

Houston HISTORY

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Dredged to Excellence: 100 Years of the Houston Ship Channel



UNIVERSITY of **HOUSTON**
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The Houston Ship Channel and Its Port



Joseph A. Pratt

The Houston Ship Channel (HSC) is the economic backbone of the region's economy, but it is more than that. This path to the sea and the port that has grown to manage its traffic have shaped the region's "can do" image, given it a national and international identity, and contributed to a distinctively "Houston" culture.

The HSC has been an impressive generator of jobs. The Port's most recent report in 2012 gives a sense of its far-reaching impacts. It estimates that businesses related to the HSC generate over one million jobs in Texas, producing about \$180 billion in statewide economic impacts while generating some \$4.5 billion annually in state and local tax revenues. Having grown into one of the nation's largest ports, the Port of Houston has more than fulfilled the dreams of those who pushed for dredging a channel more than fifty miles long to make Houston an inland deep-water port.

As discussed in the article by Jim Fisher, Houston civic leaders at the turn of the twentieth century convinced the Army Corps of Engineers to dredge the HSC by agreeing to share the costs of the project from the sale of bonds. This "Houston Plan" was, at the time, unprecedented, though it gradually became the national norm. Tom Ball, Jesse Jones, and many other Houstonians pushed through the bond issue for the dredging and then sold the bonds. This episode has gone down in Houston's lore as a symbol of the "can do" attitude that helped transform Houston from a small regional trade center into a major metropolis. Such boosterism became a defining self-image of Houstonians, who could do and did.

The rapid expansion of the Port's activities in the 1920s spurred regional growth. The effects were felt not just from the movement of trade in the channel, but also with the expansion of industry along its banks, where large tracts of land became available just as the oil industry boomed in response to the rising demand for internal combustion vehicles. Oil companies needed additional refining capacity, and much of it was built along the HSC, which had a perfect combination of access to deep water and fresh water, abundant natural gas for fuel, large tracts of relatively cheap land, and large supplies of crude oil from the Southwestern U.S., which was then the largest oil producing region in the world. As pipelines stretched from the growing refining complex along the HSC to these major oil

fields, the Houston Ship Channel became the hole at the end of the funnel for crude oil from the interior seeking refineries and access to global markets for oil products. Before it was known as an "energy capital," Houston was known as a major refining center.

The Port Authority's article covers the steady growth of trade from the Port of Houston and the expansion of industrial jobs at plants along the HSC. Poor but ambitious workers migrated to these jobs. Their "can do" spirit focused on creating options for their children and grandchildren. The cover of this issue and many of its articles tell some of the stories of the hard working people at the Port of Houston and in businesses along the HSC. An upwardly mobile working class made Houston a city of opportunity. The trade that these workers moved up and down the HSC made Houston an international city.

Articles in earlier issues of our magazine have highlighted broader, less discussed contributions of the HSC and the Port to Houston's identity and culture. For me, one of the diamonds of our city's high culture is the John A. and Audrey Jones Beck Collection at the Museum of Fine Arts, Houston. This spectacular collection of impressionist art was purchased in part by Audrey Jones Beck's sale of a 6,000-acre ranch along the HSC that she inherited from holdings established by M. T. Jones, her great-grandfather and the uncle of her grandfather, Jesse Jones. The San Jacinto Battleground and Historical Site, the best historical site in the region, holds a special place for me as one of the first outposts of history I ever visited. The elevator at the San Jacinto Monument offers the best view anywhere of the HSC, a view that has fascinated and educated the many visitors I have taken there.

That view brings back memories of a life spent moving back and forth from Beaumont to Houston. Long waits for traffic to clear at the old Baytown Tunnel. The smell as we drove through Pasadena. The massive plates of fried shrimp at the old San Jacinto Inn. The rise of the beautiful Hartman Bridge that replaced the Baytown Tunnel, providing its own views of the construction and operation of the containerization facilities at Barbours Cut and the steady expansion of ExxonMobil's giant Baytown refinery. Fun trips on the *Sam Houston* boat tour of the HSC.

The history of personal memory can be disorienting for those who have lived in a region that has changed so rapidly for so long. Events blur and run together. What remains, however, is the reality of the HSC as viewed looking west from the San Jacinto Monument or north from the Bolivar Ferry, reminding us that the HSC and its Port have been defining parts of the history of our region and of our lives.

Special Thanks:

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POSTMASTER

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COVER PHOTO: Houston History pays tribute to the men and women, such as lineman Bobby Kersey, who make up the backbone of the city's maritime industry. Kersey has worked at the Houston Ship Channel for over half a century. Photo courtesy of Lou Vest.

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Deep Water Houston: From the *Laura* to the Deep Water Jubilee

By James E. Fisher

In 1836, an early advertisement entitled “The Town of Houston” indicated, “Tide water runs to this place and the lowest depth of water is about six feet.” The ad continued, “Vessels from New Orleans or New York can sail without obstacle to this place,” and it declared Houston the “head of navigation.”¹ With this campaign, the Allen brothers presented their vision of Houston’s future rather than simply describing the present reality.

The Allen brothers’ mission to create a city where none had been before was fueled by the same philosophy that led to Houston’s long-term success: dream big and do everything possible to realize your vision. The realization of Houston and the Houston Ship Channel is a tale of promotion, ingenuity, and decades of dedicated effort by civic leaders. This story also demonstrates the leaders’ ability to create a coalition of local, state, and national governments to fund their endeavors.

Notwithstanding the “head of navigation” declaration, Buffalo Bayou was not fully navigated to the makeshift town of Houston until January 1837 when Captain Thomas Wigg Grayson guided the *Laura*, a small paddlewheel steamer with a draft of over five feet, from Galveston Bay to Harrisburg, and then to Houston. In his memoir, Francis R. Lubbock describes his transfer from the *Laura* to a yawl that sailed past Houston’s landing site. “We backed down the bayou, and by close observations discovered a road or street laid off from water’s edge. Upon landing we found



stakes and footprints, indications that we were in the town tract.”² Today that area at the foot of Main Street is known as Allen’s Landing.

This navigational feat opened Houston’s “deep water era.” The journey from Harrisburg to Houston covered a mere twelve miles, but the crew of the *Laura* labored three days to traverse this winding, overgrown section of Buffalo Bayou. An influential group of dignitaries accompanied A. C. and J. K. Allen on this defining voyage, including Gen. Moseley Baker, Judge Benjamin C. Franklin, and Lubbock, the future governor of Texas. After years of work on the part of city and state officials to create an inland port, an ordinance officially established the “Port of Houston” on June 10, 1841, and created the position of wharfmaster, who could collect wharfage and police the waterfront.³ Charles T. Gerlach was the first to serve in this position.

On January 29, 1842, the Republic of Texas passed an act granting the city the right to remove obstructions from the bayou and otherwise improve navigation.⁴ The dream now had a legal foundation.

RECONSTRUCTION ERA DEVELOPMENT

After the turmoil of the Civil War, development of a deep water channel from Galveston to Houston began anew in 1866 with the establishment of the Texas Transportation Company. Headed by John T. Brady, the company intended to dredge the channel to the Constitution Bend, where Brady later established the town of Magnolia Park.



The steamship Laura became the first ship to navigate the winding waterway up to Houston in 1837.

Photo courtesy of the Port of Houston Authority.

Under Brady, the Texas Transportation Company’s projects met with limited success. In 1869, the Buffalo Bayou Ship Channel Company was organized. This company successfully lobbied Congress to designate Houston an official U.S. “port of delivery” in July 1870.⁵

In 1872 Galveston, Houston’s main competitor, received an appropriation of \$25,000 to improve the channel in Galveston Bay and the upper stream, bringing “deep water” to its port.⁶

Texas Transportation Company redefined its objectives in 1876 when shipping pioneer Charles Morgan took the lead. Over the next two years, Morgan dredged the channel up to sixteen feet, ending at the town of Clinton, by the mouth of Sims Bayou.⁷

Thanks to Morgan, the *Clinton* became the first ocean steamship to navigate Buffalo Bayou from Galveston Bay to Clinton, reaching the town on September 22, 1876. Houston businessmen hailed its arrival. Freedom from paying Galveston’s escalating wharfage and transfer fees for ocean vessels was in sight, although Houston lagged behind Galveston in reaching a twenty-five-foot channel clearance.⁸

In September 1890, after much debate and rumor of a presidential veto, funding for the final step in Galveston’s deep water plan became reality: Congress approved a \$25 million Rivers and Harbors appropriation bill that provided Galveston with \$500,000 for the next fiscal year and authorized the government to contract for the completion of the Galveston jetties.⁹ With a stroke of President Benjamin Harrison’s pen, Galveston’s deep water port was secured.

Following an impromptu celebration of the news, the city organized a formal celebration for November 18-20, 1890, designating it the Deep Water Jubilee, a title that resurfaced years later in Houston. In the 1890 Deep Water Jubilee,



The last No-Tsu-Oh Carnival in 1915 crowned Robert E. Paine king and Marion Holt Seward queen. Laura Winstead was maid of honor, Estelle and Jane Garrow were the queen’s pages, and Imola Link (left) was dream queen. Smiling on the far right is Mrs. Minnette (Robert E.) Paine. The king’s necklace and other No-Tsu-Oh artifacts are on display at The Heritage Society.

Photo courtesy of The Heritage Society Permanent Collection given in honor of Jane Heyck Gaucher Montgomery.



In 1910 segments of the Houston Ship Channel looked more like the serene bayou from which it was carved than the bustling shipping center it would become. Photo courtesy of James E. Fisher Collection.

Galvestonians took excursions on the steamer *Comal*, attended parades and banquets, and even witnessed former governor Lubbock win the Champion Oyster Eater prize.¹⁰ As Galveston leaders reveled in their gains, it seemed the city was destined to reign as the number one port in Texas.

U. S. government appropriations for Galveston continued through 1896, and as the nineteenth century drew to a close, Galveston's waterways reached a navigable channel depth of twenty-five feet, enabling the port to accommodate cargo ships and international vessels.

A deep water channel, however, was not the only element in the equation for a dominant port. In the 1890s, following decades of rail development, Houston sought to establish itself as an essential destination for rail shipments to and from the Gulf Coast. This notion gave birth to the slogan "Houston: Where Seventeen Railroads Meet the Sea."¹¹ Linking rail and ocean transport gave Houston a significant advantage over its coastal rival.

PROMOTE, PROMOTE, PROMOTE

Local businessmen continued promoting the city as a viable inland port and developing the infrastructure it required. Civic leaders needed Houstonians to buy into the vision and ultimately approve port bond proposals. Another problem, however, remained: attracting the interest of the leading industries of the day: cotton, lumber, tobacco, and other agricultural products.

In 1896, the Business Men's Carnival Association organized Houston's Grand Carnival to be held December 16-19. It promised "more amusements and greater fun than any former carnival." The new carnival built upon several aspects of the German Society's *Volksfest*,

Houston's most successful annual event. The Grand Carnival's Railway Rate Committee secured an agreement with the railroads to provide uniform round-trip rates for points within two hundred miles. Attendees were treated to "Illuminated Street Parades" with floats representing Houston's business interests, football games, street concerts, pyrotechnic displays, and balloon ascensions. Organizers asked local citizens to enhance the illuminated parade by "burning colored fire in front of their premises while the parade [was] passing."¹² The flames of patriotism burned brightly in the city that year, as did the desire to showcase the city's business and industry.

On the national front, Houston's deep water channel found support in Washington, D.C., when local congressman Thomas H. Ball became a member of the fifty-fifth Congress in March 1897. He soon joined the Rivers and Harbors Committee as the only member from Texas. Ball's predecessor, Congressman Joseph Chappell Hutcheson, had labored to secure this committee's support for Houston during the previous session and mentored Ball. Ball's appointment allowed him to finalize Hutcheson's work, securing funding for the ship channel's expansion to a depth of twenty-five feet from Galveston Bay to a turning basin. The project also provided for "a light-draft extension of this channel, 8 feet deep and 40 feet wide, through Buffalo Bayou from the turning basin to the foot of Main Street."¹³

The twenty-sixth and final Volksfest Festival was held on July 4, 1897. On the first page of the festival newsletter, a poem entitled "Houston a Seaport" appears. Although the poet's name and the first stanza of the poem are missing on the only known copy of the newsletter, the second stanza conveys local sentiment quite well: "The streets, yes, are still muddy, The sidewalks often green; But soon they will look pretty And fine as ever seen. We fought about amendments, But over is the row, For Houston on the Bayou Becomes a seaport now."¹⁴

In 1897, Houston's Grand Carnival became the Texas Fruit, Flower and Vegetable Festival, taking center stage December 6-11. This version of the carnival expanded on earlier themes, featuring an "Industrial Houston" exhibit in the Market Hall and a Deep Water Convention held on the second day. The greatest attraction of the opening "Parade of Plenty" was a "beautiful steamboat on a decorated wagon drawn by four black horses," a vessel "made to represent an ocean freight boat." It displayed many inscriptions, including "24 feet of water at Sabine Pass: best port on the gulf."¹⁵ The competition was not just between Houston and Galveston.

The 1899 Fruit, Flower and Vegetable Festival introduced the most iconic component of the carnival, a visitor from the East known as "King Nottoc." In a fit of promotion cloaked in mystery, the organizers touted King Nottoc's ceremonial arrival in his capital city of



This invitation to the No-Tsu-Oh Carnival Ball highlights the importance of the arrival of King Nottoc V, from the realm of Tekram, as attested by Samb, the event's official spokesman.

Photo courtesy of James E. Fisher Collection.

“No-Tsu-Oh.” The *Houston Chronicle* reported that King Nottoc’s royal representative in Houston, “Samb,” was fond of telling the “Legend of No-Tsu-Oh.” On November 20, 1899, Samb drew hundreds of citizens to the Cotton Exchange to become “brethren of the royal order of the Princes of No-Tsu-Oh,” a group that included many Houston businessmen. As the festival drew near, Samb provided cryptic reports regarding the king’s pending visit from his home in “Tekram.”

Each year one prominent businessman was chosen to wear the crown of King Nottoc and rule over the “Kingdom of Sexat” and its capital city of No-Tsu-Oh in the realm of Tekram. These names, No-Tsu-Oh, Nottoc, and Tekram, when reversed, revealed the phrase “Houston Cotton Market.”¹⁶ The fabricated ceremony allowed Houstonians to reverse the constraints of the work-a-day business world, enjoy themselves, and celebrate Houston’s prosperity. The fourth and final Fruit, Flower and Vegetable Festival was held in 1900. The following year, the festival became the Grand No-Tsu-Oh Carnival.

GALVESTON FACES A NEW CHALLENGE

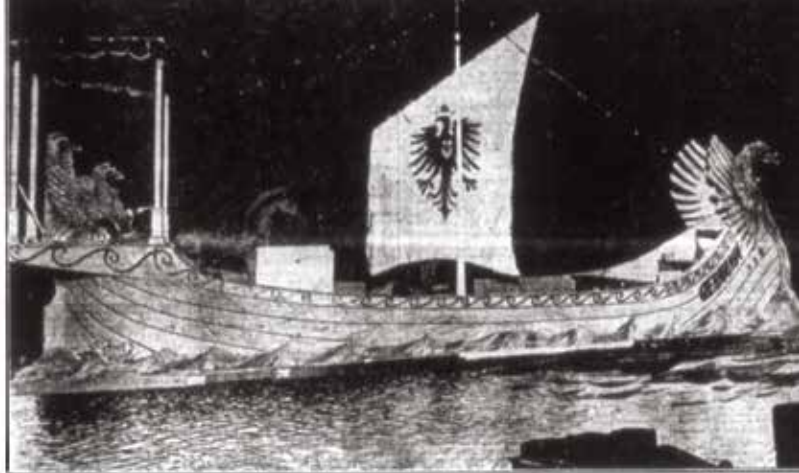
On September 8, 1900, the fates of two cities took a sudden turn when a powerful hurricane struck Galveston, resulting in the loss of between 6,000 and 12,000 lives. The storm destroyed over 3,600 homes and damaged \$20 million worth of property, without adjusting for inflation.¹⁷ Galveston rose from the devastation by organizing two massive engineering projects to rebuild and protect the city from future storms. The first project consisted of a sea wall to be built along the island’s Gulf Coast, and the second concerned “grade raising.” This called for filling in low-lying areas behind the sea wall and elevating buildings. Though Galveston made haste to overcome the disaster, the city’s port was set back by nearly a decade. Houston now had an opportunity to seize port dominance.

Houston’s effort to surpass Galveston as a deep water port gained momentum, but the task was not easy. The 1900 Storm caused damage across the coast, necessitating recovery efforts throughout the region. While Galveston suffered most, Houston’s dredging efforts also faced setbacks. By 1909 Houston had dredged the bayou to only eighteen and one-half feet.¹⁸

Four months after the hurricane, on January 10, 1901, oil was discovered near Beaumont at Spindletop, the first oil field on the Gulf Coast. At that time the Lucas gusher became the largest in the world. It gave birth to a boomtown of new enterprises, and Houston’s rail industry took full advantage of these opportunities.¹⁹

In 1909 Mayor Horace Baldwin Rice presented the River and Harbors Committee with a creative new funding plan called the “Houston Plan” to secure federal government assistance for additional ship channel development. The city proposed the government and the public share the cost fifty-fifty. The committee accepted the plan on June 25, 1910, giving congressional approval for an expenditure of \$2,500,000, one half of which would be the responsibility of the newly formed Harris County, Houston Ship Channel Navigation District.²⁰

Passage of the Houston Plan energized Houston’s civic leaders, who immediately “launched a campaign such as the



The above photo appeared in the Houston Post on November 8, 1914, in advance of the Deep Water Jubilee. The caption indicates that the German float will be one of the entries in the upcoming Tuesday night parade and will be escorted by many local German Americans in festive costumes.

Photo courtesy of the Houston Metropolitan Research Center from Houston Post.

county had seldom, if ever, seen before.” Businessman Jesse H. Jones met with local bankers and in less than twenty-four hours arranged for their acceptance of local bonds totaling \$1,250,000. On January 10, 1911, Harris County voted 16-1 in favor of the bond proposal, the final step in dredging the ship channel to twenty-five feet.²¹

A SECOND DEEP WATER JUBILEE

Far from the Gulf Coast, an important international milestone occurred on August 15, 1914. After a decade of effort by the United States, the Panama Canal opened, joining the Pacific Ocean to the Caribbean Sea. Houston civic leaders realized that this vital shipping lane provided many new opportunities for Texas ports.

Less than one month later, on September 7, U. S. superintendent engineer, Charles Crotty, completed the dredging of the deep water channel to Houston.²² The formal opening of the ship channel was scheduled during the annual No-Tsu-Oh festival in November.

The *William C. May* was the first ship to deliver its cargo via the newly dredged channel, arriving on September 26, 1914. The *Dorothy* was the second, arriving in October. Both ships docked in Clinton. Their arrivals revealed a less desirable reality: Houston’s city council and harbor board had not selected the site of the first city wharf and warehouse, and funding for these items depended on the passage of a pending bond election.²³

During this period the No-Tsu-Oh Carnival was among the state’s most popular and innovative events, albeit sponsored by a city of fewer than 100,000 people. The early twentieth century introduced two key transportation innovations to the nation, the automobile and airplane, and the city strategically used these novelties as centerpieces in the annual carnival. Houston attracted eager visitors from across Texas and neighboring states. But could the carnival committee garner the same enthusiasm for the finished port on a body of water that had been under the public eye since 1836?

Local businessmen faced a similar challenge. In order to acquire land and build new roads, wharfs, terminals, and facilities for the port, they needed support for the upcoming bond proposal. The three-million-dollar bond election,

which would pay for necessary infrastructure, was scheduled for October 28, 1914.

Promoting the port bond issue met with other challenges. Newspaper space for the bond topic was limited with war in Europe, concerns over cotton prices, the death of local philanthropist George H. Hermann, and even the pending

visit of Helen Keller and her teacher dominating the front pages of the *Houston Post* and the *Houston Chronicle*. The *Houston Chronicle* editorialized that the festival was too raucous and ought to end. The paper relegated news about the ship channel, the bond election, and No-Tsu-Oh to the “Magnolia Park News” section, far from page one. Complicating the businessmen’s predicament further, a group of citizens sought an injunction through the courts to stop the bond election.²⁴



The member pin for the 1914 Deep Water Jubilee.

Photo courtesy of James E. Fisher Collection.

The city planner’s optimism shone through nevertheless. They repurposed the 1914 No-Tsu-Oh Festival and dubbed it the “Deep Water Jubilee.” King Nottoc gave way to “King Retaw,” for “water” spelled backward. The festival’s planners envisioned a six-day, Texas-sized celebration specifically featuring Houston’s new deep water ship channel. The Jubilee allowed Houston to announce its inland port to the world, but, more importantly, it gave a promotional lead-in that could secure favorable bond election votes.

On October 8, about a month before the festival, the Houston Chamber of Commerce loaded 225 local voters on an excursion boat to view the ship channel and Turning Basin. Other tours followed, eliciting positive comments from newspapers, politicians, and individuals such as John Kirby who spoke in favor of passage of the bond sale and the potential for wealth extending from the port’s development. An ad in the *Houston Chronicle* by the Magnolia Park Land Company boasted “Deep Water Will Make YOU Rich,” and a full-page ad in the *Houston Post* warned, “We cannot allow foreign wars and temporary depression to stop the upbuilding of this city.”²⁵

On October 29, one week before the festival, the “wharf bonds” were approved three-to-one.²⁶ One can only imagine the mood of the festival had the bond issues failed, but they

did not, and Houston’s 1914 Deep Water Jubilee heralded Houston’s birth as a major inland port.

The official opening of the Houston Ship Channel was the highlight of the festival, but from November 9-14, the Deep Water Jubilee also featured various water-themed parades and festivities, embracing a new commercial era.

On November 6, Houston welcomed Eugene A. Hudson, “King Retaw I,” to his realm. The Houston Ship Channel formally opened on November 10 in a national event reaching to Washington, D. C. and the President of the United States, Woodrow Wilson.

Spectators wishing to view the ceremony could board a train from Houston’s Grand Central Depot and travel to the site for a round trip cost of twenty-five cents. A water parade of pleasure and racing boats, decorated launches and representative boats from all Texas gulf ports formed a “Pageant of Boats” to accompany the event.

Dignitaries included Governor Oscar B. Colquitt, Governor-elect James E. Ferguson, Lieutenant Governor-elect W. P. Hobby, Mayor Ben Campbell and Mrs. Ella Campbell, and their daughter Miss Sue Campbell. At 11:00 a.m. local time, President Wilson excused himself from a Cabinet meeting to press a remote button that communicated a telegraph signal to Houston, firing a cannon located at the ceremonial site.²⁷

As the boom of the cannon faded in the distance, Miss Sue Campbell dropped white rose petals onto the water and said, “I christen thee Port Houston; hither the boats of all nations may come and receive hearty welcome.”²⁸ Strains of the “Star Spangled Banner,” a twenty-one gun salute, and an outpouring of shouts, ringing bells, whistles and songs sprang from the thousands of participants and viewers assembled at the Turning Basin. Houston’s Ship Channel officially became the head of navigation, a modern, deep water port.

In the days that followed, the Deep Water Jubilee’s nautical theme remained on full display. A “Ships of the Nations” parade in downtown Houston included twenty floats, with more than 400 horses and mules to draw the floats and carry mounted escorts, 150 musicians, and 300 citizens representing the nationalities of each ship’s origin. The planning committee estimated the parade was “about



At 11:00 a.m. on November 10, 1914, the daughter of Houston’s mayor, Miss Sue Campbell dropped rose petals onto the water and christened “Port Houston.” Photo courtesy of Story Sloane Gallery.



For the ship channel’s fiftieth anniversary, Miss Campbell’s granddaughter, shown here, reenacted throwing roses into the water. Photo courtesy of Special Collections, M. D. Anderson Library, University of Houston.

two and a half miles in length.”²⁹ A dream founded almost eighty years earlier had finally come to fruition.

ONE ERA ENDS, ANOTHER BEGINS

One day after the close of the 1915 No-Tsu-Oh Carnival, the *Houston Chronicle* published an editorial entitled “Let It Be Our Last Carnival.” The article suggests that “Houston, metropolis of the Southwest, railroad center for this great and growing section of the county, should offer something by way of an annual exhibition other than tin-horn parades and garrulous horse-play.”³⁰ With this sentiment, the popular No-Tsu-Oh Carnival came to an end.

The “first full year of exportation from the Port of Houston” came in 1920. The 1920 edition of Frank Waterhouse & Company’s *Pacific Ports Manual* described Houston Port facilities: five municipal wharfs, a cotton wharf, and a warehouse. The manual noted that Houston’s municipal facilities did not charge dockage or wharfage fees. An accompanying ad in the publication boasted, “An inland harbor. Safe from storms and tidal waves. Fresh water to clean the barnacles. Seventeen railroads radiating to all

parts of the country.”³¹ The world now embraced the Allen brothers’ dream of a major inland port for their city.

Those familiar with No-Tsu-Oh a century later may know of its flower parades, Mardi-Gras-style galas, and events such as football games between the University of Texas, Texas A&M, Rice Institute, and TCU. What they may not realize, however, is how many chapters in this region’s history were written during these turn-of-the-century, mid-winter festivals, including the official opening of what became one of the nation’s busiest waterways and one of the world’s largest ports.

James. E. Fisher is a third generation Houstonian and graduate of Texas A&M University. A member of the Harris County Historical Commission and the Houston History Association Board, he retired from KUHT-TV in 2012, after a thirty-year career in public broadcasting. In the early 1990s he became senior producer for special projects for the station where he wrote and produced numerous regional history programs including the *Houston: Remember When* series and *The Cruiser Houston: Of Pride and Purpose*, and *Our Nation’s Highest Honor*.

The “Port Arthur” Whale



Captain Cott Plummer’s Olga, 1910.

Photo courtesy of Story Sloane’s Gallery.

In November 1910, the schooner *Olga* slowly made her way up Buffalo Bayou to Houston. Its cargo was unusual for the ships of that time, or any time since. Onboard the ship was a large sperm whale.

Captain Cott Plummer had “captured” the sixty-three-foot-long whale on March 8, 1910, when he found it near Sabine Pass struggling in an off-shore conglomerate of sea weed, silt, and petroleum called the “oil pond.” In the weeks that followed, over 20,000 viewed the whale in Port Arthur, many paying a \$2.00 round-trip rail fare from Houston to view the spectacle.³² The *Houston Post* then reported its arrival at the foot of Travis Street in Houston on March 28, where it remained until the stench of the decaying carcass prompted its removal.

One might sense that Captain Plummer would have simply disposed of the massive curiosity in the Gulf, but he had a different plan. Having successfully charged Houstonians as much as fifty cents each to view a decomposing whale, the removal called for a new arrangement, and it did not involve a burial at sea.

Plummer asked Robert George James, a resident of Harrisburg and a skilled taxidermist, who acquired this expertise in Galveston prior to the 1900 Storm, to apply his tal-



Port Arthur Whale postcard, 1910.

Photo courtesy of James E. Fisher Collection.

ent to the whale. In the months that followed he skinned the whale, and stretched the skin over a wooden frame. He even designed a doorway as an entrance on one side of the shell. In the Texas sun, the smell remained a problem, and his wife did not always allow him in the house after a day’s work.³³

Upon the project’s completion, the whale was exhibited near the San Jacinto Street Bridge during the 1910 No-Tsu-Oh Festival. In his diary John Milsaps writes, “A barge with a roof overhead lay below. . . . Noticing women and men picking their way down step uncertain trails and go aboard I did the same, paying 25 cents for the privilege.” The *Houston Post* reported that as part of the festivities Captain Plummer invited fourteen friends to a luncheon held inside the whale. The banquet “bore not a vestige of any discomforting smell,” proving what a fine job James had done creating this wonder of the age. Following its Houston exhibit the whale was displayed around the country, including a stop in an amusement park near Chicago in June of 1914.³⁴ Sadly it never made an encore appearance for the Deep Water Jubilee.



Many Houstonians still think of the “Turning Basin,” shown here, as a singular place where ships turn around to head out to sea. Over the years as more docks appeared along the waterway, the Houston Ship Channel added many locations where ships could turn around, saving time and money.

All photos courtesy of the Port of Houston Authority unless otherwise noted.

What a Deep-water Channel to Houston Created

By Port of Houston Authority

Fifty-two miles long and recognized as a public works engineering marvel, the Houston Ship Channel gave birth to the nation’s busiest port, its leading export port, its leading break bulk port, and its largest petrochemical complex. Indeed, the town that built a port that built a city sums up the Houston Ship Channel’s first century.

Luring customers to a new deep-water port in Houston proved to be difficult, especially during World War I. A few ships ventured up the channel in 1915, but many ships’ captains were skeptical about the channel’s promised depth and were unwilling to risk larger vessels in unproven waters. Also, the first public wharves were not completed until a year after the dredging finished.

Houston’s leaders had worked so long and hard to convince Congress to fund the dredging of a deep-water port that they gave little thought beyond that accomplishment. Marketing the new facilities to potential customers proved more difficult than Houstonians imagined.

Civic leadership knew that regular steamship service was essential to inducing other shippers to stop at the port. Houston succeeded by using the same ingenuity that convinced Congress to fund the dredging. When the Southern

Steamship Company, a subsidiary of the Atlantic, Gulf and West Indies Lines, remained indifferent to the Port of Houston’s ovations in May 1915, Houstonians made the company an offer it could not refuse: a bond signed by 100 Houstonians promising to pay \$1,000 each if the line incurred any losses providing regular service to the port.

Stunned by the conviction and enthusiasm of Houston’s citizens, Southern Steamship Company inaugurated service and graciously declined the bond’s necessity. The company sent its first vessel to Houston, the *Satilla*, loaded with seventy-five car-loads of general merchandise.

Always ready to commemorate a new achievement, Houston’s mayor Ben Campbell declared a holiday for August 19th, when *Satilla* was expected. Preparations began for the largest barbecue ever held in the county, with extensive pits built for two blocks near the Turning Basin. The city anticipated 10,000 to enjoy a parade, a free dance, and a watermelon feast.

Mother Nature, however, had other ideas. A tropical storm moved through Texas delaying the *Satilla*’s arrival. Although flooding waters washed away buoys and beacons along the channel, the depth remained unaffected. Captain



*After 100 Houstonians promised the Southern Steamship Line that they would each sign a bond to pay \$1,000 if the company incurred losses in offering regular service to the Port of Houston, the company declined the bond and sent the first of many ships, the *Satilla*, loaded with seventy-five carloads of merchandise.*

Charles Crotty of the U.S. Army Corps of Engineers said, “The hurricane dispelled the fears of many Houstonians that the channel would be filled up by such a storm, and, perhaps, disappointed some of the port’s competitors who hoped and expected it to be filled.” The city postponed the festivities, and 2,000 people greeted the *Satilla* on August 22nd instead. The Southern Steamship Company remained a good customer of the Port of Houston for many more years.

Despite a slow beginning, certain factors ensured the deep-water port’s tremendous growth during its first dozen years. Demand for petroleum escalated quickly after World War I, and refineries sprang up all along the ship channel.

Cotton remained an important cargo. By 1919, Houston was the largest spot cotton market in the world, and second only to New Orleans in the number of cotton orders handled. The deeper channel meant that Houston could finally begin shipping this valuable commodity.

The Port of Houston sent the first direct shipment of cotton from the U.S. to Europe. The *Merry Mount* loaded “until not another bale could be stuffed into her holds” left on November 16, 1919, with more than 23,000 bales. Cotton companies rushed to build compressors and wharves along

the channel to take advantage of the new access to water-borne transportation. Cotton exports grew from 275,879 bales in 1920 to 2,069,792 in 1930. Houston led U.S. ports in the cotton trade and ranked second in the world.

New facilities helped develop new customers for the port. A grain elevator opened in 1926 and soon grain arrived from America’s heartland. So much, in fact, that a bond issue passed four years later to more than triple the elevator’s capacity.

Trade flowing through the port contributed to those whose livelihoods depended on it. In 1914, a longshoreman worked a ten-hour shift and earned \$.30 an hour for day labor and \$.40 an hour for work at night. By the end of the 1920s, wages had risen to \$.80 an hour and up to 50 percent more for those with specialized skills.

The growth of Houston’s port was phenomenal, and the citizens’ faith in this venture proved more than worthwhile. In 1919, only 157 ships called at the Port of Houston, carrying 1,247,972 tons of cargo. In 1930, 2,108 ships carried 14,538,452 tons to Houston’s docks. The port ranked third in foreign exports, and its customers included almost eighty shipping lines making regular calls.

Such bountiful results deserved another celebration. The cruiser *Houston* was invited to the city for Navy Day on October 27, 1930. School children, citizens, and business people had participated in an impressive letter-writing campaign imploring the secretary of the Navy to name the ship after their city. So many letters swamped the secretary’s office that he called Mayor Oscar Holcombe personally to tell him to stop the letters as the city had won.

Citizens watched the mighty ship sail up the channel. The largest ship to have navigated the Houston Ship Channel, the cruiser drew 250,000 visitors during its week-long stay. At a banquet at the Rice Hotel, Senator Tom Connally predicted the port would be second in the nation by 1940. John Henry Kirby, who had made his fortune in lumber, pushed aside any reminiscing and declared to those present, “Why, my friends, we are only getting started!”

Houston’s port and civic leaders also aimed their



The USS Houston monument in Sam Houston Park displays the bell recovered from the ship, which was sunk in the Sunda Strait on March 1, 1942. An annual commemoration is held at the monument to honor those who lost their lives in the battle.

Photo by Lindsay Scovill Dove.

The USS Houston made her way up the Houston Ship Channel in 1930. Approximately 250,000 people visited the ship.

Photo courtesy of the US Houston (CA-30) Photograph Collection, Digital Library, Special Collections, M. D. Anderson Library, University of Houston.



marketing efforts at the new oil barons drilling in Texas and encouraged them to locate refineries along the Houston Ship Channel, safe from Gulf hurricanes such as the Great Storm of 1900 that devastated Galveston. By the start of the Depression, forty oil companies had offices in Houston, including the Texas Company (now part of Chevron), Humble Oil and Refining Co. (now part of ExxonMobil), and Gulf Oil Corp. (now part of Chevron). Sinclair Oil Co. built the first major refinery in 1918 on 700 acres along the channel.

One of the first and most successful oil moguls was Joseph Stephen Cullinan, founder of the Texas Fuel company and the Texas Company. Cullinan made a great impact on the Houston Ship Channel when in 1919, he and Ross S. Sterling petitioned the U.S. Army Corps of Engineers to further dredge the ship channel. Their reasoning was simple — large tankers drawing twenty-seven feet could not negotiate the channel, thereby hurting refineries' business. For example, the Petroleum Refining Company reported a loss of \$1.3 million in 1918 because vessels could not navigate the channel to the refinery. Congress made appropriations to fund the project in 1921, and by 1925, the channel reached a depth of thirty feet.

WORLD WAR II

The transportation industry continued to evolve between the great wars. As roads and tires improved, trucks emerged as competitors to the railroads, especially for short hauls. Rail could not match their flexible pick-up and delivery service and ability to carry smaller loads. Men displaced from their jobs by the Depression became entrepreneurs with the acquisition of a truck. The trucking industry emerged so quickly that by 1932 Texas enacted governing laws and the federal government followed suit in 1935.

The Port of Houston recovered steadily after the Depression's sudden onset. Tonnage increased modestly each year after 1932, but competition remained fierce until World War II.

Despite slower business, port improvements continued to keep pace with the shipping industry. Petroleum tankers grew in size requiring a deeper channel. In 1932, a project was approved to deepen it to thirty-two feet and widen it to 400 feet at Galveston Bay and 300 feet at Morgan's Point. Three years later, the depth was increased to thirty-four feet and the bends around Morgan's Point were eased as well. Lights were installed along the channel for the first time to enable navigation along the channel around the clock.

Industry continued to expand along the Houston Ship Channel. Taken as a sign the Depression had ended, Champion Paper and Fibre Company bought 160 acres on the channel and built a \$3.5 million paper mill that employed up to 500 persons.

With Hitler on the move, Americans watched anxiously. Shipping became costly as insurance and cargo rates soared. Some shipping lines discontinued service to Houston. Competition amongst the Gulf ports surged, while East and



The Port Commission ordered the new fireboat Captain Crotty after the Texas City disaster. The boat was named for Charles Crotty who had supervised dredging the channel in the early 1900s and later served as assistant port director from 1922-1945.

Photo courtesy of the Houston Metropolitan Research Center, Houston Public Library, RGJ0001-0188.

West Coast ports shared all the wartime cargo.

By 1943, ship arrivals sunk to its lowest level since 1923 with tonnage reaching only 15,047,871. Luckily, industrial development along the channel reached the most active levels in the area's history.

The military requirements of World War II led to the rapid development of new industries in the Houston area. Demand for motor fuels, especially aviation gasoline, accelerated the expansion of Houston area refineries. New plants converted previously wasted refinery gases into chemicals for the manufacture of explosives and synthetic rubber. The long-range transmission of natural gas and petroleum pipeline operations began and soon established Houston as the nation's major center for this activity.

Shipyards flourished, building subchasers and Liberty ships. The Dickson Gun Plant, operated during World War II by the Hughes Tool Company of Houston, produced centrifugally cast gun tubes of various calibers. The plant occupied 124 acres on the north shore of Buffalo Bayou and was constructed in 1942, at a cost of \$29 million.

War spurred the development of the metals industries, both ferrous and non-ferrous. Sheffield Steel Company built the Southwest's first fully integrated steel mill on 600 acres adjacent to the Houston Ship Channel in 1942 for \$17 million. Magnesium production from sea-water by electrolysis grew into a major industry, led by the Dow Chemical Company in Brazoria County. The aluminum industry also became well established in the region.

POST WAR ECONOMIC BOOM

With Japan and much of Europe in ruins, the U.S. government worked to rebuild these nations and the world's economy. This surge in activity caused the U.S. economy to grow dramatically, and this economic bounce took the Port of Houston along with it. Cotton, grain, petroleum products, vehicles, and other goods were in demand, and the port's

tonnage figures reflected the increased trade. The rebound started in 1945, when tonnage increased to 23.9 million tons up from 17.0 million tons in 1944.

The figures climbed to new records for the next three years: 31.8 million tons in 1946, 34.3 million tons in 1947, and 38.9 million tons in 1948. The value of the cargo also increased and exceeded \$1 billion for the first time in the port's history in 1948. That year also marked an important milestone for the Port of Houston when it became the second-largest port in the United States in tonnage, a position it still holds today.

In 1947, the U.S. Army Corps of Engineers recommended that the channel be deepened to thirty-six feet. Two tunnels were excavated under the ship channel to handle increasing traffic, and once they opened, two ferry boat services on the channel ceased.

Along the Houston Ship Channel, petroleum companies took over the wartime industrial plants and began producing peacetime products. By 1950, the developing synthetic rubber industry spent \$250 million on new construction in the Houston area, and industrial employment jumped from 22,000 to 64,000.

The most serious industrial accident in U.S. history occurred on April 16, 1947, when fire broke out on the French freighter *SS Grandcamp* docked in Texas City. With the ship loaded with ammonium nitrate, a compound used to make dynamite, the fire set off a series of explosions that killed 600 people and injured another 3,000. Property damage exceeded \$50 million, and it took two days to get the situation under control. Shortly after, the Monsanto Chemical Company announced the rebuilding and expansion of its plant, which renewed confidence in ship channel residents as they rebuilt Texas City.

The disaster prompted the Port Commission to order a new smaller, faster fireboat equipped with more modern equipment than the original fireboat purchased in 1926. The

The rise of containerization has revolutionized shipping in the modern era.

Captain Crotty, christened in 1950, helped the port maintain its reputation for safety despite the devastation of Texas City.

The 1950s also saw major improvements at the port's public wharves. New state legislation in 1957 dramatically changed how the port did business when it permitted the Port Commission to issue long-term revenue bonds to finance expansion from future earnings, and general tax bonds could be approved by a simple majority of the voters. Further, legislation allowed up to 5 percent of the gross income from the public docks to be spent on promoting the port. Between 1957 and 1965, more than \$37 million was invested in improving the port's public wharves.

The port commission ordered its third inspection boat, the *M/V Sam Houston II*, in 1957. Immediately more popular than its predecessors, it still operates today. Able to accommodate 100 passengers, it carried more visitors in its first five months of operation than the old vessel could in a year.

In 1961, the Port of Houston became a deciding factor in the government's selection of Houston as NASA's new headquarters. This outstanding development brought Houston to the forefront of the nation's imagination often for such extraordinary accomplishments as man first setting foot on the moon.

CONTAINERIZATION STARTS IN HOUSTON

Innovations and inventions often change the course of an industry. The shipping container forever changed the shipping of goods throughout the world, and the Port of Houston played a modest role in making that happen.

A prophetic event occurred as the head of a trucking company, Malcolm McLean, sat waiting all day while his truck's cargo was unloaded onto a ship. Watching this time-consuming task, he wished that his truck could simply be placed on the ship instead. The more he thought about it, the more it made sense.

McLean bought two oil tankers and transformed the



trucks' trailers so that they could be stacked on his new ships. On April 26, 1956, the world's first container ship, the *Ideal X* carrying fifty-eight 35-foot containers and her normal liquid cargo, sailed from New York to Houston, transforming the shipping industry. Soon called "Trailerships," they were loaded with either shore-based cranes or on-board cranes. McLean named his new company Sea-Land in 1960.

The partnership with Malcolm McLean also flourished, and for many years, Houston was the only port in the Gulf of Mexico visited by Sea-Land's container ships. By 1966, McLean sent the first transatlantic container shipment, which arrived in Liverpool, England, four weeks faster than traditional cargo ships of the time.

Why? Using containers for ocean shipping saves the tedious, expensive job of unloading cargo from a truck or a railroad car, loading it into the hull of a ship, and reversing the process at the destination. Ships often needed to be in each port of a route for ten days to load and unload.

Containerization changed that. A standard container can carry up to twenty tons fully loaded. It keeps all the items in a shipment together, and protects them from the elements, damage in handling, and theft. A container ship spends only a day or two at port, and then it is on its way to the next destination. Containerized shipping revolutionized the industry.

By 1969, the first container shipments from Houston went to Europe, and soon a new sixteen-acre container marshaling yard had to be built to accommodate the containerized cargo coming through Houston. Capable of handling 800 containers, it quickly proved insufficient with Sea-Land alone moving 15,000 containers through Houston annually.

BARBOURS CUT: THE GREAT GAMBLE THAT PAID OFF

By 1970, more than half of the non-bulk freight on the North Atlantic was moving in containers, and experts forecast that half of the non-bulk Pacific freight would soon follow suit. At the Port Commission meeting in August 1970, recently appointed chairman Fentress Bracewell announced the decision to build a marine terminal at Barbours Cut to handle only containerized cargo and with distinct advantages over any other such facility planned in Gulf ports. Covering more than 600 acres, with a forty-foot-deep sea channel, a 1,600-

foot turning basin and 17,141 feet of berthing space, the new terminal's projected cost was \$100 million.

The first berth in the Barbours Cut container terminal opened in 1977 as the only facility of its kind in the Gulf of Mexico. Sea-Land signed on as the Port Authority's first customer there, and its subsequent owner Maersk remains a major client at the terminal today.

BAYPORT

Barbours Cut Container Terminal made the Port of Houston the largest container port on the U.S. Gulf Coast. Nearly sixty years after the very first container ship sailed to Houston, the port handles 66 percent of all of the Gulf's container activity. The final berth opened at Barbours Cut in 1990, and almost immediately, continued growth of container shipping caused the Port Authority to run out of room. In 1999, Harris County voters approved funds to build a \$1.2 billion container terminal at Bayport to triple the Port Authority's container handling capacity.

After completing the engineering plans but before construction of the Bayport Container and Cruise Terminal began, growth of the container business changed for the Port of Houston. A little over a decade ago, container trade between East Asia and Houston was virtually non-existent. Before 2002, no direct shipping service came to Houston from Asia via the Panama Canal.

This market opened up for Houston because labor and capacity issues at West Coast ports caused shippers to rethink and diversify routes. Houston stood out as an excellent alternative due to the port's stable relations with labor and overall business-friendly environment. Houston also stood out due to an old real estate adage: location, location, location. The city offers excellent transportation connections via road and rail to the consumer-rich markets throughout Texas to the Midwest.

Major retailers starting with Wal-Mart came into the Houston market, built gigantic distribution facilities either near the port, or as far away as Katy in the case of Rooms-To-Go, and began receiving regular shipments. These distribution facilities easily stocked stores throughout the region, state, and beyond because the transportation infrastructure is good, and the port works with TxDOT to ensure that highway growth matches demand.

The Port of Houston's trade with Asia through the Panama Canal increased 85 percent from 2003 to 2011 with containerized cargo being the leading business line.

Today three regular services go all-water through the Panama Canal to East Asia: COSCO's "Gulf of Mexico Express," Hanjin Shipping's "All-Water Texas Service," and CMA CGM's PEX3 service.

Currently the Panama Canal is expanding to accommodate larger ships with expected completion in 2016. The Port of Houston is preparing for the increased trade an expanded Panama Canal will bring. The first century of the Houston Ship Channel developed Houston into an international business center. The next century should bring even more economic opportunity for the town that built a port that built the city. 🐾



A cruise ship prepares to depart from the Bayport Cruise Terminal on the western side of Galveston Bay.

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The Houston Pilots: Guardians of the Waterway

*By Debbie Z. Harwell with
Sidonie Sturrock*

Every day, Houstonians drive over the bridges above the Houston Ship Channel, glancing occasionally to see the ships and their cargos, and then turn back to focus on traffic without giving much thought to how those ships got there. Each year, more than 20,000 ships and 230,000 barges carrying some 240 million tons of cargo negotiate the 56-mile long, 535-foot-wide channel to produce an estimated one million Texas jobs and \$56.5 billion in personal income and consumption expenditures.¹

But what would happen to Houston if those ships could not reach the docks? Or if ship captains attempted to navigate the winding, narrow waterway lined with petrochemical plants without knowing the water's depth and currents, the shoals, the tides, the clearance under the bridges, or how to maneuver around passing vessels?

Houston is often called the town that built the port that

built the city. The measure of success, however, should not be in the building of what has become the nation's largest inland port but rather in the hundreds of thousands of ships the Houston Pilots have quietly and safely guided along the channel for ten decades. Steve Huttman who manages a fleet of Gulf Coast harbor tugs notes, "In order to bring a vessel into port, you have to have that pilot with their unique experience to bring the vessel in, with [its] handling characteristics, understanding the channel . . . The pilot's the conductor, telling our tug master where to go and where to get ready, and what the plan of attack's going to be."²

Pilotage is one of the world's oldest professions and can be traced back to the earliest vessels that crossed bodies of water for exploration, trade, and conquest. Houston Pilot Captain Holly Cooper explains, "A pilot's job is local knowledge, to safely bring vessels in and out of harbor."³ While that mission remains unchanged, the complexity of the job and who can become a pilot has changed dramatically.

Early Houston Pilots

In 1838 Sam Houston approved the Republic of Texas's first law regarding pilots, which enabled port collectors to oversee pilots in their respective ports. By 1842 laws became more specific. For example, the Port of Galveston collector prohibited pilots leaving the Galveston Bar for more than twenty-four hours without consent or from leaving a vessel waiting outside the bar for more than four hours. In 1846, the Texas governor began appointing pilots.

When the Houston Ship Channel opened in 1914, it was "marked by eleven lights, tended by members of the U.S. Lighthouse Service, who could light each oil lamp by hand



from a rowboat.” In 1916, Governor “Pa” Ferguson appointed L. Fred Allien and J. William Laughton as the first two branch pilots for the Port of Houston and Galveston Bar. Captain Roy Murray, a Houston Pilot from 1950 to 1984, noted that early on, “the Chamber of Commerce of Houston furnished pilots for free to encourage ships to come here.”⁴

In 1921 with the help of Congressman Tom Ball, the Houston Pilots approved Articles of Association that enabled them to “remain independent contractors conducting business together.” To account for their work, they had cards filled out and signed by the ships’ masters that noted their ships’ size and the time the pilots served on board. The pilots pooled their fees and often had to call on shippers to collect them.⁵

Since its inception, the Houston Pilots has assigned unit numbers to identify each new pilot as he or she comes into the organization. To date, the count is 220—not many for ninety-three years of service. New pilots become equal owners of the company once they complete their terms as deputies and are voted in as full pilots. All pilots hold an equal share of ownership without regard to seniority.⁶

In 1930 with increased traffic on the channel, the Houston Pilots proposed “Rules of the Road” that include procedures for passing ships at the wharf, approaching another ship in the channel, and whistle signals for various eventualities. Bigger changes came during World War II, however, when the channel operated around the clock. Forty-five companies along the channel had government contracts to supply jet fuel, synthetic rubber, petrochemicals, and other military necessities. With German U-boats regularly attacking U.S. shipping interests in the Gulf of Mexico, the


Houston Pilots voted to accept commissions in the Coast Guard and put their craft under its control to keep the channel open and cargo moving.⁷

Becoming a Pilot in the Post-war Era

In the 1950s Houston had a shortage of pilots, who at that time worked thirty days on and fifteen days off. Deputy pilots trained under one master pilot but rode with all the pilots to get the benefit of their unique experiences. Initially they trained for one year, but that changed to two years in 1975 and three years in 1997 with about 1,000 transits, a reflection of the job’s growing complexity. The Houston Pilots today take an equal mix of blue water candidates—those from ships—and brown water candidates—those from harbor tugs, push boats, and dredges. They pair deputies and masters from opposite backgrounds, blue to brown for example, to maximize the overall insight deputies gain.⁸

Deputies begin by observing, but they also get experience talking to the tugs and tows to build the all-important relationships they will need to be effective. Houston Pilot Captain Sherri Hickman explains that when the deputies begin piloting, they are assigned to ships small enough for them to handle so they can learn their way up and because they are training on the license of the master pilot who is responsible for any mishaps.⁹ By riding with different pilots, they get to know each pilot’s method of docking and undocking a vessel and the intricacies of working in the close quarters of the Houston Ship Channel. As Captain Cooper notes, “We have something that we say on the channel—no hits, no runs, no errors—and that’s basically true.”¹⁰

Another important aspect of training is to make new pilots aware that the job is challenging and involves long



This photo, “Little Ship Stories” by Houston Pilot Captain Lou Vest, illustrates the vast difference in the types, sizes, and ages of ships that pilots navigate up and down the Houston Ship Channel. Vest explains, “The way we work is that jobs are assigned to the next pilot on the list. Sometimes you get a big one, sometimes a little one. . . . Guess which ship was probably the easiest job? The big one. They give you as many tugs as you want to dock them. The tugs are the best in the fleet. Everyone calls you up way in advance and offers to get out of the way and takes care to be well on their side of the channel. On the small ship tugs are a luxury.”

All photos courtesy of Captain Lou Vest unless otherwise noted.



After World War II, the Houston Pilots purchased and refurbished a subchaser that became Houston Pilot No. 2. Intended to make the wait on the bar more comfortable for pilots, the air-conditioned boat was a step up from the group's World War I model. Nicknamed "Old Wormie," it measured 110 feet long and had two diesel engines that generated 1,000 horsepower. Unfortunately, it also leaked rusty water on the sleeping pilots.

Photo courtesy of the Port of Houston Authority.

hours, and at times might even be boring. Captain Cooper said, "If you don't enjoy the job, then you won't be a good pilot." They must have a positive attitude, refrain from holding grudges, and "treat everyone on every ship as [their] brother or sister."¹¹

Training also involves the use of simulators, manned model training, and instruction in technology. Until the 1960s, pilots' only means of communication were whistles and hand-held megaphones. Captain Murray recalled, "We used to blow a long whistle and listen if there was another ship, because there was a place you couldn't pass." He adds that two-way radios later enabled pilots to communicate bridge-to-bridge, solving a lot of problems. Even into the 1990s, pilots had radar but still had to guess at things, particularly in bad weather. Today pilots come aboard with their own laptops that have a GPS unit to show them where other vessels are or will be. The Automated Identification System (AIS), used by pilots, ships, and the Houston Pilots dispatch terminal, shows ships identified by size and cargo, as well as other vessels. Pilots can also get information from the Coast Guard's Vessel Traffic Service (VTS), which monitors the entire waterway.¹²

Even with this technology, one element of the training remains firmly dependent on human memory. Every pilot must be able to draw the entire fifty-six-mile channel complete with surrounding geographical features to within a millimeter's accuracy. The Houston Pilots presiding officer, Captain Michael A. Morris explains that trainees must mark hundreds of navigational aids, water depth, docks, and shallow areas around the channel.¹³

On the Job

Pilots work fourteen days on and fourteen off, usually handling two ships daily. Captain Cooper describes a typical scenario. She boards the ship from the gangway and goes to the bridge where she takes over command. (The captain retains the right to override the pilot at any time at his own risk.) She has tug boats come alongside, the vessel is untied, men on the dock take the lines, and she gives the engine

orders, speed, and direction port or starboard while the tug boat pulls the ship off. Once under way, the ship is either turned around or headed outbound on the channel. It can take as long as ten hours, which is rare, to as little as four and a half hours to reach a point about ten miles offshore where she disembarks onto an awaiting Houston Pilot boat. It comes up alongside, with both vessels making about ten knots, and she climbs down the ladder and steps onto the deck of the pilot boat, which is equipped with living quarters so pilots can rest from thirty minutes to several hours while they wait to board their next inbound ship.¹⁴

Transferring off and on the ship via the ladder from two feet to thirty feet, Cooper points out, is the most dangerous part of the job. Both ships are moving, the ladder is "pretty rickety," and the pilot depends on someone to have secured it properly on deck. Emphasizing that pilots board in all types of weather and all types of current, Captain Morris says, "We work 24/7/365 in a hostile environment created by high seas, strong winds, and extreme temperatures. In this country alone, we lose one pilot every year. Somebody dies climbing up or down the Jacob ladder hanging down the side of the ship." Every day, one of the 1,300 to 1,400 pilots in the United States is injured on the job. He points out, too, that ships have gotten larger and cargoes more valuable, adding to the job's stress level, "If we make a mistake, we run the risk of losing our license, our freedom, or our life."¹⁵

Twenty years ago Houston Pilots moved about twenty ships a day, now it is closer to sixty. Captain Lou Vest explains, "In the 1990s, society in general experienced a growing awareness of fatigue and its relationship to safety." Before that it was considered part of the job. After undertaking one study and considering a second, the Houston Pilots implemented changes that included a minimum number of pilots on watch, raising the maximum number of pilots for piloting a ship mandated by port commissioners, and a fixed amount of rest time after extended periods of work, coupled with an earlier decision to assign two pilots to reduced-visibility ships. Houston remains one of only three pilot groups that stay on station to get their rest, due



Transferring on and off of ships is the most dangerous part of the pilot's job. Captain Lou Vest describes this photo as a metaphor for being a pilot, "Strange ship, middle of the night, and the unknown crew and ship in the dark at the top of the gangway." In 2009, the year he took this photo, four U.S. pilots lost their lives getting on and off ships.

to the length of the channel and the time it takes to reach the offshore anchorage.¹⁶

One thing that the Houston Pilots cite as unique to this waterway is the method they have developed to accommodate two-way traffic. The Houston Ship Channel is, Captain Morris notes, the only place where "two Suezmax ships 165 foot abeam" meet each other in a 500-foot channel. He always asks ship captains if they have been to Houston before, and if not, he draws them a diagram of the maneuver called the Texas Three-Step, saying, "This is going to look ugly, but it is going to feel good." The ships approach head on until they get within about half a mile of each other. The pilots order their ships to steer a few degrees to starboard taking into account the size and draft of the oncoming ship. As the bows approach the ship's increase their engine speed, giving them a "kick" that keeps them apart, and then the pilots steer back to the middle of the channel.¹⁷

Women Pilots Join the Ranks

Across the U.S., pilotage remained a profession for white men until the late twentieth century. In 1983 Captain Paul Brown became the first African American Houston Pilot and the second in the nation. By 2001 the Houston Pilots led the way in hiring minorities and women, and a few years later it formed a nonprofit, Anchor Watch, to offer scholarships to maritime students in need and boost opportunities for minority and women candidates.¹⁸

Being one of the first to tear down barriers is never easy, but for those who have a passion to pursue their dream, that does not deter them. Such is the case for Houston Pilots Captain Holly Cooper and Captain Sherri Hickman. In May 1994, Cooper and Hickman became the first women voted into the Houston Pilots, but Cooper started training sooner.¹⁹

An Austin native, Captain Cooper was the middle child of three girls in her family, and "the most adventurous and wayward." She frequently skipped school and her father saw her becoming a beach bum, spending her time surfing, scuba diving, and sailing. Despite only showing up for tests, she made good grades and eventually followed her father's suggestion to pursue a maritime career. Her parents were "pro-education" and encouraged their children to choose any field. Cooper spent a summer at Massachusetts Maritime Academy and eventually enrolled at the Texas A&M Maritime Academy in Galveston. The academy had few women students and no housing for them, so she lived on the *Texas Clipper*, the university's merchant marine training vessel.²⁰

Cooper navigated her way from the academy to sailing on ships as third mate, second mate, chief mate, and, eventually, captain with an unlimited masters ticket—the highest level one can achieve in the United States. She sailed for twelve years, first on Panamanian and Norwegian-flagged ships and then on U.S.-flagged ships as opportunities opened. Almost always the only woman, Cooper remembers the ships were usually about 800-feet long with twenty-six people on board. "It was a very small society, so you had to



Captain Holly Cooper joined the Houston Pilots in 1994 as the group's 151st pilot and the first woman to begin training as a deputy. For stress relief, she takes to the air, flying her own plane. She recalls the excitement she felt after Hurricane Ike when she had the chance to combine her love for the water and the air as pilots were ferried back and forth to their ships on helicopters.

Photo courtesy of Captain Holly Cooper.

carry your weight,” she observes. Although Cooper hates to admit it, women often had to do more to prove themselves. “Women were brand new in the maritime industry back then, and it was unheard of. You did the best, you tried to be the smartest, you tried to be the best at what you did, and you tried to get along with everybody. That was the essential part, to get along with everybody.”²¹

After waiting eight years to be accepted by the Houston Pilots, Cooper went through the two-year pilot training program under Houston Pilot Captain C. C. Lary III. Once she became a pilot, the most common reaction she received after being dropped off at a vessel by the pilot boat was to have the ship’s crew ask, “Where’s the pilot?” Or she would walk up the gangway and be mistaken for a “lady of the evening soliciting business.” Nevertheless, no ship captain has ever refused to let her take command because, as the pilot, she is the expert on the waterway. She has had many positive experiences as well. She recalls having a crippled ship and the harbor tugs, tow boats, and other pilots working with her to prevent a disaster. She adds, “There’s camaraderie in the industry that surpasses one’s sex.”²²

Houston Pilot Captain Sheri Hickman grew up in Pennsylvania and was fascinated by the ships she saw as her family crossed bridges on the way to visit her grandparents in New York. She decided at age twelve to be a ship’s captain, and her parents supported her in that dream, despite reservations about opportunities for women. She attended the Maine Maritime Academy and looked up to women like Deborah Doane Dempsey, the first female graduate who later became a Columbia River Bar Pilot. “I felt like I was riding on their skirt tails,” she says.²³

Hickman trained under Houston Pilot Captain Tom

Gibson. She found her fellow pilots in Houston welcoming, adding, “They took me in as a partner; I never felt unwanted or [like I was] having to put my foot in the door and hold it open.” They wanted to train her properly because they knew they would meet her on the channel.²⁴

A former tanker captain, Hickman found ship captains hesitated to accept her. They skeptically asked how old she was. Her youth coupled with being a woman seemed to be a bigger concern than how she had reached this point in her career. At times, she had to put a stop to the badgering questions so it would not inhibit her ability to handle the ship. Even today, she occasionally will have someone helping her up the pilot ladder say, “Oh my God, this is my first time for a female pilot!” Hickman, who is surprised to still be hearing that after twenty years, quickly replies, “Well, this is your lucky day.”²⁵

Captain Hickman was almost seven months pregnant when she received a call in May 1994 inviting her to become a deputy with the Houston Pilots. They wanted her to come right away, but she said she had “some obligations to take care of” and could be there August 1st. Eventually she told them she was pregnant. The baby came on her due date, July 22nd, ten days later the family moved to Houston, and Captain Hickman reported for work when her baby was eighteen days old. Her husband, a marine engineer, quit his job and became “Mr. Mom.”²⁶

About five years after becoming a Houston Pilot, Captain Cooper became pregnant. Her fellow pilots thought she was merely putting on a few pounds, and she did not correct them. She climbed pilot ladders up until the last couple of months when she began shifting, which is moving vessels between the docks within the port, so she could walk up gangways. Most ship captains did not say anything, but she remembers one who was particularly “bothered by the fact I had been pregnant on his ship without his knowledge, believing that I had created some additional liability for his vessel of which he should have been aware.” Cooper adds that she has a wonderful husband who willingly acted as the primary caregiver to their son.²⁷

Recently two additional women have joined the Houston Pilots. Captain Kristi Taylor, a King’s Point graduate, became a full pilot on September 27, 2014. Captain Rebekah Martin, who graduated from Texas A&M Galveston, joined the organization as a deputy pilot in March and began handling small ships on her own in September.

For men and women, balancing the job’s demands is difficult, particularly while training. They go out and handle a ship, come home for twelve hours, and go right back out. “Basically you don’t have a home life for two weeks at a time,” Hickman observes. “You just come home to sleep and maybe offer advice.” Single deputy pilots face their own challenges because they do not have help. For example, Martin recently struggled to find someone to fix her hot water heater during the twelve hours she happened to be off.²⁸

Piloting Today

After 9/11 many changes occurred in American society and the Houston Ship Channel was no exception. The U.S. Coast Guard initiated more aggressive screening of vessels, increased security zones, and upgraded monitoring. Pilots



Deputy Houston Pilot Captain Rebekah Martin training with Captains Larry Evans and Sherri Hickman. The Houston Pilots now has four women pilots. Perhaps one day the list will include Captain Hickman’s daughter Coronado, who is at the Maine Maritime Academy and hopes to follow in her mother’s footsteps.

Photo courtesy of Captain Sherri Hickman.



The pilot boat Bayou City comes alongside the outbound Saetta to pick up her pilot at the Houston/Galveston Sea Buoy while another ship waits in the distance for her pilot. One of the four Houston Pilot boats, the Bayou City is the station boat in the Gulf. It has eight small bunkrooms and a galley/TV room where pilots can eat, sleep, or read while they wait up to seven hours for an inbound ship. The double hull construction helps minimize the water's motion.

could no longer park on docks and were screened like any other port visitor. The port built fences, added cameras, and prevented seafarers from disembarking.²⁹

One thing has stayed the same: no sail on the channel is routine. Every ship a pilot boards is different, and every trip is different. A steering or engine failure could occur, a helmsman could go the wrong way, or an anchor drop unexpectedly. To prepare for any eventuality, Captain Cooper stresses, "You've got to be sharp-witted because we've got so much traffic." Besides the commercial traffic,

For all of those who think it is nothing but sunshine and calm seas on the Gulf Coast: "The First Norther of the Year" shows the pilot boat Bayou City on October 22, 2007, just outside the Galveston jetties in the pilot boarding area.



add to that fishing boats, pleasure boats, and the occasional hot-rodder.³⁰

An example of the unexpected occurred on the morning Hickman and I spoke. Each ship is required to have someone on the bridge who speaks English, which is the legal language of the sea. As Captain Hickman piloted a ship into port while it was still dark, she asked for a pair of binoculars to verify the boat she had seen in the distance was a sailboat. She asked, "Do you have binoculars?" The person replied, "OK," and then promptly unplugged her computer!³¹

Captain Cooper reflects, "You don't know what will happen [from one day to the next]. But that's also what makes this job so exciting and the reason why I love it so much."³²

For ten decades Houston Pilots have worked day in and day out acting as guardians on the Houston Ship Channel. Securing safe passage for thousands of vessels, they have protected lives, jobs, and the economy—enabling the port to build the city; still, most residents take their work for granted. Pilots work long hours in adverse conditions and yet one cannot help but sense it is they who feel they have been rewarded. Captain Hickman exclaims, "Is it worth it? Oh yes, it's worth it!"³³

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Blue-Water Ships, Brown-Water Bayou:

Wartime Construction of the EC-2 "Liberty" Type Cargo Ship at Houston, 1941-1945

By Andrew W. Hall

On the second Friday evening in December 1945, the famed San Jacinto Inn closed to the general public to host a farewell dinner for Todd Houston Shipbuilding. Several hundred guests dined on an endless supply of oysters on the half shell, oysters *en brochette*, fried chicken, tenderloin of trout, and the house specialty, shrimp *a la* San Jacinto Inn. French fries, hot biscuits, and pineapple sherbet rounded out the menu. Though wartime rationing of beef and cheese had officially ended a few weeks before, those foodstuffs remained scarce and did not appear on the dinner menu.¹

The guests that evening could reflect on a remarkable accomplishment. In a bit over four years, they had built a

modern, efficient shipyard on an open lot of soggy, Gulf Coast prairie, and constructed over two hundred general cargo ships and small tankers. Placed bow to stern, the 208 Liberty ships they launched into the muddy waters of Buffalo Bayou would stretch for more than seventeen miles, from the dining room of the San Jacinto Inn to City Hall in downtown Houston.



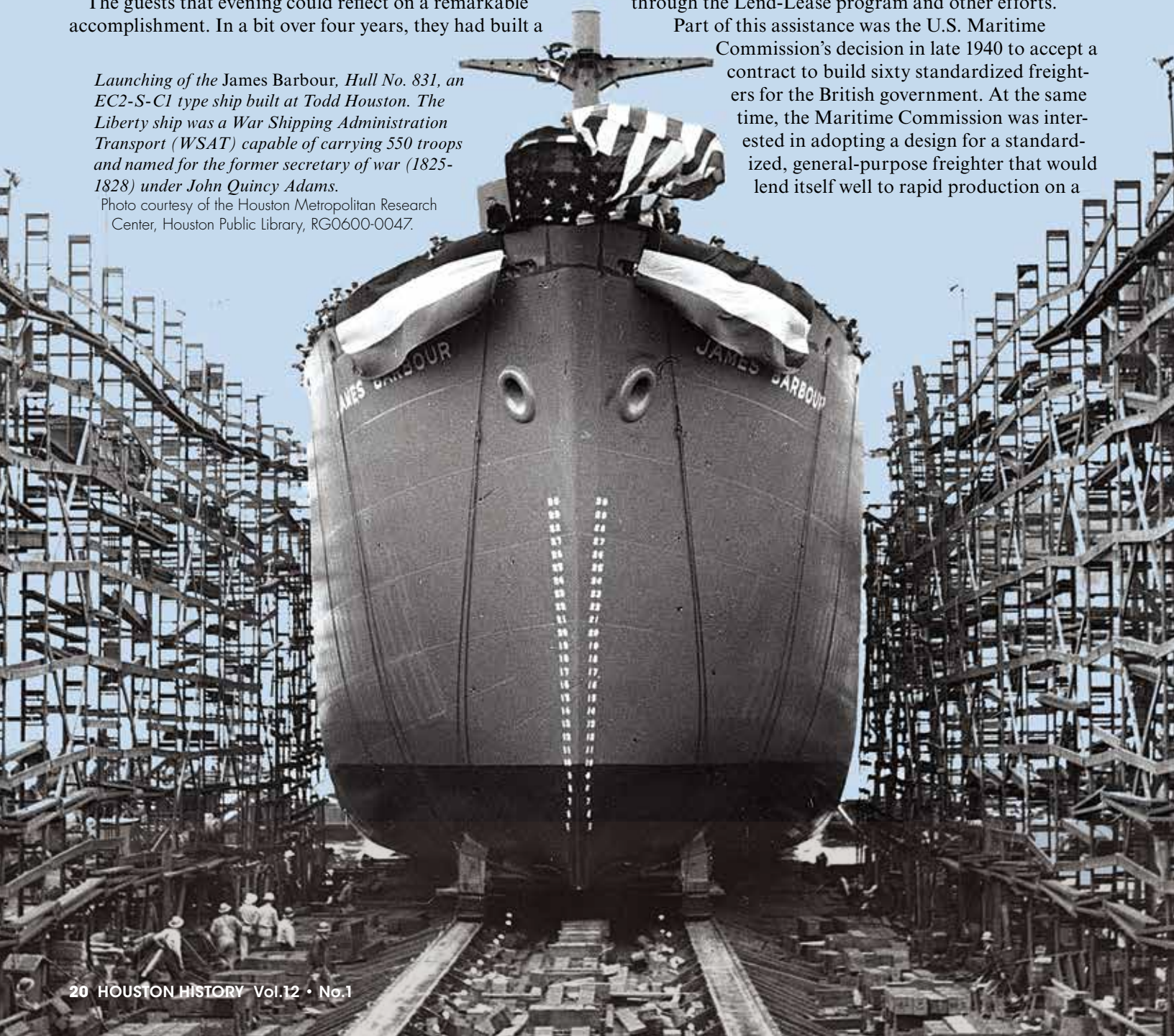
Long before its formal entry into the Second World War in December 1941, the United States was actively supporting Great Britain and its allies in the struggle against Germany through the Lend-Lease program and other efforts.

Part of this assistance was the U.S. Maritime

Commission's decision in late 1940 to accept a contract to build sixty standardized freighters for the British government. At the same time, the Maritime Commission was interested in adopting a design for a standardized, general-purpose freighter that would lend itself well to rapid production on a

Launching of the James Barbour, Hull No. 831, an EC2-S-C1 type ship built at Todd Houston. The Liberty ship was a War Shipping Administration Transport (WSAT) capable of carrying 550 troops and named for the former secretary of war (1825-1828) under John Quincy Adams.

Photo courtesy of the Houston Metropolitan Research Center, Houston Public Library, RG0600-0047.





Cover from a 1942 commemorative program celebrating the award of a U.S. Maritime Commission "M Pennant" for achievement, 1942.

Photo courtesy of the Galveston and Texas History Center, Rosenberg Library, Galveston.

large scale. The exigencies of the war demanded quantity over quality.² After reviewing proposals for a number of different designs, the Maritime Commission selected the British design for adaptation to the commission's expanding shipbuilding program. With a handful of additional modifications for American use, such as oil-firing instead of coal, the British design was the genesis of the famous Liberty ship.³

Though they were slow and only lightly armed, the Liberties had one attribute that outweighed all their defects: the prodigious amount of cargo they could carry. A Liberty was said to be able to carry 2,840 Jeeps, 260 medium tanks, 234 million rounds of rifle ammunition, between 320 and 699 mules, or 430,000 cases of C Rations – the latter sufficient to feed a full-strength infantry division in the field for eight months.⁴

The initial phase of the Liberty ship program had first been publicly announced on January 3, 1941, in a radio address by President Franklin Roosevelt. That first phase called for the construction of 200 EC-2 cargo ships (plus the sixty British hulls) over two years at nine yards around the United States. Between them, the nine shipyards had sixty-five slipways, the inclined ramps on which ships are traditionally built. Because many of the existing shipyards already had all the orders they could fill for the foreseeable future, several of the contracts under the first phase of the program were awarded to companies that proposed to build new shipyards where none had existed before. One of these

contracts was awarded to Houston Shipbuilding, a newly-created subsidiary of the Todd Shipyards Corporation. (On May 1, 1944, the prefix "Todd" was added to the name of the Houston facility to underscore its corporate paternity, making the organization's full name Todd Houston Shipbuilding Corp., or "Todd Houston" for short.)⁵

The site chosen was located at an old, sluggish curve of Buffalo Bayou known as Irish Bend. The bend had been cut through in the process of straightening and widening the bayou for the use of seagoing vessels, leaving a stagnant and disused oxbow channel on the south side of the Houston Ship Channel just west of the stream's confluence with Green's Bayou. The primary contractor for construction of the yard was the Brown Corporation, which built not only the Irish Bend facility but also its own shipyard directly across the ship channel, where Brown would construct destroyer escorts and landing craft under its own government contracts. The anticipated cost of the new Houston Shipbuilding yard was just over \$7.6 million, but the actual cost of the yard and capital improvements through 1944, which included its expansion from six slipways to nine, was nearly double the original figure, at \$14.9 million.⁶



Aerial view of Irish Bend, c. 1941, before beginning construction of the shipyard, as shown on "For Auld Lang Syne" souvenir program.

Photo courtesy of the Galveston and Texas History Center, Rosenberg Library, Galveston.

Even as the yard around it was being built, the keel for the first of the Irish Bend Liberties, Maritime Commission Hull No. 95, was laid on July 18, 1941, on Slipway No.6. Work on each of the yard's facilities was prioritized according to what was most needed to keep the production on schedule. Houston Shipbuilding quickly grew to become one of Houston's largest employers, and the largest shipyard in the region. In March 1942, the month the first of the Irish Bend Liberty ships was launched, the yard had 6,000 workers; that number had doubled to 12,000 by May, and to 18,000 in June. Just under 20,000 employees were working at the yard in July 1942, after which expansion of the payroll gradually leveled off. Employment at Irish Bend peaked at 23,500 workers in the summer of 1944. The three daily shifts ran from 7:00 a.m. to 3:30 p.m., 3:30 p.m. to 11:30 p.m., and 11:30 p.m. to 7:00 a.m. Each shift worker was allowed a half-hour lunch break in his or her shift, and the yard scaled back to a skeleton shift on Sundays.⁷

The first ship launchings at Irish Bend were appropriately grand affairs. The first of the new Liberties, *Sam Houston*,



*Rendering of the Liberty ship
Houston Volunteers.*
Images courtesy of Andrew W. Hall.

slid down the greased ways on March 29, 1942, after being christened by the Texas hero's granddaughter. The ceremony was a substantial logistical undertaking in itself, with a concert by the shipyard's band and an audience of more than 12,000 employees and invited guests. By the launch of Houston Shipbuilding's third Liberty a month later, though, yard management had decided to scale back the ceremony and dispense with prior public announcements all together in the interests of keeping up production and maintaining wartime censorship. After April 1942, the only large-scale launching ceremonies were those associated with significant production milestones.⁸

The names chosen by the Maritime Commission for the Houston-built ships included Confederate generals (*James Longstreet*, *J. E. B. Stuart*), pathfinders (*Matthew Maury*, *Amelia Earhart*), artists and literary figures (*Thomas Eakins*, *Thomas Bullfinch*), and mythic American legends (*Johnny Appleseed*, *Paul Bunyan*). By far the largest group of names, however, was drawn from prominent Texans of the past. The names chosen included figures from the Texas Republic (*Stephen F. Austin*, *Mirabeau B. Lamar*, *Lorenzo de Zavala*) and governors of the state (*John Ireland*, *Sul Ross*, *James S. Hogg*). Contemporary heroes were represented, too; when hundreds of Houstonians volunteered en masse to replace the crew of the cruiser *Houston* (CA-30), sunk at the Battle of Sunda Strait in early 1942, one of the new hulls was christened *Houston Volunteers* in their honor.⁹ To ensure that the significance of the ships' names would not be lost on their future crews, each vessel was provided with a special library of books on Texas history, that they might "become better informed about the State and the men who have made it great."¹⁰

The first few ships constructed at the yard took a long time to complete, as yard managers and supervisors worked out the most efficient methods. There were an almost infinite number of new techniques and approaches to learn, and relatively few employees had previous shipbuilding experience. The first four ships, all laid down in July 1941, were not completed for delivery until May and June of 1942, each taking a total construction time of more than 300 days. After that, though, the time to complete a Liberty at Irish Bend dropped dramatically. By the fall of 1942, Houston Shipbuilding was delivering ships in fewer than ninety days from keel-laying. From July 1943 through the end of the war, the yard at Irish Bend was completing a Liberty ship in forty days from keel-laying to launch, with another two weeks for fitting out before delivery. The fastest construction job by the yard was on *James Kyron Walker*, delivered

to her wartime operator, Alcoa, in December 1944, just forty days after being laid down.¹¹

Liberty ships were welded throughout, at a time when riveted construction was still the universal standard for shipbuilding. Traditional shipbuilders were skeptical of welding, but it sped production and eliminated an entire specialty shop in the yard. It came at a price, though, as many Liberty ships experienced cracking along welded joints, and six were lost to catastrophic structural failure and broke up in heavy seas. The last of these was a Houston-built ship, *Joel R. Poinsett*, which broke apart in the Atlantic in March 1944. The entire bow section of the vessel, forward of the superstructure, broke clean away and sank. Remarkably, there were no casualties. These structural problems were eventually overcome by the addition of bracing and reinforcing plates at vulnerable points, but the failures of the new ships in 1942-1944 permanently marred their reputation.¹²

One recent study of the relative impact of experience and capital improvement in the production efficiency of Liberty ships recalculated the rates for plate fractures for individual shipyards in the Liberty program. Of 2,692 ships' histories which were reviewed, 362 (13.6%) reported at least one fracture incident. Todd Houston's fracture rate was slightly higher than average, with 29 out of 208 ships, or 13.9%, reporting fractures.¹³

Wages in the Maritime Commission shipyards were relatively high, particularly when compared to those in other trades. Wages increased steadily during the war, along with working hours, until the shipyard worker's weekly paycheck peaked at \$63.90 in 1944, almost \$20 more than it had been before the war. While much of this increase was offset by wartime inflation, and shipyard work was more physically demanding than work in other wartime production plants, one postwar analysis concluded that, "a shipyard was the place to be to get big pay."¹⁴

Despite the ample wages, extremely high employee turnover was a serious problem throughout the Maritime Commission's shipbuilding program. Shipyards generally had a higher turnover rate than any other critical war production industry; during the last six months of 1943, between 8.2% and 12.0% of shipyard workers left their jobs *every month*.¹⁵ Numerous factors were cited for this trend, including skilled workers who moved from yard to yard seeking better positions or higher pay, inexperienced employees who underestimated the difficult working conditions, and workers who had difficulty finding adequate

housing close to the shipyard. Female employees had a higher-than-average turnover rate because, in the words of one postwar analysis, “in addition to sickness and exhaustion [experienced by all neophyte shipyard workers] were added the difficulties of keeping up with home duties.”¹⁶

Although leaders of the major national labor unions had made a “no-strike” pledge to the Maritime Commission early in 1941, strikes and other work stoppages caused problems at some yards during the war. Houston Shipbuilding had established a labor-management committee in April 1942, composed of seven members each from the workers and shipyard management.¹⁷ The yard appears to have avoided significant labor unrest almost completely, the only work stoppage of note occurring in the late summer of 1944. On September 9, a Saturday, over 700 burners and welders from the International Brotherhood of Boilermakers and Iron Shipbuilders, AFL Local 731, failed to report for their shift at the yard. They were protesting the refusal of the National Labor Relations Board to hold a petitioned hearing on the reelection of the union’s bargaining agent. Over the next two days Irish Bend workers in other trades began failing to report in sympathy with the boilermakers, forcing (on the third day) a complete shutdown of the yard. The situation was relieved on the fourth day, a Tuesday, when the regional office of the National Labor Relations Board agreed to send a field inspector to meet with Local 731, and in return the union released its members to return to work. In all, the “spontaneous action” had resulted in four days of reduced production at Irish Bend and three shifts (twenty-four hours) of complete shutdown.¹⁸

One of the most dramatic features of the wartime shipbuilding program and other defense industries is the influx of large numbers of women into jobs previously held almost exclusively by men. In some cases, this “female invasion” eventually filled 20% or more of individual yards’ employee rolls in several West Coast shipyards. Women represented a smaller proportion of the workforce at Irish Bend. In the spring of 1943, for example, 1,700 of the yard’s 21,430 employees were women, a number representing about 8% of the total workforce. Two-thirds of those women worked in traditional shipyard jobs as welders, burners, machinists and electricians.¹⁹

The yard’s female employees also played key roles in shaping Houston Shipbuilding’s public image. Women figure prominently in many newspaper and magazine stories about the facility, either as a group or as individuals. It is common to find news items mentioning awards or special honors given to female employees for superior performance, although most often these acknowledgments were for such activities as selling war bonds rather than actual shipbuilding work.²⁰

The number of African Americans employed at Irish Bend is difficult to estimate. Discrimination on account of race was prohibited by presidential executive order and an explicit clause in all Maritime Commission contracts, but in practice African Americans were often turned away from shipyard employment offices.²¹ When they were hired, it was almost always as unskilled laborers, and often in segregated divisions of the yards. Undoubtedly African Americans did work at Irish Bend, but their numbers may have been small and, unlike the female employees at the yard, their contribu-



Bennice Vick Russell and sister-in-law Marjorie Vick share a soda during a break at Brown Shipping Company, located across the channel from Todd Houston, in 1944.

Photo courtesy of the National Park Service.

tion to the production effort is virtually invisible in contemporary local publications. Faces of color simply do not appear, a situation which (by accident or design) makes it very difficult to assess their representation in the workforce at Todd Houston.²²

The Liberty ship design was remarkably successful; with 2,710 vessels built to that pattern, Liberties represented nearly half the total number of ships ordered by the Maritime Commission during the war and the largest single class of ships ever built.²³ But the design had distinct disadvantages as well. Most notably, the Liberties were very slow, capable of only about 11 knots (12.7 mph) in optimum conditions. Efforts to create a replacement design began almost immediately, and by early 1943 the plans for the 14-knot, turbine-driven Victory ships were ready to go into production. Many shipyards that had begun building Liberties were slated for conversion to the new design, including the yard at Irish Bend. For unknown reasons, however, that contract was either cancelled or never formalized by the Maritime Commission. Instead, Houston Shipbuilding received additional orders for Liberties, which continued in production at Irish Bend until March 28, 1945, with the delivery of the yard’s 208th Liberty, *Edward N. Hinton*.²⁴

Todd Houston had begun scaling back its operations and personnel gradually since the summer of 1944, when it became clear that any future Maritime Commission contracts, if they came at all, would be smaller than those received previously. That same year, the Maritime Commission awarded its last contract to Todd Houston, for fourteen small T-1 tankers. These vessels were still under construction when the war ended in August 1945, and the contract enabled the yard to remain in operation with a reduced workforce for several more months. The last of these ships, *Cisne*, Todd Houston Hull No. 222, was delivered on December 13,



In 2011 the U.S. Postal Service issued a series of four stamps honoring the U.S. Merchant Marine, including a World War II-era Liberty ship.

Photo courtesy of the U.S. Postal Service.

1945. Another, *Taverton*, was probably the last of all Todd Houston ships in regular service, running in the Philippines as the tanker *Trans Asia* as recently as the early 2000s.²⁵

Thus ended the story of Liberty ship construction in Houston. The shipyard site remained vacant until it was purchased by Phillips Petroleum in 1947. The company operated a plant to manufacture fertilizer and other agricultural chemicals there in the 1960s, but today the old shipyard site is largely vacant, used by Phillips for such auxiliary activities as employee emergency training. None of the buildings from 1941 to 1945 remain, and the land at the shipyard site has been extensively built up over the years, covering many of the foundations of the shipyard buildings, slipways, and rail lines. The ends of Nos. 1 and 2 slipways, those closest to the ship channel, are still visible. The 2,800-foot fitting-out wharf, capable of servicing six Liberty ships

at a time, is well maintained but is often leased out to an adjoining petrochemical facility.

After the war most of the 2,500 or so surviving Liberty ships went into civilian service. Together with their mass-produced cousins, the turbine-powered Victory ships and T-2 tankers, they formed the core of the world's merchant marine well into the 1960s, when they began to be replaced by the newer technology of containerized shipping. Two ships destroyed in the Texas City Disaster in April 1947, *Grandcamp* and *Wilson B. Keene*, were Liberties. In the 1970s, twelve retired Liberty ships were sunk at five different locations along the Texas coast to serve as artificial reefs in the largest program of its type, up to that time; they remain popular with sport divers. As recently as 2009, the wreck of Liberty ship *William Beaumont* – a vessel not part of the artificial reef program – was found to be leaking oil off Sabine Pass. In September 2014 a Florida-built Liberty ship, *Sturgis* (ex-*Charles H. Cugle*), that was later reconstructed as a floating nuclear power plant, was scheduled for scrapping at Galveston beginning in December.²⁶

The story of Liberty ship construction in Houston is a remarkable one. It is difficult to imagine today an industrial effort so driven that it could create a fully-functional shipyard from scratch, launch its first seagoing vessel within a year, and within three more years complete over 200 others.



The aerial view of Houston Shipbuilding Corporation's shipyard in 1941 shows the first four Liberty ships under construction (center). The ends of the building slips had not yet been dredged for launching.

Photo courtesy of the Houston Metropolitan Research Center, Houston Public Library, RG0600-804.

The impact of the Houston Shipbuilding yard, together with other new war production yards, was so great that in early 1943 the Houston Chamber of Commerce proclaimed “shipbuilding now Houston’s No. 1 Industry.”²⁷ The 208 ships built at Irish Bend represented nearly 8% of the total number of Liberties built nationwide, ranking Todd Houston sixth among all Maritime Commission yards building Liberties and the largest of the three yards on the Gulf Coast. The yard offered tremendous economic opportunity for its employees, who even with no prior shipbuilding experience could look forward to steady (if difficult) work and good wages. Todd Houston, like other war industries, also offered women an opportunity to compete directly for

well-paying jobs that offered, at least for the duration of the war, a level of economic independence most had not known before. And while the shipyard’s production efficiency and workmanship were probably no better than average, this work was accomplished with an untrained workforce and an industrial infrastructure that had been built up from nothing.

Andy Hall is a researcher from Galveston, Texas, specializing in local and maritime subjects. He is the author of *The Galveston-Houston Packet: Steamboats on Buffalo Bayou*, published by the History Press in 2012 and *Civil War Blockade Running on the Texas Coast*, published by the History Press in 2014.

THE LAST HOUSTON LIBERTY

Of the more than 2,700 Liberty ships built during World War II, only three are known to survive as museum ships, in New York, San Francisco, and Piraeus, Greece. Elements of others survive as wrecks or breakwaters in various parts of the globe.

The last surviving Houston-built Liberty ship may have been the second one launched at Irish Bend, *Davy Crockett*. Her days as a freighter ended in the 1960s, and in 1969 she was converted to a barge and moored on the Columbia River, between the towns of Vancouver and Camas, Washington. She remained there for the next four decades, used for storing ships’ fuel, known as bunker oil, and gradually deteriorating. The hulk passed through several owners over the years.

Then, in January 2011, residents on the Columbia spotted an oil slick streaming from the old *Davy Crockett*. The source of the leak proved to be the owner’s attempt to scrap the vessel in place; workers had tried cutting up the vessel amidships, causing the hull to buckle and dump oil into the river. “In water” scrapping operations are prohibited by law specifically to avoid this sort of environmental damage.

A full investigation of the accident revealed a large quan-

tity of fuel oil, asbestos, and other hazardous materials in the now-unstable hull. The Washington State Department of Ecology undertook a massive, ten-month project to remove both the hazardous materials and the hulk itself. The investigation also revealed a spill occurred in December 2010 that *Davy Crockett*’s owner knew about but failed to report. The cleanup project included building a cofferdam around the site, to prevent further releases into the river. The state ultimately hauled away for proper disposal over 38,000 gallons of bunker oil, two-and-a-half tons of asbestos, 1.6 million gallons of oily water, and over 1,800 tons of steel. Total cost to taxpayers: \$22 million.

In July 2012 the owner of the hulk pled guilty in federal court to two violations of the Clean Water Act: failing to report an oil discharge (for the 2010 incident) and unlawfully discharging oil into the Columbia River. He was sentenced in March 2013 to four months in prison, followed by eight months of home detention and three years of supervised release. He and his company were also fined \$405,000 for the spill “and 40 days of ongoing environmental harm from continuing oil leaks to the Columbia River.” Efforts to recover the rest of the costs of the cleanup continue.



Lifting out a section of Davy Crockett’s double bottom, August 18, 2011.

Photo courtesy of the Washington Department of Ecology.

Responders examining the broken hull of the former Liberty ship Davy Crockett, January 27, 2011.

Photo courtesy of the Washington Department of Ecology.



Working the Houston Ship Channel: “Tote that barge! Lift that bale!”

By Debbie Z. Harwell

As Houston marks the centennial of its deep-water channel, the contributions of many individuals have been highlighted: the Allen brothers who selected the city's site on Buffalo Bayou, Charles Morgan who dredged the channel to accommodate the first ocean-going steamship, Congressman Tom Ball who secured approval for the “Houston Plan,” a federal/local partnership to fund a deep-water channel, and Jesse H. Jones who persuaded local bankers to buy the bonds. Certainly without the vision of these men, Houston would not now rank as the largest port in tonnage and petrochemicals in the United States.

The success of the Houston Ship Channel and the Port of Houston is built on more than the determination of businessmen, however. Since its earliest days the city has acted as a magnet for people coming here to look for work, particularly in jobs associated with the ship channel and the burgeoning industries along its banks. Whether building the railroads to transport goods to and from the port, loading and unloading the ships that called here, or navigating vessels and barges along the waterway, the people—the Houston workforce—have made this economic engine successful.

Workers on the deck of the SS Sula on July 28, 1922, at the Port of Houston. Ship arrivals at the port had doubled between 1919 and 1921, doubled again in 1923, and again in 1926. By 1930 the number reached 2,100 ships, surpassing the Port of Galveston.¹

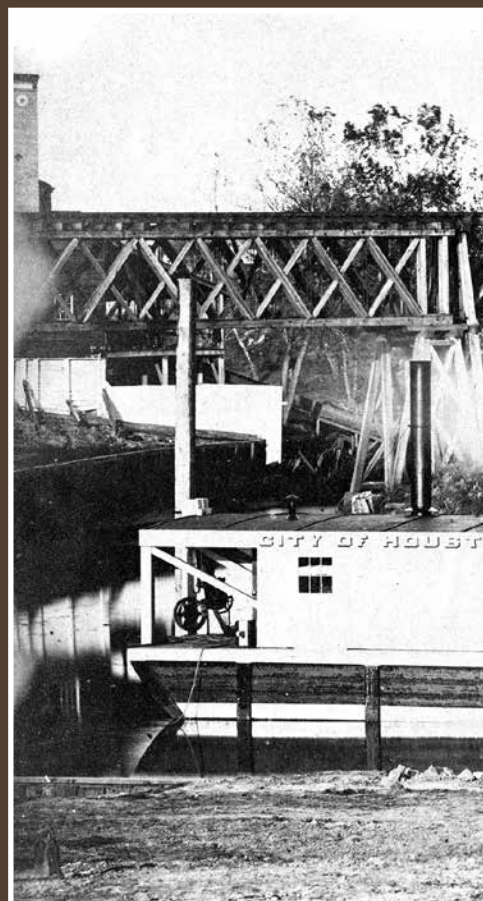
*Photo courtesy of the Houston Metropolitan Research Center,
Houston Public Library, MSS0100-0625.*





Two sailors from the destroyer USS Purdy observe the submarine USS Odax, circa 1950. The Purdy, which saw action in World War II and Korea, was conducting naval reserve training during this time. In 1947, the two-year-old Odax became the first sub converted to a "Guppy" (Greater Underwater Propulsion Power), making it the fastest U.S. submarine.³

Photo courtesy of the Houston Metropolitan Research Center, Houston Public Library, RGJ0001-0102.



Employers needed workers badly during World War II. Here Shipyard Bus Lines loads workers to transport them from downtown to the shipyards in 1943. Houston Shipbuilding Corporation (later Todd Houston) had a steam-powered train carrying workers to the shipyard three times a day.

Photo by John Vachon courtesy of the Library of Congress.



◀ Agriculture products from across the country made their way through the Port of Houston, including this shipment of Thompson Seedless Sun-Maid Raisins from California.

Photo courtesy of the Houston Metropolitan Research Center, Houston Public Library, MSS 0200-0042.



▲ For the stevedores who loaded cotton onto freighters, the work was long, hard, and hot. Cotton, which had dominated local trade in the nineteenth century, remained an important commodity, and by 1930 the Port of Houston led the nation in cotton exports. Before 1950 it took men two to three weeks to load a ship's cargo in the Gulf ports, but that changed with containerization. Ships could turn around in a day.²

Photo by Russell Lee courtesy of the Library of Congress.



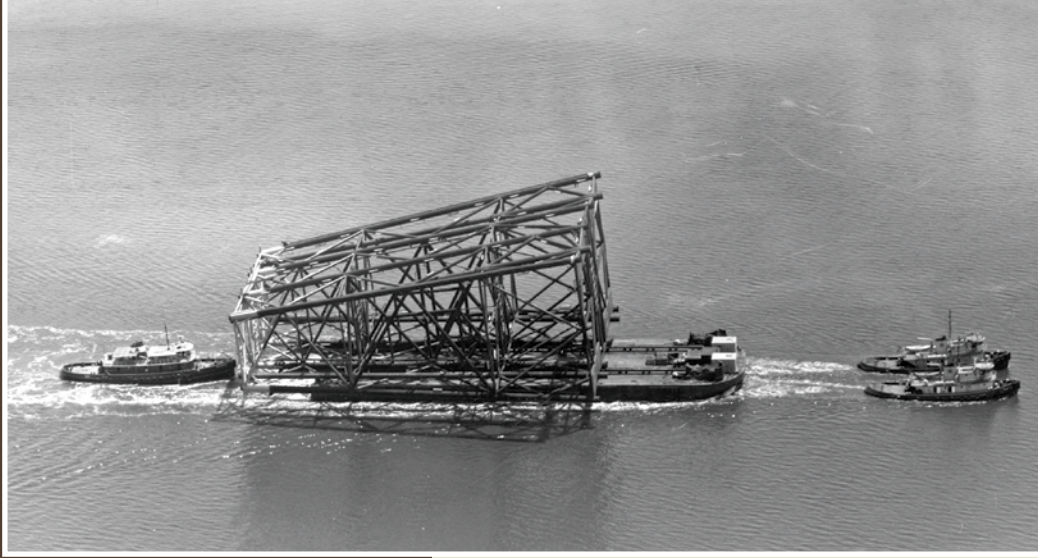
From its earliest days, the Houston Ship Channel depended on dredge boats and dredgers to make the waterway accessible to increasingly larger ships as well as to maintain its depth. Captain Charles Crotty became superintendent of dredging in 1912 after directing surveying efforts on the channel for eight years. He served as assistant port director from 1922 to 1945, and in 1950 the port honored him by naming its new fireboat the Captain Crotty.

Photo courtesy of the Houston Metropolitan Research Center, Houston Public Library, MSS0029-0002.



Even trains can travel by sea. Crane operators unload a railroad car for the Mexican railroad company Ferrocarril del Sureste, circa 1950s. The completion of the company's line in 1950 marked a decades-long effort, which was stymied by mountainous terrain, torrential rains, disease, and World War II, to unite three railroads from different parts of Mexico.⁴

Photo courtesy of the Houston Metropolitan Research Center, Houston Public Library, RGJ0001-0194.



◀ Although you rarely see their captains and crew, tugs regularly move cargo up and down the channel on barges like this one loaded with equipment for Brown & Root in 1967. Three tug companies operated in Houston at the time: Bay-Houston Towing Company, Intra-coastal Towing and Transportation Corporation, and Suderman & Young Towing Company.⁵

Photo courtesy of the Houston Metropolitan Research Center, Houston Public Library, RGJ0001-0286.

▼ This 1964 exhibit for the fiftieth anniversary of the Houston Ship Channel focused on the Port of Houston as a center for global trade. Just two years earlier, the city had opened the Houston World Trade building, the first built as a “focal point for world trade activity of a port and community.” Designed as a central location for international trade, it included consular offices as well as transportation companies, importers, and exporters who depended upon Houston’s labor force to keep the flow of goods moving.⁶

Photo courtesy of the Digital Library, Special Collections, M. D. Anderson Library, University of Houston.



THE HOUSTON MARITIME MUSEUM: HOMEPORT FOR EXPLORING THE MARITIME WORLD

By Jenny Podoloff



One of HMM's beloved docents, Harry Bounds, demonstrates how ships use signal lights to communicate with neighboring ships.

All photos courtesy of the Houston Maritime Museum.

The Houston Maritime Museum (HMM) has educated and entertained visitors for fourteen years with the mission "To capture and preserve the wonder and influence of maritime history and the marine industry with focus on the development of Houston, the Texas Gulf Coast, and the State of Texas."¹ Located on the outskirts of the museum district, the museum has eight galleries filled with model ships, images, and artifacts that trace maritime navigation from the Bronze Age to the present. The collection is so extensive that the museum has outgrown its space and has plans to move to a larger site along the Houston Ship Channel, a fitting place for visitors to discover the wonder and influence of the maritime world.

Even though Houston became one of the world's largest ports during the twentieth century, the maritime industry was not represented among local museums. Established in 2000, the Houston Maritime Museum (HMM) was an extension of founder James "Jim" L. Manzolillo's unique experiences, personality, and lifelong association with the ocean. As a naval architect, Manzolillo traveled extensively, collecting artifacts from around the world. He eventually decided to share them with the public, and Houston offered a logical place to do that. Hence, Manzolillo began channeling his resources to create a museum to engage people of all ages in the history of ships and sea exploration.

Jim Manzolillo first became interested in boats growing



Jim Manzolillo, founder of the Houston Maritime Museum.

up near the Schuylkill River in Pennsylvania. He carved his first boat at age six, and after building a raft at age twelve, he decided to pursue shipbuilding as a career.² He studied naval architecture and marine engineering at the Stevens Institute of Technology, before serving with the Merchant Marine during World War II, and earning a degree in mechanical engineering from the Colorado State College of Agriculture and Mechanic Arts. From 1950 to 1959, he traveled the world for Caterpillar Tractor Company. Explaining the connection to shipbuilding, he noted, “Caterpillar felt there was a market for their tractor engine to be used as a marine engine, so I was hired to help to develop a marine department.”³

In 1959, Manzolillo founded his own company in Mexico, *Astilleros Imesa*, to build shrimp trawlers. Unable to find a suitable location in a coastal city, he began building boats in Mexico City—7,400 feet above sea level and 200 miles from the ocean. Nevertheless, *Astilleros Imesa* successfully shipped its forty-six-foot fishing vessels to ports. Manzolillo recalled, “After we got some of them ready to move, I had to design a trailer to put them on and find somebody who was local enough to drive his tractor-trailer to pull this flatbed with the boat on it. . . . And boy, I’ll tell you, to get to Acapulco you have to go to a place called Cuernavaca, which is 10,000 feet up, and then come down, and then the highway [is] narrow. . . . While you’re making these curves, you’re looking down 5,000 feet and you’re thinking ‘mama mia!’” Manzolillo also created the first commercial vessel with a quarter-inch copper-nickel plate on its hull to inhibit the growth of barnacles, which reduced friction and fuel consumption.⁴

In 1979, Manzolillo moved to Houston where he worked for Cunard Line giving onboard cruise lectures. Calling at most of the world’s ports, he frequently visited museums and bought ship models, which he sent home. Having amassed quite a collection of maritime items and realizing Houston did not have a maritime museum, he contacted the Museum of Natural Science about donating his collection. When he failed to receive a response, he thought, “The hell with this, I’ll open up my own museum.”⁵



Master modeler Ronald Roberti’s exquisitely detailed model of the USS Confederacy illustrates how eighteenth-century shipwrights documented all the details of a proposed ship’s designs for approval before Computer Aided Design (CAD) or even much skill in drawing flat representations of compound ship hull curves.

When Manzolillo saw a sign on a vacant building on Dorrington Street, the museum’s current location, he called and made a deal for the property that afternoon. He worked tirelessly to restore and enlarge the building and filled it with his personal collection and other artifacts he acquired at his own expense. His daughter, Dr. Deborah Nightingale reminisced, “Some of the things in there were things I played with as a little girl.”⁶ Although Manzolillo passed away in 2007, the museum remains a tribute to his vision.

Today, the Houston Maritime Museum has eight galleries of model ships themed on modern warships, the modern merchant marine, sailing ships and steam power, ships in bottles, Great Lakes vessels, ancient Chinese and Middle East, history of navigation, voyages of discovery, ocean liners, the Port of Houston, sailing warships, and the offshore energy industry. They cover maritime history from the Bronze Age through the modern era, providing visitors a close up look at battleships, destroyers, submarines, aircraft carriers, clipper ships, side-and-stern-wheel paddle boats, exploratory vessels, modern merchant ships, freighters, tankers, and semi-submersible oil rigs. The museum is also



A tour group of Cub Scouts inspect the rigging of the HMS Victory, one of the museum's largest displays. Lord Nelson's flagship, the HMS Victory was the leading force in winning the Battle of Trafalgar in 1805.

home to a world-class collection of historical navigational instruments, including astrolabes, quadrants, sextants, and maritime compasses.

Senior vice president of Maritime Affairs at West Gulf Maritime Association, Niels Aalund serves as chairman of Houston Maritime Museum's board. He became involved with the museum because he believed in its value to the community. A self-proclaimed history buff with great respect for Manzolillo and his vision, Aalund wanted the museum exhibits to be "serious" in a way that was interesting to him but also carrying cross-generational appeal to young people looking for a different kind of experience. For example, children can visit HMM's Kids' Cove to steer the captain's wheel, practice Morse code with the signal light, or shift the engine telegraph into full steam ahead.⁷

As part of its educational endeavors, the museum offers monthly history lectures on a variety of maritime topics. Future lectures include varied topics such as "Monterrey Shipwrecks" by Amy Borgens and Fritz Hanselmann and "Civil War Blockaders" by Andrew Hall.⁸ In addition to its history lecture series, the museum has an industry lecture series during which maritime professionals share their experiences working in the industry. The industry lecture series is enticing and informative, providing people a vision

of what a career in the maritime industry is like.

HMM has hosted both lecture series concurrently for the past three years, and often reaches maximum capacity with people excited to learn more about the maritime world. The museum updates its website with upcoming lectures, events, and videos of past lectures for the public. As part of



Though the Port of Houston Authority did not come into existence until 1927, the origins of the Houston Ship Channel and the port date back to the 1830s, when docks emerged along Buffalo Bayou at Harrisburg, Lynchburg, and the Allen Ranch. In 1837, the steamboat Laura became the first ship to anchor at Allen's Landing, which later became the city of Houston.

the educational programming, the HMM staff also work directly with educators to plan science, math, social studies, and geography lessons for school groups.

One of the museum's major highlights is the Port of Houston Exhibit. Executive director Leslie Bowlin says, "This exhibit allows people to understand the significance of the port, and its connection to the Gulf Coast and the world." The museum uses photos, models, and artifacts throughout the exhibit to introduce visitors to the history of the port. Additionally, it provides an overview of key companies and maritime careers. Bowlin explains, "Most people that are not directly involved with the maritime industry or the Port of Houston know surprisingly little about the port and its key role in Houston's development. We hope to change that with our exhibit."

Over the past hundred years, the port has grown into one of the largest in the world, and is a key factor in the region's and the nation's economic growth. In the ship channel's infancy, many people doubted that Buffalo Bayou, at a depth of only six feet, could become a viable port. To demonstrate that steamships could navigate to Allen's Landing, the Allen brothers, who were deeply invested in the success of Houston and the channel, hired the eighty-five-foot steamer *Laura* to travel the five miles from Harrisburg to Houston on the bayou. While the journey took three days due to the narrow, dense waterway, it marked the beginning of a successful campaign to produce a deep-water port.

On November 10, 1914, thousands of people lined the waterway, and President Woodrow Wilson pressed a button at the White House to fire a cannon in Houston signaling the official opening of the Houston Ship Channel. Within five years, the port had become so successful that supporters commenced a campaign to increase the channel's depth to thirty feet.

The dawn of container shipping took center stage in 1956 when *Ideal X's* shipment of fifty-eight loaded containers arrived in Houston from New York.⁹ Port officials realized their local port was now competing with ports around the world, and they demanded expansion once again. Thus, in 1958, Congress authorized increasing the channel's depth to forty feet, and by 2005, it had reached a depth of forty-five feet and a width of 535 feet.

With approximately 8,000 deep-draft ships from over 150 countries calling at the port each year and over 200,000 barge transits, what started out being called "a ditch" is now one of the largest ports producing \$500 billion in economic activity for the United States.¹⁰ The Houston Ship Channel is over fifty miles long, extending from the sea buoy off Galveston to the Turning Basin, a few miles from City Hall. The Port of Houston Authority owns many of the terminals along the channel while others are private facilities, such as the refineries.

Recognizing the significance of the Port of Houston and

HMM's model of MSC's Alexa.



Loyal docent, Charles Cozewith teaches students about the whaling industry, the energy precursor to oil and gas.

Houston Ship Channel, HMM plans to move to a new location adjacent to the *MV Sam Houston* tour boat by 2016. Niels Aalund explains that, "Relocating to the Ship Channel will allow us to fulfill the museum's mission: to be Houston's showcase of maritime heritage and commerce."¹¹ The move will also satisfy the museum's need for a larger space.

The museum's goal is to become one of the region's biggest world-class destinations in the next five to ten years. The new building, projected to be three times larger than the current space, will enable the HMM to fully exhibit and expand its current collections, increase its patronage, and build on its educational programming through innovative exhibits to "promote respect and a greater understanding of the maritime industry's impact on the region, nation, and world." In addition, Bowlin shares, "We will have traveling exhibits from other reputable institutions, including visiting vessels, which will allow patrons the opportunity to obtain a hands-on maritime experience." With the larger space, the HMM can also accommodate larger school groups, perhaps inspiring new generations to consider maritime careers.¹²

Explore the Houston Maritime Museum and enjoy the wonder of the maritime world and heritage! The museum is located at 2204 Dorrington and is open Tuesday through Saturday 9:00 a.m. to 5:00 p.m. Admission is \$5.00 for ages twelve and up, \$3.00 for ages three to eleven, and free for ages under three, active military, and veterans. Visit www.houstonmaritimemuseum.org.

Jenny Podoloff graduated from the University of Texas with a Bachelor of Journalism – Public Relations in 1998. After living in Los Angeles and Portland, Oregon, for a number of years, she returned to Houston where she works as the client services representative for (PR)¹², a Houston-based public relations firm.

Three Continents Studio: From the Bayou to the Biennale

By Jackson Fox



An aerial perspective of the Three Continents Studio Exhibition on display in the Gerald D. Hines College of Architecture at the University of Houston.

Photo courtesy of Peter Zweig.

*F*rom the Gulf of Mexico to the heart of downtown, the Houston Ship Channel has proved to be a vital piece of the city's growth for one hundred years. Through history, we can trace how Houston's economic ethos has transformed a narrow, winding bayou into an international epicenter of import. Home to nearly 200 international companies and petrochemical plants, the ship channel has literally cemented its place in the city's past, present, and foreseeable future. How is it possible that the Houston Ship Channel, stretching more than fifty-two miles long, generating more than one million jobs, connecting us so crucially to the regional, national, and global economy, remains so detached from our local culture?¹

In the wake of recent water-related disasters around the globe, the Gerald D. Hines College of Architecture at the University of Houston is spearheading an international research effort to explore and elevate these critical questions on a global stage. This consortium, entitled “Three Continents Studio: Living in Dynamic Equilibrium,” is led by Houston architect and educator, Peter Zweig. Together, the students and faculty of Tulane University in New Orleans, the University of Buenos Aires in Argentina, the Delft University of Technology in the Netherlands, and architecture students at the University of Houston embarked on an unprecedented exploration to analyze the urban condition in each of their respective coastal cities. Professor Zweig emphasized the importance of “building a concept around [water and flooding]” to channel the efforts of each school into one, cohesive story.² Though each city brings unique and local challenges to the forefront, they all share a long-established history of systematic flooding issues. As these four schools on three continents combine research, exchange ideas, and conceptualize solutions, they demonstrate innovative approaches to city planning and showcase cooperative values, symbolic and indispensable to architecture in the twenty-first century.

On the outskirts of the University of Houston, in a cramped, cluttered studio on the top floor of the architecture building, the students of Peter Zweig’s Three Continents research program meet daily to discuss the past, present, and perhaps most important, the future of Houston. The studio is littered with city maps, drawings, charts, and models strewn across every available surface. Centered on the wall is a single, circular port window. The only view out, it looks north, framing a panoramic view of downtown Houston and the surrounding urban landscape.

The signature contours of our high-rise cityscape, like the Bank of America Building, Chase Tower, Heritage Center, Pennzoil Place, Wells Fargo Plaza, and the George R. Brown Convention Center, define the spirit of the city’s economic vitality and perseverance—a manifestation built on its entrepreneurial charisma. Gazing out that window, from left to right (west to east), the crowning peaks of downtown descend in scale, becoming less familiar and less significant. The panning view eventually terminates at the low, flat roofs of indiscriminate, box-like buildings that become a collage of grays and browns. This is the East End. Wedged between Houston’s central business district and the ship channel, the East End has been shaped by the city’s rise and decline in an industrial era, a candid chapter in Houston’s history of expansive growth.

Just as sprawling and cumbersome as it appears, Houston is always in a state of transition. From the constant construction to the culture, the city refuses to stop growing, morphing, and evolving. As the city periphery continues to stretch, swallowing up outlying suburbs, Houston’s indigenous wetlands become increasingly threatened. An ecological heart for Houston, the bayou reveals a compelling narrative of how and why Houston, in a long-established heritage of opportunism, has repeatedly cut, shoaled, and dredged the edges of its most celebrated waterway, Buffalo Bayou.

The founding of Houston along Buffalo Bayou is a single



Buffalo Bayou plays an enriching role in Houston's history not only through its transformation into the ship channel, but also through its social and cultural heritage exemplified by this African American baptism in 1901.

Photo courtesy of Special Collections, M. D. Anderson Library, University of Houston.

piece of a larger puzzle, falling subject to a broader history of settlement on regional rivers of the Gulf of Mexico. The reoccurring conflict between man’s economic drive and nature’s unpredictability has become a local tradition.

Before the ship channel, before Houston, before the Allen Brothers, and even before European settlers descended on the Gulf Coast, the bayous of Southeast Texas were the territory of Native Americans. Tribes like Orcoquiza (or Akokisa) and Bidais roamed the banks of creeks, streams, bayous, and rivers in the region.³

During the eighteenth century, in an attempt to establish a port, Spanish explorers spent decades scouting and mapping a navigable water route inland from the Gulf, trying the Sabine, Neches, Colorado, and Red Rivers. The early nineteenth century settlers of Austin Colony thrived on the fluvial plains of the Brazos River.⁴ Booming agricultural success of cash crops like cotton and sugar, as early as 1825, warranted an immediate commercial interest in establishing a water transportation route in and out of the Brazos River Valley.⁵ Many attempts to build a reliable trade route inland from the Gulf Coast failed in the wake of inconsistent water elevations and the unpredictable flooding of coastal rivers. Nevertheless, establishing a port along Texas’s coast was an experimental enterprise, gaining economic momentum.

Indigenous to Industrial: The Bayou in Dual Contexts

To design a new, compelling portrait of the city, Professor Zweig and his students set out to explore Houston’s waterways for themselves. To gain a more wholesome understanding of Buffalo Bayou’s significance to the city, students sought to experience the bayou from two polar perspectives—a boat tour of the Houston Ship Channel chauffeured by the Port of Houston Authority and a guided boat tour down Buffalo Bayou by the Buffalo Bayou Partnership. These two contexts of the bayou, just a few miles apart, evoke two starkly contrasting experiences and perceptions of Houston’s relationship with the bayou and nature.

From the water, the Houston Ship Channel tells a phenomenal story. Gliding down the center of the channel, the skyline is completely absent and it is surreal to think you are still within the city limits. Like ruinous artifacts, old storage warehouses and office parks pepper the banks of the bayou in the East End. Some stand strong in an aura of timeless antiquity, hailing an age of brute industrial know-how in a young, churning American city. Others less so. Broken glass, dilapidated roofs, crumbling bricks—some structures act more like gravestones in a post-industrial cemetery. The export grain elevator on Clinton Drive, a testament to Houston's industrial prosperity in the early twentieth century, straddles the line between a historic jewel and junk. Built in 1926 to supplement a growing demand, the grain elevator became the cornerstone public project of the newly formed Port Commission.⁶ It sits opposite the Turning Basin, inherently dominating the drab skyline with its towering height.

As the tour moves farther east, the ship channel becomes increasingly animated with more ships, more buildings, and more people. It is an industrial corridor almost reminiscent of some hometown shopping center or marketplace but blown up in scale. Freighters and tankers, like cars, are tugged in and out of parallel parking spots while workers wave from the docked ships and crane towers—a surprisingly human process. Concrete wharfs and terminals line each side of the bayou, elevated to avoid the potential for flooding. The newer petrochemical plants reach out towards the water from mazes of tangled ducts, spherical silos, and spiraling smokestacks. The inherent efficiency engineered into these impressive structures transcends their sheer utility as refineries. From an architectural perspective, they are beautifully complex.

At no point during the tour does the ship channel break its industrial prose. Very little “natural” is left at its edges. As Houston grows, its bayous are dredged, widened, shoaled, and paved for more speculation, more freight tonnage, larger ships, and more money. Self-regulation, obsolete equipment, and haphazard procedures fostered decades of environmental neglect.⁷ With the consideration of the natural environment virtually absent, the edges of the ship channel today are a verse of Houston's resounding mantra, where the entrepreneurial spirit of the private sector overshadows the indigenous nature.⁸

Touring Buffalo Bayou in the midst of downtown describes a completely different experience. Pushing off near Allen's Landing, there is an innate connection to the past. Like speculators themselves, Zweig and his students search for connections, decode relationships, and identify opportunities that will unlock the potential of Buffalo Bayou for their own projects. Sloping down, below the bustling activity of downtown, the surface of the bayou is quiet, insulated from the whirring drone of traffic above. As the water winds through the west end of the city, it slides at a smooth, gentle pace. The harsh slopes on either side are layered in lush, vibrant vegetation that blur the line between land and water.

When the tour moves into downtown, it becomes increasingly difficult to know exactly where you are. Allowing only a series of fleeting, fragmented glimpses of the skyline, the bayou leads you down a snaking path of unpredictable closeness with the city. As the boat carefully maneuvers under low-hanging branches or weaves around mazes of columns under the highways, the city and nature meet in odd ways. The old, antiquated Union Pacific rail lines, overgrown and outdated, spring to life in the rippling wake

Passengers who make their way down the Houston Ship Channel on the tour boat Sam Houston have a chance to observe firsthand the industrial facilities and maritime interests that drive Houston's economy.

Photo by PA2 James Dillard, courtesy of the U.S. Coast Guard.





The author created many maps for the Three Continents Project to show the impact of development on the waterway. This building footprint of Houston, shown in gray, is a map derived from information by the Houston Geographic Information Management System.

Image courtesy of author.

of the water. The edges of Buffalo Bayou here are more riparian, undulating, and natural than the rigid grid of streets and buildings above.

The bayou in this context owes much of its preserved beauty to Terry Hershey, a local icon of environmental activism. Since the forties, in an effort to mitigate flooding and protect the economic investments of our energy industry, the Army Corps of Engineers continually paved portions of Houston's bayou network, destroying much of the vegetation and wildlife below and above the water's surface.⁹ Throughout the sixties, Hershey led the Buffalo Bayou Preservation Association in an unprecedented effort to halt the paving of Houston's bayous. Directing the Save Buffalo Bayou Campaign, from its grass roots to the state congress, Hershey blazed a trail through the political processes that small environmental advocacy groups still use today.¹⁰

Both tours of Buffalo Bayou reveal remarkably polar attitudes of the city. From the water, they both seem to separate you from the expectations of Houston. The hard, utilitarian industrial-scape of the ship channel affirms a history rooted deep in economic vigor and industrial strength. The concrete wharfs, callous with rusty lines from surging waters, command the water's edge. Mere miles upstream, the Buffalo Bayou reverts in part back to its indigenous beginnings, flowing in a sly, natural rhythm. Dwarfed by the scale of downtown high rises, it slithers quietly in from the west, largely overlooked and underestimated by most Houstonians—but not all. Since its renovation in 2010, Buffalo Bayou is being reenergized with recreational trails and public parks, reengaging people with the water, reconnecting a tradition long since detached.¹¹

Experiential to Empirical: Connecting the Dots

To bring the story of Buffalo Bayou to the world, Peter Zweig orchestrated the efforts of his senior architecture

students, professional colleagues, and industry experts with local businesses, artists, and fabricators. Through months of researching, mapping, and modeling, the studio developed an exhibition strategy to translate their experiences on the bayou into something graphic, measurable, and empirical. Using a narrative of maps, diagrams, photographs, and models, the students began to tell *their* story of Houston rather than *the* story of Houston.

Historic cartographies, topographic surveys, demographic studies, public health reports—the scope of research formed a new collage of issues far beyond the discipline of architecture, an ecological atlas synthesized from the physical and emotional experiences with the city.¹² Collecting information already gathered by local, state, and national government agencies, students took existing, documented data and re-layered it in new, innovative ways, revealing complex relationships between geography, flood control, population density, ethnicity, income, commodity flow, toxic superfunds, public health, and infrastructure. Sources like Rice University's Kinder Institute for Urban Research, the Houston Geographic Information Management System, Harris County Flood Control District, and Department of the Interior provide the public with access to isolated issues, but the Three Continents Studio is layering these maps, stratifying these critical issues, and redrawing Houston, scripting a new narrative based on research and their own experiences of Buffalo Bayou.

The silhouette of Buffalo Bayou, matte black on a white background became the flag of the Three Continents Studio and the template from which they show most of the presentation research. Maps that integrate hard and soft science—empirical and experiential data—symbolize a new understanding of Houston in the twenty-first century where it is the quality not quantity of place that holds our prosperous future.



The tour along Buffalo Bayou provides a quiet surrounding, contrasting it with the loud noises of industry at the nearby Port of Houston.

Photo by Tom Fox/SWA Group courtesy of the Buffalo Bayou Partnership.

From Analysis to Architecture

In addition to the research, each student of the Three Continents Studio produced a small project, an architectural proposal for Houston that would turn something “negative” about Buffalo Bayou into a “positive.” Students showcased their proposals on a gleaming, twenty-two-foot-long model, the centerpiece of their exhibition. One by one they tackled issues of run-off, adaptive re-use, urban parks, pedestrian bridges, water and air quality, community farming, even a prison constructed out of storage containers.

Recently, Zweig led a small team of students to Venice, Italy, to present their exhibition *Risky Habit[at]* to the world at the 2014 Architectural Biennale. Displayed in a fifteenth-century palazzo along the Grand Canal, the students curated their proposals along Buffalo Bayou to an international audience of architects and engineers. Since its debut,

the project, which remained on display until November 2014, has received the 2014 Global Art Affairs Foundation Prize. For the students in the Three Continents program, this project has undoubtedly changed their outlook, not only about architecture, but the research and its fundamental role within all design. These students, all in their early twenties, are breathing an inspiring optimism into their city, focused on designing a future balanced between private prosperity and ecological rejuvenation as they carve their own ways in the professional world.

Jackson Fox is a graduate of the Gerald D. Hines College of Architecture at the University of Houston. He is pursuing a career in architectural research and environmental design and continues to work with students and faculty from the Three Continents program.

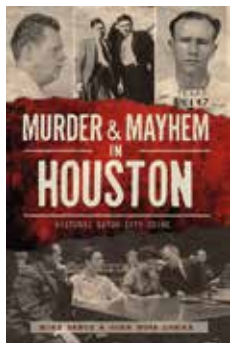
University of Houston faculty and students from the Gerald D. Hines College of Architecture on opening night of the Risky Habit[at] exhibition in Venice. Pictured left to right: Suresh Khator, Peter Zweig, Jackson Fox, Lacey Richter, Wells Barber, Houston developer Gerald D. Hines, David Regone, UH President Renu Khator, Sam Goulas, Dean Patricia Oliver, Michael Rotondi.

Photo courtesy of author.



News Updates & Books *by Barbara Eaves*

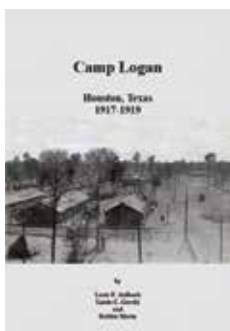
BOOKS & DOCUMENTARIES



Murder and Mayhem in Houston, by John Nova Lomax and Mike Vance (History Press, \$20). From the time of the first lot sale in Houston, the Allen Brothers' city has attracted enterprising tycoons and opportunistic crooks. Yes, our town's past is filled with bloody tales, heartbreaking loss, and downright creepiness – as well as plenty of good things! This volume of criminal tales shines light on the city's

dark shadows and delivers something new to even the most informed Houston history buffs.

Two new full-length documentaries from Mike Vance's *Birth of Texas Series* also are available. The first is *San Felipe and American Settlement*; the next is *Washington-on-the-Brazos: The Politics of Revolution*. Order from www.houstonartsandmedia.org.



Camp Logan, Houston, Texas, 1917-1919, by Louis F. Aulbach, Linda C. Gorski, and Robbie Morin. The U.S. Army established Camp Logan as an emergency training center during World War I on land that later became Memorial Park. This book covers an almost forgotten chapter in Houston's history. It is a tribute to the 44,000 men who trained at Camp Logan, which include nine Medal of Honor

winners and seventy-one African American soldiers who won the French Croix de Guerre. The book was the basis of the Camp Logan exhibit at the Heritage Society earlier this year.

NEWS

UNIVERSITY OF HOUSTON'S ARTE PÚBLICO PRESS won three International Latino Book Awards for literary excellence. *Our Lost Border: Essays on Life amid the Narco-Violence* edited by Sarah Cortez and Sergio Troncoso won the top Latino-focused nonfiction book award; *The Missing Chancleta and Other Top-Secret Cases* by Alidis Vicente took the best youth fiction trophy; and *Desperado: A Mile-High Noir* by Manuel Ramos won honorable mention in the mystery category.

SAN JACINTO BATTLEGROUND CONSERVANCY



Archaeologists continue to find artifacts that prove the Battle of San Jacinto extended beyond the boundaries of the state historic site, and the San Jacinto Battleground Conservancy continues to acquire and restore pieces of the battlefield landscape as they become available. Last

August the Conservancy closed on four acres of land both armies traversed and is raising restoration funding. Two or three other tracts are on its "wish list." To contribute contact Jan DeVault at 713-237-8997.

Every speaker in every San Jacinto Symposium from 2000 through 2014 is now posted verbatim on the Conservancy's website. This, thanks to hours of volunteer toil from Mark Pirtle, who taped the sessions and aired them on Houston Media Source, and committeeman David Singleton, who did the programming and editing. Log onto www.sanjacintoconservancy.org, go to the "Latest News" column on the left, and click on "Lecture Videos and Newsletters" to make your choice.

THE NAU CENTER FOR TEXAS CULTURAL HERITAGE

The Southern Pacific 982 steam engine will be featured in the Nau Center for Texas Cultural Heritage's *Engines of Progress* exhibit, sponsored by Union Pacific. Bringing history to life through the magic of special effects, the exhibit will celebrate the Southeast Texas railroad industry and its role in the development, growth, and economic success of Houston. As part of the job to level the tracks for SP982's future home, two 250-ton cranes hoisted the 300,000-pound steam engine fifteen feet into the air and moved it across the lot to its current location. Thanks to a generous donation from Stewart Morris and his late wife Joella, SP982 is almost fully cosmetically restored. The Nau Center, located between the George R. Brown Convention Center and Minute Maid Park, is slated for completion in late 2016.



Photo by Nick de la Torre.

THE SAN JACINTO MUSEUM OF HISTORY

2014 marks the 75th anniversary of the opening of the San Jacinto Monument and the San Jacinto Museum of History located there. A multi-venue exhibit commemorating the two-day, 1936 celebration will hang at the museum and



remain online through November. Other events honor Dow Chemical Company's support of the Jesse H. Jones Theatre for Texas Studies and the San Jacinto Day Festivals and Battle Reenactments over

the past decade. Finally, catch the best view of the city of Houston from atop the monument anytime. With the museum and Texas Parks & Wildlife, EarthCam has installed a camera 540' up, just beneath the 220-ton star, to provide live coverage of this knockout view 24/7. Visit www.sanjacinto-museum.org. The San Jacinto Battleground is at 1 Monument Circle in La Porte.

THE BRYAN MUSEUM, the new home for the Mary Jon and J. P. Bryan Collection, will open in spring 2015 in the restored Galveston Orphans Home at 1315 21st Street. The new



museum will display art, artifacts, and historical documents that detail the settlement of Texas and the American Southwest. A library and archive for scholarly research will be open by appointment. The museum's director is Jamie Christy, Ph.D., and Andrew

Gustafson is the curator – both University of Houston graduates. Visit www.thebryanmuseum.com.

THE ALLEY THEATRE will spend its 2014-2015 season at the University of Houston's Wortham Theatre while it com-



pletes a \$46.5 million renovation of its historic home, which opened in 1968. In the picture at left, Roger Plank, who with Meredith Long co-chairs the fundraising campaign, whacks an annoying column that will be removed from the Hubbard Stage. Renovations will create a more intimate performance space to enrich the audience's experience and add twenty-first

century theatre systems and audience amenities.

BUFFALO BAYOU PARTNERSHIP – The Dunlavy, a multi-purpose event space located near Dunlavy and Allen Parkway overlooking the banks of Buffalo Bayou and Lost Lake, will open by next summer as one of the major destinations along Buffalo Bayou Park. The facility is a joint project of the Buffalo Bayou Partnership and Clark Cooper Concepts, owner of five Houston restaurants. The Dunlavy “will offer something for every park user,” said Sis Johnson, board chair of the partnership, “whether a picnicker grabbing a quick bite, a cyclist picking up a park map, an adventurer renting a kayak, or an event planner looking for an idyllic venue to host a gathering.”



EMILY ARDOIN has joined the Heritage Society as building curator. Emily worked as a commercial designer and space planner in New Orleans for four years, while volunteering with local historic preservation organizations. She then earned a master's in historic preservation from UT-Austin where she focused on architecture of the recent past and vernacular architecture of the Gulf Coast states.



MAGGIE BROWN has joined Houston Baptist University as curator of two of its museums. The Museum of Southern History contains mostly relics from the Confederacy and the Civil War, and the American Architecture & Decorative Arts Museum concentrates on Texas household items from 1830 to 1930 and

has a magnificent doll collection.



SARAH CONLON has come aboard Battleship *Texas* as curator/collections manager of the world's only remaining dreadnaught-class ship, one that saw action in both world wars. A Sugarland native, Sarah brings with her a bachelor's degree in history and English from Rice, a master's in public history from the

University of South Carolina, and two years of experience as collections manager in the Mississippi Department of Archives & History.

RICK LOWE, founder of Project Row Houses, was named a 2014 MacArthur fellow. The prestigious award includes a \$645,000 grant over five years. Project Row Houses is a unique campus of restored shotgun houses in the Third Ward that celebrates African American art and culture and preserves the history of the area. It began twenty years ago when students asked Lowe to create solutions to problems instead of works that told community members about things they already knew. Lowe and a group of artists, using grants as seed money, bought twenty-two dilapidated structures and recruited companies, organizations, and individuals to restore them as artists' studios and homes. Today the campus also includes eight houses for single mothers, the Eldorado Ballroom, and the Bert Long sculpture, *Field of Vision. Round 41*, an exhibit relating the labor of local workers to the labor of artists, will be on display in the gallery houses through March 2015 in honor of the group's anniversary. The exhibits are open at 2521 Holman Wednesday through Sunday, noon to 5:00 p.m.

MICHAEL MCFADDEN recently became the new communications and marketing manager at Project Row Houses.

HIGH FIRST WARD HISTORIC DISTRICT ESTABLISHED

In May, the High First Ward became the city's twenty-second historic district. Part of the original First Ward the new district takes in sections on Crockett between Johnson and Henderson Streets, and includes pieces of Shearn, Spring, and Summer Streets as well. Founded in the 1800s, High First Ward is historically a working-class neighborhood located near downtown and Buffalo Bayou and intersected by two railroad lines. Many original residents worked for the railroads or in shops serving that industry.

Today, the two train lines remain, and the area continues to attract those who want to live near downtown. Most of the houses are Queen Anne cottages and Craftsman bungalows built between 1890 and 1930.

WEST END PARK MARKED – On July 12, the county dedicated a historical marker for West End Park, which opened in 1905 as the second home for the city's Texas League ball club, the Houston Buffaloes. This field, now home to a power station near Allen Center, witnessed many historic moments, such as exhibition games featuring Babe Ruth and Ty Cobb, the 1907 season with Tris Speaker as a Houston Buff, home games for the Black Buffaloes, and the Colored World Series in 1929 and 1930 when the Black Buffaloes faced the Kansas City Monarchs and the Chicago American Giants.



The park also hosted track and field meets, circuses, wrestling matches, football games, religious revivals, and more.

The Harris County Historical Commission's Debra Blacklock-Sloan and Houston Arts & Media founder Michael Vance prepare to unveil the West End Park marker.

EVENTS

Through Dec. 31: The Heritage Society in association with Arts Brookfield has organized an exhibition, *Texas Treasures: Fine Furnishings from the 1849 Kellum-Noble House*, in One Allen Center at 500 Dallas while the Kellum-Noble house is under restoration. The exhibition of mid-nineteenth century Texas-made furnishings is open in the second floor lobby, from 11:00 a.m. to 2:00 p.m., Monday through Friday. Admission is free, as is parking in The Heritage Society lot.

Through Jan. 31: *Stories of a Workforce: Celebrating the Centennial of the Houston Ship Channel* an exhibit at the Julia Ideson Library, explores the diverse culture and heritage of the men and women who work at the port and ship channel. From the time when everything moved by manual labor to the era of automation and containerization, the history is traced through photographs, artifacts, and multimedia installations. Interactive programs will especially appeal to families and school audiences.

Through Feb. 14, 2015: *Postcards from the Trenches: Germans and Americans Visualize the Great War* commemorates the 100th anniversary of World War I and highlights the human side of the war as told through ordinary soldiers' artwork painted on postcards—the era's social media. The exhibit is on display at the Printing Museum,



Exhibit postcard painted by Otto Schubert.

1324 Clay between Waugh and Montrose, Tues. through Sat., 10:00 a.m. to 5:00 p.m. For a schedule of events and speakers, visit www.postcardsfromthetrenches.com.

Nov. 10: Port Re-dedication – In 1914, President Woodrow Wilson punched a button in Washington, D.C., igniting a cannon 1,400 miles away at the Houston Ship Channel Turning Basin. Mayor Ben Campbell's daughter Sue sprinkled white roses into the channel's muddy waters proclaiming, "I christen thee Port Houston; hither the boats of all nations may come and receive a hearty welcome." And thus the channel officially opened. Thousands attended the opening 100 years ago, and thousands are expected to attend the re-dedication. For a slate of events, exhibits, books, and films, visit www.promotehoustonshipchannel2014.org.

Nov. 20: Dr. Gregg Dimmick's discussion of archeology at the San Jacinto Battleground includes an update on recently-discovered artifacts that pinpoint Gen. Almonte's surrender site. Houston Archeology Society, 7:00 p.m., University of St. Thomas, 3800 Montrose, Bldg. 20, Anderson Hall, free to the public. Park free on the street or pay \$2 to park in the Moran Center Garage, corner of West Alabama and Graustark.

Dec. 13- 14: The Heritage Society's 52nd Annual Candlelight Tour will be held Saturday and Sunday, 5:00 to 9:00 p.m. Tickets are \$10 for adults, \$8 for seniors, students 6-18 and children are free.



Jan. 18, 2015: Join Buffalo Bayou Partnership's Team Buffalo Bayou and receive guaranteed entry to the Chevron Houston Marathon or Aramco Half-Marathon through the Fundraising for Registration program. Raise \$650 for BBP and pay your registration fee (\$115 for the half marathon, \$125 for the full) and you get to run yourself to exhaustion and win all the team perks. Email Leigh McBurnett at lmcburnett@buffalobayou.org to sign up and help beautify our historic bayou!

April 18, 2015: The 15th Annual San Jacinto Symposium features six outstanding speakers focusing on the impact of Native Americans in the Mexican colonial era, the Texas Revolution, and the Republic of Texas. For information, visit www.sanjacintoconservancy.org

April 24-26, 2015: CASETA, the Center for Advancement & Study of Early Texas Art, will hold its annual symposium at the newly remodeled student center at the University of Houston. A "must attend" for Houstonians interested in Texas art history and cultural development, CASETA is the only statewide member organization exclusively devoted to research, documentation, and advancement of Texas art history. Visit www.caseta.org.



Houston History thanks the **Southeast Houston Transformation Alliance** and the **Houston Texans YMCA** for hosting the launch party for our summer digital issue, "Southeast Houston: From Pastures to South Park to MLK." Attendees celebrated the history of the area, watched videos, saw the bench Sam Jones created from items found at the Kuhlman Gully and heard him speak about the process, and enjoyed a performance by members of The Lord Jesus Christ Holiness Church choir. Special thanks go to *Houston History* board members **Betty Chapman, Anne Sloan, Susan Bischoff, Barbara Eaves, Steven Fenberg, and Fred Korge** who contributed to the refreshments.

Thank You!

Thank you to **Brazos Bookstore** and manager **Jeremy Ellis** for hosting our first magazine reading. Authors of the summer issue read selected passages from their articles, and a wonderful discussion on the history of Southeast Houston was held. Attendees also enjoyed porusing the bookstore and chatting with the authors. We look forward to future readings and discussions at Brazos Bookstore!



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