

BROWNWOOD: BAYTOWN'S MOST HISTORIC NEIGHBORHOOD

by
Laura Bernal

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Chair of Committee: Dr. Monica Perales

Committee Member: Dr. Mark Goldberg

Committee Member: Dr. Kristin Wintersteen

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“A land without ruins is a land without memories – a land without memories is a land without history.”

-Father Abram Joseph Ryan, “A Land Without Ruins”

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ABSTRACT

This thesis argues for the need for a historical marker for the Baytown Nature Center in Baytown, Texas. Before the City of Baytown made the decision to transform this site into a nature preserve, it was the Brownwood subdivision. Brownwood was created by Humble Oil & Refining Company executives in 1937 hoping to build an exclusive waterfront neighborhood along the Burnet, Crystal, and Scott Bays for their families. These Humble Oil executives designed the neighborhood, but the residents were the ones who made it a community. After Hurricane Carla in 1961, residents noticed that their yards were sinking and the bay waters invading their backyards. They soon learned that their neighborhood was sinking. For years, Humble Oil and the surrounding municipalities were extracting excessive amounts of groundwater to sustain their growth. This withdrawal caused the clay layers underneath to collapse, which caused the surface to sink. Even worse, the subsidence made the subdivision vulnerable to flooding from tropical storms, hurricanes, torrential flooding, and eventually, high tides. When Hurricane Alicia made landfall in 1983, the subdivision had sunk about ten feet. Therefore, the hurricane completely destroyed it. Local and federal governments were tired of chronic flooding and flood insurance payouts, so they made the decision to buy out the property. Residents had to leave the subdivision, but some resisted the buyout process. They protested, filed lawsuits against the city, and remained in the subdivision as city officials finalized their plans to transform the site into a nature park. With the help of the French Limited Task Fund, the city was able to begin this project. State and federal departments, along with local companies, also helped transformed the former subdivision into the Baytown Nature Center.

Regardless of its transformation into a nature preserve, the site still holds artifacts and vegetation pertaining to the former subdivision. However, most visitors simply know it as a natural preserve for fishing, kayaking, and walking. This study recommends a historical marker for the site to preserve its history and acknowledge it as Baytown's most historical neighborhood.

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Introduction

On September 4, 2017, less than a week after Hurricane Harvey flooded the Houston metropolitan area, Baytown District 5 Councilman Robert C. Hoskins helped residents clean up the debris in their homes. As he immersed himself in the cleaning process in Pinehurst, a Baytown neighborhood near the Harris and Chambers counties border, the sight of debris everywhere revived dormant memories about the Brownwood subdivision. During the twentieth century, Brownwood was Baytown's most desirable neighborhood. He was afraid of history repeating itself because "this was exactly what Brownwood turned out like. We had a couple of hurricanes come in and flood Brownwood and so people just started leaving behind."¹ Although his memory is correct about people leaving the subdivision, his account about the Brownwood subdivision is not the complete story.

The neighborhood, which once stood on a peninsula surrounded by the Burnett, Scott, and Crystal bays along the Houston Ship Channel, ceased to exist decades before Harvey's landfall. Brownwood residents had to move out of their neighborhood due to subsidence, or the sinking of land. (Figure 1.1) For decades, the nearby Humble Oil Refining & Company refinery excessively withdrew groundwater and oil around the subdivision. As communities around and across the refinery grew, they also withdrew large quantities to sustain their growth. This caused the subdivision to sink several feet, making it vulnerable to hurricanes, tropical storms, and eventually, heavy rainstorms. In fact, "according to city records, evacuations or

¹ Christopher James, "Pinehurst Begins Road to Recovery," *The Baytown Sun*, September 6, 2017, 10.

flooding of some kind occurred 26 times in the neighborhood between 1967 and 1981.”²

Chronic flooding in Brownwood began when Hurricane Carla made landfall in the Port O’Connor-Port Lavaca area on September 10, 1961. High winds pushed water inland, flooding most of the homes in the neighborhood. Since the subdivision was in an area prone to hurricanes and tropical storms, residents were worried for their safety. After Carla, most residents decided to stay and rebuild their neighborhood with the help from Humble Oil Refining & Company, the surrounding communities, and the local and federal governments. Residents over time learned about subsidence, the enemy silently lurking underneath the subdivision and surrounding areas, but by then, it was too late. Despite the subsidence and increasing damages they experienced, most residents rebuilt their homes after each flooding episode and learned to adapt to their neighborhood’s changing geography, including constructing perimeter roads and bulkheads, and using water pumps to protect elevated homes. Both city officials and residents tried to save the neighborhood, but the damage created by subsidence is irreversible. Subsidence can be stopped or slowed down, but sunken land cannot regain its original elevation.

Despite protective measures, Hurricane Alicia wiped out the neighborhood in 1983, destroying the residents’ hopes of staying in the place they called home. After Hurricane Alicia, city officials barred residents from rebuilding, declared the area hazardous, and cut off utilities. With the Federal Emergency Management Agency

² Whit Snyder, “From Good Times to Heartbreak: Brownwood’s Rise and Fall,” *The Baytown Sun*, May 12, 2002, 7-A.

(FEMA)'s help, the city officially bought out most of the lots in the area hoping to transform it into a park. Some homeowners refused to leave because they wanted to secure their lot's full value. Others did not want to leave because they did not believe the city's plans to transform the area into public space. These residents resisted the buyout process by pursuing legal action and protesting outside city hall.

Although many residents wanted to preserve Brownwood, as early as 1979, residents and city officials proposed transforming the subdivision into a nature center. City officials did not pursue the nature center idea in earnest until 1983, shortly after Hurricane Alicia's landfall. After the Baytown City Council passed several ordinances to prevent residents from rebuilding and to close of the subdivision, the city began buying out lots to secure land for the nature preserve. Halfway through the process of acquiring lots, they accepted Houston-based Olshan Demolishing Company's bid to clear the land. However, the building of the park did not begin until the city finally acquired enough funds. Several companies and governmental agencies helped the City of Baytown build what would become the Baytown Nature Center.

One of the biggest contributors to the creation of a nature center was the French Limited Trust Group, a consortium of 200 companies ordered to restore damaged marshlands. Their project, known as the Brownwood Marsh Restoration Project, began in 1994. The project traced its roots back to the French Limited Superfund Site in Crosby, Texas, located less than twenty miles away from the former subdivision. For decades, dozens of refineries, including the one operated by Exxon

Corporation, used this site as an industrial waste disposal facility.³ In 1973, the site lost its permit from the Texas Water Commission due to violations. Later studies revealed that these companies released about 70 million gallons of hazardous chemicals that entered the San Jacinto river basin. As part of their legal penalties, the parties involved formed the French Limited Trust Group and spent almost \$2 million dollars restoring about sixty acres of wetlands under the guidance of Crouch Environmental Services.⁴ Due to the size of their contribution, the group is often the only entity recognized for its contribution, but there were many other groups who contributed to the subdivision's transformation. Other groups who helped build the nature center included Texas Parks & Wildlife Department, Lyondell Chemical (now known as LyondellBasell), the Galveston Bay Foundation, and Stolhaven Houston.

The Baytown Nature Center first opened in 1995, but the City of Baytown closed it in 2001 for major renovations. The center reopened in May 2002, and city officials invited former residents for a homecoming reunion. During the reunion, former residents toured their former neighborhood and recorded brief interviews where they shared memories about living in the subdivision. The nature center is now a public space popular for fishing, crabbing, kayaking, and walking. Despite the area's transformation, there are still buried artifacts from the neighborhood that once stood there. Some of these artifacts include house foundations, bricks, tiles, and manhole covers.

³ David Todd and Jonathan Green, *The Texas Landscape Project: Nature and People* (College Station: Texas A&M University Press, 2016), 231.

⁴ Carol Christian, "Baytown Nature Center Gets Federal Attention," *Houston Chronicle*, May 1, 2003, <https://www.chron.com/neighborhood/pasadena-news/article/Baytown-Nature-Center-gets-federal-attention-2105986.php>. Accessed March 13, 2019.

This thesis tells the story of a community that no longer exists. It will document the story of the Brownwood subdivision from its birth in the 1930s to its transformation as a nature center beginning in the 1990s. Highlighting the effects of subsidence and chronic flooding on this community, I argue that Brownwood's unique story deserves to be commemorated in a historical marker at the Baytown Nature Center. This historical marker is necessary because it will inform visitors about the site's history, hidden within the vegetation and shorelines of the center. Former residents began proposing this historical marker during the nature center's reopening, but their petition never materialized. This historical marker is also necessary because it will honor all the residents who fought for their homes. Although most of these residents already died, this historical marker would invite their descendants and the community to honor and remember their contribution to Baytown, Texas, and United States history.



Figure 1.1 This is an aerial view of the Baytown Nature Center, formerly known as the Brownwood Subdivision, in 1997. (Tom Ford, "Baytown Nature Center, SWA Group -Tom Fox, 1997 Article: Baytown Nature Center," accessed April 10, 2020, https://en.wikipedia.org/wiki/Baytown_Nature_Center.)

Historiography

Despite Brownwood's unusual demise, its presence in the historical record is sparse and fragmented. Local historians and journalists have either used it as a case study or have only provided a basic overview of the community's founding, development, demise, or its transformation into the Baytown Nature Center. During their research, only some of these authors contacted former residents and city officials, but they simply refer to their exchanges as conversations in possession of the author. As a result, these broad narrations exclude oral histories with former residents, failing to tell the complete story of the subdivision.

Thematically, scholarship about the Brownwood subdivision describes it as "The River Oaks of Baytown," "Submarine Acres," or a "ghost town."⁵ Each description refers to different eras in the subdivision's history. The first era, "The River Oaks of Baytown," refers to the period between the subdivision's birth in the late 1930s to Hurricane Carla's landfall in 1961. During this period, Brownwood was part of the unincorporated community of Wooster when most residents were unaware about subsidence. The next era, "Submarine Acres," was between Hurricane Carla and Hurricane Alicia's landfall in 1983. Residents learned about subsidence and dealt with hurricanes, tropical storms, and rainstorms that gradually destroyed the neighborhood. After Hurricane Alicia, city officials made the subdivision a "ghost town" by passing city ordinances and resolutions to force residents out of their homes. Although they

⁵ Mike Snyder, "Nature Center Owes Birth to Subdivision's Ruin," *Houston Chronicle*, July 29, 2001, [33-A](#); David Todd and Jonathan Green, *The Texas Landscape Project: Nature and People* (College Station: Texas A&M University Press, 2016), 229; T. Baker Lindsay, *More Ghost Towns of Texas* (Norman: University of Oklahoma Press, 2003), 20-21.

had an idea about what they wanted to do with the site after purchasing the properties there, city officials did not have a concrete plan or enough funds to begin building the nature center. Therefore, the acquired properties stood abandoned until the French Limited Task Group began their Brownwood Marsh Restoration Project.

Local historians and journalists first began referring to the former subdivision as “The River Oaks of Baytown” months prior to the Baytown Nature Center’s opening in 2002 in order to describe the neighborhood’s prestige before its sinking. The first writer to use this nickname for the subdivision was *Houston Chronicle* writer Mike Snyder in 2001, and he used it to reminisce about the neighborhood’s early years. Snyder compared the Brownwood subdivision to River Oaks, Houston’s historically exclusive residential community, because “grand houses once stood on this land,” and it was “a choice waterfront neighborhood favored by oil company executives.”⁶ While other writers may not have used the same nickname, their descriptions highlighted the subdivision’s high-dollar homes and connection to the Humble Oil Refining & Company refinery in nearby Baytown. For example, in his account about the former subdivision, local historian T. Lindsay Baker also highlighted the neighborhood’s exclusivity by describing the “imposing two-story homes facing the bay. With boathouses and landscaping that included large palms, the subdivision became the most exclusive address in Baytown.”⁷ Fiction writers have also highlighted Brownwood’s exclusivity in their literature works. Local English

⁶ Mike Snyder, “Nature Center Owes Birth to Subdivision’s Ruin,” *Houston Chronicle*, July 29, 2001, 33-A.

⁷ T. Baker Lindsay, *More Ghost Towns of Texas* (Norman: University of Oklahoma Press, 2003), 20.

professor Glen Blake used the Brownwood subdivision as the setting for a short story titled “Chocolate Bay.” When describing the subdivision’s appearance prior to subsidence, he described it as ““the country club section of town.””⁸

Local accounts about the subdivision suggest that the Humble Oil executives living in the subdivision made it “The River Oaks of Baytown.” According to Baytown historian Margaret Swett Henson, the Brownwood subdivision was one of the many examples of Humble Oil’s “paternalistic role in the community.”⁹ Since the company bought land and made it available for white workers and their families, these residents made the subdivision “an exclusive area with many restrictions including a ban on Mexican, Chinese, and Japanese” employees.¹⁰ As a result, this limited the types of families who could live in the subdivision during its early years. While most of the subdivision’s residents worked at the nearby Humble Oil refinery, city directories demonstrate that doctors, engineers, and educators also lived in the neighborhood during this period. The neighborhood continued being an exclusive residential area until Hurricane Carla’s arrival in 1961. As the neighborhood, gradually sank and constantly flooded, it slowly lost its appeal. By the time Hurricane Alicia made its landfall, most of the homes were cheap rental properties. The neighborhood was also an area popular for illegal dumping, looting, satanic rituals, and vandalism. In other words, Hurricane Carla destroyed Brownwood’s reputation as “The River Oaks of Baytown.”

⁸ Glenn Blake, “Chocolate Bay,” in *Drowned Moon* (Baltimore: John Hopkins University Press, 2001), 78.

⁹ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Heritage Society, 1986), 128-129.

¹⁰ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Heritage Society, 1986), 129.

During a Brownwood homecoming reunion event at the Baytown Community Center on May 17, 2002, former Baytown civil defense communications officer Donald Northup declared, “I’m the one who named the area Submarine Acres, but that was before subsidence. And, sure, it stuck.”¹¹ As an officer at the Baytown Emergency Operation Center and Brownwood resident, Northup understood the severity of the situation. Although Northup claimed to be the first individual to use this nickname, Mike Snyder was the first writer to refer to the subdivision as “Submarine Acres” when discussing the period between Hurricanes Carla and Alicia. He was also the first writer to associate this nickname with subsidence. Snyder declared that the “extraction of underground water caused the land to sink 9 feet, contributing to periodic floods that changed the neighborhood’s nickname to ‘Submarine Acres’ by the 1970s.”¹² Civil engineer David A. Todd and conservation and environmental planner Jonathan Ogren also adopted Snyder’s nickname for this period. While they agreed with Snyder that “Submarine Acres” described a segment of Brownwood’s history, Todd and Ogren have suggested that the “Submarine Acres” period commenced with Hurricane Beulah in 1967. According to them, “between 1967 and 1981, there were twenty-six reports of flooding or evacuations in Brownwood. With each time, the area got a new nickname, ‘Submarine Acres.’”¹³ Some of the flooding events that occurred during this period included the 1969 Valentine’s Day Flood, Hurricane Fern (1971), Tropical

¹¹ Allyson Gonzalez, “Memories Run Deep at Brownwood Homecoming,” *The Baytown Sun*, May 18, 2002, 7-A.

¹² Mike Snyder, “Nature Center Owes Birth to Subdivision’s Ruin,” *Houston Chronicle*, July 29, 2001, 33-A.

¹³ David Todd and Jonathan Ogren, *The Texas Landscape Project: Nature and People* (College Station: Texas A&M University Press, 2010), 229.

Storm Delia (1973), and Tropical Storm Claudette (1979). With each storm, the flood damage estimates increased, and subsidence made it harder for the water to recede from the subdivision. As a result, it remained trapped for days inside homes and yards.

Beginning in the 1970s, national newspapers and magazines began reporting about the sinking subdivision. Some of the newspapers included the *Washington Times-Herald*, *The Washington Post*, *Chicago Tribune*, and *The New York Times*. One of the first magazines was *Texas Monthly* in December 1974. Although the article discussed the effects of subsidence along the Houston Ship Channel, editor William Broyles highlighted the Brownwood subdivision. He suggested that subsidence was “much more serious than the plight of one neighborhood. The residents of Brownwood are not alone in living on the brink of certain natural disaster.”¹⁴

Other scholars soon began using the subdivision as a case study about the dangers of subsidence. Public policy scholars interested in demonstrating how “land use planning and development management offer government officials a practical and feasible way to mitigate the destructive effects of hurricanes and other severe coastal storms,” utilized the Brownwood subdivision as one of their case studies.¹⁵ They suggested that the sinking subdivision was important because it was one of the first locations where FEMA used Section 1362 funds to buy out federally insured homes in flood-prone areas. The Brownwood subdivision was also one of FEMA’s premier examples of coastal relocation. Unlike local historians and journalists, these public

¹⁴ William Broyles, “Disaster, Part II. Houston is Sinking into the Sea,” *Texas Monthly*, December 1974, 77.

¹⁵ David R. Goldschalk, David J. Brower, and Timothy Beatley, *Catastrophic Coastal Storm: Hazard Mitigation and Development Management* (Durham: Duke University Press, 1989), 1.

policy scholars were concerned with the political components of Brownwood's history. By using the Brownwood subdivision as a case study, they discussed the different ways that local, state, and national governments could work with coastal communities to prevent tragedies such as Brownwood.

Understanding Brownwood's history also requires an examination of the scientific study of subsidence prior to Hurricane Carla's landfall in 1961. Even though most residents learned about subsidence after Hurricane Carla, Baytown could trace its subsidence problem to the discovery of oil at the nearby Goose Creek Oil Field in 1903. Geologists first discussed subsidence in this area in 1926. In an article for *The Journal of Geology*, geologists Wallace E. Pratt and Douglas W. Johnson reported that the Goose Creek Oil field, the oil field where Humble Oil extracted most of its oil, began subsiding in 1918. They argued that "the cause of the subsidence is to be found in the extensive extraction of oil, water, gas, and sand beneath the affected areas."¹⁶ Their article was one of the first reports about subsidence in American literature. However, local Baytown historian Margaret Swett Henson has also presented a different theory about the origins of subsidence in the Baytown area. She suggested that the deep extraction of liquids that caused subsidence in the area first began when rice farmers began experimenting with irrigation in Goose Creek using underground wells.¹⁷

Similarly, in 1956, geologist Eddie V. Gray wrote his thesis about subsidence in the Baytown-La Porte area. While acknowledging Pratt and Johnson's work as a

¹⁶ Wallace E. Pratt and Douglas W. Johnson, "Local Subsidence of the Goose Creek Oil Field," *The Journal of Geology* 7, no. 34 (October-November 1926), 588.

¹⁷ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Heritage Society, 1986), 76.

foundation text about subsidence, he argued that subsidence extended beyond the Goose Creek Oil Field and involved more than just the extraction of oil, gas, water, and sand. According to Gray, subsidence in Baytown-La Porte was a result of the “pumping of water for industrial purposes,” “pumping for oil, gas, water, and some sand (in early development of the field) from the Goose Creek oil field,” “natural geologic forces causing the strata to compact and tilt toward the Gulf of Mexico,” and “apparent subsidence resulting from a slow rise in sea-level.”¹⁸ Additionally, unlike Pratt and Johnson, he suggested the possible role of dredging material to expand the Houston Ship Channel. Even though it did not fit the scope of his thesis, his mention of the Houston Ship Channel was important because the Brownwood subdivision sat along the ship channel. Decades later, Ross S. Sterling, one of the Humble Oil & Refining Company founders, confirmed their findings in a memoir published in 2007. When describing the oil field, he admitted, “In the course of time, we drilled so many wells and took out so much oil that the land, which stood four feet above the water, sank to two feet under water.”¹⁹ He further explained how workers in the oil field built structures to further prevent the sinking, but the area continued sinking even though production continued.

Hurricane Alicia killed Brownwood, because its landfall solidified the City of Baytown’s decision to remove residents from the area. By deciding to transform the subdivision into the Baytown Nature Center, they made the area into a ghost town that

¹⁸ Eddie V. Gray, “The Geology, Ground Water, and Surface Subsidence of the Baytown-La Porte Area, Harris County, Texas,” (MS Thesis, Texas A&M University, 1956), 50.

¹⁹ Ross S. Sterling and Ed Kilman, *Ross S. Sterling, Texan: A Memoir by the Founder of Humble Oil & Refining Company* (Austin: The University of Texas Press, 2007), 32.

still contained house foundations and artifacts, such as bricks and tiles. This transformation shaped how authors have described and remembered the former neighborhood. According to historian T. Lindsay Baker, the Baytown Nature Center was a ghost town after Hurricane Alicia because it was “a town for which the reason for being no longer exists” with “tangible evidence remains for visitors to see.”²⁰

Similarly, Baytownian author Glenn Blake wrote two short stories, “Chocolate Bay” and “Degüello,” set in Brownwood and the surrounding bays. In “Chocolate Bay,” Blake wrote the fictionalized story of a family moving into the Brownwood when most of the residents had moved out and the rent prices were extremely cheap. The family’s patriarch became obsessed with staying and exploring his new neighborhood, ignoring his wife’s pleas to leave the subdivision before it was too late. During the protagonist’s strolls, Blake described the subdivision’s abandonment. He described debris inside abandoned homes and the missing roofs.²¹ Living in this sinking and abandoned peninsula meant the remaining residents had to adapt to the tides’ schedule, but even that did not persuade the protagonist to leave. His stubbornness breaks up his family. His son drowns, and his wife leaves him shortly after their son’s death.

Meanwhile, in “Degüello,” the protagonist was trying to reach Brownwood via the Lynchburg Ferry, but his guide discouraged him because, ““There’s nothing out there... There’s no one out there anymore... Most of those houses are out in the water

²⁰ T. Lindsay Baker, *More Ghost Towns of Texas* (Norman: University of Oklahoma Press, 2003), ix.

²¹ Glenn Blake, “Chocolate Bay” in *The Old and the Lost* (Baltimore: John Hopkins University Press, 2016), 103-104.

now. Most of those homes are out in the bay.’”²² Through the ferry guide, Blake continued to tell Brownwood’s story, highlighting the residents’ struggles. Rather than getting discouraged, the protagonist insisted on crossing the bay because he was going “Home.” With just this powerful word, Blake encapsulated the importance of Brownwood to the residents that refused to leave. Even though his short stories are not traditional historical sources like newspapers and government documents, they represent a version of how the community remembers this former subdivision. As a Baytownian, he used the residents’ experiences to tell these tales and present Brownwood’s history through a different medium.

To understand Brownwood’s history, it is necessary to place it in the context of other imperiled communities where residents also fought to save their homes. Scholars and local reporters who have written about these communities have studied their demise and transformation to understand the impact of relocation on the residents. Although the lethal combination of subsidence and chronic flooding made Brownwood’s demise unique, its story is not unprecedented. Brownwood’s history bears similarities to the experiences of three different communities: St. Feriole Island in Prairie du Chien, Wisconsin, Smelertown in El Paso, and Thompson’s Beach in New Jersey. The residents in these three communities had to abandon their homes and relocate for different reasons. Comparing their experiences will help further emphasize Brownwood’s unique history. More importantly, these comparisons will highlight how scholars have addressed two important issues: the importance of preserving the history of a community that no longer exists and federal responses to environmental disasters.

²² Glenn Blake, “Degüello,” in *Return Fire* (Baltimore: Johns Hopkins University Press, 2010), 19.

On June 30, 1976, U. S. Representative Bob Eckhardt, before the Subcommittee on Water Resources Senate Committee on Public Works, declared his support for a Brownwood evacuation/relocation project suggested by the Army Corps of Engineers in the early 1970s. The Corps proposed relocating the 448 families living in Brownwood because the 750-acre neighborhood sat on a subsiding 50-year flood plain surrounded by the Crystal, Burnet, and Scott bays. Eckhardt argued that the role of subsidence in Brownwood demonstrate the community's need to relocate, but the request for their community's evacuation was not unprecedented. He reminded the committee that The Water Resources Development Act of 1974 included the Prairie du Chien, Wisconsin evacuation project, which helped these residents relocate from their flood-prone community.²³ Although government officials had authorized the Prairie du Chien project when Brownwood residents proposed a relocation/evacuation project for their community, the government had not yet allocated funds for Prairie du Chien.

Prairie du Chien was a Wisconsin community above the confluence of the Mississippi and Wisconsin Rivers, with a portion of the city "located on a low peninsula of land which is separated from the mainland by Marais de St. Feriole, a back channel extending to the upstream end of the city."²⁴ St. Feriole, also known as the Fourth Ward, was similar to the Brownwood subdivision in two ways. First, it was

²³ Robert C. Eckhardt, "STATEMENT by Bob Eckhardt, U. S. Representatives 8th District, Texas Before the Subcommittee on Public Works," June 30, 1976, Page 5 in Robert C. Eckhardt Papers, 1931-1992, Box 95-147/38 (05170584), "Brownwood Project" Folder, Briscoe Center for American History, The University of Texas at Austin.

²⁴ U. S. Army Engineer District, St. Paul, "Final Environmental Impact Statement, Flood Control, Mississippi River, Prairie du Chien, Wisconsin," February 1977, date accessed February 24, 2020, <https://apps.dtic.mil/dtic/tr/fulltext/u2/a121422.pdf>, 13.

a small, tight-knit community where everyone knew each other. Second, and more importantly, it was an area plagued by recurrent flooding from the Mississippi River. Former Fourth Ward resident Donald Hand remembered the chronic flooding as, “The flood was just part of our way of life. We accepted it.”²⁵ The community’s deathblow was the Mississippi River Flood of 1965. On April 24, 1965, the Mississippi River crested at 25.38 feet, flooding most of the city. The river did not fall below flood stage until May 10, 1965, flooding 250 homes and twenty-five business establishments. This flooding event left “one-fourth of the town’s 5,600 residents temporarily homeless.”²⁶ The flood damages in St. Feriole totaled \$2.5 million.²⁷

Following this great flood, government officials and residents began discussing how to best move forward. Residents met with the Army Corps of Engineers on January 1996 to discuss possible solutions. All involved parties proposed different solutions.²⁸ As they tried to reach an agreement, the community flooded in 1967, 1969, 1973, and 1975. During this uncertainty, some residents moved away without waiting for a decision. Others relocated with the help of a housing and urban development program.²⁹ Despite the residents’ pleas for floodwalls and dikes to

²⁵ Correne Martin, “Flood was Just Part of Our Way of Life: Hand Recalls Knowing What to do When the Flood Water’s Threatened Family’s Home,” *Courier & Press: The Great Flood of 1965*, April 26, 2015, 8.

²⁶ Rob Drieslein, “The Mississippi Flood of 1965, Part Two,” *Big River Reader*, April 1994, accessed March 26, 2020, <http://www.bigrivermagazine.com/flood2.html>, 9.

²⁷ D. B. Anderson and I. L. Burmeister, United States Geological Survey (USGS), “Floods of March – May 1965 in the Upper Mississippi River Basin,” (Washington: United States Government Printing Office, 1970), A27.

²⁸ William J. Burke, “Moving a Neighborhood Out of Harm’s Way,” *Big River Magazine*, December 1997, accessed March 26, 2020, <http://www.bigrivermagazine.com/feriole.html>.

²⁹ Barry Adams, “On Wisconsin: Remembering the St. Feriole Island Community and the 1965 Flood,” *Wisconsin State Journal*, April 26, 2015, accessed March 26, 2020, https://madison.com/wsj/news/local/on-wisconsin-remembering-the-st-feriole-island-community-and-the/article_767828a2-925f-56d7-b2a7-3cdccaabd804.html.

protect the community, the Senate and House of Representatives passed Public Law 95-251, which authorized “the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and for other purposes.”³⁰ One of the approved flood control projects in this act was the land acquisition and relocation of St. Feriole, which cost \$500,000. This made St. Feriole, one of the first communities the federal government acquired in a flood-prone area. More importantly, as one of the government’s first flood-prone acquired properties, it set a precedent for other chronically flooded communities, such as the Brownwood subdivision.

Most of the remaining community’s residents left shortly after the act’s approval and relocated to higher ground. However, a few remained until the mid-1980s. After helping residents relocate, government officials removed most the community’s structures, leaving the area as “a bunch of space.”³¹ By 1997, only empty streets, sidewalks, and shade trees remained at the site. St. Feriole’s Island is now a family-friendly park, a suggestion made by city officials as early as 1979. The park contains sculptures, a pavilion, and a disc golf course. A segment of the property is also now part of the St. Feriole Memorial Gardens, where some former residents have planted trees in memory of other former residents. Other former residents have tried to share the site’s history by hosting family reunions there. Jeff Lessard, a former

³⁰ *Water Resources Development Act of 1974, Title I – Water Resources Development*, Public Law 93-251, March 7, 1974, 12.

³¹ Douglas Clement, “Out of Harm’s Way,” Federal Reserve Bank of Minneapolis, September 1, 2001, accessed March 26, 2020, <https://www.minneapolisfed.org/article/2001/out-of-harms-way>.

resident, has tried to preserve the site's history by writing about the island and collecting photos about this community that no longer exists.

The Brownwood subdivision also shared similarities with the Smelertown community in El Paso, Texas in terms of impact on the relocated community. Smelertown, which formed in the 1870s and sat at the base of the ASARCO refinery, had two major areas for the company's workers and their families: Upper Smelertown ("El Alto") and Lower Smelertown ("El Bajo"). Upper Smelertown was racially segregated. Anglo managers and their families lived in "Smelter Terrace," while ethnic Mexican workers and their families lived in company-owned tenements they called "El Alto." However, most of the company's ethnic Mexican workers lived in "El Bajo," with several small barrios making up this community. Residents referred to their community as "La Esmelda."

As El Paso grew, so did Smelertown eventually growing into "one of the largest single-industry Mexican American communities on the U.S.-Mexican border."³² For decades, "Esmeltianos," as historian Monica Perales described Smelertown residents, created their own community through shared spaces and kinship relationships. As a company town for minority workers, Smelertown lacked some of the amenities companies historically provided for Anglo workers, such as paved streets, streetlights, and better sanitation infrastructures. Unfortunately, Esmeltianos also had something else other communities lacked: pollution. Like

³² Monica Perales, *Smelertown: Making and Remembering a Southwest Border Community* (Chapel Hill: The University of North Carolina Press, 2010), 2.

Brownwood and St. Feriole Island residents with chronic flooding, Esmeltianos accepted pollution as part of their Smelertown experience.

In the 1960s, researchers began analyzing the distribution of environmental hazards throughout communities, such as air pollution, garbage dumps, lead poisoning, and pesticide poisoning. They soon concluded that “these environmental hazards are inequitably distributed by income or race. In studies that looked at distribution of these hazards by income *and* race, race was most often found to be the better predictor of exposure to environmental dangers.”³³ The lack of regulations and laws allowed many companies in high-polluting industries to transform these areas into a “sacrifice zone or dumping ground” where low-income and colored residents lived.³⁴ The creation of the Environmental Protection Agency (EPA) in 1970 contributed to this awareness about environmental injustice in certain communities.

As an ethnic Mexican community living under a cloud of pollution, Smelertown joined this long list in the late 1960s when the residents of nearby-middle class neighborhoods began complaining about the exhaust ASARCO’s smokestacks released. This led to El Paso filing a lawsuit against the company. As the lawsuit proceeded, authorities began investigating the company’s control of lead emissions, even though ground lead contamination was not a concern for Esmeltianos. Scientists soon discovered “toxic levels of lead dust, arsenic, zinc, and cadmium in the ground, on rooftops, and even on eating utensils in homes within a seven-mile radius of a giant

³³ Luke W. Cole and Sheila R. Foster, *From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement* (New York: New York University Press, 2000), 54-55.

³⁴ Robert D. Bullard, *The Quest for Environmental Justice: Human Rights and the Politics of Pollution* (San Francisco: Sierra Club Books, 2005), 42.

smokestack.”³⁵ The turning point occurred when the community’s children began testing positive for lead contamination.

Just like subsidence catapulted the Brownwood subdivision into the national spotlight, the lead contamination did the same for Smelertown. This discovery made Smelertown “the first American community to face the grim prospect of lead exposure and its consequences.”³⁶ Lead testing continued in the community, and scientists informed residents about the dangers of lead poisoning in children. Part of finding the solution included identifying the responsible party. ASARCO refused to accept the full blame and conducted its own investigation. Even though ASARCO’s findings did not match the previous study, the company agreed to pay fines and medical expenses related to treatments.

The community’s relocation became a point of contention between the company, city officials, and Esmeltianos. Both the company and city officials wanted to remedy the problem quickly and cheaply, so the community’s relocation and demolition seemed like the best option. Esmeltianos did not want to leave the community they had built even though health officials declared it hazardous to their health. The noise and pollution officials declared dangerous were “part of the shared experiences and day-to-day life that defined the community in relation to the rest of the city.”³⁷ Ultimately, city officials decided that the best option was evicting he

³⁵ Monica Perales, *Smelertown: Making and Remembering a Southwest Border Community* (Chapel Hill: The University of North Carolina Press, 2010), 236.

³⁶ Lauren Villagran, “Before Flint, Before East Chicago, there was Smelertown,” National Resources Defense Council, accessed March 10, 2020, <https://www.nrdc.org/onearth/flint-east-chicago-there-was-smelertown>.

³⁷ Monica Perales, *Smelertown: Making and Remembering a Southwest Border Community* (Chapel Hill: The University of North Carolina Press, 2010), 245.

community. Regardless of the eviction notices Esmeltianos received from individual private landlords, not everyone left immediately. Like Brownwood residents, the community' relocation was emotionally and financially difficult. After Esmeltianos left, the company demolished most of the buildings in the community. The smelter remained open for almost 30 years more.

Comparing the Brownwood subdivision to Smelertown is important because the experiences of these residents were similar. Despite the hazardous conditions that were part of their daily lives, Brownwood and Smelertown residents fought to save their homes and their community. Unfortunately, they lost their battles. Their forceful relocation highlighted the importance of remembering a community after it physically disappears. Comparing these two communities will highlight the need for historical markers for communities with rich histories, such as Brownwood and Smelertown.

Like the Brownwood subdivision, Thompsons Beach was a bayfront community. Thompsons Beach, however, was full of vacation homes, businesses, and a few primary residences. On November 25, 1950, a tidal wave “reduced waterside resorts almost to bare sand.”³⁸ This storm also destroyed other surrounding communities in Cumberland County. Most of the residents in these communities moved out, but some remained. A hurricane in 1980 destroyed most of the remaining structures. Following this storm, the Maurice River Township, the Cumberland County Township, decided to buy out the properties in Thompsons Beach, because

³⁸ “History: Tidal Wave Hits South Jersey in 1950,” *The Daily Journal*, March 31, 2015, accessed March 26, 2020, <https://www.thedailyjournal.com/story/news/history/2015/03/31/local-history-catastrophic-tidal-wave-hits-nj-in-1950/70737294/>.

they tired of the Delaware River constantly flooding the road leading up to the community.³⁹ The township acquired the last properties in 1998.

After acquiring the properties in Thompsons Beach, the Maurice River Township closed the road leading to the site and demolished the remaining structures. As the cleanup began, the site resembled “a post-apocalyptic landscape” littered with ruins of fireplaces, a chimney, bricks, concrete, cinder block rubble, and an isolated chimney.⁴⁰ This restoration project is part of the Public Service Enterprise Group’s (PSEG) Estuary Enhancement Project, a mitigation program created to help restore and preserve sections tidal wetlands in the Delaware Estuary. The PSEG created this project to compensate for the pollution from their nuclear plant in Salem county. The company, along with federal and local government officials, decided to restore it as natural habitat for horseshoe crabs and migratory birds, making it a heaven for fishermen and birdwatchers.

In the case of both Thompsons Beach and the Brownwood subdivision, local and federal governments transformed both communities into wetland restoration projects. Brownwood’s transformation into the Baytown Nature Center, a wetland and wildlife refuge, “presage[d] the future of many current coastal settlements,” such as Thompsons Beach.⁴¹ While St. Feriole’s Island and Smelertown serve as comparisons to further understand Brownwood’s relocation, Thompsons Beach demonstrates the

³⁹ “Thompson Beach, Heislerville Nj. Top Things to See in the Philadelphia Area Before You Die,” *South Jersey History & Adventures*, accessed March 15, 2020, <https://southjerseyadventures.wordpress.com/category/thompsons-beach-nj/>.

⁴⁰ Lee Procida, “Bayfront Ghost Town in Maurice River Township Undergoing an Ecotourism Transformation,” *The Press of Atlantic City*, March 11, 2013, accessed March 15, 2020, https://www.pressofatlanticcity.com/news/breaking/bayfront-ghost-town-in-maurice-river-township-undergoing-an-ecotourism/article_85da9a3c-89dd-11e2-97de-001a4bcf887a.html.

⁴¹ Orrin H. Pilkey and Rob Young, *The Rising Sea* (Washington: Island Press, 2009), 127.

importance of Brownwood's transformation. As a mitigation project, Brownwood served as an example for future companies ordered to compensate for their damages to the environment.

Sources

Oral histories are an important component of this project because they serve as an opportunity for former residents and city officials to preserve their memories about this place that no longer exists. These different groups saw the neighborhood during its height and demise. Therefore, their inclusion in this project demonstrates how residents of the neighborhood shaped their relationship to Baytown, and especially with city officials.

Previous studies about Brownwood often lack in-depth accounts with the people who lived there. The few that mention the residents refer to their interactions as personal communications in possession of the author. There are some brief interviews with former residents currently available online. The first batch of interviews is part of Lee College's oral histories collection, "The Oral Histories of the Citizens of Baytown" accessible through the University of North Texas' Portal for Texas History. Interviewees included Brownwood residents, Humble Oil & Refining Company employees, and city officials. Sterling Municipal Library staff members and volunteers recorded these oral histories during the 1970s and 1980s. City officials and Brownwood residents recorded most of their interviews in 1983, less than a month after Hurricane Alicia's landfall. Former residents recorded the other set of interviews on May 2002 as part of the Brownwood Homecoming Reunion the grand reopening

the Baytown Nature Center's grand reopening. The interviews are part of two YouTube videos, where dozens of former residents briefly shared their Brownwood addresses, memories about the neighborhood, and thoughts about the Baytown Nature Center. Although brief, these interviews are important because most of the former residents who participated have already died.

In addition to using these existing interviews, this thesis makes use of two oral histories recorded by the author. My original plan was to record oral histories with residents, local officials, and visitors. I wanted to ask the questions that previous interviewers did not ask in the oral history previously mentioned, and to include these different perspectives to highlight Brownwood's uniqueness. These questions would generate discussion about the neighborhood's layout, experiences with storms, and the fight to save their neighborhood. Unfortunately, most of the original residents already died. This meant that these interviews were going to be with residents who lived in the subdivision during its last years. Visitors would add another layer to this story because when they entered the neighborhood, they looked at the neighborhood from a different perspective. Conversations with people who visited the Brownwood subdivision during its heyday would reveal how they remember the neighborhood as a rich and beautiful place. City officials, on the other hand, viewed the neighborhood as a continuing problem. These clashing memories about the neighborhood were supposed to highlight the story about a group of residents deeply attached to their neighborhood, a local government tired of dealing with chronic flooding, and a community tired of helping the same community repeatedly.

The two oral histories I recorded were with a city official and a couple who briefly rented in Brownwood. I interviewed Norman Dykes, who was the City of Baytown Public Works Director when Hurricane Alicia made landfall in 1983. As a city official that helped Brownwood residents during their final storm, he provided a different understanding about the storm's impact and aftermath. Meanwhile, the couple I interviewed, Cynthia and Erick Smith, briefly rented a home in Brownwood between 1981 and 1982, right before Hurricane Alicia. They provided the renter perspective that was important during Brownwood's final years, but that very few former residents had previously discussed. Copies of these two oral histories will be part of two collections: The University of Houston's Houston History Oral Histories collection and Lee College's collection via the University of North Texas Libraries' Portal of Texas History. They will be accessible to students, scholars, and Baytownians. This will keep true to the principles of oral history, a discipline with the purpose of engaging communities with their own histories and giving a "greater voice to those who had been marginalized in history narratives."⁴² In other words, these oral histories will tell the story of a neighborhood that needs to be recognized as an important component of the community's local history.

This thesis also makes use of a wide range of primary materials, such as city directories, city ordinances, newspaper articles, Humble Oil publications, and resolutions to explain why the Brownwood subdivision needs a historical marker. Some of the archival collections cited throughout this work are located at the Texas State Archives, the University of Texas at Austin's Briscoe Center for American

⁴² Donald A. Ritchie, *Doing Oral History* (Oxford: Oxford University Press, 2015), xii.

History, and the vertical files at Sterling Municipal Libraries. These archival collections include letters from residents to U. S. Representatives, archaeological reports, photographs, and statements before committees.

Chapter Organization

Chapter 1 traces the neighborhood's birth and development. The first half discusses how Brownwood's birth intertwined with the Humble Oil & Refining Company Baytown's refinery development and expansion. Humble Oil acquired Edwin Brown II's estate following his death. Even though the deals between the Brown family and Humble Oil officials made Brownwood a physical place, the families that moved in and lived there made the neighborhood a community. This interlaced history between the neighborhood and the refinery will demonstrate how the refinery contributed to both the rise and decline of the community. Humble Oil publications, newspapers, historical markers, and books about ExxonMobil's will help flesh out Brownwood's origins. Additionally, this chapter will briefly explain Baytown's history, especially the city's layout prior to annexing Brownwood. This component is critical to understand Brownwood's relationship with the surrounding communities, especially minority and less affluent ones. The second half of the chapter examines how the Brownwood subdivision earned its nickname as "The River Oaks of Baytown." It describes homes, neighborhoods, and memories. For residents, this neighborhood was home because this was the place where they raised their families and invested their time and money. Even though most of the first residents worked at the refinery, not all the residents who lived there in the following decades

were Humble Oil employees. Besides city directories, this chapter also uses newspaper articles and Humble Oil publications to tell the story of this place and describe its layout.

Chapter 2 addresses the impact of subsidence on this bayfront community. After Hurricane Carla in 1961, Brownwood residents noticed that their properties were sinking at a rapid rate. This sinking first made the neighborhood vulnerable to hurricanes and tropical storms. However, after sinking several feet, rain events, high tides, and passing shrimp boats were strong enough to flood the subdivision. To understand when subsidence in the Baytown area began, this chapter traces subsidence back to the Goose Creek oil field. As workers drilled for oil in the early 1900s, they extracted enough oil to sink the surrounding land several feet. Gaillard Peninsula, which was near the center of the oil field, also started sinking. Humble Oil responded by elevating structures, such as roadways and derrick floors. Despite these changes, the land and vegetation disappeared. More importantly, this did not stop subsidence from spreading. As Humble Oil's Baytown refinery grew, the surrounding communities of Baytown, Goose Creek, Pelly, and Wooster also grew. To sustain this growth, these communities increased the amount of groundwater they pumped out. Geologists and a Texas A&M University graduate student determined that removing large amounts of gas, oil, and water caused subsidence in the Baytown area.

The chapter then focuses on several key flood events between 1961 and 1982: Hurricane Carla (1961), Hurricane Beulah (1967), the Valentine's Day Flood (1969), Tropical Storm Delia (1973), and Tropical Storm Claudette (1979). These flooding episodes show why city officials and fellow Baytownians referred to Brownwood as

“Submarine Acres” during this period. Subsidence around the subdivision made Brownwood residents victims to chronic flooding. Analyzing these different flooding episodes also demonstrates how each the relationship between residents, government officials, and fellow Baytownians deteriorated following each flooding episode. The chapter concludes by analyzing the solutions residents, the City of Baytown, and federal governments implemented to try to help the community. Each of these groups aimed to solve the chronic flooding problem for different reasons. To explain these different layers, this chapter makes use of Humble Oil publications, memoirs, letters from archives, oral histories, and newspaper articles. Most of the articles will be from *The Baytown Sun*, the local newspaper. However, some will also be from national newspapers informing their readers about a sinking community located on the outskirts of Houston.

Chapter 3 is about the brief but important period between 1983 and 1995. In 1983, Hurricane Alicia made landfall on a very weak Brownwood, making it the final deathblow. Rather than letting residents wait for the next flooding episode, city officials decided to close off the subdivision and acquire the properties in the area, forcing a relocation of residents. To further understand how a mandatory relocation impacts a community, I compare Brownwood’s relocation to Smelertown and St. Feriole’s Island. Although authorities relocated these communities for different reasons, Smelertown and St. Feriole’s Island residents also had to abandon their homes. Brownwood residents had to leave because in order to receive FEMA’s help to complete the transaction to transform the area into a park. Regardless of the ordinances and resolutions that Baytown city council members passed, some residents

resisted the buyout process. They resisted by filing lawsuits, protesting outside city hall, and staying even after the city cut off their utilities. However, residents and city officials were not the only ones trying to stake a claim in the property. Trespassers, illegal dumpers, and vandals snuck into the property even though city officials had closed it off. They took advantage of the city's lack of funds to begin their proposed park project. During this period of neglect, the subdivision resembled a ghost town, with debris and the remains of homes. To explain this period, this chapter includes newspaper articles, city ordinances, city resolutions, and oral histories.

Chapter 4 details how the City of Baytown finally transformed the site into the Baytown Nature Center. The nature center first opened in 1995 partially completed. In 2001, city officials closed it for major renovations. They reopened the nature center in May 2002 and celebrated the reopening by hosting a homecoming reunion with former residents. Several companies and agencies helped build the Baytown Nature Center. To recognize all the groups involved, this chapter explains the nature center's two building phases. It is important to recognize the different groups because the French Limited Task Group (FLTG), the group who helped begin the site's transformation, is often the only group credited. Comparing it to Thompsons Beach's ongoing transformation, this chapter shows how site, now as the Baytown Nature Center, continues to be an important site that needs to be recognized.

The chapter concludes with a description of the nature center almost two decades since it reopened, including observations from my visits to the site. I will discuss some of the artifacts I have found, along with the vegetation decorating the area. As a visitor who was born after city officials closed off the property, one of the

ways I have learned about the site's history is by looking at the artifacts and vegetation that still adorn the site. Despite of the few historical markers throughout the nature center, most of the visitors are unaware of the site's history. Most know it as a haven for fishing, crabbing, and kayaking. Although there are several engravings throughout the nature center describing the site's history, they are not visible enough. Therefore, a historical marker, if placed in a safe and visible location, will help visitors learn about the site's history. Meanwhile, visitors can still find some of the artifacts hidden in the vegetation and underneath the water bodies throughout the nature center. Some of these artifacts include house foundations and bricks, which contextualize the reactions from residents when they visited their former neighborhood during the 2002 reopening. More importantly, they highlight the need for a historical marker to preserve this site's history.

This thesis concludes by addressing other ways the community has preserved Brownwood's history. These examples include short stories, Facebook groups, and YouTube videos. Users have used these mediums to share Brownwood's story with different audiences outside the local community. I argue that a historical marker can be just as effective if placed in a safe and visible location. Therefore, visitors driving down Bayway Drive can park and read the historical marker. This will introduce passing visitors to the Brownwood story, hopefully inspiring them to research more about it. The thesis will conclude with a draft of the engraving of this potential historical marker. The draft will summarize the subdivision's origins, the residents' struggles with subsidence and chronic flooding, and their fight to save their

neighborhood. My hope is that this summary will be one that honors the community's former residents and make this story accessible to future generations.

Chapter 1: Building Brownwood

Before becoming the Baytown Nature Center, the peninsula surrounded by the Crystal, Burnet, and Scott Bays in Baytown, Texas, was known as the Brownwood Addition/Subdivision. In the late 1930s, executives from the Humble Oil & Refining refinery in Baytown bought this peninsula in the unincorporated town of Wooster hoping to create an exclusive neighborhood for their families. Tired of the white stucco homes provided by the refinery, they purchased this property hoping to build their dream homes along the bay. However, World War II temporarily halted their visions of beautiful bayfront properties. After World War II, homeowners began building their dream homes, contractors began building homes on empty lots, and real estate agents began selling finished homes. The subdivision grew as part of postwar growth, when the government helped veterans finish their education and buy homes. Brownwood residents were able to build on their lots, buy lots to build their dream homes, or buy homes using G.I. or Federal Housing Administration (FHA) loans. Humble Oil also helped ease the veterans' return by reinstating them in their jobs.

Regardless of oil executive's vision, not all residents worked at Humble. Available city directories demonstrate that Brownwood residents held a variety of jobs throughout the Tri-Cities and other nearby communities. Their jobs varied from educators to businessmen to sales associates. Some even worked at other nearby refineries. As Sandy Carter Bond, a former Mapleton Avenue resident recalled, "I read an article in the paper. It said, 'Brownwood residents were the executives of Exxon,' and I wanted them to know that's not true. My daddy was a blue-collar with grease

under his nails, and he worked hard. Most of his friends were that way.”¹ The truth was that the Brownwood subdivision was a middle-class neighborhood with beautiful homes. Despite the class diversity, all the residents in the subdivision during this period were white because Humble Oil executives restricted African Americans, Chinese, and Mexicans from living there. The underlying racism and homes’ exteriors helped the subdivision earn the nickname, “The River Oaks of Baytown” until Hurricane Carla’s landfall in 1961.² This nickname compared it to the luxurious River Oaks residential community in Houston established in the 1920s.

While this nickname represented certain aspects of the subdivision’s history, it did not tell the complete story of the Brownwood subdivision. First, the City of Baytown did not annex the subdivision until 1962 but, as the nickname indicated, it was always considered part of Baytown area. After all, the neighborhood was near Humble Oil’s Baytown refinery. Second, the nickname only described the subdivision’s physical appearance. It suggested that the neighborhood’s look made it unique when it was actually the relationship between neighbors.

By highlighting the neighborhood’s physical layout and demographics, this chapter demonstrates why the surrounding community remembers the subdivision as one of Baytown’s most exclusive neighborhoods. When remembering the subdivision during the Brownwood Homecoming Reunion in 2002, many former residents described their homes. However, most of them preferred to emphasize the importance

¹ Sandy Carter Bond, interview by Steve Koester, Sterling Municipal Library, YouTube May 18, 2002, video, 54:30, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

² Mike Snyder, “Nature Center Owes Birth to Subdivision’s Ruin,” *Houston Chronicle*, July 29, 2001, 33A.

of community in defining the Brownwood experience. Bond summarized the Brownwood experience as, “Everybody was just friendly. Everybody just knew everybody.”³ Similarly, Cabiness Avenue resident Bonnie Bartell (née Glass), recalled, “It was just like one big family down here.”⁴ Therefore, this chapter argues that the Brownwood subdivision’s historical significance rooted in more than just its physical appearance. Even though Humble Oil officials made Brownwood a physical place, the families who moved in and lived there made the neighborhood the tight-knit community former residents fondly remembered. The memories of community bonds contribute to its worthiness of a historical marker.

The first half of this chapter traces Brownwood’s birth to the early days of the Humble Oil refinery in Baytown. The interlaced history between the neighborhood and the refinery demonstrates how the refinery contributed to both the rise and decline of the community. The chapter begins with Spindletop, the oil discovery that introduced the Texas Gulf Coast to the oil industry and led to greater demands for more oil. Oil fever reached the Baytown area with the discovery of the Goose Creek Oil Field, near present-day Fred Hartman Bridge. (Figure 2.1) The discovery of this oil field led to the need for a nearby refinery, and the completion of the Humble Oil & Refining Company refinery in Baytown in 1920 helped the surrounding communities of East Baytown, Pelly, Goose Creek, and Wooster grow. These were the communities

³ Sandy Carter Bond, interview by Steve Koester, Sterling Municipal Library, YouTube May 18, 2002, video, 56:00, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

⁴ Bonnie Bartell Glass, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 01:11:19, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

where Humble Oil workers and their families lived. However, oil executives wanted something better, so they planned the Brownwood subdivision in nearby Wooster.

The second half of the chapter focuses on the Brownwood subdivision “B.C.” or “Before Carla.”⁵ There will be a brief history about the site’s site prior to Humble Oil’s purchase. However, most of the section will describe the neighborhood’s physical layout, the relationships between residents, and the neighborhood’s relationship with the surrounding communities. These descriptions will highlight the site’s uniqueness and significance for a historical marker. Although its physical appearance was an important aspect of the Brownwood experience, this community was more than just an expensive neighborhood with waterfront properties. Brownwood was a community created by Humble Oil executives where all sorts of different people interacted and made it their home until chronic flooding and subsidence destroyed it.

⁵ Deana Nall, “Back to Brownwood: Sinking Neighborhood’s Plight Forced the Nation to Deal with Subsidence,” *The Baytown Sun*, March 24, 2002, 1A.



Figure 2.1 This image is a view of the Fred Hartman Bridge from the submerged Goose Creek oil field. This bridge, which opened in 1995, connects Baytown to La Porte. (Patrick Feller, "Fred Hartman Suspension Bridge, Hwy 146, Baytown, Texas," February 21, 2010, accessed April 10, 2020, https://commons.wikimedia.org/wiki/File:Fred_Hartman_Suspension_Bridge,_Hwy_146,_Baytown,_Texas_0220101111.jpg.)

Humble Oil and its Surrounding Communities

On the cold morning of January 10, 1901, the three Hamill brothers from Corsicana — Jim, Al, and Curt finally found oil at Spindletop Hill, a salt dome in Beaumont. Since 1892, businessman and self-taught geologist Pattillo Higgs had argued oil was underneath salt domes due to the presence of sulfur, gas pockets, and anticline pressure below the structure.⁶ The Hamills' attempt, which occurred at a depth of 700 feet, was the fifth one following four dry holes. They were drilling a new well when mud began bubbling up on their derrick's rotary table and heavy pieces of pipe began shooting up into the air falling everywhere. When the men deemed it safe to return, they began clearing up the debris. As they were trying to understand what had occurred, they heard "a roar like the shot of a heavy cannon."⁷ Then, heavy green oil began to pour out. The oil continued flowing, and everyone could see "a great plum[e] of black liquid sprouting over the derrick."⁸ Pieces of shale and rock were also part of the gusher. The oil had flowed high enough until it flowed over the rotary table and shot up more than 150 feet into the air. The gusher was loud enough that it scared the animals and people miles away.⁹ Once the people of Beaumont, Texas realized what had happened, the news quickly spread. The community prepared for their spotlight in the oil industry.

⁶ Paul Spellman, *Spindletop Boom Days* (College Station: Texas A&M University Press, 2001), 20.

⁷ James A. Clark and Michael T. Halbouty, *Spindletop* (Houston: Gulf Publishing Company, 1952), 54.

⁸ James A. Clark and Michael T. Halbouty, *Spindletop* (Houston: Gulf Publishing Company, 1952), 55.

⁹ Judith Walker Lindsley, Ellen Walker Rienstra, and Jo Ann Stiles, *Giant Under the Hill: A History of the Spindletop Oil Discovery at Beaumont, Texas, in 1901* (Austin: Texas State Historical Association, 2002), 109-110.

The gusher attracted many to the area for its size. Some of Corsicana's oilmen, such as J.S. Cullinan, Thomas J. Wood, and James Garrity, were among the first one to arrive. Besides these businessmen, sightseers also began to come to the area.¹⁰ Some of these sightseers were just curious about the gusher. Others came with the intention of investing resources and money in the area. These outsiders and locals quickly began to bid against each other for tracts, with each party trying to get the tract closest to the Lucas gusher. Regardless of this conflict, the flow of people into the area helped boost the community's local economy. More importantly, it inspired those interested in staking a claim in the oil industry to begin looking for oil elsewhere.

As the oil fever spread, "virtually any hill jutting up from flatlands or any place with an oil seep or oily paraffin dirt was a likely target for the drill."¹¹ With each oil well, the oil industry arrived closer to the Houston area. Prior to the big discovery in Goose Creek, the oil field closest to the Baytown area was Barbers Hill, in present-day Chambers County. This oil field was forty-feet high, due to an intrusive salt plug. A salt plug consists of pure rock salt capped by gypsum anhydrite and limestone deposits. Prior to 1924, there were 120 wells drilled. Only twenty-six of them produced oil; ninety-one of them were dry. E. W. Barber discovered Barbers Hill's potential in 1889 when he accidentally found inflammable gas near his home while digging a sixty-five-foot water well. Even Patillo Higgins, the man who believed there

¹⁰ Diana Davids Olien and Roger M. Olien, *Oil in Texas: The Gusher Age, 1895-1945* (Austin: The University of Texas Press, 2002), 33.

¹¹ Judith Walker Lindsley, Ellen Walker Rienstra, and Jo Ann Stiles, *Giant Under the Hill: A History of the Spindletop Oil Discovery at Beaumont, Texas, in 1901* (Austin: Texas State Historical Association, 2002), 42.

was oil at Spindletop, dug five holes after receiving some leases from Dr. George Collier.¹² Unfortunately, he encountered hard cap rock each time. Others also tried to follow in his footsteps, but they only found small amounts of heavy, viscous oil. This continued until 1916, when the Gulf Production Company and the Humble Oil & Refining Company's fourth well produced forty daily barrels at 1,751 feet. Even though the first wells in Barbers Hills were unsuccessful, it was still an important oil field because it was located only eleven miles north of Goose Creek. This helped lead businessmen to Goose Creek, which would be the next big discovery.

According to Margaret Swett Henson, the author of the first historical study about Baytown, "the discovery of the Goose Creek oil field took place in 1903, or perhaps 1905 (memories differ), when either W.J. or Royal Matthews of La Porte, an oil scout, visited Gaillard [Peninsula] to fish in Tabb's Bay."¹³ During that visit, Gaillard pointed out some bubbles on the bay, which he thought meant feeding fish were present. Matthews had a different idea. Instead, he suspected that the bubbles meant there was a gas field underneath the bay. To prove his theory, he threw a lighted match into a bubble patch. Unsurprisingly, the bubble patch flamed up, inspiring him to go find investors to fund his quest for oil in this new potential site. On October 26, 1905, Minnie Gailliard, R. A. Welch, James Isenhour, H. T. Rue, and John Gailliard signed "the first oil lease ever made in the Goose Creek field."¹⁴ The lease expired

¹² George M. Bevier, "The Barbers Hill Oil Field, Chambers County, Texas," in *Geology of Salt Dome Oil Fields*, ed. Raymond C. Moore, Wallace E. Pratt, Donald C. Barton, Alexander Deussen, and J. P. D. Hull (The American Association of Petroleum Geologists, 1926), 530-531.

¹³ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Heritage Society, 1986), 76-78.

¹⁴ J. S. Pratt, "Field Here Has Produced Hundred Million Barrels Oil," *Semi-Weekly Tribune-Humble Day Number*, May 12, 1925, 25.

sixty days later, on December 26, 1905. Drilling began on December 24. They augered a pipe into the ground at the John Gailliard block. Workers drilled 800 feet before abandoning it because they found saltwater. However, many potential investors rejected his proposal because they were reluctant to fund drilling of oil offshore.

The other story about the origins of the Goose Creek oil field dates the discovery to 1906 when a fishing party, consisting of L. P. Garrett, R. A. Welsh, and R. T. Rue, noticed gas seeps there. After carefully investigating the area, they discovered several gas seeps and paraffin beds in the area.¹⁵ Two years later, they formed the Goose Creek Production Company and leased the land surrounding the oil field. The company began drilling its first well on December 1907, north of John Gaillard's home. They found a small amount of oil at 700 feet, but they continued drilling. After two years, they reached 1,700 feet but abandoned the well.

Drilling continued until the Goose Creek Production Company found its first producing well on June 2, 1908 at 1,540 feet deep. This oil well produced between 700 and 800 barrels each year. The second drilling well began producing on December 1908. It produced 125 daily barrels at 1,280 feet deep.¹⁶ The Producers Oil Company bought the wells for \$50,000 in cash and a one-fourth overriding royalty, which meant the company also surrendered its leases. This allowed wildcatters, speculators, and numerous oil companies to drill dry holes in the field. At one point, they reached 1,500 feet deep.

¹⁵ H. E. Minor, "Goose Creek Oil Field, Harris County, Texas," in *Geology of Salt Dome Oil Fields*, ed. Raymond C. Moore, Wallace E. Pratt, Donald C. Barton, Alexander Deussen, and J. P. D. Hull (The American Association of Petroleum Geologists, 1926), 546.

¹⁶ J. S. Pratt, "Field Here Has Produced Hundred Million Barrels Oil," *Semi-Weekly Tribune-Humble Day Number*, May 12, 1925, 25.

The discovery that sealed Goose Creek's importance in history occurred on August 24, 1916 at 12:30 a.m. The American Production Company was drilling on the Gaillard tract when they encountered sand at 2,030 feet deep. This oil well produced about 5,000 barrels of oil every day.¹⁷ The oil was dark green oil that smelled like cedar. This discovery, later known as Gaillard #1, officially attracted new people to the area, helping the surrounding areas grow. During that same period, Robert L. Blaffer and Williams Stamps Farish, two of Humble Oil's owners, bought some large wells at the oil field, which they owned jointly with the Wiess interests under the management of Harry C. Weiss. Additionally, Walter W. Fondren was also there as an individual deep-drilling operator.¹⁸ Other big discoveries soon followed Gaillard #1.

Now that oil had been discovered on this oil field in large quantities, there was a need for a refinery where it could be processed. In 1917, nine men organized to create the Humble Oil & Refining Company. The men who founded this company had participated in or had knowledge about Texas' oil industry. Charles B. Goddard and Walter W. Fondren were drillers and producers at Corsicana and Spindletop.¹⁹ William Stamps Farish and Robert Lee Blaffer met in 1912 in an oilmen's rooming house, which led to the Blaffer & Farish partnership. Harry Carothers Wiess was a civil engineer who oversaw his family's Reliance Oil Company. Lobel A. Carlton and Edgar E. Townes were lawyers specializing in petroleum law. The other businessman

¹⁷ "Goose Creek, as it was, and is: Some Interesting Sidelights on Early History of the Town," *Semi-Weekly Tribune*, May 12, 1925, 12.

¹⁸ Henrietta M. Larson and Kenneth Wiggins Porter, *History of Humble Oil & Refining Company* (New York: Harper & Brothers Publishers, 1959), 35.

¹⁹ Henrietta M. Larson and Kenneth Wiggins Porter, *History of Humble Oil & Refining Company* (New York: Harper & Brothers Publishers, 1959), 22.

who helped create the company was Houstonian Jesse H. Jones, a well-known real estate operator and lumber dealer. His experience in the oil industry was leasing a lot near Spindletop, subdividing it, and selling it. Lastly, two brothers, Ross S. and Frank P. Sterling, began working near the oil fields in 1903. Their shared interests helped them build professional relationships with each other and other businessmen at the Goose Creek oil field.

Some soon realized that to save money and resources, it would be easier to merge their interests into a single company. On January 1911, Sterling and Goddard joined G. Clint Wood, S. K. Warrner, M. C. Hale, and J. W. Fincher to form the Humble Oil Company. They achieved this by combining a capital worth \$150,000, and they received the company's charter on February 16, 1911. Even though they based their company in Humble, they soon decided to move its headquarters to Houston. However, the event that led to the Humble Oil & Refinery Company's formation was the Texas Company's request for the integration of oil companies into one sole company to produce, transform, and refine the oil into fuel.²⁰ In response, Sterling, Fondren, and Weiss joined other independent producers and formed the Texas Oil Producers and Landowners Association.²¹ Even though Sterling was the group's leader, Farish was the man who began grappling with the possibility of merging several independent companies into one, separate from the Texas Company.

²⁰ Jordan Blum, "The March from Humble Oil to Exxon Dates Back More Than a Century," *Houston Chronicle*, May 25, 2016, accessed April 1, 2020, <https://www.chron.com/local/history/economy-business/article/The-march-from-Humble-Oil-to-Exxon-dates-back-7943392.php>.

²¹ A. J. Hazlett, "Producers Organize to Oppose Bill Advocated by Texas Co.," *Fuel Oil Journal*, Volume 6 (February 1915),74.

The Texas Company's bill passed in 1917 after the Gulf Coast Oil Producers Association, another group of independent producers, supported "a bill constituting pipelines as common carriers under the control of the Railroad Commission."²² The 1917 bill allowed Sterling and the other independent producers to file a charter with the Secretary of State of Texas on May 17, 1917 for their own company. They received their charter on June 21, 1917, which legalized the existence of the Humble Oil & Refining Company. After selecting the company's trademark and colors, they had to select a location to build the company's first refinery.

The company decided to build the refinery near the Goose Creek oil field, where production was still booming. Between 1917 and 1919, "the field produced between 7,288,716 and 9,419,132 barrels each year... [making it] the third largest producing field in Texas after Humble and Sour Lake."²³ The Jersey Standard Oil Company offered to help build the refinery and help it begin its operations, and Humble Oil agreed. On the property where they planned to build the refinery stood "an old farm house situated in the center of a rice plantation, surrounded by a thicket of senna beans and brush."²⁴ The company acquired the land in 1918 when the property was "a two hundred acre field of corn...producing about eight thousand bushels in the whole field."²⁵ Ross S. Sterling, one of the company's founders, remembered the 26,000 acres as land dense with pine and hardwood trees, partly next

²² Jacqueline Lang Weaver, *Unionization of Oil and Gas Fields in Texas: A Study of Legislative, Administrative, and Judicial Policies*, United Kingdom: Routledge, 2013), 394.

²³ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Heritage Society, 1986), 82.

²⁴ "Baytown Has Phenomenal Growth: Rice Field Transformed into a Modern Industrial Plant," *Semi-Weekly Tribune*, May 12, 1925, 1.

²⁵ "Goose Creek as it Was, and is: Some Interesting Sidelights on Early History of the Town," *Semi-Weekly Tribune*, May 12, 1925, 12.

to the San Jacinto Bay.²⁶ The tract they selected was along the newly opened Houston Ship Channel, which the Atlantic, Gulf, and Pacific Company completed in 1914. Additionally, in 1913, the United States Army Corps of Engineers also supervised the building of a two-hundred-mile segment below Galveston, which ultimately connected to the ship channel. The company building the ship channel originally promised to finish the channel in three and a half years, but they finished it faster than expected.²⁷ The completed twenty-five-foot-deep channel extended from Galveston to Houston, which would allow all types of vessels to dock at the refinery. Access to this important waterway guaranteed that the refinery the opportunity to import and export a variety of products and materials.

Construction for refinery began on April 16, 1919. Many of the workers who helped construct the refinery were either African American or Mexicans. The refinery hired workers of color for two reasons. When construction of the refinery began, many white workers abandoned their jobs because they had trouble adjusting to the site's marshy and wooden surroundings polluted by tar, oil, and other toxic chemicals.²⁸ Second, in 1916, white oil field workers with Humble Oil's permission, created a local union under the Texas State Federation of Law and the Houston Trades Council. In November 1, 1917, as World War I was underway, more than 2,000 workers walked off their jobs after demanding recognition of their union and a raise. The refinery

²⁶ Ross S. Sterling and Ed Kilman, *Ross S. Sterling, Texan: A Memoir by the Founder of Humble Oil and Refining Company* (Austin: University of Texas Press, 2007), 37.

²⁷ Marilyn McAdams Sibley, *The Port of Houston: A History* (Austin: The Steck Company, 1968), 141.

²⁸ John D. Márquez, *Black-Brown Solidarity: Racial Politics in the New Gulf Coast* (Austin: University of Texas Press, 2013), 89.

called their actions “dangerous and unpatriotic during the war times” and began hiring both Mexican and African American workers.²⁹ According to historian Arnolde de León, many Mexican workers had arrived to the Houston area fleeing the turmoil created by the Mexican Revolution between 1910 and 1917, where refineries recruited them as cheap and unskilled labor.³⁰ Meanwhile, the company hired African Americans from rural communities throughout Texas, western Louisiana, and other states. Many of these workers settled in feeder communities, which helped Houston grow.³¹

Workers had to clear and drain the land, which was not an easy task. Mosquitoes, flies, grasshoppers, snakes, Brahman bulls, and 100 days of consecutive rain made the refinery’s building a hard task. Additionally, the rain made the few roads in the area impassable, frequently isolating the area. Sometimes, the only way to enter the area when it was rainy and muddy was riding an ox cart.³² Despite these natural obstacles, the contractor, Captain Willard Averill, was able to drill water wells. Prior to his contract with Humble Oil, Averill had built other refineries and managed the Dixie refinery in San Antonio. He built water wells, and workers built a railroad and power lines. The refinery began production on May 11, 1920, but its formal completion was on April 21, 1921, San Jacinto Day. By 1923, it was already a profitable location.

²⁹ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Heritage Society, 1986), 94.

³⁰ Arnolde de León, *Ethnicity in the Sunbelt: Mexican Americans in Houston* (College Station: Texas A&M University Press, 2001), 7.

³¹ Bernadette Pruitt, *The Other Great Migration: The Movements of Rural African Americans to Houston, 1900-1941* (College Station: Texas A&M University Press, 2013), 5.

³² ExxonMobil Baytown Area Public and Government Affairs Department, *ExxonMobil Baytown: A Ninety-Year Legacy* (Houston: R. R. Donnelley Printing Co., 2010), 9.

The refinery provided housing to all workers, but the conditions during the refinery's early years were harsh. There were no laundry facilities on the premises, so workers had to send their laundry away by boat to have it cleaned. Housing conditions were even worse. Workers slept inside an old army tent with one light bulb in the center. Each man had his own steel cot. Even before workers finished building the refinery, the company was already dividing the workers. The company divided workers by race, meaning that each group had its own separate tent camp. At the end of each row of tents, there were five-gallon cans serving as restrooms. An African American man, known as "Honey Boy," was responsible for emptying out the cans.³³ These terrible conditions made the workers constantly sick. Therefore, one of the first things Humble Oil did was hire the refinery's first physician, Dr. Charles M. Aves in August 1919. Since he knew it would be a difficult task, he invited a former soldier, Norman Brooks Culver, to help him. Eventually, the company relocated Dr. Aves to Houston, leaving Dr. Culver to treat workers at the refinery. The refinery's first hospital, a temporary facility, was a small wooden building with eight beds for white men. African American and Mexican workers had to stay in segregated tents around the wooden building, which were humid and muddy.³⁴ Some of the cases Dr. Culver treated included hangovers, eye irritations, animal bites, bullet wounds, broken or

³³ Diane Krizak, "You've Come a Long Way, Baby," in *Baytown Vignette: One Hundred and Fifty Years in the History of a Texas Gulf Coast Community*, ed. John Britt and Muriel Tyssen (Baytown: Lee College, 1992), 75.

³⁴ Dr. Norman B. Culver, interview by Sarah Swofford, *The Oral Histories of the Citizens of Baytown*, Lee College, The Portal to Texas History, The University of North Texas Libraries, September 19, 1979, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013829/m2/1/high_res_d/BT39_Norman_B.-Doc-Culver_Transcript.pdf.

amputated limbs, sunburns, knife wounds, diarrhea, vomiting, athlete's foot, and food poisoning. Sometimes, due to the lack of medical resources and space, these patients had to be near men suffering from malaria, smallpox, influenza, typhoid, and pneumonia.³⁵

These types of housing communities were called "rag towns." Workers also sometimes called them "poor-boy camps." Not only did these communities serve as housing for workers, but they also helped them build up seniority rights in refineries operating under union contracts. Workers built up seniority rights by first working in "low unskilled jobs requiring considerable physical efforts [and gradually advancing] to more skilled positions."³⁶ This was important for those interested in seeking permanent housing through their companies because it demonstrated their commitment to the company. Humble Oil workers were lucky to receive permanent housing sooner than workers in other oil fields. Regardless of their location, the conditions in other rag towns were like those in the Goose Creek oil field. For example, workers at the Pyote oil field in West Texas had to put wood under and around their tent rag houses before putting up screens to keep flies out.³⁷ Meanwhile, workers in nearby McCamey had to oil their bedposts and table legs with kerosene to avoid ants. Workers there also had to cover their food from sand.³⁸

³⁵ Diane Krizak, "You've Come a Long Way, Baby," in *Baytown Vignette: One Hundred and Fifty Years in the History of a Texas Gulf Coast Community*, ed. John Britt and Muriel Tyssen (Baytown: Lee College, 1992), 76.

³⁶ United States Department of Labor, "Monthly Labor Review Index to Volume 57, July to December 1943" (Washington D.C.: U.S. Government Printing Office, 1943), 203.

³⁷ Roger M. Olien and Diana Davids Olien, *Life in the Oil Fields* (Austin: Texas Monthly Press, 1986), 88.

³⁸ Roger M. Olien and Diana Davids Olien, *Life in the Oil Fields* (Austin: Texas Monthly Press, 1986), 89.

Most oil companies began providing permanent housing during the 1920s and 1930s as a means of attracting and keeping workers. Permanent housing also helped the workers' wives create an adequate place to raise their families. More importantly, permanent housing served as a tool "to build the kind of loyalty to the company that led to higher productivity on the job and discouraged support for the organization efforts of labor unions."³⁹ The companies made these properties physically attractive by planting grass, trees, and flowers. They also provided amenities to make them even more attractive.

The company-sponsored housing opportunities were appealing because many workers wanted housing for their families. When Humble Oil bought the tract for the refinery, there were already other nearby worker communities, such as Goose Creek and Pelly. Soon after the refinery's construction began, Ross S. Sterling transformed Goose Creek into "a company town owned by Humble Oil."⁴⁰ Humble Oil workers soon built shacks and tents in Goose Creek where they had access to bars, gambling places, and brothels. These locations, along with constant street fights, earned the camp the reputation of "an untidy and unruly camp."⁴¹ Therefore, Humble Oil executives began planning for better housing for the workers. For example, they relocated the workers to family-friendly tents they arranged into rows outside the refinery and sat on wooden floors. Four screens surrounded each tent, which had a

³⁹ Roger M. Olien and Diana Davids Olien, *Life in the Oil Fields* (Austin: Texas Monthly Press, 1986), 109.

⁴⁰ Patricia Bernstein, *Ten Dollars to Hate: The Texas Man Who Fought the Klan* (College Station: Texas A&M University Press, 2017), 189. Buck A. Young, "Baytown Police Scandal," *East Texas Historical Journal* 27, No. 2 (October 1989), 42.

⁴¹ Margaret Swett Henson, *History of Baytown* (Baytown: The Bay Area Heritage Society, 1986), 80.

high peaked center.⁴² The company also built a credit-based meat market, gasoline station, commissary, and drug store. Single men could live in a two-story dormitory that the refinery also built. The other residence section the refinery built included several small residential sections of homes in different sizes, identifying the residents' occupation at the refinery. The smaller homes with brown walls were for laborers. Foremen and supervisors owned the gray stucco homes with white-trim roofs. Meanwhile, managers lived in two-story houses with white walls and adobe roofs.⁴³

In 1923, three years after production began at the refinery, Humble Oil executives began planning the first permanent community for their workers. The site they selected was a frog pond and waste stretch between the refinery and Black Duck Bay, which they named East Baytown. Former Mayor John T. Brown owned the ninety-acre tract. Until the establishment of the Brownwood subdivision, East Baytown was the most exclusive community near the refinery. According to the company, East Baytown “was built through a common effort of the part of the employees who desired to own their own homes, and the Company’s desire to aid them in realizing their ambition.”⁴⁴ The planning for this community took two years because the refinery needed to clear the title for the land before building could begin. Before subdividing the property into lots, Humble Oil drained the lot, built streets and sidewalks, and installed utilities. Humble Oil then sold the lots to “Humble employees

⁴² Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Heritage Society, 1986), 95.

⁴³ Robert L. Schaadt, “ExxonMobil 100 Years of Oil,” *The Baytown Sun: 100 Years of Oil*, September 22, 2019, 5.

⁴⁴ “Additional Homesites to be Opened in East Baytown,” *The Humble Refinery Bee*, April 8, 1937, 8.

without any idea of profit to the Company” because it “financed the building of homes for its people on easy terms and at very low interest rates.”⁴⁵

Humble Oil made the lots in East Baytown accessible to the workers. Those interested in living there needed to have ten cents for a down payment. Once approved, they would pay small monthly installments at six percent interest. Since this was a good deal for well-paid employees, the refinery sold 380 lots and completed 145 buildings in only ten months. Even though most of the residents in this area worked as supervisors and skilled employees, some white unskilled workers were able to live there.⁴⁶ Additionally, some local businessmen also built homes in this community. Residents here enjoyed “full use of all city conveniences such as lights, water, gas, sewer system, storm sewers, and fire department.”⁴⁷ The town also had paved alleys, concrete curbs, gutters, and sidewalks.⁴⁸ According to the refinery workers who wrote for *The Humble Refinery Bee*, the company always tried to find ways to help workers, even during the Great Depression. In order to survive during this dark period, the refinery had to reduce the employees’ wages and hours. However, they reduced the payments on houses they had financed to the lowest amount possible.⁴⁹

⁴⁵ Pop Mabry, “Miscellany,” *The Humble Refinery Bee*, February 25, 1937, 6.

⁴⁶ Henrietta M. Larson and Kenneth Wiggins Porter, *History of Humble Oil & Refining Company* (New York: Harper & Brothers Publishers, 1959), 212.

⁴⁷ “Additional Homesites to be Opened in East Baytown,” *The Humble Refinery Bee*, April 8, 1937, 8.

⁴⁸ Dr. Norman B. Culver, interview by Sarah Swofford, The Oral Histories of the Citizens of Baytown, Lee College, The Portal to Texas History, The University of North Texas Libraries, September 19, 1979, transcript, https://texashistory.unt.edu/ark:/67531/metapht1013829/m2/1/high_res_d/BT39_Norman_B.-Doc-Culver_Transcript.pdf.

⁴⁹ M. V. Berry, “Let’s Talk About Old Times Again,” *The Humble Refinery Bee*, March 11, 1937, 12.

In March 1937, as the nation recovered from the Great Depression, Humble Oil executives decided to open two and half more blocks up for homesites on the undeveloped portion of East Baytown. The refinery made this decision because they noticed a new “need for additional homesites for employees who desire to build their homes.”⁵⁰ In order to make these properties accessible to employees, Humble Oil decided to use the same financial program as the first time. The refinery planned to make fifty-eight lots available. This new area would have a sanitary sewer system, a drainage system, water lines, and fire hydrants. Additionally, there would be concrete structures, such as alleys, curbs, gutters, and sidewalks. By this point, there were more than 500 homes in East Baytown, with Humble Oil financing 507 homes.

It is important to highlight that during this second phase, there was a housing shortage in the communities surrounding the refinery due to new construction in the refinery and an increase in plant personnel to sustain the refinery’s growth. As a result, Humble Oil created a list of rules for potential buyers. According to Jack P. Jones, the refinery’s Chief Accountant, interested buyers needed to have good credit and could not own other homes or residence sites. If approved, they had to build their homes in a year or less.⁵¹ Additionally, they could not transfer or sell their lot within that first year. Since this was a desirable area and there was a housing shortage, Humble Oil decided to hold a drawing among eligible prospective workers.

Humble Oil’s paternalism extended beyond providing homesites for employees. The company built a public library for Goose Creek residents.

⁵⁰ “Additional Homesites to be Opened in East Baytown,” *The Humble Refinery Bee*, April 8, 1937, 9.

⁵¹ Jack P. Jones, “Drawing for East Baytown Homesites to be Held Soon,” *The Humble Refinery Bee*, July 1, 1937, 10.

Additionally, it gave land for schools and paid for property taxes. Therefore, by 1937, there were five schools in Goose Creek, Pelly, and East Baytown. East Baytown had two elementary schools and one junior high. The other two were Mexican and “colored” schools in Goose Creek and Pelly.⁵² The schools were part of the Goose Creek Independent School District, which the communities established in 1918 after creating a school district separate from nearby Cedar Bayou.⁵³

Unfortunately, only white workers and their families could live in East Baytown because the refinery had separate housing for Mexican and African employees. Even though workers of color helped build the refinery and accounted for more than half of its employees by the end of 1919, these workers lived in separate tent cities. They also received fewer benefits from the company. Even worse, when the decrease of oil product forced Humble Oil officials to lay off workers, white workers pressured colored workers to vacate their jobs. Many succumbed to the pressure and left. The remaining workers of color stayed in “the lower paying jobs and inferior housing” provided by refinery officials.⁵⁴

The only partial benefit workers of color received was that the refinery helped them build a sense of community. Mexican workers referred to their community as *El Campo*, and it was located “in a fenced area southeast of the refinery.”⁵⁵ African American and Mexican workers had their separate tent cities with a playground and

⁵² Howard E. Humphrey, “Pleasant Memories of Seventeen Years,” *The Humble Refinery Bee*, May 6, 1937, 15.

⁵³ J. S. Spratt, “Goose Creek’s Schools,” *Semi-Weekly Tribune-Humble Day Number*, May 12, 1925, 5.

⁵⁴ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Heritage Society, 1986), 98.

⁵⁵ Refugio Martinez, “Humble Memories,” *The Baytown Sun*, October 17, 2019, accessed April 2, 2020, http://baytownsun.com/local/article_2c394b7c-ef8e-11e9-880f-6bbc6c9e0e0c.html.

schools. They also shared a community building that they used for special events and meetings. Segregation occurred on many levels in Houston in the early decades of the 20th century. Historian Tyina L. Steptoe describes, “Ethnic Mexicans and African Americans were on different sides of the line in [nearby] Jim Crow Houston.”⁵⁶ Ethnic Mexicans faced discrimination, but some light skinned people were able to cross the race line in some racialized public spaces, such as schools, and enjoy the economic privilege associated with whiteness. This was partly true at the Humble Oil refinery, and the common space joined the communities.

Humble Oil originally built Community House No. 2 for its Mexican and African American workers. In *The Humble Bee*, the refinery’s officials called it the Mexican Recreation Hall; Mexicans called it *El Salón* because they lived closer to it. The only equipment the refinery provided for this building were the foldable chairs used during special occasions celebrations. *El Salón* “had no lounge, no office. It was just a plain wooden structure. The inside walls were unfinished with the 2-by-4 boards exposed.”⁵⁷ Since African Americans and Mexicans had this recreation hall, they were excluded from the refinery’s annual picnics and celebrations, such as Humble Day, San Jacinto Day, and Labor Day. These sponsored events were for white workers and their families. As a result, workers of color created their own memorable experiences for their families. Even though officials did not allow them to participate in the festivities they sponsored, they allowed them to celebrate Cinco de Mayo and

⁵⁶ Tyina L. Steptoe, *Houston Bound: Culture and Color in a Jim Crow City* (Oakland: University of California Press, 2016), 85.

⁵⁷ Anna Marie Martinez Lopez, “El Salon: Longtime Hispanic Residents Remember Their Recreation Hall,” *The Baytown Sun*, April 12, 1993, 1-B.

Juneteenth.⁵⁸ As part of these holidays, workers of color created their own organizations to plan these events and parades accompanied the activities. They also hosted dances, weddings, anniversaries, birthdays, holidays, and graduations there.

The community center was very important for both communities. Mexican community members petitioned for a more adequate building because *El Salón*'s interior was rapidly deteriorating. They were concerned because "both groups viewed the structure as a home space where families could come together to celebrate ethnic customs and holidays."⁵⁹ The refinery completed the new building on March 1957 and shut down the original building. Along with change in the building materials and structure, the structure received a new name from the community: *El Salon Nuevo*. This new building was bigger and nicer than the previous one, and it even had a lounge and kitchen facilities. Sadly, the building did not last long. Humble Oil removed the building as a safety precaution because "the building was located within the perimeters of the Refinery."⁶⁰ This helped both groups create new communities away from the refinery with their own private spaces.

These two groups also had to deal with the Ku Klux Klan's revival between 1920 and 1922. The Klan flourished during this period because "the country was suffering from a widespread postwar depression, both economic and spiritual."⁶¹ The

⁵⁸ Margaret Swett Henson, *The History of Baytown* (Baytown: The Bay Area Heritage Society, 1986), 98. Olga Miller Haenel, "A Social History of Baytown, Texas, 1912-1956," (MA Thesis: The University of Texas, 1958), 116.

⁵⁹ John D. Márquez, *Black-Brown Solidarity: Racial Politics in the New Gulf Coast* (Austin: The University of Texas Press, 2013), 93.

⁶⁰ Anna Marie Martinez Lopez, "El Salon Nuevo: Longtime Hispanic Residents Remember Their Recreation Hall," *The Baytown Sun*, April 12, 1993, 1-B.

⁶¹ Patricia Bernstein, *Ten Dollars to Hate: The Texas Man Who Fought the Klan* (College Station: Texas A&M University Press, 2017), 25.

closest chapter to the refinery was in Goose Creek. The Klan created a chapter there due to the community's reputation as a rowdy oil town and its proximity to the refinery, where the number of workers of color continued increasing. This new Klan "portrayed itself as a fraternal association that protected 'American interests.'"⁶² It was concerned with the morality of its community, especially the bodies of white women.⁶³ In nearby Houston, the city's white leaders fully supported the organization. In the Baytown area, the Goose Creek Klan took things one step further, and it "legitimized itself by claiming that Baytown lacked its own local police force and needed a vigilante group to maintain social order."⁶⁴

There were Klan members everywhere, including at the Humble Oil refinery. In fact, many local accounts suggest that Ross S. Sterling, Humble Oil's founder, was a member of the Klan's chapter in Houston.⁶⁵ Jimmy Carroll, an Humble Oil employee, recalled that Houston Klan members would drive down to Goose Creek on Friday evenings and drive around in a Cadillac with the top down. They would drive down to look for someone to whip.⁶⁶ Klan members used fear, violence, and coercion to recruit members. Some of the ways Klan members made their presence known included a parade down present-day Texas Avenue on May 28, 1921, distributing

⁶² Tyina L. Steptoe, *Houston Bound: Culture and Color in a Jim Crow City* (Oakland: University of California Press, 2016), 42.

⁶³ Suzanne Blankenship, "Oil and Morals: The Klan in Goose Creek," in *Baytown Vignettes: One Hundred and Fifty Years in the History of a Texas Gulf Coast Community* ed. John Britt and Muriel Tyssen (Baytown: Lee College, 1992), 80-81.

⁶⁴ John D. Márquez, *Black-Brown Solidarity: Racial Politics in the New Gulf South* (Austin: University of Texas Press, 2013), 97.

⁶⁵ Olga Miller Haenel, "A Social History of Baytown, Texas, 1912-1956," (MA Thesis: University of Texas, 1958), 32.

⁶⁶ Jimmy Carroll, interview by Martha Mayo, *The Oral Histories of Citizens of Baytown*, Lee College, The Portal to Texas History, The University of North Texas Libraries, February 25, 1986, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013849/m2/1/high_res_d/BT54_Jimmy_Carroll_Transcript.pdf.

flyers around the refinery, displaying statues, and lynching several individuals. Even though the Klan did not last long, its presence was enough to reinforce white supremacy and keep each race in their corresponding sections. Mexican, African American, and white communities continued growing, but they made sure to reinforce the racial boundaries around the area. After the national attention Goose Creek received due to the Ku Klux Klan, white residents knew that the only way to continue keeping the communities segregated was to include racial restrictions in the deeds of future settlements. Humble Oil executives made sure to implement this strategy when they grew “tired of their stucco row homes in the refinery and wanted something more permanent.”⁶⁷ They began looking for a tract to build a new community, which they envisioned would be theirs, without the laborers, foremen, and supervisors that previously lived with them. Their search led them to the Edwin Rice Brown, Sr.’s estate in nearby Wooster, which they purchased in 1937.

The lot was part of part of the unincorporated community of Wooster, established by Quincy Adams Wooster in 1892. After moving from Iowa, Wooster and W. D. Crow bought land from Nathaniel Lynch’s league, William Hilbus’ league, and James Strange’s labor. Lynch arrived at the Baytown area in 1822 as part of Stephen F. Austin’s Old Three Hundred. Each family who accepted Austin’s invitation to Texas received a league, or 4,428 acres of grazing land, and a labor, or 177 acres of irrigable farmland.⁶⁸ Strange arrived in 1823, and his acreage included Scott Bay. Even though he stayed in the area until 1850, he sold his acreage in 1830. Meanwhile,

⁶⁷ Margaret Swett Henson, *The History of Baytown* (Baytown: The Bay Area Heritage Society, 1986), 128.

⁶⁸ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Heritage Society, 1986), 5-6.

Hilbus lived on his property but soon sold it to a man named William Bloodgood. In 1837, Lynch died, and his wife sold 480 acres from her husband's league to John Rundell from Mississippi. Rundell and his family moved to their new property in 1841, where he built a home on Scott Bay. He owned twelve slaves and cultivated sixty acres of cotton. In 1866, three years after Rundell's unexpected death, his heirs finally agreed to divide his estate. In 1892, Wooster and Crow bought one of these segments.

Wooster and Crow were business partners from Monona County, Iowa who settled in Brownwood. Another Monona County man, Junius Brown, and his family also settled in this area. Brown built his home overlooking Scott Bay, where Robert Witt's house stood on Crow Road.⁶⁹ Thru intermarriages, the Wooster, Crow, and Brown families "were the founding families of Wooster."⁷⁰ Wooster's son, John Lewis Wooster, married Jessie Margaret Brown, one of Junius Brown's daughters. Brown's other daughter, Sarah Edith Brown, married Wesley Ernest Crow, Crow's nephew. Brown's son Bertram married Ora Isenhour, and her sister married Wooster after his wife's death in 1900. W. D. Crow soon sold his interests and moved away. Meanwhile, the Woosters and Browns continued developing the area. The town was an unincorporated community, and it had a church, Wooster Baptist Church, and a school, Wooster Common School, No. 38. The community also had its own grocery

⁶⁹ Virginia Wingate, "Historic Schoolhouse," *The Baytown Sun*, June 26, 1990, 4.

⁷⁰ Trevia Wooster Beverly, "An Application for an Official Texas Historical Marker for Wooster," September 20, 2014, Harris County Historical Commission, 5. Whit Snyder, "Brownwood Descendants Were There Through it All," *The Baytown Sun*, May 13, 2002, 1-A.

store, fire department, restaurants, and pharmacy, and a Chamber of Commerce.⁷¹ Additionally, the community had a post office for twenty years, but it closed in 1914.⁷² During World War II, the community housed a camp of German prisoners of war.⁷³ It also “had its own water district and the streets and other facilities were maintained by the county.”⁷⁴ When the City of Baytown first tried to annex the community, residents refused because they wanted to protect their water district from the city. In 1952, *The Baytown Sun* reported that the 2,500 Wooster residents used 1,008,000 gallons of water daily, an average of 400 gallons per individual. Meanwhile, each Baytownian used an estimate of 80 gallons of water daily.⁷⁵ In other words, even as a smaller community, Wooster had more access to water than Baytown did.

In 1910, Edwin Rice II bought 530 acres from the Wooster estate for \$15,000. He bought the land hoping to find oil, so “he paid \$1,000 down and signed seven promissory notes for the rest at 6% interest.”⁷⁶ Meanwhile, he used the land “as a winter grazing site for their cattle.”⁷⁷ They would swim their 400 head of cattle to Goat Island. Unfortunately, he died in the late 1920s without finding oil on the property. Shortly after his death, his widow, Myra Cabiniss Brown, subdivided her

⁷¹ James Kingsmill, “Letters to the Editor: Coming Home to Wooster Sunday,” *The Baytown Sun*, January 21, 2016, 4.

⁷² Trevia Wooster Beverly, “Wooster, Texas,” *Handbook of Texas Online*, accessed February 1, 2020, <https://tshaonline.org/handbook/online/articles/hvw68>.

⁷³ Cristian Williams, “Can a Ghost Town/Toxic Dump Become a Park?” January 21, 2011, accessed March 24, 2020, <https://www.cristanwilliams.com/2011/01/21/can-a-ghost-towntoxic-dump-become-a-park/>.

⁷⁴ Mrs. Sammie McPhail, “Readers’ Views,” *The Baytown Sun*, July 23, 1979, 5-B.

⁷⁵ “Discussion Slated on Wooster Bond Issue,” *The Baytown Sun*, May 17, 1952, 1.

⁷⁶ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Heritage Society, 1986), 128.

⁷⁷ Whit Snyder, “Brownwood Descendants Were There Through it All,” *The Baytown Sun*, May 13, 2002, 1-A.

husband's estate between their three children. As the executor of his father's estate, Edwin Rice, Jr. was the one who divided the property into lots for the Humble Oil executives. The executives knew they wanted this area to be an exclusive neighborhood, so they restricted Mexican, Japanese, and Chinese residents.

The property Humble Oil executives bought was a peninsula shaped like a horseshoe and reached at least a quarter of a mile into the water.⁷⁸ The property stood about ten feet above sea level.⁷⁹ They liked the property because "people are drawn to the natural beauty of living on beachfronts...despite threats of hurricanes [and] floods."⁸⁰ The peninsula was along the Houston Ship Channel with three bodies of water surrounding it: Burnet, Scott, and Crystal Bays. Burnet Bay was named after David G. Burnet, the first president of the Republic of Texas and a Lakewood resident. Prior to his arrival, the Bay was known as the Bay of St. Mary. Scott Bay was named after William Scott, one of Stephen F. Austin's Old Three Hundred. Other nicknames for the bay included "Turkey Bay" and "Patchings Bay."⁸¹ Before its sinking, Goat Island stood between the peninsula and the Houston Ship Channel. Residents had "views of the Houston Ship Channel and the San Jacinto Monument, the spot where Sam Houston defeated General López de Santa Ana and the Mexican army leading to

⁷⁸ Cindy Horswell, "The Soggy Demise of Brownwood," *Texas: Houston Chronicle Magazine*, December 4, 1983, 4.

⁷⁹ Theron D. Garcia, "Subsidence and Surface Faulting at San Jacinto Monument, Goose Creek Oil Field, and Baytown, Texas," in *Field Trip Guidebook on Environmental Impact of Clays along the Upper Texas Coast. Prepared by Theron D. Garcia, Douglas W. Ming, and Lisa Kay Tuck for the Clay Minerals Society, 28th Annual Meeting*, 1991, A38.

⁸⁰ David R. Godschalk, David J. Brower, and Timothy Beatley, *Catastrophic Coastal storms: Hazard Mitigation and Development Management* (Durham: Duke University Press, 1989), 21.

⁸¹ Wanda Orton, "What's in a Name? Well...", *The Baytown Sun*, May 20, 1996, 4-A. Jane Howard, "Tracing Routes: Street Names Gives Clues About City's Past," *The Baytown Sun*, March 28, 1993, 4-EE.

Texas's independence."⁸² At night, residents could see the monument's star light up and hear the boats signaling each other. Simply put, the property was beautiful.

Making the Subdivision Home

Residents began purchasing lots shortly after the Humble Oil & Refining Company Baytown refinery purchased the Brown estate. The subdivision's first residents began moving to the neighborhood in the early 1940s, during World War II. According to local historian Margaret Swett Henson, the presence of Humble Oil's Baytown refinery helped Baytown and the surrounding areas experience a wartime boom that "ended the [Great] Depression and brought more workers to the Tri-Cities area."⁸³ The Baytown refinery produced synthetic toluene, 100-octane aviation gasoline, butadiene, and butyl rubber. These raw products were important to build bombs, shells, torpedoes, insulation, and rubberized cloth, all important products needed for the war effort. These became critical products when the United States entered the war, following Japan's attack on Pearl Harbor, Hawaii on December 7, 1941. However, this did not mean that Baytown residents were better off than the rest of the country. They still dealt with shortages and rationing.

Wartime scarcities meant that people could buy lots in Brownwood, but they could not build their dream homes. Baytown area residents understood the reality of wartime scarcities when a surprise hurricane made landfall at Bolivar Peninsula on

⁸² Gavin Paul Smith, "Remembrances of the Past, Concerns for the Future, and the Potential Resilience of a Southern Coastal Town," *Southern Cultures*, 22, No. 2 (Summer 2016), 72.

⁸³ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Society, 1986), 126.

July 27, 1943. At that time, residents referred to the hurricane as “the worst tropical hurricane to strike this section in a quarter of a century.”⁸⁴ The storm’s winds reached a maximum of 132 miles per hour, damaging more than 300 structures, and causing about \$1,000,000 in damages across East Harris county. For Bayshore Drive resident Mike Floyd, this hurricane was his “earliest memory of being in Brownwood.” He remembered, “Sitting in the front room with my mother and hearing the wind and stuff blowing on very hard, raining very hard.”⁸⁵ The need to ration essential materials for the war effort meant that residents “could find no material or labor to repair their homes and stores.”⁸⁶ In other words, there was no material to build new homes.

World War II ended in 1945, but the neighborhood’s building boom began in the 1950s when residents built “homes of all shapes and sizes...to fit a variety of pocketbooks.”⁸⁷ Following the war, there was an economic expansion worldwide, also known as the golden age of capitalism. The economy’s healthy growth encouraged the growth of families, creating a baby boom and the need for housing. According to historian Ronald Allen Goldberg, the nation’s “birth rate rose from 19.9 per 1,000 in 1944 to 25.8 per 1,000 in 1947.”⁸⁸ Therefore, veterans needed to find homes big enough to fit their growing families during a period when housing was very scarce.

In 1944, a year before the war ended, President Franklin D. Roosevelt had passed the Servicemen’s Readjustment Act of 1944, or the G.I. Bill, “to reward the

⁸⁴ “Homes and Business Houses Wrecked by 100-Mile Hurricane,” *The Daily Sun*, July 28, 1937, 1.

⁸⁵ Mike Floyd, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 20:27, <https://www.youtube.com/watch?v=vJvIBAYHQpI&t>.

⁸⁶ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Society, 1986), 127.

⁸⁷ Whit Snyder, “Brownwood Descendants Were There Through it All,” *The Baytown Sun*, May 13, 2002, 2-A.

⁸⁸ Ronald Allen Goldberg, *America in the 1940s* (Syracuse: Syracuse University Press, 2012), 98.

soldiers of World War II with a comprehensive program that encompassed education, housing, and unemployment benefits.”⁸⁹ This bill, which ended in 1956, also guaranteed loans for veterans to purchase a small business, homes, or farms. As American political scientist Suzanne Mettler argued, the bill “had an overwhelmingly positive effect on male veterans’ civic engagement. Those veterans who utilized the provisions became more active citizens in public life in postwar years than those who did not.”⁹⁰ The veterans who took advantage of this bill finished their education and housing opportunities, which help sustain their growing families. This helped build some very-needed homes.

Prospective residents had three options if they wanted to move to the Brownwood addition. They could either buy homes that real estate and contractors were building, build their own, or purchase a previously owned home. According to Mr. E. B. Wilson, he sold his home on Mapleton Avenue in 1945 after rebuilding his home following the 1941 Texas hurricane. He said, “We sold that house right at the end of the war when there was a tremendous shortage, and people would have bought the house then, standing at the driveway without seeing the inside.”⁹¹ Veterans could use G.I. loans to purchase these homes. During the program’s existence, ninety-

⁸⁹ Ronald Allen Goldberg, *America in the 1940s* (Syracuse, Syracuse University Press, 2012), 45.

⁹⁰ Suzanne Mettler, *Soldiers to Citizens: The G. I. Bill and the Making of the Greatest Generation* (Oxford: Oxford University Press, 2005), 10.

⁹¹ Mr. B. E. Wilson, interview by Dr. James Maroney, The Oral Histories of Citizens of Baytown, Lee College, The Portal to Texas History, The University of North Texas Libraries, February 20, 1976, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013917/m2/1/high_res_d/BT15_B._E._Wilson_Transcript.pdf.

families bought lots at the subdivision.⁹² Real estate agents tried to recruit veterans, as demonstrated by the advertisements they placed in the classified section of *The Baytown Sun*. Each real estate agent selling lots and homes in the Brownwood addition offered different payment options for veterans. For example, Jake Rutter from Rutter Realty offered a “large six room home with two baths, central heat to every room, two car garage, with game room and bath” on Crow Road.⁹³ If a veteran was interested, he could pay for the property using 100% G.I. loans. Meanwhile, if veterans decided to buy a Brownwood home with realtor “Sparky” Bond from Bond Realty Co., they had to make a down payment of ten percent with cash. They could pay the remaining balance (ninety percent) using G.I. of FHA loans. In 1947, he offered a 100 feet x 210 feet lot on Crow Road for \$1,600, a new five-room house on Cabaniss Avenue for \$1,400 down, and three 100 feet waterfront lots on Burnett Bay ranging from \$2,7750 to \$3,250.⁹⁴ Something else that helped families move into the Brownwood was Humble Oil’s promise to “place returning veterans in their old jobs with as little delay as possible” and help them find housing.⁹⁵

At least one World War II veteran did live in the Brownwood subdivision. His name was Matthew F. Heiman, and he served as a fighter pilot during the war. His family moved to the subdivision after he finished his education at the University of Texas at Austin when his daughter, Christine Anne, was a year old. According to his

⁹² “Dates Brownwood Property Owners Acquired Property,” October 1979, “Baytown-TX-Land Subdivisions-Brownwood,” vertical files, Sterling Municipal Library.

⁹³ Jake Rutter, “List Your Property for Sale with Rutter Realty,” *The Baytown Sun*, December 16, 1949, 10.

⁹⁴ Sparky Bond, “Always the Best – in Real Estate at Lowest Prices,” *The Daily Sun*, August 1, 1947, 7.

⁹⁵ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Society, 1986), 127.

daughter, he worked as a commander at Ellington Field. However, the 1952-1953 city directory listed him as a Pilot Plant Technician at General T&R Company, and the 1955-1956 one listed him as a United States Air Force Captain. His daughter recalled, “One of my favorite memories was when my father would fly over Brownwood. He could always spot the peninsula where we lived from the air, so he would give my brothers and I reflector mirrors that pilots use if they’re ever down. We would go out and get in our swimming pool...and we’d flash my dad.”⁹⁶ He usually flew over the subdivision in a Convair F-102 Delta Dagger.

Although contractors and residents were free to build the homes they wanted, their properties had to maintain a certain image. Edwin Rice Brown II helped develop the property for Humble Oil, as requested by Heinz Baker, and Humble Oil & Refining Company president. Brown’s son, Jeff Brown, recalled that representatives from the company would visit their Houston home ““with a bunch of maps and charts. They are the ones who mapped out the streets and did the work on it.””⁹⁷ Brown would simply look at the charts and sign them. However, he had two important requests. The lots had to be large, and the trees could not be bulldozed. He wanted the subdivision to be a wooded community because he loved gardening and trees with low limbs. This meant that as a wooden area, there were animals everywhere, ranging from birds to snakes to squirrels. At its height, there were about four hundred homes on a dozen streets: Bayshore Drive, Brownwood Drive, Cabaniss Avenue, Crow Road, Katherine Street, Linwood Drive, MacArthur Avenue, Milner Drive, Mapleton Avenue, Queens

⁹⁶ Christine Ann Heiman, interview by Steve Koester, Sterling Municipal Library, YouTube May 18, 2002, video, 01:18, <https://www.youtube.com/watch?v=6--gyhsqTHkn>.

⁹⁷ Whit Snyder, “Descendants Were There Through it All,” *The Baytown Sun*, May 13, 2002, 5-A.

Court, Ridgeway Avenue, and West Bayshore Drive. Visitors and residents entered the neighborhood thru Market Street Road, later known as Bayway Drive. This street easily connected the neighborhood to Houston and surrounding communities.

According to Virginia Williams Wingate, a Wooster resident, “If people needed to travel to Houston, they did so on Market Street Road through Wooster, through Wooster Heights, and on to what is now known as North Market Loop.”⁹⁸

The Homes

Homeowners began purchasing lots and building their homes shortly after Humble Oil executives bought the Brown estate. From the beginning, they were proud to move to this subdivision. Some demonstrated this by hosting open houses to show off their homes. On May 28, 1939, Mr. and Mrs. Booth invited their Goose Creek and Baytown friends to view their new “white brick two story colonial residence ... furnished in keeping with the colonial period” on Bayshore Drive, along Crystal Bay.⁹⁹ During the open house, the couple served light refreshments, which guests enjoyed on the screened porch. Prior to the event, Mrs. Booth decorated the thirteen rooms in their homes with shasta daisies, carnations, gladioli, roses, and dwarf zinnias. Booth worked as the head clerk of the tabulating division of the refinery’s accounting department. Prior to their marriage, his wife worked at the refinery’s industrial relations department.

⁹⁸ Wanda Orton, “Bygone Era in Wooster Remembered,” *The Baytown Sun*, June 7, 2009, 1B.

⁹⁹ Jean Phipps, “Society and Clubs: Booths Entertain with Open House Sunday,” *The Daily Sun*, May 30, 1939, 3.

Residents were also able to show off their homes when hosting events. On December 7 and 8, 1954, two Brownwood couples helped host the Christmas pilgrimage sponsored by the women of Trinity Episcopal Church. Humble Oil physician Dr. George S. Bays and his wife decorated their West Bayshore Drive with a modern theme. Their large den/recreation room had Styrofoam and wire decorations hanging from the ceiling beams. Meanwhile, Humble Oil technician John M. D. Heald and his wife, Elizabeth, decorated their home on Bayshore Drive traditionally. They decorated their foyer with burning candles and large magnolia leaves. Greenery bordered their windows. Their children's room had a small town scene and a Christmas tree decorated with popcorn strings.¹⁰⁰ This event let 600 people see their homes.

While most were excited about living in this new neighborhood, some were slightly concerned about its location. As a peninsula, hurricanes were a threat. Therefore, before moving to the subdivision in 1937, William and Laurene Douglas talked with some of the area's residents to ask about the site's history with hurricanes. According to Mrs. Douglas, "old timers" assured them "that [the] land had never been underwater. Not even in the 1900 storm." Therefore, the couple built their home on Bayshore Drive "in perfect confidence and really enjoyed living there."¹⁰¹ Douglas

¹⁰⁰ "Neighborhood News: About 600 Attend Christmas Pilgrimage," *The Baytown Sun*, December 10, 1954, 4.

¹⁰¹ Laurene Douglas, interview by Dr. Jim Maroney, Lee College Oral Histories, The Portal to Texas History, The University of North Texas Libraries, January 21, 1976, transcript, https://texashistory.unt.edu/ark:/67531/metaph845286/m2/1/high_res_d/002%20Oral%20history%20conversation%20with%20Laurene%20Douglas%20Transcript.pdf.

worked as a cargo inspector at Humble Oil until his death. When Hurricane Carla made landfall, Mrs. Douglas was a widow raising their teenage daughter.

The Floyds were another family who moved to the subdivision during this period. They lived in a 3,500 square foot red brick home on Bayshore Drive. The family had two sons, Mike and John, who grew up there. The family had a yard man named Leo from Louisiana. The father, Clyde Merritt Floyd, was a research chemist at Humble Oil. According to Mike Floyd, one of his earliest memories about living in Brownwood was the 1943 surprise hurricane, which only brought high winds and heavy rain to the subdivision. His family began evacuating from hurricanes in the 1950s. As he explained, “It’s not because we had any fear of getting flooding....We just didn’t want to be trapped out there for a couple of days.”¹⁰² He also vividly remembered feeling the 1947 Texas City Explosion while playing in the front porch of his home. The explosion, which was felt as far away as 150 miles, shook his home. Regardless of the potential dangers of living in the bay, he and his brother enjoyed living in Brownwood. Their neighbors had children their age, so they spent all their time playing outside.

¹⁰² Mike Floyd, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 21:03, <https://www.youtube.com/watch?v=vJvIBAYHQpl>.

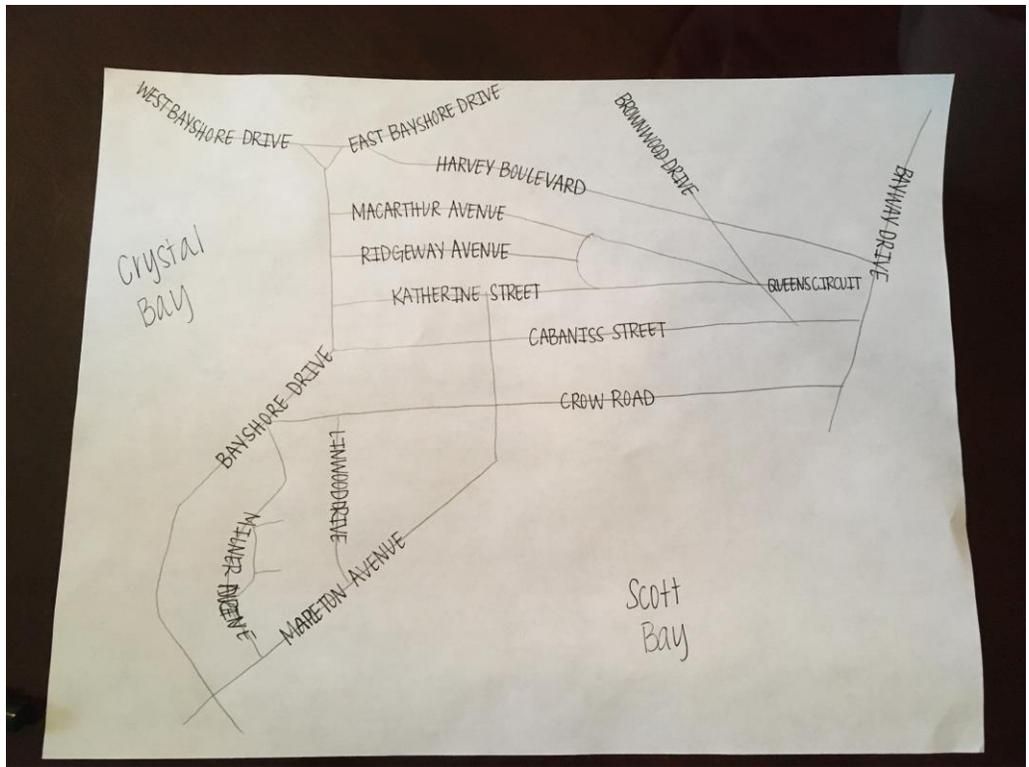


Figure 2.2 A map created by the author showing the subdivision's streets. (Photo by the Author)

When describing the homes in the Brownwood subdivision, everyone agrees they were beautiful bayfront properties with well-kept lawns. According to Crow Road resident Mrs. Sammie McPhail, “When my husband and I were looking for land on which to build, Brownwood was the best area in which to locate. It was restricted, maintained with pride, and was the ideal quality location for instilling positive values in young people.”¹⁰³ One local historian called the area “the most desirable place to live.”¹⁰⁴ Another local historian called it a “waterfront locale [that] attracted many Baytonians who built expensive homes.”¹⁰⁵ A local reporter who reported about the chronic flooding and visited it during several of the floods remembered it as “the pride of Baytown with spacious homes fronting [the] Scott, Crystal, and Burnet bays.”¹⁰⁶ Visitors and residents remember the subdivision’s homes due to their beautiful exteriors prior to the chronic flooding. Most of the homes were custom-built, designed by the homeowners who bought the lots. Contractors built houses that were just as grand. Others were simple structures, but their location was what was important. The simple fact that these houses stood in an area considered exclusive and beautiful meant they were part of this community.

Some families built small homes over the course of several years because that was all they could afford. However, they wanted to live in Brownwood and be part of this exclusive community. One of these families was the Carters, who lived on

¹⁰³ Mrs. Sammie McPhail, “Readers’ Views,” *The Baytown Sun*, July 23, 1979, 5-B.

¹⁰⁴ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Society, 1986), 127.

¹⁰⁵ Buck A. Young, *The Making of a City: Baytown, Texas Since Consolidation, 1948-1998* (Baytown: Lee College, 1997), 20.

¹⁰⁶ Wanda Orton, “Death of a Subdivision,” TexasEscapes.com, accessed March 14, 2020, <http://www.texasescapes.com/Wanda-Orton/Death-of-a-subdivision.htm>.

Mapleton Avenue. Jack S. Carter, a Humble Oil machinist, and his family moved to Mapleton Avenue in 1948 and lived there until Hurricane Alicia in 1983. As renters, they lived in three different homes. His two daughters, Sandy and Jackie, were children and did not understand the concept of renting a home. Instead, every time they moved, Jackie asked her father why they did not live on the bay, even though they lived in a neighborhood surrounded by three bays. As an adult, she finally understood that he did not want to stress her about their economic status. Instead, he simply promised her that one day they would live on the bay. After several years, he bought two submerged acres for \$500 each using a loan from his sister.

Three years passed before the family moved to the property because he had to fill up the property. He was able to fill it up by making “an agreement with Exxon that if they had extra concrete or stuff, in those big barrels of that black sludge stuff, they needed to dump it” that they could do so on his property.¹⁰⁷ When he finally filled the property, he created a hill where he built a small wooden house with one door. The girls’ classmates teased them about their home. Sandy recalled, “The rest of it didn’t have any doors, and the kids would follow me home from school making fun of my house. But I’d say, ‘We live on the bay.’”¹⁰⁸ Meanwhile, Jackie recalled, “‘Carter’s Folly,’ they called it. They made fun of Daddy because he built our house on a hill . . . but when we’d have real high tides, we were the only ones who didn’t get water in our

¹⁰⁷ Jackie Carter, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 44:58, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁰⁸ Sandy Carter Bond, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 52:38, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

homes.”¹⁰⁹ However, the hill proved to be anything but foolish when the subdivision began to flood because it protected the house from high tides. The Carters’ story illustrates how as children, Sandy and Jackie did not care about their home’s interior. Instead, they were excited about living on the bay. Their home may not have looked like the other ones in the neighborhood, but it was located on the Brownwood Addition, one of the most exclusive neighborhoods in the area.

¹⁰⁹ Jackie Carter, interview by Steve Koester, Sterling Municipal Library, May 18, 2002, video, 45:11, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.



Figure 2.3 Roxanne Gillum, now Roxanne Reeves Spalding, lived in this home located on Bayshore Drive. Like many of the homes in the neighborhood, it was enormous and had a swimming pool. (Photo Courtesy of Roxanne Reeves Spalding)

Many of the houses in Brownwood did not have air conditioning. Instead, they had a lot of windows because homeowners designed them pre-central air conditioning. Windows helped residents “take advantage of the draft and breezes like off the bay,” which aided the ventilation in their homes.¹¹⁰ When the Cappleman family moved to their “L” shaped home on Bayshore Drive in 1951, they added a new addition to the house above the garage to accommodate eight children. They built a room with windows on all four sides “made for better sleeping before air conditioning in the summer months, a story above ground where the bay breezes could flow through the room.”¹¹¹ Bill Hanna liked “sleeping with his bedroom window open and memorizing the ships’ signals as they blew their horns at each other.”¹¹² Residents liked the night breeze, but some disliked the windows open during the day. According to John Floyd, “In the summer when it’d get dry, the old shell road dust would go everywhere because most people didn’t have air conditioning in those days. You take an attic fan and you suck that dust out of the house.”¹¹³ The other problem with having open windows was the mosquitoes.

¹¹⁰ Laurene Douglas, interview by Dr. Jim Maroney, Lee College Oral Histories, The Portal to Texas History, The University of North Texas Libraries, January 21, 1976, transcript, https://texashistory.unt.edu/ark:/67531/metaph845286/m2/1/high_res_d/002%20Oral%20history%20conversation%20with%20Laurene%20Douglas%20Transcript.pdf.

¹¹¹ K. McGee, November 19, 2011 comment on Cristian Williams, “Can a Ghost Town/Toxic Dump Become a Park?” January 21, 2011, accessed March 24, 2020, <https://www.cristanwilliams.com/2011/01/21/can-a-ghost-towntoxic-dump-become-a-park/>. JJCappleman, August 27, 2017, comment on Williams, “Can a Ghost Town.”

¹¹² Deana Nall, “Back to Brownwood: ‘We Thought We Lived in Paradise,’” *The Baytown Sun*, May 24, 2002, 2-A.

¹¹³ John Floyd, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 30:38, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

Most of the descriptions about the homes' interiors come from the classified section of *The Daily Sun* and *The Baytown Sun*. For example, a home Jack Rutter from Rutter Realty was selling in 1948 was a five-room home in Brownwood made of pre-war material with a "brick porch, screened breezeway, attached garage, attic fan and a cyclone fence around back and side yard."¹¹⁴ Ten years later, contractor E. F. Luquire advertised two brick venue homes under construction available for purchase. Interested homeowners had the opportunity to select their electric kitchen, colors, paneling, and brick.¹¹⁵

More detailed descriptions of the homes emerged in the 1970s when homeowners tried to sell their homes during the chronic flooding period. For example, On September 3, 1971, someone listed their Brownwood home for sale on *The Baytown Sun*. This all-brick home was located on a corner lot on Katherine Avenue. It had central air and heat, along with an all-electric kitchen, with three bedrooms and two bathrooms. Eleven days later, realtor Allen Boothe began selling a home with "extra nice 3 bedrooms, 2 bath home with carpet, bulletins, and beautiful fenced yard."¹¹⁶ Two years later, on the September 4, 1973 edition of *The Baytown Sun* a Ridgeway Avenue homeowner wanted \$13,500 (about \$82,000 in 2020 dollars) for 1,850 square foot home. The home had a single garage, two bedrooms, one tiled bathroom, den, kitchen, breakfast room, and paneled utility room. The living room, which measured eighteen by twenty feet, had custom made draperies and the floors were bricked quarry tile and carpet. Although brief, these classified advertisements

¹¹⁴ Jake Rutter, "List Your Property for Sale with Rutter Realty," *The Daily Sun*, December 13, 1948, 8.

¹¹⁵ E. F. Luquire, "Open for Inspection Saturday and Sunday," *The Baytown Sun*, July 25, 1958, 6.

¹¹⁶ "Lots for Sale: Brownwood," *The Baytown Sun*, September 14, 1971, 11.

demonstrated how much residents had invested in their homes because they bought them expecting them to be the investment of a lifetime.



Figure 2.4 Another view of the Gillum home on Bayshore Drive. (Photo Courtesy of Roxanne Reeves Spalding)

Linwood Park

Something that made the Brownwood subdivision unique was that there was a smaller subdivision within the subdivision. In 1955, Linwood Park opened inside the Brownwood subdivision. The subdivision was on a street named Linwood Drive, an extra wide road between Crow Road and Mapleton Street, near the tip of the peninsula. Interested homeowners could purchase homes in Linwood Park using Federal Housing Administration-G. I. or conventional loans financing. Baytown Developers Inc. developed the subdivision, Charles R. Best served as the sales manager, and Don Wyatt and Sparky Bond served as realtors.

Linwood Park offered oversized lots, curbs and gutters, paved streets, school bus service, all utilities, excellent restrictions, and landscaped lots. Some of the features of Linwood Park homes included patios with sliding glass doors, perimeter heating with preparations for future air conditioning, paneled dens, slab foundations, aluminum windows, two car garages, three bedrooms, and one-and-a-half or two bathrooms. The homes were valued at between \$15,000 and \$16,000 and measured between 1350 to 1450 square feet.¹¹⁷ The three-bedroom home Mr. and Mrs. Albert J. Issacson bought in 1995 had a new brick veneer, two tiled bathrooms, a two-car detached garage, concrete patio, and a paneled family room. The home also had a new

¹¹⁷ Sparky Bond, "Buy Your New Brick Home in Either Linwood Park or Fair Fork from Sparky Bond—Realtor 100% GI or FHA Loans Already Arranged," *The Baytown Sun*, January 24, 1956, 12. "Buy Now in Linwood Park the Heart of Beautiful Brownwood," *The Baytown Sun*, January 28, 1956, 10.

GE perimeter system for heat and air conditioning.¹¹⁸ Lea Underwood, the owner of Lea's Nursery on Bayshore Drive, offered complete home landscaping for Linwood Park residents.¹¹⁹ Even though there were homes under construction, those interested in living in Linwood Park could also buy lots and build their dream homes.¹²⁰ There were a couple of vacant lots, but seventeen families lived there.

Although small, the Linwood Park community was close. Jean Shepherd, a longtime Brownwood Civic Association president, moved there in 1954. Her house, which had a prescription pool, was a block away from the water. She decorated with a grand piano that her father's grandmother gave her and furniture pieces that her father gave her as a wedding gift. She described this small community as cohesive and welcoming. When new residents moved in, they threw coffee parties and they celebrated New Year's Eve together. She and her husband were youth directors at All Saints Episcopal Church, so they converted their garage into a hangout for the church's teenagers.¹²¹ "It was so beautiful, and it was so peaceful you didn't feel like you were living in Baytown," she recalled.¹²² Her street was a like a small community with people of different backgrounds and professions. Shepherd's neighbors included a Humble Oil engineer, a physician, and a Lee College professor.

Vegetation

¹¹⁸ "Tanker Mate Buys New Linwood Home," *The Baytown Sun*, December 4, 1955, 19.

¹¹⁹ "Linwood Park in the Heart of Beautiful Brownwood..." *The Baytown Sun*, July 22, 1955, 2.

¹²⁰ "Linwood Park in the Heart of Beautiful Brownwood..." *The Baytown Sun*, August 12, 1955, 5.

¹²¹ Deana Nall, "Back to Brownwood: Sinking Neighborhood's Plight Forced the Nation to Deal with Subsidence," *The Baytown Sun*, March 24, 2002, 6A.

¹²² Jean Shepherd, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 06:33, <https://www.youtube.com/watch?v=vJvIBAYHQpl>.

Something else that made the Brownwood subdivision desirable was the vegetation. Prior to the chronic flooding, the land in Brownwood was fertile. Brownwood families took advantage of this by planting all kinds of plants around their properties to make their houses beautiful. Sandy Carter Bond, a Mapleton Avenue resident, described the subdivision as a place where “everybody’s yard was beautiful. Just beautiful with foliage and the flowers. So much pride was taken.”¹²³ Similarly, Shirley Laverne described the Armstrong property on Bayshore Drive as “a beautiful yard” with caladiums, azaleas, and oleanders.¹²⁴ Christine Ann Heiman recalled, “My mother would plant honeysuckle jasmine around the basement of our home, and she’d open up the windows. You’d go to sleep smelling that and hearing the waves of the bay.”¹²⁵ Many Brownwood residents purchased their plants from Lea’s Nursery on Bayshore Drive. Since the subdivision was a wooded area, there were also a variety of trees in residents’ yards. The Floyds had large cedar trees in their backyard.¹²⁶ The Glass family had pecan trees, which according to one of the daughters, were still there when the Baytown Nature Center opened.¹²⁷

Residents also took advantage of the soil by growing fruits and vegetables they could consume. The Hanna family, who lived next door to Lea’s Nursery, grew

¹²³ Sandy Carter Bond, interview by Steve Koester, Sterling Municipal Library, YouTube, video, 54:20, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹²⁴ Shirley Laverne, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 59:00, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹²⁵ Christine Ann Heiman, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, 03:10, <https://www.youtube.com/watch?v=6--gyhsqTHk>.

¹²⁶ Mike Floyd, interview by Steve Koester, Sterling Municipal Library, May 18, 2002, audio, 23:50, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹²⁷ Bonnie Bartell Glass, interview by Steve Koester, Sterling Municipal Library, May 18, 2002, audio, 01:15:00, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

lemons, plums, grapefruit, limes, tangerines, and watermelons.¹²⁸ Besides pecan trees, the Glass family also had bois d' arc, green apple, banana, and fig trees.¹²⁹ Their parents also had a big garden where they grew fresh vegetables. The girls had to shuck the corn and shell the peas in their backyard. The Bargainers had a farm on Mapleton Avenue. Mr. Bargainer taught the children on the block how to grow corn and other crops. According to Sandy Carter Bond, "His yard was always perfect, and he had the most beautiful roses I have ever seen in my life. Just gorgeous."¹³⁰ These different varieties of plants contributed to the subdivision's status as a beautiful and desirable place to live.

According to Jean Shepherd, the homes and vegetation made the Brownwood subdivision "the garden spot of Baytown....the Sunday drive."¹³¹ Beginning in the 1920s, "American families embraced a recreational habit that involved their personal automobiles....Instead of being used just for transportation or errands, the car was now being used for pleasure."¹³² After Sunday service and lunch, families would get in their automobiles and drive around without a set destination. Residents from the surrounding communities also engaged in this pastime, and usually drove around the Brownwood subdivision to enjoy the gardens and landscaping. While admiring the homes, they would also look out at the bays, the San Jacinto Monument, and the ships

¹²⁸ Deana Nall, "Back to Brownwood: 'We Thought We Lived in Paradise,'" *The Baytown Sun*, May 24, 2002, 2-A.

¹²⁹ Catherine Glass Harbor, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 01:22:54, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹³⁰ Sandy Carter Bond, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 55:37, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹³¹ Allyson Gonzalez, "Memories Run Deep at Brownwood Homecoming," *The Baytown Sun*, May 18, 2002, 7A.

¹³² William H. Young, *The 1930s* (Santa Barbara: ABC-CLIO, 2002), 234.

passing by on the Houston Ship. To their surprise, they could also catch glimpses of Lawson R. Bargainer's farm on Mapleton Avenue, where he grew corn and other crops and also had a cow that when he was on vacation, Mrs. Carter would milk.¹³³ Sometimes, they would be the only cars around the subdivision because some Brownwood residents liked to drive to Houston for entertainment.

Residents' Occupations

City directories provide more information about the subdivision's layout and composition. As indicated by the 1952-1953 City Directory, most residents were employees at Humble Oil. Bayshore Drive residents held positions at Humble Oil as helpers, an operator designing engineer, a fluid clerk, a port dispatcher, a petroleum engineer, a field personnel man, a research chemist, an accountant, and an inspection laboratory foreman. Meanwhile, Humble oil employees on West Bayshore Drive during this period included a gauger, an operator, a shop foreman, a laboratory foreman, and a research chemist. On Cabaniss Street, lived a locomotive fireman, a pipefitter, a welder, a metal inspector, a construction clerk, a machine operator, and a timekeeper. Residents on Crow Road included an assistant sales manager, a water pumper, an instruction technician, a pipefitting supervisor, and an electrician. On Mapleton Avenue lived a Humble Oil shift supervisor, an electric apprentice, a gang pusher, and a head mechanic. Milner Drive residents included an instructing supervisor, a switchman, and a dock man helper. These different occupations

¹³³ Jackie Carter, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 46:28, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

demonstrate that although most of the residents were employees at Humble Oil, the Brownwood subdivision was a diverse neighborhood. All Humble Oil workers could live there as long as there were housing available.

During this period, residents also included non-Humble employees. Physicians, educators, an attorney, an insurance agent, a dentist, and a J.C. Penney manager lived on Bayshore Drive. The vice president and general manager of Bayshore Buses Lines lived on West Bayshore Drive. Two teachers lived on Cabaniss Street. A Lee College professor lived on Katherine Street. On Queens Court lived the San Jacinto Builders Supply Company's manager. Some retired individuals also lived at the subdivision. Employees at other refineries lived there as well. A Sheffield Steel metallurgist lived on West Bayshore Drive, and a chemical operator for Mathieson Chemical Company lived on Queens Court Circuit.

The city directories also indicated that some residents owned their own businesses. Some were located outside the subdivision in nearby Baytown, but a couple were part of the neighborhood. Jim P. Carpenter owned Jimmie's Barber Shop, which he opened on Texas Avenue in Baytown in 1948. Dr. Jesse B. Kirkpatrick was a dentist, and his office was located on Wisconsin Street. Floyd R. Higginbotham, a Brownwood Civic Association president, owned the Higginbotham Motor Company. He also served as the company's president. Herbert G. Carew owned the Carew Studio on Market Road. Roy G. Holzheuser owned Roy's Package Store, which was next door to the Carew's studio. Later editions of the city directory show that some of these residents briefly moved their businesses to the subdivision.

Later editions of the city directories also indicated that several generations of some families lived in the subdivision. In fact, “families like the Strattons, the Hartmanns, the Floyds — have lived the years from marriage to child-rearing to retirement in their well-kept homes.”¹³⁴ For example, the Floyds owned the same Bayshore Drive property well into the 1980s. In fact, the sons, Mike and John, later sued the city for their property’s full value. The Hartmanns also owned their property on Bayshore Drive until the 1970s. By 1984, someone named Jack Moccabe lived there. Meanwhile, by 1952, the Strattons owned their house on Bayshore Drive. Like the Hartmanns, by 1984, someone else lived on their property.

As the years passed and people retired or moved away, the neighborhood grew more diverse. The 1958 city directory began demonstrating this change. Realtor Eddie Cox lived on Cabaniss Street. Cedar Bayou Junior High School’s principal, Paul D. Hodge, now lived on Crow Road. The most important change was that the first Hispanic was already living in Brownwood. His name was Rosendo Peña and he lived on Katherine Street. He worked at Humble Oil’s laboratory, and his name first appeared on the 1955-1956 City Directory. More business owners also lived in the subdivision by 1958. Lea Underwood had already set up Lea’s Nursery on Bayshore Drive. Fred L. Witt and his son had set up the Marine Supply Store on Crow Road. However, the real changes were apparent when the original homeowners began moving away to escape the chronic flooding. For some properties, the name recorded varied every year.

¹³⁴ William Broyles, “Disaster, Part II. Houston is Sinking into the Sea,” *Texas Monthly*, December 1974, 94.

Small Businesses

As city directories indicated, some residents had business in their homes. Lea's Nursery, formerly known as Ware's Nursery, was on Bayshore Drive. Maribel and Lea Underwood opened Lea's Nursery on May 1954. Maribel ran the nursery while her husband worked as an accountant at Humble Oil. The couple also offered landscaping services under the name "Maribel and Lea."¹³⁵ According to advertisements on *The Baytown Sun*, the business' motto was "Down to Earth Prices."¹³⁶ The couple sold a variety of bedding plants, fruit trees, bushes, hardy plants, and unusual flora. They liked to travel outside the state, especially to Louisiana and Mississippi to stock up on their inventory.

The Higginbotham family owned the "Little Shamrock," an event venue on Bayshore Drive. Floyd Higginbotham began building the Little Shamrock in the late 1940s, at the same time when Glenn H. McCarthy was building the famous Shamrock Hotel in Houston. According to Floyd's daughter, Nona, her mother named the event venue, "The Little Shamrock" because like McCarthy, her father "was going way over budget" to build it.¹³⁷ Construction for "The Little Shamrock" finished before Nona's birth in 1950. The event venue was a party house on Burnet Bay that had a boathouse, shuffleboards, games, and a big room with tables. The trees had concrete benches

¹³⁵ "Maribel Underwood Obituary," *The Baytown Sun*, January 16, 2018, 3.

¹³⁶ Some business' advertisements appeared on these editions of *The Baytown Sun*: May 8, 1954 and November 27, 1956.

¹³⁷ Nona Constant, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 04:14, <https://www.youtube.com/watch?v=6--gyhsqTHk>.

around them. When the family began selling the property, realtor Eddie Cox advertised the property as “2 big landscaped waterfront lots on Burnet Bay. Deep water, large all metal boathouse. Good concrete sea wall.”¹³⁸

This event venue was a popular setting for both public and private events. The Brownwood Civic Association hosted their annual picnic there. Despite their exclusivity, the community knew about these events because *The Baytown Sun* staff wrote reports about them. Many societies held meetings at the Little Shamrock. For example, on May 31, 1952, Mrs. Clinton Bates and Mrs. Clinton Horton hosted a barbecue supper for an engaged couple at the Little Shamrock where “guests danced and played shuffleboard, and a gift was presented [to] the guests of honor.”¹³⁹ The following month, on June 30, 1952, the Jaycees and Jaycee-elites hosted a joint watermelon and games party. Attendees ate watermelon while playing softball, horseshoes, and sack races.¹⁴⁰ On August 19, 1952, the Baytown Aggie Club hosted their annual pre-season football pow-wow at the Little Shamrock, where they served barbecued ham with all the trimmings.¹⁴¹ On April 1, 1955, the Baytown Woman’s Club rented the Little Shamrock to host a barbecue for their husbands.¹⁴² On April 4, 1956, the Epsilon Sigma Alpha social sorority held a meeting at Little Shamrock.¹⁴³ During the few years it was open, Humble Oil hosted their Humble Oil Day

¹³⁸ Eddie Cox, “Beautiful Brownwood,” *The Baytown Sun*, July 14, 1958, 6.

¹³⁹ “Katrinka Kelley, C. W. Magouirk Complete Plans,” *The Baytown Sun*, June 2, 1952, 5.

¹⁴⁰ “Just Folks Names – ‘N’ Notes,” *The Baytown Sun*, July 30, 1952, 7.

¹⁴¹ “Baytown Ags to Hold Pre-Season Football Pow-Wow Tuesday,” *The Baytown Sun*, August 13, 1952, 7.

¹⁴² “Calendar Close-Up—What, Where and When,” *The Baytown Sun*, March 28, 1955, 7.

¹⁴³ “Calendar Close-Up—What, Where and When,” *The Baytown Sun*, April 2, 1956, 3.

celebration there. The Brownwood Civic Association hosted its annual picnic, and they held an annual Easter Egg hunt.

The Little Shamrock also served as an event venue for important meetings. On May 20, 1952, Brownwood and Lakewood residents hosted a meeting to discuss an upcoming \$125,000 bond issue election. The bond would allow Wooster residents to vote if they agreed or declined the construction of two water wells, extension of sewer and water lines, and the increase of the disposal plant's capacity.¹⁴⁴ Similarly, in 1956, the men's brotherhood of First Presbyterian Church hosted their annual outdoor meeting at the Little Shamrock. They also invited Judge J. W. Mills to explain a proposed Harris County juvenile detention center during the meeting.¹⁴⁵

Other small businesses briefly stood inside the subdivision. For a while, there was a barbeque shack on West Bayshore Drive, but by the 1960, only the abandoned building stood.¹⁴⁶ The Hubbards owned Hubbard's Cupboard of Baytown on Cabiniss Street. Residents also had access to business right outside the subdivision. On September 4, 1954, William Cosby Smith opened Smitty's Drive-in Grocery on the corner of Cabaniss Street and Market Street Road (now Bayway Drive). The store was a place where residents could buy fresh fruits, vegetables, medicine, jewelry, and clothing. By the 1960s, women could buy clothing at The Little Shoppe, which was across from Smitty's Drive-In. Residents could also take their cars to a robo-wash right outside their neighborhood.

¹⁴⁴ "Discussion Slated on Wooster Bond Issue," *The Baytown Sun*, May 17, 1952, 1.

¹⁴⁵ "Judge to Outline Juvenile Center," *The Baytown Sun*, July 16, 1956, 2.

¹⁴⁶ City of Baytown City Council, "Minutes of the Special Meeting of the City Council of the City of Baytown," September 14, 1972, 5293.

The Brownwood Civic Association (BCA)

The neighborhood had its own civic association, named the Brownwood Civic Association. During its early years, the association's purpose was the neighborhood's beautification and well-being. For example, on February 10, 1949, the Brownwood Civic Association was "the first citizens organization in the Baytown area to protest the proposed rate increases by the Southwestern Associated Telephone Company."¹⁴⁷ Prior to the chronic flooding, the association helped residents maintain the neighborhood's famous exteriors and organized social events for the subdivision's residents, such as the neighborhood's annual picnic at The Little Shamrock.

Jean Shepherd became association's president in 1973 when the chronic flooding began. She transformed the subdivision into a survival coalition concerned with finding new ways to ease the chronic flooding burden on the community. The association lobbied in Austin for buoys to keep shrimp boats from getting too close to the subdivision and flooding it and bought water pumps. They also organized "a complex weather-watching system in which tide watcher...alerted street captains, who notified residents if an evacuation was necessary."¹⁴⁸ According to Shepherd, the BCA also created a list of things residents needed to pack during these evacuations. According to Shepherd, the federal government adopted this list and incorporated it into their emergency procedures brochure. However, the BCA's most important task was raising awareness about subsidence worldwide. Her efforts helped feature

¹⁴⁷ "Brownwood Residents Oppose Phone Boosts," *The Daily Sun*, February 10, 1949, 1.

¹⁴⁸ Deana Nall, "Back to Brownwood: Sinking Neighborhood's Plight Forced the Nation to Deal with Subsidence," *The Baytown Sun*, March 24, 2002, 1A.

Brownwood's story in national works, such as *National Geographic* and *The Wall Street Journal*, and even international outlets, such as the Russian newspaper *Moscow News* and a British television station. Yet, residents fondly remember that she tried to make their experience memorable, even in the middle of constant flooding. This was important for her because "you can't lose that feeling of closeness and the feeling of relaxation and fun and always promoting your community."¹⁴⁹ She achieved this by hosting unplanned parties, especially when politicians visited the subdivision. With the city's permission, they would close off Linwood Drive and host a weenie roast. Other times, they would host a swap shop so everyone would receive a care box.

Growing Up in Brownwood

Many of the families who moved to the Brownwood subdivision had small children, or their children were born shortly after their arrival to the neighborhood. These residents moved to the Brownwood subdivision because they wanted to raise their children in a safe community along the water. Sharon Queen, a Bayshore Drive resident, liked living in Brownwood because she was able to raise her children on the bay. She recalled, "We had a boat. We skied in the summer. We fished in the winter. We shrimped in the Galveston Bay."¹⁵⁰ Shirley Laverne remembered, "My youngest son was my child who didn't think he needed to go to school because he needed to be

¹⁴⁹ Jean Shepherd, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 13:53, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁵⁰ Sharon Queen, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 16:14, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

fishing on the bay.”¹⁵¹ For many of the subdivision’s children, living along the bays was the best part of their childhood.

Brownwood residents all knew each other and attended the same schools. They attended David G. Burnet Elementary, which opened in 1930. Junior high students attended Baytown Junior School, which opened in 1928. High school students attended Robert E. Lee High School, which also opened in 1928. Catherine Glass, a Cabiness Street resident, remembered, “We rode the bus. We had to go to the top of the street regardless of the weather, catch the bus. It didn’t top at the driveway like it did later.”¹⁵² The school year typically ended by Memorial Day weekend, so children were free to spend most of their days running around. Bonnie Glass, her sisters, and their friends celebrated the beginning of summer vacation by setting up a Monopoly game on Memorial Day weekend. The game did not end until Labor Day weekend, and anyone who wanted to join could play.¹⁵³ On Sundays, most of them attended the same church, Wooster Baptist Church. Therefore the children attended the church’s annual week-long Vacation Bible School. Some of the girls were Brownies and Girl Scouts, so they would attend meetings at the Wooster Fire Department. They also sold cookies around the neighborhood for thirty-five cents a box. When they were not attending school or church, they were busy exploring their neighborhood and playing with their neighbors. The adults let them have their freedom, but they were always

¹⁵¹ Shirley Laverne, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 58:23, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁵² Catherine Glass Harbor, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 01:20:22, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁵³ Catherine Glass Harbor, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 01:18:58, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

there to take care of them. They were not afraid to discipline any of the children because they were all like a big family.

Since they lived in a peninsula surrounded by three different bays, the children spent a lot of time playing in the water. Regardless of their symbiotic relationship with the bay waters prior to the chronic flooding and subsidence, the children knew to not go to the bay without permission. Sandra Hanna learned this the hard way when she and her brother went to the bay without their mother's permission. She recalled, "My mother got a switch[grass]. She didn't hurt us, but it stung like crazy. She switched us all the way from the bay to the house, which was in the middle of our acre."¹⁵⁴ However, this did not hinder her love for the bay.

All the children enjoyed living on the bay. Linda Underwood, who grew up on Bayshore Drive, described the subdivision as "probably one of the most fun places to grow up... The bay was our playground. We just were always in the water doing just about everything that could happen in water."¹⁵⁵ Some of the activities she participated in included swimming, waterskiing, crabbing, and fishing alligator gar. Alligator gar is "the largest and long-lived freshwater species" in Texas that feeds on buffalo, carp, and shad fishes.¹⁵⁶ One of her neighbors, Sandra Hanna, liked "rolling down the hill to the water and sitting out in the evening watching the sunset... solitary hours out on the

¹⁵⁴ Sandra Wims, interview by Steve Koester, May 18, 2002, Sterling Municipal Library, YouTube, 38:10, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁵⁵ Linda Underwood, interview by Steve Koester, Sterling Municipal Library, YouTube, 03:45, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁵⁶ Texas Parks and Wildlife Department, "Why Alligator Gar are Important," accessed March 25, 2020, <https://tpwd.texas.gov/fishboat/fish/management/alligator-gar/important.phtml>.

pier listening to the water.”¹⁵⁷ Sandra’s brother, Bill, “had several boats, rowboats and motorboats,” and was “always out either fishing, hunting, or skiing out in the water.”¹⁵⁸ Bill sometimes took out Sandra and Linda on one of his boats out on the bay. The Hanna siblings also liked to sit on their family’s long pier “sunning and waving to men on the ships coming into the docks of Houston’s seaport.”¹⁵⁹ Pattie Crow and her friend, Georgina, liked catching water moccasins using crab nets.¹⁶⁰

Prior to subsidence, the children had access to several nearby islands. John Floyd, who grew up on Bayshore Drive, built a house with his friend, Robert on the island that separated the subdivision from the Houston Ship Channel. John’s brother, Mike, remembered all the children liked to go over to the island to play. When the island sunk, the only way to reach it was crossing the bay in a boat. The Hanna siblings liked exploring the island behind their home known as “Bird Island” due to the many exotic animals that lived there.¹⁶¹ Geese were one type of bird that would sleep there at night. Ducks also landed, which residents hunted.

¹⁵⁷ Sandra Wims, interview by Steve Koester, May 18, 2002, Sterling Municipal Library, YouTube, video, 38:31, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁵⁸ Bill Hanna, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 42:25, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁵⁹ Deana Nall, “Back to Brownwood: ‘We Thought We Lived in Paradise,’” *The Baytown Sun*, March 24, 2002, 6A.

¹⁶⁰ Pattie Crow, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 01:26:04, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁶¹ Deana Hall, “Back to Brownwood: ‘We Thought We Lived in Paradise,’” *The Baytown Sun*, March 24, 2002, 6A.



Figure 2.5 This is an aerial view of the Brownwood Subdivision and Goat Island in 1953. Brownwood's tips almost connected with Goat Island. (Google Earth Pro, "Brownwood Subdivision and Goat Island, 1953," accessed April 1, 2020.)

Everyone knew each other, or as Jackie Carter, a Mapleton Avenue resident recalled, “You didn’t want to get into any mischief because everybody knew your mom and dad and told them whatever you did.”¹⁶² Yet, this did not stop the neighborhood’s children from having fun. Since the neighborhood’s streets were safe without a lot of traffic, children were free to run around and ride their bicycles. The ones who knew how to ride bicycles tried to teach the ones that did not. Carla Glass tried to teach her middle sister, Catherine, how to ride a bicycle. Instead, she accidentally let her sister run into a thorny bush growing on the empty lot next to their house.

According to Bonnie Bartell (née Glass), life in Brownwood so safe that she and her friends rode on their bicycles “from Brownwood to Lakewood, around, and get on the [Lynchburg] Ferry and go to the [San Jacinto] Monument.”¹⁶³ They would also ride over to Lakewood, the neighboring subdivision, or to Westwood Park, the park between the two subdivisions, to play tennis. When the children got older, they began riding motor scooters and racing around the subdivision.¹⁶⁴ Even though both boys and girls played together, Linda Underwood recalled, “If you were a girl in the neighborhood, you had to be a tomboy. That was just the way you survived.”¹⁶⁵ This meant they had to play with BB guns and fish for gar with the boys.

¹⁶² Jackie Carter, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 45:55, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁶³ Bonnie Bartell, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 01:10:00, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁶⁴ Mike Floyd, interview by Steve Koester, Sterling Municipal Library, YouTube, audio, 22:40, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁶⁵ Linda Underwood, interview by Steve Koester, Sterling Municipal Library, May 18, 2002, audio, 34:41, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

The children also spent a lot of time playing in the woods where they built tree houses. Since a big wooden section was next to their home, Catherine Glass Harbor's father installed lights so she, her sisters, and their friends could play there after dark. This was important because there were snakes and squirrels in the woods. They would play hide and seek, freeze tag, climb trees, and tried to make four leaf clovers.¹⁶⁶ The woods were a good place to play until Hurricane Carla. Following the hurricane, poison ivy began appearing throughout the woods.¹⁶⁷ The woods also served another function during hurricane season, as the Coast Guard and residents would bring the boats from the bay and tie them to the trees to prevent damage.

Sometimes, the children would spend the day playing in someone's backyard. One of the popular backyards the Glass' on Cabiness Street. Between fourteen to sixteen children gathered to play in the Glass backyard each summer, where Mrs. Glass would set up a big tarp so the children could make mud pies. They also played basketball and baseball. There was a vacant lot next to the Glass' house, and the children liked to play tag football there.¹⁶⁸ However, one of Catherine's favorite activities was using the oleanders in her family's yard to make leis for luau parties she and her friends hosted. They would make the leis and keep them in their refrigerator until they were ready for their luau party. The Glass' backyard was also popular because the children liked playing in the alley behind their home. The children liked

¹⁶⁶ Bonnie Bartell, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 01:12:42, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁶⁷ Catherine Glass Harbor, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 01:22:57, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁶⁸ Catherine Glass Harbor, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 01:18:45, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

going in the evenings to listen to Pattie Ford tell ghost stories with a flashlight under her chin. Backyards with swimming pools were also popular. Pat Burn and Jean Shepherd taught children how to swim in Shepherd's prescription swimming pool in Linwood Drive. The Hartmans on Bayshore Drive let Shirley Laverne's children swim in their "large ceramic tiled pool" if there was an adult present.¹⁶⁹

Riding horses was also an important pastime for the children at the subdivision. The Carter girls would ride Lawson R. Bargainer's two horses, Della and Tony. Although he was a shift supervisor at Humble Oil, he lived on a farm on Mapleton Avenue. His neighbors, the O'Sullivans had a Palomino horse, along with chickens and geese, but he did not let them ride it. In 1954, Mrs. W. P. Cappleman organized the Sam Houston Hunt Club, a group of about fifty horse riders.¹⁷⁰ She and her husband, William, a physician at Humble Oil, lived on Bayshore Drive, and she hosted the group at a barn in Mapleton. Hurricane Carla destroyed the original barn, so the Cappleman family built a new one that "eventually fell into the bay due to the land subsidence."¹⁷¹ The groups also participated in horse shows. Their first one was on December 21, 1958 near Scott Bay in the subdivision. The group was open for both serious equestrians and those interested in learning how to ride a horse.

The adults tried to create happy memories for the children by hosting parties, especially when things began to decline in the subdivision. Carla Glass' birthday was

¹⁶⁹ Shirley Laverne, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 59:10, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁷⁰ "Sam Houston Hunt Club Sets Horse Show Sunday," *The Baytown Sun*, December 21, 1958, 11.

¹⁷¹ JJCappleman, August 27, 2017, comment on Cristian Williams, "Can a Ghost Town/Toxic Dump Become a Park?" January 21, 2011, accessed March 24, 2020, <https://www.cristanwilliams.com/2011/01/21/can-a-ghost-towntoxic-dump-become-a-park/>.

on June 1. She and her neighbor across the street, Minnie Bargainer, shared the same birthday. Every year, they hosted a joint birthday party with homemade ice cream with all their neighbors.¹⁷² Every Fourth of July, each family hosted a party. Every yard was open, inviting the children to visit every yard. Pattie Crow recalled, “It was a big thrill because we would go and roll from one yard to the next. One, good meal. One, next cake. One, next pie. We loved the Fourth of July.”¹⁷³ During the summer, each street neighborhood hosted barbecues. According to Bonnie Glass, during these picnics, they would eat watermelon and visit everyone’s home. During Halloween, everyone would leave their homes and walk around the subdivision trick or treating for candy. Everyone felt safe in this neighborhood.

One of the most important activities that both children and adults participated in was learning about the site’s history. Like visitors today at the Baytown Nature Center, Brownwood residents liked to dig around the peninsula to learn more about the neighborhood’s history. When she lived on Bayshore Drive, Pattie Crow and her best friend, Georgina, liked digging in their backyards where “there would be arrowheads and all sort of pottery.”¹⁷⁴ W.C. Smith, a renter who moved in to the subdivision in the 1970s, recalled prowling the beaches along Mapleton Avenue and Bayshore Drive where he “started finding Indian pottery and started reading about

¹⁷² Carla McCullah, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 01:16:16, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁷³ Pattie Crow, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 00:03, <https://www.youtube.com/watch?v=6--gyhsqTHk>.

¹⁷⁴ Pattie Crow, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 01:26:35, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

it.”¹⁷⁵ The artifacts residents found were from nomadic tribes who liked sites like the peninsula due to “the ample food supply along the shore.”¹⁷⁶ One of these tribes was the Arkokisa Indians, who “hunted, fished and gathered shell fish from the marshes and bays” there during the summer.¹⁷⁷ Along the bays, especially the northern shoreline of Scott Bay, residents could find some of these “prehistoric *rangia* shell midden[s],” as well as fish spears and other artifacts.¹⁷⁸ Some children also learned about the site’s history by playing in the remains of the John Rundell’s home before Hurricane Carla destroyed it in 1961.¹⁷⁹ Rundell, originally from Mississippi, owned the second largest number of slaves and most of the subdivision before his death in 1863.¹⁸⁰

Before sinking, the old Wooster Cemetery stood at the tip of the subdivision between the Scott and Crystal bays. Children liked to play among the graves and cross the cemetery to swim out to Bird Island.¹⁸¹ This was Catherine Glass’ favorite place to play. When the subdivision continued sinking, the land sunk deep enough that the children could see the cemetery’s caskets.¹⁸² According to Trevia Wooster Beverly,

¹⁷⁵ W. C. Smith, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 2:41, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁷⁶ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Heritage Society, 1986), 1.

¹⁷⁷ Friends of the Baytown Nature Center, “History of the Nature Center Site,” accessed March 15, 2020, <https://www.baytownnaturecenter.org/bnc-facilities/history-nature-center-site/>.

¹⁷⁸ Richard B. Mahoney, Roger G. Moore, and Sue Winton Moss, “Cultural Resource Investigations and Archaeological Inventory of the Baytown Nature Center Park, City of Baytown, Harris County, Texas,” Moore Archaeological Consulting, June 1999, 22.

¹⁷⁹ Whit Snyder, “From Good Times to Heartbreak: Brownwood’s Rise and Fall,” *The Baytown Sun*, May 12, 2002, 7A.

¹⁸⁰ John D. Márquez, *Black-Brown Solidarity: Racial Politics in the New Gulf South* (Austin, The University of Texas at Austin Press, 2014), 70.

¹⁸¹ Betsey Webber, “Baytown Area Grave Stone Simply Marked, ‘My Father,’” *The Baytown Sun*, July 15, 1971, 4.

¹⁸² Catherine Glass Harbor, interview by Steve Koester, Sterling Municipal Library, May 18, 2002, video, 01:20:51, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

her great-grandfather, Quincy Adams Wooster, deeded the cemetery to Harris County in 1901 with the stipulation that any white person living within a five-mile radius could be buried there. However, his family only buried him, his wife, and a son after this ownership change. The county appointed his other son, John L. Wooster, as the cemetery's trustee. John's son, Ray Wooster, assumed the position after his father's death.

The cemetery served as a playground for Brownwood residents until the Wooster family buried three family members in the 1960s. Trespassers became a major problem when they began to vandalize the tombstones. They stomped on the graves and ripped away the military flags the Veterans of Foreign Wars placed on them. To protect the tombstones, the family installed a gate with a lock. The family understood that the cemetery was on subdivision, so they were okay with people visiting the gravestones if they did not continue vandalizing them. Until its sinking, Ray Wooster's widow owned the property surrounding the cemetery. By the 1980s, the cemetery was completely underwater. The family was only able to move three graves and two gravestones.

Hurricanes Before the Subsidence

Prior to Hurricane Carla, residents in the Brownwood subdivision experienced several hurricanes and severe thunderstorms. However, their homes did not flood because subsidence in the area was still occurring at a gradual rate. According to the U. S. Geological Survey, the neighborhood sunk about five inches annually.¹⁸³ As

¹⁸³ Tom Curtis, "Sinking Areas in Texas Face Flood Threat," *The Washington Post*, July 5, 1975, A2.

previously mentioned, long-term residents, like the Floyds, did not begin evacuating until the 1950s. During this period, hurricane “forecasting was mostly a matter of recognizing existing patterns and using both experience and scientific understanding to project those patterns into the future.”¹⁸⁴ Meteorologists did not begin using computer models until the 1960s, so they based their predictions on previous storms and the few upper-air observations available, such as weather balloons. Therefore, the residents were the ones deciding if they needed to evacuate. This meant that the ones who did begin evacuated likely had experienced previous storms as Brownwood residents.

As a peninsula surrounded by three bays, the Brownwood subdivision sat in an area vulnerable to hurricanes and occasional heavy thunderstorms. According to former Baytown mayor, R. H. “Red” Pruett, the subdivision first flooded during the 1915 hurricane that made landfall in Galveston. The hurricane, which made landfall on August 16, killed 375, damaged \$50 million in crops, and \$56 million in property.¹⁸⁵ Pruett recalled the “water was up to tree tops in Brownwood,” and “that he and some other men rescued a man in that area who had tied himself to a tree to keep from being blown away.”¹⁸⁶ Pruett’s memories are significant because they presented the Brownwood subdivision as flood-prone area before 1917, the year the court determined Humble Oil began subsidizing the Goose Creek oil field and the surrounding areas.

¹⁸⁴ Kerry Emmanuel, *Divine Wind: The History and Science of Hurricanes* (Oxford: Oxford University Press, 2009), 229.

¹⁸⁵ Robert L. Schaadt, “Southeast Texas Hurricanes History,” *The Baytown Sun: Hurricane Preparedness*, June 28, 2018, 4B.

¹⁸⁶ “Early Flood in Brownwood is Described,” *The Baytown Sun*, January 7, 1980, 2-A.

In 1940, Brownwood residents also previewed the impact of flooding from heavy rainfall. During a five-day rain event in late November 1940, residents along the San Jacinto and Trinity rivers had to evacuate and, in some cases, be rescued from their homes. Residents around the Humble Oil refinery sustained damages to their properties. According to reports, in Brownwood, “more than two score houses in that district, nearly all of them new, were endangered by flood waters backing up into the bay. By afternoon however, the water had halted its rise, and no damage other than the inconvenience caused by block[ed] roads resulted.”¹⁸⁷ Despite this preview, residents continued to carry with their lives, unaware that the neighborhood was sinking.

Brownwood residents experienced at least three more flooding events prior to Hurricane Carla in 1961. According to Mr. B. E. Wilson, six feet of water entered his home on Mapleton Avenue in 1941.¹⁸⁸ This flooding event was probably the 1941 Texas Hurricane, which made landfall near Matagorda Bay on September 23, 1941.¹⁸⁹ Then, On July 25, 1943, a Category 1 hurricane made a surprise landfall on Bolivar Peninsula. The Floyd family was already living in Brownwood at the time. One of the sons, Mike, recalled the Brownwood subdivision received heavy rain and wind.¹⁹⁰ Mrs. M. S. Ciruti, Jr., a Milner Drive resident, also confirmed the subdivision did not

¹⁸⁷ “Section of Market Street Road is Washed Away, Ferries May Try to Operate Tomorrow,” *The Daily Sun*, November 27, 1940, 1.

¹⁸⁸ Mr. B. E. Wilson, interview by Dr. James Maroney, *The Oral Histories of Citizens of Baytown*, Lee College, The Portal to Texas History, The University of North Texas Libraries, February 20, 1976, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013917/m2/1/high_res_d/BT15_B._E._Wilson_Transcript.pdf.

¹⁸⁹ David Roth, “Texas Hurricane History,” accessed April 10, 2020, <https://www.weather.gov/media/lch/events/txhurricanehistory.pdf>, 41.

¹⁹⁰ Mike Floyd, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 20:27, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

flood during this storm in a letter to Representative Bob Eckhardt in 1973. The subdivision, however, flooded when Hurricane Debra made landfall between Freeport and Galveston on July 24, 1959. According to Mrs. Ciruti, the “Brownwood area was flooded, on Crow Road at the lowest place. We got 2” inside of homes.”¹⁹¹ Two inches may not seem like much, but in an area that was sinking four or five inches every year, this was a significant amount. As the land and the protective islands around the peninsula continued sinking, even the most minimal amounts of floodwaters were enough to cause damage.

Conclusion

When Humble Oil executives decided to build a separate community because they were tired of their white stucco houses, they envisioned an exclusive bay front community with beautiful homes exclusively for white Humble Oil employees. World War II, however, interfered with their original vision by creating opportunities for non-Humble employees and veterans. Prospective homeowners could either build their dream homes or purchase ones built by contractors. The homes built in this subdivision were beautiful and big. Residents from nearby communities liked to visit them, especially on Sundays, just to admire the homes and their yards.

However, Brownwood was more than just an attractive neighborhood. For residents, it was a safe and fun place to raise children. The children spent their summer

¹⁹¹ Mrs. M. S. Ciruti, Jr., Letter to Robert C. Eckhardt, September 15, 1973 in Robert C. Eckhardt Papers, 1931-1992, Box 97-150/5 (8253054), “Harris Co. Brownwood Subsidence Folder, 1 of 2,” Folder, The University of Texas at Austin Briscoe Center for American History.

days riding around on their bicycles, playing in the surrounding bays, visiting nearby islands, and hiding in the woods. Their parents knew that by moving to a peninsula, they were at risk for tropical storms and hurricanes, but they did not let their children worry about this. Instead, they hosted parties and picnics to give their children a childhood full of happy memories. After Hurricane Carla, the residents' lives changed. Instead of worrying about maintaining their homes and lawns in perfect condition, they were more concerned with trying to stop their properties from sinking and keeping the bay waters out of their backyards. The following chapter will further elaborate on the impact of subsidence and chronic flooding on this community as a result of Hurricane Carla.

Chapter 2: Surviving Brownwood

Brownwood's golden era lasted until 1961 when Hurricane Carla made landfall on the Texas coast. As Gulf Coast residents, they prepared for the storm's impact, but they were unprepared for its aftermath. Following the storm, Brownwood residents had to rebuild their homes and neighborhood. More importantly, they learned about subsidence, or the sinking of land due to underground material movement.¹ The Brownwood subdivision was sinking due to the excessive withdrawal of liquids, particularly groundwater, by Humble Oil & Refining Company refinery in Baytown and to serve the growing needs of surrounding cities.

For years, the refinery and surrounding cities withdrew millions of gallons of groundwater surrounded by fine-grained sediments, such as sand and clay. When the refinery and cities extracted the groundwater, the compacted sediments collapsed "because the water is partly responsible for holding the ground up."² In other words, as these entities withdrew excessive amounts of groundwater to sustain their rapid growth, the land began sinking. Since the Brownwood subdivision was a peninsula next to the refinery and the City of Baytown, it began sinking at an alarming rate. Even though geologists had identified the problem of subsidence at the Goose Creek oil field in the 1920s, most residents in nearby communities were unaware of subsidence in the Houston area, not just Baytown. Once they learned about

¹ National Oceanic and Atmospheric Administration (NOAA), "What is subsidence?" U.S. Department of Commerce, , accessed February 15, 2020, <https://oceanservice.noaa.gov/facts/subsidence.html>.

² United States Geological Survey, "Land Subsidence," U.S. Geological Survey's Water Science School, accessed February 15, 2020, https://www.usgs.gov/special-topic/water-science-school/science/land-subsidence?qt-science_center_objects=0#qt-science_center_objects.

subsidence, Brownwood residents and city officials tried to solve it. However, the damage was irreversible. All they could do was slow down the subdivision's sinking rate. As a result, hurricanes and tropical storms were not the only weather-related events that could flood the subdivision during this period. Eventually, when the land had sunk several feet, thunderstorms and high tides were enough to flood the peninsula.

Between Hurricane Carla in 1961 and Hurricane Alicia in 1983, Brownwood residents flooded and evacuated more than two dozen times.³ As a result, it became known as "Submarine Acres."⁴ Brownwood was the community that forced the world to learn about subsidence and the first place eligible for federal flood insurance.⁵ As they experienced chronic flooding episodes, Brownwood residents tried different ways to save their neighborhood. Their methods varied from installing bulkheads on their properties to rebuilding their homes on stilts. After Baytown annexed the subdivision, the local and federal governments soon lent their support by transforming the subdivision's main road into a levee and proposing a relocation project. Baytownians did not like this because they felt the city was investing too much money and time in one section of the city. As a result, this caused tensions between Baytownians and Brownwood residents, which only worsened as the subdivision continued flooding.

³ Whit Snyder, "From Good Times to Heartbreak: Brownwood's Rise and Fall," *Houston Chronicle*, May 12, 2002, 7-A.

⁴ Mike Snyder, "Nature Center Owes Birth to Subdivision's Ruin," *Houston Chronicle*, July 29, 2001, 33-A; David Todd and Jonathan Green, *The Texas Landscape Project: Nature and People* (College Station: Texas A&M University Press, 2016), 229.

⁵ Whit Snyder, "From Good Times to Heartbreak: Brownwood's Rise and Fall," *Houston Chronicle*, May 12, 2002, 7-A.

This chapter demonstrates how the subdivision became “Submarine Acres” by looking at subsidence in the Houston area and its impact on the subdivision. Rather than highlighting each flooding episode residents experienced during this period, the chapter focuses on five key events: Hurricane Carla (1961), Hurricane Beulah (1967), the Valentine’s Day Flood (1969), Tropical Storm Delia (1973), and Tropical Storm Claudette (1979). By highlighting these different flooding episodes, I will argue that subsidence, unmasked by Hurricane Carla, worsened flooding in the subdivision, altering the subdivision’s landscape and, most importantly, the residents’ relationship with city officials and Baytownians. After looking at how subsidence and chronic flooding altered this community, I will then analyze the solutions residents, the City of Baytown, and federal government officials implemented to try to help Brownwood residents.

Subsidence

Subsidence in the Baytown area began in Goose Creek. According to local historian Margaret Swett, the deep extraction of liquids that caused subsidence in the area first started when rice farmers began experimenting with irrigation in Goose Creek using underground wells.⁶ However, most geologists agree that subsidence began with the discovery of oil at the Goose Creek oil field, which occurred between 1903 and 1905. The Goose Creek Production Company drilled the first producing well on June 2, 1908 at 1,540 feet deep, which produced between 700 and 800 barrels each day. Drilling continued at depths of more than 1,000 feet. The American Production

⁶ Margaret Swett Henson, *The History of Baytown* (Baytown: Bay Area Heritage Society, 1986), 76.

Company drilled the deepest well on August 24, 1916 at 2,030 feet. Although it was revolutionary that they were finding oil this deep, they were unaware that they were causing the oil field to sink.

Geologists Wallace E. Pratt and Douglas W. Johnson were the first to report about subsidence at the oil field. According to these geologists, the oil field was “a large complexly faulted uplift above a deep-seated salt dome” sitting in an area of young rocks and four different soft clay beds.⁷ Geologist R. E. Minor later confirmed there was “no topographical elevation or depression to indicate the presence of a dome,” like at Spindletop.⁸ In the middle of the field stood Gaillard Peninsula, a small, marshy community of residents that extended into Tabbs Bay, until its sinking between 1916 and 1921. By 1908, it was obvious that the oil field was sinking. They described the subsidence as gradual, but noticeable. Workers at the oil field, like future Brownwood residents, tried to adapt to their surroundings. For example, “elevated plank roadways or walks were built from the mainland to the derricks. Derrick floors had to be raised.”⁹ However, their efforts were futile because the vegetation in the area flooded and died. Then, the peninsula disappeared underwater. In his own words, Ross S. Sterling, one of Humble Oil & Refining Company’s

⁷ Eddie V. Gray, “The Geology, Ground Water, and Surface Subsidence of the Baytown-La Porte Area, Harris County, Texas,” (MS Thesis: Texas A&M University, 1958), 13.

⁸ H. E. Minor, “Goose Creek Oil Field, Harris County, Texas,” in *Geology of Salt Dome Oil Fields*, ed. Raymond C. Moore, Wallace E. Pratt, Donald C. Barton, Alexander Deussen, and J. P. D. Hull (The American Association of Petroleum Geologists, 1926), 550.

⁹ Wallace E. Pratt and Douglas W. Johnson, “Local Subsidence of the Goose Creek Oil Field,” *The Journal of Geology* 34, No. 7, Part 1 (October – November 1926): 578.

founders said, “I built a road the length of the peninsula, paving it with lime rock. It is now submerged.”¹⁰

According to the State of Texas, subsidence at the oil field occurred as “an act of man, namely the removal of large volumes of oil, gas, water, and sand from beneath the surface.”¹¹ The state sued Humble Oil & Refining Company for ownership of the land because submerged land in Texas lawfully belonged to the state, so only the state could grant gas and oil leases on subsided land. As a result, the state tried to recover oil and gas leases and any other costs associated with the lands’ subsidence. However, after further reviewing the case, the State of Texas lost after concluding that subsidence began in 1917. In other words, had the court determined that subsidence in the oil field occurred naturally, the state could have acquired the land. Instead, the Humble Oil & Refining Company was able to keep the land and continue drilling for oil.

Pratt and Johnson agreed with the court’s decision that the subsidence at the Goose Creek oil field was man-made. As geologists, they analyzed alternative theories, including post-glacial subsidence, change of mean sea-level, and erosion by sea waves or currents. Post-glacial subsidence, also known as ice sheet deglaciation, occurs when melted water from ice sheets flows into the oceans causing the sea level to rise and the land underneath to begin rebounding upwards.¹² They dismissed

¹⁰ Ross S. Sterling and Ed Kilman, *Ross S. Sterling, Texan: A Memoir by the Founder of Humble Oil and Refinery Company* (Austin: The University of Texas at Austin, 2007), 32.

¹¹ Wallace E. Pratt and Douglas W. Johnson, “Local Subsidence of the Goose Creek Oil Field,” *The Journal of Geology* 34, No. 7, Part 1 (October – November 1926), 581-582.

¹² Pippa Whitehouse, “Postglacial Rebound,” AntarcticGlaciers.Org, February 17, 2017, accessed March 11, 2020, <http://www.antarcticglaciers.org/glaciers-and-climate/sea-level-rise-2/recovering-from-an-ice-age/>.

post-glacial subsidence as an alternative theory because “post-glacial subsidence ceased to exist several thousands of years ago, since which time the land and sea have remained remarkably stable.”¹³ More specifically, post-glacial subsidence occurs uniformly and gradually across an area, which did not happen at the Goose Creek oil field. In fact, the oil field sank three feet in eight years. Pratt and Johnson similarly dismissed the changes of mean sea-level theory because the changes in sea-level in surrounding communities, such as Galveston were significantly less than the changes at the oil field. Lastly, they dismissed the erosion theory by citing the uneven distribution of subsidence across the oil field. According to their observations, the oil field was in a sheltered area protected by marshy forelands from wave and current action.

Their assessment made sense because during their time there, Humble Oil workers withdrew millions of gallons of fluids from this piece of land in a short amount of time. According to Ross S. Sterling, one of the company’s founders, worked at the oil field “drilled so many well[s] and took out so much oil that the land, which stood four feet above water, sank to two feet underwater.”¹⁴ Furthermore, this localized subsidence extended into the communities surrounding the oil field. One of the nearby communities affected was Pelly, which later consolidated with Goose Creek and East Baytown to form present-day Baytown. Shortly after oil production began at the oil field, “cracks appeared in the ground running beneath houses, across

¹³ Wallace E. Pratt and Douglas W. Johnson, “Local Subsidence of the Goose Creek Oil Field,” *The Journal of Geology* 34, No. 7, Part 1 (October – November 1926), 587.

¹⁴ Ross S. Sterling and Ed Kilman, *Ross S. Sterling, Texan: A Memoir by the Founder of Humble Oil and Refinery Company* (Austin: The University of Texas at Austin, 2007), 32.

streets, and through lawns and gardens. These cracks persisted and recurrent movement along them resulted in dropping in the surface of the ground on the side of the cracks toward the oil field.”¹⁵ These cracks sunk several areas at least sixteen inches. Furthermore, slight earthquakes accompanied these cracks. The earthquakes shook homes, causing water spills and displaced dishes. Unfortunately, the subsidence continued to spread outside the oil field into nearby Hogg Island, which has mostly disappeared due to subsidence and erosion. By 1978, the land where the oil field once stood had sunk nine feet.¹⁶ Regardless of the sinking, Sterling decided to build a refinery in nearby Baytown, which opened in 1920. Its growth and development encouraged workers and their families to create communities near the refinery. As the oil industry expanded around the oil field and beyond it, so did the subsidence.

In 1958, Texas A&M University geology graduate student and Baytown resident Eddie V. Gray made the connection between the withdrawal of both water and oil as factors contributing to subsidence. Rather than focusing exclusively on the Goose Creek oil field, the region’s first major subsidence problem and the first example recorded in American literature, he decided to look at subsidence in the broader Baytown-La Porte area. When Gray published his master’s thesis, subsidence was no longer a problem specific to the Goose Creek oil field. Instead, it was a problem that was also now occurring in Houston and Galveston. Regarding the Goose

¹⁵ Wallace E. Pratt and Douglas W. Johnson, “Local Subsidence of the Goose Creek Oil Field,” *The Journal of Geology* 34, No. 7, Part 1 (October – November 1926), 579-580.

¹⁶ Theron D. Garcia, Subsidence and Surface Faulting at San Jacinto Monument, Goose Creek Oil Field, and Baytown, Texas”. *Field Trip Guidebook on Environmental Impact of Clays along the Upper Texas Coast. Prepared by Theron D. Garcia, Douglas W. Ming, and Lisa Kay Tuck for the Clay Minerals Society, 28th Annual Meeting, 1991, 44.*

Creek oil field, he estimated that between 1917 and 1953, the oil field had sunk five feet. Even more concerning was the fact that between 1916 and 1925, the oil field's workers had withdrawn almost 100 barrels of groundwater and oil, along with gas and sand. However, unlike Pratt and Johnson, Gray highlighted the relationship between groundwater and subsidence. He argued, "The large withdrawals of ground water from the Houston-Galveston region and more specifically from the Baytown-La Porte area have caused most of the observed surface subsidence and surface faulting."¹⁷

Ground water was essential for the growth and development of the refinery and its surrounding communities. As the refinery and its surrounding communities grew, they needed substantial amounts of water. Therefore, these cities and refinery began using ground water as their main water supply. In 1956, the Baytown-La Porte area withdrew 26.4 million of gallons of groundwater daily. As a result, these large withdrawals of water caused depressions in the area. The amount of ground water used by these entities rapidly increased in the 1950s. In 1951, water production was about 12.4 million gallons daily. By 1954, water production doubled to 24 million gallons daily. Water production in 1956 reached its highest production rate at 24.6 million gallons daily.¹⁸ This compacted the surface, forcing it to lose its porosity. Compaction occurs when fine-grained sediments begin accumulating at the bottom of the bay or lake where water the entities withdraw their groundwater. As more material accumulates, water begins squeezing out, reducing the pore space. Compaction is a

¹⁷ Eddie V. Gray, "The Geology, Ground Water, and Surface Subsidence of the Baytown-La Porte Area, Harris County, Texas" (MS Thesis: Texas A&M University Press, 1958), i.

¹⁸ Eddie V. Gray, "The Geology, Ground Water, and Surface Subsidence of the Baytown-La Porte Area, Harris County, Texas" (MS Thesis: Texas A&M University Press, 1958), 47.

natural process, but human interference accelerates it. Human interference includes building heavy structures or withdrawing large amounts of fluids. When humans withdraw large amounts of fluids from the surface of an area like the Goose Creek oil field, the withdrawal sunk the area.

After Hurricane Carla, Brownwood residents began seeing “their property slipping into the bay in small increments. They noticed the tides coming in higher and higher every year, but the cause remained a mystery.”¹⁹ Then, in the 1960s, Robert K. Gabrysch from the United States Geological Survey began studying the Brownwood subdivision and its surrounding areas. He soon began warning residents and anyone who would listen that the Brownwood subdivision sat on land lacking “the firmness of bedrock or even sand. And as water-hungry industries pumped enormous quantities of groundwater out of that land, he explained, the land compacted.”²⁰ He called this process subsidence. Gabrysch continued studying the area and determined the Brownwood subdivision was not the only area sitting in alternating layers of sand. He determined that the entire Houston area sat on “a highly compressible, geologically young type of clay called montmorillonite, which is rather like modeling clay in consistence.”²¹ The withdrawal of water caused the internal pressure within the clay layers to decrease. This then caused the clay sediments to collapse and the surface to sink.

¹⁹ Whit Snyder, “From Good Times to Heartbreak: Brownwood’s Rise and Fall,” *The Baytown Sun*, May 12, 2002, 7-A.

²⁰ Lisa Gray, “Brownwood: The Suburb that Sank by the Ship Channel,” *Houston Chronicle*, March 23, 2013, accessed March 15, 2020, <https://www.houstonchronicle.com/news/houston-texas/houston/article/Brownwood-The-suburb-that-sank-by-the-Ship-4379765.php>.

²¹ Robert Reinhold, “Houston’s Great Thirst is Sucking City Down the Ground,” *The New York Times*, September 26, 1982, 28.



Figure 3.1 This image shows how close Brownwood (located inside the small circle) was to the Humble Oil Baytown refinery (indicated by the bigger circle). This proximity contributed to the subdivision's demise. (NASA Jet Propulsion Laboratory California Institute of Technology, "Baytown Refinery, Texas, October 22, 2012, accessed April 10, 2019, <https://www.jpl.nasa.gov/spaceimages/details.php?id=PIA16295>.)

When Dr. H. C. Clark, a professor from Rice University's Geology and Geophysics Department visited the subdivision in 1975, he further explained Gabrysch's observation. After seeing a home completely surrounded by bay waters, Dr. Clark explained that Brownwood and the surrounding areas was sinking because "more groundwater had been sucked from the surface than was being replenished by recharge rainfall north of Texas."²² In other words, he suggested that the industrial and municipal usage of groundwater was greater than the accumulation of rainfall.

By 1973, the subdivision had sunk nine feet.²³ The subsidence was evident to visitors. In April 1974, when *Houston Chronicle* photographer David Nance toured the subdivision, he photographed a couple's submerged barbeque pit. The caption read, "The barbeque pit, lower right, at Herbert and Jayne Slatkin's Bayshore Drive home in the Brownwood subdivision was usable 15 months ago. It is now almost completely submerged in water."²⁴ Other visible submerged structures included in-ground pools. The most important proof was the abandoned home surrounded by water, as reported by *The Chicago Tribune* in 1978. The owner had raised the home eight feet after Hurricane Carla, but by 1978, it was sitting in the middle of the bay.²⁵

²² Jim Blackburn, *The Book of Texas Bays* (College Station: Texas A&M University Press, 2004), 72.

²³ William M. Bulkeley, "Clyde Floyd of Texas Has a Headache & His Home is Feeling Low," *The Wall Street Journal*, January 12, 1973, 1.

²⁴ "Archive Photos of Long-Gone Brownwood Subdivision in Baytown," *Houston Chronicle*, May 28, 2016, accessed March 25, 2020, <https://www.chron.com/news/houston-texas/slideshow/Archive-photos-of-long-gone-Brownwood-Subdivision-130243/photo-10156363.php>.

²⁵ Timothy McNully, "In Texas That Sinking Feeling is Real," *The Chicago Tribune*, April 2, 1978, 4.



Figure 3.2 This is an aerial view of the Brownwood Subdivision in December 1978. By then, Goat Island and the subdivision's tips had subsided. (Google Earth Pro, "Brownwood Subdivision and Goat Island, 1978" accessed April 1, 2020.)

Hurricane Carla

On Sunday, September 3, 1961, a set of showers off Nicaragua in the Caribbean developed into a tropical depression.²⁶ Two days later, this tropical depression grew into a tropical storm threatening Honduras and Guatemala. By September 5, the Miami Weather Bureau declared the conditions in the western Caribbean unfavorable for the storm to grow into a hurricane.²⁷ Weather officials did not know its trajectory, but Carla was already dominating the front page of *The Baytown Sun*'s September 5, 1979 edition. Carla entered the Gulf of Mexico on September 7. The following day, the Weather Bureau extended its hurricane watch along Texas' coast. Since the storm's circulation covered the Gulf of Mexico, weather forecasters were unsure about where it would make landfall, but Baytown city officials began preparing for the storm. Baytown City Manager J. B. LeFebvre met with department heads "to make plans for providing shelter, food and transportation in event Baytown is in the path of Hurricane Carla."²⁸ LeFebvre also asked school officials to open schools as shelters and placed all city employees ready to help.

The next morning, September 9, forecasters first estimated that Carla would make landfall in upper Texas or Louisiana's western coast.²⁹ The weather bureau included Baytown within the hurricane warning. Baytownians and the surrounding

²⁶ Mattie E. Treadwell, "Hurricane Carla: September 3-14, 1961," Department of Defense Office of Civil Defense Region 5 (Washington D. C.: U. S. Government Printing Office, 1962), 1.

²⁷ The Associated Press, "Storm Carla Flood Threat to Honduras," *The Baytown Sun*, September 5, 1961, 1.

²⁸ The Associated Press, "Carla is Now Major Storm," *The Baytown Sun*, September 8, 1961, 1.

²⁹ Mattie E. Treadwell, "Hurricane Carla: September 9-13, 1961," Department of Defense Office of Civil Defense Region 5 (Washington D. C.: U. S. Government Printing Office, 1962), 1.

communities began preparing for the storm. Superintendent of Schools George H. Gentry declared that all school buildings in the area would be “viable for shelter and feeding if necessary.”³⁰ Some families in Brownwood evacuated even though Carla was still hundreds of miles away from Texas’ coast.³¹ Laurene Douglas, a Bayshore Drive resident, evacuated to Houston “in perfect confidence that nothing could happen to our house except the roof might blow off, if the wind got strong.”³² However, she moved everything valuable downstairs before leaving. By Sunday, September 10, forecasters predicted a landfall between Aransas Pass and Galveston. Meanwhile, Baytownians and city officials finalized their preparations for Carla since forecasters predicted the storm would make landfall in less than twenty-four hours. As promised, Superintendent Gentry made all schools available for shelter and food for as long the community needed them. One of the first schools he opened was Burnet Elementary, which was close to the Brownwood subdivision.

As the storm approached land, things worsened in the Baytown area, particularly in the Brownwood subdivision. Even though Baytownians had prepared beforehand, they were unprepared for the storm’s impact on the Brownwood subdivision. By 8:00 a.m. Sunday morning, “some houses were reported to have as much as a foot of water on the first floor.”³³ That same night, Baytown’s National

³⁰ John Marsh, “Baytown Gets Set to Ride Out Big Blow,” *The Baytown Sun*, September 10, 1961, 1.

³¹ Blue Brethard, “Nearly Everyone Took Carla Lightly – Until,” *The Baytown Sun*, September 9, 1962, 4.

³² Laurene Douglas, interview by Dr. Jim Maroney, Lee College Oral Histories, The Portal to Texas History, The University of North Texas Libraries, January 21, 1976, transcript, https://texashistory.unt.edu/ark:/67531/metaph845286/m2/1/high_res_d/002%20Oral%20history%20conversation%20with%20Laurene%20Douglas%20Transcript.pdf.

³³ John Marsh, “Flood Waters, High Winds Lash at City,” *The Baytown Sun*, September 11, 1961, 1.

Guard helped “evacuate an undetermined number of persons from their homes in Brownwood where storm-pushed tides threatened to reach record highs.”³⁴ Members of the National Guard and volunteers from the Wooster Fire Department also aided in these rescues. Flying debris and gusty winds made the evacuation a difficult task. However, first responders were able to take Brownwood residents to the shelters set up in schools and churches. Some rescuers also evacuated “horses in the Sam Houston Hunt Club on Mapleton [Avenue] to assorted cats, dogs, birds and even a wet rooster or two.”³⁵ Even as conditions in the subdivision worsened, some Brownwood residents refused to leave their homes. When recalling their experiences, they claimed tornado-like winds hit the subdivision. These residents believed a tornado hit the area because “bricks fell from the buildings instead of inside, and huge, jagged holes were torn in the sides of houses.”³⁶ Unfortunately, this was only the beginning.

Hurricane Carla finally made landfall near Port Lavaca, Texas on Monday, September 11. Residents began returning to the subdivision on September 12 to assess the damages on their properties. Baytown policemen patrolled the area and helped direct traffic. Before entering the subdivision, city officials and volunteers warned residents “to use a disinfectant in their washing machines to sterilize all dishes and take typhoid and tetanus shots at the Wooster Fire Station.”³⁷ Doctors from the Harris County Medical Society and nurses from local hospitals gave out tetanus and typhoid shots starting on September 14. Those who wanted to enter the subdivision as

³⁴ “2,000 Stay in Shelters Here,” *The Baytown Sun*, September 11, 1961, 1.

³⁵ Wanda Orton, “Carla Left Her Mark in Animal World Too,” *The Baytown Sun*, September 9, 1962, 4.

³⁶ Blue Breathard, “Nearly Everyone Took Carla Lightly – Until,” *The Baytown Sun*, September 9, 1962, 4.

³⁷ “Brownwood Needs Aid, Food, Funds,” *The Baytown Sun*, September 15, 1961, 10.

volunteers also needed these shots. These precautionary measures were necessary because the subdivision was a disaster zone. However, the extra surveillance did not stop sightseers from entering the neighborhood and surveying the storm's damages.

Immediately after storm, authorities declared the Wooster area a "disaster area because of floods."³⁸ They also declared the Brownwood subdivision an almost complete loss, with damages estimated at \$3.5 million. Between six to ten feet of water entered the homes, leaving more than 300 families homeless.³⁹ This was a significant amount because by September 14, insurance experts in New York estimated that Carla's damage would be less than \$100 million.⁴⁰ Furthermore, the types of damages varied throughout the subdivision. It is important to understand that each family's experience varied due to the residents' preparations and location on the peninsula.

When Brownwood residents returned to the subdivision, "they found their home in ruins. Everything they had worked and saved for to accumulate had either been swept away by the savage invader or damaged beyond repair."⁴¹ Even though Carla made landfall more than 200 miles away, "many houses in the Brownwood area were flooded and isolated. The water flooded some homes to the middle of the first floor. Mailboxes and traffic signs were underwater."⁴² Both the wind and floodwaters damaged homes. The floodwaters swept away some homes, and winds left "hulking

³⁸ "Survey of Damage from the Hurricane," *New York Times*, September 13, 1961, 39.

³⁹ Buck A. Young, *The Making of a City: Baytown, Texas Since Consolidation, 1948 – 1998* (Baytown: Lee College, 1997), 20.

⁴⁰ The Associated Press, "Carla's Damage Less Than \$100 Million," *The Christian Science Monitor*, September 14, 1961, 3.

⁴¹ "Editorials – Sun Planning Carla Review," *The Baytown Sun*, September 5, 1962, 6.

⁴² John Marsh, "Flood Waters, High Winds Lash a City," *The Baytown Sun*, September 16, 1961, 1.

shells of two-by-fours. Some houses were not totally destroyed, but none escaped without major damage.”⁴³ In some cases, “only skeletons of some homes remained, others were completely wiped from lots.”⁴⁴ Reporter John L. Tveten later recalled seeing “empty concrete slabs on which houses stood the day before” when he went to help some friends living in the subdivision.⁴⁵ The storms’ winds also knocked out the electrical power and telephone communications throughout the subdivision. Their yards were also destroyed and full of debris. Residents found a lot of dead animals, especially livestock, scattered throughout the subdivision. Residents also discovered many snakes crawling in drainage ditches and inside their homes.

Homes on the bays sustained the most damage. Most were on Bayshore and West Bayshore Drives, along Burnet Bay. Six feet of water entered Laurene Douglas’ home on Bayshore Drive. The water “stayed there for quite a few days and what caused as much damage as anything was the fact that the water was full of chemicals and oil.”⁴⁶ The water was oily because the oil tanks at the Humble Oil refinery floated away and turned over. The oil inside the tanks came out and entered the bays around the Brownwood subdivision.⁴⁷ The dirty water damaged pieces of china and glassware, their furniture, and photographs. When she returned home and walked into their living room, they did not see their piano. Mrs. Douglas first thought was that

⁴³ “Damage Placed at \$3.5 Million,” *The Baytown Sun*, September 16, 1961, 3.

⁴⁴ “Circumstances Improved Throughout Brownwood,” *The Baytown Sun*, September 15, 1961, 10.

⁴⁵ John L. Tveten, “Nature Strong, but Humans Worse,” *Houston Chronicle*, September 24, 1988, E4.

⁴⁶ Laurene Douglas, interview by Dr. Jim Maroney, Lee College Oral Histories, The Portal to Texas History, The University of North Texas Libraries, January 21, 1976, transcript, https://texashistory.unt.edu/ark:/67531/metaph845286/m2/1/high_res_d/002%20Oral%20history%20conversation%20with%20Laurene%20Douglas%20Transcript.pdf.

⁴⁷ Catherine Glass Harbor, interview by Steve Koester, Sterling Municipal Library, YouTube, video, 01:22, 23, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

looters entered her home. Eventually, she and her daughters found the piano pieces outside. Weeks after the storm, they continued to find pieces of the piano in their yard. On that same street, five feet and eight inches of water entered the Breeland home. The same oil that damaged Mrs. Douglas' home also covered the Breeland home. Additionally, "the outside walls were still standing after the storm but two inside walls were out, including a kitchen wall."⁴⁸ After the storm, the family found one of their tables down the street in a pear tree and one of their cigarette boxes with the cigarettes still dry. Another Bayshore Drive family, the Hannas, returned to find huge boulders on their ground floor. All of their belongings floated out their windows. The parents, Pete and Juanita, found pieces of the Tabbs Bay – Hog Island Causeway floating around in their bedroom. The Tabbs Bay – Hog Island Causeway was a concrete road on top of wooden piers on Tabbs Bay, on the Goose Creek oil field. The causeway connected Hog Island to nearby towns, such as La Porte.⁴⁹ Their daughter's clothes floated blocks away, and their neighbors kept finding them in the months that followed.⁵⁰ The family also found their neighbor's garage in their front yard.

The damages on West Bayshore Drive, which was next to Bayshore Drive, were similar because it was between the Crystal and Burnet Bays. Roger Wylie's family owned a one-story house. Some of the personal belongings the storm destroyed included the family's appliances, grand piano, and clothing. They had to rebuild their

⁴⁸ "Brownwood People Still Erasing Marks of Storm," *The Baytown Sun*, September 9, 1962, 4.

⁴⁹ "Hog Island," *Our Baytown: Baytown's Historical Resource*, accessed March 3, 2020, <https://ourbaytown.com/hogisland.htm>.

⁵⁰ Deana Nall, "Back to Brownwood: 'We Thought We Lived in Paradise,'" *The Baytown Sun*, May 24, 2002, 2-A.

home because “seventy feet of the 140 foot wall was blown out. All the plywood was ripped out and found later a quarter of mile down the street.”⁵¹ The houses on Mapleton Avenue, which was on Scott Bay, sustained similar damages. When Mr. and Mrs. Knox temporarily returned from a business trip in London, they found that “nothing was left of their new home but the foundation and studs.”⁵² The couple had only lived in their new home for twelve days before leaving for London.

The damages on the streets inside the subdivision were also bad, even though they were further away from the three bays. Almost six feet of water entered the Sanders home on Ridgeway Avenue. However, Mrs. Sanders felt “much more fortunate” than her neighbors because some returned to worse damages.⁵³ Meanwhile, on Linwood Drive, the subdivision inside Brownwood, the hardwood floors and exterior brick at the Shepherd home were gone. They found their couch in their backyard “near their month-old swimming pool, which Carla had filled with fish, crabs, and shrimp.”⁵⁴ The black fence around their home prevented their furniture from floating away. As they cleaned up, Mrs. Shepherd found her neighbor’s wedding picture in her front yard.

Due to the damages, the subdivision needed extra surveillance. More Guardsmen arrived at the subdivision on the evening of September 12 after receiving “reports of looting in flooded areas.”⁵⁵ They joined the Civil Air Patrol in guarding the

⁵¹ “Roger Wylie Home Nears Completion,” *The Baytown Sun*, September 9, 1962, 4.

⁵² “New Home Lasts Only Twelve Days Before Destroyed,” *The Baytown Sun*, September 9, 1962, 4

⁵³ Mrs. Sanders, “Letter to Editor,” *The Baytown Sun*, January 7, 1980, 7-A.

⁵⁴ Deana Nall, “Back to Brownwood: Sinking Neighborhood’s Plight Forced the Nation to Deal with Subsidence,” *The Baytown Sun*, March 24, 2002, 2-A.

⁵⁵ “Additional Guardsmen Posted in Brownwood,” *The Baytown Sun*, September 13, 1961, 1.

subdivision as residents returned and began cleaning up. By September 15, the circumstances in the neighborhood improved. Yet, sixteen men from the Texas National Guard were still stationed at the subdivision, and city officials were fighting “to keep the Guard on duty to prevent looting and unnecessary entry into the disaster area.”⁵⁶ That same day, Sheriff V. C. Kern ordered six deputy sheriffs to patrol Wooster and the Brownwood subdivision.

Brownwood residents received an outpouring of support from the surrounding communities. Food was one of the first donations they received, and some of it came from outside the Baytown area. On September 14, the women from St. Paul’s Church fed lunch and supper to more than 250 residents. Additionally, more than 100 residents also ate lunch and supper at Wooster Baptist Church. The next day, Salvation Army trucks arrived at the subdivision and delivered “two planeloads of food flown in by the Lions Club of Virginia, repaying a favor by Texas Lions Club when Virginia suffered a similar disaster.”⁵⁷ The food first arrived at the Houston International Airport before being delivered to the subdivision. Upon its arrival, the Salvation Army distributed the food at the Wooster Volunteer Fire Station, the hurricane headquarters. Volunteers then drove a truck around the subdivision and distributed the food to residents. Similarly, the Red Cross Emergency Mass Feeding began providing meals for people in the Brownwood area at Burnet Elementary School. The school personnel provided these “daily food service[s]...from 1 p.m. to 2 p.m. and from 6:30 p.m. to

⁵⁶ “Circumstances Improve Throughout Brownwood,” *The Baytown Sun*, September 15, 1961, 10.

⁵⁷ “Circumstances Improve Throughout Brownwood,” *The Baytown Sun*, September 15, 1961, 10.

8:00 p.m.”⁵⁸ They also provided coffee and doughnuts in mobile units around the subdivision.

Besides the residents and sightseers, volunteers also wanted to enter the subdivision to help residents clean up and rebuild. Everyone wanted to help Brownwood residents for two reasons. First, Hurricane Carla was the first major flooding episode Brownwood residents experienced. Second, and more importantly, as local historian Buck A. Young suggested, “But Carla was, after all, a hurricane, and most residents did not suspect they were any more vulnerable to flooding than most others who lived along the coast.”⁵⁹ Therefore, they received an outpouring of support from the local community, including residents, local businesses, and major companies.

Brownwood residents received a lot of help from the Humble Oil refinery because many of the residents worked there. Some of the first volunteers to enter the subdivision after receiving their tetanus and typhoid shots were Humble Oil workers. On September 14, Humble Oil “sent all mobile equipment operators that could be spared into the disaster area.”⁶⁰ The refinery also sent 100 men to work with a Civil Defense coordinator. Their supervisors coordinated the workers’ efforts “with shortwave radio communications between Wooster Fire Station and the refinery.”⁶¹ Some volunteers “helped home owners clean and move furniture that could be reclaimed” while “others helped clean mud and debris out of the homes that were still

⁵⁸ “Red Cross to Provide Daily Meals,” *The Baytown Sun*, September 15, 1961, 1.

⁵⁹ Buck A. Young, *The Making of a City: Baytown, Texas, Since Consolidation, 1948 – 1998* (Baytown: Lee College, 1997), 20.

⁶⁰ “Sleeves Rolled Up to Help Hurricane Victims: Refinery Has Task Force Working in Disaster Area,” *Humble Baytown Briefs*, September 22, 1961, 1.

⁶¹ “Humble Machinery, Men Aid Clean Up,” *The Baytown Sun*, September 15, 1961, 1.

standing.”⁶² These men also helped remove heavy timbers and fallen trees. Other Humble Oil workers volunteered to operate cranes, trucks, tractors, and draglines over the weekend. In total, 100 Humble Oil employees helped Brownwood residents clean up during that first weekend. Additionally, the refinery “designated some mobile equipment for employees’ personal use over the weekend.”⁶³ Humble Oil employees who lived in the subdivision had the opportunity to borrow small equipment that workers could spare. Refinery officials also let residents throw the rotten meat from their freezers into the refinery’s incinerator. Humble Oil chief accountant David Funderburk spent several days helping his neighbors in the subdivision cleaning up.

The refinery continued to help Brownwood residents in the months following Hurricane Carla. Starting on the October 10, 1961 edition of the refinery’s magazine, *Humble Baytown Briefs*, staff members included a section titled “Service for Hurricane Victims” where the refinery’s employees and retirees could “acquire volunteer help to get their homes repaired.”⁶⁴ Since the magazine was a weekly publication, those interested in receiving help had to call by 10 a.m. on Wednesdays to place their requests. In the first round of help, the magazine’s staff listed six residents who needed help. A week later, on the October 13, 1961 edition of the magazine, three more people requested help. Walker Koepke, a welder who lived on Milner Drive, needed men to help him get the sheet rock out of his house. Mapleton Drive resident R. D. Barr needed volunteers with hammers to pull nails and stack lumber at his home

⁶² “Sleeves Rolled Up to Help Hurricane Victims: Refinery Has Task Force Working in Disaster Area,” *Humble Baytown Briefs*, September 22, 1961, 1.

⁶³ “Humble Machinery, Men Aid Clean Up,” *The Baytown Sun*, September 15, 1961, 1.

⁶⁴ “Service for Hurricane Victims,” *Humble Baytown Briefs*, September 29, 1961, 1.

to prevent the lumber from curling. Annuitant B. P. O'Sullivan needed four carpenters to pull nails and clean the salvage lumber remaining on his property.⁶⁵ It is unknown if these residents received the help they requested.

Everyone wanted to help Brownwood resident following Hurricane Carla. Mrs. Douglas' friends helped her gather and sterilize her good china and crystal. They put it in their dishwasher and stored it until she found a new home. Additionally, one of her friends took care of her daughter for two weeks. This friend also cooked for them and washed their clothes.⁶⁶ Mike Floyd, a Bayshore Drive resident, recalled, "My parents, with the help from a whole lot of friends from Wooster and Lakewood and everywhere in Baytown, got the house cleaned up to move back in it."⁶⁷ Similarly, Lea Underwood declared, "We rebuilt with the help of the community and friends."⁶⁸ The help they received extended beyond cleaning up debris and rebuilding homes. Some Brownwood residents helped their neighbors by taking care of pets until their owners' return. Other residents helped reunite lost pets with their owners, like "one man, whose name could not be learned, made it his personal crusade to rescue in the Brownwood area."⁶⁹ He set up headquarters to help reunite owners with their pets. The Wooster Fire Department kept a list of the animals they found, hoping to return them

⁶⁵ "Carla Victims Request Help," *Humble Baytown Briefs*, October 13, 1961, 2.

⁶⁶ Laurene Douglas, interview by Dr. Jim Maroney, Lee College Oral Histories, The Portal to Texas History, The University of North Texas Libraries January 21, 1976, transcript, https://texashistory.unt.edu/ark:/67531/metaph845286/m2/1/high_res_d/002%20Oral%20history%20conversation%20with%20Laurene%20Douglas%20Transcript.pdf.

⁶⁷ Mike Floyd, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 27:25, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

⁶⁸ Lea Underwood Kraymer, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 36:00, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

⁶⁹ Wanda Orton, "Carla Left Her Mark in Animal World, Too," *The Baytown Sun*, September 9, 1962, 4.

to their owners. Religious groups also helped Brownwood residents. Besides feeding Brownwood residents, the women from St. Paul's Church also offered to volunteer their time "to cook, wash clothes, and-or donate funds."⁷⁰

As residents cleaned up and rebuilt their homes, they also tried to regain a sense of normalcy, especially for their children. Students returned to school on September 14 even though some schools were still part of the relief effort. One of the schools that was still a "Red Cross canteen" when classes resumed was Burnet Elementary in Wooster.⁷¹ The school was both a shelter for displaced residents and a meeting point for volunteers helping these residents. Additionally, Brownwood resident and American Red Cross disaster chairman W. D. (Bill) Hinson, temporarily had his office at the school administration building.⁷²

Following the storm, several residents had difficulties receiving their insurance settlement. This became an important issue when the subdivision began flooding more frequently, especially when the floods were not tropical storm- or hurricane-related. Laurene Douglas had some difficulty with her insurance settlement. As a recent widow, she was unfamiliar with the process. Even though she "had insurance with a good company" and a patient insurance agent, she was not satisfied with her first insurance offer.⁷³ The insurance sent her a second adjuster who offered her a little

⁷⁰ "Brownwood Needs Aid, Food, Funds," *The Baytown Sun*, September 15, 1961, 10.

⁷¹ "Students Return to School After Forced Holiday," *The Baytown Sun*, September 14, 1961, 1.

⁷² Wanda Orton, "Scores Come to Aid Victims of Hurricane," *The Baytown Sun*, September 15, 1961, 2.

⁷³ Laurene Douglas, interview by Dr. Jim Maroney, Lee College Oral Histories, The Portal to Texas History, The University of North Texas Libraries, January 21, 1976, transcript, https://texashistory.unt.edu/ark:/67531/metaph845286/m2/1/high_res_d/002%20Oral%20history%20conversation%20with%20Laurene%20Douglas%20Transcript.pdf.

more than her first agent, but she did not accept the offer. The third adjuster gave her a check, which she did not cash because she was still not satisfied with her settlement. Eventually, she wrote to the insurance company's president, who sent her a new insurance agent. According to Mrs. Douglas, the new agent "said that he had never seen anything like it."⁷⁴ Yet, this did not change her insurance claim. Mrs. Douglas soon sold her home without fixing it up. Prior to Hurricane Carla, Mrs. Douglas planned to sell her home.

Chronic Flooding

During the five years after Hurricane Carla, things were calm at the subdivision. This calmness ceased when Hurricane Beulah, a Category 3 storm made landfall near Brownsville on Wednesday, September 20, 1967. Even though Brownwood was located more than 300 miles away, the high tides created a lot of damage in the subdivision. According to R. D. Causey, the coordinator at the Humble Oil docks, "the peak reading [of tides] during the hurricane watch was 5 feet, 9 inches above normal."⁷⁵ Most residents emptied their homes and evacuated the day before Beulah's landfall. Some, like Ridgeway Avenue resident Axel Schoyen, simply moved out the furniture in their homes.

⁷⁴ Laurene Douglas, interview by Dr. Jim Maroney, Lee College Oral Histories, The Portal to Texas History, The University of North Texas Libraries, January 21, 1976, transcript, https://texashistory.unt.edu/ark:/67531/metaph845286/m2/1/high_res_d/002%20Oral%20history%20conversation%20with%20Laurene%20Douglas%20Transcript.pdf.

⁷⁵ Bobby Sutphin, "Only Have Rains Feared Now – Civil Defense Operation Eases," *The Baytown Sun*, September 21, 1967, 1.

The evacuation process during Beulah created bumper-to-bumper traffic throughout the subdivision because residents were trying to leave before it was too late, and sightseers were blocking the roads trying to catch glimpses of the rising tides. Even though the tides began receding by noon on Wednesday, many residents were still packing to evacuate the peninsula.⁷⁶ Police reserve units and regular patrolmen guarded the subdivision throughout the night to prevent looters and trespassers from entering the subdivision after residents evacuated. Officers did this by checking the identities of everyone entering the area.⁷⁷ Since the tidal waters quickly receded, civil authorities gave residents permission to return to their homes on Thursday morning. However, most residents were not in a hurry to return. According to a man interviewed by *The Baytown Sun*, most Brownwood residents were not worried about the storm's damage because "they needed to get the rugs cleaned anyway."⁷⁸ This man's declaration suggested that residents knew they would soon experience a new flooding episode. After all, the last major one was Hurricane Carla in 1961.

Hurricane Beulah was the first flooding episode in Brownwood since Carla, so Baytownians tried to help the subdivision's residents. It is important to highlight the community's response because as the flooding episodes occurred more frequently, the surrounding communities were less willing to help the subdivision. Following Beulah, some Baytownians volunteered to pack their garages and home "with household

⁷⁶ Johnella Boynton, "Brownwood Residents Not Hurrying Back to Homes," *The Baytown Sun*, September 21, 1967, 1.

⁷⁷ Bobby Sutphin, "Only Have Rains Feared Now – Civil Defense Operation Eases," *The Baytown Sun*, September 21, 1967, 1.

⁷⁸ Johnella Boynton, "Brownwood Residents Not Hurrying Back Homes," *The Baytown Sun*, September 21, 1967, 1.

furnishings and equipment from Brownwood and other areas which had been threatened by the water.”⁷⁹ One vacant business building on Bayway Drive had a sign advertising “Free Storage” for Beulah’s victims.

After Hurricane Beulah, the flooding episodes in Brownwood occurred more frequently. The next flooding episode occurred on February 13 and 14, 1969. This flooding episode was one of the most debilitating floods that Brownwood residents experienced because it occurred rapidly and unexpectedly. The flooding occurred when “a thunderstorm with pounding rain struck in the middle of the night, and the water rose at an alarming rate inside homes and over yards.”⁸⁰ On Thursday, February 13, residents received a brief warning after 10:00 p.m. when a police sound truck drove around the subdivision and called out, “You are being advised to evacuate your home.”⁸¹ Even though it was late at night, most residents followed the truck’s advice and evacuated. However, there were some families who stayed, such as the Wilders, who lived on the corner of Mapleton Avenue and Linwood Drive. According to Mrs. Wilder, Thursday night, she sat on the stairs for a while and watched the waves against her French doors before going to sleep. Soon after, one of her sons woke her and her husband up to let them know he opened an outside door at about one in the morning and saw small fish swimming in their den. When they went down, Mr. Wilder

⁷⁹ Bobby Sutphin, “Only Have Rains Feared Now – Civil Defense Operation Eases,” *The Baytown Sun*, September 21, 1967, 1.

⁸⁰ Wanda Orton, “Hurricane Harvey Jogs Stormy Memories,” *The Baytown Sun*, September 3, 2017, 4A.

⁸¹ Johnella Boynton, “Torrential Rain, High Wind Ride with Blow,” *The Baytown Sun*, February 14, 1969, 1.

witnessed the water reach the wall plugs and pop each socket.⁸² Yet, they did not evacuate because they wanted to stay and protect their homes.

Before evacuating, residents tried to save some of their belongings. For example, Axel Schoyen, a Ridgeway Avenue resident, put his family's furniture on cans and books six inches off the floor the same night residents received the evacuation notice. His family was still there when the first set of tides threatened to reach his home. The Schoyen family finally left after their neighbor called them at 5:30 Friday morning to warn them the tides were rising again. According, to Schoyen, "we put the rest of the furniture up the best way we could and left at 6:45. I had about three feet of water in the driveway, but got both cars started."⁸³ Like the Schoyen family, West Bayshore Drive residents Mr. and Mrs. W. A. Thomas moved much of their furniture to an upper level of their house. Then, they let their daughter spend the night at their friends' home on Cabaniss Avenue.

Some of the families who evacuated Thursday night returned to their homes early Friday morning when "the threat ceased [at] about 3 a.m. after tide levels slowed their rise."⁸⁴ Unfortunately, Civil Defense Director Fletcher Hickerson had to renew the evacuation order at about 6:00 a.m. Friday after the wave levels in the subdivision rose eight inches in only fifteen minutes. First responders had to rescue some of the residents who returned. Following the same pattern as earlier, the water quickly

⁸² Jean Froneberge, "Storm-Weary Brownwood Dwellers Plead for Long-Delayed Levee Action," *The Baytown Sun*, February 16, 1969, 11.

⁸³ Jean Froneberger, "Storm-Weary Brownwood Dwellers Plead for Long-Delayed Levee Action," *The Baytown Sun*, February 16, 1969, 1.

⁸⁴ Johnella Boynton, "Torrential Rain, High Wind Ride with Blow," *The Baytown Sun*, February 14, 1969, 1.

receded. Before residents returned to the subdivision, city officials had to inspect the subdivision to make sure all utilities were working. They also made sure that the sewage was adequate for the residents' return. By 10:30 a.m. Friday morning, many residents returned to their homes, some accompanied by friends. Sightseers also returned to the subdivision to witness the flood damage in the area.

City officials reopened all the streets in the neighborhood, except for a low place on Mapleton Avenue on Saturday, February 15. That same day, city trucks picked up trash throughout the subdivision. The American Red Cross immediately set up a mobile kitchen where volunteers served sandwiches, doughnuts, and coffee for Brownwood residents. The Red Cross also helped residents "buy food, clothing, medical and nursing care, repair owner-occupied homes, replace household goods, occupational supplies and equipment."⁸⁵ As they did after Hurricanes Carla and Beulah, police officers patrolled the area and supervised the checkpoints they set up throughout the neighborhood.

When residents returned to the subdivision, they were unsure of the damages they would find. Most had to replace carpets, refrigerators, deep freezers, pianos, dryers, washers, and television sets. They spent all weekend cleaning up and trying to salvage their belongings. In some houses, the floodwaters damaged water meters. West Bayshore Drive residents Mr. and Mrs. W. A. Thomas returned to find the furniture and carpet they replaced after Hurricane Carla completely soaked. Their weirdest discovery, however, involved their concrete swimming pool. After wading to

⁸⁵ Johnella Boynton, "Brownwood Damage is Pegged at \$250,000," *The Baytown Sun*, February 16, 1969, 1.

her home, Mrs. Thomas saw their pool floating several feet out of the ground. Prior to the flood event, the pool was empty because it was winter. Their next-door neighbors found carpet and central air conditioning damages upon their return.⁸⁶

Further inland, the damages residents encountered were similar. The Wilder family, who lived on the corner of Mapleton Avenue and Linwood Drive, had to pump out water from their property with a small pump they bought and used regularly after Hurricane Carla. Additionally, they had to drape their wet mattresses and balance their piano “precariously across two empty dresser drawers stacked on top of two benches.”⁸⁷ The rising tides forced the family to also include the drawers in the stack. Additionally, their fireplace had a water line nineteen inches from the floor. When Axel Schoyen returned to his home and assessing the damages at his Ridgeway Avenue, he lamented “they should have raised everything a good six inches higher.”⁸⁸

The preliminary estimate of damages for this flooding event known as the 1969 Valentine’s Day Flood was \$250,000. This amount was less than Hurricane Alicia, but the damage was extensive. According to Civil Defense Director Fletcher Hickerson, about eighty percent of the homes in the subdivision flooded.⁸⁹ Although this flooding was not hurricane related, residents were able to apply for financial aid from both the Small Business Administration and the American Red Cross. Hours after the flood, residents could apply for SBA loans because the Baytown City Council

⁸⁶ Jean Froneberge, “Storm-Weary Brownwood Dwellers Plead for Long-Delayed Levee Action,” *The Baytown Sun*, February 16, 1969, 1.

⁸⁷ Jean Froneberge, “Storm-Weary Brownwood Dwellers Plead for Long-Delayed Levee Action,” *The Baytown Sun*, February 16, 1969, 11.

⁸⁸ Jean Froneberger, “Storm-Weary Brownwood Dwellers Plead for Long-Delayed Levee Action,” *The Baytown Sun*, February 16, 1969, 1.

⁸⁹ Wanda Orton, “Freaky, Stormy Friday on Feb. 14, 1969,” *The Baytown Sun*, February 9, 2020, 4A.

immediately “agreed to ask the Small Business Administration to declare Brownwood an emergency area after conferring with a state relief official from Austin.”⁹⁰

Brownwood residents would need these disaster loans to cover the remaining costs after settling their insurance claims.

Since this was the third flooding episode Brownwood residents experienced during in a decade, residents received assistance from public organizations and private businesses. These groups helped residents clean up and rebuild their community.

Humble Oil officials sent equipment, just like they did after Hurricane Carla.

Similarly, Charles McKay, the plant manager at Ashland Chemical, sent employees with a stake truck and a winch truck.⁹¹ Brownwood residents also helped each other by sharing cleanup and rebuilding tips. One interesting piece of advice residents received was to drill “small holes at the bottom of walls to allow water to drain more quickly [because] water pressure in the walls is strong enough to loosen bricks over a period of time.”⁹² Brownwood residents needed to listen to all the tips they received, especially from longtime residents, because the subdivision would continue to flood and sink.

Between February 1969 and September 1973, the subdivision flooded two more times. On August 3, 1970, Hurricane Celia made landfall in Corpus Christi. Even though this Category 3 hurricane made landfall more than 230 miles away from the subdivision, about four to five inches of bay water entered six homes and some

⁹⁰ Wanda Orton, “Low-Rate Loans Can be Made,” *The Baytown Sun*, February 16, 1969, 1.

⁹¹ Johnella Boynton, “Brownwood Damage is Pegged at \$250,000,” *The Baytown Sun*, February 16, 1969, 1.

⁹² Johnella Boynton, “Brownwood Damage is Pegged at \$250,000,” *The Baytown Sun*, February 16, 1969, 2.

garages in the Brownwood subdivision.⁹³ Ships and tugs passing thru the Houston Ship Channel were responsible for the wave action that flooded low-lying homes on the bay.⁹⁴ When compared to the previous storms, Celia's impact on the subdivision was minimal because the water never went over the newly elevated Crow Road. Residents and city officials began preparing for the storm the day before Celia's landfall. While residents packed up their belongings, city officials blocked Bayshore Drive and Mapleton Avenue. Meanwhile, Hurricane Fern, which made landfall between Freeport and Matagorda on September 10, 1971, created high tides in Brownwood. Eight hundred received evacuation orders. Up to eighteen inches of rain entered some homes, which surpassed the 1969 Valentine's Day Flood. About six inches of rain fell on the area, but the water did not recede quickly.⁹⁵ Instead, it lingered, turning yards into lakes for the eels slithering in the water.⁹⁶ These two hurricanes did not make landfall near Brownwood, but they did impact the subdivision in different ways because the area was sinking five inches every year.⁹⁷ In other words, as the subdivision continued sinking, the more vulnerable it was to subsequent flooding episodes.

The next significant flooding episode occurred in September 1973 when Tropical Storm Delia demonstrated the impact of a tropical storm on the sinking

⁹³ Johnella Boynton, "Residents Here 'Hoping Up,'" *The Baytown Sun*, August 4, 1970, 1.

⁹⁴ Johnella Boynton, "Brownwood May Get Storm Threat Passes," *The Baytown Sun*, August 7, 1970, 2.

⁹⁵ "High Tides Remain to Plague Baytown Areas," *The Baytown Sun*, September 12, 1971, 1-2.

⁹⁶ Wanda Orton, "Little Damages by Winds Reported," *The Baytown Sun*, September 10, 1971, 1.

Wanda Orton, "Hurricane Harvey Jogs Stormy Memories," *The Baytown Sun*, September 10, 2017, 4A.

⁹⁷ William M. Bulkeley, "Clyde Floyd of Texas Has a Headache & His Home is Feeling Low," *The Wall Street Journal*, January 12, 1973, 1.

subdivision. This flooding episode was important because by this point, the subdivision had sunk nine feet, and the perimeter road stood at five feet, instead of its original height of seven feet.⁹⁸ As a result, Tropical Storm Delia was “the first time since the perimeter road was constructed this year, that tides went over and into the interior.”⁹⁹ After the perimeter road’s completion, high tides had threatened the subdivision. However, the levee protected residents each time. Unfortunately, subsidence and Delia’s high tides made this storm one of the worst flooding episodes Brownwood residents experienced regardless of the perimeter road’s presence. Delia’s status as a tropical storm meant that its impact upon landfall should have been less severe than a hurricane’s. In other words, as a tropical cyclone with maximum sustained winds between forty and seventy-three miles per hour, Delia was weaker than a hurricane, which has maximum sustained surface winds seventy-four miles per hour or more.¹⁰⁰ However, the subsidence in the area altered the tropical storm’s impact on the subdivision.

Delia, which formed out of a tropical wave on September 1, 1973, quickly grew into a tropical storm. By 10:00 a.m. on September 3, it was 400 miles southeast of Baytown, but Civil Defense Director Fletcher Hickerson was unsure about its effect on the area. One of the reasons why he was unsure was because the National Weather Service expected Delia to reach hurricane strength later that day, but they had only

⁹⁸ William M. Bulkeley, “Clyde Floyd of Texas Has a Headache & His Home is Feeling Low,” *The Wall Street Journal*, January 12, 1973, 1.

⁹⁹ Wanda Orton, “Tides in Brownwood Drive Over 1,000 Out: At Least 140 Homes Flooded,” *The Baytown Sun*, September 6, 1973, 2.

¹⁰⁰ Kerry Emmanuel, *Divine Wind: The History and Sciences of Hurricanes* (Oxford: Oxford University Press, 2005), 21.

issued a hurricane watch east of Lake Charles to the mouth of the Mississippi River. Yet, he urged Baytownians to prepare for every possible scenario, except evacuation.¹⁰¹ Hickerson was also hesitant to create panic in the community because it was Labor Day. Many residents were out of town or were returning home. Since the month of September is in the middle of hurricane season, city officials activated the Emergency Operation Center at 9:00 a.m. at the City Hall basement and alerted Civil Defense staff members and city department heads. Regardless of Hickerson's hesitation to tell residents to evacuate, city officials began preparing the LARC, their new amphibious vehicle for possible water rescues and agreed to notify residents to evacuate even if they had to do so by knocking on their doors in the middle of the night.

Hickerson encouraged Baytownians to prepare for the storm by reminding them of their previous experiences. He advised residents to have emergency lighting, such as lanterns and candles, in case they lost electrical power. They also needed to store water in jars and tubs in anticipation of a water shortage. Non-perishable food items were also essential because electrical power outages spoiled food, especially frozen meat, inside their fridges, which happened during Hurricane Carla.¹⁰² Baytownians also needed to secure loose objects around to their homes to prevent them from flying around due to strong winds. They also needed to bring in their yard swings, boards, and garbage cans to shield them from potential winds. More importantly, Baytownians needed battery-operated radios because the Civil Dense

¹⁰¹ "Take Storm Precaution: Delia is Gaining Strength," *The Baytown Sun*, September 3, 1973, 1.

¹⁰² "Take Storm Precaution: Delia is Gaining Strength," *The Baytown Sun*, September 3, 1973, 13.

broadcasted hourly bulletins in KWBA. This would help them stay informed during the storm. Hickerson's advice was for all Baytownians, but the area that immediately began preparing for the storm was the Brownwood subdivision.

Preparations in and around the Brownwood subdivision began on Labor Day. The Baytown Community Center and Wooster Baptist Church opened as shelters, but they closed that same day. *The Baytown Sun* reported that they closed due to the lack of interest, but many residents did not take advantage of this opportunity because not everyone had returned home from their Labor Day weekend vacations. This also meant only six families evacuated from the subdivision.¹⁰³ The 7:00 a.m. reading on Tuesday morning was 3.5 feet at Crow Road, but Hickerson did not expect the tides "to go beyond five feet which would be below the protected level of the perimeter roads."¹⁰⁴ The rising tides were not the only problem that Tropical Storm Delia could potentially bring to the Baytown area. City officials expected four to six inches of rain, which could potentially flood the subdivision, and winds to be as high as 50 miles per hour. Therefore, residents boarded and taped their windows. They also stocked up on emergency supplies. Baytown schools dismissed classes early so families could get ready for the storm.

Delia made its first landfall in Freeport, Texas, a city located less than 100 miles away from the Brownwood subdivision on Tuesday, September 4. City officials assumed that Delia's threat was over, so they closed their Emergency Operating

¹⁰³ "Keeping Tab on Storm – Civil Defense Officer Here Tracking Delia," *The Baytown Sun*, September 4, 1973, 1.

¹⁰⁴ "Keeping Tab on Storm – Civil Defense Officer Here Tracking Delia," *The Baytown Sun*, September 4, 1973, 1.

Center that night. However, at 8:45 p.m., the Baytown Police Department received a weather bulletin that tides were going to be five to seven feet above normal at about 2:00 a.m. because Delia returned to the Gulf of Mexico. Baytown Police Sergeant Johnny Deel immediately ordered the bulletin's distribution in the Brownwood area. Police and fire department personnel, Baytown Emergency Corps volunteers, and the Texas State Guard distributed evacuation bulletins in thirty minutes. In ninety minutes, they helped more than 500 Brownwood residents evacuate.¹⁰⁵ The American Red Cross opened shelters at Horace Mann Junior High School and Westminster Presbyterian Church, but residents did not go there. Instead, they took shelter with family and friends. Meanwhile, city officials reopened the Emergency Operating Center, promising to keep it open for as long as Baytownians needed it.

When Delia made its second landfall in Rockport on Wednesday, the tides in Brownwood were 4.9 feet, but they were not threatening to go over the perimeter road.¹⁰⁶ The water eventually went over the perimeter road and remained inside the neighborhood, turning "Brownwood into an enormous water bowl."¹⁰⁷ City officials did not expect severe weather following the storm. They did expect the tides to quickly recede, so they let Brownwood residents return to their homes on Wednesday. Police officers and the Texas State Guard set up roadblocks to prevent sightseers from entering the subdivision. Unfortunately, Delia was not finished.

¹⁰⁵ "500 Flee Brownwood Ahead of Tide Threat: Perimeter Road is Water Bar," *The Baytown Sun*, September 5, 1973, 2.

¹⁰⁶ "500 Flee Brownwood Ahead of Tide Threat: Perimeter Road is Water Bar," *The Baytown Sun*, September 5, 1973, 1.

¹⁰⁷ Whit Snyder, "From Good Times to Heartbreak: Brownwood's Rise and Fall," *The Baytown Sun*, May 12, 2002, 7-A.

Early Thursday morning, more than 1,000 Brownwood residents had to evacuate the subdivision after tidal waters went over the elevated perimeter road. Three feet of water were inside the perimeter road. The tide waters flooded 140 homes, causing between \$1.5 million to \$3 million in damages. The Baytown Police Department alerted the Civil Defense about the rising tides at about 1:30 a.m., but the tides began going over the perimeter road two hours later when they were about 6.3 feet high. City officials did not have time to go door-to-door, so Civil Defense staff drove around the neighborhood with loudspeakers and sirens telling residents to evacuate. The water's rapid rising meant that residents did not have time to protect and save their furnishings, appliances, and cars. The Civil Defense used the LARC to help the residents whose cars were flooded. Some were able to leave in their own car, so they were able to seek shelter with family and friends. Residents could not exit the subdivision via Crow Road because there were "six inches of water flowing rapidly over it."¹⁰⁸ They could exit via Ridgeway Avenue, Cabaniss Street, Katherine Street, and McArthur Avenue.

According to Hickerson, the tidal waters flooded the subdivision because when "the storm came ashore at Freeport and then toward Freeport and then toward Angleton it brought southerly winds and high tides."¹⁰⁹ At 4:24 a.m., the maximum tide was 6.4 feet, which was 1.5 feet more than the 1969 Valentine's Day Flood. However, it was five feet below Hurricane Carla in 1961. Ed Mackert, a Civil Defense

¹⁰⁸ Wanda Orton, "Tides in Brownwood Drive Over 1,000 Out: At Least 140 Homes Flooded," *The Baytown Sun*, September 6, 1973, 2.

¹⁰⁹ Wanda Orton, "Tides in Brownwood Drive Over 1,000 Out: At Least 140 Homes Flooded," *The Baytown Sun*, September 6, 1973, 1

volunteer witnessed that the water was “up to four feet in some of the homes and numerous cars were up to the windows.”¹¹⁰ The deepest water was along the lower Bayshore Drive area north of Mapleton Avenue. This forced some families to remain in their homes. They wanted to leave, but the high waters had them trapped. The waters began to slowly recede that same day. By 10:35 a.m., the water was down to 4.65 feet.

Since the water was still high, city officials did not let residents return to the subdivision. They closed all the roads in the neighborhood. Police officers and Texas State Guardsmen patrolled the area. Residents had to check in with the Police Precinct Station on Bayway Drive before making plans to return. If they needed to enter the subdivision, they had to show identification with a Brownwood address. Meanwhile, they could stay at the disaster center at Wooster Baptist Church where they could sleep, eat, and get medical care. Fifty residents stayed at Wooster Baptist Church, while a couple of families went to St. Paul’s Methodist down the road.

Although Delia was a tropical storm, its impact on the subdivision was intense. The tropical storm damaged about 250 homes in the Brownwood subdivision. City authorities estimated the damages between \$2.5 million and \$3 million. When residents returned to the subdivision, they found a variety of damages. Packs of dogs were running around the subdivision. There were also dead dogs scattered throughout the neighborhood. City officials advised residents to cut off their electrical power and check the pilot lights to their gas lines to avoid further damages. Old-timers who had

¹¹⁰ Wanda Orton, “Tides in Brownwood Drive Over 1,000 Out: At Least 140 Homes Flooded,” *The Baytown Sun*, September 6, 1973, 1

previously experienced flooding episodes, also offered their own advice for the cleanup process. Mrs. Alma Appelt, a Bayshore Drive resident, suggested several ways to clean and deodorize their flooded refrigerators. This was one of the first items that residents checked upon their return because during previous flooding episodes, refrigerators had flooded, spoiling their contents. Therefore, Mrs. Appelt suggested baking soda, baking soda with water, soaking “a pad in oil of wintergreen,” “a strong dose of vanilla extract on the last rinse water,” straight tomato juice, diluted Lysol, and pieces of charcoal.¹¹¹ These small pieces of household advice were important because even though it was not a solution to all the damages residents encountered upon their return, it served as glimmer of hope for residents that they would rebuild again.

Once again, Brownwood residents received help from different groups. By Monday, September 10, American Red Cross volunteers used a mobile van to feed about 800. Fifty families registered with the Red Cross’ caseworkers for assistance. The following day, the Baytown Civil Defense created a coordinating center at Wooster Baptist Church. Besides serving as a donation drop-off location, this center served as a place where flood victims could obtain information on insurance and getting assistance. Volunteers encouraged the surrounding communities to donate food and clothing for the victims. Some of the help flood victims also received from the Red Cross included “purchase orders for food and clothing and minor repairs to families needing emergency assistance.”¹¹² After recipients used the purchase orders with local merchants, the merchants would forward the purchase orders to the

¹¹¹ “Refrigerator Cleaning Way is Suggested,” *The Baytown Sun*, September 11, 1973, 10.

¹¹² “If You Want to Help in Brownwood, Call 424-4747,” *The Baytown Sun*, September 11, 1973, 10.

American Red Cross for reimbursement. Additionally, the Harris County Commissioner Precinct 2 sent crews with trucks and loaders to haul away debris, including damaged furniture, from the Brownwood subdivision.¹¹³ More importantly, Texas Governor Dolph Briscoe asked President Richard Nixon to declare the Brownwood subdivision a disaster area so residents could apply for Small Business Administration loans and housing assistance.

Residents rebuilt following Tropical Storm Delia, but things continued to get worse. In August 1977, Hurricane Anita's high tides flooded the subdivision once again. The subdivision's most brutal year was 1979 because the subdivision flooded three times. Two of the flooding episodes occurred in April, when the Baytown area received 9.8 inches of rain.¹¹⁴ The first flooding episode occurred on the morning of April 11, when southerly winds flooded a dozen homes west of Bayshore Drive.¹¹⁵ The second flooding episode that month occurred exactly a week later, on April 18, when a thunderstorm system crossed through Montgomery County and caused flood and wind damage in the Brownwood subdivision. Ten homes flooded both inside and outside the perimeter road protecting the subdivision from the bay waters.¹¹⁶ Residents also reported marble-size hail, interrupted pump services, and a tree over a natural gas

¹¹³ City of Baytown City Council, "Minutes of the Regular Meeting of the City Council of the City of Baytown," September 13, 1973, 5494.

¹¹⁴ Wanda Orton, "City Dries Out After 'Expensive' Rainfall," *The Baytown Sun*, April 23, 1979, 1-A.

¹¹⁵ Wanda Orton, "Some Brownwood Homes Flood After High Tides," *The Baytown Sun*, April 11, 1979, 1-A.

¹¹⁶ Wanda Orton, "Brownwood is on Alert to Evacuate," *The Baytown Sun*, April 20, 1979, 1.

meter.¹¹⁷ Some residents felt the April 18 flooding episode was worse than Hurricane Carla.

While a hurricane is stronger than a thunderstorm, Brownwood was lower in April 1979 than in September 1961. The subdivision was sinking four inches every year, meaning that by the 1970s, it had sunk about ten feet.¹¹⁸ Following the April 18 thunderstorm, the surrounding bodies of water remained swollen the days after the storm. Residents in the subdivision had to evacuate because city officials predicted the tides would reach between four and four-and-a-half feet.¹¹⁹ City crews had to go to the subdivision and stay overnight to pump out the rainwater to prevent it from staying inside the perimeter road. This was also necessary because if high tides did reach the subdivision, the water would also stay inside the perimeter road. Thankfully, the tides only reached a maximum of less than three feet.

Three months later, on the evening of Monday, July 23, 1979, Tropical Storm Claudette made landfall near the Texas-Louisiana border, about 100 miles away from Galveston. Brownwood residents were aware of the storm because Assistant City Manager Dan Savage warned them that the tides could get reach three-and-a-half feet when the storm made landfall, potentially flooding the homes outside of the perimeter road.¹²⁰ City officials warned residents about the high tides using a loudspeaker system. Some residents had already begun feeling the effects of the tropical storm

¹¹⁷ Wanda Orton, "Wind is the Real Culprit in Heavy Thunderstorms Here: 7 Homes Inside Brownwood Perimeter Road Flooded," *The Baytown Sun*, April 17, 1979, 1.

¹¹⁸ William Broyles, "Disaster, Part II. Houston is Sinking into the Sea," *Texas Monthly*, December 1974, 77.

¹¹⁹ Wanda Orton, "Brownwood is on Alert to Evacuate," *The Baytown Sun*, April 20, 1979, 1.

¹²⁰ "High Tides," *The Baytown Sun*, July 23, 1979, 1-A.

prior to its landfall, as three homes flooded outside the subdivision. However, most residents did not evacuate until Thursday, July 26, when the Civil Defense declared the storm's aftermath as an emergency. Regardless of the storm's distance, about 180 homes flooded in the subdivision. Again, city crews had to pump out the water from inside the perimeter road.¹²¹

The selected flooding episodes discussed above were a sample of the more than two dozen times the subdivision flooded between 1961 and 1979.¹²² As the subdivision continued sinking, residents also had to prepare for flooding episodes that did not materialize. A more detailed list of these flood threats is included in Appendix B, but a brief discussion about the circumstances regarding these flooding threats illustrates the impact of subsidence on the subdivision during this chronic flooding era. It is also important to note that residents had established an evacuation routine to determine if they needed to evacuate. When residents and city officials received notifications about high tides or nearby storms, they “checked the tide marker off Crow Road to see if tidal flooding was inching toward the 3-foot mark, the indication that it was time to evacuate.”¹²³ One family dog also let his owners know when it was time for them to evacuate. When the weather started deteriorating, the Northrups' dog would hop into their boat, which stood in the driveway.

¹²¹ Wanda Orton and D'Eva Turner, “Reports Say 350 Homes in City Flooded During Storm,” *The Baytown Sun*, July 27, 1979, 1.

¹²² Appendix A in page 303 includes a list of the flooding events Brownwood residents experienced during this period.

¹²³ Wanda Orton, “Hurricane Harvey Jogs Stormy Memories,” *The Baytown Sun*, September 3, 2017, 4A.

The first flooding episode that did not materialize was Hurricane Cindy. It made landfall on High Island, about sixty miles away from the subdivision, on September 17, 1963. The storm caused the tides in Scott Bay to rise twenty-two inches.¹²⁴ Brownwood residents prepared by parking pickup trucks, cars, and trailers out of driveways and pointing towards the roads so residents could quickly evacuate. Before evacuating, a dozen residents moved out their furniture, and a boat owner docked his boat in the middle of Crystal Bay.¹²⁵ The next flood threat occurred a week after the 1969 Valentine's Day Flood. On February 21, 1969, Civil Defense Authorities issued an alert for residents living in low-lying areas after heavy rainfall fell in the Baytown area. Brownwood residents were nervous because city officials expected high tides four feet above normal. Luckily, the tides only reached two feet.¹²⁶

During the 1970s, when the subdivision had almost sunk ten feet, residents experienced fewer flood threats because most of the threats did materialize. In September 1971, as Hurricane Fern flooded parts of the Brownwood subdivision, they were also keeping track of Hurricane Edith. Even though it approached the Gulf of Mexico and briefly grew into a Category 5 storm, it soon lost its strength. Due to the storm's instability, city officials in Baytown were concerned that it would make landfall nearby and affect the already flooded subdivision. Instead, the storm veered towards Louisiana causing tides to rise 2.6 feet of water, instead of the expected 4.5

¹²⁴ Chester Rogers, "Full Force of 'Cindy' Skirts City," *The Baytown Sun*, September 17, 1963, 1.

¹²⁵ Wanda Orton, "Better Safe Than Sorry – Some Storm-Shy Folks Flee Brownwood Area," *The Baytown Sun*, September 17, 1963, 1.

¹²⁶ "Rain Drenches Baytown but High Tides Absent," *The Baytown Sun*, February 21, 1969, 1.

feet.¹²⁷ One of the last flood threats Brownwood residents experienced before Hurricane Alicia in 1983 was Hurricane David, about five weeks after Tropical Storm Claudette. Rather than waiting until the last minute, Brownwood residents quickly evacuated as far as Austin.¹²⁸ City officials were ready to help residents, and American Red Cross had volunteers ready to open shelters for the community. Fortunately, the subdivision did not flood.

Learning to Survive

Part of the Brownwood experience was learning to survive and adapt to the chronic flooding. Brownwood residents implemented different methods hoping to save their neighborhoods, especially their homes. At the beginning, city officials also wanted to help the residents plan ahead because they were also tired of helping residents during every flooding episode. Many Baytownians did not like this because they felt city officials were investing too much money and time in a small segment of the community. As a result, these chronic flooding episodes created tensions between Brownwood residents, Baytownians, and government officials. The tensions worsened as the subdivision continued sinking and flooding. Things got so bad that the city's Civil Defense Director declared he refused to continue protecting the subdivision.

The chronic flooding affected the neighborhood's physical appearance and presentation. The yards, which were once the pride and joy of the neighborhood, were always flooded and full of dead plants. The residents lived waiting for the next storm

¹²⁷ "No Flooding," *The Baytown Sun*, September 17, 1971, 2.

¹²⁸ Wanda Orton, "Baytown Keeps Eye on 'David,' Gulf Storm," *The Baytown Sun*, August 30, 1979, 1.

so they could quickly evacuate. According to former Brownwood Civic Association president Jean Shepherd, during this period, the BCA “became not the civic association that was concerned with the beautification, streetlights, the year-to-year picnic.” Instead, it became “a survival civic association.”¹²⁹ While some residents thought that the best way to save their homes was to elevate them, some felt that the best way to combat subsidence was to try to keep the bay out of their backyards. They tried to do this by rebuilding their homes on stilts, building bulkheads, installing water pumps, and moving further inland.

The local government, sometimes in conjunction with the federal government, also tried to help the subdivision. Their efforts included annexing the subdivision, stopping groundwater usage, transforming the subdivision’s main road into a levee, creating a subsidence district, and proposing a relocation project. Baytownians did not like this because they felt the city was investing too much money and time in one small section of the city. They offered these solutions hoping to alleviate the impact of subsidence in the subdivision and decrease the costs of insurance payouts after each flooding episode. Eventually, they got tired of the situation, and began researching a buyout program. The solutions residents and government officials suggested varied in price and effectiveness, but their main goal was to help Brownwood residents survive. Each party involved hoped for different outcomes, but the residents’ well-being was always their focus. Residents wanted the local entities to stop using groundwater to decrease subsidence in the area. This would help them save their homes and their

¹²⁹ Jean Shepherd, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, audio, 06:45, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

neighborhood. While the local government also wanted to decrease subsidence in the subdivision, they needed to find solutions that would not affect other Baytownians. Finally, the federal government wanted to find a solution that would help decrease the cost of flood insurance payouts claimed after each flooding episode.

One of the first solutions residents requested was building a large levee around the perimeter. The federal government has built levees for flood control because they are “elevated earthen works used to protect against rising floodwaters.”¹³⁰ Brownwood residents first met with the Corps of Army Engineers from the Galveston District on March 6, 1962 to discuss the possibility of building a levee in their subdivision. Since they were still unaware of subsidence, they thought they were dealing with a flooding problem, so a levee seemed like the best solution to reduce flood damage in the subdivision. About twenty residents spoke to the engineers about their losses during Hurricane Carla, serving as testimony for their plea for the “construction of [a] 30-foot levee to offer hurricane flood protection to almost 2,000 acres of residential areas” in the neighborhood.¹³¹ Everyone in attendance approved building a levee in the Brownwood subdivision. However, due to problems with funding, city officials decided to instead build a perimeter road around the subdivision.

The City of Baytown did not begin planning for the perimeter road until 1972. During their emergency meeting on August 17, 1972, Baytown city council members passed Ordinance No. 1266, which approved and adopted a written statement and

¹³⁰ David R. Godschalk, David J. Brower, and Timothy Beatley, *Catastrophic Coastal Storms: Hazard Mitigation and Development Management* (Durham: Duke University Press, 1989), 28.

¹³¹ John Marsh, “Bay Area Levee Data Heard by Engineers,” *The Baytown Sun*, March 6, 1962, 2.

report by consulting engineer Johnny Busch. In the report, he estimated the total costs for road improvements, including in the Brownwood subdivision.¹³² The Brownwood roads discussed in the ordinance were Crow Road, Mapleton Avenue, South Bayshore Drive, East Bayshore Drive, Brownwood Drive, and West Bayshore Drive. Busch estimated the project would cost \$331,940. Most of the money would be used for roadway base (\$131,325) and roadway fill (\$117,000). The rest of the money would be for base stabilization (\$34,125), a roadway shoulder (\$35,70), slope protection (\$8,440), and clearing and grubbing (\$5,000).¹³³

During a special meeting on September 14, 1972, city council members held a public hearing to discuss the benefits of the proposed Brownwood perimeter road. To create the perimeter road, workers would raise “portions of Crow Road, Mapleton Avenue, South Bayshore Drive, West Bayshore Drive and East Bayshore Drive, to an elevation of seven feet above mean sea level.”¹³⁴ They would also add a flexible base with five-foot shoulders on each side, constructed within the existing right-of-way. Busch declared they also planned to improve the subdivision’s drainage by grading the bar ditches. This would help them install manually operated tide gates designated to let rainfall runoff exit the perimeter.

Skria, Inc. workers began constructing a seven-foot elevated perimeter road on October 16, 1972. They built two and three-quarter miles of perimeter roads around

¹³² City of Baytown City Council, “Minutes of the Emergency Meeting of the City Council of the City of Baytown,” August 17, 1972, 1.

¹³³ City of Baytown City Council, “Ordinance No. 1266,” August 17, 1972, 8.

¹³⁴ City of Baytown City Council, “Minutes of the Special Meeting of the City Council of the City of Baytown,” September 14, 1972, 5292.

the subdivision for \$388,630. Workers completed the project in increments of 1,000 feet “in an effort to inconvenience people living along the roadways as little as possible.”¹³⁵ Workers raised the pre-selected roads to an elevation of seven feet. When construction began, the company also agreed to install a new water main for \$73,847. The company had to complete the projects in 180 working days. When completed, the perimeter road had a roadside gauge where residents and city officials could measure the tides. Resident Jack Carter later added a 15,000 gallon-per-hour pump with a discharge pipe pointing out to the bay.¹³⁶ By the time workers finally completed the perimeter road, the ground had sunk eighteen inches. This meant it would not be the protective barrier residents had envisioned.

The company that built the perimeter road also installed pump mounds to help alleviate the flooding. On Thursday, October 12, 1972, city council members authorized Skria, Inc. to install five pump mounds along the roadway for \$5,000. The Brownwood Civic Association purchased the five electric pumps to help with drainage in the subdivision for \$25,000.¹³⁷ Travis Porter, the Brownwood Civic Association president at the time, said that they acquired the funds by asking Brownwood residents to pledge money. When the city authorized the company to install the pumps, ninety-one residents had pledged money. However, the association hoped to receive between 120 and 130 pledges in total. After purchasing the pumps, association members

¹³⁵ Johnella Boynton, “Perimeter Road Now Under Construction in Brownwood,” *The Baytown Sun*, October 16, 1972, 1.

¹³⁶ R. Bruce Beckner, “Subsidence Hits Texas Subdivision, Houses Sink Slowly,” *The Washington Post*, November 24, 1973, A12.

¹³⁷ Johnella Boynton, “Perimeter Road Now Under Construction in Brownwood,” *The Baytown Sun*, October 16, 1972, 1.

installed them throughout the subdivision to pump out water during floods and high tides. Then, the association appointed a flood pump chairman, but they also took turns watching the pumps.¹³⁸ This chairman would call city officials to activate the pumps during high tides.¹³⁹

For a few years, the perimeter road did keep water out of the subdivision. However, “the road kept the water in, too, and after floods the neighborhood filled up like a giant bowl.”¹⁴⁰ This meant that during flooding events, the water remained inside yards and homes even though the pumps were dispersed throughout the area. The Linwood/Mapleton pump pumped the water from inside the perimeter road. The Y pump was near the neighborhood’s tide marker.¹⁴¹ The pumps could only do so much, so residents also depended on city officials to help them. City workers constantly had to bring heavy equipment to help dredge around the perimeter levee. Once, when city workers did not arrive, BCA members grabbed their shovels and dug a 400-foot long ditch. Some residents also installed personal pumps in their yards that cost \$3,000 to help pump the water out faster. When visitors drove around the subdivision to catch a glimpse of the sinking neighborhood, they could also see that Clyde Tacker, a Bayshore Drive resident, had a sign on his explaining the perimeter road’s purpose. The handwritten sign said, “Who Needs a Levee IF YOU WAKE UP

¹³⁸ Larry Albert, *Houston Wet* (MS Thesis: Rice University, 1994), 26.

¹³⁹ Deana Nall, “Back to Brownwood: Sinking Neighborhood’s Plight Forced the Nation to Deal with Subsidence,” *The Baytown Sun*, March 24, 2002, 1A.

¹⁴⁰ Larry Albert, *Houston Wet* (MS Thesis: Rice University, 1994), 26.

¹⁴¹ Jean Shepherd, interview by Martha Mayo, Lee College Oral Histories, The Portal to Texas History, The University of North Texas Libraries, September 15, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013804/m2/1/high_res_d/BT63_Marcine_Lanham_Jean_Shepherd_Transcript.pdf.

IN TIME, YOU PROBABLY MAY ESCAPE THE TIDE WATERS VIA THE DIKE (BAYSHORE DR.) SAYS OWNER CLYDE TACKER.”¹⁴² Unfortunately, these pumps were no match for the subdivision’s flooding rate.

Some homeowners installed environmental alteration measures, such as bulkheads. Bulkheads are small vertical walls designed “to protect investments in existing coastal development from both ongoing erosion and sea level rise and from concentrated storm forces.”¹⁴³ However, not all homeowners could install these bulkheads for two reasons. First, not all residents lived on the bays, so they did not need this additional shoreline protection. Most importantly, installing bulkheads is expensive, costing hundreds of dollars per foot. Bulkheads are also expensive because hurricanes and tropical storms wore them down, and residents had to constantly replace them. However, in the Brownwood subdivision, the bulkheads that residents installed were also vulnerable to subsidence, making them even less effective. One resident, C. S. Brownfield, had installed bulkheads to protect his property, but by October 1976, only submerged wooden posts stood there.¹⁴⁴

Other structures homeowners installed around their properties as the subdivision continued sinking and flooding were seawalls. In 1976, Bayshore Drive resident Don Queen raised the seawall on his property four feet.¹⁴⁵ After experiencing

¹⁴² “Archive Photos of Long-Gone Brownwood Subdivision in Baytown,” *Houston Chronicle*, May 28, 2016, accessed March 20, 2020, <https://www.chron.com/news/houston-texas/slideshow/Archive-photos-of-long-gone-Brownwood-Subdivision-130243/photo-10156359.php>.

¹⁴³ David R. Godschalk, David J. Brower, and Timothy Beatley, *Catastrophic Coastal Storms: Hazard Mitigation and Development Management* (Durham: Duke University Press, 1989), 29.

¹⁴⁴ “Archive Photos of Long-Gone Brownwood Subdivision in Baytown,” *Houston Chronicle*, May 28, 2016, accessed March 25, 2020, <https://www.chron.com/news/houston-texas/slideshow/Archive-photos-of-long-gone-Brownwood-Subdivision-130243/photo-10156364.php>.

¹⁴⁵ Larry Albert, *Houston Wet* (MS Thesis: Rice University, 1994), 77.

their first flood, the Nolan family moved to a higher home on Mapleton Avenue. However, since this new home was already surrounded by water, the children used the seawall to fish. One of the children, Marc Nolan, recalled, “The far side of the seawall was in fifteen feet of water and the fishing there was excellent.”¹⁴⁶ Other homes on Mapleton Avenue also had seawalls built around them to keep bay waters out of their yards. After installing a seawall in his property, Mapleton Avenue resident Jack S. Carter installed some for his neighbors. According to Jackie, one of his daughters, “He poured them all at the same time because he was skilled in that way, and the others were not.”¹⁴⁷ As the land continued sinking, homeowners also had to continually raise the structures to keep their homes protected.

Some homeowners could not afford to build bulkheads or seawalls in their backyards, so they tried alternative methods. They used dirt to protect their properties from the bays’ tides. During their visit to the subdivision in 1975, Jim Blackburn and Dr. H. C. Clark, professor emeritus at Rice University’s Geology and Geophysics departments “talked with a landowner who was dumping dirt on his backyard, trying to keep the tides away.”¹⁴⁸ Others used sandbags to keep bay waters outside their yards. Sandbagging is a simple way to reduce or prevent flood damage, but it is only a temporary solution. If used properly, sandbags “act as a barrier to divert moving water around, instead of through buildings.”¹⁴⁹ Brownwood residents used sandbags to build

¹⁴⁶ Marc Nolan, *Alcatraz: Parents Have Their Secrets* (Morrisville: Lulu Press, 2013).

¹⁴⁷ Jackie Carter, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 47:30, <https://www.youtube.com/watch?v=vJvIBAYHQpl>.

¹⁴⁸ Jim Blackburn, *The Book of Texas Bays* (College Station: Texas A&M University Press, 2004), 72.

¹⁴⁹ U. S. Army Corps of Engineers Walla Walla District, “Flood Fighting: How to Use Sandbags,” National Tribal Emergency Council, March 22, 2001, accessed march 28, 2020,

walls around their properties, which were supposed to serve the same purpose as bulkheads. Others sandbagged their patios.¹⁵⁰ Unfortunately, neither of these methods could withstand the effects of subsidence. As the land sank, so did these structures.

The neighborhood's civic association also tried to help residents by investing and lobbying for devices that would benefit all citizens. When they learned that the waves from nearby ships also were flooding their yards, they lobbied in Austin for buoys. The Baytown City Council ultimately approved the buoys and residents installed them "up and down in the bays around Brownwood to warn ships to not make waves."¹⁵¹ Like previous ideas, the buoys were no match for subsidence.

Another survival strategy that residents used during this period was designing and building their homes to survive future flooding episodes. Following Hurricane Carla, the Hanna family rebuilt a new elevated home "on their home's outside structure that Carla had spared."¹⁵² When one couple, Jeff and Suzanne Brown, built their second home in 1968, Suzanne designed it "to withstand a hurricane. The living quarters were located on the second floor over a concrete enforced, three car garage devised to allow storm surge to flow through."¹⁵³ After flooding once, Marc Nolan's father bought a new home that sat on five feet of bricks. According to Nolan, "The

http://ntemc.org/documents/disaster_assistance/Flood_Fighting_How_To_Use_Sandbags%20-%20USACE-ARMY.PDF, 1.

¹⁵⁰ William Broyles, "Disaster, Part II. Houston is Sinking into the Sea," *Texas Monthly*, December 1974, 77.

¹⁵¹ Wanda Orton, "Hurricane Harvey Jogs Stormy Memories," *The Baytown Sun*, September 3, 2017, 4A.

¹⁵² Deana Nall, "Back to Brownwood: 'We Thought We Lived in Paradise,'" *The Baytown Sun*, March 24, 2002, 6A.

¹⁵³ Whit Snyder, "Brownwood Descendants Were There Through It All," *The Baytown Sun*, May 13, 2002, 2-A.

house was situated on the bay so we had a dry front lawn, but both sides of the house and the backyard were in the water.”¹⁵⁴ One family, however, rearranged their property. According to Cynthia and Erick Smith, the rental home where they briefly lived before Hurricane Alicia had the in-ground swimming pool in the front yard. According to Erick, “It had a swimming pool on the front yard, in-ground pool in the front yard. I guess they had it in the backyard until Hurricane Carla. Hurricane Carla destroyed their home, and they rebuild a new home behind the pool on piers over the water.”¹⁵⁵ Raising their homes meant that their homes were protected from floodwaters, but it did not guarantee they would be protected from hurricanes and tropical storms.

Some residents did not want to leave the subdivision, so they moved more inland. For example, in 1972, W.C. Smith rented a beautiful and cheap house with terrazzo floors on the corner of Mapleton Avenue and Bayshore Drive. He learned about the subsidence in the area after a high tide, “and the water came within a few inches of the foundation.”¹⁵⁶ Additionally, he learned that his rental home had flooded during Hurricane Carla. Six months later, he moved up the hill to Queen’s Court, where the land was seventeen feet higher. However, not all residents could afford to move higher because they were still paying off the mortgages. Those who could not afford to move away simply lived prepared for the next flooding episode. Some of

¹⁵⁴ Marc Nolan, *Alcatraz: Parents Have Their Secrets* (Morrisville: Lulu Press, 2013).

¹⁵⁵ Cynthia and Eric Smith, interview by Laura Bernal, UH-Oral History of Houston, Houston History Archives, University of Houston Libraries February 20, 2020, transcript.

¹⁵⁶ W. C. Smith, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 01:09, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

these families “parked a car permanently on higher ground, kept their belongings in packing crates, and had local moving companies standing by to ensure their escape from another heavy storm or hurricane.”¹⁵⁷

Governmental Solutions

Since not all residents could afford to invest in personalized flooding solutions, the local and federal governments tried helping the community as a whole. The struggles residents faced forced the sixty-fourth Texas Legislature to create the Harris-Galveston Coastal Subsidence District in 1975. The legislature created the district to help “regulate the withdrawal of groundwater within Harris and Galveston Counties, the first of its kind.”¹⁵⁸ This district helped the surrounding communities understand the importance of using surface water instead of groundwater in the battle to stop subsidence in the area. This agency had the power to restrict groundwater withdrawals but decided that the best way to deal with this major issue was to study the water usage and water supply in Harris and Galveston counties. They designed a plan to help industries along the Houston Ship Channel to begin using surface water from the Lake Livingston reservoir.¹⁵⁹ Although using surface water was an expensive change, it was necessary to prevent losing more neighborhoods. This helped to significantly reduce the subsidence rates in Baytown. Unfortunately, by the time they were able to stabilize

¹⁵⁷ William Broyles, “Disaster, Part II. Houston is Sinking into the Sea,” *Texas Monthly*, December 1974, 77.

¹⁵⁸ Deana Nall, “Back to Brownwood: Sinking Neighborhood’s Plight Forced the Nation to Deal with Subsidence,” *The Baytown Sun*, March 24, 2002, 1A.

¹⁵⁹ Harris-Galveston Subsidence District, “Our History,” accessed March 30, 2020, <https://hgsubsidence.org/about/history/>.

the sinking rates in Baytown, it was too late for the Brownwood subdivision. In 1983, the district reported that since 1906, the area had subsided between eight to ten feet.¹⁶⁰ The district's mission to help reduce the use of groundwater in the Houston area aided subsidence in the subdivision, but the damage was irreversible.

The most controversial solution government officials presented to Brownwood residents was a relocation/evacuation project. Brownwood was not the first community to be offered this proposal, but it was the first subsided property the federal government offered to buy out. Brownwood's unique problem with subsidence helped residents receive a generous offer, especially when compared to other communities. For example, when scientists identified lead contamination in the ethnic Mexican community of Smelertown in El Paso, Texas in the late 1960s, the city and private landholders quickly began making plans to move residents away from the community. Unlike the City of Baytown, El Paso authorities immediately decided to evict the community without exploring other options, other than government housing. Esmeltianos, unlike Brownwood residents, did not have the opportunity to vote for their future or try to find solutions that would help them conserve and clean up their community.¹⁶¹ In other words, Brownwood's history as an exclusive community helped residents exhaust all possible solutions without a problem.

On May 1, 1974, U.S. Congressman Robert C. Eckhardt from the 8th District of Texas introduced a bill to evacuate and relocate the 450 families living in the Brownwood subdivision, as suggested by the Army Corps of Engineers. The bill

¹⁶⁰ Allyson Gonzalez, "\$3 Fee for the Birds, Some Say," *The Baytown Sun*, June 2, 2002, 7A.

¹⁶¹ Monica Perales, *Smelertown: Making and Remembering a Southwest Border Community* (Chapel Hill: The University of North Carolina Press, 2010), 240.

would cost \$15.9 million, with the federal government paying \$12.7 million. The City of Baytown would pay the remaining \$3.2 million. Eckhardt introduced this bill because this was “a most unique problem which has been caused, not by the dereliction or ignorance of the residents, but by the short-sightedness of nearby industries and municipalities.”¹⁶² He wanted Congress to pass this bill because subsidence in the subdivision would continue even after the nearby municipalities and industries began using surface water instead of groundwater. More importantly, the relocation plan was a cheaper option than the Federal Flood Insurance Administration’s payouts residents received after each flooding episode. According to Eckhardt, Congress needed to help these residents who were not responsible for their subdivision’s sinking. Since this was a unique and unprecedented problem, Senator Lloyd Bentsen also introduced a similar bill to the Senate that same day. Therefore, if Congress disapproved Eckhardt’s bill, Bentsen still had a chance to introduce the bill to the Senate.

Most Brownwood residents eagerly supported this bill. While Representative Eckhardt tried to convince Congress to approve his bill, he received numerous letters from Brownwood residents begging for the bill. In September 11, 1974, Rep. Eckhardt received a forwarded letter from Mrs. J. G. Hanson, a MacArthur Avenue resident. Mrs. Hanson originally sent the letter to Representative Robert Casey, who represented Texas’ 22nd District, urging him to support Eckhardt’s bill because

¹⁶² Robert C. Eckhardt, “Congressman Bob Eckhardt’s STATEMENT ON BROWNWOOD FLOOD PLAN,” May 1, 1974, Page 1 in Robert C. Eckhardt Papers, 1931-1992, Box 95-147/38 (05170584), “BROWNWOOD FLOOD PLAN Statement on Introduction of HR 14529; May 1976” Folder, The University of Texas at Austin Briscoe Center for American History.

Brownwood residents needed the bill to pass. She wrote, “We cannot sell our home...We cannot afford to be paying on two homes if we moved out of the area. And what about our elderly retired neighbors? How do they survive the recurring losses? Our flood insurance helps a great deal, but the doesn’t cover all our loses.” The following month, he received a letter from Mrs. Roger Barr, who wrote, “Please help us to ‘get out’ and leave with something. Many others are in similar circumstances.” In January 1976, he received a letter from Mrs. John W. Tinsley, a mother of five living on Mapleton Avenue, who referred to the subdivision as “Flood City, U.S.A.” She explained, “We never know when we go to bed at night if we will be allowed to sleep through the entire night undisturbed or if we will be awakened by the tide waters telling that we must once again abandon our home and seek refuge from the rising water.”¹⁶³ This small sample of the many letters Rep. Eckhardt conveyed the desperation residents felt during this period. This desperation intensified as Congress agreed to support Rep. Eckhardt’s bill.

Representative Eckhardt included the proposal in The Water Resources Act of 1976, which President Gerald Ford signed. He modeled his proposal after the request for the St. Feriole Island evacuation project in Prairie due Chien, Wisconsin, which helped this flood-prone community receive funding to relocate.¹⁶⁴ Both communities received federal assistance for a buyout process because they experienced chronic

¹⁶³ Robert C. Eckhardt Papers, 1931-1992, Box 97-150/5 (8253054), “Brownwood Project-94th Congress, 1975-76” Folder, The University of Texas at Austin Briscoe Center for American History.

¹⁶⁴ Robert C. Eckhardt, “STATEMENT by Bob Eckhardt, U. S. Representatives 8th District, Texas Before the Subcommittee on Public Works,” June 30, 1976, Page 5 in Robert C. Eckhardt Papers, 1931-1992, Box 95-147/38 (05170584), “Brownwood Project” Folder, The University of Texas at Austin Briscoe Center for American History.

flooding due to their location. However, as Keith Ozmore, Eckhardt's aide and a FEMA official pointed out, "The only precedent which the Brownwood Project might set is that it has been caused by land subsidence. The problem in Prairie du Chien was caused by people moving into an already flood area."¹⁶⁵ This helped the proposal pass and made the funding available for the project. However, the biggest hurdle was letting Baytown voters decide if they approved the city's decision to buyout the Brownwood subdivision and low-lying parts of nearby Lakewood, Lynchburg, and Wooster.

As Tropical Storm Claudette made landfall near the Texas-Louisiana border on July 23, 1979, Brownwood residents were too busy campaigning for the first bond election, which the city scheduled for July 24, 1979. During this special election, 19,787 Baytownians were eligible to vote. Baytownians had to cast their vote regarding two different propositions. Proposition 1 was about airport bonds, and Proposition 2 was for "the issuance of \$7,600,00 in park bonds (park land to be acquired from the United States of America pursuant to the Corps of Engineers of the U.S. Baytown, Texas, project)."¹⁶⁶ If approved, the city would sell bonds over a five-year period to fund their portion of the relocation project. By this point, the buyout proposal was the only feasible solution. The neighborhood was too low for a levee or any other type of structures designed to assist with flooding. Despite the pleas from Brownwood residents, Baytownians rejected the 1979 relocation project.

¹⁶⁵ Keith Ozmore memo to Robert C. Eckhardt, August 27, 1976 in Robert C. Eckhardt Papers, 1931-1992, Box 95-150/5 (8253054), "Brownwood Project – 94th Congress, 1975-1976" Folder, The University of Texas at Austin Briscoe Center for American History.

¹⁶⁶ "19,787 are Eligible to Vote in Bond Election," *The Baytown Sun*, July 23, 1979, 1-A.

Baytownians cited numerous reasons for their rejection. Most of the people who opposed it were Baytownians concerned with the money involved. Many Baytownians felt that the millions of dollars discussed in this proposition were free handouts for Brownwood residents. According to former Public Works Director Norman Dykes, some Baytownians felt this way because there were some residents that took advantage of the chronic flooding in Brownwood. One resident who bought several houses, and “in one of those houses, she collected on it at least three times. She would insure it to the max. They’d paid off like a slot machine, and I couldn’t believe that flood insurance would keep insuring.”¹⁶⁷ Baytownians also rejected the proposal because had they approved that bond renters would have received up to \$2,000 for the down payment of a home and closing costs.¹⁶⁸ Some were also concerned about city’s suggestion to transform the subdivision into a park. Willaden Hines, a Baytownian, was concerned that “neither the city manager nor the bond committee has suggested what it will cost to maintain and operate the evacuated area as a park. Surely, Baytown does not intend to have a 600-acre park with no sewer, water or roads.”¹⁶⁹

However, city officials did not give up. During their November 20, 1979 meeting, city council members decided to hold a second election on January 8, 1980. They made a major change in this new bond proposal by making it solely about the Brownwood subdivision. It excluded “Lynchburg, which is unincorporated and the

¹⁶⁷ Norman Dykes, interview by Laura Bernal, UH-Oral History of Houston, Houston History Archives, Special Collections, University of Houston Libraries, April 5, 2018, transcript.

¹⁶⁸ Wanda Orton, “No ‘Windfall Profits’ if Brownwood Bonds Pass,” *The Baytown Sun*, July 23, 1979, 9-A.

¹⁶⁹ Willaden Hines, “Readers’ Views,” *The Baytown Sun*, July 23, 1979, 5-B.

higher elevations in Lakewood and Wooster where residents asked to be excluded.”¹⁷⁰ Yet, this did not change much of the project’s cost. If voters approved the proposition, the Corps of Engineers would begin the process by acquiring the homes in lowest elevations first on a fair market value basis. According to Public Law 91-646, homeowners were eligible to receive up to \$15,000 in relocation funds. Additionally, renters would have received up to \$4,000 to relocate.¹⁷¹ Residents desperately needed the bond to pass. By this point, “much of the sewer system has sunk below sea level, gravity flow lines do not function well. Also, the pumps have to be regularly maintained and operated, and city crews frequently have to haul away debris after floods.”¹⁷²

Brownwood residents tried everything to convince the community to vote for the bond. They wrote letters to *The Baytown Sun*’s editor and published advertisements in the newspapers. This time, many Baytownians expressed their support. They did so because they felt sorry for the community. Others felt that the flooding episodes in Brownwood were also stressful to the whole community, and the proposed park would help alleviate this communal stress. For example, after endorsing the bond, The Baytown League of Women Voters sponsored a panel to further explain the project to Baytownians. Brownwood residents also received the support from

¹⁷⁰ Wanda Orton, “Estimated \$20 Million Said Needed for Brownwood Property Buy-Out,” *The Baytown Sun*, January 4, 1980, 3-A.

¹⁷¹ “What Will Happen to Land? – Questions and Answers on Evacuation Project,” *The Baytown Sun*, January 7, 1980, 1-A.

¹⁷² Wanda Orton, “Brownwood Like a Wake, Holding Us Back: Lanham,” *The Baytown Sun*, January 6, 1980, 1-A.

Lakewood, a neighboring sinking subdivision. Lakewood residents supported this new project because city officials only wanted to acquire properties in Brownwood.

Unfortunately, despite the overwhelming support expressed prior to January 8, 1980, voters rejected the bond once again. A total of 22,424 Baytownians were eligible to vote, but only twenty-two percent (4,967) of them voted, with 56.7 percent voting against the proposition. This frustrated the residents because by 1980, some sections of the subdivision had sunk more than nine feet, more than four feet since 1961 alone.¹⁷³ The bond's rejection meant that residents had exhausted all the possible solutions. The local and federal governments' persistence to try to pass the bonds makes this the Brownwood subdivision unique. When compared to other proposed relocation projects, the proposal and numerous chances they received were generous.

Conclusion

Moving out seemed like the best solution, but most residents could not afford to do so. As Brownwood Civic Association president Travis Porter told *The Washington Post* in 1973, residents risked at least a fifty percent loss of their home's actual worth if they moved out. This big loss would then limit the housing options available for them outside the subdivision.¹⁷⁴ Meanwhile, others could not move out because they still had mortgages they were paying off and very few people wanted to buy property in the subdivision. If they really wanted to move out, they had to make

¹⁷³ Wanda Orton, "Brownwood Like a Wake, Holding Us Back: Lanham," *The Baytown Sun*, January 6, 1980, 1-A and 2-C.

¹⁷⁴ R. Bruce Beckner, "Subsidence Hits Texas Subdivision, Houses Slowly Sink," *The Washington Post*, November 24, 1973, A12.

their home into rental property. They knew it would be the biggest risk. There were a few residents that decided to risk moving out instead of waiting for the next storm. Some of these residents moved out because the stress was too much for them. One of them was Pete Hanna, who lived on Bayshore Drive. He developed heart trouble during this period and felt that the “the constant threat of flooding was too much pressure,” so his family moved out in 1974.¹⁷⁵ They needed to get away and move somewhere else where they were not always living under a state of emergency waiting for the next flood.

This did not mean that the ones who stayed were wrong to do so. They stayed because they had invested everything in their homes believing that they would retire there. They never expected that the big, wooden lots would rapidly sink and make them vulnerable to flooding from rainstorms and high tides. Their struggles made them a national story, raising awareness of subsidence. The bond’s rejection, their last hope, sealed the subdivision’s fate. The only thing they could do was wait for the next storm to come. Unfortunately, the next storm was right around the corner. As the next chapter will explain, Hurricane Alicia was the last storm these residents experienced as the Brownwood subdivision.

¹⁷⁵ Deana Nall, “Back to Brownwood: ‘We Thought We Lived in Paradise,’” *The Baytown Sun*, March 24, 2002, 6A.

Chapter 3: Losing Brownwood

Hurricane Alicia made landfall during a critical moment in the subdivision's history when disagreements between city officials and residents were at their worst. By the time this storm hit, residents already had plenty of experience dealing with dozens of flooding episodes over the previous two decades. Even though some residents were still hopeful about their neighborhood's future, Hurricane Alicia was the final deathblow. Since the subdivision had already sunk several feet by Alicia's landfall, city officials knew that the neighborhood's recuperation was unlikely. As a result, city officials made the decision to close off the subdivision instead of letting the residents wait for the next big storm.

The city's decision to let FEMA buy out the subdivision's properties and making plans to transform the area into a public park worsened the relationship between city officials and residents. While most residents immediately accepted FEMA's buyout program, some refused to move out and filed lawsuits. As city officials and the remaining residents negotiated buyout amounts, city council members passed ordinances prohibiting them from rebuilding and cutting off their utilities. Yet, they refused to leave. The few who stayed had to deal with looters and trespassers who used the subdivision for illegal activities. Even though the city eventually acquired most of the properties and cleared them, they neglected the area until they finally began receiving monetary help for the project. According to historian T. Lindsay Baker, Brownwood's physical appearance during this period made it a "ghost town." He defined ghost towns as "places that no longer have a rational reason for existence."

Furthermore, ghost towns must have public access and “tangible remains for visitors to see.”¹ Based on these descriptions, Baker was correct to declare Brownwood a ghost town between Hurricane Alicia’s landfall in 1983 and the Baytown Nature Center’s first opening in 1995.

This chapter demonstrates how government officials, residents, and trespassers made Brownwood into a ghost town. Even though Hurricane Alicia was the subdivision’s deathblow, these groups physically made the area a ghost town littered with rotting homes and debris until the Baytown Nature Center’s opening. The Baytown city council passed ordinances banning residents from returning to the subdivision and rebuilding their homes and sought help from the federal government to buy out the properties. However, this process took time. As the city acquired the land and finalized their plans to make the area a public open space, as requested by the Federal Emergency Management Agency (FEMA), it neglected the area. The few who remained were homeowners who refused to leave their homes or accept FEMA’s offers. As a result, looters and vandals entered the subdivision and used the area for their needs. Brownwood finally shed its ghost town image after opening as the Baytown Nature Center. The involvement of groups and the passing of time helped the area gradually shed its ghost town image and be recognized as a nature center. By highlighting the period between 1983 and 1995, this chapter argues that the conditions in Brownwood needed to worsen so that city officials and residents could recognize the need to transform the site into something better.

¹ T. Lindsay Baker, *More Ghost Towns of Texas* (Norman: University of Oklahoma Press, 2003), ix.



Figure 4.1 This picture of Cabaniss Avenue at the Baytown Nature Center gives a glimpse at the residents' experiences with flooding. Days after a rain event, in April 2018, the water remained on the streets of the neighborhood. The residents' yards looked similar to this after every flooding event. (Photo by the Author)

Hurricane Alicia

Even though Brownwood residents did not want to accept it, by 1983, their subdivision “was a sitting duck for the next hurricane.”² City officials knew this, so a couple of weeks before the storm, Public Works Director Norman Dykes and his team tested out the amphibious vehicle that the city had recently acquired for water rescues. According to Dykes, his team “took it out to a boat ramp out in the Brownwood area...for a test run to see if it would float.”³ During the test run, they learned that they needed to put the plug in, otherwise water would quickly enter the vehicle. More importantly, they confirmed that the vehicle would be useful during the next flood, which was closer than anyone suspected. Dykes’ testing of the amphibious vehicle was also important because about a week later, heavy rain fell in the area. These thunderstorms “left the ground so saturated that the trees were easily driven down by the storm’s [Alicia’s] high winds.”⁴ Looking back, these two separate events foreshadowed the storm that was coming.

Hurricane Alicia formed on August 15, 1983 off the Louisiana coast. By the next morning, it was 230 miles southeast of Galveston. According to the National Hurricane Center, its location indicated that the storm would begin affecting the Texas

² Mark Babineck, “Remnants of Hurricane Alicia Reveal Power of 1983 Storm,” *Plainview Daily Herald*, May 22, 2003, accessed November 5, 2019, <https://www.myplainview.com/news/article/Remnants-of-Hurricane-Alicia-reveal-power-of-1983-8832427.php>.

³ Norman Dykes, interview by Laura Bernal, Houston History Archives, Special Collections, University of Houston Libraries, April 5, 2018, transcript.

⁴ “Remembering Hurricane Alicia,” *The Baytown Sun*, August 18, 2015, 1; Jean Shepherd, interview by Martha Mayo, Lee College Oral Histories, The Portal to Texas History, The University of North Texas Libraries, September 15, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013804/m2/1/high_res_d/BT63_Marcine_Lanham_Jean_Shepherd_Transcript.pdf.

coast within the next seventy-two hours.⁵ Since the storm was nearly stationary, forecasters had a difficult time predicting where it would make landfall. They were unsure if it would make landfall in Galveston or further south. Regardless of this uncertainty, Baytown began preparing for the storm. City officials and residents in Baytown began preparing on Tuesday, August 16, after Civil Defense workers drove around the Brownwood subdivision and advised about 1,000 residents living in properties under the six-foot elevation to evacuate by noon on Wednesday as a precaution. Baytown Emergency coordinator Fletcher Hickerson advised residents to turn off their electricity when they left their homes. Additionally, Police Chief A. W. Henscey announced that he would assign five or six officers to patrol the area from looters. While these preparations occurred, officers from the Baytown Police Department and Texas Department of Safety set up roadblocks around the neighborhood. Before they left the subdivision, residents received automobile stickers from the Civil Defense to help police officers know if looters or sightseers tried to enter the subdivision.⁶ The city's Public Works Department made sure to have people available to take care of the perimeter road's water pumps to pump out the water if tides got too high.⁷ By this point, the tides had to be 4.5 feet high to flood the perimeter road.

⁵ "Storm Alicia Gains Strength in Gulf," *The Baytown Sun*, August 16, 1983, 1.

⁶ Susan Humphrey, "No Panic in Brownwood," *The Baytown Sun*, August 17, 1983, 1; Lisa Ocker, "Baytown Prepares for Storm-Related Problems," *The Baytown Sun*, August 17, 1983, 2.

⁷ Norman Dykes, interview by Martha Mayo, *The Oral Histories of Citizens of Baytown*, Lee College, The Portal to Texas History, The University of North Texas Libraries, September 13, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013815/m2/1/high_res_d/BT61_Smith_Sanders_Jacks_on_Dykes_Transcript.pdf.

After contacting the Civil Defense, Brownwood Civic Association president Jean Shepherd agreed to drive around the neighborhood at 8:00 p.m. with the civic association's PA system on her car to notify residents to evacuate by noon the following day. Driving around the subdivision to make evacuation notices usually took Shepherd thirty minutes to complete. However, she said, "This time it took me two hours to drive through the subdivision and talk to people because we had so many new people living in the area, that they were stopping me and trying to get more information" because by this point, about sixty-five percent of the homes were rental properties.⁸ She talked to at least ten families during the drive, one which had moved to the neighborhood in the last two weeks. They did not know what to do. Since they lived on the perimeter road and did not have flood insurance, she suggested they take out everything they loved and owned and drive away in their truck.

The preparations continued the following day, Wednesday, August 17. Police officers returned to the subdivision and with their car sirens on to remind residents to leave. City officials wanted residents to leave the subdivision because "signs of the imminent storm were apparent in Brownwood by [that] Wednesday. The tide level in the Brownwood subdivision reached 3 feet and 8 inches above normal, although wind variance and normal tide activities caused the level to change periodically."⁹ The rising tide level was noticeable because by this point, the perimeter road was 4.6 feet

⁸ Jean Shepherd, interview by Martha Mayo, Lee College Oral Histories, The Portal to Texas History, The University of North Texas Libraries September 15, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013804/m2/1/high_res_d/BT63_Marcine_Lanham_Jean_Shepherd_Transcript.pdf.

⁹ Susan Humphrey, "Tides Reach Up to 10½ Feet at Brownwood," *The Baytown Sun*, August 17, 1983, 9-B.

high. Later that day, water began to enter the yards on homes on Bayshore Drive and Crow Road, which were two roads along the bays. By late afternoon, the yards were submerged. As a precaution, the Entex Gas Company had to close a gas line on Bayshore Drive because it was corroded with rust. According to Shepherd, about forty-five percent of the residents evacuated by late Wednesday afternoon.

Residents embraced two different attitudes as Hurricane Alicia neared the coast. Most Brownwood residents “calmly prepared for the onslaught by patiently taping or boarding their windows even though officials recommended evacuation.”¹⁰ Some, like Cabaniss Avenue residents Mr. and Mrs. Clements, knew they needed to prepare for the storm. That Wednesday morning, they packed their clothes and personal belongings into their pickup truck. Others who also decided to leave their homes rented large moving trucks, which they packed up with their belongings. Allen Wilder, one Mapleton Avenue resident simply moved out the furnishings from their home. Jean Shepherd put some things on top of her cabinets because from previous storms, she knew that eighteen inches of rain would not reach the top of her cabinets.

Others decided to stay inside their homes. According to Shepherd, “Some of ‘em felt that they wouldn’t have to leave because they had been assured by realtors and landlords that they wouldn’t flood.”¹¹ She tried to convince them to leave because the subdivision quickly flooded. The perimeter flooded within forty-five minutes

¹⁰ Whit Snyder, “From Good Times to Heartbreak: Brownwood’s Rise and Fall,” *The Baytown Sun*, May 22, 2007, 7-A.

¹¹ Jean Shepherd, interview by Martha Mayo, Lee College Oral Histories, The Portal to Texas History, The University of North Texas Libraries, September 15, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013804/m2/1/high_res_d/BT63_Marcine_Lanham_Jean_Shepherd_Transcript.pdf.

making, leaving residents stranded. If they wanted to leave the subdivision, they would have to wade out and encounter snakes and fire ants. If necessary, Civil Defense would knock on residents' doors and ask them to immediately evacuate their homes. Yet, some decided to risk it. The Von Rosenbergs decided to that they would stay at their home on Crow Road to protect it even if the Civil Defense knocked on their door. They decided to stay because they lived "on a high-elevation section of Brownwood. They said they have not had to evacuate their home during the 18 years they have lived there but said the bay water was creeping up onto their property."¹² Since they decided to stay in their home and weather the storm, the Von Rosenbergs prepared for potential hurricane damage by boarding up their windows, putting away their yard furniture, and mowing their yard so they could avoid snakes swimming in the water.

Some residents refused to evacuate because they noticed the tides started to briefly go down. Dykes suggested that "everyone that lived in there had a false sense of security that they were okay" even after city officials reported tides up to six feet high.¹³ In fact, people got so confident that they began throwing hurricane parties celebrating the low tides. Others began fishing, especially on Crow Road, and wading along the bays. Lt. Jackson recalled that a group of men sat around drinking waiting for to see what happened next. However, they said, "When it gets high enough, we'll

¹² Susan Humphrey, "No Panic Seen in Brownwood Subdivision," *The Baytown Sun*, August 17, 1983, 2.

¹³ Norman Dykes, interview by Martha Mayo, *The Oral Histories of Citizens of Baytown*, Lee College, The Portal to Texas History, The University of North Texas Libraries, September 13, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013815/m2/1/high_res_d/BT61_Smith_Sanders_Jacks_on_Dykes_Transcript.pdf.

get in our boat and leave.”¹⁴ Their boat was tied to a nearby tree. As the tides began to rise, city officials returned to the subdivision to warn again residents about the approaching storm.

Hurricane Alicia made landfall on Thursday morning, August 18, near San Luis Pass, a strait of water less than 100 miles away from Baytown. The National Weather Service warned the Houston area to expect as much as fifteen inches of rain and forty miles an hour winds.¹⁵ As Alicia made landfall, Baytown police firefighters, officers, and Civil Defense crews had to rescue the residents who had not evacuated because the water was spilling over the perimeter road. They used boats, dump trucks, and a duck, the recently acquired amphibious vehicle, to conduct these rescues. Prior to using the duck, city officials were using “high profile army trucks that are like two-and-a-half times truck that go through about two feet of water without drowning out their engines then go to through deep water.”¹⁶ According to Baytown Police Officer Marvin Currie, these rescues were dangerous and scary. While on a boat, he and his crew had to stop several times to avoid the debris floating around. The debris they saw floating away included couches, lamps, tables, and a house. They also saw people floating around with ice chests and others screaming for help. Some of these “families

¹⁴ Lieutenant William Jackson, interview by Martha Mayo, *The Oral Histories of Citizens of Baytown*, Lee College, The Portal to Texas History, The University of North Texas Libraries, 1983, https://texashistory.unt.edu/ark:/67531/metaph1013815/m2/1/high_res_d/BT61_Smith_Sanders_Jackson_Dykes_Transcript.pdf.

¹⁵ Nathaniel Sheppard Jr. and Rogers Worthington, “Thousands in Texas Flee Hurricane Alicia,” *Chicago Tribune*, August 18, 1983, 3.

¹⁶ Norman Dykes, interview by Laura Bernal, UH-Oral History of Houston, Houston History Archives, Special Collections, University of Houston Libraries, April 5, 2018, transcript.

kept their pets afloat on inner tubes so they, too, would be rescued.”¹⁷ Many of these were families who refused to evacuate or waited until the last minute.

Several rescues occurred in Brownwood during the hurricane because according to Civil Defense Director Fletcher Hickerson, the tides began flooding the perimeter road about 2:00 a.m.¹⁸ The city officials and first responders there had to rescue about 100 people because the entire perimeter road flooded in less than forty-five minutes, trapping those who refused to evacuate.¹⁹ One of the biggest rescues involved a man who spent the night of the storm’s landfall on the roof of his home. According to Dykes, during the hurricane’s height, they had rescued everyone, except for this man. He refused to leave, even though the conditions worsened. Even though they did not want to, city officials had to suspend the rescue mission and look for safety. However, the next morning when everything was calmer, the rescue team got back on the big boat and returned to look for the man, who was still on the roof of his home. In order to reach him, they had swim through the water. When they reached him, he told them about the snakes he had to fight throughout the night. He vowed to never stay again. His rescuers “said he was just crying. He was just so glad to be alive, but it was really sad. They said he was just shaking and crying.... He said he thought

¹⁷ Susan Humphrey, “Tides Reach Up to 10½ Feet at Brownwood,” *The Baytown Sun*, August 19, 1983, 9-B.

¹⁸ Fletcher Hickerson, interview by Martha Mayo, *The Oral Histories of Citizens of Baytown*, Lee College, The Portal to Texas History, The University of North Texas Libraries, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013886/m2/1/high_res_d/BT64_Shepherd_Warner_Hickerson_Transcript.pdf.

¹⁹ Casey Miller, Mike Pruett, and Jerry Traylor, interview by Martha Mayo, *The Oral Histories of Citizens of Baytown*, Lee College, The Portal to Texas History, The University of North Texas Libraries, August 30, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013798/m2/1/high_res_d/BT60_Casey_Pruett_Traylor_Transcript.pdf.

he was dying.”²⁰ City of Baytown dispatcher Irene Sanders also recalled, “We had two men that went into the water after two ladies.”²¹ The ladies were stranded and could not escape from their home. Additionally, Emmanuel Johnson, the city’s street foreman, and some of his workers helped save a family of five.

After rescuing residents, first responders took them to nearby shelters on Bayway Drive where they joined some of the residents who evacuated on Wednesday. The American Red Cross shelter closest to the subdivision was at Baytown Junior School. It opened at noon on Tuesday, and it remained open until the water in the subdivision subsided. Lakewood Church of Christ, which was also on the same street, served as an overflow shelter until 1:00 p.m. on Thursday. Wooster Baptist Church also opened its doors for evacuees, but it was not a Red Cross shelter. Even though these shelters opened ahead of the storm, most evacuees “who flocked to Baytown shelters waited until the storm was well underway.”²² Most of the 520 people who arrived to Baytown Junior High School when the storm was in full force were from Brownwood and the nearby Lakewood subdivision. Even though Brownwood residents knew there would be shelters available, many left their homes before the storm’s landfall to stay with friends and relatives.

There were a few individuals who stayed in their properties during the storm. Leon Warner, a Ridgeway Avenue resident, stayed because he had never had water in

²⁰ Norman Dykes, interview by Laura Bernal, UH-Oral History of Houston, Houston History Archives, Special Collections, University of Houston Libraries, April 5, 2018, transcript.

²¹ Irene Sanders, interview by Martha Mayo, The Oral Histories of Citizens of Baytown, Lee College, The Portal to Texas History, The University of North Texas Libraries, September 12, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013815/m2/1/high_res_d/BT61_Smith_Sanders_Jacks_on_Dykes_Transcript.pdf.

²² Susan Humphrey, “Red Cross Shelter Dark and Quiet,” *The Baytown Sun*, August 19, 1983, 9-B.

his yard during previous storms. He refused to leave because there was no rain, and he thought city officials were just guessing how high the storm's tides were going to be. When the subdivision finally began feeling Alicia's effects, Warner was already wading in knee-deep water. He climbed with his dog on chair he placed on a table, and the water soon rose past the table. As the water continued rising, his furnishings and appliances began floating away. Even worse, the electricity went out at about 2:00 a.m. Eventually, he had to go up to the roof of his home, where he stayed until city officials rescued him in an aluminum boat. After the storm, some of the possessions he had to look for included Tupperware pieces and the tools from his big tool cabinets. He described the experience as, "I lost 19 years down there...It was just unbelievable, and I know it's material things. But people never understand until they've either been through a flood or a fire that destroyed everything they got."²³

Residents were nervous to return to their homes. Some wanted to return to their homes immediately after the storm to assess the damages their homes. According to Lieutenant William Jackson, patrolling officers would inform these anxious residents that they could not enter the neighborhood due to extensive damage, but some residents did not believe them.²⁴ Residents were nervous because according to Jean Shepherd, the president of the Brownwood Civic Association, "many of those in

²³ Leon Warner, interview by Martha Mayo, The Oral Histories of Citizens of Baytown, Lee College, The Portal to Texas History, The University of North Texas Libraries, September 16, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013886/m2/1/high_res_d/BT64_Shepherd_Warner_Hickerson_Transcript.pdf.

²⁴ Lieutenant William Jackson, interview by Martha Mayo, The Oral Histories of Citizens of Baytown, Lee College, The Portal to Texas History, The University of North Texas Libraries, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013815/m2/1/high_res_d/BT61_Smith_Sanders_Jackson_Dykes_Transcript.pdf.

the area had no flood insurance because they did not know their homes would flood.”²⁵ They were also nervous because they knew this hurricane would once again put the sinking subdivision in the national spotlight. City inspectors visited the subdivision on Thursday, August 18, to assess the damages. After touring the area, they “considered homes with more than 50-percent damage to be destroyed.”²⁶ Before allowing residents to return to the subdivision, city officials entered the subdivision with elevation drains and a diesel pump to pump out 5,000 gallons of water per minute from inside the perimeter road. City crew members worked overtime pumping the water out. Prior to restoring city services to the neighborhood, they also had to clear the perimeter road of debris. City officials also needed to quickly clear the perimeter road because Governor Mark White visited the area on Friday. He surveyed the subdivision from the air with City Manager Fritz Lanham.

Some of the residents who evacuated prior to the hurricane’s landfall returned to the subdivision Thursday afternoon. In order to reach their homes, they passed the police barricades and waded through shoulder-high water. Many of these were young men who slipped away from their mothers. Those brave enough to wade around the neighborhood saw how “the howling, relentless gale-force winds shook the rest, tearing off roofs and blowing apart houses reducing them to piles of water.”²⁷ Abandoned cars and debris “filled the ditches and streets, the dead fish, the raw

²⁵ Lisa Ocker, “Brownwood Aftermath a Messy Scene,” *The Baytown Sun*, August 19, 1983, 1-A.

²⁶ Susan Humphrey, “Brownwood Family Not Found,” *The Baytown Sun*, August 22, 1983, 1.

²⁷ Whit Snyder, “From Good Times to Heartbreak: Brownwood’s Rise and Fall,” *The Baytown Sun*, May 12, 2002, 7-A.

sewage and the contaminated waters in that area.”²⁸ However, even though they were able to enter the subdivision, most were unable to reach their homes because “many streets were still impassible due to water and fallen trees or power lines.”²⁹ There were many trees across the perimeter road, which was still flooded. Dykes and his crew had to saw off the trees with chainsaws. Regardless of the debris, the water was cleaner than “it had ever been in a storm. It was clear, clean-looking water.”³⁰ The water soon lost its clarity because people immediately began using their sewer systems upon returning. Some who came to check on their homes saw the destruction, so “they waited at the waterline or waded as far as they could to see if their homes were still there. Others walked along the shoreline with binoculars, hoping to see even a shell of what had been their homes.”³¹ These residents immediately began cleaning up and trying to find their belongings, which were scattered throughout the subdivision.

By August 22, city authorities determined that “the Brownwood subdivision suffered \$35 million worth of damage. Damage to the extent that some homes were completely demolished was limited to Brownwood.”³² This damage estimate “indicated that more than 472 homes were destroyed, about 60 were uninhabitable but repairable and about 630 would soon be inhabitable with repairs.”³³ The damages in

²⁸ City of Baytown City Council, “Minutes of the Regular Meeting of the City Council of the City of Baytown,” August 25, 1983, 30825-2.

²⁹ Susan Humphrey, “Tides Reach Up to 10½ Feet at Brownwood,” *The Baytown Sun*, April 19, 1983, 9-B.

³⁰ Jean Shepherd, interview by Martha Mayo, Lee College Oral Histories, The Portal to Texas History, The University of North Texas Libraries, September 15, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013804/m2/1/high_res_d/BT63_Marcine_Lanham_Jean_Shepherd_Transcript.pdf.

³¹ Lisa Ocker, “Brownwood Aftermath a Messy Scene,” *The Baytown Sun*, August 19, 1983, 1-A.

³² Lisa Ocker, “\$45-\$50 Million Damages Estimated,” *The Baytown Sun*, August 22, 1983, 1.

³³ Susan Humphrey, “Brownwood Family Not Found,” *The Baytown Sun*, August 22, 1983, 1.

the subdivision were intense because “tides surged over rooftops early Thursday, rising as high as 10½ feet. Some houses were still underwater Thursday evening and others had washed ashore or out into the bay.”³⁴ Even though the damages in the subdivision varied by section, most residents agreed that “Alicia’s punch to Brownwood was more severe than that of Hurricane Carla 22 years ago.”³⁵ According to Civil Defense Director Fletcher Hickerson, the damage was more severe due to subsidence, which made the floodwater rise two feet higher than it did during Hurricane Carla.

The damages throughout the subdivision varied. Fannie Geaslin, a resident since 1940, returned to find that “Alicia swept away all the bracings of her bottom floor and left the upstairs [floor] tilted to one side.”³⁶ When Shepherd returned to her street, Baytown Assistant Police Chief Robert Merchant had to assured her they were on Linwood Drive because she did not recognize it because there were no more homes. She had prepared herself to see studs, roof, and slabs, but “was not mentally prepared to see 45 slabs right in a vicinity.”³⁷ The gas lines throughout the subdivision were broken, and residents tried to go to their meters to cut their lines off. City officials had to cut off the water because the leaks in homes made it difficult to pump

³⁴ Susan Humphrey, “Tides Reach Up to 10½ Feet at Brownwood,” *The Baytown Sun*, August 29, 1983, 9-B.

³⁵ Lisa Ocker, “Brownwood Aftermath a Messy Scene,” *The Baytown Sun*, August 19, 1983, 2-A.

³⁶ Cindy Horswell, “The Soggy Demise of Brownwood,” *Texas: Houston Chronicle Magazine*, December 4, 1983, 2.

³⁷ Jean Shepherd, interview by Martha Mayo, Lee College Oral Histories, The Portal to Texas History, The University of North Texas Libraries, September 15, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013804/m2/1/high_res_d/BT63_Marcine_Lanham_Jean_Shepherd_Transcript.pdf.

out the water in the area. They had to use auxiliary pumps and cut the perimeter road in two spots to drain it. They cut it by Crystal Bay.

To keep control of the area, “police [officers] had been issuing [entry] passes to those residents who could prove they lived on high ground and were not allowing others beyond barricades guarded by state troopers.”³⁸ City officials issued a curfew after sunset in flooded areas of the subdivision. This did not stop sightseers and curious Baytownians from visiting the subdivision. Following Alicia’s landfall, police officers had to patrol the subdivision “for looters as reports of suspicious persons” increased.³⁹ Their command posts still stood a week after the hurricane’s landfall, and they continued to guard the barricades blocking the subdivision’s roads and issuing permits to residents. City authorities soon disassembled the command posts, but police officers promised the residents that they would continue to patrol the subdivision. Baytown Police Department Chief Wayne Henscey fulfilled this promise by assigning extra patrols, including “two boats from Harris County’s Marine Division Sheriff Department patrolling the bay.”⁴⁰

Deciding the Subdivision’s Future

Even if Hurricane Alicia had not sealed the subdivision’s fate, some residents were tired of living under fear of constant flooding. During the storm’s height, some decided that this would be last flooding episode they would experience as Brownwood

³⁸ Lisa Ocker, “Brownwood Aftermath a Messy Scene,” *The Baytown Sun*, August 19, 1983, 2-A.

³⁹ “Baytown Police Still Patrolling for Looters,” *The Baytown Sun*, August 22, 1983, 2-A.

⁴⁰ City of Baytown City Council, “Minutes of the Regular Meeting of the City Council of the City of Baytown,” August 25, 1983, 30825-3.

residents. One of these residents was Cathy Davis, who arrived at the American Red Cross shelter in Baytown Junior High School on Wednesday morning. As she waited for the storm to pass, she said to *The Baytown Sun* “she planned to move to another part of town because she didn’t like her house and the risk of flooding was too high” at this point in the subdivision’s history.⁴¹ Even if residents were unsure about their future, this flooding episode was the last straw for city officials. They were tired of devoting extra resources, time, and money to this subdivision. These residents were also tired of paying for flood insurance. Leon Warner, a Ridgeway Avenue resident, had let his flood insurance expire six days before the storm’s landfall because he had to choose between paying his electricity bill or his insurance policy.⁴² Someone he knew was also tired of paying thousands of dollars in coverage, only to receive small payout amounts.

The city’s first step was addressing the Brownwood problem during the next city council meeting on August 25, 1983. City officials and Brownwood residents were both present because one of the items on the city council’s agenda was considering proposing Ordinance No. 30825-2, “an ordinance suspending the issuance of building permits and prohibiting the occupancy of structures in Brownwood” for two weeks.⁴³ Some of the city officials present at the meeting were people familiar with the subdivision’s problems: City Manager Fritz Lanham and City Attorney

⁴¹ Susan Humphrey, “Red Cross Shelter Dark and Quiet,” *The Baytown Sun*, August 19, 1983, 9-B.

⁴² Leon Warner, interview by Martha Mayo, *The Oral Histories of Citizens of Baytown*, Lee College, The Portal to Texas History, The University of North Texas Libraries September 16, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013886/m2/1/high_res_d/BT64_Shepherd_Warner_Hickerson_Transcript.pdf.

⁴³ Lisa Ocker, “Brownwood Reconstruction Opposed by City Authorities,” *The Baytown Sun*, August 23, 1983, 1.

Randy Strong. Baytown Mayor Allen Cannon was also there. Before city council members approved the ordinance, the audience listened to the testimony of several Brownwood residents.

Brownwood Civic Association president, Jean Shepherd, led the resident testimony portion of the meeting. As a long-time Brownwood resident and president of the association, she “stated she felt that the Council was premature to think about a permanent suspension of building permits, though she did feel that a temporary suspension was absolutely necessary due to the sewer situation.”⁴⁴ Even though she agreed with the city’s decision for a temporary solution, she felt that it was still too soon for city officials to decide on a permanent solution regarding the subdivision’s future. Part of Shepherd’s hesitance to think about the subdivision’s long-term future was also due to the lack of concrete plans. City officials were ready to close off the subdivision, but they did not know what they planned to do with the property after closing it.

The residents that spoke after Shepherd shared some of her concerns, but they also expressed different opinions. While addressing the Brownwood rebuilding debate, the council’s main concern during the meeting, residents were on both sides of the debate. Some did not want to rebuild, but others did want the chance to rebuild their homes. Meanwhile, “some simply urged City Council to take quick action, and others wanted to wait” until they gathered more information about the city’s plans for the

⁴⁴ City of Baytown City Council, “Minutes of the Regular Meeting of the City Council of the City of Baytown,” August 25, 1983, 30825-3.

area.⁴⁵ Others simply used their speaking opportunity to express their concern with looters entering the subdivision. Even though Brownwood residents had different opinions about the city's decision to temporarily halt their rebuilding plans, these different testimonies also highlighted a bigger concern. Everyone present knew the subdivision's needs for the immediate future, but its long-term future was still unknown.

Before approving the ordinance and moving on to the next topic on their agenda, the City Manager informed audience members that representatives from federal and state agencies would meet with Brownwood residents on Sunday, August 28 at 2:00 p.m. at Robert E. Lee High School. During the meeting, these representatives planned to discuss and answer questions about programs available for Brownwood residents. The City Manager asked council members to "attend this meeting to acquire more information before taking any permanent action. The Brownwood residents were in favor of this."⁴⁶ Following this announcement, city council members voted unanimously to approve Ordinance No. 3669, which declared the Brownwood subdivision a "health and safety hazard," suspended "the issuance of building permits" within the subdivision, and prohibited "the occupancy of structures" within the subdivision until September 8, when city council members planned to meet again.⁴⁷ The city's newspaper, *The Baytown Sun*, informed readers about the ordinance on page 3-A of its August 29, 1983 edition.

⁴⁵ City of Baytown City Council, "Minutes of the Regular Meeting of the City Council of the City of Baytown," August 25, 1983, 30825-3.

⁴⁶ City of Baytown City Council, "Minutes of Regular Meeting of the City Council of the City of Baytown," August 25, 1983, 30825-3.

⁴⁷ City of Baytown City Council, "Ordinance No. 3669," August 25, 1983, 30825-1.

As discussed during the August 25, 1983 city council meeting, Brownwood residents met with representatives from federal and state agencies at the Robert E. Lee High School auditorium. During the meeting, some of the residents who attended told the representatives that they were interested in participating in a government buyout program. As a result, FEMA representatives informed residents about Section 1362 of the National Flood Insurance Program Act, which authorized FEMA to “buy repetitively flood insured properties and transfer the land to communities.”⁴⁸ In order to qualify for this funding, the properties “must have been damaged by a single flood event to at least 50% of value, or damaged three times in five years to at least 25% of value.”⁴⁹ Jean Shepherd attended the meeting, and when she asked homeowners “which of them wished to leave and sell out property to the government, a majority of those in the audience raised their hands and even applauded.”⁵⁰ Even though residents present at the meeting were willing to sell their properties, their enthusiasm was not enough. There were two issues that needed to be addressed: the renters living in the subdivision and the area’s future after its acquisition. Local and federal government officials needed to address these issues because a great number of residents in the subdivision were renters. Additionally, in order to receive the Section 1362 funds, the city had to have firm plans to use the areas an open space.

⁴⁸ Rawle O. King, “Federal Flood Insurance: The Repetitive Loss Problem,” (Congressional Research Service: The Library of Congress, June 30, 2005), <https://fas.org/sgp/crs/misc/RL32972.pdf>, 9.

⁴⁹ Federal Interagency Floodplain Management Task Force, “Floodplain Management in the United States: An Assessment Report, Volume 2: Full Report,” (Washington, D.C.: Federal Emergency Management Agency, 1999), 11-45.

⁵⁰ Lisa Ocker, “Brownwood Residents Want Property Buy,” *The Baytown Sun*, August 29, 1983, 1-A.

The large number of renters residing in the subdivision and the lack of concrete plans for the area's future continued to be critical issues between homeowners and city officials. Both groups continued meeting hoping to reach an agreement to no avail. On September 1, 1983, three days after the Lee High School meeting, the Brownwood Civic Association held a meeting at the Baytown City Hall Council Chambers where city and federal flood officials met with residents again. Prior to the meeting, the association's president declared "the meeting concerns property owners, not renters, in Brownwood."⁵¹ As the president of the organization, Shepherd was the leader and face of the neighborhood. Her decision to exclude renters from this meeting highlighted the rising tensions between renters and homeowners.

Historically, home ownership has symbolized "both individual and neighborhood stability," while "renters are an indicator of social disorganization."⁵² The Brownwood subdivision was no exception to this cultural belief. During its "River Oaks of Baytown" period, most of the residents were homeowners, with a few renters living there. The constant flooding episodes made the subdivision less desirable and more dangerous, so those who had the resources moved away and transformed their homes into rental properties. As a result, when Hurricane Alicia made landfall, sixty-five percent of the homes were rental properties. The number was high because the rent was cheap. People could rent a 2,700-square-foot home for \$150 to \$250 a month.⁵³ According to the remaining homeowners, the cheap renting prices opened the

⁵¹ "Sun Spots: Property Owners," *The Baytown Sun*, August 29, 1983, 2-A.

⁵² Kathy S. Kremer, "Homeowners, Renters, and Neighbors: Perceptions of Identity in a Changing Neighborhood," *Michigan Sociological Review* 24 (Fall 2010): 131.

⁵³ Cindy Horswell, "The Soggy Demise of Brownwood," *Texas: Houston Chronicle Magazine*, December 4, 1983, 2.

once exclusive neighborhood to everyone, disregarding the traditional renting method when “potential renters were screened by local owners or managers who often rented based on familiarity or network ties.”⁵⁴ In other words, anyone who could afford the rent price could move to the subdivision.

Since homeownership has historically translated to stability and good citizenship, most renters in Brownwood were rarely considered the good neighbors. According to property owners, many renters were more hazardous to the subdivision than the flooding episodes. Lee College student Lora S Hubbard described the late 1970s – early 1980s as a period when “a transient population moved in to take advantage of cheap rental rates offered by owners who had given up trying to live there.”⁵⁵ Jeff Brown, a descendent of the Brown family who originally owned the land, reinforced this stereotype by recalling that the renters living in his home during Hurricane Alicia “...did more damage than the storm.”⁵⁶ However, this did not mean that all renters were troublemakers. This generalization obscured the fact that there were some renters living in Brownwood because they could not rent anywhere else in Baytown. Since Brownwood homeowners were renting their properties at a cheap price, their prices did not translate to strict rent rules. The rent in Brownwood was cheap, so this was the only place where people with children and pets could afford to live.⁵⁷ Their desperation led them to a “slum landlord area” landowners patched up

⁵⁴ Kathy S. Kremer, “Homeowners, Renters, and Neighbors: Perceptions of Identity in a Changing Neighborhood,” *Michigan Sociological Review* 24 (Fall 2010): 134.

⁵⁵ Lora S. Hubbard, “Baytown’s Brownwood Subdivision and the Problems of Subsidence, 1958-1996.” *Touchstone* 17 (1998): 36.

⁵⁶ Whit Snyder, “Brownwood Descendants Were There Through It All,” *The Baytown Sun*, May 13, 2002, 5-A.

⁵⁷ Mrs. Robert G. LaVergne, “Dear Editor,” *The Baytown Sun*, January 6, 1980, 4-A.

and renters mistook as nice area with reasonable rent.⁵⁸ In reality, they were renting in an unsafe area. Others, however, moved to Brownwood because they were new to the area. When Cynthia and Erick Smith moved to Southeast Texas in 1981, they moved in with a friend who lived in the Brownwood subdivision. They shared the house until the next-door neighbors moved out and offered them their home as a rental property.⁵⁹ They lived there until they were able to find a smaller home closer to their job.

The other reason why homeowners in the subdivision tried to exclude renters from participating in conversations about the future was money. The homeowners who had owned their homes for decades did not like that people were moving into the subdivision when local and federal officials began discussing a possible buyout program. Prior to Hurricane Carla, the Army Corps of Engineers had proposed a relocation plan, which Baytownians first rejected on July 24, 1979 when twenty-five percent of Brownwood residents were renters.⁶⁰ Brownwood homeowners were concerned that renters were moving in just to receive money from the government without living the so-called full Brownwood experience. If city officials and homeowners agreed on pursuing Section 1362 of the National Flood Insurance Program Act, renters would probably have had to meet requirements like the ones outlined on the Corps of Engineers' relocation plan. If Baytownians had approved the

⁵⁸ Jean Shepherd, interview by Martha Mayo, Lee College Oral Histories, The Portal to Texas History, The University of North Texas Libraries, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013804/m2/1/high_res_d/BT63_Marcine_Lanham_Jean_Shepherd_Transcript.pdf.

⁵⁹ Cynthia and Erick Smith, interview by Laura Bernal, UH-Oral History of Houston, Houston History Archives, University of Houston Libraries, February 20, 2020, transcript.

⁶⁰ Wanda Orton, "Brownwood Renters Pay Plan is Defended: Engineers' Corps Boss Comments," *The Baytown Sun*, December 7, 1989, 1-A.

Corps of Engineers relocation plan, “renters must have occupied their dwellings for not less than 90 days prior to initiation of negotiations to acquire the property.”⁶¹ In order to determine the requirements for Section 1362 agreement, residents continued meeting with local and federal officials.

On September 8, 1983, city council members reconvened to continue discussing the Brownwood problem. The Mayor Pro Tempore and FEMA representatives also attended the meeting. During the meeting, city council members considered proposing an ordinance to permanently suspend building permits and prohibiting residents from returning to the area. Upon City Manager Fritz Lanham’s request, City Attorney Randy Strong reviewed the proposed ordinance. Lanham then revealed the city received a letter from FEMA listing the assistance the area would receive if the city council approved the ordinance. If the city adopted the resolution, FEMA would “reimburse the City for debris removal down to the slab in the Brownwood Subdivision on a 75 – 25 cost share basis.”⁶² Furthermore, FEMA would allocate up to \$1.5 million from the Section 1362 funding from its 1984 fiscal year budget. Even if city council approved the residents’ return to the subdivision and let them rebuild, money would be the defining factor. However, if the city accepted FEMA’s offer, they would have the money to help residents recuperate from the stress of chronic flooding and rebuilding.

⁶¹ Wanda Orton, “Brownwood Renters Pay Plan is Defended: Engineers’ Corps Boss Comments,” *The Baytown Sun*, December 7, 1989, 1-A.

⁶² City of Baytown City Council, “Minutes of the Regular Meeting of the City Council of the City of Baytown,” September 8, 1983, 30908-6.

During this meeting, Lanham also raised nine different important points about the subdivision where he declared why the subdivision needed FEMA's help. He first declared that Alicia destroyed all the structures in the subdivision. Next, he discussed the subdivision's low elevation, which guaranteed that future flooding episodes would continue to plague the area. Since the area had sunk several feet, even high elevated portions of the subdivision sustained major damages. Therefore, this made the subdivision a dangerous neighborhood, justifying the need for relocation plans. More importantly, the decision to allow residents to return and rebuild would be a dangerous investment for city officials. According to the city's calculations, they needed at least "four million dollars to rehabilitate the water and sewer within the area."⁶³ This cost would be an economic burden on the rest of the city.

Like at the previous city council meeting, Brownwood residents had the opportunity to express their opinions. Jean Shepherd, the Brownwood Civic Association president, was present. Roxanne Gillum, a Brownwood resident outside the perimeter road, declared her house could be "livable again" if the city restored utilities and city services again. Dorothy Edmundson, a West Bayshore Drive resident who also experience Hurricane Carla, described Brownwood as a "wonderful place; but a harmful place to live." Another West Bayshore Drive resident, Herbert Slatkin, described the subdivision's uncertain future as "riding a dead horse" that they needed to "get rid of."⁶⁴ Others who also spoke with city council members used their

⁶³ City of Baytown City Council, "Minutes of the Regular Meeting of the City Council of the City of Baytown," September 8, 1983, 30908-7.

⁶⁴ Lisa Ocker, "Death of a Ravaged Area Decided by Unanimous Vote," *The Baytown Sun*, September 9, 1983, 1-A.

turn to express their dissatisfaction with the settlement offers they received from FEMA. Although these are only a sample of the conversations between residents and city council members, these different opinions reflect the subdivision's limbo status during this period. These different opinions also help explain the outcome of this city council meeting.

Even though council members felt sympathetic towards Brownwood residents, city council members knew that their position as “the City of Baytown’s legislative and policy-making body,” they needed to make a decision that would benefit the city, not just a group of residents.⁶⁵ As a result, Councilman Perry Simmons was the first council member to support a new ordinance, and Councilman Roy L. Fuller followed his lead. As the other city council members made their decisions, audience members discussed the subdivision’s immediate future. Their suggestions varied greatly. For example, some wanted city council members to pass a new ordinance. Others wanted city council members to let Brownwood residents rebuilt their homes. Some even suggested that the city dis-annex the neighborhood so that residents could be responsible for their own utilities.⁶⁶ In other words, disannexation would eliminate the Brownwood problem in Baytown. Shepherd delivered the most important, if not defining, opinion during this segment of the meeting. Rather than disagreeing with city officials, “she felt that residents had to be realistic about the approach to

⁶⁵ City of Baytown, “City Council,” accessed February 18, 2020, <https://www.baytown.org/city-hall/city-council>.

⁶⁶ City of Baytown City Council, “Minutes of the Regular Meeting of the City Council of the City of Baytown,” September 8, 1983, 30908-7.

Brownwood; that Brownwood was no more.”⁶⁷ As the subdivision’s leader, her opinion meant that it was time for residents to begin moving on.

After this discussion, the Mayor Pro Tempore asked city council members to vote. They voted unanimously for Ordinance No. 3675, which declared “the existence or occupancy of structures within the Brownwood hazard zone a nuisance; prohibiting the repair, erection, and/or construction of structures within the Brownwood hazard area.”⁶⁸ This was the best option because Hurricane Alicia completely destroyed the subdivision. As expected, some of the remaining residents in the subdivision were upset with the city council’s decision. Even though Brownwood residents knew that Alicia was the deathblow to their beloved subdivision, they wanted to stay because “so many people are so desperate to find one thing that belongs to them that they are trying to get down there even with the sewage problem.”⁶⁹ Even though Shepherd agreed with the city council’s decision to begin closing off the subdivision, the council’s decision to approve Ordinance No. 3675, she still compared their decision to “the end of the Republic of Texas.”⁷⁰ Her comparison demonstrated how attached residents were to their properties even though they were living in dangerous circumstances. Many of these residents had lived in their homes for decades and now had to look for new homes elsewhere.

⁶⁷ City of Baytown City Council, “Minutes of the Regular Meeting of the City Council of the City of Baytown,” September 8, 1983, 30908-8.

⁶⁸ City of Baytown City Council, “Ordinance No. 3675,” September 8, 1983, 30908-3.

⁶⁹ City of Baytown City Council, “Minutes of the Regular Meeting of the City Council of the City of Baytown,” August 25, 1983, 30825-3.

⁷⁰ Lisa Ocker, “Death of a Ravaged Area Decided by Unanimous Vote,” *The Baytown Sun*, September 9, 1983, 3-A.

Unsurprisingly, the local economy experienced a boom in the housing industry. Shortly after the hurricane, banker Paul Edwards predicted that this economic growth would last about six months. One reason why this economic boom occurred was because Baytownians used their insurance settlements locally. Most of this money was from Brownwood residents who began looking for new homes after the city council passed Ordinance No. 3675. However, some Brownwood residents began visiting and calling local real estate agents to look for new homes before they received their insurance settlements and before the ordinance. Two of the real estate companies these residents contacted were the Bay Area Board of Realtors and Whitaker & Associates. One agent at Whitaker & Associates told *The Baytown Sun* that “two or three clients had been placed in rent[al] houses. Others had called asking if houses for sale could be rented.”⁷¹ Their decision to rent instead of purchasing homes meant that they were still reluctant to commit to a new neighborhood and completely sever their ties with Brownwood.

Even though residents were in desperate need of housing, they were being selective. According to a real estate agent, one of these reasons was “although a government program proposes to pay Brownwood homeowners fair market value of homes and adjacent property, fair market value in the sinking subdivision is not very high.”⁷² One resident declared that her house would sell for \$90,000, but her insurance adjuster valued it at \$30,000 due to its location in Brownwood. Residents were also selective because they wanted low payments and immediate occupancy. Even if

⁷¹ Lisa Ocker, “Economic Boom May Last Six Months,” *The Baytown Sun*, September 12, 1983, 1-A.

⁷² Lisa Ocker, “Economic Boom May Last Six Months,” *The Baytown Sun*, September 12, 1983, 1-A.

Brownwood residents were not planning to look for new homes, they needed to start thinking about a future outside of Brownwood because on September 22, 1983, a month after Hurricane Alicia's landfall, the Baytown City Council passed Resolution No. 848, which restricted the entry into the Brownwood subdivision.⁷³ The resolution was an extension of Declaration of Disaster Emergency Operations Regulation No. 1, which began on August 16, 1983. The original declaration only gave permission to property owners and government officials to be in the subdivision in daytime.

The city council's decision to restrict the residents' entry into the subdivision occurred after they began planning the city's budget for the 1983-1984 fiscal year. During their special meeting on September 16, 1983, they considered proposing ordinances to adopt the city's budget and establish a tax rate for the upcoming year. Unfortunately, Hurricane Alicia forced them to recalculate their budget. City Manager Fritz Lanham estimated that the city's cleanup costs would be about \$1,370,000. From that amount, he estimated they would need about \$200,000 for debris clearance in the Brownwood subdivision, including slabs.⁷⁴ Since this was a lot of money, it was no surprise that city officials felt residents' entry to the subdivision was a cheaper option than spending thousands of local dollars as they waited for FEMA's Section 1362 of the National Flood Insurance Program Act.

As city officials focused on Brownwood's future, they forgot about Lakewood, the neighboring subdivision that was also sinking. Therefore, during the October 6,

⁷³ City of Baytown City Council, "Minutes of the Regular City Council of the City of Baytown," September 22, 1983, 1500.

⁷⁴ City of Baytown City Council, "Minutes of the Special Meeting of the City Council of the City of Baytown," September 16, 1983, 30916-4.

1983 city council meeting, Bob Zarco, a resident in the lower section of Lakewood, reminded city council members “that the residents of that area had also suffered damages from the storm, and they felt that they had been overlooked.”⁷⁵ He then presented the council with a petition signed by 100% of the homeowners on his block asking for relief. Even though the city council members did not review his petition, the city manager wanted Zarco to clarify what he wanted from city council members. The City Manager asked Zarco if he wanted the council to include Zarco’s block in Brownwood’s Section 1362 funding. In response, Zarco declared he wanted forty-two Lakewood homes to receive the same financial assistance and attention as Brownwood. However, he wanted government officials to treat Lakewood as a separate case because residents understood that being part of the Section 1362 program gave FEMA permission to remove or destroy structures in a high-flood risk area, transform it into an open space land, and deed it to the local jurisdiction.⁷⁶ In other words, including Lakewood in the Section 1362 funding meant that city officials would have to declare Lakewood a hazard area and force residents to leave their subdivision too.

Zarco was not the only Lakewood resident to ask city council members for help during their October 6, 1983 meeting. Gorden Gallatin, a Baytown resident since 1943, expressed his concern “that this section of Lakewood would end up looking just

⁷⁵ City of Baytown City Council, “Minutes of the Regular Meeting of the City Council of the City of Baytown,” October 6, 1983, 31006-1.

⁷⁶ David R. Godschalk, David J. Brower, and Timothy Beatley, *Catastrophic Coastal Storms: Hazard Mitigation and Development Management* (Durham: Duke University Press, 1989), 112.

like Brownwood, and he was concerned about not getting included in funding now.”⁷⁷ He claimed he did not flood during Hurricane Carla in 1961, but five feet of water entered his home during Hurricane Alicia, making Alicia his first flooding episode. As a result, he was sure this meant the section of Lakewood where he lived would flood during future storms. Therefore, the city needed to help Lakewood residents before Lakewood became the next Brownwood. He wanted city officials to include Lakewood in the Brownwood buyout because it would save the local and federal government unnecessary expenses in the form of insurance flooding, repairs, and city resources. Gallatin “stated that all FEMA would tell him was that if there was money left over from Brownwood, then they would look at the people in Lakewood on a one to one basis.”⁷⁸ Regardless of these testimonies, the council passed Ordinance No. 3695, which authorized and directed “the Mayor and City Clerk of the City to execute and attest to an agreement with the Federal Emergency Management Agency for the acquisition of property under Section 1362, Public Law 90-448.”⁷⁹ This agreement gave FEMA permission to begin acquiring properties solely in the Brownwood subdivision. However, Mayor Allen Cannon assured Gallatin the city wanted to acquire this portion of Lakewood. They just needed time and money.

Even though city council members approved FEMA’s acquisition of Brownwood properties on October 6, 1983, the process was slow. By July 1984,

⁷⁷ City of Baytown City Council, “Minutes of the Regular Meeting of the City Council of the City of Baytown,” October 6, 1983, 31006-13.

⁷⁸ City of Baytown City Council, “Minutes of the Regular Meeting of the City Council of the City of Baytown,” October 6, 1983, 31006-14.

⁷⁹ City of Baytown City Council, “Ordinance No. 3695,” October 6, 1983, 31006-3.

FEMA had bought about 200 of the 279 eligible homes in the area.⁸⁰ While FEMA negotiated with residents, city officials had until August 15, 1983 to submit their plans to transform the subdivision into a non-commercial open space. The proposal had to include plans for debris and slab removal, which would cost between \$500,000 and \$1,000,000. FEMA would pay seventy-five percent of the total costs, and Baytown would pay the remaining twenty-five percent. During this period, property owners could not rebuild or stay overnight. They could only enter the subdivision during the day through a single manned security gate on Crow Road because the other streets were barricaded.

On July 24, 1984, the Hazard Mitigation Team consisting of several state and federal agency representatives reviewed the City of Baytown's Land Management and Use Plan for the Brownwood Hazard Area. This team was one of several Interagency Regional Hazard Mitigation Teams established in 1980 "to promote a comprehensive approach to flood hazard mitigation during the postflood recovery process."⁸¹ Before the plan's approval, city council members needed to review the two most important components of the plan: the neighborhood's cleanup and land use.

City Manager Fritz Lanham presented the city's plan to the city council during their August 23, 1984 meeting. Director of Public Works Norman Dykes presented the debris removal portion of the plan. According to Dykes, the debris included uprooted trees, downed utility lines, abandoned vehicles, and the remains of homes. Properties

⁸⁰ Glenn Lewis, "Baytown Expected to Buy Up to 80 Flood-Prone Lots," *Houston Post*, July 3, 1984.

⁸¹ David R. Godschalk, David J. Brower, and Timothy Beatley, *Catastrophic Coastal Storms: Hazard Mitigation and Development Management* (Durham: Duke University Press, 1989), 82.

had contents scattered in yards. Some only had concrete slabs and paved driveways. The slabs looked like residents were getting a new home. The remaining homes had wall studs still supporting their roofs.⁸² One possible method to complete this task was hiring a contractor to demolish structures and haul them off to a sanitary landfill. Authorities expected contractors to charge at least \$1,000,000. The other suggestion was to burn the debris, move the debris to certain locations within the subdivision, and cover it with dirt. Since this method would require assistance from the State Health Department, the Texas Air Control, and Harris County Pollution Control Department, it would cost about \$600,000. Even though the second method would take about a year to complete, city officials preferred it because it was cheaper.

After Dykes concluded his presentation, Director of Parks and Recreation Bobby Rountree presented the land use section of the city's plan. According to Rountree, the city proposed three alternate plans. If city officials selected Alternative Plan I, they would be responsible for regularly mowing the area, installing litter containers, and removing litter from the containers. Alternative Plan II would be a two-step plan because local and federal officials would identify elevations inside the perimeter and select areas where they could excavate lakes. The third one, Alternative Plan III, was a multi-phased project to create a state park.

Following Rountree's presentation, audience members voiced their opinion on these two components of the city's plan. Lakewood resident Kitty Allen opposed the city's plan to transform the subdivision into a state park because she felt Texas had

⁸² City of Baytown City Council, "Minutes of Regular Meeting of the City Council of the City of Baytown," August 23, 1984, 40825-5.

enough state parks, it would further damage property values, increase traffic significantly, and the place would be a haven for robbers and muggers. On the other hand, former Baytown Glen Walker congratulated city council members for considering this plan. After Walker's remarks, the council adopted the contractor suggestion for the cleanup component of the plan. For the land use section, they approved Alternative Plans II and III, hoping the area would someday be part of the Texas State Park System.

The city council considered the city's statement and plan for financing the acquisition of property in the Brownwood subdivision on December 13, 1984. After reviewing the revenue sharing budget they approved earlier in the year, city council members approved the statement and plan. The budget included \$200,000 for land acquisition. They also had \$450,000 available in unappropriated revenues from a \$.59 tax rate general fund. City council members also planned to resubmit grant applications to the Department of Parks and Wildlife valued at \$400,000. If approved, they would receive the money in May or June 1985. Regardless of the money available, Bayshore Drive resident Roxanne Gillum "stated that she could not see no reason that the City of Baytown would need all the land in Brownwood for a park. She felt that people and parks could live together in harmony."⁸³ Even though city council members listened to her remarks, they approved the city's statement and plan. After approving the plan, city council members also approved Resolution No. 897, which notified the public "that a portion of the Brownwood Subdivision is a flood-prone,

⁸³ City of Baytown City Council, "Minutes of the Special Meeting of the City Council of the City of Baytown," December 13, 1984, 41213-7.

hazardous area, to which the city is unable to provide certain services.”⁸⁴ The area affected covered blocks in Brownwood, including Linwood Park, and Wooster. City council members made this decision after looking over the report Director of Public Works Norman Dykes sent City Manager Fritz Lanham on December 5, 1984.

Lastly, city council members contemplated repealing Ordinance No. 3675, the ordinance they passed fifteen months before to prohibit Brownwood residents from rebuilding. This previous resolution also declared the subdivision a hazard area and a nuisance to the city. The city council, under the guidance of City Attorney Randy Strong, decided to repeal this ordinance for two reasons. First, by repealing Ordinance No. 3675, the city would cut off damage claims. Second, most property owners in the area were willing to negotiate with the city.⁸⁵ Therefore, city council members repealed Ordinance No. 3675 by passing Ordinance No. 4019. Even though they passed the ordinance on December 13, 1984, it did not take effect until Christmas Eve of that year.⁸⁶

In 1985, city officials soon began acquiring properties within the subdivision. During their January 10, 1985 meeting, city council passed Ordinance No. 4059, which authorized the city attorney to begin making offers to Brownwood residents for their properties. The city attorney received permission to make offers on twenty-two lots, with the amounts varying from \$100 to \$4,900 for park purposes.⁸⁷ Two weeks

⁸⁴ City of Baytown City Council, “Resolution No. 897,” December 13, 1984, 1627.

⁸⁵ City of Baytown City Council, “Minutes of the Special Meeting of the City Council of the City of Baytown,” December 13, 1984, 41213-10.

⁸⁶ City of Baytown City Council, “Ordinance No. 4019,” December 13, 1983, 41213-2.

⁸⁷ City of Baytown City Council, “Ordinance No. 4059,” January 10, 1985, 50110-15.

later, during their January 24, 1985 meeting, city council members approved Ordinance No. 4066. This authorized the city attorney to make offers on twenty-seven more lots in the subdivision. The offers varied between \$1,000 and \$4,000.⁸⁸ City council members approved the next set of offers on February 14, 1985, with Ordinance No. 4082. The city attorney received permission to make offers on thirty-one more lots. This time, the offers varied between \$700 and \$5,000.⁸⁹ Exactly two weeks later, city council members passed Ordinance No. 4094, which authorized the city attorney to make offers on twenty-six more lots, with the offers varying from \$450 to \$2,200. The amounts property owners varied due to lot size, remaining structures, and flood insurance coverage. Some owners owned multiple lots, which the city valued at different prices.

While almost two-thirds of the homeowners accepted buyouts, sold their homes, and left the subdivision, some refused to leave.⁹⁰ The remaining one-third resisted the city's offers, ordinances, and resolutions by protesting outside city hall, forming special groups, filing lawsuits against the City of Baytown, and simply continuing to live in their Brownwood homes. These residents were the ones national newspapers, such as *The New York Times*, interviewed when they reported about the subdivision. One of the best-known property owners during this period was Roxanne Gillum, who owned multiple lots. These homeowners refused to leave for two reasons. First, they were suspicious of the city's decision to buy out the subdivision because

⁸⁸ City of Baytown City Council, "Ordinance No. 4066," January 24, 1985, 50124-7.

⁸⁹ City of Baytown City Council, "Ordinance No. 4802," February 14, 1985, 50214-15.

⁹⁰ "Deluge Washed Out One Neighborhood," *The New York Times*, March 31, 1985, 22.

“there were rumors that the City intended to resell the properties to industry at a profit.”⁹¹ Second, they disliked the low values city officials offered for their lots.

Most of the homeowners’ protests occurred in 1983 following the city council’s decision to forbid them from rebuilding or repairing their homes. A picture of the three homeowners, Ann Stubbs, Roxanne Gillum, and Carl G. Schulz, protesting outside the Baytown City Hall on September 27, 1983 appeared on the July 29, 2001 edition of the *Houston Chronicle*. All three homeowners protested the city’s decision using posters. Stubbs and Gillum sat on the grass while holding posters reading, “Do you have a home? We don’t! City Council took ours!” and “Why pay taxes in ’83? City Council may take your home!” Next to them was a poster on the grass that read, “Down with Gestapo City Council.” Schulz’s poster read, “We paid our taxes & our mortgage, but City Council won’t let us go home!”⁹²

Meanwhile, some residents formed special groups and filed lawsuits against the city. One group formed the Wooster Township for Fair Equality group. When selecting the group’s name, members did not want to include the word “Brownwood” because it “stirred nothing but negative images.”⁹³ The group advocated for

⁹¹ Federal Interagency Floodplain Management Task Force, “Floodplain Management in the United States: An Assessment Report Volume 2: Full Report,” (Washington, D.C.: Federal Emergency Management Agency, 1999), 11-47.

⁹² Mike Snyder, “Nature Center Owes Birth to Subdivision,” *Houston Chronicle*, July 29, 2001, 33-A. John D. Harden, “For Years, the Houston Area Has Been Losing Ground,” *Houston Chronicle*, May 28, 2016, accessed December 1, 2019, <https://www.houstonchronicle.com/news/houston-texas/houston/article/For-years-the-Houston-area-has-been-losing-ground-7951625.php#photo-10156346>.

⁹³ Whit Snyder, “From Good Times to Heartbreak: Brownwood’s Rise and Fall,” *The Baytown Sun*, May 12, 2002, 7-A.

Brownwood's disannexation and the installment of a desalinization plant for water needs other than drinking.

About sixty property owners sued the City of Baytown in state and federal court.⁹⁴ Several who did this owned multiple lots, which they bought as residents left. They bought these properties hoping to secure the lots' full values. As their lawsuits proceeded, the lot owners met with a city representative trying to reach an agreement via mediation, "a private process where a neutral third person called a mediator helps the parties discuss their interests, understandings, and feelings."⁹⁵ When this happened, the City of Baytown appointed City Works Director Norman Dykes as its representative. He would meet with the homeowner and their attorney at the Houston Municipal Courthouse. Several homeowners hired the same attorney, Andrew J. Lannie. Before each mediation meeting, city officials set the maximum value the city would pay for their properties. When Dykes met with the homeowner and their attorney, the homeowner declared their perceived land value, and Dykes responded with a lower amount. Their negotiation continued back and forth, with residents reducing what they were willing to accept from the city and Dykes raising his initial offer until they agreed on an amount. This amount was typically the limit the city originally set.⁹⁶

⁹⁴ "Deluge Washed Out One Neighborhood," *The New York Times*, March 31, 1985, 22.

⁹⁵ The American Bar Association, "Dispute Resolution Processes Mediation," accessed March 22, 2020, https://www.americanbar.org/groups/dispute_resolution/resources/DisputeResolutionProcesses/mediation/.

⁹⁶ Norman Dykes, interview by Laura Bernal, UH-Oral History of Houston, Houston History Archives, Special Collections, University of Houston Libraries April 5, 2018, transcript.

Residents refused to leave their homes for numerous reasons, including an attachment to their homes, wanting better offers for their homes, wanting to keep looters out of their homes, and distrust of the government. As a result, they found different ways to survive. For example, Roxanne and Ronald Gillum hauled in fresh water into their homes and used a generator. They rented a home somewhere else in Baytown but continued to stay in their Brownwood home because they wanted to protect it from looters and vandals.⁹⁷ A Reddit user, hindskey, remembered riding his bicycle “through the neighborhood when there was still a few hardcore people who didn’t want to leave yet. Most of the homes had already sunk into the water though.”⁹⁸

This group made it hard for city officials to fulfill the first phase of their plan: clearing the area. Even though the city was still negotiating with some of these homeowners, the city council gave their preliminary approval to transform the area into a nature city park on April 25, 1985. Therefore, the city council needed to begin accepting bids from companies specializing in debris clean-up. On June 13, 1985, the Baytown City Council awarded Houston-based Olshan Demolishing Company a \$157,700 contract “for clearing hurricane-related debris as well as all traces of human habitation for more than 200 lots by the city in the Brownwood subdivision.”⁹⁹ City council members selected this company because it was the lowest bid out of the nine they received. Since FEMA was paying for about 70 percent of the cleanup costs, Olshan needed to begin the project by June 20, 1985 and complete it by August 19,

⁹⁷ “Deluge Washed Out One Neighborhood,” *The New York Times*, March 31, 1985, 22.

⁹⁸ Hindskey, 2019, comment on Scott Dailey, “Brownwood was a subdivision in Baytown that subsided into the ship channel and was condemned in the 1980s,” Redditt, accessed March 25, 2020, [reddit.com/r/houston/comments/a6vjne/brownwood_was_a_subdivision_in_baytown_that/](https://www.reddit.com/r/houston/comments/a6vjne/brownwood_was_a_subdivision_in_baytown_that/).

⁹⁹ Lisa Ocker, “Brownwood Should be Cleaned by August,” *The Baytown Sun*, June 14, 1985, 1-A.

1985. City officials were excited about the bid because originally, their FEMA approved Land Management and Use Plan for the Brownwood Hazard Area estimated total for debris removal was about \$600,000. Even though Olshan workers were free to do what they wanted with the debris, city officials had designated certain low areas where they could bury it. Additionally, they had permission to burn fallen trees, if they obtained the necessary permits.

By this point, the City of Baytown had acquired about two-thirds of all the eligible properties in the subdivision. As a result, Olshan workers would only clear the properties under the city's control. However, since the city was still acquiring properties in the area, they would allow Olshan "an additional working day ... for every five lots added to the list of those to be cleared."¹⁰⁰ Workers cleared each lot using the same formula. They dug a giant hole parallel to a house, leveled the structure, scooped up the debris, and dumped it in the hole. Olshan workers then covered the hole with dirt, pounded it, and smoothed it out.¹⁰¹ According to City Manager Fritz Lanham, Olshan workers buried the debris at each site instead of at the three designated burial sites because "after getting into the process of demolishing [the structures], it was easier to bury the debris on site."¹⁰² Otherwise, the company's trucks would have gotten stuck in the debris. On September 26, 1985, city council members "approved [the] final payment of \$42,947 to Olshan Demolishing Co. for [its] Brownwood cleanup."¹⁰³ Ultimately, the company charged the city \$166,495 to

¹⁰⁰ Lisa Ocker, "Brownwood Should be Cleaned by August," *The Baytown Sun*, June 14, 1985, 1-A.

¹⁰¹ Norman Dykes, interview by Laura Bernal, UH-Oral History of Houston, Houston History Archives, Special Collections, University of Houston Libraries April 5, 2018, transcript.

¹⁰² Louise Shaw, "Council Hears Rodriguez's Concerns," *The Baytown Sun*, October 13, 1985, 2-A.

¹⁰³ "Council at a Glance," *The Baytown Sun*, September 27, 1985, 2-A.

clear 228 lots, including twenty-three vacant ones. Yet, by October 1985, the city still needed to acquire more than ninety developed lots and several other lots that residents never built on.

During this planning stage, city officials encountered other problems besides lawsuits and stubborn homeowners. Vandals, looters, and illegal dumpers were now the ones staking their claim on the land, making the peninsula a dangerous place. W. C. Smith, a renter, recalled that these three groups helped make Brownwood “an eye sore, a dangerous place for people to be. It was really unsupervised, unsupervised for four hundred acres. The police couldn’t spend a whole lot of time down there, so some of the things that shouldn’t be happening were going on all the time.”¹⁰⁴ Even though the city did not have the resources to patrol the area, they needed to start building the nature center as soon as possible to stop these illegal activities.

Though their actions, vandals, looters, and illegal dumpers contributed to Brownwood’s demise. Several former residents filed complaints. However, according to Lieutenant William Jackson, former Brownwood residents filed the complaints using their Brownwood address. Therefore, when officers went to investigate, they arrived to abandoned homes. This meant they had to dismiss the complaints because there was no one they could talk to.¹⁰⁵ The most common incidents that occurred during this period were fires. In 1987, there were eight fires in the remaining vacant

¹⁰⁴ W. C. Smith, interview by Steve Koester, Sterling Municipal Library, YouTube May 18, 2002, video, 04:17, <https://www.youtube.com/watch?v=vJvIBAYHQpl>.

¹⁰⁵ Lieutenant William Jackson, interview by Martha Mayo, The Oral Histories of Citizens of Baytown, Lee College, The Portal to Texas History, The University of North Texas Libraries, 1983, transcript, https://texashistory.unt.edu/ark:/67531/metaph1013815/m2/1/high_res_d/BT61_Smith_Sanders_Jackson_Dykes_Transcript.pdf.

homes.¹⁰⁶ Two years later, in 1989, trespassers burned at least four abandoned homes.¹⁰⁷ Other trespassers treated the area as an illegal dumpsite. When he lived in Crow Road, one of the major access areas, W.C. Smith constantly dealt with illegal dumping. He recalled, “I literally used to chase trash haulers. I’d jump in the truck, and they would go over sixty miles an hour down the streets trying to get away from me. It was a stupid thing to do, but they usually managed to beat me.”¹⁰⁸ The trash haulers usually dumped their trash behind bushes. In fact, one day, he encountered a man with a gun dumping trash. Even though Smith was unarmed, he was able to scare off the trespasser. Following that episode, he spent the next two years walking around and keeping vigilance of the neighborhood. He estimated that one in five people he encountered during his daily walks were either drinking or inebriated. While some drove around to throw out trash and other debris, someone once abandoned a stolen brown Geo Prizm in the area. Police officers found the vehicle partially submerged in water on Mapleton Avenue. Before abandoning the vehicle, the thief broke the car’s windows and used a stick to press the accelerator.¹⁰⁹

One of the most unusual problems city officials dealt with during this period was a Satanic cult that “for many years been performing rituals and killing animals, mainly in the abandoned Brownwood subdivision, while also committing other crimes.”¹¹⁰ Even though worshipping Satan is a right protected by the Bill of Rights,

¹⁰⁶ Bruce Guynn, “Restricted Access Proposal Dropped,” *The Baytown Sun*, September 13, 1987, 1-A.

¹⁰⁷ Jane Howard, “Who’s Setting Fire to Houses Remaining in Subdivision,” *The Baytown Sun*, July 3, 1989, 1-A.

¹⁰⁸ W.C. Smith, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 04:28, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

¹⁰⁹ City of Baytown Police Department, “Thefts,” *The Baytown Sun*, August 2, 1990, 2-A.

¹¹⁰ Jane Howard, “Cult Follower Tells of Satanic Rituals,” *The Baytown Sun*, July 15, 1990, 1-A.

people can complain to authorities if worshippers trespass on private property, steal pets, or hurt animals. These complaints allowed police officers to investigate a suspected Satanic cult in Baytown. During their investigation “at a ritual site in an abandoned Brownwood house, Baytown police found pigs’ feet in a pentagram marked on the floor. In another part of the house, a string was found attached to several pieces of glass. When pulled, it made a sound like a bell.”¹¹¹ Conversations with some members and the alleged cult leader also revealed that the cult’s practices included unusual sex activities.

In response to these illegal activities, city council members proposed an ordinance restricting entry to the Brownwood subdivision during their November 12, 1987 meeting. More specifically, the proposed ordinance would only allow property owners and city officials to have limited access to the subdivision between nightfall and daybreak.¹¹² However, city council members rejected the proposal after the city’s legal department reviewed it and declared it was problematic to pass an ordinance restricting entry to the subdivision. According to City Attorney Randy Strong, passing the ordinance meant the “council would be restricting a public property.”¹¹³ Ultimately, city council members agreed with his assessment because by this point, Brownwood was mostly an empty area. The few residents who remained there were living without phone service and city utilities but with increased police patrols. These extra security measures did not discourage trespassers. As a result, city officials

¹¹¹ Jane Howard, “Cult Follower Tells of Satanic Rituals,” *The Baytown Sun*, July 15, 1990, 1-A.

¹¹² Bruce Guynn, “Restricted Access Proposal Dropped,” *The Baytown Sun*, November 17, 1987, 1-A.

¹¹³ City of Baytown City Council, “Minutes of Regular Meeting of the City Council of the City of Baytown,” November 12, 1987, 71112-8.

simply encouraged the remaining residents to post “No Trespassing” signs in their properties.

Now that the city had cleared most of the properties in the subdivision, city officials needed to determine how they would finance the nature center. On February 26, 1990, city officials announced they authorized City Manager Bobby Rountree “to begin procedures for the sale of \$5 million in certificates of obligation to fund various capital improvements.”¹¹⁴ The city planned to use \$250,000 to acquire more land in Brownwood. Meanwhile, the Baytown Chamber of Commerce applied for a Regional Urban Design Assistance Team (R/UDAT) study from the American Institute of Architects (AIA). The AIA established the R/UDAT program in 1967 to help “transform communities by developing a citizen-led vision for a better future, with implementation strategies that produce results.”¹¹⁵ The Baytown Chamber of Commerce wanted R/UDAT to study Baytown because the interdisciplinary team could help city officials understand how to take full advantage of its available resources and shape the community’s future.

The R/UDAT study began on the second week of June 1995 when the team conducted a planning event, which they scheduled over a weekend, called a “Task Force.”¹¹⁶ The five professionals selected for the team specialized in “community

¹¹⁴ Bruce Guynn, “Certificate Sale Totals \$5 million: Baytown Capital Improvements Funded,” *The Baytown Sun*, February 26, 1990, 1-A.

¹¹⁵ The American Institute of Architects, “Regional/Urban Design Assistance Team Program (R/UDAT),” accessed February 24, 2020, <https://www.aia.org/pages/2896-regionalurban-design-assistance-team-program-rudat>.

¹¹⁶ Massachusetts Institute of Technology, “Interactive Community Planning: Urban Community Assistance Team (R/UDAT),” Issues & Tools, accessed February 24, 2020, <http://web.mit.edu/urbanupgrading/upgrading/issues-tools/tools/RUDAT.html>.

development, urban and landscape design, architecture, growth management and other fields” to address problems like “downtown revitalization, environmental conservation, historic preservation and park and open space development” in Baytown.¹¹⁷ Since team members needed to immerse themselves in the community for four days, they toured the city via airplane, helicopter, and buses. During this step, they met with community leaders and listened to the opinions from a diverse group of residents.

On their last day, June 10, 1990, the team held a public hearing at Robert E. Lee High School to present a comprehensive report and recommendations about Baytown. More than 200 people attended. Many audience members declared “they wanted to see something done about the abandoned Brownwood subdivision.”¹¹⁸ Susan Cummings Hastie, an audience member suggested that the city convert Brownwood into a nature reservoir, or an artificial lake to store water. Although it was too late for residents’ suggestions regarding the subdivision’s future, Hastie’s opinion was interesting even though she did not elaborate on the type of reservoir that would fit the area’s needs. Subsidence meant that water towers and dams were not the best options.

After listening to the audience, the team reviewed their urban design and development project about Baytown. The team highlighted the former subdivision in the “Environment” section of the study. The R/UDAT study agreed “with the current

¹¹⁷ Jane Howard, “R/UDAT Study to Start This Weekend,” *The Baytown Sun*, June 4, 1990, 1-A.

¹¹⁸ Jane Howard, “R/UDAT Session Draws More Than 200: Speakers Share Dreams for City’s Future, Suggestions for Creating Cohesiveness,” *The Baytown Sun*, June 11, 1990, 1-A.

actions by the city to acquire the Brownwood area at fair and reasonable cost, and restore the land and water to its natural state as a public park open to all.”¹¹⁹ They agreed with the city’s vision because during their study, one of the most common demands R/UDAT members heard was improving the use of and public access to the city’s water resources. Proceeding with the city’s plan to transform Brownwood into a nature center would help city officials take advantage of the city’s “natural resources and escape its landlocked character.”¹²⁰ Lastly, the team concluded that Brownwood was one of the three locations for extensive pedestrian ways. As the city improved public areas, their improvements needed to include well-designed walkways with benches, lighting, and picnic tables.

The R/UDAT study’s comments and observations helped city officials understand what they needed to transform the area into a park. The project served as confirmation that this was the best option. On January 31, 1991, city council members approved Ordinance No. 5750. This ordinance discontinued the use of all or certain sections of Milner Drive, Linwood Drive, Crow Road, Cabiness Street, Short Street, Katherine Street, Ridgeway Avenue, MacArthur Avenue, Harvey Boulevard, and Mapleton Avenue.¹²¹ Physically closing off the major entrances to the subdivision and its streets cemented the city’s plans for the area and allowed city officials to move forward with their plans. Meanwhile, city officials also continued to raise the funds to support the project. On May 4, 1991, Baytownians voted in a special election on seven

¹¹⁹ The American Institute of Architecture, Regional/Urban Design Assistance Team (R/UDAT), “Baytown R/UDAT,” June 7-11, 1990, 16.

¹²⁰ Jane Howard, “Take Advantage of Waterways, R/UDAT Advises City,” *The Baytown Sun*, June 22, 1990, 1-A.

¹²¹ City of Baytown City Council, “Ordinance No. 5750,” January 31, 1991, 910131-1.

different propositions. Proposition 4 was for \$1,800,000 in bonds to improve streams and parks in Baytown. City officials would use part of the bond amount for the park. If the general obligation bonds passed and sold, “the estimated average annual tax increase will be 1.4 cents per \$100 assessed value each year for five years.”¹²² The bond passed by a 1,643 to 827 vote margin.¹²³

Even though the bond passed, the city did not have enough money to begin transforming the area. Therefore, the area continued to sit abandoned. Regardless of the city’s efforts to isolate the area, many sightseers and nearby residents continued to sneak into the property. Olshan workers had cleared the property in the previous decade, but the remains of a few homes still stood. City workers had also stockpiled materials for future filling and breakwater work. Additionally, the “dead trees raise[d] bare branches wanly to the sun, their roots killed by brackish water. Litter, not wildflowers, decorate[d] the landscape.”¹²⁴ Regardless of the barricades and debris, people trespassed to wade, fish, and swim. City officials knew about the trespassers, so they reminded Baytownians to stay away from shipping lanes and to not wade out too far into the bays.¹²⁵ Larry Albert, a Rice University architecture graduate student, snuck into the subdivision during this period to photograph the site in the early 1990s. He graduated in 1994, which means that he was there during the first building phase.

¹²² The Special Committee – City of Baytown – City of Baytown Bond Election, “On May 4th, 1991, the People of Baytown Will be Given 7 Opportunities to Change Their Lives,” *The Baytown Sun*, April 21, 1991, 10-A.

¹²³ Katherine Feibleman, “Bond Issue ‘Brightens’ City Future: Mayor Calls Passage of All Propositions a ‘Benchmark,’” *The Baytown Sun*, May 6, 1991, 1-A.

¹²⁴ Jane Howard, “Bird Sanctuary Named After Nature Lover Myra C. Brown: Husband Edgar Brown Bought Land from Wooster Estate,” *The Baytown Sun*, March 28, 1993, 2-GG.

¹²⁵ Denise Fischer, “Literacy Lifeline: June 5,” *The Baytown Sun*, June 15, 1991, 2.

When reflecting on his adventure, he described the site as creepy because ““there were more remnants. They hadn’t yet cut the channels to create the marshes...it was just like the suburb I lived in.”¹²⁶ The only difference was that this was a sunken and abandoned neighborhood. Wanda Orton, a retired reporter from *The Baytown Sun*, later reflected, “Brownwood in its last days resembled a war zone.”¹²⁷

Former residents also visited the area after moving out. However, many did not admit to this until recently. Former Brownwood Civic Association president Jean Shepherd was one of the first to acknowledge that she would sometimes drive out the subdivision and drive around the peninsula. She would look at the abandoned structures and relive her memories about the subdivision.¹²⁸ In 2018, Scott Dailey shared his YouTube video about the neighborhood’s history on Reddit. One user, texasfitter, shared that he lived in the subdivision as pre-teenager when Hurricane Alicia made landfall and admitted riding though the ruined subdivision before the city closed it down to turn into the nature center. He recalled seeing “skeletal frames of houses ripped apart by nature’s fury. Lots of houses with ruined possessions of the former inhabitants. It was surreal and creepy, almost like riding though a ghost town.”¹²⁹

¹²⁶ Lisa Gray, “Brownwood: The Suburb that Sank by the Ship Channel,” *Houston Chronicle*, March 13, 2013, accessed March 14, 2020, <https://www.houstonchronicle.com/news/houston-texas/houston/article/Brownwood-The-suburb-that-sank-by-the-Ship-4379765.php>.

¹²⁷ Wanda Orton, “Death of a Subdivision,” TexasEscapes.com, accessed March 14, 2020, <http://www.texasescapes.com/Wanda-Orton/Death-of-a-subdivision.htm>.

¹²⁸ Deana Nall, “Back to Brownwood: Sinking Neighborhood’s Plight Forced the Nation to Deal with Subsidence,” *The Baytown Sun*, March 24, 2002, 1A.

¹²⁹ Texasfitter, 2019, comment on Scott Dailey (u/t3xplor3), “Brownwood was a subdivision in Baytown that subsided into the ship channel and was condemned in the 1980s,” Reddit, accessed March 25, 2020, [reddit.com/r/houston/comments/a6vjne/brownwood_was_a_subdivision_in_baytown_that/](https://www.reddit.com/r/houston/comments/a6vjne/brownwood_was_a_subdivision_in_baytown_that/).

Conclusion

Hurricane Alicia was the deadly storm residents knew was coming but did not want. It was the storm that killed the subdivision and forced city officials to demolish it. They physically removed the residents, but their homes still stood abandoned because city officials had not yet cemented the plan they had suggested since the 1970s. This period of abandonment also forced city officials to witness the community's deep attachment to their community. More importantly, city officials had to decide if they wanted to commemorate the site's history after decades of tensions. As the following chapter will demonstrate, the city tried to remove all physical reminders of the subdivision but was unsuccessful.

Chapter 4: Transforming Brownwood

The Baytown Nature Center first opened in 1995 partially completed. In June 2001, city officials closed the nature center for major renovations. When the city reopened the nature center in May 2002, it hosted a grand opening ceremony that included a homecoming reunion with former Brownwood residents. This ceremony was an important moment in Brownwood's history because it signified that the community, and most former Brownwood residents, finally recognized the area as a park. However, their acceptance did not mean that former residents wanted to forget their experiences. Instead, this meant that supporting the Baytown Nature Center's grand opening served as an opportunity to remind the community about the area's history.

The City of Baytown received a lot of help from different groups and organizations to transform the Brownwood subdivision into the Baytown Nature Center. Although the French Limited Task Group is the organization that often receives most of the credit, it was not the only contributor to this project. It was the organization that helped the city begin this long-awaited program, but several governmental agencies and companies also provided the money and labor to transform the area into the nature center it is today. The project occurred in two phases.

The first phase was between 1991 and mid-2001. During this phase, city officials cemented their plans for the nature center, including its name. The French Limited Task Group helped launch this project, preparing the area for its opening as the Baytown Nature Center in 1995. This phase was also important because it served

as testing period for city officials, helping them identify the changes they needed to finish transforming the area into a nature center. More importantly, there were still very noticeable remnants of the area's former residents, such as abandoned homes, demonstrating that the nature center was far from complete. Yet, rather than highlighting the area's history with subsidence, the City of Baytown began promoting it as haven for bird watchers, fishermen, and hikers. This helped the city begin earning recognition for the area's transformation.

The second phase began in mid-2001 when city officials closed the nature center for major renovations. These renovations added the details the area needed to finally be the Baytown Nature Center that city officials envisioned. Additionally, this period was necessary to finish making this area a space for the community to enjoy. City officials celebrated this achievement by hosting a grand opening and homecoming reunion. During the reunion, former residents toured the nature center and recorded brief oral histories about living in Brownwood. When the nature center reopened, the remaining abandoned homes were gone. However, hidden within the vegetation planted to create the marshes and forests throughout the nature center, visitors can still find artifacts pertaining to the area's former life as a vibrant community.

This chapter documents the nature center's creation through both the building phases led by agencies and organizations, the community's participation, and examines the nature center almost two decades after its reopening. I conclude with my observations about visiting the site almost twenty years after the nature center's reopening. In this section, I discuss some of the artifacts I uncovered during my visits.

By highlighting some of these artifacts, along with some of the vegetation decorating the area, I demonstrate how Brownwood's history as a neighborhood is still present in the landscape regardless of the city's decision to promote the area as a birdwatching, fishing, and crabbing haven. Even if visitors are unfamiliar with the Brownwood subdivision's history, there are still enough remaining artifacts to understand that this park was once a neighborhood. By explaining the importance of these artifacts and their connection to the different periods of the subdivision's history, I demonstrate the need for a historical marker to help preserve these remaining structures and memories.

Phase I

Shortly after the nature center first opened, architecture graduate student Larry Albert declared, "After sitting for years as a dangerous, swampy dumping ground, the land became marsh – both from neglect and – one area of the site – through the concerted effort of a marshland restoration project run by the French Limited Task Group."¹ Albert was correct to credit the French Limited Task Group for its role in the nature center's restoration, but his statement did not tell the complete story. The truth was that the French Limited Task Group did not voluntarily restore the area. As part of their legal penalties pertaining to a superfund site, the group had to help restore a marshland area. After an extensive search, the group selected the Brownwood subdivision, which helped the City of Baytown finally begin their long-awaited project.

¹ Larry Albert, "Houston Wet," (MA Thesis, Rice University, 1997), 26-27.

The French Limited Task Group consisted of about 200 chemical companies, including Exxon and Lyondell, responsible for dumping more than seventy million gallons of industrial wastes on a 55-acre property in Crosby, Texas, less than twenty miles north of Baytown, between 1950 and 1973. French Limited of Houston, Inc. owned and operated the site. Their dumping activities “contaminated groundwater, surface water, soil and sludge with hazardous chemicals and heavy metals.”² In 1973, the Texas Water Quality Board revoked the site’s permit and shut down the facility. After learning about the contamination, the Environmental Protection Agency (EPA) placed the site on the National Priorities List in 1982. This made the potentially responsible parties (PRPs) responsible for cleaning up the superfund site and completing a marsh restoration project.³

On March 16, 1993, the potentially responsible parties and federal trustees entered a consent decree “to provide for replacement of natural resources injured, destroyed or lost as a result of releases of hazardous substances from the French Limited site.”⁴ The project’s review group, established the following month, included representatives from the Department of Interior (DOI), the Department of Commerce’s National Oceanic and Atmospheric Administration (NOAA), the Texas Workforce Commission (TWC), the Department of Interior’s Fish and Wildlife Services (FWS), the Texas Park & Wildlife Department (TPWD), and the Department of Agriculture’s

² United States Environmental Protection Agency, “Superfund Site: French, LTD. Crosby, TX,” accessed November 18, 2019, <https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0602498>.

³ United States General Accounting Office, “Superfund: Status of Selected Federal Natural Resource Damage Settlements,” Resources, Community, and Economic Development Division, 1996, 13.

⁴ Texas Natural Resource Conservation Commission Letter to Brandi Silvey, July 7, 1994 in Parks and Wildlife Department Parks Division Record, Box 2008/038-3 (French Ltd. Superfund Site), Freshwater Conservation Branch Project Files, 1984-2000, ORR folder, Texas State Archives.

Forest Service.⁵ In November 1983, the potentially responsible parties met again to discuss the remedial investigation conducted by the Texas Department of Water Resources earlier that year. The following month, they formed the French Limited Task Group, a group with the goal “to assist the public agencies in protecting the public health and the environment from possible hazards represented by this site through responsible actions by its members companies.”⁶ The group’s steering committee included representatives from Arco Chemical Company, Armco, DuPont, and the Gulf and Southern Pacific Transformation. Since Arco Chemical Company owned fifty-two percent of the site, the company led the project and named R. L. “Dick” Sloan as the project’s manager.⁷

The French Limited Task Group had to spend \$90 million to restore marshland in an area “located in the general vicinity of the French Limited site, and must be tidally linked to the San Jacinto River.”⁸ According to Joann Crawford, Crosby ISD’s school board president, since 1989, she had “quietly talked with French Ltd. project coordinator Dick Sloan about creating what she calls an outdoor classroom for Crosby area children.”⁹ However, after looking at twenty-nine different sites around the superfund site, the group rejected Crawford’s suggestion. Instead, they narrowed down

⁵ “Natural Resources Consent Order Requirements” in Parks and Wildlife Departments Parks Division Record, Box 2008/038-3 (French Ltd. Superfund Site), Freshwater Conservation Branch Project Files, 1984-2000, French LTD – Superfund Site (Crosby, Texas) folder, Texas State Archives.

⁶ United States Environmental Protection Agency, “French Limited Task Group Information Report, Background Report No. 1,” August 31, 1984, <https://semspub.epa.gov/work/06/1006709.pdf>, 000906 .

⁷ Jane Howard, “Nature Center Wins \$1 Million,” *The Baytown Sun*, March 25, 1994, 1-A.

⁸ United States Congress, House of Representatives, Committee on Commerce, *Superfund Reauthorization: Hearing Before the Subcommittee on Commerce, Trade, and Hazardous Materials on the Committee of the Committee on Commerce House of Representatives, One Hundred Fourth Congress, First Session, 104th Congress, 1st session, March 23, 1995, 346.*

⁹ Cindy Horswell, “Town, Firm Bicker Over Cleanup Site,” *Houston Chronicle*, April 3, 1994, 1C.

their search to four other sites: Wallisville Road, Barrett I, Brownwood, and San Jacinto Monument. The group had to select a site where they could restore between twenty-one and twenty-five acres of marshland.¹⁰ After selecting the site, the group had to draft a marsh restoration plan, set a complete deadline, find a public entity to respond for the site, create and maintain a \$30,000 marshland restoration fund for hurricane or flooding damages, and establish a \$30,000 fund for the project's future maintenance.

With the help of Crouch Environmental Services, the group contemplated each site's environmental/technical, sociological, political, and economic criteria, along with the possible risks. The environmental/technological criteria included the size and configuration of the site, susceptibility to natural disasters (especially hurricanes), presence of threatened or endangered species, past site issues, and the surrounding land use. The sociological criteria included the community benefits, accessibility, perception of the site by different groups, aesthetics, community acceptance, future site ownership, and the number of possible visitors. Next, the political criteria referenced the site's proximity to the superfund site, accepted by the regulatory agencies overseeing the project, and the perceptions from the community and governments. Lastly, the economic criteria the group analyzed included land acquisition costs, excavation costs, disposal costs, and how time constraints would affect additional costs.¹¹

¹⁰ United States General Accounting Office, "Superfund: Status of Selected Federal Natural Resource Damage Settlements," Resources, Community, and Economic Development Division, 1996, 13.

¹¹ "French Limited Wetlands Mitigation: Site Selection Report," April 25, 1994 in Texas Parks and Wildlife Department Resource Protection Division Records, Freshwater Conservation Branch Project

The Brownwood subdivision was a finalist because the City of Baytown owned it and planned to build a park in the property, meaning the task group would not have to purchase the property. Instead, the group would only have to purchase the materials necessary to create and enhance diverse habitat types, including freshwater and estuarine wetlands, in the property. The group also liked Brownwood because it was a large site not prone to wave stress. Its existing hydrologic system was adaptable to wetlands creation, so its transformation would not have a negative impact on the existing habitat. By this point, segments of the property were marshland, due to the neglect of city officials. The site had public access, making it an area with good education and recreational potential. This meant that many people would visit the area, especially if the city promoted the site's history. Selecting Brownwood would also be a great investment because the group projected that by 2030, the project subsidence at the site would be 0.3 feet. More importantly, if the task group restored the site, the City of Baytown would own and supervise it. The city had qualified personnel available for future management of the site. This preliminary report also declared the local community accepted this project.¹²

As part of the selection process, the task group also had to contemplate the site's drawbacks. If the group selected Brownwood, they would have to significantly enhance the area's aesthetics due to its neglected appearance. The most important

Files, 1984-2000 (Box 2008/038-3), "French Ltd. Superfund Site" folder, Texas State Archives, Austin, Texas.

¹² "French Limited Wetlands Mitigation: Site Selection Report," April 25, 1994 in Texas Parks and Wildlife Department Resource Protection Division Records, Freshwater Conservation Branch Project Files, 1984-2000 (Box 2008/038-3), "French Ltd. Superfund Site" folder, Texas State Archives, Austin, Texas.

¹²

concern was the site's low elevation, which made it susceptible to hurricane damage. This also meant that it was at risk for high wave stress/erosion potential in the future. The group also recognized that the Brownwood project would not directly benefit the communities near the superfund site, but it was still close enough to where they could visit it. Some of the additional costs the task group would encounter would be for the site's preparation and shoreline stabilization.¹³

During the March 25, 1994 French Site Wetlands Restoration Project Review meeting at the Texas Natural Resource Conservation Commission regional office in Houston, the task group selected Brownwood as its mitigation project. The project's review group approved the proposed location that same day. Brownwood was the best site for marsh recreation because it had "the lowest risk of failure, and the greatest probability of long-term success of any of the sites considered."¹⁴ The task group determined the site's risk factor by analyzing the site's hydrological, biological, and topographical conditions. Additionally, the existing habitat in the site would not have to be destroyed to create the marshlands necessary to fulfill their bargain. On April 12, Stephen R. Spencer, from the U. S. Department of the Interior Office of Environmental Policy and Compliance in Albuquerque, New Mexico sent a memorandum to Richard Seiler, from the Texas Natural Resource Conservation Commission (TNRCC) confirming the review group's approval of Brownwood. Three group members signed it: Don Pitts (TPWD), Tom Calnan (TGLO), and Don Moore

¹³ Crouch Environmental Services, "French Limited Wetlands Mitigation Site Selection Report," April 25, 1994, 16-21.

¹⁴ J. P. Schmidt, Letter to Brandi Silvey, July 7, 1994 in Parks and Wildlife Department Parks Division Record, Box 2008/038-3 (French Ltd. Superfund Site), Freshwater Conservation Branch Project Files, 1984-2000, Baytown Site Harris Co. folder, Texas State Archives.

(NMFS). Seiler replied on May 23, declaring Brownwood a suitable site for French Limited's marsh restoration project. The task group estimated that they would restore about up to twenty-five acres, but they did not want to limit the project's size. On August 4, 1994, the French Limited Task Group officially signed an agreement with the City of Baytown to restore sixty acres of marshland centered in the interior area of the site for \$1.8 million.¹⁵ Kay and Greg Crouch, founders of Crouch Environmental Services, Inc. helped the task group develop the 450-acre master plan for the marsh project. Originally, the task group planned to restore less than thirty acres, but they decided to expand the amount. Their updated "design included the creation of 40 acres of new saline marsh, 10 acres of deepwater channels allowing tidal influence from the bay, and 10 acres of forested islands supporting freshwater ponds."¹⁶ The couple also helped the task group implement the master plan they developed.

Construction for the French Limited Wetlands Mitigation-Brownwood Marsh Restoration Project started in November 1994. The task group estimated that construction would last between four to five months because they would only transform the area inside the perimeter road into wetlands.¹⁷ On November 9, 1994,

¹⁵ Thomas R. Calnan, "The Brownwood Marsh Restoration Project: A Successful Effort to Restore and Create Wetland Habitat" in *Galveston Bay National Estuary Program Proceedings State of the Bay Symposium IV*, Texas Natural Resources Conservation Commission (Austin: Texas Natural Resources Conservation Commission, January 28-29, 1999),

http://www.tceq.texas.gov/assets/public/comm_exec/pubs/gbnep-T1/gbnepT1/gbnepT1_77-78.pdf, 77.

¹⁶ Kay and Greg Crouch, "The Brownwood Marsh Restoration Project/The Baytown Nature Center – Multiple Mitigation Projects," Crouch Environmental Services, Inc, accessed December 15, 2019, <http://crouchenvironmental.com/projects/brownwood-marsh-restoration-project/>.

¹⁷ Richard B. Mahoney, Roger G. Moore, and Sue Winton Moss, "Cultural Resource Investigations and Archeological Inventory of the Baytown Nature Center Park, City of Baytown, Harris County, Texas," (Houston: Moore Archeological Consulting, Inc., June 1999), 4.

Crouch Environmental Remedial Construction workers set up massive pumps to remove the water in the area. They achieved this by sealing the inlets into Scott Bay prior to pumping out the water.¹⁸ This would help draw the water level down and access the pipelines and old house slabs that were previously underwater.

After pumping out the water from the former subdivision, construction workers removed most of the concrete home foundations, utilities, and the remaining roads. Some of the structures that they did not remove included garages and half-buried homes sunk into the soggy earth.¹⁹ They also filled swimming pools. Workers broke down the debris and repurposed it as “buffer zone around the developing wetlands.”²⁰ Broken down slabs served as attenuation barriers to reduce erosion at the mouth of tidal guts opening into the bay. On May 26, 1994, agreed to enter an agreement with the U.S. Fish & Wildlife Service valued at \$50,000. The agency agreed to help clean up this debris, demolish the remaining homes, removing slabs and driveways, and constructing a wave barrier.²¹

Planting species of local origin to the site was an important aspect of creating the Baytown Nature Center. Before workers could create marshlands and two forested islands, workers had to remove the vegetation that would not thrive in these new environments and strip the topsoil. In order to plant the new vegetation, the task group

¹⁸ Charles Lockwood, “From Subdivision to Sanctuary: In Baytown, Texas, a Flooded Neighborhood Becomes a Wetland,” *Planning* 62, no. 10 (October 1996), 13.

¹⁹ M. A. Bengtson, “All-Terrain Vehicles Blamed for Damage to City Nature Center,” *The Baytown Sun*, May 7, 2000, 1-A.

²⁰ Brian W. Cain, “The First 60 Acres: A NRDA Restoration Project” in *Galveston Bay National Estuary Program Proceedings State of Bay Symposium IV, Texas Natural Resources Commission* (Austin: Texas Natural Resource Conservation Commission, January 28-29, 1999), 9, http://www.tceq.texas.gov/assets/public/comm_exec/pubs/gbnep/gnep-T3/gbnepT3_07-09.pdf.

²¹ Jane Howard, “Feds to Aid Nature Center,” *The Baytown Sun*, May 26, 1994, 1-A.

scheduled the project in phases. They wanted the first phase to begin in Spring 1995, the second one in Spring 1996, and a possible third one in Fall 1995. Eventually, the task group decided to only schedule two planting phases in Spring 1995 and 1996 due to weather delays and cost control maintenance issues. To create tidal marsh and encourage the area's natural restoration, workers restructured the land using laser techniques. This helped elevate the subsided land high enough so tidal marsh plants could successfully grow there. Since subsidence in the area occurred in different increments, there were already some areas naturally elevated. Workers transformed the elevated areas into islands, which facilitated the creation of freshwater ponds. Then, they added a direct line for freshwater supply for the mature trees they planted. The varieties they planted included live oaks, red maples, green ashes, and water hickories. They also planted bottomland shrubs. By April 1995, workers had planted 200 trees.

To finish creating the marshlands, workers needed to plant marsh grasses throughout the area. They began planting *Spartina patens* (saltmeadow cordgrass or salt hay), scirpus (bulrush), *Distichlis spicata* (saltgrass), and *Spartina alterniflora* (smooth cordgrass) on July 18, 1995. After planting the marsh grass, they “dug three 60-foot-wide channels—to reflood the site and make sure the crosscurrents would encourage natural restoration activity.”²² Although these workers had removed most of the remaining structures, there were still some house foundations throughout the area. However, as workers continued to fix more areas around the nature center, the

²² Charles Lockwood, “From Subdivision to Sanctuary: In Baytown, Texas, a Flooded Neighborhood Becomes a Wetland,” *Planning* 62, no. 10 (October 1996), 13.

vegetation helped hide the remaining artifacts. The initial vegetation encouraged animals to make this restored area their new home. By summer 1995, there were already pelicans, osprey, deer and small alligators in the area.²³ The last things workers built were observation areas and walkways far enough for visitors to enjoy the area without disturbing the present wildlife. They also moved the gate at the side entrance about 200 yards from its original position to discourage motor vehicle. Ultimately, the task group fulfilled their end of the bargain by creating a diverse habitat “to compensate for the type of wildlife species and their habitat that may have suffered injury from the French Limited Site.”²⁴ Now that the task group had started this project, they would continue to monitor and maintain the site until May 2000, when it planned to hand over the responsibilities to the City of Baytown.

The French Limited Task Group continued to monitor and maintain the site until 2003.²⁵ Greg Crouch from Crouch Environmental Services, Inc. helped fulfill the group’s promise by publishing quarterly, and eventually, annual site monitoring reports. In each report, he documented the conditions of the bridges, channels, channel cuts, riprap, survival/growth rates of the vegetation, entry gate, signage, and erosion/minimal shoreline invasion. He also included observations about the area’s visitors and their activities during the site inspection date. For example, some of the

²³ Christian Messa, “Back to Nature: Bay Waters Return to Former Subdivision,” *The Baytown Sun*, June 20, 1995, 1-A.

²⁴ Brian W. Cain, “The First 60 Acres: A NRDA Restoration Project” in *Galveston Bay National Estuary Program Proceedings State of Bay Symposium IV, Texas Natural Resources Commission* (Austin: Texas Natural Resource Conservation Commission, January 28-29, 1999), 9, http://www.tceq.texas.gov/assets/public/comm_exec/pubs/gbnep/gnep-T3/gbnepT3_07-09.pdf.

²⁵ United States Department of Interior, “Final Damage Assessment and Restoration Plan/Environmental Assessment for Greens Bayou, Harris County, Houston, Texas,” December 14, 2008, 72.

ongoing problems he observed between 1996 and 1997 were the tracks of small motorized vehicles and a prolonged route. Crouch conducted the group's final annual inspection on March 10, 2000 during a low tide. In total, the French Limited Task Group restored 59.8 acres: 14.28 acres of open channel, 8.7 acres of forested island, 3.99 acres of freshwater pond, 21.34 acres of *Spartina alterniflora* marsh, and 11.49 acres of *Spartina patens*.²⁶

After the French Limited Task Group restored their acres, ARCO, the leading company, decided to restore fifty more acres starting on October 1996. Crouch Environmental continued to work with the company during this new ARCO-led project. ARCO provided \$45,000 for the fifty acres. The Crouch team planted more than 3,600 trees and staked young seedlings wrapped in a plastic shroud to protect them from deer. Other groups not affiliated with the French Limited Task Group also helped restore the area. The U. S. Fish & Wildlife Service created one acre of marsh at San Jacinto Point and traffic barriers. Stolhaven Houston, a shipping company, contributed several hundred dollars to create forty bottomland acres of forested wetland. David Dauphin, a member of the Baytown Nature Center advisory committee member, spent hours clearing areas of the center from non-native plants and undesirable brush.

By the end of this first construction phase, a range of different agencies and companies worked hard to transform the former subdivision into a nature center. By

²⁶ Greg Crouch, "French Limited Wetlands Mitigation – Site Monitoring Report, Brownwood Marsh Restoration Project, January 1999-March 2000" in Freshwater Conservation Branch project files, Texas Parks and Wildlife Department Resources Protection Division records, Archives and Information Services Division, Texas State Library and Archives Commission.

1999, the area contained “over 200 acres of 30+ years old mixed hardwood forest, over 60 acres of created wetlands, over 10 acres of meadow, and 140 acres of lowlands.”²⁷ About 120 acres remained undeveloped, including Westwood Park.²⁸ This undeveloped area contained various pine, oak, and elm trees. Regardless of this makeover, the area still needed a lot of work. During his visit to the area in 2000, historian T. Lindsay Baker still considered the nature center a ghost town because he could still see debris and artifacts from the former residents. There were still four abandoned homes in bad shape, concrete slab foundations, and ornamental shrubs and trees. Some of the debris littered the area included an abandoned sofa and a set of bedsprings. More important, visitors could still “observe the effects of uneven land subsidence in the form of cracks in street paving throughout” the nature center.”²⁹ Fortunately for visitors, the center’s next big project was right around the corner.

Phase II

On July 9, 2001, city officials closed the Baytown Nature Center for new construction projects sponsored by Lyondell Chemical and the Texas Parks & Wildlife Department. City officials felt it was best to close the center for the visitors’ safety because according to City Manager Monte Mercer, ““The work will involve the

²⁷ David T. Dauphin, “Baytown Nature Center: A Jewel in the Great Texas Coast Birding Trail” in *Galveston Bay National Estuary Program Proceedings State of the Bay Symposium IV, Texas Natural Resources Conservation Commission* (Austin: Texas Natural Resource Conservation Commission, January 28-29, 1999), 13, http://www.tceq.texas.gov/assets/public/comm_exec/pubs/gbnep/gbnep-T3/gbnepT3_11-13.pfd.

²⁸ Richard B. Mahoney, Roger G. Moore, and Sue Winton Moss, “Cultural Resource Investigations and Archeological Inventory of the Baytown Nature Center Park, City of Baytown, Harris County, Texas,” (Houston: Moore Archeological Consulting, Inc., June 1999), 6.

²⁹ T. Lindsay Baker, *More Ghost Towns of Texas* (Norman: University of Oklahoma Press, 2001), 22.

cutting of roadways, and earth-moving equipment will be in operation throughout the center.”³⁰ Their original plan was to close the center for six months, with construction ending around January 1, 2002. The group planned to build flushing channels, a pavilion, a butterfly garden, and more walking trails.

Even though construction on the projects was about seventy-five percent complete by October 2001, city officials pushed the reopening date to May 2002 due to the numerous different projects happening throughout the center. During the October update, Lyondell Chemical’s flushing channels were seventy percent complete, and the islands were finished. Next, workers were scheduled to build the boardwalk and pavilion. Meanwhile, the Texas Parks & Wildlife Department had completed its trails, including the one for a butterfly garden. Workers had installed the pads for picnic areas, and they were also already building the observation decks, fishing piers, and wetlands. City officials planned to plant more marsh grass in the freshwater lagoon and wildflower seeds at the butterfly trail in November.³¹

During January 2002, the original reopening month, city spokesman Gary Smith revealed the city’s plan to have a homecoming for the area’s former residents to celebrate the nature center’s reopening. City officials wanted to host a celebration to commemorate this event because they did not host one for the nature center’s first opening. When the French Limited Task Group began their restoring project back in 1994, both the task group and city officials began brainstorming ways to celebrate the

³⁰ M. A. Bengtson, “Nature Center to Close Monday: About Six Months of Construction on Tap,” *The Baytown Sun*, July 3, 2001, 3-A and 8-A.

³¹ Matthew Cook, “Work on Baytown Nature Center 75 Percent Complete,” *The Baytown Sun*, October 7, 2001, 1-A.

nature center's inauguration. By November 1994, task group members began planning an open house for the community, scheduled for early September 1995 with a dedication and barbeque. Their plans never materialized, and the Baytown Nature Center first opened in 1995 without fanfare. City officials wanted to host a grand opening to finally and formally recognize the nature center, inviting former residents and honoring the area's history and future.

City officials had time to prepare for this homecoming reunion and grand opening because workers still had many details to finalize before finishing their ongoing projects. When Smith announced the city's plans for a possible homecoming reunion, he also revealed that city workers originally planned to plant the seeds for the butterfly garden and the marsh grass during November 2001, but they decided to wait until March, when the chance of freeze damage had passed. On January 23, 2002, survey work began for an educational/discovery area with various stations explaining the center's ecology and habitat.³² Smith also reported that there were still some driveways, house foundations, and a fishing pier still present. Some of the concrete slabs were hidden beneath recently planted trees and marsh grass. One slab was next to the new butterfly garden. Two months later, the project was eighty-five percent complete.³³

Lyondell Chemical and the Texas Parks & Wildlife Department spent about \$700,000 on new construction projects for the Baytown Nature Center. Lyondell

³² Matthew Cook, "Opening of Center Pushed Back Until May," *The Baytown Sun*, January 27, 2002, 1-A.

³³ Jim Liddell, "Number of Tickets Issued in Baytown Rises 33%," *The Baytown Sun*, March 7, 2002, 6-A.

Chemical spent \$190,000 to construct twenty acres of wetlands, flushing channels, and a twenty-four-foot-wide gazebo for students. City officials used grants from the Texas Parks & Wildlife Department to “build a 1½-acre fresh water pond with an observation deck, 600-foot surge barrier, more than a mile of walking trails, picnic facilities, parking lots, two fishing piers, a saltwater marsh observation platform, fitness stations, horseshow pits, benches, butterfly/hummingbird garden and an educational pavilion at Wooster Point.”³⁴ Eventually, they also added a children’s play area to the price tag, bringing the total costs up to \$510,000. The department used funds from its Texas Recreation and Parks Account (\$375,000), 1999 Certificates of Obligations (\$125,000), and a \$15,000 grant from the Galveston Bay Estuary Program of the Texas Natural Resource Conservation Commission. Additionally, the Galveston Bay Foundation gave the City of Baytown a \$22,000 grant that city officials used during the “Marsh Madness” Day in March 2002 to plant new marshland.

Even though city officials reopened the nature center in May 2002, they still had plans to add more amenities and continue restoring the site. The city wanted an educational Interpretive Center, the Myra C. Brown Bird Sanctuary, walking trails, and a butterfly garden. However, the biggest project initiated immediately after the nature center’s reopening was building a new entrance. The original entrance was “nestled behind the Baytown West Little League Park [formerly known as Westwood Park] and rows of house along Schreck Avenue.”³⁵ However, on July 12, 2002, two months after the nature center’s opening, city council members approved the contract

³⁴ M. A. Bengtson, “Nature Center to Close Monday: About Six Months of Construction on Tap,” *The Baytown Sun*, July 3, 2001, 1-A.

³⁵ Beth Guillett, “Nature Center Slated to Renovate Entrance,” *The Baytown Sun*, July 8, 2003, 1A.

and construction for a new entrance on Bayway Drive, north of Harvey Boulevard. A year later, the City of Baytown announced construction for the new entrance would begin in early fall 2003. According to historian T. Lindsay Baker, when city officials were still planning the new entrance in 2000, they wanted it to be between Harvey Boulevard and Foster Street, directly off Bayway Drive. Regardless of the street changes, it was obvious that the new entrance needed to reach Bayway Drive, the street connecting the area to the surrounding neighborhoods. The nature center's new entrance opened in 2005.

City officials were not the only ones contributing to the nature center's ongoing growth. Other groups and organizations held create more public spaces within the site and restore more acres into wetlands. In October 2003, the Friends of the Baytown Nature Center, ExxonMobil, and the City of Baytown finished "the new footbridge that crosses the Crow Road flow channel" providing "better access to the eastern marsh area."³⁶ The team assembled the forty-two-foot wooden footbridge over a two-day period.³⁷ The following year, another project helped restore fifteen more acres of wetlands. In 2009, a group of representatives from GB Biosciences, Malcolm, Pirnie, and Arcadis selected the Baytown Nature Center to create 10.89 acres of brackish marsh on the center's east side, adjacent to Bayshore Drive.³⁸ The group recontoured the area by excavating fill material and filling submerged areas to create intertidal elevations. Workers used bulldozers and backhoes to excavate material from

³⁶ Dwayne Litter and Ron Ummel, "BNC Journal," *The Baytown Sun*, October 21, 2003, 6-A.

³⁷ Merie Hunt, "Big Thanks to All 'Caring' Volunteers," *The Baytown Sun*, October 21, 2003, 4-A.

³⁸ United States Department of Interior, "Final Damage Assessment and Restoration Plan/Environmental Assessment for Green Bayou, Harris County, Houston, Texas," December 14, 2008, 74.

the artificial upland. Then, they removed soil and deposited in adjacent shallow open waters to further increase existing elevations and help support emergent wetlands. This helped create 10.89 acres of intertidal flats full of plugs of smooth cord grass. Under the Texas Commission on Environmental Quality, the QB Biosciences Team worked with Crouch Environmental Services, Friends of the Baytown Nature Center, and the Natural Resources Trustees Program.

Groups continue to build and restore wetlands at the nature center because “scientific research has shown that a one-acre wetland can hold about three acre-feet of water (or 1 million gallons) during flood events, which is then released after the rains subside.”³⁹ Nature-based solutions, such as restoring coasts are cost effective, which is an important reason why local and federal government officials forced residents out of the subdivision. According to The Nature Conservancy, a global environmental nonprofit organization, every dollar spent restoring wetlands and reefs yields seven dollars in direct flood reduction benefits. This, in a way, justifies the city’s decision to remove the residents from their chronically flooded community.

Between 2011-2012, several large scale and individual projects occurred at the Baytown Nature Center to continue beautifying and expanding the site. In August 2011, six Parks and Recreation Department employees salvaged two pedestrian bridges from Bicentennial Park and took them to the Baytown Nature Center.⁴⁰ Parks

³⁹ The Nature Conservancy, “How Nature Can Help Reduce Flood Risks,” January 28, 2020, accessed March 12, 2020, <https://www.nature.org/en-us/what-we-do/our-priorities/tackle-climate-change/climate-change-stories/natures-potential-reduce-flood-risks/>.

⁴⁰ City of Baytown Parks and Recreation Department, *City of Baytown Parks and Recreation Department Annual Report 2011-2012*, http://agendas.baytown.org/docs/2012/CC%20Regular/20120823_709/6431_2011%20-%202012%20Annual%20Report%20-%20Final.pdf, 10.

and Recreation Department employees worked with Wetlands Center staff and the Friends of the Baytown Nature Center to install a 6x8-foot crab climber, construct a wood pirate ship, construct three large picnic shelters with picnic tables and family grills, and install the Bayer Music Garden Rock. Meanwhile, city officials applied for grants to continue this work. One of the grants they applied for was an \$84,615 Texas Parks and Wildlife Department Recreational Trails Grant to construct 5,340 feet of new decomposed granite trail at the nature center. The project would be fulfilled in two parts. They wanted to make the Myra C. Brown Wild Bird Sanctuary accessible to visitors, improve a dirt path with a new decomposed granite trail to connect the Butterfly Garden to the Phase I trail on Bayshore Drive, and build a 20x40 foot wildlife viewing platform at the end of the Myra C. Brown section. Soon after its proposal, the city received approval for a \$57,240 grant. The department denied the city's request for fencing. Work began in late fall 2012 and finished in early 2013.

During this same period, city officials resumed a project that began in 2003 with an application for a Natural Resource Trustee Program Grant (NRTP) valued at \$187,000. They planned to use this grant to build thirty-seven acres of wetlands. The project officially began in January 2007 but had to stop three months later. It resumed more than four years later with the aid of the City's Purchasing Department and Crouch Environmental Services. Regardless of the extended drought that covered the area, "a contractor was able to grade and clean the area to the needed elevations in two short weeks."⁴¹ During the process an extremely high tide fractured the temporary

⁴¹ City of Baytown Parks and Department, *City of Baytown Parks and Recreation Department Annual Report 2011-2012*, accessed March 10, 2020,

dams and flooded the area, but the contractor was able to clear the area. By September 2011, it was complete and open to organisms. The project's next phase required the planting of *Spartina alterniflora* and *Spartina patens* grasses.

Two of the main volunteering projects that occurred during this period were Marsh Mania and the United Way Day of Caring. During the May 5, 2012 Marsh Mania, Baytown Nature Center staff and the Galveston Bay Foundation invited volunteers to plant smooth cordgrass. Marsh Mania is part of the Galveston Bay Foundation's Burnet Bay Wetlands Restoration Project, established between June and October 2009. In total, the project restored more than thirty acres of intertidal marsh within Burnet Bay, one of the bays surrounding the nature center.⁴² As part of this Marsh Mania, more than 300 volunteers spent three hours planting several acres of the cordgrass on marsh mounds.

After the event, city officials then began negotiating with The Texas Commission on Environmental Quality to help complete cordgrass planting and for a demonstration oyster bed. The city's request for help to complete the grass planting was understandable because creating a marsh is a slow process. Participants have to plant marsh grass "by hand, one stem at a time. Stems are spaced several inches apart to allow the rhizome root system to expand outward."⁴³ The process is also hard because they "have to get the plant far enough into the mud to ensure that it stays

http://agendas.baytown.org/docs/2012/CC%20Regular/20120823_709/6431_2011%20-%202012%20Annual%20Report%20-%20Final.pdf, 25.

⁴² Philip Smith and Scott Williams, *Burnet Bay Wetland Restoration Project*, Galveston Bay Foundation, accessed March 10, 2020, https://galvbay.org/wp-content/uploads/2014/03/2010_BB_Poster_final.pdf.

⁴³ Jim Blackburn, *The Book of Texas Bays* (College Station: Texas A&M University Press, 2004), 76.

upright and also keep its leaves above the water at high-tide.”⁴⁴ After the grass’ planting, it takes about three years for the marsh to be functional and suitable for a variety of living organisms within its mud and water.

During the 2016 United Way Day of Caring, the ExxonMobil partnered up again with the Friends of the Baytown Nature Center and the Parks and Recreation Department. They concentrated their efforts on Jacinto Point, where they assembled and installed a floating kayak dock, worked on siding and decking at Tracey’s Theater, created a frog jump, spread mulch in the Children’s Nature Discovery Area, added rubber fall zone to the Brownwood Mine entries, and repainted the concrete turtles in the Children’s Nature Discovery Area. The most important project was the Friends of the Baytown Nature Center’s installment of a new kayak launch.⁴⁵ During a previous year, the refinery’s staff had also worked with Parks and Recreation Department Employees and the Friends of the Baytown Nature Center to construct seven 12x12 - foot picnic table shelters in San Jacinto Point, a paver walkway leading to the fountain at the Information Center, and repairing the wood fence at the Children’s Discovery Area. In 2017, the same groups partnered up. Their projects included building deck extending a boardwalk, relocating and sealing decks and wood carvings, replacing the door jamb and door on the Tracey’s Theater storage room, repairing the Children’s Nature Discovery Area fence, painting the interior of the Tracey’s Theater, weeding

⁴⁴ Jim Blackburn, *The Book of Texas Bays* (College Station: Texas A&M University Press, 2004), 77.

⁴⁵ City of Baytown Parks and Department, *City of Baytown Parks and Recreation Department Annual Report 2015-2016*, accessed March 10, 2020, <https://www.baytown.org/home/showdocument?id=4907>, 24.

the Children's Nature Discovery Area Butterfly Garden, and repairing the instruments in the Bayer Music Garden.⁴⁶

Since its major renovations, the nature center (which now has an entrance fee) has acquired four fishing piers, picnic shelters, two overlooks, and two pavilions. Additionally, there is a Children's Nature Discovery Area, the Crystal Bay Butterfly Garden, and seven miles of hiking trails in the Natural Area. As visitors walk down the trails, they have the opportunity to access the Brownwood Marsh, Crystal Bay Overlook, Cypress Pond, Scott Bay Overlook, Heron Haven, Killdeer Beach, Duck Pond, Oak Mott, Turtle Pond, Wooster Pond, Wooster Point, and Rundell Cove. Most of the neighborhood's former roads serve as these walking trails for visitors. Katherine Avenue is one of the streets that has partially disappeared; it only exists in fragments. Even though most of the residential structures were gone when the nature center opened, visitors can still find pieces pertaining to the park's history. Some of the artifacts include bricks, tile fragments, pipe fragments, a rusty fence, house foundations, a fire hydrant, manhole covers, wooden poles, driveways, and pieces of carpet. City Council members approved the Baytown Nature Center's expansion in 2015 by acquiring Westwood Park. This required the city to relocate the park's fence so the park could be part of the nature center's acreage.

The Baytown Nature Center Reopening/Brownwood Homecoming

⁴⁶ City of Baytown Parks and Department, *City of Baytown Parks and Recreation Department Annual Report 2016-2017*, accessed March 10, 2020, <https://www.baytown.org/Home/ShowDocument?id=7119>, 19.

To commemorate the Baytown Nature Center's reopening, the city hosted two special events: The Brownwood Homecoming Reunion and the Baytown Nature Center's grand opening. The events were on May 17 and 18, 2002. Both events were opportunities to welcome former residents back to the Baytown area and reminisce about their shared Brownwood experience. The city's newspaper, *The Baytown Sun*, helped promote these historic gatherings by advertising them the weeks leading up to the events and publishing a three-part series about the subdivision's history. According to former Brownwood Civic Association president, Jean Shepherd, the week before the opening and reunion was "a week of interviews" for former residents.⁴⁷ Everyone in wanted to know the group's reactions to their former neighborhood's transformation.

On Friday, May 17, 2002, former Brownwood residents and friends attended a reunion reception in the Baytown Community Center's auditorium. When residents entered the community center, four aerial maps of the area greeted them. The photographs were from 1994, 1995, 2000, and 2002. The photographs let the former residents compare the site before and after the Baytown Nature Center's creation. Several residents tried to pinpoint where their houses once stood. This helped the former residents share their memories about living in Brownwood. In fact, some of the attendees acknowledged that they had not seen each other in thirty years. The event lasted two hours, from 6:00 p.m. to 8:00 p.m. Even though it was raining, about 500 former residents attended.

⁴⁷ Jean Shepherd, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 15:42, <https://www.youtube.com/watch?v=vJvIBAYHQpl>.

Jean Shepherd, a former civic association president, was the evening's guest speaker. As the subdivision's best-known activist, her testimony detailed the subdivision's struggles with chronic flooding. One of the most meaningful moments of her speech was when she read a poem written by her friend, Peti Campbell: "Someday someone will write the history of 'Brownwood's Golden Days'/They'll tell about the sinking of our lovely homes into the bays."⁴⁸ The other important segment of her speech was when she revealed that there were already plans to place a historical marker at the site to commemorate Brownwood's history, meaning that visitors to the Baytown Nature Center would learn about the site's history. Shepherd's speech was not the only highlight of the evening. Former resident W. C. Smith also shared his testimony. A current member of the Friends of the Baytown Nature Center, he acknowledged that not everyone wanted to return to celebrate the nature center's opening. Some did not want to return because they were still sad about losing their homes.

The following day, former residents attended the Baytown Nature Grand Opening and Ribbon Cutting Ceremony, organized by the Brownwood Homecoming Committee. The committee organized an oral history recording session so former residents could document their memories about the Brownwood subdivision, the announcement of a historical marker, and a tour of the center. More than 325 former residents attended the celebration. According to the Susan Sloan, the event's coordinator, "When we started [planning the event], we didn't know how to find

⁴⁸ Allyson Gonzalez, "Memories Run Deep at Brownwood Homecoming," *The Baytown Sun*, May 18, 2002, 7A

people. It snowballed. When the invitations went out in March, we added a part that says help us find people.”⁴⁹ As the committee organized the event, the Friends of the Nature Center asked former residents for photographs of the old neighborhood. The organization wanted to display them in a photo board to showcase the site’s history.

Activities for former residents began at 10 a.m. The grand opening ceremony took place at the San Jacinto Point section of the Baytown Nature Center and lasted about thirty minutes. Director of Parks and Recreation Department Scott Johnson opened the program. Then, Mayor Pete Alfaro recognized several of the guests in attendance, including the Friends of the Baytown Nature Center, Lee College President Martha Ellis, and Baytown City Council members. Even though he received an invitation to the event, Governor Rick Perry was unable to attend. Others who later spoke included Wayne Gray, Baytown Nature Center Committee member W.C. Smith, and Lee College professor John Britt. The ceremony lasted about thirty minutes at San Jacinto Point. At the time of this grand opening, plans included an educational Interpretive Center, walking trails, the Myra C. Brown Bird Sanctuary, and a butterfly garden.

Some of the attendees also recorded brief interviews, which are available at the Sterling Municipal Library’s YouTube channel. When asked about the site’s transformation, most interviewees expressed their support and admiration. However, there was also a sense of bitterness because some of these residents lived at this site for decades before they had to move out. Sharon Queen, a Bayshore Drive resident from 1968 to 1983, perfectly summarized the ambivalence. She declared, “I am

⁴⁹ Allyson Gonzalez, “Brownwood: ‘It’s Now a Useful Place,’” *The Baytown Sun*, May 19, 2002, 8A.

delighted that they have done this to this area. It's kind of a bittersweet thing to come down here and see it, but it's okay.... I'm hoping that the district will still bring the children down here because it's a very important part of Baytown."⁵⁰ John Floyd, one of the homeowners whose lawsuit against the City of Baytown County-at-Law Judge Ed Landry dismissed, declared, "I think the park's a good idea. I mean, you would've never gotten 350 people to fix this place up."⁵¹ Lea Underwood, who was an educator when the nature center opened, shared, "I'm very excited. I'm an educator, so I'm very glad to see that kids are going to be enjoying the same things we did."⁵² Jeanette Garber Mallory later wrote a brief letter to *The Baytown Sun* thanking the community for the reunion. Mallory enjoyed seeing her former friends and neighbors at the grand opening at a well-planned event. She declared, "It helps all former residents to know that our former home sites will bring pleasure and learning to many people over the years."⁵³

Community's Reactions

City officials opened the Baytown Nature Center on 1995. However, most of the community began embracing the nature center before its opening. They led several individual efforts to clean up the area hoping it would serve as recreation area for everyone. For example, months before its opening, Beautify Bayway volunteers

⁵⁰ Sharon Queen, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 19:27, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

⁵¹ John Floyd, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 32:55, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

⁵² Lea Underwood, interview by Steve Koester, Sterling Municipal Library, YouTube, May 18, 2002, video, 37:00, <https://www.youtube.com/watch?v=vJvIBAYHQpI>.

⁵³ Jeannette Garber Mallory, "Brownwood Reunion was Enjoyable," *The Baytown Sun*, May 23, 2002, 4A.

cleaned up trash along Bayway Drive to beautify the area for the nature center's upcoming opening. They also added new coats of paint to buildings along Bayshore Drive, such as T. J.'s Appliances, to make the area appealing for the nature center's visitors.

Sailing enthusiast Kevin Plante led one of the major individual efforts to help beautify the nature center before its 1995 opening. When he bought a small catamaran in October 1993, Plante began looking for a place to use it. He called the Baytown Parks and Recreation Department for advice, and they suggested the Baytown Nature Center. After visiting the area, he selected a location on Crystal Bay even though it was full of debris. Again, he reached out to the department's officials, "and they agreed that if a citizen effort whipped the location into better shape, the parks department would maintain the site."⁵⁴ Five months later, on March 5, 1994, he recruited some volunteers to clean an area locally known as Crystal Beach Recreation Area, hoping to transform it into a launch area for small boats. The Baytown Parks and Recreation Department oversaw the project, but they received assistance from the city's fire and rescue, public works, and engineering department. Additionally, volunteers from Goose Creek Independent School District's Project Lead, the Baytown Area Boy Scouts of America, and the Baytown YMCA also helped clean up. Their efforts included marking unmovable underwater obstacles, removing debris, picking up trash and underbrush, and making a parking area. This clean-up effort later became known as the first annual River, Lakes, Bays N Bayous Trash Bash.⁵⁵

⁵⁴ Jane Howard, "Back to Nature...Clean-Up Begins Task of Turning Baytown Nature Center into Sailing Spot," *The Baytown Sun*, March 27, 1994, 3-BB.

⁵⁵ "Volunteers to Improve Water Fun," *The Baytown Sun*, March 3, 1994, 1-A.

Rather than making this a one-time event, Plante continued to host annual River, Lakes, Bays N Bayous Trash Bashes. Each year, the number of volunteers and tasks increased, especially after the nature center opened. These bashes were invitations for the community to embrace the area's new identity and take ownership of the place. During the second Trash Bash on March 25, 1995, volunteers removed trash and debris on the bays, marshes, and recreation area.⁵⁶ The theme for the March 27, 1999 Trash Bash was "Clean It Like You Mean It." For this Trash Bash, city officials "used about \$100,00 in state grant money for coastal remediation and added another \$170,000 in materials and man power to the mix to begin the marsh preservation project and create a passive recreation area to the end of the peninsula."⁵⁷ Volunteers included Exxon Chemical Company employees and their families, along with City of Baytown staff. Exxon employees planted cord grass, which protects shorelines and creates cover for blue crabs, fin fish, and shrimp. Cord grass can do this because after it is planted, it colonizes and spreads.

In November 1996, the Baytown Nature Center Subcommittee began hosting tours of the Baytown Nature Center. Interested visitors arrived at the Baytown Junior High School parking lot at 8:00 a.m. every Saturday and carpoled to the center. During this period, the entrance to the center was "nestled behind the Baytown West Little League Park [formerly known as Westwood Park] and rows of houses along Shreck Avenue."⁵⁸ After visitors entered the premises, a guide would then "lead

⁵⁶ "Bayou Trash Bash Will Focus on San Jacinto River Cleanup," *The Baytown Sun*, March 22, 1995, 1-A.

⁵⁷ Jim Webre, "Marsh Gets Step Up with City Help," *The Baytown Sun*, March 29, 1995, 3-A

⁵⁸ Beth Gullett, "Nature Center Slated to Renovate Entrance," *The Baytown Sun*, July 8, 2003, 1-A.

visitors through the center and introduce them to Brownwood's history and the different animal species that now make their habitat in the newly developed wetlands area."⁵⁹ To fully enjoy the experience, visitors needed to wear comfortable clothing and shoes suitable for a mile-long hike, which lasted about an hour.

Unfortunately, not everyone in the community respected the nature center. Shortly after the nature center first opened, city officials had to deal with trespassers who entered the subdivision driving all-terrain vehicles (ATVs) around the property. The Baytown Parks & Recreation Department tried different ways to discourage ATVs from entering the area. Their methods included "installing various guard rails, traffic barricades, pipe railings and ditches with steep slopes."⁶⁰ These riders had always been a problem for city officials, but their presence during the first construction phase was extremely problematic. Rather than driving around in an abandoned area, these trespassers were driving around a reconstructed area full of young, delicate fauna and flora. These trespassers liked driving around the nature center because the vegetation was very dense. Others liked using the young seedling stakes workers planted to create forested areas as targets. The riders drove around road barriers and ditches that separated the center from neighboring subdivisions. According to Greg Crouch, the project's consultant, the center needed a 3- to 4-foot chain link fence to prevent ATV riders from entering the nature center. Unfortunately, the fencing cost about \$50,000, which city officials could not afford at that moment.

⁵⁹ Maike Van Wuk, "Baytown Nature Center Tours Set for Saturday," *The Baytown Sun*, November 1, 1996, 1-A.

⁶⁰ M. A. Bengtson, "All-Terrain Vehicles Blamed for Damage to City Nature Center," *The Baytown Sun*, May 7, 2000, 1-A.

Several Baytownians continued to express their disagreement with the city's decision to transform the former subdivision into a nature center. One Baytownian, Myrtle Hudgins, wished the city had left the site alone, and let birds and other animals restore it to its natural setting. That way, "the barbecuers, etc., can go someplace else. People won't do anything but trash up."⁶¹ In other words, rather than investing thousands of dollars in this area, the city should ignore it. This Baytownian also felt that the city did not need another park for people to litter and destroy.

After the nature center's reopening visitors expressed their disappointment in the daily entrance fee. They liked the nature center's layout, but they did not like that each visitor had to pay a \$3 fee to enter. They could also buy an individual annual pass for \$20 or an annual family pass for \$50. Baytownian Tom L. Kincaid, Sr. felt the entrance fee was unnecessary because "the fishing piers aren't lighted, or are there any other amenities justifying an entry fee."⁶² Another Baytownian, Lloyd R. Cargill, also critiqued the need for the entrance fee. Since the nature center lacked lighted structures, that meant there were no electricity costs. He asked, "Why, Baytown, is a fee charged? Wasn't the nature center funded primarily through grants?"⁶³ Cargill was concerned because the entrance fee would make the park an expensive outing for big families who wanted to picnic or fish somewhere new. The center's director, Travis Lovelace, justified the price because it was a natural area. The fee was necessary for

⁶¹ Myrtle, Hudgins, "It's for the Birds," *The Baytown Sun*, May 20, 1997, 4-A.

⁶² Tom L. Kincaid, Sr., "Substance Over Image," *The Baytown Sun*, May 31, 2002, 5A.

⁶³ Lloyd R. Cargill, "No Fees Should be Charged at Nature Center," *The Baytown Sun*, May 23, 2002, 4A.

its operation and maintenance costs.⁶⁴ Presently, visitors continue to pay an entrance fee.

The site's transformation helped the City of Baytown earn recognition for their effort. Some of the recognition came shortly after the nature center opened. On April 22, 1997, the Texas Parks and Wildlife Department unveiled Baytown's official Great Texas Coastal Birding Trail marker at the nature center's proposed entrance.⁶⁵ This was the first birding trail marker sign in Harris County. It was important that the Baytown Nature Center was the first site in the county because "the purpose of the Great Coastal Birding Trail is to marry the interests of birders, conservationists, and local communities."⁶⁶ In other words, the trail was for birders, especially out-of-state birders, and environmentalists. This recognition made the Baytown Nature Center one of the 308 birding sites that make this trail. The Texas Parks and Wildlife Department selected the Baytown Nature Center as site UTC 039 of the trail's San Jacinto Loop because they were certain when construction finished, it would "attract a large number of eco-tourists, who will spend their dollar in the nearby area, thus attracting the attention of local officials and businessmen even further."⁶⁷ This helped the City of Baytown begin promoting the site as a coastal oasis for birdwatchers.

⁶⁴ Allyson Gonzalez, "\$3 Fee for the Birds, Some Say," *The Baytown Sun*, June 2, 2002, 1A.

⁶⁵ Jeff Haddon, "Baytown Officially Joins State Bird Trail," *The Baytown Sun*, April 14, 1997, 1-A.

⁶⁶ Ted Lee Eubanks, Jr., Robert A. Behrstock, and Seth Davidson, *Finding Birds on the Great Texas Coastal Birding Trail: Houston, Galveston, & the Upper Texas Coast* (College Station: Texas A&M University Press, 2008), ix.

⁶⁷ David T. Dauphin, "Baytown Nature Center: A Jewel in the Great Texas Coastal Birding Trail," in *Galveston Bay National Estuary Program Proceedings State of the Bay Symposium IV*, Texas Natural Resources Conservation Commission (Austin: Texas Natural Resources Conservation Commission, January 28-29, 1999), accessed March 20, 2020, https://www.tceq.texas.gov/assets/public/comm_exec/pubs/gbnep/gbnep-T3/gbnepT3_11-13.pdf, 13.

As the city continued promoting the nature center as a wildlife refuge, the site continued to receive awards for its transformation. In 2000, *Southern Living Magazine* featured the Baytown Nature Center in the “Texas Living” section of its May 2000 edition. The section, “Baytown’s for the Birds,” praised the variety of birds visiting the nature center. Three months later, on August 15, 2000, the City of Baytown received a 2000 Chevron Conservation Award. The award recognized ten citizen volunteers, ten professionals, and five nonprofit organizations working to enhance the country’s wildlife, land, air, and water resources.⁶⁸ The city received a \$5,000 prize at the Chevron corporate headquarters in San Francisco, California. The award honored four Baytown projects: the Baytown Nature Center, the Goose Creek Steam Greenbelt, the Eddie V. Gray Wetlands Center, and the George and Freda Chandler Arboretum.⁶⁹ These awards helped the nature center earn national recognition and boost Baytown’s eco-tourism.

Author’s Observations

As a Goose Creek Consolidated Independent School District (GCCISD) graduate, my first visit to the Baytown Nature Center was during an elementary school field trip. The field trip was part of a partnership between GCCISD and the Eddie V. Gray Wetlands Center. Every year, the Wetlands Center hosts the Wetlands Ecology Program for fifth graders and the Liquid Science Program for all seventh graders.

⁶⁸ Barbara Spector, “Chevron Awards Honor Conservationists,” *The Scientist*, October 28, 1990, accessed March 20, 2020, <https://www.the-scientist.com/news/chevron-awards-honor-conservationists-61026on-awards-honor-conservationists-61026>. \

⁶⁹ M. A. Bengtson, “Honors Given for Preserving Environment,” *The Baytown Sun*, August 16, 2000, 1-A.

After completing the program, students ride buses to the Baytown Nature Center, where they picnic and walk around the center. As they walk around, they bird watch and staff members pull a seine net through shallow marsh water to catch small aquatic animals. This partnership is important because “for many students, it will be their first opportunity to see and touch these aquatic critters that are common in our bays and wetland nurseries.”⁷⁰ Unfortunately, for a child, it is hard to comprehend that this park was once one of Baytown’s most exclusive neighborhoods.

I revisited the Baytown Nature Center on March 10, 2017 as a graduate student. Once again, it was for a field trip. This time, it was for a graduate public history course titled, “Critical Issues in Gulf Coast History.” Eric Magrane, a then-poet-in-residence at the Arizona-Sonora Desert Museum, accompanied us and challenged us to write down observations and poems inspired by the scenery (Appendices C and D). Prior to the field trip, we read about the site’s history. Even though I had visited the nature center about a decade before, it still felt like my first visit to the area. This was probably because I was older and finally able to understand the area’s history. The other reason I was oblivious to this nature center for so long was due to how the community advertises the site. The year prior to my visit, *The Baytown Sun*, released the Summer 2016 Newcomers Guide discussing everything important about Baytown. According to the special publication, “Baytownians Say You Haven’t Lived in Baytown Until You Have... pointed out exactly where...the

⁷⁰ Friends of the Baytown Nature Center, “Baytown Nature Center: Educational Partnership,” accessed December 10, 2019, <http://www.baytownnaturecenter.org/educational-partnership/>.

streets and house of Brownwood used to be before being engulfed in water.”⁷¹ When promoting the Baytown Nature Center, the newspaper described the site as “an oasis for wildlife,” that was once “a former subdivision that suffered land subsidence and repeated flooding, and was finally abandoned after severe flooding from Hurricane Alicia in 1983.”⁷² Rather than further discussing the site’s history, the article praised the nature center’s amenities. As a lifelong Baytownian, I had no idea that the nature center’s history was more complex than repeated flooding and a major hurricane.

During this first adult visit, we visited the Brownwood Marsh Educational Pavilion, sponsored by the Lyondell Chemical Company. We then walked to Wooster Point, which served as an opportunity to look at the vegetation adorning the site. One of the plants I immediately recognized was the Eastern Prickly Pear Cactus, which grows at my house. When we finally reached Wooster Point, we had to step up on a house foundation to reach the kiosk where we sat down to eat lunch. As we stepped up the foundation, we noticed there were pieces of pink porcelain tile still attached to the foundation with a couple of purple flowers growing there. We also found some pipe fragments indicating where residents rested their home appliances. This makes Wooster Point one of the best-known house foundations at the site. From the kiosk, we could see a small beach full of seashells. Afterwards, I reflected on my visit in my personal journal. I described Wooster Point as an interesting location because even

⁷¹ “Baytownians Say You Haven’t Lived in Baytown Until You Have...,” *The Baytown Sun: Newcomers Guide*, Summer 2016, accessed March 15, 2020, <http://www.baytownsun.com/app/Newcomers2016.pdf>, 17.

⁷² “Nature Flourishes in the Shadow of Industrial Growth,” *The Baytown Sun: Newcomers Guide*, Summer 2016, accessed March 15, 2020, <http://www.baytownsun.com/app/Newcomers2016.pdf>, 35.

though the City of Baytown tried hard to transform the landscape, Baytown authorities did not succeed. This foundation is still accessible to nature center's visitors.

After this initial visit, I continued exploring the nature center with my family and friends. During each visit, I found more artifacts and foundations that indicate humans once lived there. Some of the artifacts include house slabs, driveways, bricks, manhole covers, culverts, a fire hydrant, and a rusted fence. Our weekly trips helped us discover ornamental vegetation that also tells the story of the site. The vegetation was one of the first remnants I noticed because I grew up surrounded by some of these plants. Our backyard is full of plants, which helped us recognize some of the plants we found during our visits. Below, I will describe some of the artifacts still present at the Baytown Nature Center that help tell the story about the Brownwood subdivision.

Roads

As visitors walk around the Nature Area, they will notice that the walking trails are the neighborhood's former roads. (Figure 5.1) All are still accessible, except for Katherine Street because it sank. Instead, it exists in two parts without a center. Some streets, such as Ridgeway Avenue and Cabaniss Street needed boardwalks to convert them into walking trails, allowing visitors to witness the subsidence in the area. (Figure 5.2) The subsidence is also noticeable after rain events. For example, a couple of days before Easter Day 2018, heavy rains swept through the Baytown area. As a result, certain parts of the Baytown Nature Center flooded. Some streets, such as Cabaniss Avenue, were impassable in the days following the storm because the water was still retained there. Sadly, this gives visitors a glimpse into the residents' struggles during the "Submarine Acres" period.



Figure 5.1 One of the many former streets serving as walking trails for visitors. (Photo by the Author)



Figure 5.2 This is a walkway replacing a partially submerged portion of Ridgeway Avenue. (Photo by the Author)

House Foundations/Concrete Slabs

As previously mentioned, there are several house foundations accessible to visitors. Google Maps and drone videos indicate that there are more house foundations throughout the site, but the nature center's layout and subsidence make them inaccessible. The two foundations closest to the entrance are located near the Butterfly Garden, which is along Crystal Bay. One of them is on the wooded area next to the garden. Some of the fragments include glass, red bricks, white tiles, and wood fragments. (Figure 5.3) The other foundation is across the street. Visitors can only see the granite flooring, which is like the foundation near the Butterfly Garden. There are pieces of wood covering most of it, suggesting that the city's Parks and Recreation Department uses it to store leftover building materials.

The other accessible foundations are further down in the Natural Area. On MacArthur Avenue, there is a foundation that contains white tile that is slowly peeling off from the concrete. However, since the tile has been sitting there for decades, visitors can see where there were other pieces since they are marked on the foundation. Additionally, there is a segment of red brick floor. At some point, a segment of the of the foundation also contained blue mosaic tile, but the few remaining pieces are scattered throughout the foundation. (Figure 5.4) Further down the street, near Cypress Pond, there is another house foundation. This one is only a concrete slab, but visitors can see the outline of driveway. It is best to access it during winter, when most of the vegetation is drier and sparser. During one of my visits, there was some debris there, which may or may not have been from former residents. This debris included a vinyl record, meter box, and a plastic drop-in meter reader cover.

Two streets down east, on Cabaniss Avenue, there are two more house foundations. One of them has pink mosaic tile and pipe fragments for home appliances. However, unlike the Wooster Point foundation, this one has a small wooden structure with slits where visitors can bird watch without disturbing the fauna. (Figure 5.5) The other one is only visible during winter when the vegetation is scant. There are still some wooden posts here. The most noticeable thing we found were a handful of planting pots containing prickly pear cacti.

There is another house foundation near Wooster Point. (Figure 5.6) It is hidden among the trees. Although it is located in the center's Natural Area, where visitors are discouraged from fishing, it is a popular fishing area. Artifacts include red bricks and mosaic flooring. The foundation is next to the Scott Bay, so the bay waters are always hitting the foundation. This shows how much the site has subsided.



Figure 5.3 The house foundation next to the Butterfly Garden contains several artifacts related to Brownwood's history. The moss on the floor demonstrates the site's restoration to its natural state. (Photo by the Author)



Figure 5.4 The white fragments on the top left are pieces of the white tiles that are peeling away from this house foundation on MacArthur Avenue. (Photo by the Author)



Figure 5.5 The foundation on Cabaniss Avenue contains pink porcelain tile similar to the one in Wooster Point. However, this piece is smaller and a softer shade of pink. (Photo by the Author)



Figure 5.6 This house foundation on Mapleton Avenue, is hidden among the trees. Although fishing is prohibited in this area of the nature center, many visitors like to fish there. (Photo by the Author)

Artifacts

On and along the streets, there are other indicators about the land's previous inhabitants. For example, hidden among the trees on Crow Road, there are wooden utilities posts and their corresponding wires. (Figure 5.7) Based on their shape, they were either electricity or telephone wires. Some of the cables are attached to one of their poles. Another one still has part of a telephone box attached. Across from the telephone pole, there were also wooden pole fragments with wires and nails. During 2018, at the entrance of the street closest to the fence separating the nature center from the neighborhood, there was a circular object that from far away looked like either a toilet or a urinal. However, it was a light post laying upside down, close to pieces of broken concrete.

Mapleton Avenue is full of artifacts. For example, there are still some remaining manhole covers. One of the most visible ones has engraved, "Trinity Valley Forth Worth Texas." Unfortunately, it does not contain a year to know its production or installation year. Grass is slowly starting to cover it. (Figure 5.8) Nearby, there is another manhole cover with the engraving, "Vulcan Foundry." The other important artifact on this street is a rusted fire hydrant hidden within the trees. The year engraved on it is 1950. There are some letters engraved above the year, possibly spelling out "Chattanooga." There are also specks of yellow paint among the rest. It is impossible to photograph it because the area is always muddy and full of mosquitoes, especially during the summer.



Figure 5.7 A wooden post with part of a telephone box still attached. (Photo by the Author)



Figure 5.8 Manhole cover still visible around the Baytown Nature Center. (Photo by the Author)

Subsided Structures

Along the bays, there are two important types of subsided structures that are only visible during low tides and when cold fronts enter the area. They are in-ground swimming pools and bulkheads or retaining walls. (Figure 5.9) Even when the tide is low, they are hard to access because they are surrounded by mud and puddles.

There are three remaining pools, located on the Burnet and Crystal Bays. One of the pools on Burnet Bay has blue tiles on the inside. It has three edges, and it is full of wetland vegetation. In fact, there is a tree growing inside the pool. (Figure 5.9) The other one is more inland, very close to Bayshore Drive. It has four edges, and it is also full of vegetation. At one point, there was a white door inside it. (Figure 5.10) More than likely, someone dumped it there. Meanwhile, the pool on Crystal Bay has three edges facing the bay. Its position indicates that its owners wanted it there so it could be filled by the bay water. (Figure 5.11) Drone footage from Steve Rowell's project "Uncanny Sensing (Texas Prototype)" for the University of Houston's 2014 CounterCurrent Festival shows a house foundation and another possible pool east of this pool.



Figure 5.9 The bulkhead and palm tree demonstrate where a house once stood. (Photo by the Author)



Figure 5.10 This in-ground swimming pool on Burnet Bay is only accessible when tides are extremely low. During the nature center's early years, visitors could still walk inside this pool. (Photo by Author)



Figure 5.11 This other in-ground swimming pool near Burnet Bay is partially accessible due to the vegetation and mud surrounding it. (Photo by the Author)

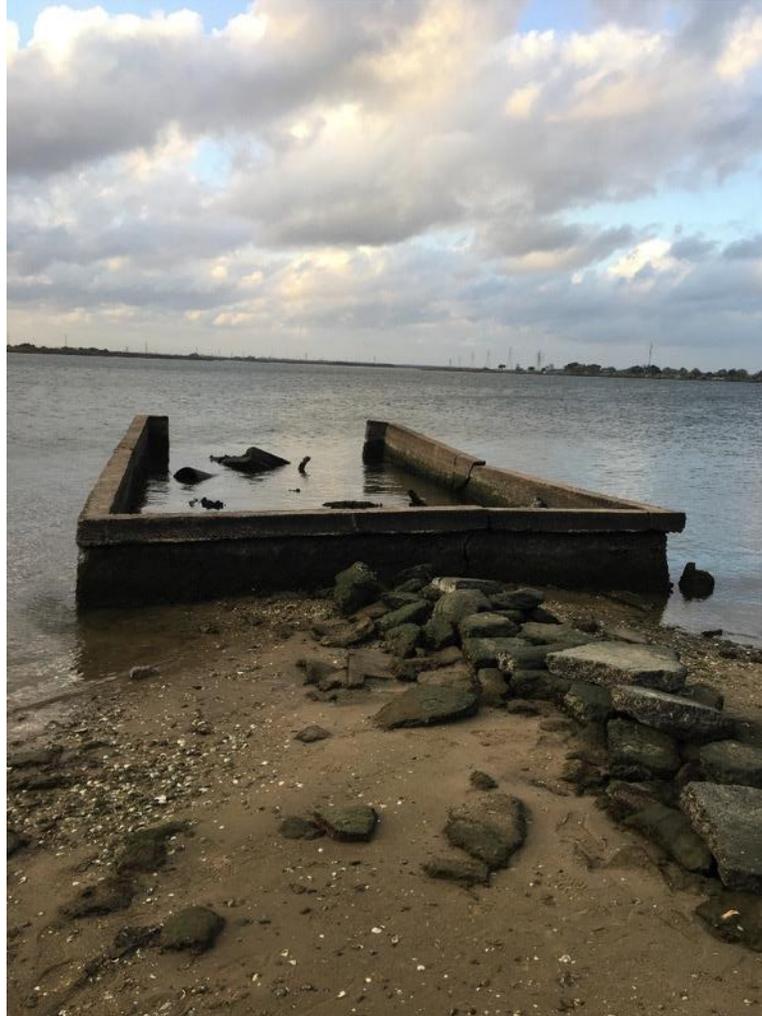


Figure 5.12 This in-ground swimming pool on Crystal Bay is only accessible when tides are extremely low, demonstrating the impact of subsidence on the site. (Photo by the Author)

Bricks

There are several types of bricks throughout the Baytown Nature Center. A gray one I found in Wooster Point during a low tide was engraved “ELGIN ACME.” (Figure 5.13) Acme Brick, formerly known as Acme Pressed Brick Company, was founded in 1891 by George E. Bennett.⁷³ The company has a factory in Elgin, Texas, which is where this brick was probably manufactured. The company offers various colors, but the brick’s original color is unknown because the water changed it.

Near this Elgin Acme brick, I also found half a red one. Even though only half of it was laying on the shells, most of its engraving was visible. (Figure 5.14) The top line was “CORDE,” and the bottom line contained “REDS.” Using Google, I learned that a complete brick contains the engraving, “CORDELL REDS.” This brick is popular among brick collectors, due to its connection to Houston’s Sixth Ward. In fact, people buy and sell them through websites, such as eBay. The Lighthouse Brick Words, later known as Andy Cordell Brick Company, manufactured this brick.

The other type of brick I have discovered on Wooster Point during low tides is a Walsh XX fire brick. (Figure 5.15) Like Cordell Reds, this brick is also a collectible. Walsh Fire Clay Products Company produced these bricks in Missouri. These special bricks measured nine inches by nine inches, although the company sometimes produced them in special shapes. Workers used selected Missouri flint clays to make

⁷³ Bill Beck, *Acme Brick Company: 125 Years Across Three Centuries* (Forth Worth: Acme Brick Company, 2016), 17, accessed March 10, 2020, https://brick.com/sites/default/files/acme_digital_book_single_pages-sm.pdf.

them resistant to “high heats and sudden changes in temperature.”⁷⁴ These bricks were popular for areas where furnace temperatures were high.

During a low tide at Crystal Bay, I found a brick engraved with “CEDAR BAYOU.” (Figure 5.16) Cedar Bayou is one of the communities that incorporated into Baytown. Before its annexation, Cedar Bayou was one of Texas’ oldest communities and also one of the most important brick manufacturing communities. Cedar Bayou bricks “were made from 2 parts top soil, one part clay, and water from Cedar Bayou.”⁷⁵

⁷⁴ Sweets Catalogue Service, Inc. *Sweet’s Engineering Catalogue*, (New York City: Sweets Catalogue Service, Inc., 1922), 499.

⁷⁵ “Brickyards Along Cedar Bayou,” *Our Baytown: Baytown’s Historical Resource*, accessed December 2, 2019, <http://ourbaytown.com/brickyards.htm>.



Figure 5.13 Although the engraving is not completely legible, this is an Elgin Acme brick. (Photo by the Author)



Figure 5.14 Cordell Red bricks are popular among brick collectors. (Photo by the Author)



*Figure 5.15 This Walsh XX is one of several collectible bricks scattered throughout the Baytown Nature Center.
(Photo by the Author)*



Figure 5.16 Cedar Bayou bricks were the bricks Brownwood residents could buy locally because they were produced in nearby Cedar Bayou. (Photo by the Author)

Westwood Park

Due to its proximity to the Brownwood and Lakewood subdivisions, this park served as a popular gathering space for residents from these areas. Until summer 2017, this abandoned park still contained bleachers, a children's playground, and roofed areas. (Figure 5.17) The bench next to the playground was at an angle where parents could take care of their children, demonstrating the park's importance as a public space for families. The park's parking lot is still there, along with a lot consisting of crushed concrete. Some parking space markers are still there. Additionally, the park's restrooms still exist. Even though this park was important for Brownwood residents, the City of Baytown did not incorporate it into the Baytown Nature Center until 2015, when City Council members authorized city officials to relocate the park's fence. The city acquired the park because it could be "a possible site for the future Chandler Arboretum and Eddie V. Gray Wetlands Education and Recreation Center."⁷⁶ As of Spring 2020, most of the park's structures still stand.

⁷⁶ City of Baytown Parks and Recreation Department, *City of Baytown Parks and Recreation Department Annual Report, 2015-2016*, accessed December 1, 2019, <https://www.baytown.org/home/showdocument?id=4907>, 19.



Figure 5.17 City authorities began removing the structures at Westwood Park, including the bleachers and playground. (Photo by the Author)

Ornamental Vegetation

During a tour with Lisa Gray, a *Houston Chronicle* reporter, naturalist Jason Mason described some of the vegetation at the Baytown Nature Center. Mason pointed out that hardy native species were already appearing around the subdivision. They included yaupon holly, rattlebush, sea purslane, and huisache. He also pointed out “the toughest of the old suburban-lawn plants still survive.”⁷⁷ Two of these plants were the prickly pear cactus and the palm tree. Although the interview took place in 2013, these plants and more are still at the nature center and, along with other plants and the artifacts scattered throughout the subdivision, also help tell Brownwood’s history.

Underneath the “Baytown Hurricanes” sign on the walking trail near the entrance parking lot, a Belladonna Lily bloomed in late June 2017. (Figure 5.18) The plants’ funnel-shaped flowers are pink to white and bloom before its leaves develop. It is native to South Africa’s Cape Province and usually blooms in late summer because it needs full sun exposure. In its natural habitat, it grows among rocks, meaning that it requires little watering and is drought tolerant.⁷⁸ According to the United States Department of Agriculture National Resources Conservation Service, this perennial has only been introduced to California and Louisiana. Based on these facts, it seems this plant was introduced to as ornamental vegetation to the area. The Belladonna Lily at the Baytown Nature Center grows in a wet, shaded area, instead of sandy or rocky

⁷⁷ Lisa Gray, “Brownwood: The Suburb that Sank by the Ship Channel,” *Houston Chronicle*, March 13, 2013, accessed March 14, 2020, <https://www.houstonchronicle.com/news/houston-texas/houston/article/Brownwood-The-suburb-that-sank-by-the-Ship-4379765.php>.

⁷⁸ Nikki Phipps, “Amaryllis Belladonna Planting – How to Grow Amaryllis Bulbs,” Archive.Today, accessed December 1, 2019, <https://archive.is/20150124233841/http://www.plantingflowerbulbs.com/amaryllis-belladonna-the-belladonna-lily.htm>.

soil. In order to survive as an ornamental plant, growers need to plant it in “well-draining soil and be wary of water accumulating around the base and the roots.”⁷⁹

There are two possible explanations for the plant’s location there. Either someone just randomly planted it there, or it was once part of someone’s yard. The site’s history suggests the latter. Although the bulb needs to be planted just below the surface, its surroundings helped it adapt and prosper in that wet and shady spot.

Across from Cypress Pond, close to the concrete slab, there is a giant pink rosebush that blooms in the spring. (Figure 5.19) The rosebush extends far, but not far enough to reach the foundation. Its location meant that it was probably in a backyard. Unfortunately, the vegetation surrounding it makes it hard to get close enough to try to identify it. Even though it is similar, if not the same, to the ones in homes, this one is thornier. Its thick prickles, commonly mistaken as thorns, serve as the “plants’ defensive weaponry, making their precious parts unpalatable – even untouchable – to big plant-eaters.”⁸⁰ In other words, prickles are an adaptation plants have to help them survive in its natural habitat. Therefore, the roses’ thick prickles mean that it has survived the changes around it and adapted to its new setting.

Hidden among the native trees are palm trees. Their fronds, or leaves, make them stand out among the nature center’s greenery. During our visits, we immediately noticed two. One stands near on Burnet Bay, next to a bulkhead previously mentioned. (Figure 5.8) Its position relative to the bulkhead shows how far that property on

⁷⁹ “Belladonna Plant Care Maintenance and Buying Tips,” Plant Care Today, accessed December 1, 2019, <http://plantcaretoday.com/amaryllis-belladonna-plant-care.html>.

⁸⁰ Christie Wilcox, “The Thorny Truth About Spine Evolution,” *Quanta Magazine*, June 14, 2017, accessed March 15, 2020, <https://www.quantamagazine.org/the-thorny-truth-about-spine-evolution-20170614/>.

Bayshore Drive has sunk. The other is hidden among the trees on MacArthur Avenue. These trees are important because they are associated with beautiful landscaped gardens. They are also expensive, which meant that they were an investment. Palm Trees of Houston, a palm tree business in Houston, sells different 100-gallon palm trees ranging from \$995 to \$2650. Since these are large plants, the business offers installation and landscaping services. According to their website, palm trees are safe trees around pool due to their small roots.⁸¹

Lastly, all throughout the Baytown Nature Center, there are prickly pear cacti. As a first-generation Mexican American, this was the first plant I noticed because I grew up seeing it in my backyard. The prickly pear cactus is often associated with the desert, but the species at the nature center is the Easter Prickly Pear (*Opuntia humifusa*). This prickly pear has oval green pads with white thorns, red prickly fruit, and yellow flowers. The immature fruit look like smaller pads.⁸² (Figure 5.20) However, there are some species of the cactus that have smaller, almost invisible thorns. It is known as the thornless prickly pear cactus, and it is hybrid by Luther Burbank. Burbank is the same breeder who developed Russet potatoes.⁸³

Regardless of the type, most of the prickly pear cactus' parts are edible. In fact, they are a staple in the Mexican diet. When peeled, the green thorny pad is known as nopal. It can be boiled or grilled, depending on the dish being prepared. It is a

⁸¹ "Palm Trees of Houston," accessed April 1, 2020, <http://palmtreesofhouston.com/blank.html>.

⁸² Nora Bowers, Rick Bowers, and Stan Tekiela, *Cactus of Texas Field Guide* (Cambridge: Adventure Publications, Inc., 2009), 259.

⁸³ Jay White, "Thornless Prickly Pear-The Perfect Plant?" *The Masters of Horticultures*, November 1, 2011, accessed December 8, 2019, <http://masterofhort.com/2011/thornless-prickly-pear-the-perfect-plant/>.

common ingredient during Lenten season when Catholics abstain from eating red meat on Fridays. Eliseo “Cheo” Torres, a Mexican and Mexican American traditions scholar, describes the combination of nopales and eggs as “a delicacy, especially on Fridays during the Lenten season when the church did not allow meat to be eaten.”⁸⁴ Nopales served in egg tacos or as a salad are alternative meals for those observing the religious holiday. Another popular Lenten recipe is whole cactus paddles with shrimp cakes, or tortas de camarón, made with dried shrimp and egg.⁸⁵ The prickly pear fruit can be eaten ripe, candied, or as a jam. Many people also consume the cactus because as a medicinal plant. Some consume it because it “can decrease blood sugar levels in people with type 2 diabetes,” and “it’s high in fiber, antioxidants, and carotenoids.”⁸⁶

The prickly pear cactus could also be used as a cheap and natural fence. (Figure 5.21) If planted parallel to a fence, its thorns “provide an added line of defense against unwanted guests such as burglars, neighborhood pranksters or burrowing wildlife. If these intruders manage to cross the fence line, they’ll be met with a row of sharp barbs that will make them think twice about proceeding.”⁸⁷ However, it is necessary to plant several cacti spaced out to create this fence because new stem

⁸⁴ Eliseo Torres, *Curandero: A Life in Mexican Folk Healing* (Albuquerque: University of New Mexico Press, 2014), 113-115.

⁸⁵ Carlo Andres López, “Cactus Cooking: Prickly Pear Cactus Offers Much Versatility in the Kitchen,” *Santa Fe New Mexican*, October 15, 2013, accessed March 20, 2020, https://www.santafenewmexican.com/life/taste/prickly-pear-cactus-offers-much-versatility-in-the-kitchen/article_fc257e5a-58da-5dad-91d9-ef73ce15ba63.html.

⁸⁶ Katherine Zertsky, “I’ve Seen Prickly Pear Cactus Promoted as a Superfood? What’s Behind the Hype?” Mayo Foundation for Medical Education and Research (MFMER), December 15, 2019, <http://www.mayoclinic.org/healthy-lifestyle/consumer-health/expert-answers/prickly-pear-cactus/faq-20057771>.

⁸⁷ “Planting Cactus Near a Fence,” *SFGATE*, accessed March 30, 2020, <https://homeguides.sfgate.com/planting-cactus-near-fence-31970.html>.

segments grow on the plant every year, making the plant bigger. Some people also like to add this natural barrier under their windows as an extra layer of protection.

However, it is important to remember to not plant a cactus “in the path of your escape route or you’ll have some serious injuries to deal with.”⁸⁸ This plant can also be a danger to pets and children who underestimate the plant’s thorniness.

Both the thornless and thorny varieties of the Eastern Prickly Pear Cactus are present at the Baytown Nature Center. The cacti sit on Aldine-Urban Land Complex (An) soil, a sandy loam that was once full of timber. Urban structures, such as single- and multiple-unit dwellings, sidewalks, patios, shopping centers, office buildings, paved parking lots, and industrial parks” altered or obscured this type of soil.⁸⁹ During our first visit as a family, my parents immediately pointed out both the thornless and thorny types because we have both in our backyard. We eat the thornless one and have the thorny one parallel to our backyard fence. Many of the clusters we saw were big, extending several feet. This meant that they had been there for years because “in this type of cactus, new stem segments, or joints, branch from the previous year’s segments.”⁹⁰ Therefore, its presence suggests that as the Brownwood subdivision lost its exclusivity, minority groups who were originally excluded from the area were finally able briefly live here and alter the landscape with the introduction of preferred plants.

⁸⁸ Good Earth Plant Company, Inc., “Living Walls and Fences are a Natural Choice,” September 14, 2017, accessed March 30, 2020, <http://www.goodearthplants.com/living-walls-fences-natural-choice/>.

⁸⁹ Frankie F. Wheeler, “Soil Survey of Harris County, Texas,” United States Department of Agriculture, Soil Conservation Service, the Texas Agricultural Experiment Station, and the Harris County Flood Control District, 1976, 13.

⁹⁰ Nora Bowers, Rick Bowers, and Stan Tekiela, *Cactus of Texas Field Guide* (Cambridge: Adventure Publications, Inc., 2009), 10.



Figure 5.18 Belladonna lilies typically thrive in shady, rocky soil. However, this one bloomed in a wet and shady section of the nature center. (Photo by the Author)



Figure 5.19 Although similar to a swamp rose, this rosebush demonstrates that a house once stood nearby. (Photo by the Author)



Figure 5.20 The greener pads on this cluster of prickly pear cactus demonstrate the plant's growth. Each year, new branches join the previous year's segments. (Photo by the Author)



Figure 5.21 The prickly pear in the author's backyard demonstrates how this plant works as a natural fence. (Photo by the Author)

Conclusion

The Baytown Nature Center is a site whose unique history of subsidence and chronic flooding deserves to be commemorated in a historical marker. Although the Brownwood subdivision was not the first community bought out by the local government due to chronic flooding, it was the first subsided property the government acquired. Therefore, it is an example for other subsiding or coastal communities. Baytown's decision to transform the neighborhood into a nature center addresses two important questions: What can we do to coastal communities bought out by the federal government? How can we preserve the history of a community that no longer physically exists? As H. Pilkey and Rob Young suggested in their book, *The Rising Sea*, Brownwood serves as an example for chronically flooding communities, such as Thompsons Beach. Thompsons Beach is currently a restoration project, and the site is littered with artifacts from the former residents. If the Public Service Enterprise Group (PSEG), the group overseeing this project, wants to incorporate the site's history into its design, the Baytown Nature Center serves as a great example. The agencies and organizations that helped create the nature center created a nature center that serves as both a wildlife refuge and a natural museum to honor the residents that once lived there.

As this chapter demonstrated, the Baytown Nature Center as it stands today continues to evolve. When city officials first began planning for the center, they did not have concrete idea about what they wanted to do or the money to cleaning up the area. Therefore, they depended on a variety of different groups and individuals to help

them begin restoring the subdivision to its natural state. Regardless of its transformation, visitors can still find fragments of the site's history. However, a historical marker would make its history even more accessible to them and to future generations of visitors.

Conclusion: Remembering Brownwood

In 2015, the Texas Historical Commission approved Trevia Wooster Beverly's application for a historical marker for the Wooster Community. ExxonMobil and the Baytown Historical Preservation Association sponsored the application.¹ The engraved historical marker, property of the State of Texas, briefly mentions the Brownwood subdivision. After listing Brownwood's founding year, the marker reads, "Much of Brownwood is submerged due to extensive subsidence and the devastation of Hurricanes Carla and Alicia. All remaining homes have been removed, and the area is now the Baytown Nature Center." While the two sentences briefly summarize the site's history, they do not tell Brownwood's complete story. It lacks a description of the site's origin, residents, and the chronic flooding that plagued the area between Hurricanes Carla Alicia, as described in this thesis.

Based on its history, the Baytown Nature Center would qualify for a subject marker from the Texas Historical Commission (THC). According to the THC, "subject markers are educational in nature and reveal aspects of local history that are important to a community or region."² Qualifying topics include communities. To qualify, the topic must date back at least fifty years and must have impacted the course of history or cultural development locally, statewide, or nationally. The application, if submitted as the Brownwood Subdivision, would meet THC's criteria.

¹ Matt Hollis, "Wooster to Receive Historical Marker," *The Baytown Sun*, March 4, 2015, 1.

² Texas Historical Commission, "Official Texas Historical Marker Procedures," last modified January 27, 2012, accessed April 5, 2020, <https://www.thc.texas.gov/public/upload/Item%2012.2%20-%20Marker%20Procedures.pdf>.

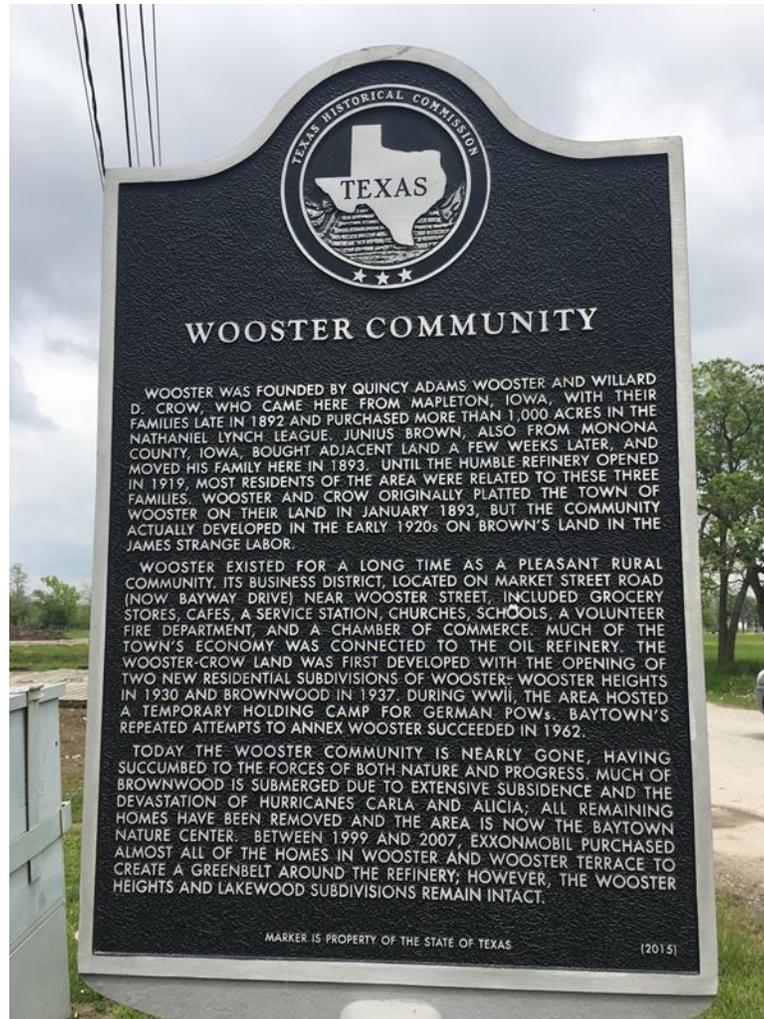


Figure 6.1 The Texas Historical Commission's historical marker for the Wooster Community briefly acknowledges Brownwood's history. (Photo by the Author)

The Brownwood Subdivision qualifies for a subject marker because it forced the local, state, and federal governments to address the problem of subsidence, or the sinking of land. Although Humble Oil & Refining Company executives purchased this site in 1937, subsidence began in the early 1900s with the discovery of oil at the Goose Creek oil field. Rather than being known as a historic site where indigenous people once lived and the Mexican government owned, the subdivision earned worldwide recognition due to the deadly combination of chronic flooding and subsidence. The community's rapid demise made the subdivision the first community to qualify for national flood insurance, the first subsided community FEMA bought out, and one of the first federally bought out communities transformed into a nature preserve. This once exclusive community demonstrated the importance and impact of the oil industry and natural weather events in Texas. More importantly, this marker would recognize the importance of the subdivision's residents. Although Humble Oil executives purchased this property, the families who moved in made this place a beautiful community. They were the ones who fought for this community until the local and federal governments determined there was nothing else left to do to save this subdivision. These residents were the ones who spent their time and money trying to save the community until FEMA bought it out.

Several community members have led different efforts to preserve and share the neighborhood's history. Each of these efforts have helped Baytownians continue remembering the former subdivision, along with introducing visitors and newcomers to the site's history. One of the first efforts used literature to project the importance of losing one's home. More recent efforts have been digital, with the individuals using

the Internet as a platform to share Brownwood's history with the community and beyond. These different efforts introduced broader audiences to this unique story. Although effective, a historical marker would help maximize their efforts.

One of the first people who began sharing Brownwood's history was Dr. Glenn Blake. In 2001, this former creative writing professor published an anthology titled *Drowned Moon*. One of the short stories, "Chocolate Bay" was about a family who moved to a sinking subdivision in a peninsula. Nine years later, he published another anthology, *Return to Fire*. One of the stories included, "Degüello," was about a man riding on a ferry to visit the San Jacinto River to visit the San Jacinto Monument and its surrounding submerged areas. In 2016, he included both short stories in his newest anthology, *The Old and the Lost*. This newest anthology was a collection about stories set in Southeast Texas' sinking sloughs, swamps, and bayous. Southeast Texas extends from Palacios to Orange. It includes the Houston area, home to the Brownwood subdivision and the San Jacinto River. Both short stores addressed the themes of loss and the powers of water. While the Brownwood subdivision was the setting for "Chocolate Bay," "Degüello" briefly described the subdivision. Although his stories were fictionalized accounts about the Brownwood's subdivision, he reimagined the residents' experiences and emphasized that they lost more than their homes when they were forced to moved out; they also lost the sense of community they had built.

"Chocolate Bay" was about a couple, Drew and Allison, who rents a cheap house in a sinking peninsula. The stress of living in the sinking peninsula soon tears the family apart because Drew refuses to leave even after learning about the

peninsula's history and the birth of their son, Robin. His obsession with staying soon breaks up their family. However, the break point occurs when Robin drowns in the bay waters, and Allison leaves. Drew stays even though the subdivision continues sinking, and spends his days charting the tides and exploring the ruins of the remaining homes.³

Although there is a Chocolate Bay in Brazoria County, the descriptions Blake provided identified the Brownwood subdivision as the setting. When describing the subdivision, Drew recalled a conversation with their renter, Mr. Burnet, whose last name was the same one as one of the bays surrounding the subdivision. Mr. Burnet told him, "This all used to be a real show place.... The country club section of town. All the oil executives lived out here."⁴ He continued the conversation by explaining that the house they rented was cheap because it had been sinking since the 1920s due to the refineries along the ship channel pumping out excessive amounts of groundwater. Before driving away, Mr. Burnet warned the family to quickly evacuate as soon as a tropical storm or hurricane neared the Gulf.

"Chocolate Bay" was a fictionalized account about the Brownwood subdivision during its "Submarine Acres" period. The family moved to a home very close to the bay and immediately understood the impact of subsidence on the peninsula. Once beautiful, their rental home was soon populated with miniature hermit crabs crawling from the drains into their bathtubs and shad fish in the bottom drawers

³ Glenn Blake, "Chocolate Bay" in *The Old and the Lost* (Baltimore: John Hopkins University Press, 2016), 81-105.

⁴ Glenn Blake, "Chocolate Bay" in *The Old and the Lost* (Baltimore: John Hopkins University Press, 2016), 86.

of their kitchen drawers deposited by the high tides.⁵ During every high tide, their pier disappeared. After the tides receded, barnacles and algae would adorn the pier. The wake from passing boats also flooded their backyard. As they continued living there, they learned to adjust to these brief flooding events. Allison learned to time her outings during low tides. If she miscalculated, she had to wait for the water to recede or drive to her mother's house to wait it out. The Army Corps of Engineers had elevated the peninsula's main road, but it had also sunk. Meanwhile, the other remaining couple had lived there longer, so they knew to leave their car parked in the perimeter road and take a boat home.⁶

Rather than trying to keep the bay waters out of their property, Drew grew obsessed with measuring the property's sinking rate and tides. He purchased twenty broomsticks, painted them white, and added black marks. After hammering them every three feet throughout his yard, he used them to measure changes in the tides. Then, he bought 150 feet of rope, which he put around the loops of the cyclone fence surrounding the property. One day, Allison tells Drew that she was tired of living in this sinking property and wanted to move. She said, "I've helped you move furniture at a too-high tide. I've had to replace carpet, carry crabs out of my own kitchen.... I'm tired of water in my house.... I don't want my baby crawling around on a floor...No telling what's in that bay water!"⁷ Robin drowned soon after, and Allison leaves. After

⁵ Glenn Blake, "Chocolate Bay" in *The Old and the Lost* (Baltimore: John Hopkins University Press, 2016), 89.

⁶ Glenn Blake, "Chocolate Bay" in *The Old and the Lost* (Baltimore: John Hopkins University Press, 2016), 90.

⁷ Glenn Blake, "Chocolate Bay" in *The Old and the Lost* (Baltimore: John Hopkins University Press, 2016), 94.

Allison leaves, Drew spends the day charting the tides. Four years later, his property has sunk sixteen inches.

Blake also described some of the abandoned homes in the subdivision because Drew liked to explore them. The remains were shells of once beautiful homes. The house across from the family was a skeleton with an intact roof but without walls, sheetrock, or paneling. In fact, he could look through the home and see the bay. St. Augustine grass covered the yard, including the driveway and the sidewalk. When describing the house's interior, Drew said, "...the rusty nails, the broken glass. The floor is littered with once soggy sheetrock, contorted coat hangers, credit card receipts, socks, tattered strips or carpet covered with a fine layer of silt."⁸ He could not walk around barefoot. Furthermore, "Poison ivy carpets the master bedroom. Birds nest in the medicine cabinet."⁹ Other belongings he found included comics, old records, and an old Scrabble game spelling out, "STORM." Another one closer to the bay had a line of silt and dead grass stuck to the remaining walls, indicating the last storm's watermark. The residents had left without their water heater, washing machine, books, a loveseat, and a photo album. After looking at that photo album, he learns that the Ferrell family used to live there. The abandoned home also had a massive stone fireplace where he would make fires late at night. After Allison's abandons him, he sleeps over at the Ferrell home looking at the stars.

⁸ Glenn Blake, "Chocolate Bay" in *The Old and the Lost* (Baltimore: John Hopkins University Press, 2016), 90.

⁹ Glenn Blake, "Chocolate Bay" in *The Old and the Lost* (Baltimore: John Hopkins University Press, 2016), 90.

In “Degüello,” the unnamed protagonist insists on taking a ferry down the Ship Channel. He gets off the ferry and wades around until he finds the ferry again. After getting back on the ferry, he asks his guide why the San Jacinto has disappeared. The ferry operator, like Mr. Burnet in “Chocolate Bay,” informs him, “Subsidence, they call it. Subsided some ten feet this century. The refineries up the Channel are to blame. They keep pumping out the water. We keep sinking.”¹⁰ Since the protagonist does not seem to understand about the impact of subsidence on the area, his guide tells him that he will drop him off at the other side of the bay where oil executives once lived. According to the guide, most of the old families died off or moved away. However, not everyone had left the subdivision. There were still some people holding on and survived by parking their cars on the perimeter road and taking boats to their homes. He finishes describing this sinking neighborhood by saying, “The city’s shut down the place down...barricaded the entrances, cut off the utilities, so there might be someone living in those homes, but like I said, no one in his right mind.”¹¹ Regardless of his guide’s warnings, he lets the ferry reach the sinking area and gets out. Before he gets off the ferry, his guide warns him that he will not like what he finds and asks him what he is looking for. The protagonist quietly says he knows “home” is waiting for him in that sinking area.

Although Blake’s descriptions of the abandoned subdivision were not completely accurate, they conveyed the sense of survival, the power of water, and loss

¹⁰ Glenn Blake, “Degüello,” in *The Old and the Lost* (Baltimore: John Hopkins University Press, 2016), 17.

¹¹ Glenn Blake, “Degüello,” in *The Old and the Lost* (Baltimore: John Hopkins University Press, 2016), 19.

Brownwood residents experienced. According to Sabina Murray, a professor at the University of Massachusetts Amherst's College of Humanities & Fine Arts, historical fiction pieces like Blake's are important because "fiction takes historical figures — significant or not—and turns them into actors."¹² In other words, one of the reasons why authors write historical fiction pieces is to highlight underrepresented populations in a more appealing context. Murray further explained that because historians write books to tell the truth, they do not have the opportunity to experiment in their work. Historical fiction writers can imagine and provide creative interpretations of the same subject, which is what Blake did in both of his short stories. Although Blake's short stories are historical fiction, they introduced Brownwood's story to audiences unaware of Brownwood's history. For example, Lee College professors Jerry Hamby and Georgeann Ward have assigned these two short stories for their Human Condition honors program course so students can explain how nature influences humans. After reading the pieces, they visit the Baytown Nature Center. This visit helps them see the real setting that inspired these two stories and witness the complex relationship between humans and nature.¹³

Community members have also tried to preserve Brownwood's history using the Internet. Two important platforms they have used are Facebook and YouTube, which have helped share Brownwood's story with different audiences. While Blake has introduced writers and college students to Brownwood's history, Internet users

¹² Sabina Murray, "What Can Historical Fiction Accomplish That History Does Not?" November 10, 2016, accessed April 6, 2020, <https://lithub.com/what-can-historical-fiction-accomplish-that-history-does-not/>.

¹³ I learned about this class from a coworker, who was enrolled in the class in Fall 2018. She was the one who shared these short stories with me after completing her assignment for that unit.

have shared Brownwood’s story worldwide. One of these individuals is Baytownian Russell Hamman. In 2016, Baytownian Hamman created the Facebook group, “Baytown’s History...with a Twist.” Although marked as private, anyone is welcomed to join this group where “he posts tidbits about the city’s past and uses his talent as a graphic artist to add some flavor or at least give the viewer an idea of what once existed in Baytown.”¹⁴ The group currently has more than 17,000 members, with some from other countries around the world. Hamman’s posts include screenshots of Baytown’s newspapers and historic photographs. This group is his first of several efforts to keep Baytown’s history alive. He has also advocated for the renovation of the city’s historic Brunson Theater and promoting moving the USS Texas Battleship to Baytown. All these efforts earned him a nomination for *The Baytown Sun*’s 2020 “Citizen of the Year Award.”

Occasionally, Hamman posts about the Brownwood subdivision. These posts have generated responses from former residents and Baytownians that visited the Brownwood subdivision. This group has also helped different generation connect and share these memories. As a former member, this group helped me make some connections and gather some more information about the subdivision. Through this group, I was able to meet and interview Norman Dykes, a former City of Baytown Public Works Director. His wife is a member, and she suggested I interview him. I was also able to talk with Roxanne Spalding, one of the last residents to leave the subdivision. Although she never accepted my request to record an oral history, she

¹⁴ Matt Hollis, “Russell Hamman: ‘A Big Heart for Baytown and its People,’” *The Baytown Sun: Community Leadership Profiles 2020 Special*, March 29, 2020, 7.

sent me two pictures of her home, which I used in the *Houston History Magazine* article I previously wrote.¹⁵ In addition to this Facebook group, Hamman also has a YouTube channel titled “Hamman’s Baytown History with a Twist.” While most of his videos chronicle the Brunson Theatre’s transformation, on May 28, 2019, he uploaded a video showing the Brownwood subdivision after Hurricane Carla. This home video filmed by Rick Slagle titled “Brownwood after Hurricane Carla in September 1961,” shows the storm’s impact on the subdivision. This is one of the few videos available showing what the neighborhood looked like.

Others have also uploaded videos about the subdivision. On January 30, 2013, YouTube user Clem Hausmann uploaded a video titled, “Brownwood Subdivision – January 20, 1985.” The video, which has more than 12,000 views, provides a glimpse of the subdivision sixteen months after Hurricane Alicia destroyed most of the homes there. According to the video description, the Hausmann family entered Brownwood Drive to Bayshore Drive. Then, they drove down West Bayshore Drive to the end of the peninsula before going south on Bayway Drive and up Crow Road. As of April 2020, the video has twenty-six views, and a couple of those comments were from former residents who recognized their homes and provided the addresses. This video provides a glimpse at the flooded yards, abandoned homes, and dead vegetation that characterized the subdivision during its final years. More importantly, the video has given former residents the opportunity to point out their homes and share their memories, which are available for viewers to read in the comments section. Lastly, on

¹⁵ Laura Bernal, “Brownwood: From Neighborhood to Nature Center,” *Houston History Magazine* 16, No. 2 (Spring 2019): 26-30.

December 16, 2018, Scott Dailey uploaded a video titled, “The Neighborhood That Sank into the Water.” The video, which has more than 3,000 views, also has seven comments. One of the comments was from a woman named Sharon whose then-boyfriend’s grandparents lived there when Hurricane Alicia landed in 1983. Although different in content, these videos are available for anyone interested in learning more about the Brownwood subdivision.

Although these are useful, they do not offer the same benefits as a historical marker. It would make Brownwood’s history accessible to people who do not have access to the Internet where they can find these videos or short stories. To make it accessible to visitors, the proposed marker needs to be in a safe location. Therefore, it should be in front of the small waterfall before the entrance kiosk, facing Bayway Drive. (Figure 6.2) This proposed area would make the marker noticeable for people driving down Bayway Drive. If they wanted stop and read it, they would be able to park there without paying an entrance fee. They would only have to pay it if they want to make a detour stop and explore the site. If they chose to visit the nature center, they could look for the three existing markers providing brief summaries about the subdivision’s history. (Figures 6.3, 6.4, and 6.5)



Figure 6.2 The proposed site for the Brownwood Subdivision historical marker. (Photo by the Author)

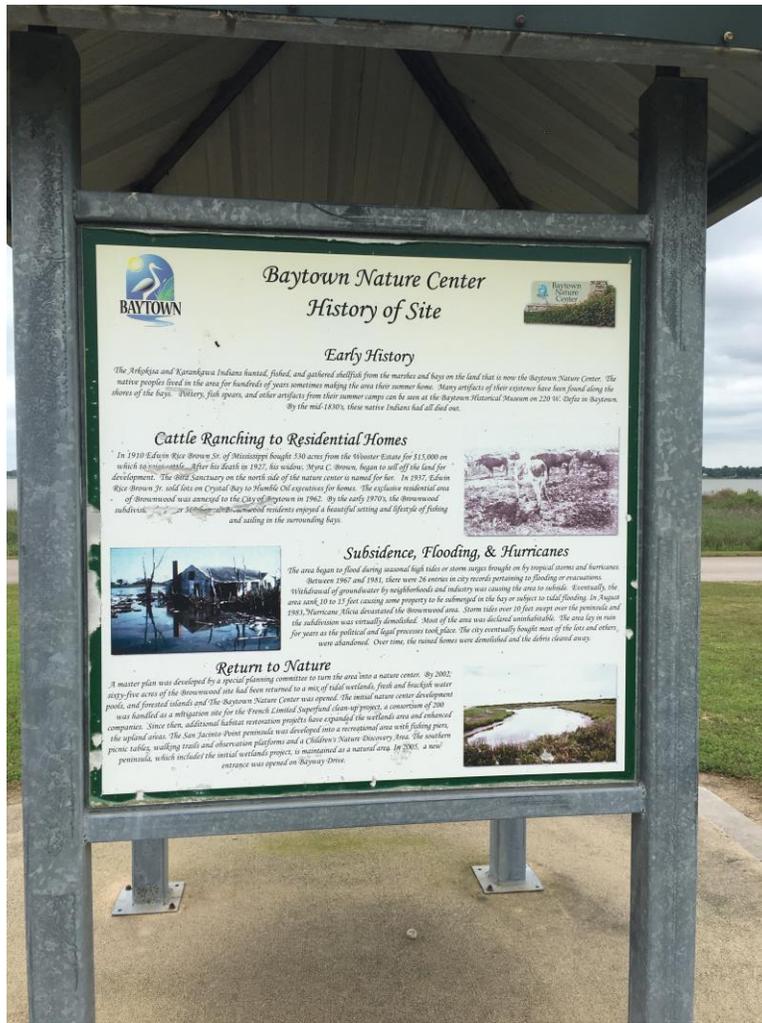


Figure 6.3 In the intersection of West and East Bayshore Drive, there is a small kiosk with information about the nature center. One of the sides displays the site's history, which is also available on its website. (Photo by the Author)

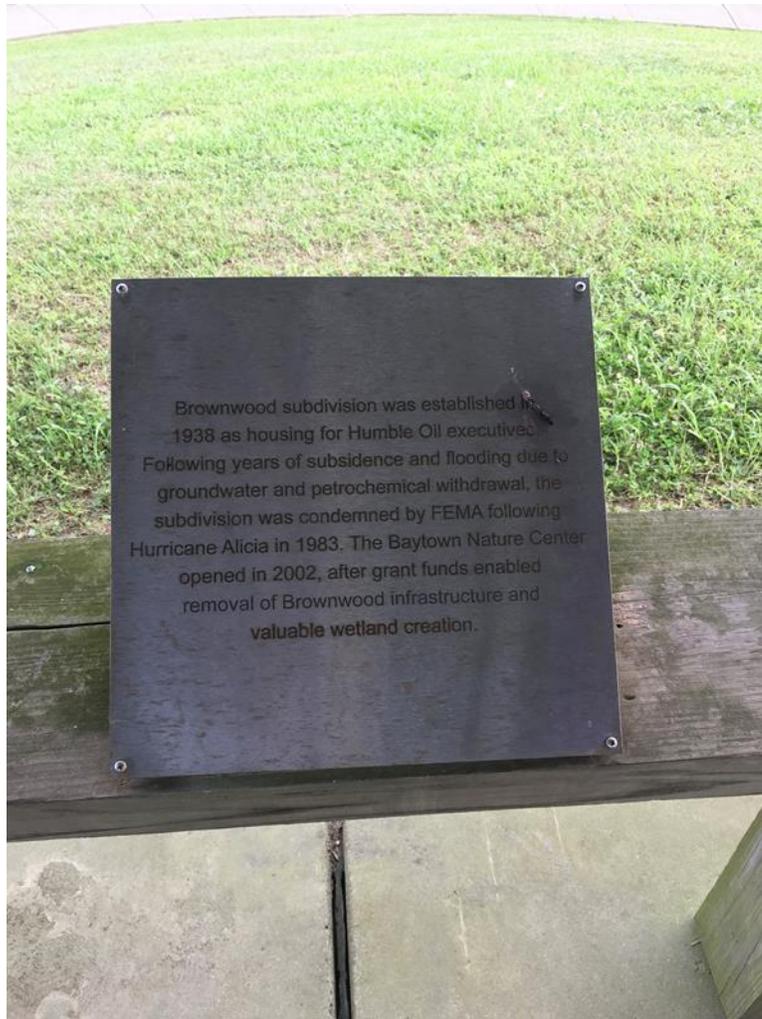


Figure 6.4 This plaque, which city officials installed in April 2020, tells a summary of the site's history. It is located at the Brownwood Marsh Educational Pavilion. (Photo by the Author)



Figure 6.5 This wooden sign, which displays the site's history with hurricanes, is on display along the walkway to Cypress Pond. The belladonna lilies previously mentioned bloomed near it. (Photo by the Author)

If they are unable to enter the nature center, they can drive around the small portion of the neighborhood that the city did not purchase due to its higher elevation. As they drive up to the fence dividing this elevated portion from the nature center, they would catch a glimpse of subsidence in the area, which is immediately visible when one drives down these remaining streets. The streets suddenly seem to dip, indicating the slightly elevated portions that city officials did not acquire for the nature center. These visitors could also catch a glimpse of the homes that once adorned the subdivision. If driving around these streets is not an option, then these visitors can simply visit the nearby Wooster Community marker and pass the ExxonMobil, formerly known as Humble Oil, the company that helped create this community.

The ideal time to erect this historical marker would be May 2022, the Baytown Nature Center's twentieth anniversary, or May 2027, its twenty-fifth anniversary. This celebration would serve as an opportunity to remember, reacquaint, and introduce the community with the site's history. Many of the neighborhood's original residents will not be there because they have already passed away. However, some of the residents and renters that lived there during the final years could still attend this gathering. This would serve as an opportunity for those living far away to return once more and those reluctant to share their experiences to finally do so. This historical marker could help them understand that Brownwood's history needs to be remembered and preserved for future generations. Therefore, it would provide another opportunity to record more in-depth oral histories about this neighborhood and ask some of the questions not discussed when the Baytown Nature Center first opened. This would help them record

memories they think are important to remember the Brownwood subdivision before its transformation into the Baytown Nature Center.

Suggested Marker Engraving: The Brownwood Subdivision

This thesis gives a fuller history of the Brownwood subdivision that informs this proposed historical marker. It is important because it will expand on the engraved text that will be on the historical marker. Below is the language I propose for the historical marker:

In 1937, Humble Oil & Refining Company executives bought Edwin Rice Brown, Sr.'s estate to build an exclusive bayfront community surrounded by the Burnet, Crystal, and Scott Bays. They named this peninsula the Brownwood Addition. Following World War II, this community grew into a middle-class neighborhood with beautiful homes in big wooden lots. Although most of the residents worked at Humble Oil, many worked in different industries and businesses in the surrounding communities. Their children grew up playing in the bays, looking at the San Jacinto Monument and the ships passing down the Houston Ship Channel. Residents from the surrounding communities liked to visit Brownwood and admire the beautiful community these residents built.

In 1961, Hurricane Carla damaged the subdivision. Most residents rebuilt their homes and soon noticed that their properties were sinking. They learned that the peninsula was sinking due to the excessive withdrawal of groundwater for industrial and municipal use. Subsidence in the Baytown area first began at the Goose Creek oil field in 1908, where Humble Oil began drilling for oil. Subsidence made the

subdivision vulnerable to hurricanes, tropical storms, rainstorms, and eventually high tides. Between 1961 and 1983, the subdivision experienced more than two dozen flooding events and several others that did not materialize. Some of the methods residents implemented to save their properties included rebuilding higher and building seawalls around their properties. Local and federal government officials tried to help too, especially by allowing Baytownians to vote twice regarding a bond proposal to relocate residents.

In 1983, Hurricane Alicia was the subdivision's deathblow. City officials, in conjunction with FEMA, decided to buy out most of the properties in the subdivision. While most residents accepted their offers, some refused to move out and resisted. Regardless of the lawsuits and holdouts, city officials acquired the properties. While they cemented their plans for a nature preserve, the site remained abandoned. The French Limited Task Group helped launch this project, and with the help of other agencies and organizations, this neighborhood is now the Baytown Nature Center.

Appendix A

Brownwood Subdivision's Flooding Events

Prior to Learning About Subsidence

- 1915 Hurricane (August 1915)
- 1941 Texas Hurricane (September 1941)
- Hurricane Debra (July 1959)
- Hurricane Carla (September 1961)

After Learning About Subsidence

- Hurricane Beulah (September 1967)
- Valentine's Day Flood (February 1969)
- Hurricane Celia (August 1970)
- Heavy Thunderstorms (October 1970)
- Hurricane Fern (September 1971)
- Tropical Storm Delia (September 1973)
- Hurricane Anita (September 1977)
- Southerly Winds (April 1979)
- Heavy Thunderstorms (April 1979)
- Tropical Storm Claudette (July 1979)
- Tropical Storm Elena (September 1979)
- Hurricane Alicia (August 1983)

Appendix B

Flood Threats to Brownwood Subdivision

- Harris County heavy rainfall (November 1940)
- 1943 “Surprise” Hurricane (July 1943)
- Heavy Rainfall (February 1961)
- Hurricane Cindy (September 1963)
- Hurricane Edith (September 1971)
- Hurricane Allen (August 1980)

Appendix C

Baytown Nature Center Writing Prompt #1

Observations from the Brownwood Marsh Educational Pavilion

- Both Exxon and San Jacinto Monument in background
 - Man-made structures
- Miniature, colorful flowers
- Hidden prickly pear cactus
- Path to pavilion = spiral to paradise?
- Soft, gentle breeze
- Graffiti on wood
- Wind pushing away water
- An abundance of trees
 - Different shades of green
- Life in concrete
- Storms brewing in the sky/storms approaching
- The paths to hidden treasures
- Peace and quiet
- Wind blowing through my hair
- Train whistle in the distance
- Specks of gold in the green

Appendix D

Baytown Nature Center Writing Prompt #2

Questions to the Baytown Nature Center

- Have people lost shoes trying to find the secrets hidden in your water?
- How do you welcome new members into your family?
- When is the best moment to visit you?
- How would you describe your relationship with the refinery?
- What is your best accessory?

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