



# Buffalo Bayou

## National Heritage Area Study





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National Park Service  
Intermountain Region  
12795 West Alameda Parkway  
Lakewood, CO 80228

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Front cover images:

Top center: Detail of "Surrender of Santa Anna,"  
by William Henry Huddle, 1836  
(Courtesy Texas State Preservation Board).

Bottom left: Allen's Landing, Houston (NPS photo).

Bottom right: A sunrise view of one of the many refineries  
in the Houston area (Photo © Jim Olive, Stockyard.com).

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A view of the Buffalo Bayou in the downtown Houston area  
(photo credit: Jim Olive, Stockyard.com)

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## Chapter 1: Introduction

### Study Criteria

*The Buffalo Bayou National Heritage Area Study Act (Public Law 107-337) authorized a study to examine the suitability and feasibility of establishing a National Heritage Area in the Buffalo Bayou. The legislation specified that eight specific criteria must be met in order for Buffalo Bayou to be considered as a National Heritage Area. The legislation requires the National Park Service to determine whether the Study Area:*

- (A) has an assemblage of natural, historic, and cultural resources that together represent distinctive aspects of American heritage worthy of recognition, conservation, interpretation, and continuing use, and are best managed through partnerships among public and private entities and by combining diverse and sometimes noncontiguous resources and active communities;*
- (B) reflects traditions, customs, beliefs, and folklife that are a valuable part of the national story;*
- (C) provides outstanding opportunities to conserve natural, historic, cultural, or scenic features;*  
*(continued on next page)*

### Purpose

On December 16, 2002, Congress passed the *Buffalo Bayou National Heritage Area Study Act* (Public Law 107-337), which authorized the National Park Service to study the suitability and feasibility of establishing the Buffalo Bayou National Heritage Area. Funding became available in 2005, at which time the National Park Service, Intermountain Regional Office, undertook the study. This report summarizes the results of that effort, including an assessment as to whether the proposed Buffalo Bayou National Heritage Area meets the eight criteria outlined in Public Law 107-337 (listed in left column).

### Why a Buffalo Bayou National Heritage Area?

When brothers Augustus Chapman Allen and John Kirby Allen came upon the spot where they would establish the city of Houston in 1836, they envisioned a great new city, but could not have imagined Houston's role in fueling the rise of the United States as a world power in the 20th century. The Houston town site was located along the Buffalo Bayou, which was the only semi-navigable waterway running east and west in Texas. The bayou eventually became a major economic access point into the hinterland of the Southwest and a corridor to the Gulf of Mexico and beyond. Cotton was the chief export in the last half of the 19th century. However, the 1901 oil strikes, especially those at Spindletop, revolutionized the area's economy as Texas soon surpassed Pennsylvania in oil production and refining. The disastrous 1909 hurricane that hit Galveston further strengthened Houston's case for an inland port. Local efforts to dredge the bayou

were supplemented when federal funding was provided to create the Houston Ship Channel in 1914. Since then, the Port of Houston has become the busiest port in the United States in terms of foreign tonnage, second busiest in the United States in terms of overall tonnage, and tenth busiest in the world. In total, it accounts for 215 million tons of cargo per year. Buffalo Bayou's complex of petrochemical plants employs over 35,000 people. Oil and gas refining along the bayou remains the foundation of Houston's economy, providing 13% of the nation's refining capacity. Exxon/Mobil's Baytown facility alone processes 557,000 barrels a day, making the facility one of the world's largest.

The economic growth of the Buffalo Bayou as a center for oil and petrochemical production shaped the community's character. As in Detroit and Pittsburgh—other authorized National Heritage Areas that reflect previous eras of national economic growth—Houston's oil industry helped draw and meld cultures that then helped define its regional character. The influx of immigrants included poor white and black tenant farmers and family farmers who left behind depressed agricultural economies in East Texas and western Louisiana; Mexican Americans and Mexican nationals; and Cajuns from South Louisiana. The burgeoning workforce also led to improvement in working conditions, first through paternalistic company towns, then through the advent of a strong labor union movement along the Houston Ship Channel, in a state where unions otherwise had little presence or impact. This “gumbo” of different cultures had a strong effect on the area's food and music. Whether Cajun or country-fried, the foods that Houstonians eat are

## Study Criteria

(continued from previous page)

- (D) provides outstanding recreational and educational opportunities;*
- (E) contains resources important to the identified theme or themes of the Study Area that retain a degree of integrity capable of supporting interpretation;*
- (F) includes residents, business interests, nonprofit organizations, and local and State governments that are involved in the planning, have developed a conceptual financial plan that outlines the roles for all participants, including the Federal Government, and have demonstrated support for the concept of a national heritage area;*
- (G) has a potential management entity to work in partnership with residents, business interests, nonprofit organizations, and local and State governments to develop a national heritage area consistent with continued local and State economic activity; and*
- (H) has a conceptual boundary map that is supported by the public.*

spiced by this influx. Zydeco emerged as a new sound from this mix, and country, country blues, and rhythm and blues all found a strong presence in Houston.

Adjacent to the ship channel is the San Jacinto Battleground State Historic Site, where Texas gained its independence as a republic. A National Historic Landmark and state park, the San Jacinto Battleground provides the cultural and natural landscape for the second major theme of a potential National Heritage Area: Texas independence. The historic site also includes the USS Texas battleship, also designated as a National Historic Landmark, which was built in the “dreadnought” era and launched in 1912. After serving in World War I, the ship was updated for service in World War II, and participated in the amphibious invasions of Normandy, Iwo Jima, and Okinawa.

Historian Lynn M. Alperin has stated that “Buffalo Bayou has been transformed from a meandering stream into a vast industrial complex.” But that transformation

has not been without environmental consequences. However, as with most cities throughout the United States in the second half of the 20th century, Houston has worked to balance economic development with environmental protection. Parts of the story of the proposed Buffalo Bayou National Heritage Area are environmental and recreational initiatives, supported by its industries, including wetlands restoration, trails development, prairie ground restoration, riverfront park development, and natural preserves. These efforts are part of the story of the community’s efforts to improve the quality of life for Houston’s two million people.

## What Is A National Heritage Area?

A National Heritage Area is a place recognized by the United States Congress for its unique contribution to the American experience. In a National Heritage Area, natural, cultural, historical, and recreational resources combine to form a cohesive, nationally distinctive landscape



From the top of the 570-foot-tall San Jacinto Monument, visitors may gain an appreciation for both of the historic themes associated with the Buffalo Bayou (NPS photo).

arising from patterns of human activity shaped by geography. These patterns make National Heritage Areas representative of the national experience through the physical features that remain and the traditions that have evolved in these areas. Continued use of National Heritage Areas by the people whose traditions helped to shape the landscapes enhances their significance.

Beginning in 1984, National Heritage Areas were created by Congress as a new vehicle by which a region, through collaboration and partnerships, could conserve and promote its natural, cultural, and historic resources, linking resource conservation, tourism, and economic development. It is important to note the voluntary nature of this initiative, as they do not require, create or permit any regulatory layers or restrictions on private property. As designated by Congress, each National Heritage Area is governed by separate authorizing legislation and operates under provisions unique to its resources and desired goals.

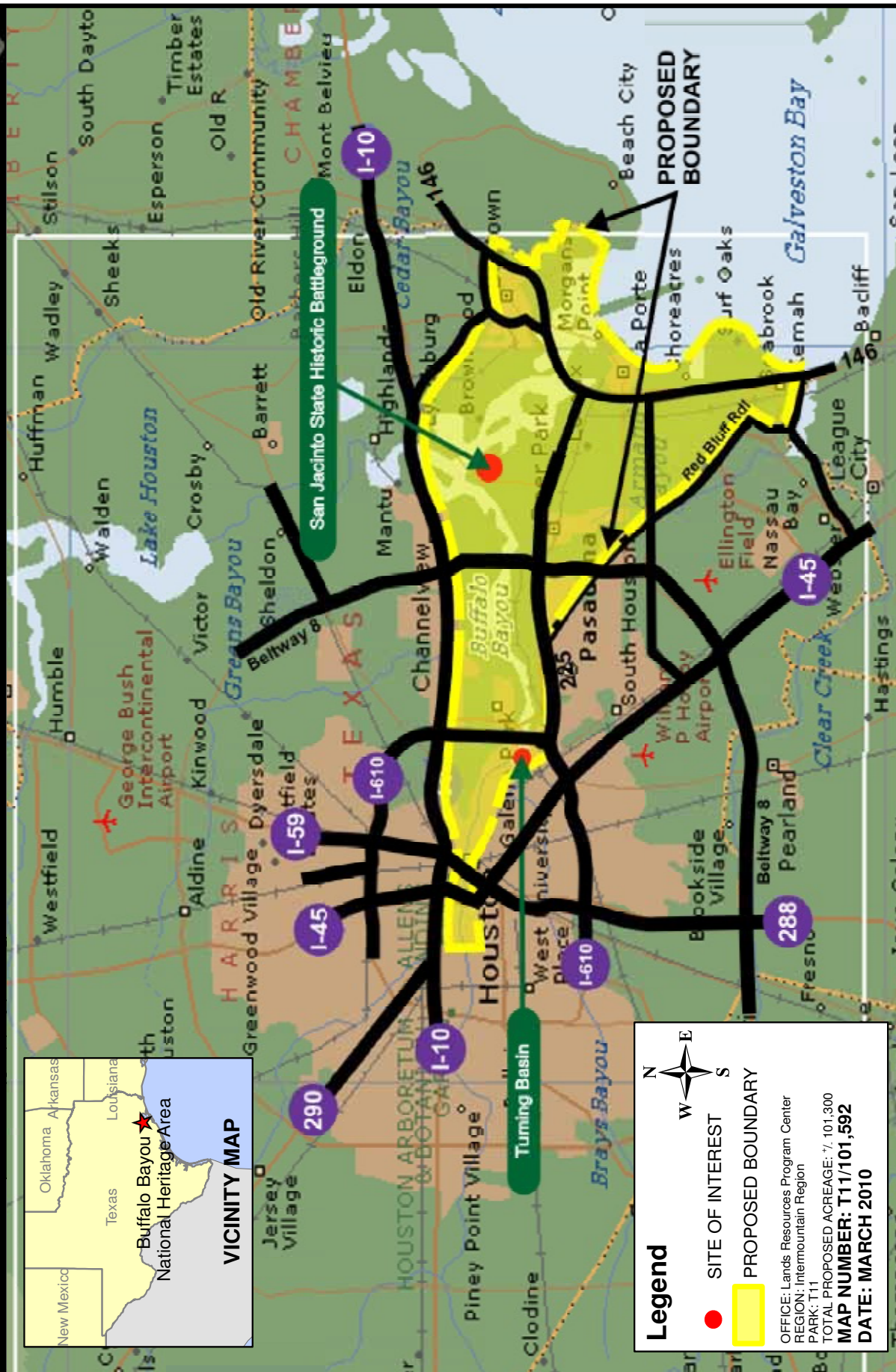
Creation of a National Heritage Area is primarily an outgrowth of local grass-roots efforts. Local supporters bring a proposed heritage area to the attention of legislators and advocate for its passage while working with the National Park Service to determine whether it meets the designation criteria. After designation, a locally controlled management entity guides the development of a management plan, and then coordinates the many partners in the implementation of the plan's projects and programs.

The study followed four steps that are required before Congressional designation of a potential National Heritage Area can be considered: 1) completion of a suitability and feasibility study; 2) public involvement in that study; 3) demonstration of widespread support among area residents for the proposed designation; and 4) commitment to the proposal from key local partners, which may include governments, industry, and private, non-profit organizations.

## Environmental Compliance

In terms of environmental compliance, the Buffalo Bayou National Heritage Area suitability and feasibility study qualifies for Categorical Exclusion 3.3 R, and there are no extraordinary circumstances that may cause a significant environmental effect. Categorical Exclusions under the National Environmental Policy Act (NEPA) and National Park Service Director's Order 12, Conservation Planning, Environmental Impact Analysis, and Decision Making, apply to listed actions that have no potential for measurable effects to the human environment. As applies to the Buffalo Bayou study, Categorical Exclusion 3.3 R is for the "adoption or approval of surveys, studies, reports, plans and similar documents which will result in recommendations or proposed actions which would cause no or only minimal environmental impacts." Note that actions categorically excluded under NEPA and Director's Order 12 must still be reviewed for compliance with Section 106 of the National Historic Preservation Act. The release of this report initiates that consultation process.

National Park Service  
U.S. Department of the Interior



## Chapter 2: The Study Area

*The initial analysis focused on the urban core of Houston, representing an area of approximately 8,000 acres, in which the Buffalo Bayou Partnership—one of the proposed heritage area’s partner organizations—is located. However, the study team quickly realized that this relatively small area failed to contain several of the most important historical elements associated with the history of the Buffalo Bayou, including the Houston Ship Channel and the San Jacinto Battlefield. Therefore, the study area was expanded to include a much larger section of the bayou, stretching from the urban core of Houston east toward Galveston Bay.*

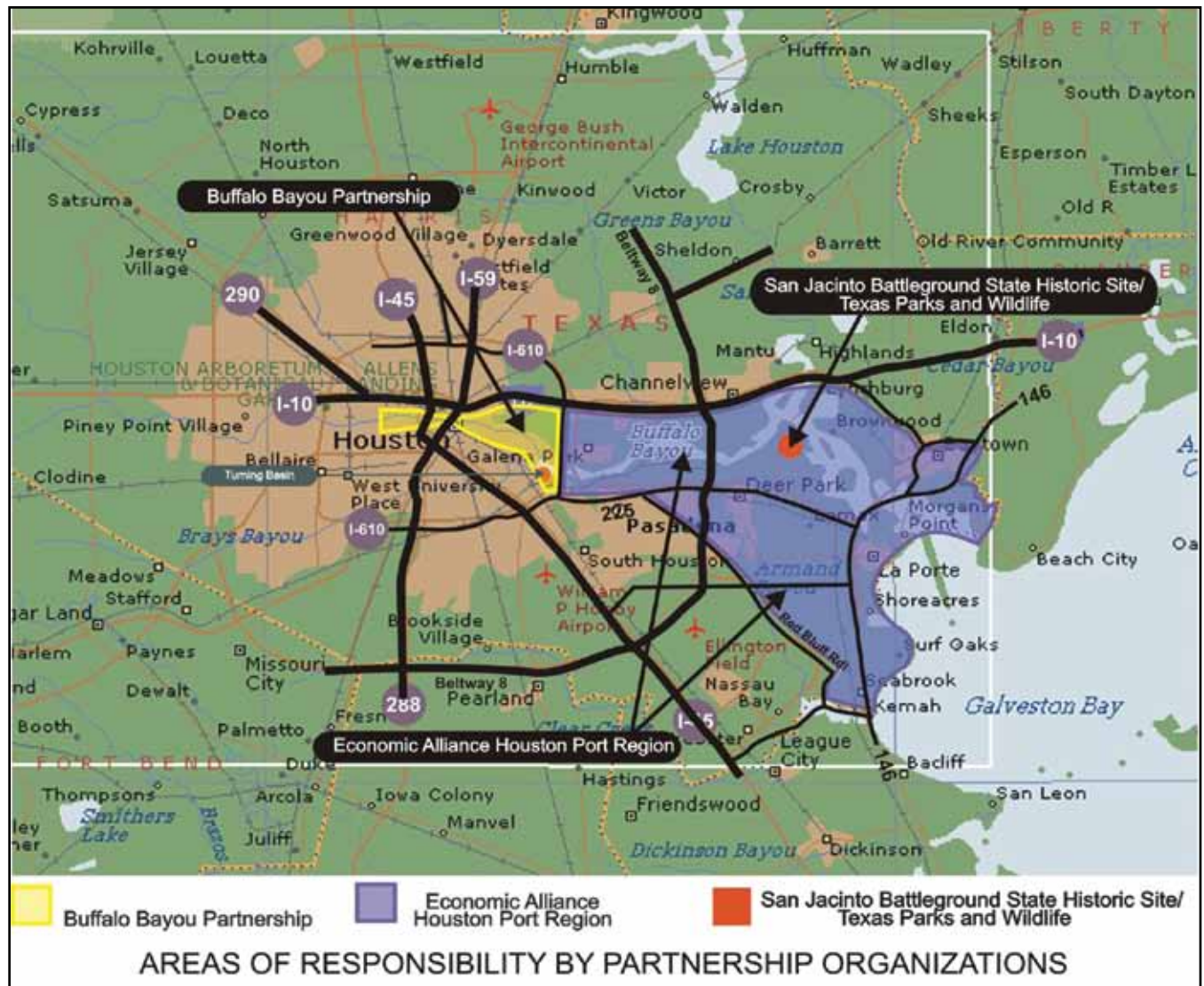
The Buffalo Bayou has been called the “aorta” of the Houston metropolis. From its very beginnings, Houston has relied upon the bayou for its commercial access to the Gulf of Mexico and the world market—be it for cotton, lumber, oil, or petrochemicals.

The study area for the proposed Buffalo Bayou National Heritage area extends from the urban core of Houston east toward Galveston Bay, encompassing approximately 100,000 acres of land within the Gulf Coast region of Texas. It was here, along the bayou, that Texans fought and won the crucial battle for their independence from Mexico. The Buffalo Bayou also spawned industries along its banks, as well as the communities that built up around those jobs. The Buffalo Bayou has served as an outlet for recreation and, in the latter half of the 20th century, Houstonians have understood the importance of restoring and revitalizing the bayou’s ecosystems for the benefit of people, wildlife, and the environment.

While the Buffalo Bayou National Heritage Area Study Act originally pinpointed a small section of the bayou, there has been an evolution in the thinking concerning the study area boundary. The initial analysis focused on the urban core of Houston, representing an area of approximately 8,000 acres, in which the Buffalo Bayou Partnership—one of the proposed heritage area’s partner organizations—is located. However, the study team quickly realized that this relatively small area failed to contain several of the most important historical elements associated with the history of the Buffalo Bayou, including the Houston Ship Channel and the San Jacinto Battlefield. Therefore, the study area was expanded to include a much larger section of the



A truss bridge over the Buffalo Bayou (NPS Photo ).



Map: Boundary of the study area showing the areas of responsibility of the three key partner organizations for the proposed Buffalo Bayou National Heritage Area (NPS graphic).

bayou, stretching from the urban core of Houston east toward Galveston Bay. As a result, the proposed National Heritage Area boundary now includes the entire Houston Ship Channel, as well as the communities along the channel, such as Baytown, which developed as a direct result of the development of the energy and petrochemical industries.

In the process, the growth of the study area also brought in additional partner organizations. While many organizations play a role in a potential heritage area, there are three key partner organizations for the proposed Buffalo Bayou National Heritage Area. First, the Buffalo Bayou Partnership operates within the urban core of Houston. Second, Texas Parks and Wildlife operates the San Jacinto

Battleground State Historic Site. Third, the Economic Alliance Houston Port Region represents the many cities and communities along the bayou east to Galveston Bay, including: Baytown, Channelview, Deer Park, Galena Park, Jacinto City, La Porte, Morgan's Point, North Shore, Pasadena, Pearland, Seabrook, Sheldon, Shoreacres, South Belt Ellington, South Houston, Port of Houston, Harris County, and Houston East End.

### Buffalo Bayou Partnership

Created in 1986, the Buffalo Bayou Partnership is a coalition of civic, environmental, governmental and business representatives whose director nominees are confirmed by the Mayor of

Houston and Harris County Judge. The 501(c)(3) non-profit corporation is responsible for developing and facilitating improvements to the Buffalo Bayou greenway system. In the past seven years, the Partnership has raised and leveraged over \$45 million for improvements along a 10-mile stretch of Buffalo Bayou from Shepherd Drive to the Turning Basin. These improvements have included a 20-year master plan, three miles of trails east of downtown, Sesquicentennial Park, the North Side Trail, and the purchase of over 35 acres of land in the East End for park lands.

### **Texas Parks and Wildlife**

The mission of the Texas Parks and Wildlife Department is to manage and conserve the natural and cultural resources of Texas, and to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations. Within the proposed Buffalo Bayou National Heritage Area, the Texas Parks and Wildlife Department's San Jacinto Battleground State Historic Site consists of the Battleground, San Jacinto Monument, and the battleship USS Texas. Both the San Jacinto Battleground and Battleship Texas are designated as National Historic Landmarks.

### **Economic Alliance Houston Port Region**

Created in 1985, the Economic Alliance Houston Port Region, a non-profit organization, provides professional economic development services on behalf of 16 communities surrounding the 25-mile Houston Ship Channel. In addition to the Port Region cities, the Economic Alliance

services also are funded by 12 Chambers of Commerce, Harris County, the Port of Houston Authority and private businesses. Since 2004 alone, the Economic Alliance has facilitated activities to help bring approximately \$320 million of capital investment to the area.

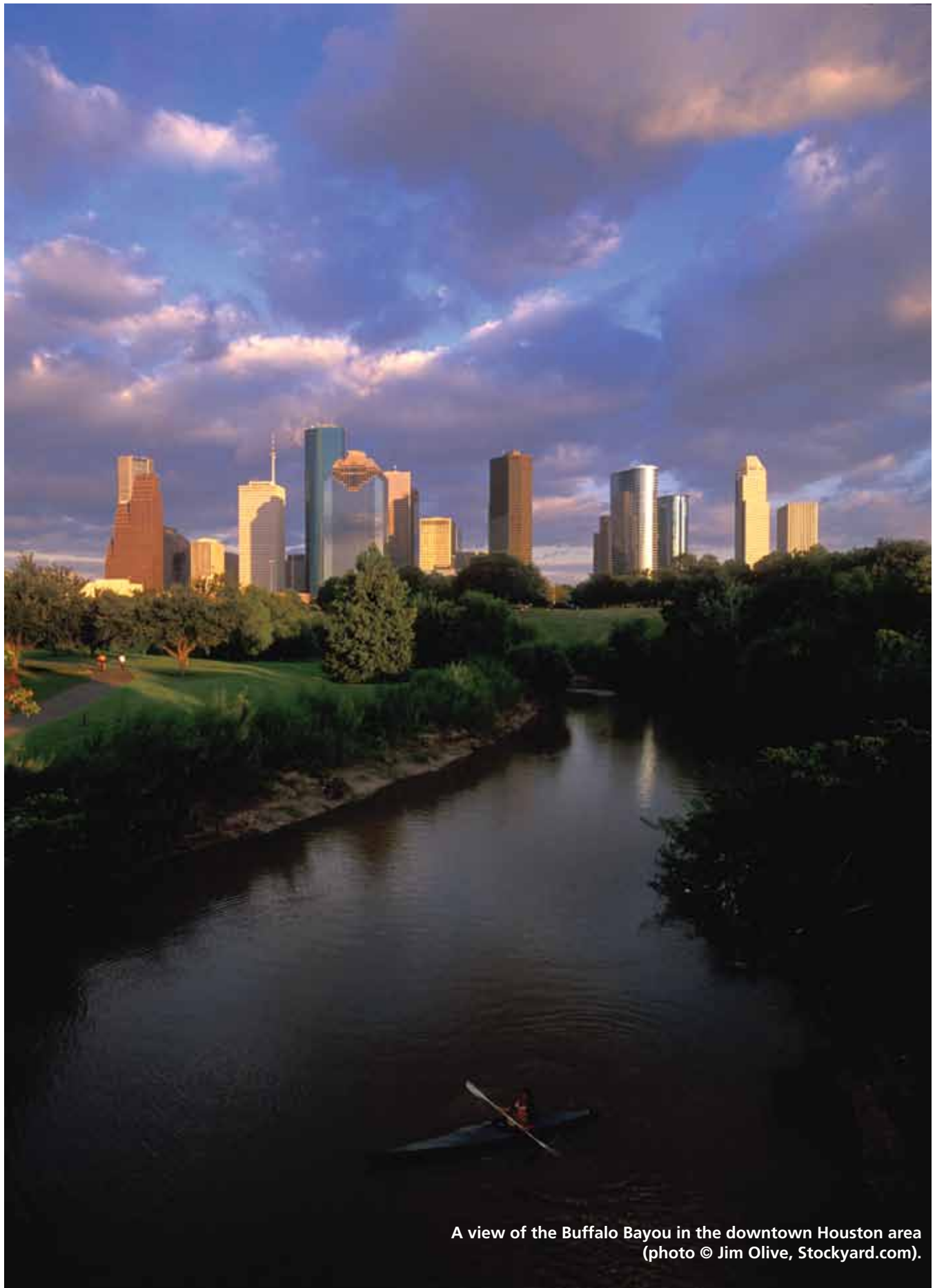
### **Boundary of the Study Area**

As seen in the map in the preceding page, the proposed Buffalo Bayou National Heritage Area generally extends from Shepherd Drive on the west to the edge of Galveston Bay from Seabrook to Baytown. Specifically, the proposed boundary runs north on Shepherd Drive to Interstate 10, then east of Interstate 10 past Lynchburg to its intersection with Route 330. The boundary continues east on Route 330 to its intersection with Route 146, which then continues east until it meets the Harris and Chambers County boundary. The proposed National Heritage Area boundary then continues south along the Harris County boundary, crossing Galveston Bay, then proceeding farther south on the western edge of Galveston Bay to its intersection with Galveston County. The boundary then proceeds west on 2nd Street and NASA Road 1, then north to Red Bluff Road after including Armand Bayou Park. The boundary then proceeds north and west on Red Bluff Road until its intersection with Route 225. The boundary proceeds along Route 225 west to its intersection with Interstate 610-South, then north on Interstate 45 to its intersection with Allen Parkway. The boundary then proceeds west on Allen Parkway until its intersection with Shepherd Drive.

The emphasis on international trade is expanding every year, and will be a prominent theme in the city's continued economic development.

The Port of Houston ranks first in the United States in international waterborne tonnage handled and second in total cargo tonnage handled (photo © Jim Olive, Stockyard.com).





A view of the Buffalo Bayou in the downtown Houston area  
(photo © Jim Olive, Stockyard.com).



Several organizations representing a wide cross-section of the Houston community are strongly supportive of the formation of a Buffalo Bayou National Heritage Area.

## Chapter 3: Public Involvement

The proposed Buffalo Bayou National Heritage Area is a reflection of the public involvement in that process.

This public input has included formal public meetings, as well as the more informal process of stakeholder group collaboration and consensus building. The suitability and feasibility analysis for a potential National Heritage Area differs considerably from a National Park Service park unit, which is responsible for developing and implementing its own projects and programs. Instead, a National Heritage Area is entirely dependent on its web of partner organizations—public, private and non-profit—to be sustained and be successful. Therefore, stakeholder group outreach and support is central to the public involvement process.

### A Community Planning Process: Responding to an Expanding Network of Stakeholder Groups

In December 2002, when Congress authorized the Buffalo Bayou National Heritage Area Study Act, the initial focus was on the inner urban core of Houston along the Buffalo Bayou. Over time, stakeholder groups along the bayou suggested that the study area should be expanded to feature additional important natural, cultural, and historic resources, as well as individual citizens, organizations, and communities that are integral to telling the story of the Buffalo Bayou.

While the National Park Service did not receive appropriation funding to undertake the study until early 2005, the Houston community began the process of stakeholder involvement on its own. It soon became apparent that one of the state's most historically significant resources was missing from the initial study area: the San Jacinto Battleground State Historic Site. Texas Parks and Wildlife, which manages the battleground, requested that the

site be included within the study area. On October 6, 2003, Walter Dabney, Director of the Texas Parks and Wildlife Department, wrote to Congressman Gene Green, asking for an expansion of the study area. Congressman Green responded by asking the National Park Service for the expansion, to which the National Park Service agreed.

The National Park Service began a series of natural and cultural resource, social, and recreational studies to determine the feasibility and suitability of Buffalo Bayou as a National Heritage Area. Concurrently, the communities along Buffalo Bayou began expressing their interest in becoming involved. What emerged was a consensus that the potential National Heritage Area should extend far beyond the urban core and include communities along the Buffalo Bayou to Galveston Bay. Of equal importance, particularly within the context of the proposed National Heritage Area's theme of Houston as the Nation's "Energy Capital" was the willingness of the private sector—specifically the petrochemical industry—to support the expansion of the study area through the Houston Ship Channel.

### Participation from Local Governments and Business

Throughout 2006, communities and organizations all along the Buffalo Bayou considered and then decided to formally support the concept of a National Heritage Area. The following is a chronology of support for the Buffalo Bayou National Heritage Area and its expanded study area:

- December 15, 2005: The Port of Houston Authority formally endorsed the National Heritage Area by a letter from its chairman.



BUFFALO BAYOU  
PARTNERSHIP



- June 22, 2006: The City Council of the City of Baytown enacted Resolution #1798, expressing support for the Buffalo Bayou National Heritage Area.
- July 5, 2006: The City Commission of the City of Galena Park enacted Resolution #Ro8-2006, expressing support for the Buffalo Bayou National Heritage Area.
- August 23, 2006: The Houston City Council enacted Resolution #2006-11, expressing support for the Buffalo Bayou National Heritage Area.
- August 28, 2006: The City Council of the City of La Porte enacted Resolution #2006-18, expressing support for the Buffalo Bayou National Heritage Area.
- October 24, 2006: The City Council of the City of Pasadena enacted Resolution #2006-98, expressing support for the Buffalo Bayou National Heritage Area.
- October 25, 2006: The East Harris County Manufacturers Association (EHCMA), representing the industries along the Buffalo Bayou, formally endorsed the National Heritage Area by a letter from its chairman.

### Public Meeting Process

As the required technical studies were underway in 2007, the National Park Service then undertook a series of public outreach meetings, the purpose of which was to seek the public's reaction and ideas concerning the themes and issues surrounding the potential National Heritage Area, as well as its proposed boundary. Three public meetings were held: in Houston on September 24, 2007; in Jacinto City on September 25, 2007; and in La Porte on September 26, 2007. The meetings were announced through a press release, as well as through a

postcard mailing to people on the "Friends of Buffalo Bayou" National Park Service mailing list. Approximately 40 people attended the meetings and the general reaction was support for the concept of a National Heritage Area. Among the primary comments that were heard at the meetings:

- The historical events and growth of the oil industry along the banks of the Buffalo Bayou are critical to understanding the rise of the United States as a modern industrial giant.
- Buffalo Bayou has a great history to preserve and the potential to continue providing economic development opportunities for the Houston area.

The public meetings, as well as subsequent project newsletters, also provided a forum for the National Park Service to address concerns regarding possible restrictions on private property rights in National Heritage Areas.

### Buffalo Bayou National Heritage Area Study Newsletter #1 and Additional Invitations for Public Comment

Buffalo Bayou National Heritage Area Study Newsletter #1 was released in winter 2007-2008, and summarized the project to date. The newsletter identified the area's cultural and natural resources and recreational opportunities, outlined potential management alternatives, and provided an update on legislative requirements. The newsletter also specifically addressed the question of private property rights, and clarified that a National Heritage Area is not a unit of the National Park Service, nor is any land owned or managed by the National Park Service. The newsletter cited a U.S. Government Account Office (GAO) evaluation of 24 National Heritage Areas that concluded that there was not a single example of a heritage area directly affecting – positively or negatively – property values or use.



One of many biking/hiking trails within Houston's inner city (photo credit: Jim Olive, Stockyard.com).

*A National Heritage Area is entirely dependent upon the willingness of its partner organizations to cooperate and integrate their efforts.*

*Buffalo Bayou National Heritage Area Study Newsletter #1* also included a self-mailer comment form that provided the public with an opportunity to answer the following questions:

- 1) Do you think Buffalo Bayou should be a National Heritage Area?
- 2) Are there other alternatives for preserving and telling the story of Buffalo Bayou?
- 3) Do you have any other ideas or comments you would like to share with the study team?
- 4) Do you have any comments on the preliminary analysis of criteria or the study in general?

In addition, the newsletter invited the public to submit an electronic comment form at <http://parkplanning.nps.gov/imro>, and/or to send a letter to the National Park Service. The National Park Service received fewer than ten comments, all of which were generally supportive of the Buffalo Bayou National Heritage Area concept.

### Key Stakeholder Group Consultation

A National Heritage Area is entirely dependent upon the willingness of its partner organizations to cooperate and integrate their efforts. Consultation by the National Park Service study team with the Buffalo Bayou stakeholder groups on this matter was, therefore, essential.

On May 19, 2008 the Office of the Texas Secretary of State issued a Certificate of Filing for the Buffalo Bayou National Heritage Area Corporation. The Corporation was established for the purposes of developing and implementing a plan for the Buffalo Bayou National Heritage Area—generally required as part of any federal authorizing legislation for a National Heritage Area. The establishment of this new corporation by the partner organizations reflects a level of organizational development needed to effectively manage a potential National Heritage Area.



Image above: In 2007 the National Park Service conducted a series of public meetings with community members in the study area, who reiterated their strong support for the heritage area concept (NPS photo).

During the week of June 9, 2008, the National Park Service conducted a site visit to assess the depth and breadth of the commitment to collaborate on the part of those organizations. While not able to meet with leaders in every community in the study area, study team members met with City of Houston and Harris County officials, who reiterated their strong support for the heritage area concept and corporation.

The study team then focused on three entities whose active support and collaboration would be essential to a viable and functioning National Heritage Area: Buffalo Bayou Partnership, Economic Alliance Houston Port Region, and Texas Parks and Wildlife. Support by these organizations to the heritage area concept was very strong.

The National Park Service team also met with officials from the Port of Houston and the East Harris County Manufacturers Association, which together represent a significant portion of the business community and economic strength of the greater Houston area. The Port of Houston is a 25-mile-long complex that is made up of the Port of Houston Authority and over 150 private industrial companies along the Houston Ship Channel. The East Harris County Manufacturer's Association is an alliance

of more than 125 chemical manufacturers, refiners and supporting distribution facilities in Baytown, Deer Park, Houston, La Porte, North Channel and Pasadena. The support of these organizations for the concept of a National Heritage Area was unequivocal. Finally, the East End Management District—which represents more than 3,000 commercial property owners, and was formed to provide services that enhance property values and spur new development in an area that encompasses 16 square miles between downtown Houston and the Port of Houston—reiterated its support for a National Heritage Area through its commitment to serve on the board of the new Buffalo Bayou National Heritage Area Corporation.

#### **Buffalo Bayou National Heritage Area Study Newsletter #2 and Key Stakeholder Review of Draft Study Report**

In July 2009, the National Park Service issued a second newsletter to the general public and stakeholder groups. The newsletter provided a summary of the study efforts to date. It also was intended to solicit additional feedback before final printing of the draft study. The NPS study team briefed the Buffalo Bayou Partnership regarding the status of the study.

## Chapter 4: Historical Themes

The proposed Buffalo Bayou National Heritage Area represents two nationally significant themes of American history: Houston as the Nation's "Energy Capital," and the story of Texas independence.

"Whether you call it crude, black gold, or Texas tea, oil is the economic lifeblood of the Lone Star State," noted a University of Houston reviewer, commenting on a 2009 exhibit of the Texas oil and petrochemical industry. Indeed, the story of Texas oil in the proposed Buffalo Bayou National Heritage Area, and the impacts of that industry on the Lone Star State's cultural and physical landscape, is a compelling one. Hailed as the Nation's "Energy Capital," Houston is one of the world's major oil and petrochemical centers, resulting from its proximity to vast oil and gas fields, as well as the construction of the Houston Ship Channel. A large shipping industry and commercial trade along Buffalo Bayou going back to the early 19th century established important

precedents for modern industrial development and oceanic trade between Houston and the rest of the world via the ship channel, Galveston Bay, and the Gulf of Mexico. Buffalo Bayou also was the site of a wide array of events and activities in the 19th and 20th centuries that shaped the state of Texas and the United States. The most notable of these is the Battle of San Jacinto, which played the pivotal role in the struggle for Texas independence leading to the establishment of the Republic of Texas.

The identification of the nationally significant historic themes for the proposed Buffalo Bayou National Heritage Area are based on a study prepared for the National Park Service

Battle flag used at the Battle of San Jacinto by the Newport Rifles, a company of Kentucky volunteers. This is the only such flag to survive to the present day (photo credit Texas State Preservation Board).





Image above: The Surrender of Santa Anna, painted by Texas artist William Henry Huddle the day after the Battle of San Jacinto. The painting depicts Texan General Sam Houston (lying beneath the tree), who had been wounded in the battle, in negotiations with the captured Mexican President, General Antonio Lopez de Santa Anna (slightly left of center in white trousers, in the uniform of a common soldier), photo credit Texas State Preservation Board.

by Dr. Martin V. Melosi, professor of History, College of Liberal Arts and Sciences, University of Houston. The study identified two nationally significant themes associated with Buffalo Bayou: Houston as the Nation's "Energy Capital" and Texas independence. The period of significance for the theme of Texas independence is 1836, which marks the Battle of San Jacinto, the concluding military event of the struggle for independence. The "Energy Capital" theme begins in 1901 with the Spindletop oil strike, and extends beyond World War II with the predominance of the petrochemical industry along the bayou.

### **The Battle of San Jacinto and Texas Independence**

On the base of the San Jacinto Monument commemorating the Battle of Jacinto, the following is inscribed:

*Measured by its results, San Jacinto was one of the decisive battles of the world. The freedom of Texas from Mexico won here led to annexation and to the Mexican-American War, resulting in the acquisition by the United States of the states of Texas,*

*New Mexico, Arizona, Nevada, California, Utah and parts of Colorado, Wyoming, Kansas and Oklahoma. Almost one-third of the present area of the American Nation, nearly a million square miles of territory, changed sovereignty.*

While the statement attributes too much to this battle, or almost any one military engagement, the Battle of San Jacinto (April 21, 1836) did save the Texan cause from what seemed like certain defeat at the hands of Mexican General Antonio Lopez de Santa Anna and his superior forces. While independence was not assured immediately, the path in that direction quickened, and the Battle of San Jacinto was the concluding military event of the Texas Revolution.

On March 13, 1836, one week after the Battle of the Alamo, the Texas revolutionary army under General Sam Houston began to retreat eastward, crossing the Colorado River on March 17 and camping near present-day Columbia on March 20. Recruiting and reinforcements increased the size of the Texan army to approximately 1,200 men.

Houston's scouts reported Mexican troops west of the Colorado to number some 1,325 men. On March 25, the Texans learned of James W. Fannin's defeat at Goliad, and many of the men deserted the army to join their families. Sam Houston led his remaining troops to San Felipe de Austin by March 28, and by March 30 to the Brazos River where they camped and drilled. Meanwhile, Santa Anna decided to take possession of the Texas coast and seaports. Accordingly, he crossed the Brazos River at present-day Richmond on April 11, and on April 15, with some 700 men, arrived at Harrisburg on the south side of the Buffalo Bayou (part of present-day Houston). Santa Anna's troops burned Harrisburg and started in pursuit of the Texas government at New Washington (present-day Morgan's Point), where they arrived on April 19 to find that the government had fled to Galveston. Santa Anna then set out for Anahuac, by way of Lynchburg.

In response, on April 11, the Texans, newly armed with the "Twin Sisters" cannon and additional weapons, crossed the Brazos River and reached Spring Creek in present-day Harris County on April 16. On April 17, Houston and his men took the road to Harrisburg, and on April 18

reached White Oak Bayou at a site within the present-day city limits of Houston. There they learned that Santa Anna had gone down the west side of the bayou and the San Jacinto River, crossing by a bridge over Vince's Bayou.

During the evening of April 19, Houston's forces crossed Buffalo Bayou some 2-1/2 miles below Harrisburg, while nearly 250 men, mostly sick and ineffective, were left with the baggage at the camp opposite Harrisburg. The march continued until midnight. At dawn on April 20, the Texans resumed their trek down the bayou and at Lynch's Ferry captured a boat laden with supplies for Santa Anna. They then drew back about a mile on the Harrisburg Road and encamped in a skirt of timber protected by rising ground. That afternoon a small detachment of Texas cavalry engaged the Mexican infantry. Santa Anna made camp under the high ground overlooking a marsh about three-quarters of a mile from the Texas camp and threw up breastworks of trunks, baggage, packsaddles, and other equipment. On the morning of April 21, the Texans were eager to attack. About 9:00 a.m., they learned that Martin Perfecto de Cos had crossed Vince's bridge with some 540 troops and swelled

The USS *Texas* (BB-35), permanently anchored on the Buffalo Bayou at the San Jacinto Battleground State Historic Site (NPS photo).



the Mexican forces to about 1,200. Houston ordered Erastus (Deaf) Smith to destroy the bridge and prevent further enemy reinforcements. Destruction of the bridge would also prevent the retreat of either the Texans or the Mexicans toward Harrisburg.

After holding a council of war, Houston disposed his forces in battle order about 3:30 p.m. while all was quiet on the Mexican side. The Texans' movements were screened by trees and the rising ground, and evidently Santa Anna had no lookouts posted. The battle line was formed, and the Twin Sisters cannon was wheeled into position. The entire Texas line sprang forward on the run with the cry "Remember the Alamo!" and "Remember Goliad." The battle lasted eighteen minutes. According to Houston's official report, the casualties included 630 Mexicans killed and 730 taken prisoner. Compared with these figures, only nine of the 910 Texans were killed or mortally wounded, and thirty, including Houston whose ankle was

shattered by a rifle ball, were wounded less seriously. The Texans captured a large supply of muskets, pistols, sabers, mules, horses, provisions, clothing, tents, and \$12,000 in silver.

Santa Anna disappeared during the battle and search parties were sent out on the morning of April 22. The general was discovered hiding in the grass along the north bank of Buffalo Bayou, dirty, wet, and disguised in common soldier clothing. The search party did not recognize him until he was addressed as "El Presidente" by other Mexican prisoners. The Mexican general was forced to sign the Treaties of Velasco in which he recognized Texas independence.

The Battle of San Jacinto was the decisive engagement of the Texas Revolution and ensured the victory of the revolutionaries and, ultimately, the independence of the Texas Republic from Mexico. Texas independence paved the way for annexation by the

This map shows the Buffalo Bayou watershed, as well as the Bayou's relative placement within the State of Texas (image © Wikipedia user "Kuru").



*The rise of shipping and commercial development along Buffalo Bayou in the 19<sup>th</sup> century was an essential precedent for the construction of the Houston Ship Channel and the emergence of Houston as an international focal point for oil production, refining, and petrochemicals.*

United States and, eventually, the acquisition by the United States of the entire Southwest under the terms of the Treaty of Guadalupe Hidalgo, which ended the Mexican-American War of 1846-48.

### **Buffalo Bayou: Rise of Shipping and Commercial Development**

The rise of shipping and commercial development along Buffalo Bayou in the 19th century was an essential precedent for the construction of the Houston Ship Channel and the emergence of Houston as an international focal point for oil production, refining, and petrochemicals. Buffalo Bayou flows for sixty-five miles west to east from outside Katy in Fort Bend County to its mouth as a tributary of the San Jacinto River at Lynchburg. The river continues the journey into Galveston Bay and then the Gulf of Mexico.

In 1824, Mexican grants of land were issued near the mouth of the San Jacinto River, on the lower end of Buffalo Bayou, and at the junction of Brays Bayou and Buffalo Bayou. John P. Austin's land grant of July 21, 1824 contained the location of the city of Houston. He died in Brazoria on August 11, 1833. His wife, Elizabeth, inherited the grant jointly with Austin's brother William. The Austin family then sold the grant to John Kirby Allen and Augustus Chapman Allen in 1836. Other land grants along Buffalo Bayou belonged to Luke Moore (August 3, 1824), John R. Harris (August 16, 1824), M. Callahan and Allen Vince (August 3, 1824), William Vince (July 21, 1824), John Brown (August 19, 1824), Ezekiel Thomas (August 9, 1824), W. P. Harris and Robert Wilson (January 3, 1832), Samuel C. Herons (July 25, 1831), Thomas Earle (July 7, 1824), and Arthur McCormick (August 10, 1824).

In 1826, John Richardson Harris established the town of Harrisburg at the confluence of Buffalo and Brays Bayous (just below the present-day Turning Basin of the Houston Ship

Channel), and also set up the first industry, a steam sawmill, on Buffalo Bayou. The first house in Harrisburg was constructed in 1833. The new town served as a port of entry and trading center for early settlers in the region prior to the Texas Revolution. On April 19, 1836, two days before the Battle of San Jacinto, Santa Anna's Mexican army looted and burned Harrisburg.

Persuaded that Harrisburg was an attractive location for a port, but unable to acquire property in the vicinity, Augustus Chapman Allen and John Kirby Allen decided to settle approximately fifteen miles upstream near present-day Main Street in Houston at the confluence of Buffalo and White Oak Bayous. On August 30, 1836, the Allen brothers ran an advertisement in the *Telegraph and Texas Register* about real estate available in the new town of Houston. While the brothers' glowing claims about the wonders of the town site (named after the Texas Revolution's hero, Sam Houston) were clearly overstated, they persuaded the Texas Congress to designate it as the temporary capital of the new republic. The Allens laid out a street grid and set about selling lots (the first lot in the new town was sold to Benjamin Brown on January 1, 1837 for \$700). The Allens also built a meeting place for political leaders, made reservations for a school and churches, and promoted commerce along the bayou, even though it was not yet effectively navigable. While Houston ceased to be the republic's capital after 1839, it grew and prospered as a shipping and commercial center. From these beginnings, Houston continued to grow ultimately into the largest city in Texas, with Buffalo Bayou as the focal point for the establishment of the city.

A prosperous and productive shipping industry and commercial trade were established along the shores of Buffalo Bayou with local, regional, national, and international impacts. "The commerce of the republic [of Texas]," geographer

D.W. Meinig stated, “very largely followed the flows of nature downriver to the Gulf.” Galveston Bay provided the best access to the rich agricultural lands to its northeast, and with few rivers navigable for long stretches, access to those agricultural lands via Buffalo Bayou ultimately made Houston the state’s chief inland port. Texas historian Marilyn McAdams Sibley added, “By the time Texas became a state, Buffalo Bayou was the only stream in Texas that was dependably navigable, and Houston was permanently established as a way station where water and land routes met.” As such, Buffalo Bayou became an economic access point into the hinterland of the Southwest and a corridor to the Gulf of Mexico and beyond. Barges and riverboats from Buffalo Bayou could load cargoes onto seagoing ships in Galveston and, in turn, pick up goods to deliver into the hinterland.

Until the 1830s, Buffalo Bayou was barely navigable, but Houston boosters were undeterred, despite the bayou’s limitations. When the Allen brothers surveyed potential sites for development, they searched for the head of navigation along Buffalo Bayou. Among the sites

they considered were Morgan’s Point, the Township of Harrisburg, and the junction of Buffalo and White Oak Bayous. The brothers decided on the junction of the two bayous because it was for sale and had a clear title. The brothers also sounded out the bayou to determine that the river to the site for their proposed township was at the head of navigation. Finding that the water was six feet at the shallowest points, the Allens advertised that ships could sail to the new town in all seasons and in all kinds of weather, and that steamboats “of the largest classes” could make a trip from Houston to Galveston in eight to ten hours.

Buffalo Bayou quickly became a significant water highway for shallow-draft steamboats running between Houston and Galveston, and was viewed as a potentially important access route to the Brazos River and the inland cotton trade, as well as an important point of trans-shipment for a wide variety of goods that entered or left the state and an avenue of passage for travelers and immigrants. In December 1830, the *Ariel* became the first steamboat on Texas waters, traveling up Buffalo Bayou via Galveston Bay.

Allen's Landing  
as it appears today  
(NPS photo ).





Image above: In 1873, Augustus Koch produced a lithograph entitled *Bird's Eye View of the City of Houston, Texas, 1873*. Steamboats engaging in commerce along the Buffalo Bayou are prominently featured in the lithograph, especially at Allen's Landing near the confluence of White Oak and Buffalo Bayous (Public domain; published by J.J. Stoner, Madison, Wis. Center for American History, The University of Texas at Austin).

Despite the successful voyage of the *Ariel*, many remained skeptical of the Allens' claim that a steamboat, or any kind of ship for that matter, could reach Houston. In order to prove this claim, the brothers arranged for the steamer *Laura* to make the trip up the bayou, to prove that it could be done. Unknown to many, the ship was the smallest steamboat in Texas. As the *Laura* made her way up the bayou, all of the passengers and crew cleared fallen trees and snags to make a channel for the ship. Once the *Laura* docked, regular steamboat service commenced from Houston to Galveston and other points in Galveston Bay.

Francis Richard Lubbock, a merchant and later Civil War Governor of Texas, was one of the passengers aboard the *Laura* when it made the first voyage to Houston. According to his

account, the Houston town site was so underdeveloped that the ship steamed past it into White Oak Bayou. Realizing the mistake, Lubbock and the others reversed their course and discovered a road leading off from the bayou. Following it, they realized that they had found the town site.

The place where the *Laura* docked became known as Allen's Landing, and it is on the south bank of Buffalo Bayou and a fork of White Oak Bayou in central Harris County. The City of Houston officially established the port in June 1841, and in 1910 the federal government approved funding for the dredging of a ship channel from the Gulf to the present Turning Basin four miles to the east of Allen's Landing. A historical marker was placed at the site where the *Laura* docked when it was dedicated as Allen's Landing Memorial Park in 1967.

In a bit of hyperbole, Buffalo Bayou was designated as the “National Highway of the Republic” in 1840, but soon lived up to the name. In 1841, as stated above, the Houston City Council established the Port of Houston and levied wharfage fees to help finance dredging and port improvements. That same year, the city council established the port at Allen’s Landing. “A landing place” at the foot of Main Street had been provided in 1837, and a wharf along the water front from Main to Fannin Street was constructed in 1840. The Allen’s Landing waterfront, which coincides with the area between Main and Fannin Streets, was specifically reserved for larger boats and steamships. Smaller ships “were assigned to other positions.”

*In a bit of hype, Buffalo Bayou was designated as the “National Highway of the Republic” in 1840, but soon lived up to the name.*

Buffalo Bayou’s advantage over other waterways such as the Brazos River was that it ran east and west. It also was relatively wide and deep at its mouth along the San Jacinto River to Brays Bayou, although narrower and more difficult to float from Brays to White Oak Bayou. However, at the entrance to Galveston Channel, vessels had to traverse a twelve-foot bar, and then run over a shell reef (Red Fish Bar) stretching across the middle of the bay. It was not uncommon for ships to run aground at this juncture as they traveled toward Buffalo Bayou. Where the waters of the San Jacinto River entered Galveston Bay (opposite Morgan’s Point) ships faced another bar (Clopper’s Bar). Light-draft vessels traveled easiest along the bayou at this point. However, in 1869, the Buffalo Bayou Ship Channel Company initiated major dredging and widening of the bayou.

Soon ships were bypassing Galveston wharves to enter the bayou. As a way of avoiding the high port charges at Galveston, the Houston Direct Navigation Company (chartered in 1866) loaded and unloaded ocean vessels in the channel and carried the cargoes by barge along the bayou.

The first federal survey for a ship channel running from Buffalo Bayou to Galveston Bay (completed in 1871), stated that the bayou was at least 70 feet wide and could be navigated to Houston by vessels drawing less than four feet. Some stretches had been much deeper (fifteen to twenty feet), but urbanization as early as 1870 had encouraged shoaling, and thus substantially reduced the depth despite previous efforts at dredging.

Cotton from West Texas plantations found its way to the Houston port, as did sugar, cattle, and other commodities from the rich Brazos agricultural region. In the 19th century, “cotton was king” in Texas, and in the 1870s Houston was the center for exporting cotton to textile mills in the northeastern United States and Great Britain. In 1839, one observer stated that only eight bales of cotton were shipped from Houston; by 1843 the figure reached 4,336 bales. In 1845, the *Telegraph and Texas Register* claimed that Houston had received more than 14,000 bales. The bayou also served as a source of power for grist mills and sawmills. In 1860 five sawmills along Buffalo Bayou were utilizing local timber. During the 1890s, the mills were producing 400,000 board feet of lumber per day. Not unlike cotton, Houston was “the capital of the Texas lumber industry.” By 1875, the ship channel along the east stretch of the bayou was widened and straightened, allowing most ocean-going vessels to deliver goods to the Houston area. These large ships docked at the wharves at Allen’s Landing, as this area was specifically reserved for steamboats and larger ships. This practice continued until the Turning Basin was finished in August of 1914, although smaller ships did navigate past the Turning Basin.

Until the major competition of railroad lines in the late 1870s, the Gulf Southwest depended on water transportation for access to inland markets, and Buffalo Bayou played a major role in offering such access.



The Spindletop gusher  
(photo © Jim Olive,  
Stockyard.com)..

During these years, Buffalo Bayou helped Houston become a major port city.

The chartering of the Buffalo Bayou, Brazos and Colorado Railway (BBB&C) in February 1850 not only established Buffalo Bayou as the site for the State of Texas' first railroad, but acknowledged the emergence of the next great wave of commercial and passenger transportation in the Gulf Southwest. The BBB&C only operated between Harrisburg and Stafford's Point by 1853 (20 miles) and extended to East Richmond on the banks of the Brazos River (an additional 12 ½ miles) by 1856. However, by 1861, five railroads radiated from Houston. The Civil War halted further railroad development for a time, but Houston soon emerged as the leading railroad hub in the region, virtually eliminating the economic potential of Galveston as a rival urban center and helping to usher in a new era of ground transportation. Even with the extensive railroad network, Buffalo Bayou remained important, especially in the transportation of bulky cargo. As historian David McComb stated, "The usefulness of roads and railways, however, depended, at least in part, on a third commercial artery—Buffalo Bayou, Houston's link to the outside world until the rail connections of 1873."

### **The Oil Boom Comes to Texas: The Spindletop Strike and Beyond**

Gigantic oil strikes in 1900 and 1901 west of the Mississippi River, especially in the Southwest and California, were transforming events in United States history. Beginning as a regional phenomenon, the discovery of rich oil fields in Texas, Oklahoma, and California created a new form of wealth in what would become the American "Sunbelt," and accelerated the process of industrialization across the nation. The supply of crude available on the

market soared, and new companies promoted oil as the preeminent fuel for locomotives, ships, and, eventually, automobiles. In this way, oil became more directly competitive with coal.

When a top official of Standard Oil boasted that he could drink all the oil found west of the Mississippi, he had no idea what a foolish statement that was. The discovery of the Gulf of Mexico, Midcontinent, and California oil fields signaled a major turning point in the production of crude in the United States with repercussions throughout the world.

A dramatic symbol of this historic moment was the 1901 strike at Spindletop, ninety miles east of Houston. While Texas was only one of several states to challenge Pennsylvania's dominance as the major oil-producing state (others included California, Oklahoma, and Kansas), Spindletop became synonymous with the birth of the 20th-century oil industry in the United States. The *Year Book of Texas* reported how the famous well "blew in" on January 10, 1901:

*At exactly 10:30 a.m., the well that made Beaumont famous burst upon the astonished view of those engaged in boring it, with a volume of water, sand, rocks, gas and oil that sped upward with such tremendous force as to tear the crossbars of the derrick to pieces, and scattered the mixed properties from its bowels, together with timbers, pieces of well casing, etc., for hundreds of feet in all directions.*

The world's largest producing well, outside of the Baku field in Russia, was the result of eight frustrating years of effort by Pattillo Higgins, a Beaumont local who insisted that oil lay under a swamp near the Neches River, and Captain Anthony F. Lucas, an Austrian mining engineer who Higgins took as a partner in 1899. The venture's financial

*Along with the discovery of oil at Spindletop, the construction of the Houston Ship Channel made Houston—and its location along Buffalo Bayou—the center of the oil and gas industry.*

woes brought in outside funds, and with replenished backing—and a new rotary rig—Lucas struck oil at 1,160 feet, almost exactly where Higgins predicted.

Newspapers everywhere announced the Lucas strike, and the little town of Beaumont was soon overrun with promoters, speculators, and swindlers. Beaumont became the “Queen of the Neches,” where you could see “a gusher gushing.” In three months the population tripled to 30,000, as six trains daily pulled in from Houston. Shacks and shanties dotted the town, saloons and bawdyhouses provided the entertainment. It was a time for legendary fortunes to be made, for even grander tall tales to be circulated.

The field itself was the most extraordinary story. By the end of 1902, almost 400 wells were bunched together on Spindletop; by 1904, about 1,200. The first six wells drilled at Spindletop accounted for more oil than all the world’s other wells. In 1905 the Humble field, also near Houston, began producing oil, and by 1919 two other major fields were tapped. Approximately three-fourths of Gulf Coast oil was pumped from these fields. Between 1901 and 1950, crude-oil production in Texas accounted for about 33 percent of the all-time production of the United States and 21 percent of world production.

The strike at Spindletop produced a variety of results. It meant new financial resources for the state of Texas. It led to the exploitation of other salt-dome fields near the coast, including Sour Lake, Goose Creek, Humble, Jennings, and Batson. The boom ultimately spread across the state, from the Gulf of Mexico to the Panhandle, and throughout the Southwest. Businesses servicing the oil industry, such as Hughes Tool Company, brought an industrial capacity to Texas like never before. Oil’s effect on the development of major cities was no less significant: first Beaumont, then Houston, then Dallas and Fort Worth—all benefited from oil wealth.

On a broader scale, Spindletop signaled the permanent establishment of the oil industry in the Southwest, and produced a new group of rivals to challenge Standard Oil’s control of the industry—Gulf, Texas (Texaco), Shell, Sun, and others. Having spawned several major oil companies and many smaller ones, Spindletop irreparably altered the oil industry in the 20th century.

### **The Construction of the Houston Ship Channel**

In the 20th century, Buffalo Bayou was dominated by the Houston Ship Channel, especially in the part of the bayou filled with industrial activity—particularly petroleum and petrochemicals. To the east, there are the wetlands along Galveston Bay and, to the west, an urban park system in the downtown. Yet at the heart of Buffalo Bayou is the Houston Ship Channel, which clearly represents the dramatic transformation of “a meandering stream into a massive industrial complex.” It is also the key feature in the proposed National Heritage Area’s nationally significant theme of Houston as the Nation’s “Energy Capital.”

Along with the discovery of oil at Spindletop, the construction of the Houston Ship Channel made Houston—and its location along Buffalo Bayou—the center of the oil and gas industry. Indeed, the ship channel altered Houston’s commercial future in many ways. According to historian Lynn M. Alperin, “The goal of a ship channel from the Gulf to the head of navigation on Buffalo Bayou predates the inception of the city of Houston in 1836 and the boisterous era of the Texas Republic.” Not until the 1870s, however, was a concerted effort made to actually complete such a channel. The U.S. Army Corps’ 1870 survey had recommended a channel of 100 feet wide and six feet deep, but without sufficient appropriations little was done.

Charles Morgan, who was involved in Gulf shipping and eager to bypass Galveston's wharfage costs, bought the Bayou Ship Channel Company in 1874. Within two years, he dredged a channel from Galveston Bay to present-day Clinton in proximity to Houston. (Clinton was to the southeast of the Turning Basin.) He also stretched a chain across the channel at Morgan's Point in order to collect tolls, making Buffalo Bayou a nautical tollway. Morgan soon turned to railroading, and the United States government ultimately gained responsibility for the channel in 1892 in order, as David McComb stated, "to liberate the stream" by removing the chain. Through the efforts of men such as Houston Congressman Thomas H. Ball, a member of the Rivers and Harbors Committee, appropriations became available to expand upon Morgan's channel improvements. This was particularly important since Galveston was developing plans for deepening the bar to allow ocean-going vessels access to the local wharves. Congress also authorized the channel to be deepened to 25 feet and a terminus to be located at Long Reach, later called the Turning Basin. By 1909, however, the channel had only been deepened to 18 ½ feet.

A delegation from Houston, led by Mayor Horace Baldwin Rice, traveled to Washington, urging Congress to accept

the "Houston Plan" for the channel, which would provide half of the cost of the remaining dredging. Events then moved quickly: Congress accepted the plan with assurances that the facilities would remain in public hands; the Texas legislature enabled Harris County to establish a navigation district; and the citizens of the county approved a bond issue. In September 1914, the dredging was completed, and the channel was officially opened on November 10. But deep-water capacity was delayed until after World War I. In 1919, the *Merry Mount* became the first ocean-going vessel to ship cotton directly from Houston to Europe. Within a decade, Houston was the leading cotton port in the United States, matching its role as the largest spot cotton market in the world and the second leading port in the country in the volume of cotton orders handled. Oil would soon rival cotton as the Houston Ship Channel's most important cargo.

### **Petroleum, Petrochemicals, and Buffalo Bayou as "Energy Capital of the World"**

With the development of the Houston Ship Channel along Buffalo Bayou, and its proximity to one of the world's great concentration of oil fields, Houston was being touted as the "Energy Capital of the World" by the 1930s. At that time, half of the world's production of oil was

The construction of the Houston Ship Channel allowed Houston to emerge as a major port. Today, large ocean vessels frequently operate on the Houston Ship Channel (NPS photo ).



A 1939 *Fortune* magazine feature article observed: "Without oil Houston would have been just another cotton town....Take oil away and Houston's skyscrapers would be tenanted with ghosts."

located within 600 miles of Houston, and it could boast of 4,200 miles of pipeline reaching outward to hundreds of fields. While Beaumont was close to the major oil fields, it did not have the railroads, banking system, or the port facilities that Houston had already developed.

One observer noted in 1918 that: "The future of the Houston Ship Channel appears to lie in the direction of industrial developments as its banks furnish very favorable locations for industries which would thus be given the advantage of water transportation." The utilization of Buffalo Bayou as a major commercial conduit for cotton, timber, and other commodities established an important precedent that allowed the Port of Houston to build an industrial capacity that would surpass its 19th- and early 20th-century enterprises. In addition, before the dominance of oil and gas, Houston and the Gulf Coast also was the site of other extractive enterprises beyond timber, namely sulphur, salt, lime, and other minerals.

The oil strike at Spindletop opened the way for oil, natural gas, and petrochemicals to dominate the Gulf Coast trade and industrial production centered along the bayou. In a reciprocal way, transporting oil and other petroleum-related goods added incentive for additional channel improvements. Oil was transformed into many products; it created thousands of jobs in production, transportation, sales, refining, and distribution; it led many oil companies to establish headquarters in Houston and the surrounding area; and it became home to many oil-related businesses such as Hughes Tool Company (started by Howard R. Hughes) and Cameron Iron Works. Between 1929 and 1945, oil and related industries replaced cotton as the central feature of the Houston economy. In 1935 almost half of all Texas oil was shipped through the Port of

Houston. *Fortune* magazine asserted, "without oil Houston would have been just another cotton town. . . . Take oil away and Houston's skyscrapers would be tenanted with ghosts." Today, petroleum remains the top import and export, along with other petroleum products, crude fertilizers and minerals, and organic chemicals. With the Spindletop strike, oil companies began to extend pipelines to the ship channel, and the protected watercourse offered an excellent location for refineries and other oil- and gas-related businesses. By 1930, more than fifty businesses had developed along the channel.

Oil refining became a trademark of the Houston area. As oil historian Joseph A. Pratt stated, "Throughout the twentieth century, the Gulf Coast of the United States had been one of the largest centers of petroleum refining in the world." He added, "Although all phases of the industry were important, refining left its mark most prominently on the region." While the Gulf Coast refining region, writ large, extended from New Orleans to Corpus Christi (with almost 35 percent of the nation's refining capacity in 1970 and providing a substantial share of refined goods going to the Northeast), Pratt argued that the "historical and geographic center" was focused along a 100-mile coastline from Houston to Port Arthur, which contained the greatest concentration of refineries. Houston itself was at the center of the extensive expansion of refining, which further enhanced its reputation as a major energy center. The large, integrated oil companies—several of which were based in Houston—were most influential in shaping refining development along the Gulf Coast.

As early as 1916, refineries had already come on line in the region, but initially they were not as important as oil production or pipeline development for oil transport. With the construction of pipelines from a variety of oil fields in Texas, Louisiana, and Oklahoma,



The petrochemical industry is a major employer in the Houston area (photo © Jim Olive, Stockyard.com).

oil continued to flow to the Gulf Coast despite the subsiding of the Spindletop boom. The turning point for Houston as the center of refining along the Gulf Coast came several years after the completion of the ship channel. With the end of World War I, refineries slowly began to be attracted to the area, but it was in the 1920s that large plants were constructed in earnest.

By 1927 eight refineries with a capacity of approximately 125,000 barrels of crude a day were operating along the ship channel. The early leader was Humble Oil & Refining Company's huge Baytown refinery—the largest on the Gulf Coast for several decades. In 1920, Sinclair Oil Company built a large plant in Houston, and Crown-Central built another in Pasadena in 1924. A variety of smaller refineries also dotted both sides of the ship channel. In the late 1920s and 1930s, Houston saw increasingly rapid expansion in refining capacity—Shell's plant in Deer Creek (1929), Pan Americans' in Texas City (1934), Republic's also in Texas City (1932), and

the Eastern States Petroleum facility in Houston (1937). The refining capacity in the Houston area increased by more than 360 percent between 1931 and 1941, even greater than in the Port Arthur area, which had dominated years earlier.

Emerging as a major economic force in World War II, the production of petrochemicals added to the importance of petroleum and natural gas to the Houston area in general and to the ship channel in particular. In 1920 there were only two active petrochemical companies in the United States. In the 1920s and 1930s, Union Carbide and Standard Oil of New Jersey were pioneers. World War II brought significant changes in the industry, especially with the need for aviation fuel, synthetic rubber, and other petroleum-based products necessary for the war effort. In fact, half of the synthetic rubber used in the war came from Texas. Historian Joseph A. Pratt asserted, "Petrochemicals were the catalyst for a second spurt of regional growth in the modern era, which

repeated in many ways the refining-led expansion of the period from 1901 to the 1930s. By 1970 six billion dollars had been invested in the petrochemical industry in Texas.” In 2008, many of the world’s largest energy companies maintained a large base of operations in Houston, including ConocoPhillips, Exxon-Mobile, Shell Oil, British Petroleum, and Chevron.

Houston, in particular, was at the heart of petrochemical production, especially because the Gulf Coast refineries were a major source of the raw material – the feedstock – for petrochemicals. By 1950 there were 27 chemical plants along the ship channel. By the 1980s, the Houston area had more than half of the petrochemical capacity in the country. One of the prices that the region has paid for the high concentration of petroleum and petrochemical facilities, however, has been high levels of air, land, and water pollution to accompany its economic bounty.

The oil and petrochemical industry also brought social changes to the region. From the 1920s forward, poor white and black tenant farmers and family farmers from East Texas and western Louisiana flocked from depressed agricultural conditions and went to work in the factories along

the ship channel in search of a better life for themselves and their children. They were joined in growing numbers during and after World War II by Mexicans, Mexican-Americans, and Cajuns from South Louisiana. The energy industry also provided jobs for engineers, accountants, and managers. Over time, regional universities such as Rice University and the University of Houston offered specialized technical training for the oil and petrochemical industries, and it was not unusual for children and grandchildren of refinery workers to become better-paid technicians in the industry.

The growth of the energy industry resulted in changes in working conditions. The major oil companies tried to prevent the growth of independent unions through company-dominated workers organizations. In the 1920s, the Humble Oil & Refining Company built housing for their employees in Baytown; the company also provided medical care inside refineries for workers and their families, and sponsored activities such as sports leagues, Christmas parties, and hunting and fishing camps.

A rarity in this part of the nation, the growth of unions, particularly the Oil Chemical and Atomic Workers (OCAW),

Houston is the fourth largest city in the United States. It is a major center for the oil and gas industry, petrochemicals, biotechnology, medical, computers and technology, aerospace, and the hospitality industries (photo © Jim Olive, Stockyard.com)..





Established along the Buffalo Bayou in 1836, Houston eventually grew into the largest city in Texas. (photo © Jim Olive, Stockyard.com).

after World War II became a focal point for life along the Buffalo Bayou through the 1970s. Long nights spent working, talking and eating on the graveyard shift created unity, as did the shared experiences of long, hard strikes and the occasional success of electing pro-labor politicians such as Senator Ralph Yarborough and local mayors and sheriffs. The union hall became a common meeting ground outside of the factories. While the unions—now merged with United Steelworkers—still have a presence in the factory towns, computer-driven technology had led to a decline in the number of permanent factory workers and their impact.

More significant in forging a common social identity among workers families were the local schools. “Refinery towns” such as Pasadena, Galena Park, Deer Park, Baytown, and Texas City sprang up along the ship channel in the 1920s and 1930s. Their school districts benefited greatly from direct payments and assistance from the refineries. And, of course, Texas high school football was as strong along the Buffalo Bayou as anywhere else. Particularly after desegregation in the 1960s, a run at a state championship brought an entire community together.



## Chapter 5: The Landscape of the Buffalo Bayou, and its Natural, Cultural, Historic and Recreational Resources

*A National Park Service cultural resource inventory of the potential Buffalo Bayou National Heritage Area identified 48 historic resources that reflect the nationally significant theme of the Texas oil industry and Houston's role as the Nation's "Energy Capital." These resources include 19 historic buildings within Houston and 29 petrochemical plants along the bayou.*

A National Heritage Area is a place designated by the United States Congress where natural, cultural, historic and recreational resources combine to form a cohesive, nationally distinctive landscape arising from patterns of human activity shaped by geography. These patterns make National Heritage Areas representative of the national experience through the physical features that remain and the traditions that have evolved in the areas. Continued use of the National Heritage Areas by people whose traditions helped to shape the landscapes enhances their significance.

A recent National Park Service report, *Charting a Future for National Heritage Areas*, noted that heritage areas should tell nationally important stories through a regionally distinctive combination of resources. As authorized by the Buffalo Bayou National Heritage Area Study Act, the National Park Service undertook a series of technical studies to assess this area's natural, cultural, historic and recreational resources. Excerpts of some of these technical reports are in the report appendices.

The study area includes the urban core of Houston along the Buffalo Bayou, the Houston Ship Channel, and the communities that stretch east all the way to Galveston Bay. This chapter identifies major resources associated with its historical themes, highlights some of its neighborhoods, communities, and customs; describes recreational opportunities, and includes a discussion of efforts to preserve the area's natural preserves, nature centers, wetlands restoration, and wildlife management area.

### Historic and Cultural Resources

As discussed in the previous chapter, the Buffalo Bayou played a significant role in fueling the nation's growth. This history is reflected in downtown Houston buildings and neighborhoods that relate directly to the growth of the

energy industry, the gigantic oil and petrochemical industry that bestrides the Buffalo Bayou, and the communities that became home for the many workers drawn to the area by its economic opportunities.

A National Park Service cultural resource inventory of the potential Buffalo Bayou National Heritage Area identified 48 historic resources that reflect the nationally significant theme of the Texas oil industry and Houston's role as the Nation's "Energy Capital." These resources include 19 historic buildings within Houston and 29 petrochemical plants along the bayou. (More information on these resources is in Appendix D.)

*"Energy Capital"-Related Historic Resources within Houston* — From early gas stations that served as national prototypes for the sale of petroleum-related products, to warehouses and manufacturing plants that supplied oil and petrochemical producers, to the skyscrapers that served as national and regional headquarters of major oil companies, Houston's built environment offers numerous opportunities to tell the story of energy development. The National Park Service study identified 19 places within the city of Houston through which this story could be told.

Photo on left: The San Jacinto Monument was constructed from 1936 to 1939 as a joint project between the State of Texas and the federal Works Progress Administration. The top is designed so that it appears as a star from all angles (photo © Jim Olive, Stockyard.com).



Image above: A dramatic view of three tanks at a refinery in the Houston area. The area's refinery capacity of 4,035 million barrels of refined petroleum products per calendar day—representing nearly a quarter of America's total capacity—is one of the reasons the city is known as the "Energy Capital of the World" (photo © Jim Olive, Stockyard.com).

Four of these buildings – all of which are listed on the National Register of Historic Places – were built as the headquarters for major oil companies. The Texas Company, later known as Texaco, was the first major oil company to establish its headquarters in Houston. The 1915 Beaux Arts-style building, which features grand limestone arches and is emblazoned with the Texaco star, is a landmark Houston building. Also in downtown Houston is the Main Building, constructed in 1921 as the headquarters for the Humble Oil & Refining Company, which was founded by Ross Sterling, who later became governor. Gulf Oil built two of the most impressive buildings on Houston's skyline. In 1907, the company built one of the city's earliest examples of Chicago School-style skyscrapers, now known as the Paul/Republic Building. Twelve years later, the company relocated into what is now known as the Chase Bank Building, considered one of the premier Art Deco skyscrapers in the American Southwest.

Other buildings in the Houston area represent a historic "who's who" of energy development suppliers. The Union Bank Building once housed the

office of Brown & Root, which played a significant role in the development of the oil and gas industry in Houston and east Texas. The Peden Iron & Steel Company manufactured heavy hardware, mill, railroad, and oil well drilling equipment. Like other buildings along the bayou, the Peden building was constructed with additional floor levels below the street that could be served by commercial barges. Also within the study area are the historic offices, manufacturing plants, and retail outlets of numerous other companies associated with energy development – Eric City Iron Works, Wholesale Wire Rope Company, Plowden Supply Company, Longhorn Supply Company, and Hahn & Clay, which began as a blacksmithy and boilermaker shop and now serves as a single-source supplier for pressure vessels and other custom fabricated products for the oil and petrochemical industry.

Following is a listing of Houston resources, all within the boundary of the study area, that specifically reflect the "Energy Capital" theme of Texas oil and petrochemical production and development:

1. Texas Company Building, 1111 Rusk Street. Constructed 1915.
2. Humble Oil Company Building (now known as the Main Building), 1212 Main Street. Constructed 1921.
3. Gulf Oil Company Building (JPMorgan Chase Building), 710-724 Main Street. Constructed 1929.
4. Paul Building (Republic Building), 1018 Preston Street. Constructed 1907.
5. Union National Bank Building (Hotel Icon), 220 Main Street. Constructed 1912.
6. Peden Iron & Steel Company Building (Harris County Peden Community Correction Facility), 610 North San Jacinto Street. Constructed 1930.
7. Peden Iron & Steel Company Building, 700 North San Jacinto Street. Constructed 1905-06.
8. Peden Iron & Steel Company Warehouse (Maloney Warehouse), 800 North San Jacinto Street. Constructed late 1940s.
9. Commercial National Bank Building, 917 Franklin Street. Constructed 1904.
10. Wholesale Wire Rope Company (Fred's Trailer & Truck Supply Company), 3229 Navigation Boulevard. Constructed 1920-1930.
11. Plowden Supply Company (General Supply & Equipment Company), 3201 Engelke Street. Constructed 1920s.
12. Houston Natural Gas Company, Service Center (Center Point Energy, Lockwood Service Center), 900 Lockwood Drive. Constructed late 1940s.
13. Erie City Iron Works Warehouse, 1302 Nance Street. Constructed 1909.
14. Reed Power Bit Company, 6501 Navigation Boulevard. Constructed 1924.
15. Longhorn Supply Company, 3130 Navigation Boulevard. Constructed in the 1920s and rebuilt in the 1950s.
16. Shipside Contracting Corporation, 5601 Navigation Boulevard. Constructed 1938.
17. Hahn & Clay, 5100 Clinton Drive. Constructed 1948.
18. Humble Oil & Refining Company Service Station #179 (Look Automotive), 2101 Washington Avenue. Constructed 1929.
19. Heflin Rubber Company Service Station, 1001 North San Jacinto Street. Constructed 1935.

In addition, Houston has several individual buildings and in-town historic districts listed on the National Register of Historic Places at a local and/or state level of significance, all of which are in the study area.



Image on right: Exterior of the Gulf Oil Company Building (now known as the JPMorgan Chase Building). Constructed in 1929, the Gulf Oil Company Building is considered one of the premier Art Deco skyscrapers in the southwestern United States. The building was designed by architects Alfred C. Finn, Kenneth Franzheim, and J.E.R. Carpenter (NPS photo).

*By the early 2000s, the Port of Houston had become the sixth largest port in the world and home to a \$15 billion petrochemical complex that was the largest in the Nation and second largest in the world.*

These districts include Main Street/Market Square, Old Sixth Ward, and Freedman's Town. A draft National Register nomination of the Houston warehouse district identified 65 contributing resources within the proposed 163-acre district, most of which are associated with the commercial and economic development of the city.

*"Energy Capital"-Related Historic Resources along the Houston Ship Channel* — The post-World War II era has enhanced the Buffalo Bayou's position as a major oil and petrochemical capital. In 1946, nine refineries along the Houston Ship Channel processed 416,500 barrels of oil daily. By 1950, 27 petrochemical plants lined the ship channel. By 1955, the ship channel's refineries had an aggregate daily capacity of 780,000 barrels of crude oil and employed more than 12,000 workers.

The largest refinery in the area was the Humble Oil & Refining Company's Baytown complex, covering some 2,600 acres, employing more than 6,000 workers and having a daily crude oil capacity of 260,000 barrels. According to Joseph L. Clark and Elton M. Scott in

their *The Texas Gulf Coast: Its History and Development*, the Baytown refinery was "generally listed as the largest refinery in the United States and the largest operating refinery in the world. The Abadan refinery in Iran is bigger, but it has been closed down for several years by political difficulties. . . ."

According to Clark and Scott, the Houston area contained "about one-fifth of the chemical industry of the Texas Gulf Coast Country, the greatest concentration within the region and, according to *Fortune* magazine, the greatest chemical and petro-chemical concentration in the world." Several plants, other than oil refineries, were operating before 1939, the first being constructed by the Texas Chemical Company in 1917. However, the "value of Houston's chemical production increased more than 600 percent in the decade ending in 1949 – the output of that year being valued at \$2,500,000." The area's industries supplied a long list of industrial chemicals, plastics and fiber intermediaries, synthetic rubber, glycerin, fertilizers, and other materials. Some of the largest plants are clustered along the south side of the Houston Ship Channel between Pasadena and the San Jacinto Battleground State Historic Site.

First floor interior, Gulf Oil Company Building. Designated as a City of Houston Landmark and National Historic Civil Engineering Landmark, the Gulf Oil Company Building has undergone extensive renovation of its historic architectural features (NPS photo).





A view of the Buffalo Bayou/Houston Ship Channel from the San Jacinto Monument. The Houston skyline can be seen in the background (NPS photo).

By the early 2000s, the Port of Houston was home to a \$15 billion petrochemical complex. On its website, the South Texas Section of the American Institute of Chemical Engineers states:

*The Houston Ship Channel is the “aorta” of the area’s chemical industry with more than 50 chemical processing facilities located along either side “pumping” their products into commerce around the world. The ship channel has more than 50% of the nation’s basic petrochemical manufacturing capacity and nearly 50% of the capacity of first stage derivatives – almost three times larger than its closest competitor. Each year, port activity has a three billion dollar impact on the Houston economy. The list of companies that are located along the Houston Ship Channel reads like a who’s who of the chemical process and refining industries. The Port of Houston is the largest port in the nation for foreign tonnage and is directly responsible for more than 75,000 jobs plus another 130,000 related jobs in the Houston/Harris County area not including those who work in the refineries, chemical plants and petrochemical complexes that line the Houston Ship Channel.*

([http://www.aichests.org/ship\\_channel\\_2006/stsaichehoustonshipchanneltrip.htm](http://www.aichests.org/ship_channel_2006/stsaichehoustonshipchanneltrip.htm))

Similarly, the Greater Houston Partnership website lists an array of “Petrochemical Facts” that demonstrate the importance of this industry to the area, the state, the nation, and the world:

- The Houston-Gulf Coast region has nearly 40 percent of the nation’s petrochemicals manufacturing capacity
- The Texas Gulf Coast region has a crude operable capacity of 4.035 million barrels of refined petroleum products per calendar day—87 percent of the Texas total and 24.5 percent of the U.S. total
- Houston metropolitan area has more than 400 chemical manufacturing establishments with more than 35,000 employees
- Houston (as of February 1, 2005) dominates the U.S. production of three major resins: polyethylene (38.2 % of U.S. capacity); polyvinyl chloride (36.4 % of U.S. capacity); and polypropylene (53.7 % of U.S. capacity)



NPS photo

*Houston's success as a commercial shipping hub continued to grow such that the Buffalo Bayou became known by the moniker: "where seventeen railroads meet the sea."*

- Petrochemical plants in the Houston metropolitan area (as of 2005) produce the following: benzene (32.4 % of U.S. capacity); butadiene (50.6 % of U.S. capacity); ethylene (43.0 % of U.S. capacity); polymer-grade propylene (31.0 % of U.S. capacity); toluene (33.2 % of U.S. capacity); and xylenes (19.1 % of U.S. capacity)—based on capacity estimates by SRI Consulting and volume-to-weight calculations for certain chemicals by the Greater Houston Partnership
  - 48 percent of the region's economic base employment is energy-related
  - ExxonMobil's complex in Baytown is one of the oldest in the area and one of the largest of its kind in the world
  - Houston is geographically close to four ports that make the area's petrochemicals accessible to the world
  - Houston has two of the four largest U.S. refineries
  - One-half of all Texas plastics workers are employed in the Houston area
- According to an article in the November 2004 issue of *Texas Monthly*, the area comprises "one of the largest concentrations of heavy industry on earth, producing nearly half of the nation's supply of gasoline and half of its petrochemicals." Thus, the Houston Ship Channel and its associated oil refineries, natural gas pipelines and facilities, and petrochemical plants are historic resources that relate directly to the "Energy Capital" theme of the proposed Buffalo Bayou National Heritage Area.
- The National Park Service inventory of resources identified 29 petrochemical plants that reflect this nationally significant theme:
1. Albemarle Corporation
  2. Arkema, Inc.
  3. BP Chemicals
  4. BP Solvay Polyethylene North America
  5. ChevronPhillips Chemical Company, LP
  6. Crown Central Petroleum Corporation
  7. Dixie Chemical Company, Inc.
  8. Dow Chemical Company, Houston Operations, La Porte Site
  9. Dow Chemical Company, Houston Operations, Deer Park Site (Hampshire Chemical Corporation)
  10. DuPont Company
  11. Equistar
  12. Equistar Chemicals, LP
  13. Ethyl Corporation
  14. ExxonMobil Company
  15. ExxonMobil Chemical Company
  16. Goodyear Tire and Rubber Company
  17. Haldor Topsoe, Inc.
  18. Lubrizol Corporation
  19. Lyondell-Citgo Refining, LP
  20. Merisol Company
  21. Natural Gas Odorizing, Inc.

22. Oxy Vinyls, LP (Deer Park Plant Chlor-Alkali Site) – Main Plant
23. Reagens
24. Reichhold, Inc.
25. Rhodia Eco Services
26. Rhodia
27. Rhom and Haas Texas, Inc.
28. Shell Deer Park Refining Limited Partnership and Shell Deer Park Chemical Plant
29. Texas Petrochemicals Company, LP

*The Battle of San Jacinto and Texas Independence* — The proposed Buffalo Bayou National Heritage Area includes one major resource that represents the nationally significant theme of Texas independence: the San Jacinto Battleground State Historic Site. On April 21, 1836, near the mouth of Buffalo Bayou, where it empties into the San Jacinto River, the decisive battle of the Texas Revolution was fought. Some 900 men led by General Sam Houston, Commander-in-Chief of all Texas forces, surprised the Mexican army

under the command of President Antonio Lopez de Santa Anna, which was encamped on the San Jacinto River. In a battle lasting eighteen minutes, the Texans routed the enemy, killing or capturing many Mexican soldiers. The following day, Santa Anna himself was captured, and held hostage against further Mexican attack. The victory ultimately ensured independence of the Texas Republic from Mexico. Independence paved the way for annexation of Texas by the United States in 1845, which in turn brought on the Mexican War (1846-48) and the acquisition by the United States of the entire Southwest and California via the Treaty of Guadalupe Hidalgo (1848).

San Jacinto Battleground State Historic Site preserves and interprets cultural and historic features associated with the Battle of San Jacinto. Between 1883 and 1901, the Texas state government worked to acquire land around the historic battlefield. Eventually, some 445 acres were purchased from various private owners, and San Jacinto veterans helped to delineate the location of the battle. In 1909, the site was designated as a state park by the Texas legislature. In 1936, under the impetus of the state centennial celebration, extensive development of

The 1936 Texas Centennial Marker commemorating the site where the Texan army was assembled to attack General Santa Anna's forces. Tanks of the Intercontinental Terminals Company are in the background.  
(NPS photo)





The urban core of Houston features several parks within the study area (photo © Jim Olive, Stockyard.com).

the battlefield site was undertaken by the state with the assistance of the Works Progress Administration, including construction of a towering 570-foot reinforced concrete obelisk faced with Texas shell limestone and capped by a three-dimensional version of the Lone Star. High raised terraces surround the base of the San Jacinto Monument, which contains the San Jacinto Museum of History and an elevator that carries sightseers to an observation deck at the top of the shaft. Today, the state historical site is administered by the Texas Parks and Wildlife Department and covers some 1,200 acres within a vast expanse of oil refineries, petrochemical plants, and other industrial development. Markers at various numbered points along park roads interpret key points and features associated with the battle. Thus, the state historical site provides significant opportunities for ongoing historic preservation and interpretation related to Buffalo Bayou's nationally historic theme of Texas independence.

Although the battle and war for Texas independence are primarily interpreted at San Jacinto Battleground State Historic Site, some 20-25 historical markers have been erected at sites in the broader area that commemorate significant events or persons associated with the battle and war. All of the sites commemorated by these historical markers have, however, been impacted significantly by urban and/or industrial development. As such, they were not evaluated as cultural resources as part of this study. However, these markers help interpret the theme of Texas independence. Among the historical markers in the Buffalo Bayou study area that are associated with the Battle of San Jacinto and Texas independence are the following:

1. "Old Harrisburg" – Address: 8100 block of Lawndale and Frio, Houston. The marker reads, in part: "Site of state's first steam saw, grist mills and railroad terminal. Town founded, 1826, by John R. Harris . . . Became the seat of government of the Republic of Texas, March 22 - April 13, 1836, when David G. Burnet, President of the ad interim government and several of his cabinet resided near here in the home of Mrs. Jane Harris, widow of town founder."
2. "Near Site of Isaac Batterson Home" – Address: Galena Park City Hall. Commemorates the site of Isaac Batterson's home, which was the source of the flooring used by the Texan army to build a raft on which they crossed the Buffalo Bayou on April 19, 1836.
3. "Texan Army Crossing of Buffalo Bayou" – Address: 12000 Lawndale Avenue, Houston. Commemorates the site where the Texan army crossed Buffalo Bayou between Sims Bayou and Vince's Bayou on April 19, 1836.
4. "Vince's Bridge" – Address: North Richey Street, about one mile north of State Highway 225, Pasadena. Commemorates the site of William Vince's Bridge, which was destroyed on April 21, 1836 to prevent the arrival of reinforcements to Santa Anna's army. Because the bridge was out, Santa Anna could not escape and was captured nearby on April 22.
5. "Site of Battle of San Jacinto, 1836" – Address: Marker on west side of State Highway 134, north of State Highway 225. Commemorates the site where the Texan army was drawn up to attack Santa Anna's forces on April 21, 1836.
6. "Capture Site of General Santa Anna" – Address: Marker



Capture Site of General Santa Anna marker (NPS photo ).

adjacent to front gate of Pasadena Paper Company, Pasadena. Commemorates approximate site of the capture of Santa Anna on April 22, 1836.

7. “Texan Capture of Mexican Dispatchers” – Address: Bellaire Boulevard at Second Street, Bellaire. Commemorates site of the Texan army encampment on April 18, 1836, opposite Harrisburg (about 800 yards downstream) which had been burned by the Mexican army on April 17. Deaf Smith and Wax Kearnes crossed Buffalo Bayou and captured a Mexican courier, confirming the location and troop strength of the Mexican army.
8. “Lorenzo de Zavala” – Address: 531 Crockett Drive, Channelview. Commemorates the homesite of Lorenzo de Zavala, a signer of the Texas Declaration of Independence and first vice-president of the Republic of Texas. The de Zavala home, a plank-covered log house overlooking Buffalo Bayou, served as a hospital for both sides after the battle.

At the San Jacinto Battleground State Historic Site, several non-profit organizations help support that site’s preservation efforts, including the San Jacinto Battleground Association, which was incorporated as a Texas nonprofit corporation in September 2002 to preserve, promote and enhance the battleground. Also known as the Friends of the San Jacinto Battleground, the association partners with the Texas Parks and Wildlife Department, non-profit organizations, foundations and corporations to conduct archeological investigations of the battle site, acquire property adjacent to the park, support marsh and prairie restoration projects, and help fund activities for the annual San Jacinto Day Commemoration and the Battle of San Jacinto Symposium.

The Friends includes the First Texas Volunteers, the group responsible for the ongoing interior restoration of the Battleship Texas and “Hard Hat Tours” of the battleship, and the San Jacinto Volunteers, who reenact the San Jacinto battle annually. Other groups that are involved with the battleground are the San Jacinto Museum of History, which is operated by the San Jacinto Museum of History Association in association with the Texas State Parks and Wildlife Commission, and the Battleship Texas Foundation, which was created to assist ongoing preservation and educational efforts aboard the historic ship.

### ***The Neighborhoods, Communities, and Customs of the Buffalo Bayou***

Historic buildings and sites provide only a partial understanding of the texture of this potential National Heritage Area. It is also the people attracted to live and work along the Buffalo Bayou who formed the communities and shaped the culture of greater Houston today.

*Native Americans and Early Exploration* — Long before European and Mexican explorers would establish the first missions and settlements along the upper Texas coast, Native Americans lived and traded throughout Harris County and along Buffalo Bayou. The Bidais and Akokisa tribes lived in the woodlands on the north side of Buffalo Bayou. The Comanche and Karankawa tribes were the first humans to populate the western portion of the bayou in the present day Katy Prairie. Here, they hunted waterfowl, deer and the large bison herds that once grazed these prairies. The French and the Spanish began trading with these tribes in the late 1700s, but did not establish any settlements along the bayou until the 1820s.

When settlers began arriving in Houston in the 1830s, Native American tribes—Coushattas, Bidais, Caddos, Alabamas, Lipans—camped in and around Houston



Houstonians enjoy the variety of diversions at the International Festival, held yearly in Sam Houston Park. Note the presence of a "Texas Zone," appropriate due to Texas's former status as an independent nation (Photo © Jim Olive, Stockyard.com)

to trade furs and venison for lead, powder, textiles and house wares. Several trading houses were established in Houston's early history and lasted through about 1870. Though information about the relationships between early Houstonians and Native Americans is not widely held, it is known that Native Americans taught early settlers important skills such as making natural dyes for coloring thread, forming clay containers and using "spring houses" (excavations dug beside running springs) for keeping perishables cool.

In 1837, when the first Congress of the Republic of Texas convened in the then Texas Capital of Houston, many Native Americans came to speak on behalf of their tribes. About three hundred members of the Comanche tribe arrived in Houston seeking to establish a treaty with the Texas government, and that same year, the Cherokee Chief Duwali arrived in Houston to negotiate a treaty for his organization, then known as the Cherokee and Associated Bands. The Comanches camped on Buffalo Bayou, in the city block bounded by Travis Street, Prairie Avenue and Congress Avenue in downtown Houston. The thick forests of the bayou's banks transformed into a tall grass prairie near this area of town (hence the name Prairie Avenue), and there was also a freshwater spring and an impressive oak tree here, near the present day front door of Houston's performing art center, Wortham Center. Feelings toward Native American tribes varied from completely hostile to highly amicable. Texas' President Sam Houston is remembered for his attempts to establish peaceful coexistence with Texas' tribes. President Houston held peace talks with tribal representatives among a grove of pecan trees located in Houston's present day Theater District.

Northwest of Houston, in the area that is now Barker Reservoir on Buffalo Bayou near Highway 6, Native American tribes used to come in large

numbers to the area and camp on the bayou. The severe winter of 1875 caused widespread illness and death for many of them. This was probably the last time that there was such a large gathering of Texas' Native Americans and marked the demise of these first true inhabitants of Buffalo Bayou's lands. Most of the varied Native American tribes that once lived along Buffalo Bayou were either extirpated or "relocated" by the 1870s. Today, there is one Native American band still directly tied to Buffalo Bayou. They are the Buffalo Bayou Band of Chickamaugan Cherokees and are members of the Southern Cherokee Nation. The Cherokee Cultural Society of Houston also is still active in the community. Archeologically, there exist several well preserved Native American "kitchen" middens along Buffalo Bayou within the boundaries of Houston's Memorial Park.

#### *Houston Neighborhoods —*

Well before the advent of the oil industry, the Buffalo Bayou was drawing workers to Houston. Lumber, cotton, brewing and ice-making drove Houston's growth in the 19th century. A large German population settled in Houston, along with Mexicans, and freed slaves after the Civil War.

Houston's success as a commercial shipping hub continued to grow such that the Buffalo Bayou became known by the moniker: "where seventeen railroads meet the sea." In a sense, this 19th century economic and transportation infrastructure laid the groundwork and made possible the development of the energy industry of the 20th century. While many early neighborhoods have given way to new industrial and transportation development, two notable historic neighborhoods, representing different aspects of the city's history, are the River Oaks Country Club Estates and the Second Ward.

The 180 acres that would become River Oaks Country Club Estates

Three young girls of Mexican descent in traditional costume celebrate their heritage. The long-standing Mexican community is an integral element of Houston's diverse population (photo © Jim Olive, Stockyard.com)



was purchased by some of Houston's wealthiest men in 1920, and then repurchased and developed by the well known Hogg brothers in 1924. River Oaks was one of the first among Houston's master planned garden communities. Its site was chosen because of its location on the high grounds lying along the southern edge of Buffalo Bayou, west of the growing industrial sector of downtown Houston. The landscaping plan of the subdivision capitalized on the natural beauty of the bayou, and the most sought-after lots in the subdivision backed up to Buffalo Bayou's wild forests and ravines. Central to the affluent River Oaks subdivision, River Oaks Country Club was established in 1923, and its manicured lawns and nationally known golf course still blanket the southern banks of Buffalo Bayou today.

The Second Ward neighborhood, today known as "The East End," was one of Houston's first Hispanic neighborhoods. The northern portion of the neighborhood is made up of the Houston Ship Channel's industrial centers, and it is for this reason that the East End came to exist. Houston's corporations began hiring Mexican immigrants in the 1880s because of their reputation for being reliable, hard workers. In 1908, approximately 2,000 Mexicans were living in Houston, out of a population of 75,000.

The majority of Houston's Mexican population were immigrants from Mexico, but a growing number of Texas-born Mexican Americans also joined them. Houston's growing Mexican population soon developed a strong *colonia*, as people celebrated



Image above: A recent Buffalo Bayou Regatta, held at Sesquicentennial Park (photo © Jim Olive, Stockyard.com)

traditional social and religious events together. They also formed close-knit *barrios* close to work and family members. These *barrios* were well established by the 1920s. *El Segundo Barrio* (the Second Ward) followed Buffalo Bayou from eastern downtown and was primarily Mexican American by the 1920s. A Mexican American *barrio* by 1915, the Magnolia Subdivision is southeast of the Second Ward and located along the ship channel. *El Crisol* took its Spanish name from the powerful chemicals used to preserve railroad ties, as it was close to the Southern Pacific Railroad yards.

Today, these same *barrios* still form the East End. They continue to be inhabited by many of Houston's Hispanic Americans and are vibrant centers of Latino culture in Houston. Over the years, the East End's Hispanic population has increased in dominance within the area. According to the 2000 census, the Hispanic proportion of the East End district population has

increased 6.56% from the 1990 census to 83.6 % Hispanic. As in the past, the majority of these community members are employed by the industries of the Houston Ship Channel. The East End also continues to house Houston's most important Hispanic institutions, all within walking distance of Buffalo Bayou. These include Our Lady of Guadalupe Catholic Church, the Ripley House, Hidalgo Park and *Talento Bilingue*, the Latino Cultural Center of Houston. Today, the residents of Houston's East End continue to live, work and play along the banks of Buffalo Bayou.

*Historic Parks and Social Gathering Points*  
In 19th century Houston, not only were the majority of homes and businesses located along the Bayou waterway, many of Houston's favorite parks and social gathering points were also on the banks of Buffalo Bayou. Although the study area's recreational resources are discussed in more detail later in this chapter, many of Houston's parks

*It goes without saying that the massive industrial development of the surrounding area has significantly impacted the once-meandering stream that was the Buffalo Bayou. It would be inaccurate, however, to assume that the study area has no natural resources or that such resources are insignificant.*

reflect the city's history, and are active and vibrant components of Houstonian culture.

**Sam Houston Park** was established in 1899, as Houston's first public park, named simply City Park. The park's sixteen acres were located across Buffalo Bayou's banks and included the Samuel Young brick yard on the north side and the Kellum-Noble Home and Sarah Bryers Nursery on the south bank. The city constructed an attractive bridge to combine the two banks and also eventually added the city's first zoo to the park. The park has since been renamed Sam Houston Park and is managed by The Heritage Society. The society is dedicated to preserving Houston's history, and several historic buildings rest in the park's grounds, including the original Kellum-Noble House, the oldest house in Houston still in its original location. City-wide festival events are regularly held in Sam Houston Park, including Houston's annual International Festival, Children's' Festival, and the Bayou City Arts Festival.

**Magnolia Park/Hidalgo Park** is located on Buffalo Bayou just south of the Turning Basin. John Brady established Magnolia Park in the 1880s to showcase the Houston Belt and Magnolia Park rail line. The train took Houstonians from the center of the city on a 15-minute ride to Magnolia Park, and the park quickly became a popular destination for Houstonians seeking recreation. The park took its name from the thousands of magnolia trees that once covered this area. The park's central feature was a large pavilion that hovered over Buffalo Bayou. The pavilion consisted of four stories designed for dancing, private parties and concerts. The park also had pleasure boats for cruising Buffalo Bayou.

Magnolia Park was subdivided in 1909 to house the many workers supporting the growing Houston Ship Channel industries. The subdivision became

the center of Mexican American life, and was a favorite location for Mexican American cultural celebrations, including the celebration of *Fiestas Patrias*, commemorating Mexico's independence from Spain and one of the most widely celebrated activities of Mexican citizens in Houston. The first recorded city-wide celebration was held in 1917, and by 1925, this annual September celebration included a downtown parade, dances, baseball games and beauty pageants. Patriotic speeches were also a key part of the festivities, and a major theme of these speeches was the meaning of being a Mexican in the United States.

Present-day Hidalgo Park opened in 1934 and is on one of the remnant locations of the original Magnolia Park. Hidalgo Park carries on the traditional uses of Magnolia Park for Houston's Mexican American citizens – a frequent site for Mexican cultural celebrations and social gatherings, such as *Fiestas Patrias* and Cinco de Mayo.

**Sesquicentennial Park**, which is in downtown Houston, commemorates the city's first 150 years and was formerly the home and ranch of Horace D. and Emily Taylor. Built in 1851, the Taylor ranch was a popular site for community gatherings in the mid to late 1800s with gardens, a fig orchard, livestock pens and campgrounds for city market traders to stay overnight. Today, Sesquicentennial Park is a waterfront park that hosts regular events including the Buffalo Bayou Regatta, the Anything That Floats festival, and monthly Movies in the Park.

Food and music also help define a National Heritage Area, and the diverse cultural traditions of the Buffalo Bayou have created a distinctive "gumbo" of smells and sounds. Food from various migrant groups spread to one another; as different cultural groups brought into the mix foods ranging from barbecue to fried chicken to chicken-fried steaks. Mexican foods found a new

*The Buffalo Bayou Partnership, which would be one of the lead organizations in the proposed National Heritage Area, is working to stabilize banks and reduce erosion in these areas. The downtown area has a limited number of wetlands because of channel modifications and the filling of smaller tributaries.*

expression in Tex-Mex dishes. Cajuns created new variations of fried shrimp and blackened fish. In the process, these “working class” foods became an important part of Houston’s culinary identity.

The music of the Buffalo Bayou reflects a similar rich diversity. Cajun music burst onto the scene during World War II, and later fused with Creole traditions to create Zydeco. Country western found a sharp urban edge as honky-tonk music in such ship channel haunts as Gilleys, the bar made famous by the movie *Urban Cowboy*. Rural blacks brought to the Buffalo Bayou the traditional blues sounds of Lightnin’ Hopkins, as well as the rhythm and blues sounds of Bobby Blue Bland.

## Natural Resources

The national significance of the proposed Buffalo Bayou National Heritage Area is tied to the themes of Texas independence and Houston as “Energy Capital,” the latter of which is largely reflected by activities associated with petroleum and petrochemical production. As such, extensive industrial development has impacted the bayou and its surrounding landscape. It would be inaccurate, however, to assume that the study area has no natural resources or that such resources are insignificant. These resources include the Buffalo Bayou itself, the prairies and wetlands within and adjacent to the San Jacinto Battleground State Historic Site, and wetlands, tidal marshes and bottom lands along the northern and eastern edges of Galveston Bay.

The Buffalo Bayou watershed lies within the Texas Gulf Coast Plain, and is at the interface of three ecosystems: the East Texas Upland Piney Woods, the Gulf Coast Bluestem Prairie, and the Coastal Marsh Complex. The bayou originally supported a wooded or riparian plant community. These areas were associated with an adjacent

forested floodplain and wooded zones that transitioned to the upland prairies. Native vegetation associated with the bayou before clear cutting and settlement has been described as heavily wooded with abundant Spanish moss (*Tillandsia usneoides*) dripping from the trees and magnolia (*Magnolia sp.*). Research indicates the bayou would have supported a combination of bald cypress (*Taxodium distichum*) swamps and mixed hardwood bottomland floodplain forest. Naturally occurring landscape features within the bayou floodplain previously included the meandering channel, oxbows and oxbow lakes, natural levees, scattered wetland sloughs, ponds, and backwater swamps. Some of the natural wetland areas, previously lost, present an opportunity for restoration and habitat improvements.

The headwaters of the Buffalo Bayou are in a geographic landform called the Katy Prairie. Located west of Houston, and outside the boundary of the study area, the Katy Prairie is a 1000-square-mile area once characterized by coastal plains, tallgrass prairies, and prairie wetlands. Much of the original prairie has succumbed to development, and water flows are now subject to managed releases from Addicks and Barker reservoirs. Remnants of this once expansive prairie are protected by the Katy Prairie Conservancy, a nonprofit land trust, through both full acquisition and conservation easements. Much of the conservancy’s almost 12,000 acres are in agricultural use, however, the wetlands serve to attract millions of migratory birds. The conservancy offers public tours of some of its properties. While almost all are located in the Cypress Creek watershed portion of Katy Prairie, visitors can experience what the Buffalo Bayou headwaters may have looked like before flood management altered its regime.

*Downtown Houston Bayou Area —* Within the Houston urban area, the bayou has undergone significant



An interpretive display at the Armand Bayou Nature Center (NPS photo ).

*The Texas Parks and Wildlife Department's goal is to continue ongoing restoration efforts across the San Jacinto Battleground so that the area will again resemble the landscape as it existed during the 1836 battle, returning it to what was primarily large open grasslands.*

channelization and other modifications to control flooding. Much of the bayou is confined between concrete walls with development and industrial activity along the banks. Areas that are not channelized with concrete or sheet piling are experiencing some erosion. The Buffalo Bayou Partnership, which would be one of the lead organizations in the proposed National Heritage Area, is working to stabilize banks and reduce erosion in these areas. The downtown area has a limited number of wetlands because of channel modifications and the filling of smaller tributaries. However, a half-dozen areas have been identified where potential wetlands are present, which would be classified as riverine, emergent, scrub-shrub, or forested habitats. The eastern half of the bayou within the study area is regularly dredged to facilitate shipping activities.

Great blue heron, great egret, green-black heron, little blue heron, cardinal, mockingbird, hawk, frogs, Texas diamond-backed water snake, and squirrel are a few of the animal species that were observed within the downtown Houston section of the study area. On occasion, American alligators have been seen in portions of the Buffalo Bayou. A colony of bats is known to roost under the Waugh Drive Bridge. Opossum, shrews, raccoons, rats, mice, skunks, rabbits, and armadillos also live and have been observed within the downtown survey area. Habitat conditions are generally poor to non-existent, as the habitat is too small to support communities of animals, only individuals. Typical of most urban areas, downtown Houston is occupied by buildings, sidewalks, roads, and other development. The remaining open spaces are urban parks with maintained lawns and ornamental plants. Much of the vegetation is young (less than 20 to 25 years old) pioneer species. The Buffalo Bayou Partnership plans to return some areas of the open space to more native vegetation.

Aquatic organisms that should be found in Buffalo Bayou include finfish, shellfish, and bottom dwelling macroinvertebrates. Studies undertaken by the Houston Galveston Area Council (HGAC) indicate that macroinvertebrates are severely limited to non-existent because of past dredging and water quality. The Texas Parks and Wildlife Department have been monitoring the presence of fish species in the bayou for the past 20 years. Results indicate that there are 22 species of fish within the study area. All are typical of inland waterways like Buffalo Bayou and some indicate a tidal influence. No protected fish species were recorded within Buffalo Bayou.

Like many cities, Houston has a tradition of environmental activism and citizens' grass roots conservation efforts. An example of such activism occurred in 1967, when the U.S. Army Corps of Engineers began to implement plans for the channelization of the Buffalo Bayou. If completed, the native waterway would have vanished entirely, and the bayou's curves would have been straightened wherever possible. Terese Hershey and several of her neighbors witnessed the Army Corps' initial tree removals and contacted then-Congressman George H.W. Bush concerning the project. In response to these local concerns, Congress directed the Army Corps to discontinue the project. Today, Terry Hershey Park, sitting on 500 acres along west Buffalo Bayou, honors Mrs. Hershey's legacy.

In order to specifically focus on the protection and enhancement of Houston's signature bayou within its urban core, the Buffalo Bayou Partnership was established in 1986. This 501(c)(3) non-profit organization is responsible for helping preserve the native environments and developing improvements to the waterway and its bordering greenways. Its efforts have raised more than \$45 million



The Baytown Nature Center  
(NPS photo ).

for improvements to the bayou, including creation of a 20-year master plan, “Buffalo Bayou and Beyond,” development of more than fifteen miles of new trails and 100 acres of park land and restoration of native greenways and tributaries.

*San Jacinto Battleground State Historic Site as a Natural Preserve* — The San Jacinto Battleground State Historic Site’s natural areas include native prairie, tidal marshes and bottomland forests. The habitat at the 1200-acre park is some of the highest quality observed during the survey. The native tallgrass prairie was dominated historically by little bluestem, big bluestem, Indiangrass, and switchgrass. This ecosystem has become quite rare, as less than one percent of the original Gulf coastal prairie remains. The Texas Parks and Wildlife Department’s goal is to continue ongoing restoration efforts across the battlefield so that the area will again resemble the landscape as it existed during the 1836 battle, returning it to what was primarily large open grasslands

The park has a relatively extensive system of tidal marshes. They play a vital role in the life cycle of most commercially important seafood species such as shrimp, crabs, spotted weakfish, red drum, and flounder. The marshes are also important for wildlife.

Many species of shorebirds, wading birds, and migratory birds use the marshes for feeding and nesting. The area is located along the Central Flyway, the largest migratory bird route in North America. Other wildlife seen in the marsh include river otters, diamondback terrapin, nutria, and cottonmouth snakes. The marshes in the park had formerly been converted to open water by subsidence. They were restored in the 1990s by pumping clean sand and sediment into the marsh from the adjacent San Jacinto River. Efforts to restore the tidal wetlands at the park are ongoing.

The San Jacinto Battleground State Historic Site also contains a small bottomland hardwood forest. Historically, these forests dissected the coastal prairies. They increase the diversity of the ecosystem and provide nesting, denning and foraging habitat for resident and migratory wildlife. A younger forest that grew from seeds that floated down from upstream forests during floods is located at the end of the interpretative trail. It contains many non-native species. While it currently does not accurately represent historical old-growth forests that were native, its restoration could be one of the many projects considered in the management plan of the proposed Buffalo Bayou National Heritage Area.

Also known as the "Bayou City," Houston was founded by brothers Augustus and John Allen in 1836 and was named after Sam Houston, the famous Texas Army general (photo © Jim Olive, Stockyard.com).



*Other Natural Resources Located Within the Study Area* — Beyond the downtown urban core and San Jacinto Battleground State Historic Site, the National Park Service identified other natural resources, including:

*Nature Centers* — The Baytown Nature Center is comprised of two connected peninsulas, surrounded by three bays, on the west side of Baytown. As noted on the center's website, the smaller of the two peninsulas is San Jacinto Point, which is designated as a recreation area. The larger peninsula includes fresh water and salt water wetlands, with mixed woodland habitat for animals, birds and other wildlife. Located along the Great Texas Coastal Birding Trail, the Baytown Nature Center provides 450 acres of important wildlife habitat within the proposed Buffalo Bayou National Heritage Area. The Great Texas Coastal Birding Trail is a state-designated system of trails, bird sanctuaries, and nature preserves that runs the length of the Texas Gulf Coast.

Also along the Great Texas Coastal Birding Trail, as well as the Central Flyway, is the Armand Bayou Nature Center, the mission of which is to preserve the region's original ecosystems including wetlands, bottomland forest, tall grass prairies, and marsh habitat. The center, which

encompasses 2,500 acres of land, is one of the largest urban wildlife refuges in the United States. Located approximately 25 miles southeast of Houston, the Armand Bayou Nature Center provides habitat for more than 370 species of birds, mammals, reptiles and amphibians. The center also provides a strong program of environmental interpretation/education with demonstrations and tours available to school groups and other visitors, including canoe tours and pontoon boat nature cruises.

*Wetlands Restoration* — At the eastern edge of the study area, Galveston Bay has become a major focus for restoration. The Port of Houston, partnering with the U.S. Army Corps of Engineers, created a Beneficial Uses Group to identify ways to use the material dredged from maintenance of the Houston Ship Channel to create habitat and recreation amenities in the channel and bay.

Boaters urged the partners to recreate Redfish Island, an island once popular for overnight harboring that was lost ten years ago to subsidence and hurricane forces. The partners completed the island project in 2004 and also restored shore land and habitat at the San Jacinto Battleground State Historic Site and adjacent Goat Island.

As early as the 1870s, Buffalo Bayou was attracting recreationists (photo © Jim Olive, Stockyard.com)



Another major restoration project within the project boundary is Pierce Marsh, where more than 400 acres of intertidal marsh have already been restored. Current plans will expand this restoration site utilizing maintenance dredge material from a nearby canal.

While the Galveston Bay Foundation operates in areas beyond the potential National Heritage Area, it also is currently planning a major restoration of areas east of the Turning Basin to the eastern edge of the proposed National Heritage Area boundary. One such proposed project is the Burnett Bay Wetlands Restoration. When implemented, this project will restore up to 78 acres of intertidal marsh adjacent the Crosby-Lynchburg Road, utilizing dredge materials from the shipping channel.

*Atkinson Island Wildlife Management Area* — The Atkinson Island Wildlife Management Area is located on the southern end of Atkinson Island, a long and narrow island located at the mouth of the San Jacinto River in the northern tip of Galveston Bay. The island runs north and south and is three miles long and less than a half mile wide. The island was used as a case study for wetland restoration using dredge

material. Wildlife in the management area includes shore and wading birds, raccoons, and rattlesnakes. Forty acres of the island, consisting mostly of hackberry and yaupon, is woodlot. Another 90 acres is brackish marsh. Twenty acres is a spoil site left from dredging the channel. Atkinson Island Wildlife Management Area is managed by the Texas Parks and Wildlife Department.

## Recreational Resources

*Historic Recreational Use of the Bayou* — As early as the 1870's, Buffalo Bayou was known for attracting recreationists to its waters. Swimmers enjoyed a number of natural swimming holes in downtown and also up and downstream. Vick's Lake, a former oxbow of the bayou (now filled in) located in present-day Spotts Park, began as a private park but became a city park in 1917. Another popular swimming hole was Shepherd's Dam, built in the late 1870's for a mill race diversion. The site converted to a recreation amenity after the mill failed, and it was used through the 1920's. Zero Ice Factory operated a park on the bayou in the East End near Jensen Street. Pleasure boating was popular on the bayou around the turn of the century, and visitors to Zero Park enjoyed watching the boats pass



A greenbelt, including several parks along Buffalo Bayou has been a long-time goal of recreation providers and funding organizations in the area (photo © Jim Olive, Stockyard.com).

by. As noted above, Sam Houston Park, established in 1900 and still in existence today in the downtown area, has the honor of being the City of Houston's first park.

*Existing Parks, Recreation Facilities and Bayou Attractions* — A present-day vision to create a greenbelt along Buffalo Bayou has engaged the interest of the primary recreation providers and funding organizations in the area. Many parks and recreational facilities have been developed since 1984 when a joint city-county task force created the Buffalo Bayou Partnership. The Partnership operates within a ten-mile stretch from Shepherd Drive to the Turning Basin, which boasts eleven different parks comprising 234 acres. The trails within the corridor attract bicyclists and walkers. The Buffalo Bayou Partnership takes the lead in promoting a continuous trail network on both sides of the bayou and has found sympathetic private landowners willing to grant trail easements to fill the gaps between parkland. The Houston Bikeway Program spends millions of dollars constructing the trails on this designated bikeway corridor. Sponsors have tapped many funding sources, including local bonds and capital improvement programs, federal and state park and transportation funds,

and private contributions.

The bayou parks in the downtown portion of the study area serve as activity hubs for an increasingly popular entertainment district. For example, the Theater District is not just home to indoor performances; many outdoor music concerts are offered at Jones Plaza, just earshot from the bayou. Latino Access sponsors one or two weekday evening concerts almost year-round. The Wortham Theater Center overlooks the bayou and Sesquicentennial Park, and other performing arts locations are found nearby as is the Downtown Aquarium. Bayou Place is a new commercial complex with restaurants and shops situated on the bayou in the theater district. Sesquicentennial Park won awards for its design which features gardens, the Seven Wonders (columns portraying Houston's history created by school children), the George H. W. Bush monument, and interpretive exhibits that feature the sounds of paddlewheels and steamships. Allen's Landing, another highly developed urban destination park offers public artwork, trails and promenades, and an interpretive wharf.

At the upstream edge of downtown, Sam Houston Park houses the Harris County Heritage Society and its

Museum of Texas History. Just upstream, Houston holds its annual 4th of July fireworks events, along the bayou in Eleanor Tinsley Park. Farther upstream is Terry Hershey Park, which has 500 acres and provides more than 12 miles of hike and bike trail plus launches to float the bayou. Downstream of downtown, the Guadalupe Plaza Park, an Hispanic styled plaza, is the site of numerous ethnic events featuring mariachis, ballet folklorico, and salsa dancing.

The bayou sees moderate amounts of canoeing, supported by six launches in the 10-mile study area that is managed by the Buffalo Bayou Partnership, and two additional formal launches upstream that put paddlers into the more wooded and naturally meandering sections of the bayou. Several other well known put-in/take-out sites provide informal facilities that allow a variety of paddling distances and experiences on the 52-mile navigable stream upstream of the Houston Ship Channel. Bayou Preservation Association, in collaboration with the Houston Canoe Club, posts detailed descriptions of paddling segments on Buffalo Bayou. In a link from the Buffalo Bayou Partnership's history webpage, authors Louis Aulbach and Linda Gorski describe the natural and cultural features that can be seen from a boat on the bayou, along with engaging historical accounts of this part of Houston.

The Buffalo Bayou Partnership sponsors a variety of floating events on the bayou. Each month, there is a canoe tour with a different theme, such as history, bats, birds, dinner, moonlight and twilight. For 34 years, paddlers have competed in the Buffalo Bayou Regatta. The Dragon Boat Races, a more recent addition, are held at Allen's Landing in association with the Asian Festival. The Partnership's Anything Floats Parade occurs on Buffalo Bayou through the greenbelt in the spring, following the Orange Show Foundation's Art Car Parade on Allen Parkway adjacent to the bayou. Both events showcase the creativity of the entrants who decorate either cars or boats.

Downstream, the Port of Houston accommodates boats of a much larger kind. Recent Homeland Security regulations restrict small recreational watercraft from the Port's Turning Basin and the Houston Ship Channel. The Port, however, offers a tour boat excursion through the Turning Basin and along the shipping channel, which was created by dredging and widening Buffalo Bayou.

Recreational boating opportunities resume farther downstream of the shipping channel, at the mouth of the Buffalo Bayou where it reaches the upper end of Galveston Bay. Here, the San Jacinto Battleground State Historic Site is located, surrounded by Buffalo and Santa Ana bayous and Galveston Bay. Paddlers launching from the park can explore back bays and tributaries and observe a variety of coastal birds. History buffs and school children regularly visit the Battleground and its Monument to learn about the place where Texas won independence from Mexico in 1836. A 2.5-mile interpretive trail portrays the battleground events. Park visitors may also go up in the monument and tour the on-site San Jacinto Museum of History. It also should be noted that Galveston Bay has a following of passionate saltwater boaters.

Visionary plans for Buffalo Bayou proliferate throughout the public and private sectors. The Buffalo Bayou Partnership commissioned several planning studies, and its master plan promotes parks and community improvements on 850 acres along the bayou. Plans include trails along both banks, promenades and bridges, waterfront access, boat launches or landings, and major destinations. Additionally, the plans recommend urban designed mixed-use neighborhoods adjacent to the bayou. Another study recommends concession boat operations for both interpretive tour boats and individual boat rentals for paddling the bayou. Many of the destination sites in the master plan are programmed far into the future on former and currently

*The Buffalo Bayou Partnership commissioned several planning studies, and its master plan promotes parks and community improvements on 850 acres along the bayou. Plans include trails along both banks, promenades and bridges, waterfront access, boat launches or landings, and major destinations.*



The Buffalo Bayou Partnership has plans to expand trails on both sides of the bayou (photo © Jim Olive, Stockyard.com).

operating industrial properties. Proposed destinations would provide gardens and created wetlands, marinas and viewing stands for watching boat races, a festival place, amphitheaters for performing arts, and more. A number of these proposed venues could offer interpretive activities to educate visitors about the Texas oil industry theme of the proposed National Heritage Area. The City of Houston and Harris County concur with many of the vision plans by the Partnership. Parks and open space master plans (2003) from each governmental entity support greenbelts along major bayous, with specific mention of plans for Buffalo Bayou linear parks and trails. The Houston Bikeways Program also has identified Buffalo Bayou as a designated bikeway and has programmed funds to continue building trails, especially in the proposed National Heritage Area study area.

Overall, the National Park Service recreation resources inventory indicates that parks and recreational opportunities are plentiful along Buffalo Bayou. The bayou shaped Houston's settlement patterns as it provided water for the population and transportation

for the growing port. While some parks along the bayou came into public use early in Houston's urbanization, many of the parks in the study area have been developed in recent history on reclaimed land adjacent to the bayou as agency and organizational supporters began to recognize the value of positive land uses facing the bayou. Houston already serves as a destination for business travelers in international commerce and energy. Expanding and enhancing the visitor experience with increased recreational opportunities and heritage tourism offerings could provide more reasons for people to visit the area.

## Summary

The resources of the Buffalo Bayou are an interplay of the original landscape, historic and economic forces, the people who were drawn to the area, and the communities that grew up around them. This significant collection of historic, recreational, industrial, and natural resources provides a diverse backdrop for the area's fusion of Cajun and Creole cultures and helps to make the Buffalo Bayou a unique visitor experience.



Sam Houston Park in downtown Houston (photo © Jim Olive, Stockyard.com).

## Chapter 6: Potential Management Entity and Financial Feasibility



BUFFALO BAYOU  
PARTNERSHIP



The Buffalo Bayou Partnership, Economic Alliance–Houston Port Region, and the San Jacinto Battleground State Historic Site (administered by Texas Parks and Wildlife) are three of the core organizations in the proposed National Heritage Area; each has recently updated its master plan.

On May 19, 2008, the Office of the Texas Secretary of State issued a Certificate of Filing for the Buffalo Bayou National Heritage Area Corporation. The board of directors include: Buffalo Bayou Partnership, Economic Alliance Houston Port Region, Port of Houston Authority, East End Management District, East Harris County Manufacturers Association, and the San Jacinto Battleground State Historic Site (Texas Parks and Wildlife Department)

Of these organizations, the Buffalo Bayou Partnership has volunteered to play a leading administrative role. The Economic Alliance Port Houston Region will serve an important supporting role in representing the communities and businesses east of Houston to Galveston Bay. While all members of the Board will provide input, the Texas Parks and Wildlife Department has a particularly significant mission, since it contains the pivotal National Historic Landmark telling the story of Texas independence.

The proposed Buffalo Bayou National Heritage Area encompasses approximately 100,000 acres of land. The leading partner organizations of the Buffalo Bayou National Heritage Area Corporation operate within three distinct areas within this proposed heritage area. The Buffalo Bayou Partnership operates within the urban core of Houston, an area that includes approximately 10 miles of the bayou and 8,000 acres of land. Texas Parks and Wildlife administers the San Jacinto Battleground State Historic Site, which is approximately 1,200 acres. The Economic Alliance Houston Port Region represents the many cities and communities surrounding the 25-mile length of the Houston Ship Channel, from Houston east to Galveston Bay, an area of approximately 91,000 acres (excluding Houston and the San Jacinto Battleground State Historic Site). The communities within the Economic Alliance area include Baytown, Channelview, Deer Park, Galena Park,

Jacinto City, La Porte, Morgan's Point, North Shore, Pasadena, Pearland, Seabrook, Sheldon, Shoreacres, South Belt Ellington, South Houston, Port of Houston, Harris County, and Houston East End.

The Buffalo Bayou Partnership, the Economic Alliance Houston Port Region, and Texas Parks and Wildlife have demonstrated the ability to manage complex projects and programs. Playing a major role in the Buffalo Bayou National Heritage Area Corporation, these three organizations will assist in the implementation of a future management plan. Following is a brief description of the history and mission of these three organizations:

### **Buffalo Bayou Partnership —**

Established in 1986, this 501(c)(3) non-profit corporation has demonstrated a long-standing ability to raise and administer public and private funds. It will be a key partner in providing local match for federal funds and in providing administrative and office support. Since 2000, the organization has raised and leveraged \$45 million for improvements along a 10-mile stretch of the Buffalo Bayou's inner urban core.

The organization's financial statements reflect its financial strength. Total assets have grown from \$9,241,127 in 2006 to \$13,367,146, with net assets growing from \$6,549,904 to \$8,076,775. A considerable portion of these assets are in land along the Buffalo Bayou, and the Partnership

is involved in an ambitious program of building rehabilitation along the bayou. As with every non-profit organization, ongoing annual fundraising is an issue, but the Buffalo Bayou Partnership has consistently demonstrated its ability to meet this challenge. In 2007, approximately \$1.5 million was raised and spent for program services, operations and management.

“Buffalo Bayou and Beyond” is the Buffalo Bayou Partnership’s updated master plan for the bayou’s urban core—a ten-mile stretch within Houston. The mission of the master plan is rooted in a nearly century-old planning report by Arthur Coleman Comey, who envisioned a linear park system along Houston’s waterways, advocating that “its bayous and creek valleys intersect the city and surrounding country to furnish opportunity for parks of unusual value,” accessible to close-by neighborhoods. The plan defines “the Buffalo Bayou’s 10-mile waterway corridor as a restored park system that joins land and water to become the green heart of Houston.” It further emphasizes that downtown waterfront revitalization at Allen’s Landing is based on “the same central significance of the city plan that the Allens recognized in choosing their first town site. It is still in the right place.”

The goals are:

- Rehabilitate the Buffalo Bayou’s ecosystems while making it more accessible and yet more flood-resistant for Houstonians
- Restore and redevelop the Buffalo Bayou’s scenic, leisure, and recreational resources
- Promote the economic revitalization of the historic urban neighborhoods surrounding Buffalo Bayou

Specific objectives include creating 850 acres of new park land; reducing the risk of flooding; building a network of trails; reclaiming former industrial sites; and creating greater public access to the bayou for residents and visitors.

**Economic Alliance Houston Port Region** — Established in 1985, the Economic Alliance Houston Port Region plays a similar role for the eastern portion of Harris County. It essentially incorporates all of the land mass within the proposed National Heritage Area that is not part of the Buffalo Bayou Partnership or the San Jacinto Battleground State Historic Site. East of the City of Houston and bordering on Galveston Bay, the Economic Alliance

An example of the Economic Alliance–Houston Port Region’s “Project STARS” — an effort to produce “Texas-sized” art on massive storage tanks leading to the San Jacinto Battleground State Historic Site (NPS photo).



currently represents a collaboration of 16 communities, 12 Chambers of Commerce, Harris County and the Port of Houston

As part of its mission, the Economic Alliance Houston Port Region has developed a plan to integrate past and present, which is called San Jacinto Historic District “Project Stars.” Through the project, industry partners have helped create a “Museum without Walls” featuring historical “Texas-size” art on massive oil storage tanks along roadways leading to the San Jacinto Battleground Historic Site. The Economic Alliance also is committed to programs that tell the story of the Texas energy industry, along with programs that will promote and restore the region’s natural resources.

The Economic Alliance is funded by private businesses and Chambers of Commerce memberships, and contracts with 16 East Harris County cities, the Port of Houston, and Harris County. An indication of the support for the San Jacinto Historic District is contained in the balance sheet for the San Jacinto Texas Historic District as of June 30, 2008, which indicates net assets

of \$644,719. Recently, the Shell Oil Company donated \$500,000 to promote the project.

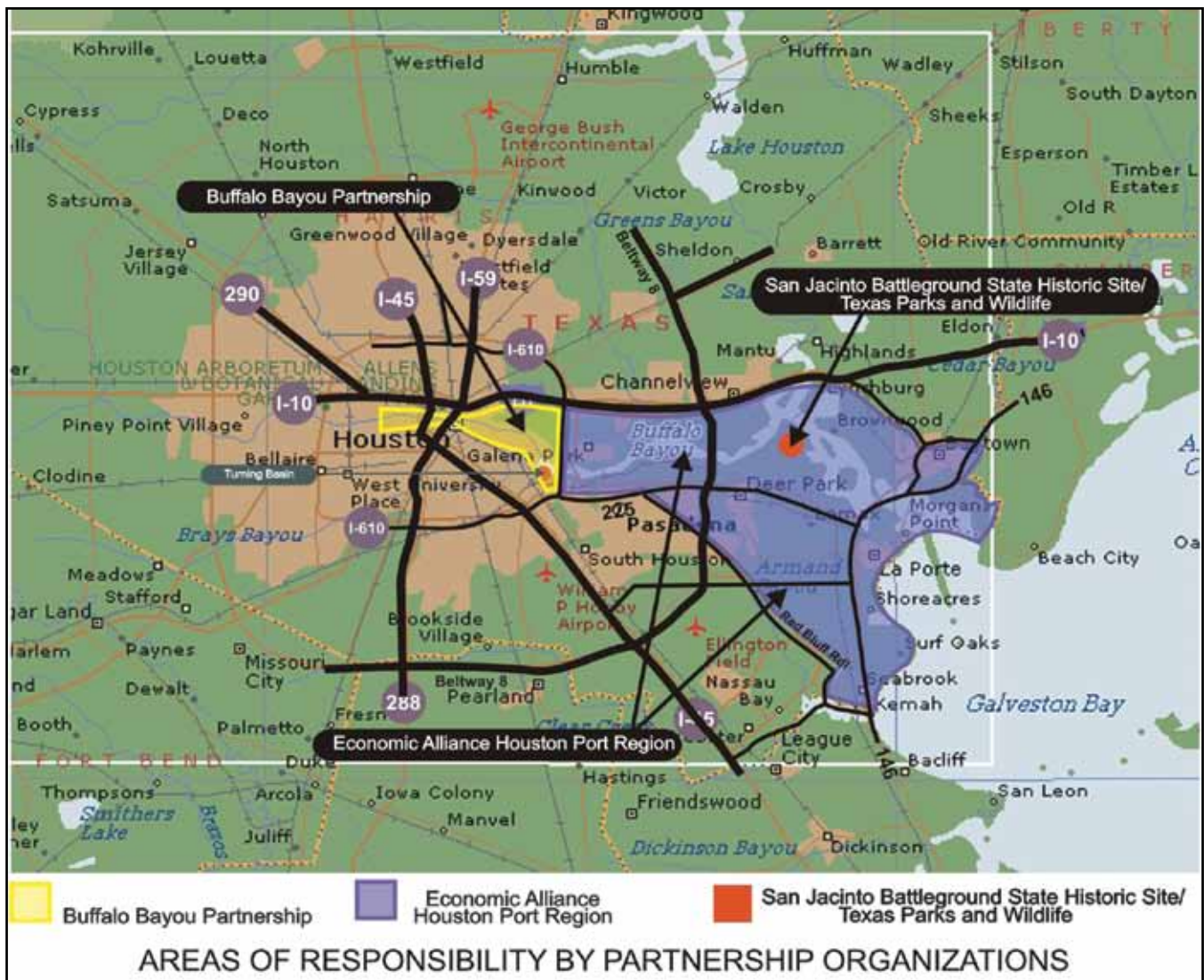
### **San Jacinto Battleground State**

**Historic Site** — The State Jacinto Battleground State Historic Site, which is administered by the Texas Parks and Wildlife Department, holds a significant responsibility to preserve the history of the State of Texas. The primary purpose of the 1,200-acre site is to commemorate the battle and to preserve the battleground on which Texas troops under General Sam Houston achieved the independence of Texas by defeating a Mexican Army led by General Antonio Lopez de Santa Anna on April 21, 1836.

The updated master plan for the battleground emphasizes the importance of preserving and restoring, to the extent feasible, the battleground as it was in 1836. The native prairie, tidal marsh and bottomland forests of San Jacinto Battleground are some of the last remaining examples of these habitats in the area. Two hundred years ago, the coastal plain was dominated by these habitats but the alteration of natural forces, such as fire, introduction of exotic species such as Chinese

A view of the San Jacinto Battleground State Historic Site from the San Jacinto Monument. Texas Parks and Wildlife has plans to restore the battleground to its 1836 state (NPS photo ).





tallow, and manipulation of the land for the adjacent petrochemical industries, communities, and businesses have drastically altered the landscape.

San Jacinto Battleground State Historic Site has an annual budget of \$2,319,079. While most of these funds involve personnel and maintenance costs, Texas Parks and Wildlife has a master plan for capital improvements to the site. Texas voters recently approved \$25 million to dry-berth the Battleship *Texas* in order to prevent further deterioration from the corrosive waters of the ship channel.

### Mission and Goals

During the fall and winter of 2009, these three organizations of the Buffalo Bayou

National Heritage Area Corporation collaborated in the development of long-term goals and a conceptual financial plan. Following are excerpts from the corporation's Mission Statement and Goals.

**Mission Statement** — The Buffalo Bayou National Heritage Area Corporation envisions communities along the Buffalo Bayou restoring, revitalizing, and reconnecting with its common waterway; telling the stories of the Texas oil and petrochemical industry and Texas independence through many venues throughout the National Heritage Area; and basing the economic growth and quality of life of the area on a respect for its history and its natural, cultural, historic and recreational resources.

**Goals:**

1. *Interpret the Buffalo Bayou as the foundation and common thread upon which the cities large and small evolved and continue to grow. The major interpretive themes of Houston as the nation's "Energy Capital" and Texas independence can only be understood and interpreted within the context of Buffalo Bayou from downtown Houston all the way to Galveston Bay. The interpretive plans of the various partner organizations must be integrated so that the visitor experience throughout the National Heritage Area is seamless and evocative.*
2. *Promote a strong and sustainable management entity that reflects the various communities and interests of the Buffalo Bayou. The feasibility of the Buffalo Bayou National Heritage Area is based on the strength of the partner organizations and their willingness to cooperate. The Buffalo Bayou National Heritage Area Corporation is prepared to develop a management plan and organizational structure that meets both the needs of the partner organizations and the needs of the Buffalo Bayou as a whole.*
3. *Help communities and neighborhoods along the Buffalo Bayou gain greater access, use, and enjoyment of this key waterway. Whether it is an urban trails network, wetlands restoration, regattas, or nature centers along inner Galveston Bay, the Buffalo Bayou can be a tremendous resource for residents looking to enjoy a boat ride, revitalize their neighborhoods, or just enjoy wildlife. The National Heritage Area is a vehicle by which communities can be strengthened through their connection to the bayou.*
4. *Promote preservation of the Buffalo Bayou heritage resources in a manner consistent with economic growth. Historic preservation, interpretation, and wetlands and prairie restoration will all improve the quality of life for the residents of the Buffalo Bayou. As National Heritage Areas are based on collaboration and consensus-building, these efforts will take place in partnership with the industries that provide the jobs and livelihoods for its residents. Having the support of business and industry is essential to the success of such an effort.*

**Conceptual Financial Plan**

The Buffalo Bayou National Heritage Area Corporation is confident that it has the capacity to contribute non-federal dollars to match, on at least a 50-50 basis, the funding provided by the National Park Service to the proposed Buffalo Bayou National Heritage Area. Based on recent history, the Buffalo Bayou National Heritage Area Corporation assumes the following level of National Park Service funding over the next five years.

**Years One and Two:**

*\$150,000 per year*

**Years Three, Four, and Five:**

*\$300,000 per year*

The Board of Directors of the Buffalo Bayou National Heritage Area Corporation have agreed that the federal funding, as well as the match, will focus on programs and projects that integrate the efforts of the various organizations represented by the newly formed corporation, rather than supplement projects that would only benefit one locale. The corporation has drafted a conceptual financial plan, as follows:

### **Years One and Two**

During its first two years of federal funding, the Buffalo Bayou National Heritage Area Corporation will focus on the development and approval of its management plan. In addition, the corporation plans to implement small early-action projects that will increase public awareness of the National Heritage Area and begin the process of knitting the three major districts together.

Initially, the Buffalo Bayou National Heritage Area Corporation is not planning to directly hire new staff. Instead, the Buffalo Bayou Partnership staff, with strong input from the Economic Alliance and Texas Parks and Wildlife, will develop the draft management plan with assistance from outside consultants. As the National Heritage Area moves closer to full implementation of an approved management plan, an executive director and small staff would be necessary.

The key elements of the management plan include:

- The development of a website, an early-action project that will assist in public outreach and stronger public identification of the National Heritage Area
- The development, printing, and mass distribution of a National Heritage Area promotional brochure and map
- The development of a wayfinding master plan, which will serve to orient the public to all elements of the National Heritage Area. It is envisioned that the plan will involve not only highway signage but electronic media, such as iPod self-guided tours.
- The development of an interpretive master plan. While each of the districts currently undertakes interpretation of certain specific elements within their purview, a master plan is needed that will emphasize the two overarching themes of “Energy Capital” and Texas independence within the National Heritage Area. It is envisioned that both themes will be featured in all districts within the National Heritage Area, in varying ways and degrees. While the central location for telling the story of Texas independence is at the San Jacinto Battleground State Historic Site, determining how best and where to tell story of the oil and petrochemical industry will be a central matter of attention in the crafting of the interpretive master plan. Interpretive media will include kiosks, panels, and exhibits featuring the most advanced media technology.

	Federal Funding	Local Match (In-kind Staff)	Local Match (Cash)
Year One:	\$150,000	\$125,000	\$25,000
Year Two	\$150,000	\$125,000	\$25,000

The Buffalo Bayou National Heritage Area Corporation will seek public input, guide the management plan process, and manage consultants for specific tasks such as wayfinding and the interpretive master plan, as well as appropriate National Environmental Policy Act (NEPA) compliance. Expenditures in these years also will include the development of an interactive website to assist in the planning process as well as for ongoing use; as well as design, publication, and distribution of the draft and approved management plans. With its considerable administrative background in planning and development, the Buffalo Bayou Partnership will guide the effort to secure local match funding.

### **Years Three Through Five**

Once the management plan has been approved, the Buffalo Bayou National Heritage Area Corporation will hire an executive director and small staff to guide implementation of the plan. The Buffalo Bayou Partnership will provide office space and administrative support for the National Heritage Area Corporation staff. If the Board determines that a satellite office is needed at a later date, the Economic Alliance Houston Port Region may be an appropriate location as the National Heritage Area expands implementation plans to the east toward Galveston Bay.

Initial implementation efforts will focus on design, printing, and mass distribution of the promotional brochure and map as well as design and engineering of the wayfinding and interpretive programs. The wayfinding system will be installed in Years Three and Four. The interpretive kiosks, panels, exhibits, and supplemental media, which are more complex in design, will need to be incorporated into numerous locations and interpretive sites. The costs of implementing the interpretive program will be extensive and will be incorporated in Years Three, Four, and Five.

	<b>Federal Funding</b>	<b>Local Match (In-kind Staff)</b>	<b>Local Match (Cash)</b>
Year Three:	\$300,000	\$175,000	\$125,000
Year Four	\$300,000	\$175,000	\$125,000
Year Five	\$300,000	\$175,000	\$125,000



Galveston Bay (photo © Jim Olive, Stockyard.com).

## Chapter 7: Application of National Heritage Area Criteria

The following is a summary of the National Park Service’s findings on the eight criteria required in the legislation that authorized the study.

### **PUBLIC LAW 107-337**

DEC. 16, 2002  
116 STAT. 2883  
107th Congress

### **An Act**

*To authorize the Secretary of the Interior to study the suitability and feasibility of establishing the Buffalo Bayou National Heritage Area in west Houston, Texas.*

On December 12, 2002, Congress enacted the *Buffalo Bayou National Heritage Area Study Act*, (Public Law 107-337), authorizing the National Park Service to complete a study of the feasibility and suitability of establishing the Buffalo Bayou National Heritage Area in Houston, Texas. During the course of this study, it is important to note that there was an evolution in the thinking concerning the boundaries of the proposed Buffalo Bayou National Heritage Area, based on a fuller understanding of the landscape. The initial area of study focused on a relatively small section of the Buffalo Bayou contained within the urban core of Houston. A preliminary reconnaissance of this study area quickly revealed, however, that many of the most important cultural and natural resources associated with the bayou were outside this urban corridor. The study area was therefore expanded to include the Houston Ship Channel as well as the San Jacinto Battlefield Historic Site, which most accurately represent the two major interpretive themes of “Energy Capital” and Texas independence. The larger study area required a wider inventory of resources, as well as an assessment of other partner organizations in addition to the Buffalo Bayou Partnership that could, in turn, form the foundation of a potential management entity.

The *Buffalo Bayou National Heritage Area Study Act* required an assessment of the proposed National Heritage Area based on eight criteria. The National Park Service undertook a series of technical studies that support a positive assessment of all eight criteria associated

with the *Buffalo Bayou Heritage Area Study Act*, as summarized below:

### **Criteria**

*A. Has an assemblage of natural, historic, or cultural resources that together represent distinctive aspects of American heritage worthy of recognition, conservation, interpretation, and continuing use, and are best managed as such as an assemblage through partnerships among public and private entities, and by combining diverse and sometimes noncontiguous resources and active communities*

The physical landscape of the Buffalo Bayou helped shape the growth of Houston, just as Houston’s economic development reshaped the Buffalo Bayou. The nation’s fourth largest city, Houston was born in 1836 from the entrepreneurial efforts of Augustus and John Allen to make the city the area’s chief inland port. Since then, it has evolved into a colossus of oil and petrochemical production, with that growth hugging the Buffalo Bayou and Houston Ship Channel.

In July 2005, the National Park Service commissioned a series of technical studies, beginning with a study entitled “Historical Significance of the Buffalo Bayou” by historian Martin Melosi with Thomas McKinney and Terry Tomkins-Walsh (Department of History, University of Houston). The study identified Houston as the Nation’s “Energy Capital” and Texas independence as two nationally significant themes associated with the

*The San Jacinto Battleground State Historic Site holds a significant responsibility to preserve the proud history of the State of Texas and the United States. Because of the great importance of the Battle to the course of history, the Battleground is of state, national and international significance, a fact that is attested to by the site's National Historic Landmark status.*

proposed National Heritage Area. A cultural resources inventory for the original study area was conducted by NPS historian Harlan Unrau in October 2005. This report was followed up in September 2006 with an overview of the expanded study area, which determined that 29 active oil refineries or petrochemical plants that were operational during the historic period of significance also are associated with the theme of “Energy Capital.” A natural resource survey and inventory conducted by Elizabeth Meyer in March 2006 noted that despite intensive industrialization, wetlands restoration initiatives and the intact resources of the San Jacinto Battleground provide opportunities to enhance the area’s natural resources.

What these inventory studies—historical, cultural and natural—collectively made clear is that 20th century America, whose rise as a nation and world power was fueled by affordable and accessible energy, came to rely on the productive capability of the Buffalo Bayou area. The growth and transformation of the Buffalo Bayou to meet that national need has defined the Buffalo Bayou as a distinctly American story. In addition, the proposed Buffalo Bayou National Heritage Area provides an outstanding opportunity to interpret the story of Texas independence, as represented by the San Jacinto Battleground Historic Site, which has been designated as a National Historic Landmark.

The nationally significant resources of “Energy Capital” and Texas independence within the Buffalo Bayou, stretching along a 25-mile-long waterway, require a new management entity to knit together the current separate conservation and interpretive efforts of non-profit organizations, governments and citizens. The area demarked in the Buffalo Bayou National Heritage Area study represents the economic lifeblood of not only the

Houston area but the nation. This potential National Heritage Area can be developed and sustained with: (1) the consultation and support of the hundreds of manufacturing plants that provide over 35,000 jobs; (2) a respect for the security requirements of the Houston Ship Channel; (3) coordination of efforts between San Jacinto Battleground State Historic Site and the industries that surround it; (4) integration of the natural resource component with industry in order to tell the whole story of the Buffalo Bayou, and (5) an agreement among the many partners to develop overarching themes and design elements that tie these many and disparate elements together.

Although greater detail is provided in the discussion of the following criteria, it is important to note that the partnership needed to create a viable Buffalo Bayou National Heritage has already been developed and is prepared to lead this effort, should a National Heritage Area be authorized. The partner organizations are already actively working on a conceptual financial plan. Updated master plans recently prepared by the Buffalo Bayou Partnership, the Economic Alliance Port Houston Region, and San Jacinto Battleground State Historic Site serve as one component of the management plan, should a National Heritage Area designation be authorized. Integrating those master plans to create a unified experience for residents and visitors alike can best be accomplished through a coordinated effort under the auspices of a National Heritage Area.

*B. Reflects traditions, customs, beliefs, and folk life that are a valuable part of the national story*

In 2006, the National Park Service commissioned an ethnographic study, entitled “Buffalo Bayou National Heritage Area Study Analysis and Documentation Regarding

Ethnographic Resources,” by Gerard Kyle and Bethany Fosbee. The study concluded that “the Buffalo Bayou was the lifeline of the city of Houston from the city’s founding in 1836, and today, 150 years later, Buffalo Bayou remains a vital resource for America’s fourth largest city. The proposed Buffalo Bayou National Heritage Area holds a compelling collection of natural, historic, and cultural resources that together represents a momentous and distinctive aspect of American heritage.”

The National Park Service consulting team, in cooperation with Dr. Martin Melosi of the University of Houston, undertook additional research on the inter-relationship of the growth of the petrochemical industry and the evolution of 20th century Houston as a society. The research found that this phenomenal economic growth served as a magnet for a wide range of immigrants: poor white and black tenant farmers and family farmers who left behind depressed agricultural economies in East Texas and western Louisiana; Mexican Americans and Mexican nationals; and Cajuns from South Louisiana. This influx of immigrants amid the economic boom also led to improvement in working conditions, first through paternalistic company towns, then through the advent of a strong labor union movement along the Houston Ship Channel, in a state where unions otherwise had little presence or impact.

As noted in this study document, this “gumbo” of different cultures had a strong effect on the area’s food and music. Whether Cajun or country-fried, the foods that Houstonians eat are spiced by this influx. Zydeco emerged as a new sound from this mix, and country, country blues, and rhythm and blues all found a strong presence in Houston. Just as Detroit or Pittsburgh (other authorized National Heritage Areas) helped draw and meld cultures that defined their regions, similarly, Houston has been shaped by the differing cultures drawn to

the Buffalo Bayou by the growth of the oil and petrochemical industries.

*C. Provides outstanding opportunities to conserve natural, cultural, historic, and/or scenic features*

The proposed Buffalo Bayou National Heritage Area has numerous outstanding opportunities for resource conservation, and has been in the process of implementing environmental projects for many years. These projects include the Clean & Green of the actual bayou running through Houston west of the Turning Basin, and major restoration of estuary and wetland habitats east of the Turning Basin. The community has recognized the great potential for resource conservation and restoration in the area. The partnership is currently implementing many programs to conserve their natural, cultural, historic and scenic features, including the following:

*Buffalo Bayou from Western Boundary to the Turning Basin* — Current work in this area includes the Skimmer Boat and Clean & Green programs, which are ongoing programs to remove trash and debris in this reach of the bayou and to improve aesthetic and environmental quality of the area. One of the key partners in the area, the Buffalo Bayou Partnership, is also in the process of planning and implementing a water quality program. This program is monitoring water quality in the area and is working towards addressing the erosion problems facing the Bayou. Buffalo Bayou Partnership is also currently implementing an Adopt-a-Spot program. The bayou is the main drainage for the City of Houston, which has created some challenging conditions for restoration of this specific area, but the Buffalo Bayou Partnership is committed to addressing these issues with their ongoing and planned activities to restore and protect this reach.

Wetlands restoration efforts  
(photo © Jim Olive,  
Stockyard.com).



Another turnkey effort being planned and implemented in this stretch includes the vegetation management plan for the Buffalo Bayou Park, a 160-acre area between Memorial Drive and Allen Parkway. This plan includes the revegetation of the natural landscape and providing extensive opportunities for environmental education, outdoor recreation, bird watching and low-impact outdoor recreation. In addition, the partnership is working to develop a series of trails which will make the bayou much more accessible to the public. When implemented, this plan will greatly enhance the resources and natural history of the western portion of Buffalo Bayou.

*Turning Basin to the Proposed Eastern Boundary along Galveston Bay —*

This area offers some of the world's most productive estuaries. The proposed National Heritage Area and its many partners recognize that while industrialization has brought many economic benefits, the environmental balance of the bayou and Galveston Bay also needs to be restored.

The Port of Houston has implemented a major program of mitigation and wetlands restoration.

While the Galveston Bay Foundation operates in areas beyond the potential National Heritage Area, it is also currently planning a major restoration of areas east of the Turning Basin to the eastern edge of the proposed National Heritage Area boundary. One such proposed project is the Burnett Bay Wetlands Restoration. When implemented, this project will restore up to 78 acres of inter-tidal marsh adjacent the Crosby-Lynchburg Road, utilizing dredge materials from the shipping channel to restore this area. Should the Buffalo Bayou National Heritage Area be authorized, integration of all these efforts can be developed during the development of the management plan.

Another major restoration project within the project boundary includes Pierce Marsh, where over 400 acres of inter-tidal marsh have already been restored. Current plans will also expand this restoration site utilizing maintenance dredge material from a nearby canal.

A corresponding effort is underway related to the area's historic and cultural resources. Included among these is the master plan for San Jacinto Battlefield State Historic Site that seeks to restore,

This inner-city parkland provides a critical pedestrian and bicycle link from Sesquicentennial Park to the upstream reach and to new entertainment venues (photo © Jim Olive, Stockyard.com).



to the extent feasible, the landscape that existed in 1836, with the restoration of native grasslands and wetlands

*D. Provides outstanding recreational and educational opportunities*

The National Park Service commissioned a comprehensive study of recreational and educational opportunities entitled, “Recreational Opportunities Survey and Inventory” by Kathryn Nichols, dated January 27, 2006. As noted earlier, that report concluded that recreational and educational opportunities are plentiful along Buffalo Bayou. These include opportunities for boating, canoeing, bird watching, biking, hiking, popular entertainment, and visitation to the area’s numerous historic sites, parks, and natural areas. While some parks along the bayou came into public use early in Houston’s urbanization, many of the parks in the study area were developed in recent history on reclaimed land adjacent to the bayou as agency and organizational supporters began to recognize the value of positive land uses facing the bayou. As the recreational report noted, Houston already serves as a destination for business travelers

in international commerce and energy. Expanding and enhancing the visitor experience with increased recreational opportunities and heritage tourism offerings could provide more reasons for people to visit the area.

Following is a summary listing of some of the area’s recreational and educational opportunities:

- *Waterfront Park: The park includes hiking and bike trails on both sides of the bayou, linking Allen Parkway/Memorial Drive trails in the west with Sesquicentennial Park in downtown. Events include “Clean & Green” bayou cleanup and recycling program, and “KBR Kids on the Buffalo Bayou” (family fun, educational, musical performances, and boat rides).*
- *Sam Houston Park: The park originally featured a children’s zoo, wading pool, and picturesque wooden bridge. Today it is home to the Houston Heritage Society, which is dedicated to preserving Houston’s history by restoring and interpreting early historic structures.*

- *Allen's Landing: It was here in 1836 that August C. and John K. Allen stepped ashore and established the city of Houston. The Buffalo Bayou Partnership plans to adaptively reuse a historic building at Allen's Landing, to offer additional amenities to park visitors and to create a tourist attraction.*
  - *Buffalo Bayou Partnership sponsors canoe and kayak launches from Shepherd Drive to Jensen Drive. The Partnership also hosts the annual Buffalo Bayou Regatta, and offers boat tours on the Buffalo Bayou as follows: Sabine-to-Bagby Promenade, Waugh Bridge Bat Colony Pontoon Tour, Looking Back History Boat Tour, private charter on the Bayou Breese.*
  - *San Jacinto Battleground State Historic Site, which preserves and interprets the site of the 1836 battle that led to Texas independence from Mexico. The site, which is managed by the Texas Parks and Wildlife Department, also provides opportunities for boating and hiking. The 570-foot San Jacinto Monument at the site is one of the only points with public access to view the enormity of the petrochemical complex surrounding the state historic site.*
  - *Battleship Texas, which was decommissioned on April 21, 1948 and transferred to the state of Texas to serve as a permanent memorial. The battleship is located within the San Jacinto Battleground State Historic site, and is open for tours.*
  - *The Houston Port Authority offers a two-hour tour of a portion of the Houston Ship Channel, through the Turning Basin. The tour provides information on the history of the channel, the petrochemical industry, container shipping, and the various ports along the channel.*
  - *The STARS Program: This effort by the Economic Alliance Houston Port Region has identified 26 locations within or very near the proposed boundary for the Buffalo Bayou National Heritage Area. These locations provide interpretive photo murals, with one of the themes being Texas independence.*
  - *The proposed Buffalo Bayou National Heritage Area includes the Great Texas Coastal Birding Trail, which is a state-designated system of trails, bird sanctuaries, and nature preserves that runs the length of the Texas Gulf Coast. The proposed heritage area is also located along the Central Flyway, the largest migratory bird route in North America.*
- E. Contains resources important to the identified theme or themes of the Study Area that retain a degree of integrity capable of supporting interpretation*
- Visitors to the Buffalo Bayou will find many resource-based opportunities for interpretation. One of the most significant is the San Jacinto Battlefield State Historic Site, which provides a setting for the interpretation of the history of Texas independence, the Houston Ship Channel, and the vast complex of petrochemical industrial sites that line the channel. The park's 560-foot-high observation tower provides a 360-degree view of the vastness of the bayou and its relationship to the City of Houston to the west as well as Galveston Bay to the east.

The Houston Shipping Channel is a conduit for ocean-going vessels between the Houston-area shipyards and the Gulf of Mexico. The channel is a widened and deepened natural watercourse created by dredging the Buffalo Bayou and the Galveston Bay (photo © Jim Olive, Stockyard.com).



As noted earlier in this report, a National Park Service inventory of the potential Buffalo Bayou National Heritage Area identified 48 historic resources that reflect the nationally significant theme of Houston as the Nation's "Energy Capital," which provide opportunities for interpretation. These include 19 historic buildings within Houston and 29 petrochemical plants along the bayou.

Due to security concerns, it will prove a challenge to interpret the history of the oil and petrochemical industry along the Houston Ship Channel. The potential to interpret, however, clearly exists with the number of plants that fan out along the Buffalo Bayou.

Importantly, the East Harris Manufacturers Association has expressed support for a potential National Heritage Area and is willing to cooperate to help tell this story. Should a National Heritage Area be authorized, one of the key issues in developing a successful management plan will be to find ways to tell the energy story within context. Within certain constraints,

the story can also be told and the visitor experience enhanced on the ship channel's existing water tour, with the cooperation and support of the Port Authority.

Other resource-based interpretive opportunities include:

*Bayou Learning Center* – A Bayou Learning Center will be located in the International Coffee Building, a historic building at Allen's Landing. The facility, a project of the Buffalo Bayou Partnership, will house exhibits and informational displays to educate visitors, especially school children, about the history of the Buffalo Bayou and downtown Houston.

*The Houston Port Authority's Boat Tour of the Houston Shipping Channel* – A two-hour tour of a part of the shipping channel is currently available to tourists and school groups. While photos are prohibited, a tour guide provides a running commentary on the history of the channel, adjacent industry, container shipping, the petrochemical industry,

*The potential Buffalo Bayou National Heritage Area naturally divides itself into three distinct “districts”—the original study area in the concentrated urban area of Houston; the San Jacinto Battleground State Historic Site; and the expanded study area that reaches out along the ship channel and the eastern edge of Galveston Bay.*

and the various ports along the channel. The global impact of this channel is reflected by the numerous ships moored there from around the world.

*The San Jacinto Monument –*

The tower provides the best viewing point for the vast complex of petrochemical and shipping industries in the area. The tower also provides views of the environmental wetlands and marshes to the north of the park and to the east the Route 146 bridge and the Baytown area. San Jacinto Battleground State Historic Site also provides extensive nature trails and interpretive signs describing habitats and the relevant ecological values of the bayou.

*The East Buffalo Bayou Area from the Turning Basin to I-610 –*

This section of the bayou includes extensive wetland reclamation areas including Turkey Bend Ecology Park and the Green Fingers area that will be interconnected by the East Trail System. The east bayou area provides opportunities for interactive environmental interpretation.

*The Baytown Nature Center –*

This 450-acre peninsula provides numerous environmental interpretive opportunities, and is an official site of the Great Texas Coastal Birding Trail.

*The Armand Bayou Nature Center –*

The nature center provides a strong program of environmental interpretation/education, as well as canoe tours and pontoon boat nature cruises.

*F. Residents, business interests, non-profit organizations, and governments within the proposed area are involved in the planning, have developed a conceptual financial plan that outlines the roles for all participants including the federal government, and have demonstrated support for designation of the area*

The study area contains partner organizations with considerable financial strength, reflecting commitments from private citizens, government, and businesses to support the heritage area concept. During the extended period of this National Heritage Area study, the number of partner organizations has expanded as the study area has expanded. In Houston's urban core, the Buffalo Bayou Partnership plays a leading role. As the study area has grown, the Buffalo Bayou Partnership has welcomed the involvement of additional partners. Both the public and private sectors, from municipal and state parks to manufacturing trade associations to municipalities, saw the benefit of voluntary collaboration to conserve and interpret the area's resources. The strongest evidence of this collaboration was their willingness to join in a new non-profit corporation for the purpose of advancing the concept of a National Heritage Area for the Buffalo Bayou and integrating their separate efforts through the new management entity.

As part of the study, the National Park Service conducted a site visit to the Buffalo Bayou area during the week of June 9, 2008 to assess the depth and breadth of the commitment to collaboration. While not able to meet with leaders in every community in the study area, the consulting team did meet with the City of Houston and Harris County officials, who reiterated their strong support for the Heritage Area concept.

The study focused on a number of entities whose support and collaboration would be essential to a viable National Heritage Area and who have committed their support to the new Buffalo Bayou National Heritage Area Corporation, which was established in May 2008.

- Buffalo Bayou Partnership
- Economic Alliance Houston Port Region



Image above: Wetlands restoration is expected to be a major part of the proposed Buffalo Bayou National Heritage Area (photo © Jim Olive, Stockyard.com).

- Texas Parks and Wildlife
- Port of Houston Authority
- East End Management District
- East Harris County Manufacturers Association

The National Park Service met with officials from the Port of Houston and the East Harris County Manufacturers Association, which together represent a significant portion of the business community and economic strength of the greater Houston area. The support of each of these organizations for the concept of a National Heritage Area was strong. The East End Management District reiterated its support for a National Heritage Area through its commitment to serve on the board of the new corporation.

#### *Financial Plan and Feasibility –*

The potential Buffalo Bayou National Heritage Area naturally divides itself into three distinct “districts”—the original study area in the concentrated urban area of Houston; the San Jacinto Battleground State Historic Site; and the expanded study area that reaches out

along the ship channel and the eastern edge of Galveston Bay. As such, it was important to identify if there were “lead” organizations in each of these three districts, to determine their financial capability, and to assess their willingness to collaborate in the management of a potential National Heritage Area. Finally, it was important to determine if these lead organizations had jointly moved forward with an integrated financial plan.

The consulting team sampled the three key organizations representing these three districts to determine the feasibility of a potential National Heritage Area.

*Buffalo Bayou Partnership* – This 501(c)(3) non-profit corporation reflects the community’s long-standing commitment to enhancement of the Buffalo Bayou within Houston’s urban core. Established in 1986 and resulting from an extensive community planning effort, Buffalo Bayou Partnership has established itself as a financially strong and capable community organization.

Since 2000, the organization has raised and leveraged \$45 million for improvements along a 10-mile stretch of the Buffalo Bayou. It recently updated its master plan with a document entitled “Buffalo Bayou and Beyond”, a 20-year plan that can provide an important component for the eventual development of a management plan for the proposed Buffalo Bayou National Heritage Area.

Chapter 6 of this report provides a comprehensive review of the financial statements of the Buffalo Bayou Partnership, confirming the financial strength of this organization and its ability to help match federal funding that might be authorized through a new National Heritage Area designation. Net asset value, though much of it in land and buildings, is sizeable. Of equal significance is that the annual operating budget is \$1.5 million, demonstrating an ability to raise funds for operations as well as for capital campaigns..

*Economic Alliance Houston Port Region* – The Economic Alliance Houston Port Region was established in 1985 to promote the manufacturing and maritime economy of the region as well as to enhance the quality of life for the eastern portion of Harris County. East of the City of Houston and bordering on Galveston Bay, the Economic Alliance currently represents a collaboration of 16 communities, 12 Chambers of Commerce, Harris County and the Port of Houston. The Economic Alliance is funded by private businesses and chamber of commerce memberships, and contracts with East Harris County cities, the Port of Houston, and Harris County. Again, Chapter 6 of this report details this organization’s

strength and its support from the energy and petrochemical industry.

*San Jacinto Battleground State Historic Site, Texas Parks and Wildlife* –

This site represents a considerable investment by the State of Texas, with an annual budget of \$2,319,079. Recently, Texas voters approved \$25 million in funds to dry-berth the Battleship Texas, which is located within the battleground site, in order to prevent the ship’s further deterioration from the corrosive waters of the ship channel.

The National Park Service assessment then focused on the conceptual financial plan for the proposed National Heritage Area. The three organizations appear to have the financial strength and willingness to cooperate in a potential National Heritage Area. The partner organizations met in late 2009 to develop a conceptual financial plan. The Buffalo Bayou Partnership and Economic Alliance Houston Port Region agreed to provide staff, office and logistical support during the process of developing the management plan. Once the management plan is approved and federal funding is increased, staff will be hired and housed within offices of one of the partner organizations. Significantly, funding for the projects and programs of the National Heritage Area will be used to integrate the visitor experience – as opposed to using the funds to advance the agenda of anyone of its partner organizations. Specifically, it is envisioned that promotional brochures, maps, and an interactive website will be developed, followed by implementation of wayfinding and interpretive master plans. The five-year financial plan is predicated on partner organizations providing



The dreadnought USS *Texas* (BB-35) was launched in 1912. The *Texas* served in both World Wars, and in 1948 the U.S. Navy turned her over to the State of Texas to become the first U.S. battleship to serve as a permanent museum (photo © Jim Olive, Stockyard.com).

a 50-50 match through both in-kind and cash for \$1.2 million in federal funds over a five-year term.

*G. Has a potential management entity that has been established to work in partnership with residents, business interests, non-profit organizations, and local and state government to develop a national heritage area consistent with local and state economic activity*

On May 19, 2008 the Office of the Texas Secretary of State issued a Certificate of Filing for the Buffalo Bayou National Heritage Area Corporation. The corporation was established for the purposes of developing and implementing a plan for the Buffalo Bayou National Heritage Area—generally required as part of any federal authorizing legislation for a National Heritage Area. The initial board consists of 14 members, representing a cross-section of communities and organizations throughout the study area. (The partner organizations

are discussed in Criterion F.) The establishment of a new corporation by the partners indicates the necessary level of commitment to undertake a potential National Heritage Area.

The goals and objectives of a potential National Heritage Area are clearly consistent with local and state economic activity. It is readily apparent that the oil and petrochemical industry serves as the foundation for the economy, not only within the study area but throughout the Houston area. The proposed National Heritage Area is not simply “consistent” with the area’s economic activity, but is in fact central to its mission and purpose. Indeed, one of the major themes of the proposed National Heritage Area is the history of oil and petrochemical production in Texas and Houston’s role as the Nation’s “Energy Capital.” Furthermore, the East Harris County Manufacturers Association has expressed its support for the



View of future Learning Center in the adaptively reused International Coffee Building (NPS photo).

heritage area and is one of the founding directors of the newly established corporation. The Port of Houston, East End Management District, and the Economic Alliance Port Houston Region also are founding directors .

The partner organizations have also moved beyond simply the legal creation of the management entity. In 2009, the partners crafted a financial plan to meet federal matching requirements and to create the outlines for a management plan, should Congress authorize the Buffalo Bayou National Heritage Area.

*H. There is a conceptual boundary map that is supported by the public.*

As noted throughout this report, the conceptual boundary for the proposed Buffalo Bayou National Heritage Area has expanded over the course of this study. From the earlier analysis that focused on the urban core in Houston, consensus developed that the landscape should more fully reflect the two nationally significant themes of “Energy Capital” and Texas independence and, therefore, that the boundary be extended to the east toward Galveston Bay. The proposed boundary now includes the entire Houston Ship Channel, as well as the communities along Galveston Bay, such as Baytown, which developed as a direct result of the development of the oil and petrochemical industries. The draft boundary reflects recognition not only of the centrality of the Houston Ship Channel, where the petrochemical industry and important events related

to Texas independence are located, but also of the natural and historic resources along Galveston Bay. The boundary generally incorporates the areas in which the many partner organizations are responsible for and operate.

In 2007, public meetings were held to unveil the proposed expanded area, and the boundary was supported by the partner organizations and general public. Questions concerning the issue of private property rights were addressed and resolved. In general, the public was supportive of greater recognition of the historic importance of the Buffalo Bayou.

Generally, the draft boundary extends from Shepherd Drive on the west to the edge of Galveston Bay from Seabrook to Baytown. Specifically, the proposed boundary runs north on Shepherd Drive to Interstate 10, then east of I-10 past Lynchburg to its intersection with Route 330. The boundary continues east on Route 330 to its intersection with Route 146, and then continues east until it meets the Harris and Chambers County boundary. The proposed heritage area boundary then continues south along the Harris County boundary, crossing Galveston Bay, then proceeding farther south on the western edge of Galveston Bay to its intersection with Galveston County. The boundary then proceeds west on 2nd Street and NASA 1 Road, then north to Red Bluff Road after including Armand Bayou Park. The boundary then proceeds north and west on Red Bluff Road until its intersection with Route 225. The boundary proceeds along 225 west to its intersection with Interstate 610-South, then north on Interstate 45 to its intersection with Allen Parkway. The boundary then proceeds west on Allen Parkway until its intersection with Shepherd Drive.

## Chapter 8: Conclusion

It is the finding of this study, through the efforts of the National Park Service planning team, its technical consultants, and its local partners, that Buffalo Bayou is eligible for National Heritage Area designation.

*A potential Buffalo Bayou National Heritage Area—through its historical, natural, cultural and recreational resources, through its network of partner organizations and its diverse population, and consistent with the area's economy—would represent a distinctively American story about the nation's growth.*

This finding is based on an extensive inventory of Buffalo Bayou's resources—historical, cultural, natural, and recreational. It is also founded upon the local community's strong support for the National Heritage Area concept; the local partner organizations' management and financial strength; and the willingness of those partner organizations to cooperate in the management of a potential heritage area.

As noted in the opening pages of this report, the National Park Service followed four steps that need to be taken prior to Congressional designation of a National Heritage Area. These steps are:

1. Completion of a feasibility/suitability study
2. Public involvement in that study
3. Demonstration of widespread support among heritage area residents for the proposed designation
4. Commitment to the proposal from key local partners, which may include government, industry, and private, non-profit organizations

Congress authorized the suitability/feasibility study in December 2002. Although no federal funding became available until 2005, the community planning process began in 2003 as partner organizations suggested an expansion of the original study area from just the urban core of Houston to the entire landscape of the Buffalo Bayou to Galveston Bay. While the National Park Service undertook technical resource studies in 2005-2009,

citizens, local governments and partner organizations were considering and then formally endorsing the National Heritage Area concept. In 2007, the National Park Service issued and widely distributed a newsletter that detailed the major themes and key resources of the Buffalo Bayou. Public meetings sponsored by the National Park Service in September 2007 generated further evidence of public support. In 2008, partner organizations created a new 501(c)(3) non-profit corporation, the Buffalo Bayou National Heritage Area Corporation, to serve as the management entity, and their collective financial strength indicated their ability to match or exceed any potential federal funding. In 2009, the National Park Service issued a second newsletter that summarized the progress of the study effort, which was widely distributed to the general public and partner organizations.

In accordance with PL 107-337, this study has demonstrated that the proposed Buffalo Bayou National Heritage Area meets the following criteria:

- A. has an assemblage of natural, historic, and cultural resources that together represent distinctive aspects of American heritage worthy of recognition, conservation, interpretation, and continuing use, and are best managed through partnerships among public and private entities and by combining diverse and sometimes noncontiguous resources and active communities
- B. reflects traditions, customs, beliefs, and folklife that are a valuable part of the national story

- C. provides outstanding opportunities to conserve natural, historic, cultural, or scenic features
- D. provides outstanding recreational and educational opportunities
- E. contains resources important to the identified theme or themes of the Study Area that retain a degree of integrity capable of supporting interpretation
- F. includes residents, business interests, nonprofit organizations, and local and State governments that are involved in the planning, have developed a conceptual financial plan that outlines the roles for all participants, including the Federal Government, and have demonstrated support for the concept of a national heritage area
- G. has a potential management entity to work in partnership with residents, business interests, nonprofit organizations, and local and State governments to develop a national heritage area consistent with continued local and State economic activity
- H. has a conceptual boundary map that is supported by the public.

A potential Buffalo Bayou National Heritage Area—through its historical, natural, cultural and recreational resources, through its network of partner organizations and its diverse population, and consistent with the area’s economy—would represent a distinctively American story about the nation’s growth. The nationally significant themes of Houston as the Nation’s “Energy Capital” and Texas independence are significant chapters of our history. These important American stories are best told through the framework of a National Heritage Area by the people of the Buffalo Bayou themselves and the partner organizations that represent them.



Running through the heart of Houston, Buffalo Bayou is often called the “aorta” of the Houston region—not only due to the commerce it provides by way of the Houston Ship Channel, but also because of its opportunities for recreation and a natural setting in the midst of the city (photo © Jim Olive, Stockyard.com).

## Appendix A: Study Team and List of Technical Reports

### National Park Service Study Team

Greg Kendrick, Assistant Regional Director, Partnerships and External Relations,  
National Park Service, Intermountain Region

John Paige, Historian, National Park Service, Intermountain Region,  
Heritage Partnerships Program (Team Leader)

Tom Keohan, Historical Architect, National Park Service, Intermountain Region,  
Heritage Partnerships Program (Team Leader)

Christine Whitacre, Program Manager, Heritage Partnerships Program, National Park  
Service, Intermountain Region (Team Leader)

Lisa Jameson, Biologist, Big Thicket National Preserve

Elizabeth Meyer, Natural Resource Specialist, National Park Service,  
Denver Service Center

Kathryn Nichols, Community Planner, National Park Service, Intermountain Region,  
Rivers, Trails and Conservation Assistance

Suzy Stutzman, Outdoor Recreation Planner, National Park Service,  
Intermountain Region

Harlan D. Unrau, Historian, National Park Service, Denver Service Center

Lawrence F. Van Horn, Anthropologist, National Park Service, Denver Service Center

Lysa Wegman-French, Historian, National Park Service, Intermountain Region,  
Heritage Partnerships Program

### Technical Studies and Reports prepared for the Buffalo Bayou National Heritage Area Study

*Copies of these reports and studies are in the files of the National Park Service,  
Intermountain Region, Heritage Partnerships Program, Lakewood, Colorado.*

Flynn, Charles. "Summary of Findings Concerning the Feasibility and Suitability of  
Establishing the Buffalo Bayou National Heritage Area." Yuma Crossing National  
Heritage Area, Inc., May 11, 2009.

Jameson, Lisa. "Research Trip Report (re Natural Resource Survey and Inventory) to  
Buffalo Bayou Partnership, Houston, Texas, January 26-28, 2005, for Buffalo Bayou  
National Heritage Area Study." Big Thicket National Preserve, February 22, 2005.

- Kyle, Gerald, and Bethany Foshee. "Buffalo Bayou National Heritage Area Study Analysis and Documentation Regarding Ethnographic Resources." Department of Parks, Recreation and Tourism Sciences, Texas A&M University, August 7, 2006.
- Melosi, Martin and Thomas McKinney and Terry Tomkins-Walsh. "Historical Significance of Buffalo Bayou." Department of History, University of Houston, July 18, 2005.
- Meyer, Elizabeth. "Buffalo Bayou National Heritage Area Study, Final Reconnaissance Survey Report, Final Natural Resources Survey and Inventory." National Park Service, Denver Service Center, March 14, 2006.
- Nichols, Kathryn. "Research Trip Report (re Recreational and Educational Opportunities) to Buffalo Bayou Partnership, Houston, Texas, January 26-28, 2005, for Buffalo Bayou National Heritage Area." National Park Service, Rivers, Trails & Conservation Assistance, February 16, 2005.
- Nichols, Kathryn. "Buffalo Bayou National Heritage Area Study, Recreational Opportunities Survey and Inventory." National Park Service, Rivers, Trails & Conservation Assistance, January 27, 2006.
- Pratt, Joseph. "Buffalo Bayou National Heritage Area Study, Supplemental Report for Criterion B, Relating to the Social History of 20th Century Houston." Center for Public History, University of Houston, February 8, 2009.
- The Louis Berger Group, Inc. "Buffalo Bayou National Heritage Area Feasibility Study, Environmental Assessment." Draft sections on Socioeconomics, Affected Environment, and Natural Resource Issues and Impacts. The Louis Berger Group, Inc., Lakewood, Colorado, February 11, 2009.
- Van Horn, Lawrence F. "Buffalo Bayou National Heritage Area Study, Houston, Texas, Cultural Resource Inventories and Visitor Experience Analysis of Harlan D. Unrau, October 11, 2005, and September 26, 2006." National Park Service, Denver Service Center; Reformatted June 13, 2007; Revised September 28, 2007.
- Van Horn, Lawrence F. "Buffalo Bayou National Heritage Area, Houston, Texas, Environmental Consequences, Cultural Resources and the Visitor Experience." National Park Service, Denver Service Center, September 28, 2007.
- Unrau, Harlan D. "Research Trip Report (re Cultural Resources Survey and Inventory) to Buffalo Bayou Partnership, Houston, Texas, January 26-28, 2005) for Buffalo Bayou National Heritage Area Study." National Park Service, Denver Service Center, February 9, 2005.
- Unrau, Harlan D. "Buffalo Bayou National Heritage Area Study, Reconnaissance Survey Report, Cultural Survey and Inventory." National Park Service, Denver Service Center, October 11, 2005.
- Unrau, Harlan D. "Buffalo Bayou National Heritage Area Study, Expanded Study Area, Affected Environments for Cultural Resources and Visitor Experience." National Park Service, Denver Service Center, September 26, 2006.

## **Appendix B: Expansion of Study Area: Letters and Resolutions of Support**

The following pages contain correspondence between Congressman Gene Green (TX-29), the National Park Service, Intermountain Regional Office, and local stakeholders that discusses the possibility of expanding the original study area. Also included are letters and resolutions of support for a Buffalo Bayou National Heritage Area from various local governments and other organizations.

**GENE GREEN**

29TH DISTRICT, TEXAS

- ☐ 2335 RAYBURN  
WASHINGTON, DC 20515  
(202) 225-1688
- ☐ 256 N. SAM HOUSTON PKWY. EAST  
SUITE 29  
HOUSTON, TEXAS 77060  
(281) 999-5879
- ☐ 11811 I-10 EAST  
SUITE 430  
HOUSTON, TEXAS 77029  
(713) 330-0761
- WWW.HOUSE.GOV/GREEN

**Congress of the United States**  
**House of Representatives**  
**Washington, DC 20515-4329**

October 30, 2003

**COMMITTEE ON ENERGY AND COMMERCE**

- SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET
- SUBCOMMITTEE ON HEALTH
- SUBCOMMITTEE ON ENVIRONMENT AND HAZARDOUS MATERIALS
- SUBCOMMITTEE ON COMMERCE, TRADE AND CONSUMER PROTECTION

**COMMITTEE ON STANDARDS OF OFFICIAL CONDUCT**

**DEMOCRATIC SENIOR WHIP**

Mr. Steve P. Martin  
Regional Director  
National Park Service  
Intermountain Region  
12795 W. Alameda Parkway  
Denver, Colorado 80225-0287

Dear Mr. Martin:

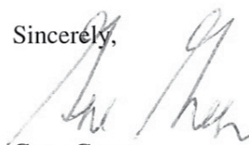
Late last year, Congress enacted PL 107-377 authorizing the National Park Service to perform a study to determine the feasibility of designating the Buffalo Bayou in Houston, Texas, a National Heritage Area. I would first like to thank you and the staff of the Intermountain Region of the National Park Service for your continued support for and cooperation on this project.

Our office has been in on-going communication with David Vela, Texas State Coordinator of the National Park Service; Greg Kendrick, Acting Program Manager of Heritage Programs for the Intermountain Region; and Anne Olsen of the Buffalo Bayou Partnership. In our discussions about the Buffalo Bayou's ability to meet the necessary criteria for designation as a National Heritage Area, we began to explore the idea of expanding the initial boundaries to include the San Jacinto Battlefield National Historic Landmark. It is our hope that the inclusion of the battleground would add to the Buffalo Bayou National Heritage Area's national significance.

To that end, I request that the initial feasibility study boundaries be amended to include the San Jacinto Battlefield National Historic Landmark. It is my understanding that the National Park Service can conduct a feasibility study on a non-contiguous stretch of land; therefore, I request that the study be conducted along the following stretch of the Buffalo Bayou: from Shepard Drive to the Turning Basin, and then within the San Jacinto Battlefield National Historic Landmark. These non-contiguous boundaries should ensure that neither the Port of Houston nor the petrochemical companies along the Houston Ship Channel are included in the study for purposes of a National Heritage Area designation.

Again, thank you for your continued support. Please do not hesitate to contact me, or Lantie Ferguson of my staff, at (202) 225-1688 should you have any questions or concerns.

Sincerely,



Gene Green  
Member of Congress

GG:lf

Cc: Sen. Kay Bailey Hutchison  
Greg Kendrick, National Park Service  
David Vela, National Park Service  
Anne Olsen, Buffalo Bayou Partnership

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## United States Department of the Interior

NATIONAL PARK SERVICE  
INTERMOUNTAIN REGION  
12795 West Alameda Parkway  
PO Box 25287  
Denver, Colorado 80225-0287



H34 (IMDE-CHP)

SEP 07 2005

Honorable Gene Green  
United States Congress  
House of Representatives  
2335 Rayburn House Office Building  
Washington, DC 20515-4329

RE: Buffalo Bayou National Heritage Area Study

Dear Mr. Green:

We'd like to update you on our current activities and findings on the Buffalo Bayou National Area Study Area Act. As you are aware, in December of 2002, Congress passed the Buffalo Bayou National Heritage Area Study Act (P.L. 107-337) authorizing the Department of the Interior to conduct a study of the suitability and feasibility of establishing the Buffalo Bayou National Heritage Area, Texas. As the legislation suggested, the bayou provides the stage for an important confluence of oil refining, petrochemical production, industrial capacity, and ocean-going commercial trade. Indeed, Houston has received the well-deserved moniker, "Energy Capitol of the World," due in large part to its location along Buffalo Bayou. The legislation also noted that the bayou played a significant role in the struggle for Texas independence leading to the establishment of the Republic of Texas—a unique chapter in North American history.

Geographically, the Buffalo Bayou flows roughly 55 miles in an easterly direction, beginning at the its headwaters in the Katy Prairie and terminating at the junction with the San Jacinto River, near Galveston Bay.

The Act defined a much smaller study area for the Bayou: about 8 miles confined mostly within the Houston urban core and bounded by Shepherd Drive on the west and the Turning Basin (at the west end of the Houston Ship Channel) on the east. The study area does not include the Houston Ship Channel, which has become the heart of the petrochemical industry in Texas and is specifically cited in the study bill. In the fall of 2004, you directed the NPS to expand the study to include the San Jacinto Battlefield State Park (located at the mouth of the Buffalo Bayou at the San Jacinto River) as a discontinuous addition.

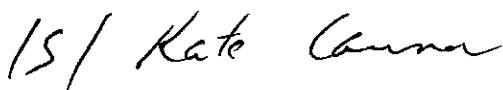
The study remained unfunded until the spring of 2005 at which time, the NPS began a resource survey and inventory. The preliminary results of this inventory identified two major historical themes: Energy Capitol of the World and Texas Independence. Under the theme "Texas Independence," the San Jacinto Battlefield was identified as an important historical resource. The survey identified only a few historic resources related to the national theme "Energy Capitol of the World" within the study area. However, it has become very clear that

significant historic resources related to the energy theme probably exist along the Houston Ship Channel, which is outside the study area but an integral part of the Buffalo Bayou and petrochemical story. We believe that by expanding the study area to include the Houston Ship Channel the likelihood of successfully addressing the NHA criterion will be improved. Enclosed is a map showing what the study area would look like if expanded to include the Houston Ship Channel.

Of course, since we have not surveyed the Houston Ship Channel we cannot guarantee that the expanded area will meet National Heritage Area Criteria. We are also unsure whether local support exists for the establishment of a national heritage area within the Ship Channel.

We would appreciate your sense and guidance on your goals and those of the community in pursuing the study in its current or expanded form. Greg Kendrick of my staff has been working diligently on this study and would be happy to answer any specific questions related to the study area. Please do not hesitate to contact Greg at 303-969-2894 if you have any questions, or if we can provide additional information.

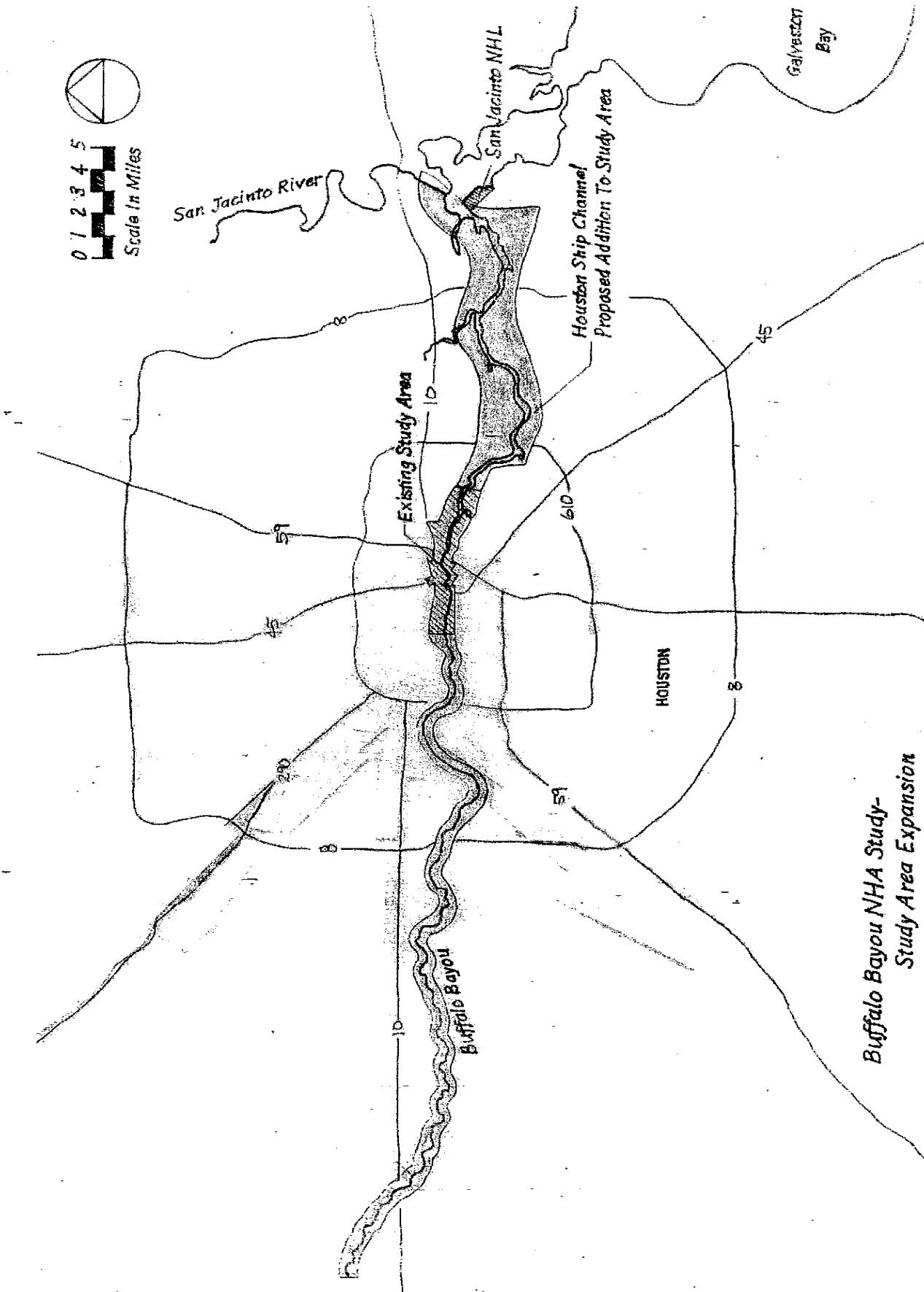
Sincerely,



*for* Michael D. Snyder  
Acting Director  
Intermountain Region

Enclosure

cc: Greg Kendrick, IMR, Heritage Partnerships Program  
Warren Brown, WASO, Park Planning and Special Studies  
Brenda Barrett, WASO, National Heritage Area National Coordinator  
Don Hellmann, WASO, Legislative and Congressional Affairs  
Wayne Gardner, IMR, Planning and Environmental Quality  
Susan Garland, IMR, Legislative Specialist



*Buffalo Bayou NHA Study-  
Study Area Expansion*

# PORT OF HOUSTON AUTHORITY

EXECUTIVE OFFICES: 111 EAST LOOP NORTH • HOUSTON, TEXAS 77029-4327  
MAILING ADDRESS: P.O. BOX 2562 • HOUSTON, TEXAS 77252-2562  
TELEPHONE: (713) 670-2400 • FAX: (713) 670-2429



JAMES T. EDMONDS  
Chairman

December 15, 2005

The Honorable Gene Green  
U.S. House of Representatives  
2335 Rayburn House Office Building  
Washington, D.C. 20515

Dear Congressman Green:

The Houston Ship Channel is vital to the economy of Texas, the nation, and the world. Ranked first in the United States in foreign waterborne tonnage, second in total tonnage and sixth largest in the world, the Port of Houston is home to one of the world's largest petrochemical complexes that produces plastics, gasoline, diesel and many other important products. The Port of Houston has achieved many firsts in the maritime industry, including the first local cost share program for the deepening of the Houston Ship Channel, the first container movement, the first utilization of a double stack train, the first U.S. port for direct shipment of cotton to Europe and the first U.S. port to develop and implement an environmental management system that meets the rigorous standards of ISO 14001 environmental compliance.

Houston's port area is also home to one of the most historic battles during the Texas Revolution. At the battle of San Jacinto, Texans defeated Santa Ana and his Mexican army to pave the way for the creation of the Republic of Texas, an independent republic that was eventually annexed by the United States.

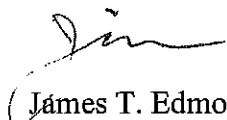
The Port of Houston Authority extends its support to your efforts to expand the boundaries of the proposed Buffalo Bayou Heritage Area to include the Houston Ship Channel. Before moving forward, I believe it would be appropriate to extend an invitation to the private interests along the Houston Ship Channel to be active participants in the process to create the Heritage Area. The Port of Houston Authority looks forward to being a partner in this unique venture by assisting you in creating the Heritage Area through legislation and in the administration of the Area.

Because the National Park Service is using "Energy Capitol of the World" and the historic San Jacinto battle as its theme for the National Heritage Area, it makes perfect sense to include the Houston Ship Channel in the suitability/feasibility study.

Buffalo Bayou National Heritage Area  
December 15, 2005  
Page Two

I look forward to working with you and the Buffalo Bayou Partnership on this worthy endeavor. I always appreciate working with you on matters that are important to all Texans. Please feel free to contact me at 713-861-3036 or Tom Kornegay at 713-670-2480 if we can assist you in any way.

Sincerely,



James T. Edmonds  
Chairman  
Port of Houston Authority

**GENE GREEN**

29TH DISTRICT, TEXAS

- ☐ 2335 RAYBURN  
WASHINGTON, DC 20515  
(202) 225-1688
  - ☐ 256 N. SAM HOUSTON PKWY. EAST  
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(281) 999-5879
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HOUSTON, TEXAS 77029  
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- WWW.HOUSE.GOV/GREEN

**Congress of the United States**  
**House of Representatives**  
**Washington, DC 20515-4329**

February 1, 2006

**COMMITTEE ON ENERGY AND COMMERCE**

- SUBCOMMITTEE ON ENERGY AND AIR QUALITY
- SUBCOMMITTEE ON HEALTH
- SUBCOMMITTEE ON ENVIRONMENT AND HAZARDOUS MATERIALS
- SUBCOMMITTEE ON COMMERCE, TRADE AND CONSUMER PROTECTION

**COMMITTEE ON STANDARDS OF OFFICIAL CONDUCT**

**DEMOCRATIC SENIOR DEPUTY WHIP**

**DEMOCRATIC REGIONAL WHIP**

Mr. Jim Edmonds  
Chairman  
Port of Houston Authority  
1200 Smith, Suite 700  
Houston, Texas 77002-4400

Dear Mr. Edmonds:

Thank you for taking the time to meet with the National Park Service, the Buffalo Bayou Partnership, and our office regarding the potential expansion of boundaries lines for the proposed Buffalo Bayou National Heritage Area. I appreciate your hosting the meeting and your subsequent letter of support for our efforts to include the Houston Ship Channel in the proposed heritage area.

The inclusion of the Houston Ship Channel in the proposed heritage area will allow us to accurately showcase our area's impressive petrochemical industry and its contribution to the economic growth of our nation. Likewise, a focus on the Houston area as the "Energy Capitol of the World" will help the proposed heritage area meet the National Park Service's national significance standard necessary for designation as a National Heritage Area.

As your letter suggested, the National Park Service and our office will engage the private interests along the ship channel to share in our efforts to highlight their success and contribution to our nation. To that end, we will assure these private interests that National Heritage Areas are not part of the National Park System and are not federally-owned or managed. Rather, lands within heritage areas remain in state, local or private ownership, with a local, non-federal management entity coordinating the work of the heritage area partners. Once the feasibility study is completed and legislation is enacted to designate the Buffalo Bayou National Heritage Area, I will work with your office and the private interests along the ship channel to ensure that they and the Port Authority play a significant role in the activities of the local management entity.

Again, thank you for your support of the proposed Buffalo Bayou National Heritage Area. Should you have any additional questions or concerns, please do not hesitate to contact our office.

Sincerely,

Gene Green  
Member of Congress

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**GENE GREEN**

29TH DISTRICT, TEXAS

- ☐ 2335 RAYBURN  
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**Congress of the United States**  
**House of Representatives**  
**Washington, DC 20515-4329**

February 1, 2006

**COMMITTEE ON ENERGY AND COMMERCE**

- SUBCOMMITTEE ON ENERGY AND AIR QUALITY
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- SUBCOMMITTEE ON COMMERCE, TRADE AND CONSUMER PROTECTION

**COMMITTEE ON STANDARDS OF OFFICIAL CONDUCT****DEMOCRATIC SENIOR DEPUTY WHIP****DEMOCRATIC REGIONAL WHIP**

Mr. Greg Kendrick  
Program Manager  
Intermountain Region  
National Park Service  
12795 W Alameda Pkwy  
Lakewood, Colorado 80228-2838

Dear Mr. Kendrick:

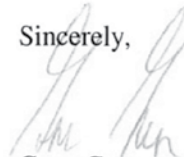
In 2002, Congress enacted PL 107-377 authorizing the National Park Service (NPS) to perform a study to determine the feasibility of designating the Buffalo Bayou in Houston, Texas, a National Heritage Area. I would first like to thank you and your staff at the NPS Intermountain Region for your continued support for this project.

In our discussions with the NPS and the Buffalo Bayou Partnership about the Buffalo Bayou's historical significance to the nation, we have determined that the proposed Buffalo Bayou National Heritage area should include the Houston Ship Channel, which is home to the largest petrochemical complex in the United States. It is our hope that the inclusion of the Ship Channel will help the proposed Buffalo Bayou National Heritage Area meet the national significance standard necessary for a positive NPS determination of the area's suitability as a National Heritage Area.

To that end, I request that the revised feasibility study boundaries be amended to begin at Shepard Drive in Houston, Texas and extend into Baytown, Texas to include both the Houston Ship Channel and the San Jacinto Battlefield National Historic Landmark (as previously requested). The Port of Houston Authority supports this boundary extension, and I have included a copy of its letter of support for your review. Additionally, our office will work with the City of Baytown to determine the eastern-most boundary for the Buffalo Bayou National Heritage Area, and we would request that the feasibility study include the Baytown Nature Center as well as ExxonMobil's Baytown refinery, the largest refinery in the world.

Again, thank you for your continued support. Please do not hesitate to contact me, or Lantie Slenzak of my staff, at (202) 225-1688 should you have any questions or concerns.

Sincerely,



Gene Green  
Member of Congress

GG:ls

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**GENE GREEN**

29TH DISTRICT, TEXAS

- ☐ 2335 RAYBURN  
WASHINGTON, DC 20515  
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HOUSTON, TEXAS 77029  
(713) 330-0761
- WWW.HOUSE.GOV/GREEN

**Congress of the United States  
House of Representatives  
Washington, DC 20515-4329**

February 1, 2006

**COMMITTEE ON ENERGY AND COMMERCE**

- SUBCOMMITTEE ON ENERGY AND AIR QUALITY
- SUBCOMMITTEE ON HEALTH
- SUBCOMMITTEE ON ENVIRONMENT AND HAZARDOUS MATERIALS
- SUBCOMMITTEE ON COMMERCE, TRADE AND CONSUMER PROTECTION

**COMMITTEE ON STANDARDS OF OFFICIAL CONDUCT**

DEMOCRATIC SENIOR DEPUTY WHIP  
DEMOCRATIC REGIONAL WHIP

The Honorable Calvin Munding  
Mayor  
City of Baytown  
PO Box 424  
Baytown, Texas 77522-0424

Dear Mayor Munding:

In 2002, Congress enacted PL 107-377 authorizing the National Park Service (NPS) to perform a study to determine the feasibility of designating the Buffalo Bayou a National Heritage Area. National Heritage Areas are partnerships between the NPS, states, and local communities, where the NPS supports state and local efforts to highlight an area's contribution to our nation in order to promote tourism and community revitalization.

After several months of studying the feasibility of the Buffalo Bayou as a National Heritage Area, NPS has approached our office to share its interim findings. In its feasibility study of a proposed heritage area, the NPS must determine that the area is nationally significant to the history of our nation. The NPS views the development of our area's energy industry as its most nationally-significant feature and therefore would like our office to extend the boundaries of the current proposed Buffalo Bayou National Heritage Area to include the Houston Ship Channel and parts of Baytown, with specific focus on ExxonMobil's Baytown refinery and its important contribution to the growth and sustainability of our nation's energy industry.

Our office has garnered the support of the Port of Houston Authority, and we are engaging private interests along the Ship Channel in our efforts. For your reference, I have enclosed a copy of the Port of Houston Authority's support letter. Once the NPS completes the feasibility study, I will introduce implementing legislation to officially designate the Buffalo Bayou National Heritage Area, which will stretch from Shepard Drive in Houston and include the Ship Channel and the San Jacinto National Historic Landmark. Your and the City Council's support is critical for the inclusion of parts of Baytown on the eastern-most boundary of the heritage area, specifically the Baytown Nature Center and ExxonMobil's Baytown refinery.

A National Heritage Area designation would bring to our area not only national acclaim but also an appropriation of up to \$1 million annually for the first ten years after designation. Please be assured that National Heritage Areas are not part of the National Park System and are

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Page 2  
February 1, 2006

not federally-owned or managed. Rather, lands within heritage areas remain in state, local or private ownership, with a local, non-federal management entity coordinating the work of the heritage area partners to utilize these federal resources for additional tourism and revitalization. We would welcome the City of Baytown's participation in this effort and would be happy to work with you to determine the areas of Baytown that are most-appropriate for inclusion in a proposed heritage area.

Thank you in advance for your cooperation in this effort. Should you have any questions or require additional information, please do not hesitate to contact me, or Lantie Slenzak of my staff, at (202) 225-1688.

Sincerely,



Gene Green  
Member of Congress

GG:Is

OCT 31 '06 10:41 FR CITY SECRETARY

713 247 1907 TO 9120222599036286 P.01

**CITY OF HOUSTON, TEXAS RESOLUTION NO. 2006 - //****A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HOUSTON,  
TEXAS IN SUPPORT OF THE ESTABLISHMENT OF THE BUFFALO  
BAYOU NATIONAL HERITAGE AREA.**

\* \* \* \* \*

**WHEREAS**, efforts are currently underway to establish a Buffalo Bayou National Heritage Area to bring national recognition to our area for its contribution to the historic and economic development of our nation;

**WHEREAS**, in 2002, Congress passed legislation sponsored by Congressman Gene Green, authorizing the National Park Service (NPS) to study the suitability and feasibility of establishing our area as a National Heritage Area, which requires our area to be deemed historically, naturally and culturally significant on a national level;

**WHEREAS**, a National Heritage Area is a place where natural, cultural, historic and scenic resources combine to form a cohesive, nationally important landscape arising from patterns of human activity shaped by geography and as such, a National Heritage Area represents the national experience through the physical features that remain and the traditions that have evolved in them;

**WHEREAS**, a National Heritage Area is not managed by the NPS, involves no land acquisition or land management by the federal government, and local authority and private property is not affected;

**WHEREAS**, the initial boundaries of the NPS study area stretched from Shepherd Drive in Houston to the Turning Basin and within those initial boundaries the NPS determined that for this program our area's contribution on a national level stemmed from our energy industry and the historic events that took place during the Battle of San Jacinto;

**WHEREAS**, subsequent to the NPS' initial determination, the study area was expanded to include the Ship Channel and a theme for the proposed Buffalo Bayou National Heritage Area was selected to be "The Energy Capital of the World";

**WHEREAS**, upon the NPS' favorable completion of the study, Congressman Green will coordinate significant input from local stakeholders, including the City of Houston, and implement legislation to formally establish the Buffalo Bayou National Heritage Area;

**WHEREAS**, the Buffalo Bayou National Heritage Area: The Energy Capital of the World will be locally-managed, with federal involvement limited to technical and financial assistance, will bring up to \$1 million per year for ten years for heritage area activities and involve no federal land protections or additional federal restrictions;

OCT 31 '06 10:41 FR CITY SECRETARY

713 247 1907 TO 9120222599036286 P.02

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF HOUSTON, TEXAS:**

Section 1. That the City Council adopts the above recitals as findings.

Section 2. That the City of Houston does wholly support the designation and establishment of the Buffalo Bayou National Heritage Area: The Energy Capital of the World as a National Heritage Area.

Section 3. That the Mayor is hereby authorized to designate a representative from the City of Houston to sit on the Buffalo Bayou National Heritage Area's management entity at such time as the entity is formed.

Section 4. That the City Secretary is directed to forward a certified copy of this Resolution to Congressman Gene Green at his office at 2335 Rayburn, Washington, DC 20515.

Section 5. That this Resolution shall take effect immediately upon its passage and approval by the Mayor.

PASSED AND ADOPTED this the 23rd day of August, 2006.

APPROVED this the 23rd day of August, 2006.

  
\_\_\_\_\_  
Mayor of the City of Houston, Texas

Prepared by:

  
Dolores Caldwell  
Assistant City Attorney

L.D. No. \_\_\_\_\_  
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CAPTION PUBLISHED IN DAILY COURT  
REVIEW  
DATE: AUG 30 2006

RESOLUTION NO. 1798

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BAYTOWN, TEXAS, EXPRESSING THE CITY OF BAYTOWN'S SUPPORT FOR FEDERAL EFFORTS TO ESTABLISH THE BUFFALO BAYOU HERITAGE AREA: ENERGY CAPITAL OF THE WORLD; AND PROVIDING FOR THE EFFECTIVE DATE THEREOF.

\*\*\*\*\*

WHEREAS, the area beginning at Shepherd Drive in west Houston, Texas – commonly known as the Buffalo Bayou – extending along the Houston Ship Channel and ending at the Fred Hartman Bridge in Baytown, Texas. made a unique contribution to the cultural, political, and industrial development of the United States; and

WHEREAS, the Buffalo Bayou is distinctive as the first spine of modern industrial development in Texas, and one of the first along the Gulf of Mexico coast; and

WHEREAS, the Buffalo Bayou played a significant role in the execution of the Battle of San Jacinto and the struggle for Texas independence; and

WHEREAS, the Buffalo Bayou developed a prosperous and productive shipping industry that contributed to formation of the modern day Houston Ship Channel and the development of the Port of Houston, which today is the United States' second largest port in terms of foreign tonnage; and

WHEREAS, the Buffalo Bayou led in the development of Texas' petrochemical industry that made Baytown and the communities along the Houston Ship Channel the center of the early oil boom in America; and

WHEREAS, ExxonMobil's Baytown Refinery, as the world's largest petrochemical refinery, has made a significant contribution to the Houston Ship Channel's development as the "Energy Capital of the World"; and

WHEREAS, there is a need for assistance for the preservation of the Buffalo Bayou and the promotion of the Houston Ship Channel as a system for transportation, industry, and commerce; and

WHEREAS, the 400 acre nature preserve at the Baytown Nature Center possesses significant natural resources, including threatened and endangered species, that warrant preservation and inclusion in a National Heritage Area; and

WHEREAS, Congress, in 2002, enacted legislation (PL 107-337) authorizing the National Park Service (NPS) to study the suitability and feasibility of establishing a Buffalo Bayou National Heritage Area; and

WHEREAS, the purpose of a National Heritage Area is to provide federal recognition to and highlight the Buffalo Bayou, the Houston Ship Channel and the City of Baytown's historic contribution to the nation and its economic development; and

WHEREAS, no federal land protection or additional federal restrictions are provided by a National Heritage Area designation; NOW THEREFORE.

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BAYTOWN, TEXAS:

Section 1: That provided the City of Baytown is assured a seat on the local management entity administering the Buffalo Bayou National Heritage Area to ensure (i) that decisions regarding the heritage area and distribution of federal funding remain local, and (ii) that federal involvement is limited to technical and financial assistance, the City Council of the City of Baytown, Texas, hereby supports:

- a. the inclusion of the Baytown Nature Center in the Buffalo Bayou National Heritage Area and seeks to work with the heritage area's local management entity to preserve and interpret the natural resources abundant at the Baytown Nature Center; and
- b. including within the Buffalo Bayou National Heritage Area the parts of the City of Baytown that lie along the Houston Ship Channel west of the Fred Hartman Bridge, in order to promote the area's contribution to America's historic and economic development.

Section 2: This resolution shall take effect immediately from and after its passage by the City Council of the City of Baytown, Texas.

INTRODUCED, READ and PASSED, by the affirmative vote of the City Council of the City of Baytown this the 22<sup>nd</sup> day of June, 2006.

ATTEST:

  
LORRI COODY, City Clerk

  
STEPHEN H. DONCARLOS, Mayor

APPROVED AS TO FORM:

  
IGNACIO RAMIREZ, SR., City Attorney

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RESOLUTION NO. R08-2006

**A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF GALENA PARK, TEXAS, IN SUPPORT OF THE ESTABLISHMENT OF THE BUFFALO BAYOU NATIONAL HERITAGE AREA**

WHEREAS, in 2002, Congress passed legislation sponsored by Congressman GENE GREEN, authorizing the National Park Service to study the feasibility of establishing a BUFFALO BAYOU NATIONAL HERITAGE AREA which is an area the City of Galena Park, Texas, and its citizens deem to be an area that is historically, naturally and culturally significant on a national level and;

WHEREAS, the City of Galena Park, Texas desires to lend its unqualified support for the establishment of a BUFFALO BAYOU NATIONAL HERITAGE AREA which has national significance; Now Therefore:

**BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF GALENA PARK, TEXAS:**

**Section 1.** That the City of Galena Park, Texas, on behalf of the governing body of the City and all of its citizens do hereby RESOLVE that we are in support of the establishment of a BUFFALO BAYOU NATIONAL HERITAGE AREA and urge the National Park Service and other federal officials to assist us in the determination that our area is both suitable and feasible for the establishment of such National Heritage Area.

**Section 2.** That we urge all of our citizens and citizens living in the BUFFALO BAYOU NATIONAL HERITAGE AREA to voice their unqualified support and work for the establishment of this important National Heritage Area.

**PASSED AND ADOPTED BY THE CITY COMMISSION OF THE CITY OF GALENA PARK, TEXAS, ON THIS THE 5<sup>TH</sup> DAY OF JULY, 2006.**

  
\_\_\_\_\_  
R.P. "BOBBY" BARRETT, MAYOR

ATTEST:

  
\_\_\_\_\_  
MARGARET STEVENS, CITY SECRETARY

RESOLUTION NO. 2006-98

A Resolution to express the City of Pasadena's support for federal efforts to establish the Buffalo Bayou Heritage Area: Energy Capital of the World.

WHEREAS, the area beginning at Shepherd Drive in west Houston, Texas - commonly known as the Buffalo Bayou - extending along the Houston Ship Channel and ending at the Fred Hartman Bridge in Baytown, Texas made a unique contribution to the cultural, political, and industrial development of the United States; and

WHEREAS, the Buffalo Bayou is distinctive as the first spine of modern industrial development in Texas and one of the first along the Gulf of Mexico coast; and

WHEREAS, the Buffalo Bayou played a significant role in the execution of the Battle of San Jacinto and the struggle for Texas independence; and

WHEREAS, the Buffalo Bayou developed a prosperous and productive shipping industry that contributed to formation of the modern day Houston Ship Channel and the development of the Port of Houston, which today is the United States' second largest port in terms of foreign tonnage; and

WHEREAS, the Buffalo Bayou led in the development of Texas' petrochemical industry that made Pasadena and the communities along the Houston Ship Channel the center of the early oil boom in America; and

WHEREAS, there is a need for assistance for the preservation of Buffalo Bayou and the promotion of the Houston Ship Channel as a system of transportation, industry and commerce; and

WHEREAS, Congress, in 2002, enacted legislation (P.L. 107-337) authorizing the National Park Service (NPS) to study the suitability and feasibility of establishing a Buffalo Bayou National Heritage Area; and

WHEREAS, the purpose of a National Heritage Area is to provide federal recognition to and highlight the Buffalo Bayou, the Houston Ship Channel and the City of Pasadena's historic contribution to the nation and its economic development; and

WHEREAS, no federal land protection or additional federal restrictions are provided by a National Heritage Area designation;

NOW, THEREFORE

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PASADENA:

SECTION 1. That the city of Pasadena supports including within the Buffalo Bayou National Heritage Areas the parts of the City of Pasadena that lie along the Houston Ship Channel, in order to promote the area's contribution to America's historic and economic development.

SECTION 2. That the City of Pasadena will be assured a seat on the local management entity administering the Buffalo Bayou National Heritage Area to ensure that decisions regarding the heritage area distribution of federal funding remain local, and

distribution of federal funding remain local, and that federal involvement is limited to technical and financial assistance.


SECTION 3. That the City Council officially determines that a sufficient written notice of the date, hour, place and subject of this meeting of the City Council was posted at a place convenient to the public at the City Hall of the City for the time required by law preceding this meeting, as required by the Open Meetings Law, Chapter 551, Texas Government Code; and that this meeting has been open to the public as required by law at all times during which this resolution and the subject matter thereof has been discussed, considered and formally acted upon. The City Council further confirms such written notice and the contents and posting thereof.

PASSED, APPROVED AND ADOPTED THIS THE 24<sup>th</sup> day of October,  
A.D., 2006.


  
JOHN MANLOVE, MAYOR

OF THE CITY OF PASADENA, TEXAS

ATTEST:

  
LINDA RORICK  
CITY SECRETARY  
CITY OF PASADENA, TEXAS

APPROVED:

  
LEE CLARK  
CITY ATTORNEY  
CITY OF PASADENA, TEXAS

RESOLUTION NO. 2006 - 18

**A RESOLUTION SUPPORTING THE ESTABLISHMENT OF THE BUFFALO BAYOU NATIONAL HERITAGE AREA AND TO APPOINT A REPRESENTATIVE TO SAID COMMITTEE; FINDING COMPLIANCE WITH THE OPEN MEETINGS LAW; AND PROVIDING AN EFFECTIVE DATE HEREOF.**

**WHEREAS**, the Buffalo Bayou National Heritage Area would bring national recognition to our area and contribute to the historic and economic development of our nation; and

**WHEREAS**, to be considered suitable as a National Heritage Area, the Buffalo Bayou National Heritage Area must be deemed historically, naturally and culturally significant on a national level; and

**WHEREAS**, while the initial area stretched from Shepard Drive in Houston, Texas to the Turning Basin, the National Park Service has determined that our area's contribution on a national level stems from our energy industry and the historic events that took place during the Battle of San Jacinto. With the support of the Port of Houston Authority, the expanded area is to include the Ship Channel and determined the theme of the proposed heritage area to be "The Energy Capital of the World"; and

**WHEREAS**, local government and industry support for this effort is essential, as National Heritage Areas are locally-run and require the support and coordination of local stakeholder groups to be successful. The Buffalo Bayou National Heritage Area: The Energy Capital of the World would be locally-managed, with federal involvement limited to technical and financial assistance. Designation would bring up to \$1 million per year for ten years for heritage area activities. However, no federal land protection or additional federal restrictions are provided by a National Heritage Area designation;

**NOW THEREFORE BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LAPORTE:**

**Section 1.** That the City Council, on behalf of the citizens of the City of La Porte, supports the establishment of a Buffalo Bayou National Heritage Area.

**Section 2.** That the City Council, on behalf of the citizens of the City of La Porte, hereby expresses its intent to participate in the heritage area's management entity comprised of local government, industry and community stakeholders.

**Section 3.** That the City Council, may appoint a representative of the La Porte City Council or designee to sit on the heritage area's management entity.

**Section 4.** That the City Council officially determines that a sufficient written notice of the date, hour, place and subject of this meeting of the City Council was posted at a place convenient to the public at the City Hall of the City for the time required by law preceding this meeting, as required by the Open Meetings Law, Chapter 551, Texas Government Code; and that this meeting has been open to the public as required by law at all times during which this resolution and the subject matter thereof has been discussed, considered and formally acted upon. The City Council further confirms such written notice and the contents and posting thereof.

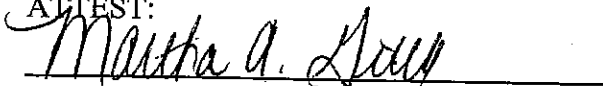
Passed by the City Council this 28th day of August, 2006.

CITY OF LA PORTE



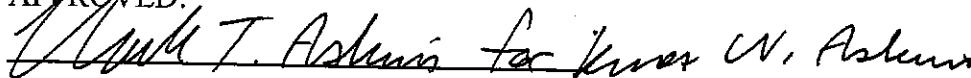
Alton E. Porter  
Mayor

ATTEST:



Martha A. Gillett  
City Secretary

APPROVED:



Knox W. Askins  
City Attorney



# EHCMA Neighbors Who Care

EAST HARRIS COUNTY MANUFACTURERS ASSOCIATION

People • Products • Safety • Support

October 25, 2006

The Honorable Gene Green  
256 North Sam Houston Parkway East, Suite 29  
Houston, Tx 77060

Dear Congressman Green:

The Houston Ship Channel deserves the title of "Energy Capital of the World" and designation as a National Heritage Area. Since the early 1900s the Energy and Petrochemical needs of our nation have been met through the combined efforts of the companies residing in the Houston Ship Channel. The Battle of San Jacinto was a turning point for Texas Independence so it is fitting that the Houston Ship Channel played a key role in World War II by supplying 100 octane aviation fuel, butadiene for rubber and toluene for explosives. 100 octane fuel meant our bombers had 50 percent further range than the German planes and our fighters were faster, more powerful and more maneuverable. The toluene was used in over two-thirds of the bombs dropped, shells fired and torpedoes launched by the U.S.

The Petrochemical Complex in East Harris County has grown to \$82.6 billion of direct sales and 252,000 direct and indirect jobs. The economic development of the region has created a unique infrastructure of pipelines, rail and sea transport. Furthermore, the surrounding cities and the county are an integrated engine supporting the industry, which in return has afforded so many a great living for decades and some of the best schools in the country. There is no other region in the country that invokes any stronger image of industrial strength than Houston. It is with great pride that the East Harris County Manufacturers Association (EHCMA) offers their support to the designation of the Houston Ship Channel as a National Heritage Area.

In August of this year we had the pleasure of hosting Harlan Unrue from the National Parks Service. During Mr. Unrue's visit he toured some of our largest petrochemical facilities and we shared with him the unique history of the Houston Ship Channel. We recently learned that our efforts with Mr. Unrue were successful in generating a positive recommendation. We understand there is more work ahead before a National Heritage Area designation is approved.

If there is anything else EHCMA can do to work with you on this important endeavor, please feel free to contact me at 713-450-6747.

Sincerely,

  
Eric S. Lankofsky  
Chairman  
East Harris County Manufacturers Association

cc:

James T. Edmonds, Chairman Port of Houston Authority  
Jan Lawler, President Economic Alliance Houston Port Region

NOTED  
OCT 26 2006  
CJ



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VICE-CHAIRMAN, MIDLAND

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CHAIRMAN-EMERITUS  
FORT WORTH

ROBERT L. COOK  
EXECUTIVE DIRECTOR

October 6, 2003

The Honorable Gene Green  
Member of Congress  
2335 Rayburn Building  
Washington, D.C. 20515

Dear Congressman Green:

I have been apprised by David Vela, Texas State Coordinator for the National Park Service, of the interest to expand the boundaries of the Buffalo Bayou Feasibility Study. It is my understanding that the enlarged study area would include the original boundary in the legislation (Shepherd Drive to the Turning Basin); continue east from Turning Basin following the Buffalo Bayou/Houston Ship Channel corridor, to the San Jacinto Battlefield

By adding the San Jacinto Battlefield National Historic Landmark, the Houston Ship Channel, and the mouth of the Bayou, the study area would include resources of clear and or potential national significance. It is also my understanding that this enlarged study area would not require any additional funding than original estimates provided by the National Park Service.

We welcome the opportunity to engage in a dialogue and to participate in this Feasibility Study with your office as well as with all parties in this project. We would also encourage and welcome your approval to proceeding with the expanded study area. Should you have any questions on this matter, feel free to give me a call.

Sincerely,

Walter D. Dabney, Director  
State Parks Division

cc: David Vela  
Greg Kendrick



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RESOLUTION NO. 1798

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BAYTOWN, TEXAS, EXPRESSING THE CITY OF BAYTOWN'S SUPPORT FOR FEDERAL EFFORTS TO ESTABLISH THE BUFFALO BAYOU HERITAGE AREA: ENERGY CAPITAL OF THE WORLD; AND PROVIDING FOR THE EFFECTIVE DATE THEREOF.

\*\*\*\*\*

WHEREAS, the area beginning at Shepherd Drive in west Houston, Texas – commonly known as the Buffalo Bayou – extending along the Houston Ship Channel and ending at the Fred Hartman Bridge in Baytown, Texas. made a unique contribution to the cultural, political, and industrial development of the United States; and

WHEREAS, the Buffalo Bayou is distinctive as the first spine of modern industrial development in Texas, and one of the first along the Gulf of Mexico coast; and

WHEREAS, the Buffalo Bayou played a significant role in the execution of the Battle of San Jacinto and the struggle for Texas independence; and

WHEREAS, the Buffalo Bayou developed a prosperous and productive shipping industry that contributed to formation of the modern day Houston Ship Channel and the development of the Port of Houston, which today is the United States' second largest port in terms of foreign tonnage; and

WHEREAS, the Buffalo Bayou led in the development of Texas' petrochemical industry that made Baytown and the communities along the Houston Ship Channel the center of the early oil boom in America; and

WHEREAS, ExxonMobil's Baytown Refinery, as the world's largest petrochemical refinery, has made a significant contribution to the Houston Ship Channel's development as the "Energy Capital of the World"; and

WHEREAS, there is a need for assistance for the preservation of the Buffalo Bayou and the promotion of the Houston Ship Channel as a system for transportation, industry, and commerce; and

WHEREAS, the 400 acre nature preserve at the Baytown Nature Center possesses significant natural resources, including threatened and endangered species, that warrant preservation and inclusion in a National Heritage Area; and

WHEREAS, Congress, in 2002, enacted legislation (PL 107-337) authorizing the National Park Service (NPS) to study the suitability and feasibility of establishing a Buffalo Bayou National Heritage Area; and

WHEREAS, the purpose of a National Heritage Area is to provide federal recognition to and highlight the Buffalo Bayou, the Houston Ship Channel and the City of Baytown's historic contribution to the nation and its economic development; and

WHEREAS, no federal land protection or additional federal restrictions are provided by a National Heritage Area designation; NOW THEREFORE.

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BAYTOWN, TEXAS:

Section 1: That provided the City of Baytown is assured a seat on the local management entity administering the Buffalo Bayou National Heritage Area to ensure (i) that decisions regarding the heritage area and distribution of federal funding remain local, and (ii) that federal involvement is limited to technical and financial assistance, the City Council of the City of Baytown, Texas, hereby supports:

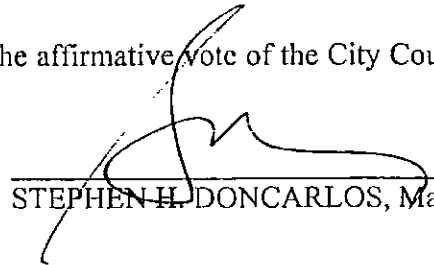
- a. the inclusion of the Baytown Nature Center in the Buffalo Bayou National Heritage Area and seeks to work with the heritage area's local management entity to preserve and interpret the natural resources abundant at the Baytown Nature Center; and
- b. including within the Buffalo Bayou National Heritage Area the parts of the City of Baytown that lie along the Houston Ship Channel west of the Fred Hartman Bridge, in order to promote the area's contribution to America's historic and economic development.

Section 2: This resolution shall take effect immediately from and after its passage by the City Council of the City of Baytown, Texas.

INTRODUCED, READ and PASSED, by the affirmative vote of the City Council of the City of Baytown this the 22<sup>nd</sup> day of June, 2006.

ATTEST:

  
LORRI COODY, City Clerk

  
STEPHEN H. DONCARLOS, Mayor

APPROVED AS TO FORM:

  
IGNACIO RAMIREZ, SR., City Attorney

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### A RESOLUTION

To express the Economic Alliance Houston Port Region's support for federal efforts to establish the Buffalo Bayou Heritage Area: Energy Capital of the World.

#### WHEREAS:

- The area beginning at Shepherd Drive in west Houston, Texas – commonly known as the Buffalo Bayou – extending along the Houston Ship Channel and ending at the Fred Hartman Bridge in Baytown, Texas made a unique contribution to the cultural, political, and industrial development of the United States.
- The Buffalo Bayou is distinctive as the first spine of modern industrial development in Texas and one of the first along the Gulf of Mexico coast.
- The Buffalo Bayou played a significant role in the execution of the Battle of San Jacinto and the struggle for Texas independence.
- The Buffalo Bayou developed a prosperous and productive shipping industry that contributed to formation of the modern day Houston Ship Channel and the development of the Port of Houston, which today is the United States' first largest port in terms of foreign tonnage.
- The Buffalo Bayou led in the development of Texas' petrochemical industry that made the communities within the service region of the Economic Alliance Houston Port Region the center of the early oil boom in America.
- There is a need for assistance for the preservation of the Buffalo Bayou and the promotion of the Houston Ship Channel as a system for transportation, industry, and commerce.
- Congress, in 2002, enacted legislation (PL 107-337) authorizing the National Park Service (NPS) to study the suitability and feasibility of establishing a Buffalo Bayou National Heritage Area.
- The purpose of a National Heritage Area is to provide federal recognition to and highlight the Buffalo Bayou, the Houston Ship Channel and the historic contribution to the nation and its economic development 15 community members of the Economic Alliance Houston Port Region.
- No federal land protection or additional federal restrictions are provided by a National Heritage Area designation.

**THEREFORE, let it be resolved on this day of October 18, 2006 that the Economic Alliance Houston Port Region** supports including our area within the Buffalo Bayou National Heritage Area in order to promote the area's contribution to America's historic and economic development;

**Chairman of the Board of Directors**  
**Mr. Jimmy Burke**

**President/CEO – Jan Lawler**  
Call 832-864-4020 for more information

## Appendix C: Cultural Resource Research Methodology, Sources, Acknowledgements, and Selected Bibliography

### Types of Cultural Resources Investigated

Cultural resources investigated during the course of the reconnaissance surveys that produced the inventories for the western and eastern parts of the proposed Buffalo Bayou National Heritage Area Study Area include buildings, structures, objects, sites and districts associated with Buffalo Bayou's nationally significant historical themes. Definitions of these resource types are found in Section IV of *National Register Bulletin 15: How to Apply the National Register Criteria of Evaluation of the National Register of Historic Places*:

**Building** – “A building, such as a house, barn, church, hotel, or similar construction, is created principally to shelter any form of human activity. ‘Building’ may also be used to refer to a historically and functionally related unit, such as a courthouse and jail or a house and barn.”

**Structure** – “The term ‘structure’ is used to distinguish from buildings those functional constructions made usually for purposes other than creating human shelter.”

**Object** – “The term ‘object’ is used to distinguish from buildings and structures those constructions that are primarily artistic in nature or are relatively small in scale and simply constructed. Although it may be, by nature or design, movable, an object is associated with a specific setting or environment.”

**Site** – “A site is the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archeological value regardless of the value of any existing structure.”

**District** – “A district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.”

### Research Design: Themes of Texas Independence and Houston – Energy Capital

Dr. Martin V. Melosi, Professor of History, College of Liberal Arts and Social Sciences, Department of History, University of Houston, produced a document entitled “Historical Significance of Buffalo Bayou” on July 18, 2005, for the National Park Service, Intermountain Region, Heritage Partnerships Program. Dr. Melosi's services were arranged through a cooperative agreement between the Intermountain Regional Office and the Organization of American Historians. The document (1) provided historical themes for Buffalo Bayou and placed development of the area within national contexts; (2) established Buffalo Bayou's period of significance; and (3) included an assessment regarding whether Buffalo Bayou possessed national importance. According to the aforementioned document, there are two nationally significant historic themes associated with the importance of Buffalo Bayou: “Texas Independence” and “Houston: Energy Capital.”

The document establishes the period of significance for Buffalo Bayou as 1836 for the theme of Texas independence, and as 1901 to roughly 1955 for the “Houston: Energy Capital” theme. The latter begins with the 1901 Spindletop oil strike near Beaumont, Texas, and extends through circa 1955. The “Houston: Energy Capital” theme recognizes the historical significance of the petrochemical industry of the Buffalo Bayou/Houston Ship Channel water corridor.

### **Overview of Sources**

National Park Service historian Harlan D. Unrau used various sources to identify historic resources related to the nationally significant themes of Texas independence and “Houston: Energy Capital.” The sources comprised consultations with historical and cultural organizations and knowledgeable individuals working in the fields of history and historic architecture, including industrial history. Examined were readily available published and other documentary sources of information. Unrau conducted further research in historic resource building inventories and surveys with file searches performed online in internet databases.

### **Consultations**

The National Park Service, in the person of historian Harlan D. Unrau, communicated with the following organizations and individuals via personal, telephone, e-mail, and fax consultations:

#### *Organizations and Their Primary Contact Persons*

Buffalo Bayou Partnership (BPP), Houston, Texas: Anne Olson, Executive Director

East Harris County Manufacturers Association (EHCMA), League City, Texas: Carol Harman, Administrative Assistant, EHCMA; Eric Lookofsky, Operations Manager, Arkema, Inc. and Chair, EHCMA Board of Directors Houston, Texas

Economic Alliance, Houston Port Region, Seabrook, Texas: Jan Lawler, President/Chief Executive Officer

Greater Houston Preservation Alliance (GHPA), Houston, Texas: David Bush, Director, Programs and Information; Ramona Davis, Executive Director

Harris County Historical Commission, Houston, Texas: Al Davis, Executive Director

Houston Archaeological and Historical Commission, Planning and Development Department, Houston, Texas: Randy Pace, Historic Preservation Officer, City of Houston

Houston Public Library, Houston, Texas (Houston Metropolitan Research Center and Texas and Local History Collection): Tamara Jordan, professional staff member

Pasadena Chamber of Commerce, Pasadena, Texas: Sherry Trainer, Executive Vice President

Port of Houston Authority, Public Affairs Division, Houston, Texas: Grace Moolchan, Publications Director; Scott Forbes, Government Relations Manager, Texas Historical Commission (THC), History Programs Division

Texas Historical Commission, History Program Division, National Register of Historic Places, Austin, Texas: Greg Smith, National Register Coordinator

The Heritage Society, Houston, Texas: Alice Collette, Executive Director

University of Houston, M.D. Anderson Memorial Library, Special Collections Division, Houston, Texas: Bobby Marlin, Senior Library Specialist

*Individuals Listed Alphabetically by Surname*

Stephen Fox, Lecturer, School of Architecture, Rice University, Houston, Texas

Mary Margaret Hansen, Executive Director, Greater East End District, Houston, Texas

Edward Matuszak, Director of Project Development, URS Corporation, Houston, Texas

Martin V. Melosi, Professor of History, Department of History, College of Liberal Arts and Sciences, University of Houston, Houston, Texas

Barry Moore, Fellow, American Institute of Architects, Houston Chapter; Architect, Gensler and Associates, Houston, Texas; and Adjunct Associate Professor, George D. Hines School of Architecture, University of Houston, Houston, Texas

C. David Pomeroy, Jr., Member, Board of Directors, San Jacinto Battleground Association, La Porte, Texas

Barrie Scardino, representative of American Institute of Architects, Houston Chapter, Houston, Texas

**Inventories of Historic Buildings and Structures and Other Historic Properties**

The following historic building/structure resource inventories were consulted during the research phase of this study. All of these inventories are on file at the Texas Historical Commission, History Programs Division, National Register of Historic Places Department, as well as at various locations in the Houston area, as indicated below as part of the reference.

“An East End Guidebook of Historic Resources, Houston, Texas”. Prepared by Center for Historic Architecture, University of Houston, College of Architecture. Houston: The Atrium Press, College of Architecture, University of Houston, 1995.

“Buffalo Bayou Heritage Corridor: Interpretive Graphics Master Plan.” Prepared by Douglas/Gallagher for the Buffalo Bayou Partnership. Houston, Texas: January 1998. On file at the Buffalo Bayou Partnership, Houston, Texas.

“Buffalo Bayou Historical Vignettes, 1825-1928: A Collection of Impressions of the Natural and Environmental Aspects of Buffalo Bayou from Eyewitness Accounts of Early Travelers and Settlers.” Prepared for the Buffalo Bayou Partnership by J.K. Wagner & Company, Inc., Houston, Texas: October 1998. On file at the Buffalo Bayou Partnership, Houston, Texas.

City of Houston Landmark Designation Reports. Randy Pace, City of Houston Historic Preservation Officer, provided copies of landmark designation reports for historic properties in the study area from the files of the Archaeological and Historical Commission, Planning and Development Department, City of Houston.

“Freedmen’s Town Historic District, Houston, Texas.” National Register of Historic Places Registration Form, prepared by Kenneth A. Breisch, National Register of Historic Places Department, Texas Historical Commission. November 1984.

Historic Inventory Card Files, 1970s-1990s. Texas Historical Commission, History Programs Division, National Register of Historic Places Department, Austin, Texas.

“Historic Resources in the City of Houston: Information Compiled from the Historic Resources Database of the Metropolitan Transit Authority of Harris County Texas (METRO).” 4 vols. Houston: December 1991.

“Historic Resources in the City of Houston. Addendum to December 1991 Report.” Houston: January 1993.

“Historic Resources Inventory, Houston Warehouse District.” Prepared by Barrie Scardino. 4 vols. Houston: 1987.

“Historic Resources Inventory, Warehouse District, Houston, Harris County, Texas.” Prepared for Department of Planning and Development, City of Houston by Preservation Services, Houston, Texas. 4 vols. Houston: August 31, 1991.

*Houston: An Architectural Guide.* Houston Chapter, American Institute of Architects. Houston: 1972.

*Houston Architectural Guide.* American Institute of Architects, Houston Chapter. Houston: American Institute of Architects, Houston Chapter, and Herring Press, 1990.

*Houston Architectural Guide, 2d ed.* American Institute of Architects, Houston Chapter. Houston: American Institute of Architects, Houston Chapter, and Herring Press, 1999.

“Houston Architectural Survey.” Prepared by Southwest Center for Urban Research with School of Architecture, Rice University. Commissioned by Texas Historical Commission and City of Houston. 5 vols. 1980. (Updated, expanded – Vol. 6, Supplement, 1981).

“Houston Heights Survey.” Prepared by Ellen Beaseley. Houston: Late 1970s-early 1980s.

“Our Ancestors’ Graves: Houston’s Historic Cemeteries.” Text and Research by Douglas Milburn; Photographs by Paul Hester. Houston: Houston Public Library, Douglas Milburn, and Paul Hester, 1980. On file at the Greater Houston Preservation Alliance, Houston, Texas.

“Outline for Historic Land Use Summary Prepared for Houston Transit Consultants.” Prepared by Lonacker & Papademetriou, Architects. Houston: April 1982.

“Request for Determination of Eligibility and Effects for the Downtown to Astrodome Light Rail Transit Project, City of Houston, Harris County, Texas.” Prepared for Federal

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National Register Information System (NRIS). Database contains listings of properties listed in or determined eligible for listing in the National Register of Historic Places.

Texas Historical Commission's Texas Historic Sites Atlas. Database contains listings and documentation for Texas historic properties that are (1) designated National Historic Landmarks; (2) listed in the National Register of Historic Places, (3) designated Recorded Texas Historical Landmarks, (4) designated Texas Archeological Landmarks, and (5) identified by Texas Historical Markers.

**Site Visits**

National Park Service historian Harlan D. Unrau made site visits to historic buildings and structures and other historic resources pertinent to this study either directly on site or by way of a “windshield survey” from public land and water rights-of-way. Both methods included examination, photography, and integrity assessment of inventoried cultural resources within allowable parameters consistent with national homeland security measures. It should be noted that none of the oil refineries or petrochemical plants in the expanded study area provide regularly scheduled public tours, although some of the facilities make arrangements for guided business, community, and school tours on a periodic basis. Sites visited included:

East Harris County Manufacturers Association area. A tour visit on August 15, 2006, to four major industrial facilities in the eastern part of the study area organized by the East Harris County Manufacturers Association and taken in company with Eric Lookofsky and Jan Lawler of that organization. The site visits included tours of the facilities, consultations with company/corporate officials, and photography for which permission was granted. The East Harris County Manufacturers Association (EHCMA) is a voluntary alliance of approximately 125 chemical manufacturers, refiners, and supporting distributors with terminal facilities in the Houston Ship Channel area, which includes Baytown, Deer Park, Houston, La Porte, and Pasadena. EHCMA is the largest network of its type in the world, and its member companies employ more than 30,000 people. These are the four facilities visited:

ExxonMobil Chemical Complex, 3525 Decker Drive, Baytown, Texas 77520. The ExxonMobil Baytown Complex also includes a refinery, olefins plant, polymers center, and basic chemicals and intermediates technology division.

Lyondell Chemical Company, 2502 Sheldon Road, Channelview, Texas 77530. The Lyondell Channelview Complex also includes Equistar, 8280 Sheldon Road, Channelview, Texas 77530.

Lyondell-Citgo Refining LP, 12000 Lawndale Street, Houston, Texas 77017

Shell Deer Park Manufacturing Complex, 5900 State Highway 225, Deer Park, Texas 77536. The Shell manufacturing complex includes a refinery, olefins plant, chemical plant, and lubricating oils plant.

Houston Ship Channel via *M. V. Sam Houston*. A boat tour open to the public on the *Sam Houston* on August 18, 2006, of the Houston Ship Channel operated by the Port of Houston Authority, Houston, Texas. The 90-minute interpretive tour embarks from the port’s Sam Houston Pavilion at the Turning Basin and extends to the Washburn Tunnel (Federal Road Tunnel). Photography is permitted while on the boat tour.

San Jacinto Battleground State Historic Site. In 2005, National Park Service historian Harlan D. Unrau visited San Jacinto Battleground State Historic Site to see the remnant fields of battle, the memorial monument, the museum, and views of the Houston Ship Channel portion of Buffalo Bayou.

**Photography**

In 2005, National Park Service historian Harlan D. Unrau took photographs of resources associated with the western Buffalo Bayou study area. He took photographs of resources associated with the eastern Buffalo Bayou study area during the week of August 14-18, 2006. As with his inventory reports for the western and eastern parts of the study area, he submitted the photographs to National Park Service historian John C. Paige, project manager. They are on file in the NPS Intermountain Regional Office, Denver, Colorado.

Although Unrau traveled many of the public streets and roads throughout the area, it was not possible to make integrity assessments of the area's oil refineries and petrochemical facilities. Stopping along roadways for the purpose of viewing, analyzing, and/or photographing facility development is likely to attract attention from security personnel. Pertinent to the eastern study area, general homeland security concerns and policies require plant facility security personnel to monitor and prevent photography unless plant officials grant permission. Without permission, photography is prohibited from roads accessible to the public. Because of such security concerns and restrictions, the only photographs that Harlan Unrau took during the eastern survey were those for which the oil refineries and petrochemical plants granted permission during the week of August 14-18, 2006, and those taken while he was on the *Sam Houston* boat tour from which photography is permitted. In addition, he took several photographs of the Houston Ship Channel and adjacent plant facilities involving the following locations from which photography is permitted:

Capture of General Santa Anna small pocket park along the Houston Ship Channel that is interpreted by a stone historical marker and that commemorates the capture of General Antonio López de Santa Anna on April 22, 1836, the day after the Battle of San Jacinto;

Lynchburg Ferry, which carries vehicles traveling on State Highway 134 across the mouth of the Houston Ship Channel where it empties into the San Jacinto River; and

San Jacinto Battleground State Historic Site, which commemorates Texas independence from Mexico on April 21, 1836.

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## Appendix D: Inventory of Cultural Resources in Buffalo Bayou National Heritage Study Area

**Inventory of historic buildings, structures, and other resources in the study area of the proposed Buffalo Bayou National Heritage Area.**

**Historic Name – Brown & Root**

**Current Name – Kellogg, Brown & Root (KBR)**

**City – Houston**

**Address – 4100 Clinton Drive**

**Construction Date(s) – 1990s**

Statement of Importance: Brown & Root located its headquarters at this location near Buffalo Bayou during the 1940s. After World War II, Brown & Root, which had been active in oil and gas exploration, and other investors purchased the Big and Little Inch pipelines from the government and organized a new company, Texas Eastern Transmission Company, now part of the Panhandle Eastern Corporation. During the 1950s and 1960s, Brown & Root was widely known for constructing U.S. air and naval bases, roads, dams, bridges, petrochemical plants, and large offshore oil drilling platforms throughout the world. In 1961, the company won the planning contract for the Manned Spacecraft Center in Houston. In December 1962, the Halliburton Company of Dallas purchased Brown & Root, which continued to operate under its own name. After Halliburton acquired Dresser Industries in 1998, Dresser's engineering subsidiary, M.W. Kellogg, a pipe fabrication business started by Morris W. Kellogg in 1900 and acquired by Dresser in 1988, was merged with Halliburton's construction subsidiary, Brown & Root, to form Kellogg, Brown, and Root.

Integrity Assessment: Although this location is the site where Brown & Root located its headquarters during the 1940s, the KBR headquarters building is a modern, high-rise 1990s-era office building. Other structures at the site may be older than the headquarters building, but there are few, if any, extant structures that date from the 1940s and early 1950s. Thus, the building and site do not provide opportunities for preservation and interpretation of a historic structure(s) relating to Buffalo Bayou's nationally significant "Energy" theme.

**Historic Name – Commercial National Bank Building**

**Current Name – Currently for lease by Colliers International for "historic loft/office space;" Gallery Café on ground floor.**

**City – Houston**

**Address – 917 Franklin Street (also listed as 116-120 Main Street in some building inventories)**

**Construction Date(s) – 1904 (Green and Svarz, Architects); 1970s – storefront altered; ca. 2000 – rehabilitation for present-day loft/office space**

Statement of Importance: This six-story building was the "first skyscraper" built in Houston's financial district on lower Main Street. The upper floors of the bank building were occupied by oil companies, civil engineers, and other similar tenants. Listed in the National Register of Historic Places as a contributing resource to the Main Street/Market Square Historic District, also designated as City of Houston Historic District.

**Integrity Assessment:** This six-story brown brick building was constructed in Beaux Arts styling and has limestone trim and a rounded corner bay which contains the main entrance. The building was one of the first in Houston to display the return to classical architecture that succeeded the picturesque eclecticism of the Victorian era. Although the exterior of this well preserved building retains a high degree of historic integrity, the interior has undergone significant modifications. However, if subsequent research can identify the names of the petroleum companies that had offices in the building and if those interior spaces are largely intact, such space could be used to interpret elements of the early history of the oil and natural gas industry in Houston. Thus, this building provides potential opportunities for preservation and interpretation of a historic structure relating to Buffalo Bayou's nationally significant "Energy" theme.

**Historic Name – Erie City Iron Works Warehouse**

**Current Name – Various Professional Studios, Offices, Apartments, and Small Businesses**

**City – Houston**

**Address – 1302 Nance Street**

**Construction Date(s) – 1909; 1980s – rehabilitation for studios, offices, and apartments (Dharma Café currently housed in entrance at corner of Nance and Richey Streets)**

**Statement of Importance:** Constructed near the Southern Pacific rail yard in 1909 by Herbert A. Paine to serve as a showroom and warehouse for his wholesale machinery business, this structure has sometimes been called the Paine Building. Paine was an agent for the Erie City Iron Works Company of Erie, Pennsylvania, an iron foundry firm that manufactured machinery for the petroleum industry and other industries. Paine apparently leased portions of the building to other wholesalers. By 1924, the structure was solely occupied by the Norvell Wilder Hardware Company. The building is recommended as eligible for listing in the National Register of Historic Places as a contributing resource to the proposed Warehouse Historic District (per draft 1992 nomination).

**Integrity Assessment:** This single-story brown brick building features extensive use of arched windows and decorative brickwork. The Nance Avenue entrance has a stuccoed entry bay with an oversailing brick cornice repeated on other elevations. A more monumental entrance (to the Dharma Café) is contained in an interesting chamfered bay at the corner of Nance and Richey Streets; it is similarly decorated and uniquely identifies the building. The long elevation, on Richey, has an interesting rhythm of paired, arched windows between larger, arched loading doors. The most impressive elevation, however, on Sherrett is composed of high semi-circular arched apertures that once held loading doors which opened onto a rear loading dock.

This rehabilitated building is well maintained and in good condition. Although its exterior retains a moderate degree of historic integrity, its interior has been changed significantly to house present-day offices, studios, and apartments. While the building's interior does not provide opportunities for historic interpretation, its exterior could be interpreted via walking tours. Thus, it provides opportunities for preservation and interpretation of a historic structure related to Buffalo Bayou's nationally significant "Energy" theme.

**Historic Name – Hahn & Clay**

**Current Name – Hahn & Clay**

**City – Houston**

**Address – 5100 Clinton Drive**

**Construction Date(s) – 1948; other buildings have been added at the site during subsequent years**

Statement of Importance: With antecedents as a late 19<sup>th</sup>-century blacksmithy and boilermaker shop in Houston, Hahn & Clay was established in 1908 in response to the rapidly developing oil industry of east Texas. Specializing in the shop and field manufacture, repair, and maintenance of industrial equipment, the expanding company outgrew its location in downtown Houston and moved to 1800 Franklin Street in 1928. Twenty years later, in 1948, the growing firm relocated to this nine-acre site at 5100 Clinton Drive. Today, the company serves a variety of industries as a single source supplier for pressure vessels and other custom fabricated products with markets in the oil field, petrochemical, construction, mining, forging manufacturing, pipeline, military, sub sea, and marine industries.

Integrity Assessment: Hahn & Clay continues to operate as an industrial equipment manufacturing, repair, and maintenance company at the location to which it moved in 1948. Some buildings at the company site appear to date from the late 1940s, while others are likely of more recent construction. The industrial buildings and site are well maintained and provide limited opportunities for preservation and interpretation of a historic structure(s) relating to Buffalo Bayou’s nationally significant “Energy” theme.

**Historic Name – Heflin Rubber Company Service Station**

**Current Name – A Bond Company – Bail Bonds**

**City – Houston**

**Address – 1001 North San Jacinto Street**

**Construction Date(s) – 1935**

Statement of Importance: Built in 1935 as a gas station and outlet for Heflin rubber tires, this structure is important as an example of an early retail outlet for a petroleum industry-related company. The building is recommended as eligible for listing in the National Register of Historic Places as a contributing resource to the proposed Warehouse Historic District (per draft 1992 nomination).

Integrity Assessment: Although rehabilitated for use as a bail bond office, this structure retains a moderate degree of integrity. Thus, the building provides opportunities for preservation and interpretation of a historic structure relating to Buffalo Bayou’s nationally significant “Energy” theme.

**Historic Name – Houston Natural Gas Company – Service Center**

**Current Name – Center Point Energy – Lockwood Service Center**

**City – Houston**

**Address – 900 Lockwood Drive**

**Construction Date(s) – Late 1940s**

Statement of Importance: This facility, which contains an office building and maintenance yard/garage facility, is associated with post-World War II natural gas distribution in Houston, one of the first American cities to use natural gas for industrial production.

Integrity Assessment: This facility continues to serve as a natural gas service center in Houston, and retains a relatively high degree of historic integrity. Thus, the facility provides opportunities for preservation and interpretation of a historic structure(s) related to Buffalo Bayou’s nationally significant “Energy” theme.

**Historic Name – Humble Oil & Refining Company Service Station #179**

**Current Name – Look Automotive**

**City – Houston**

**Address – 2101 Washington Avenue**

**Construction Date(s) – 1930; structure and site are currently used as a pre-owned automobile dealership**

Statement of Importance: John F. Staub designed a series of gasoline service station prototypes for the Humble Oil & Refining Company in 1929. This station, which is associated with the sale of petroleum-related products to the public, represents one of Staub's larger models. The building is identified as historically significant in the American Institute of Architects, Houston Chapter, *Houston Architectural Guide*, 2d ed., 1999.

Integrity Assessment: Although rehabilitated for use as a pre-owned automobile dealership, the gas station structure retains a moderate degree of integrity. Thus, the building provides opportunities for preservation and interpretation of a historic structure relating to Buffalo Bayou's nationally significant "Energy" theme.

**Historic Name – Longhorn Supply Company**

**Current Name – Longhorn Building**

**City – Houston**

**Address – 3130 Navigation Boulevard**

**Construction Date(s) – 1920s; 1952 – rebuilt**

Statement of Importance: The Longhorn Supply Company was an oil field equipment supply company. Oil field equipment supply companies were concentrated along Buffalo Bayou in Houston's "East End" because of their proximity to the east Texas oil fields and the Houston Ship Channel with its associated oil refineries and natural gas and petrochemical plants. A number of such companies were located at or near the intersection of Engelke Street and Navigation Boulevard because of their proximity to the bayou and the Southern Pacific railroad tracks that bisected the intersection. The building was identified as potentially eligible for listing in the National Register of Historic Places per listing in the Eastend Guidebook Inventory (1995).

Integrity Assessment: This structure, the brick and concrete front portion of which appears to retain a moderate degree of its early 1950s-era architectural integrity, is currently used as an office. Current usage of the reasonably well-maintained long metal shed that extends along the railroad tracks behind the front portion of the building could not be determined. This building provides opportunities for preservation and interpretation of a historic structure relating to Buffalo Bayou's nationally significant "Energy" theme if further research demonstrates that the long metal shed at the rear of the structure was part of the oil field equipment company during the period of significance.

**Historic Name – Oil Tool Manufacturing Company**

**Current Name – R. Bowman Real Estate Company**

**City – Houston**

**Address – 1318 Nance Street**

**Construction Date(s) – Ca. 1940**

Statement of Importance: The Oil Tool Manufacturing Company was an oil field equipment supply company. Oil field equipment supply companies were concentrated

along Buffalo Bayou in Houston's "East End" because of their proximity to the east Texas oil fields and the Houston Ship Channel along with its associated oil refineries and natural gas and petrochemical plants. The building is recommended as eligible for listing in the National Register of Historic Places as a contributing resource to the proposed Warehouse Historic District (per draft 1992 nomination).

**Integrity Assessment:** Located next door to the historic Erie City Iron Works Warehouse, the Oil Tool Manufacturing Company building is typical of industrial-type buildings constructed in the Houston Warehouse District during the 1930s and 1940s. It is a two-story yellow brick veneer building (concrete and steel frame construction) with a centered entrance and industrial metal-frame windows. Although the exterior of the building retains a minimal level of integrity and is reasonably well maintained, its exterior front façade has been altered and it currently houses a real estate office. Thus, it does not provide opportunities for preservation and interpretation of a historic structure relating to Buffalo Bayou's nationally significant "Energy" theme.

**Historic Name – Peden Iron & Steel Company Building**

**Current Name – Harris County Peden Community Correction Facility**

**City – Houston**

**Address – 610 North San Jacinto Street**

**Construction Date(s) – 1930 (James Ruskin Bailey, Architect); 1990s – interior renovated for use as Harris County Community Correction Facility**

**Statement of Importance:** One of the last major buildings constructed in the Fifth Ward "Factory District" of Houston, this four-story structure served as a retail store and administration building for the Peden Iron & Steel Company. Peden manufactured heavy hardware, mill, railroad, and oil well drilling equipment as well as other iron and steel supplies, thus making a significant contribution to the developing Houston oil industry. Like other buildings along the bayou, it was constructed with additional floor levels below the street that could be served by commercial barge traffic along Buffalo Bayou. The building is recommended as eligible for listing in the National Register of Historic Places as a contributing resource to the proposed Warehouse Historic District (per draft 1992 nomination).

**Integrity Assessment:** Constructed of reinforced concrete with brick and pyramid cast stone veneer in the modernistic Perpendicular style, this structure was built to house the showroom and corporate offices of the company which began as a hardware business in 1890. The building is articulated in the upper three stories with tall vertical piers that rise above the roof to form a crenelated roofline. A moderately setback penthouse tower rises one story above the corner entry bay.

Although the exterior of this building retains a moderate degree of historic integrity, the structure's interior has undergone significant rehabilitation to accommodate use as a correctional facility. While the building's interior does not provide opportunities for historic interpretation, its exterior could be interpreted via walking tours. Thus, it provides opportunities for preservation and interpretation of a historic building relating to Buffalo Bayou's nationally significant "Energy" theme.

**Historic Name – Peden Iron & Steel Company Building**

**Current Name – Currently used as storage warehouse**

**City – Houston**

**Address – 700 North San Jacinto Street**

**Construction Date(s) – 1905-06 (C.H. Page and Company, Architects); 1912 – construction of L-shaped addition (C.D. Hill, architect)**

Statement of Importance: This building was constructed in 1905-06 to house the Peden Iron & Steel Company's headquarters and extensive wholesale hardware operations. Although this structure was not Peden's first headquarters building, it was the first large permanent structure in this sector of Houston's "warehouse district" and the first to contribute to the modernization of the Fifth Ward factory district. The building is recommended as eligible for listing in the National Register of Historic Places as a contributing resource to the proposed Warehouse Historic District (per draft 1992 nomination).

Integrity Assessment: This two-story brick structure with arched windows and projecting brick piers and belt courses is located across Baker Street from the Peden building at 610 North San Jacinto Street. An extensive L-shaped concrete and brick annex was added to the building in 1912. Although not well maintained, the exterior of this building retains a moderate degree of historic integrity and could be interpreted via walking tours. Thus, it provides opportunities for preservation and interpretation of a historic structure relating to Buffalo Bayou's nationally significant "Energy" theme.

**Historic Name – Peden Iron & Steel Company Warehouse**

**Current Name – Maloney Warehouse**

**City – Houston**

**Address – 800 North San Jacinto Street**

**Construction Date(s) – Late 1940s**

Statement of Importance: The warehouse is important for its historical association with the Peden Iron & Steel Company. The building is identified as "significant" to the proposed Warehouse Historic District (per draft 1992 nomination), but was not recommended for listing in the National Register of Historic Places as a contributing resource in the draft 1992 nomination because it was not 50 years old at that time.

Integrity Assessment: This warehouse consists of five corrugated metal sections (constructed around a steel frame, columns, and trusses and a concrete floor) successively stepped out on the north side to the west as they extend backward from San Jacinto Street along what was Allen Avenue to Buffalo Bayou. This configuration allowed the building to align perpendicularly with Allen Street on the south and along a diagonal following the Southern Pacific Railroad tracks on the north. At the ridge of the roof gable of each section a four-foot high light trough is separately roofed (with a pitched roof stepped up for ventilation at the center) and lined on each side with metal-frame windows. Although not well-maintained, the exterior of this structure retains a moderate degree of historic integrity, and it does provide opportunities for preservation and interpretation of a historic structure relating to Buffalo Bayou's nationally significant "Energy" theme.

**Historic Name – Plowden Supply Company**

**Current Name – General Supply & Equipment Company (GENSCO)**

**City – Houston**

**Address – 3201 Engelke Street**

**Construction Date(s) – 1920s; Ca. 1950, brick addition**

**Statement of Importance:** The Plowden Supply Company was an oil field equipment supply company. Oil field equipment supply companies were concentrated along Buffalo Bayou in Houston's "East End" because of their proximity to the east Texas oil fields and the Houston Ship Channel along with its associated oil refineries and natural gas and petrochemical plants. A number of such companies were located at or near the intersection of Engelke Street and Navigation Boulevard because of their proximity to the bayou and the Southern Pacific railroad tracks that bisected the intersection. The building is considered potentially eligible for listing in the National Register of Historic Places per listing in the Eastend Guidebook Inventory (1995).

**Integrity Assessment:** Although this structure is currently used as an operating business and retains a moderate degree of historic integrity, it is not well-maintained. Thus, this building provides minimal opportunities for preservation and interpretation of a historic structure relating to Buffalo Bayou's nationally significant "Energy" theme.

**Historic Name – Reed Power Bit Company**

**Current Name – ReedHycalog – A Grant Prideco Company**

**City – Houston**

**Address – 6501 Navigation Boulevard**

**Construction Date(s) – 1925**

**Statement of Importance:** The original plant of the Reed Power Bit Company, located at the 3600 block of Harrisburg Boulevard, was opened by Clarence E. Reed and J.H. Giesey in 1915. The plant manufactured oil drilling tools and associated oil field equipment. By 1924, the company had outgrown the Harrisburg location and relocated to this site. Today, this brick building is still used as a business facility by ReedHycalog – A Grant Prideco Company, a world-wide manufacturer and supplier of drill bits and related applications technology. The company's drilling products and services segment manufactures and sells a full range of proprietary and American Petroleum Institute drill pipe, drill collars, heavy weight drill pipe, and accessories. These engineered drill stem products make up the principal tools (other than the rig) used for drilling oil or gas wells that are located between the rig floor and the bit. The company's tubular technology and services segment designs, manufactures, and sells premium connections and associated tubular products and accessories that are used primarily for the completion of natural gas wells and offshore and other wells that are drilled in harsh high-temperature and high-pressure environments or in environmentally sensitive areas.

**Integrity Assessment:** This well maintained historic building, which is currently used as an operating business for the design, manufacture, and sale of oil and natural gas field drilling equipment and technology, retains a relatively high degree of historic integrity. Thus, it provides opportunities for preservation and interpretation of a historic structure relating to Buffalo Bayou's nationally significant "Energy" theme.

**Historic Name – Shipside Contracting Corporation**

**Current Name – Foodco Warehouse (Currently Unoccupied)**

**City – Houston**

**Address – 5601 Navigation Boulevard**

**Construction Date(s) – 1938; periodically rehabilitated by various owners/tenants**

**Statement of Importance:** This structure was built in 1938 as part of the Esperson Industrial District, a complex of businesses, docks, warehouses, and manufacturing plants developed

by Mrs. Mellie K. Esperson along the south shore of Buffalo Bayou just upstream from the Houston Ship Channel Turning Basin. A long-time supporter of Buffalo Bayou industrial development, Mrs. Esperson planned and developed the district along Navigation Boulevard during the 1930s. Mellie was the widow of Neils Esperson, a native of Denmark who arrived in Houston in 1903 and became a pioneer developer of the Humble oil field as well as a real estate entrepreneur in the Houston area. Thus, this building is important for its historic associations with the shipping, industrial, and commercial operations of the Buffalo Bayou, Turning Basin, and Houston Ship Channel. First owned by the Shippside Contracting Corporation, this building was later taken over by the U.S. Navy during World War II. By the late 1980s it was owned and operated by General Stevedores Operations, Houston Barge Terminal. The building is considered potentially eligible for listing in the National Register of Historic Places per listing in the Eastend Guidebook Inventory (1995).

Integrity Assessment: Apparently, this brick building, which is unoccupied and in deteriorating condition, was most recently used as a Foodco Company warehouse. Because the exterior of the building retains a moderate degree of integrity, its rehabilitation could provide opportunities for interpreting shipping and commercial operations associated with the Houston Ship Channel and its Turning Basin. Thus, it provides potential opportunities for preservation and interpretation of a historic structure relating to Buffalo Bayou's nationally significant "Energy" theme.

**Historic Name – Union National Bank Building**

**Current Name – Hotel Icon**

**City – Houston**

**Address – 220 Main Street**

**Construction Date(s) – 1912 (Mauren, Russell & Crowell of St. Louis, Missouri, Architects); 1974 – all original windows and main entry doors replaced with plate glass windows and doors; 1996-97– rehabilitated for use as commercial space, hotel, and residential condominiums**

Statement of Importance: Among other things, the Union National Bank Building housed an early office of Brown & Root, Inc., a construction company established in Houston in 1919. Initially, the company paved roads and built steel bridges for municipal and county governments in central Texas. In 1936 the firm submitted a successful joint bid to construct the Marshall Ford Dam (now Mansfield Dam) on the Colorado River. A 1940 contract to construct the Corpus Christi Naval Air Station was the first of the firm's large federal World War II-related projects. Brown & Root established the Brown Shipbuilding Company in 1942 and constructed more than 350 vessels for the navy in a plant near the mouth of Greens Bayou where it empties into the Houston Ship Channel (just north of present-day Pasadena, Texas). During World War II Brown & Root became actively engaged in oil and gas exploration [See entry for Kellogg Brown & Root (KBR)]. The building is listed in the National Register of Historic Places as a contributing resource, Main Street/Market Square Historic District, also designated as a City of Houston Historic District.

Integrity of Assessment: The Main Street base of this 12-story, reinforced concrete framed building is detailed like a Roman commemorative arch, with freestanding Corinthian columns of Bedford limestone supporting ogeed architraves. The keystones above the arched ground-floor openings are carved with the likeness of Mercury, Roman god of commerce. The office floors above the two-story base are faced with brown brick and topped with screens of alternating piers and pilasters. On the Congress Avenue face of the building, all the detail is flatter and more compressed.

The exterior of this well-preserved building retains a relatively high degree of historic integrity, but the interior has been modified to accommodate present-day hotel operations. However, if subsequent research indicates that the interior spaces once associated with Brown & Root are largely intact, such space could be used to interpret the early history of the company and its role in the development of the oil and gas industry in Houston and east Texas. Thus, this building potentially provides opportunities for preservation and interpretation of a historic structure relating to Buffalo Bayou's nationally significant "Energy" theme.

**Historic Name – Wholesale Wire Rope Company**

**Current Name – Fred's Trailer & Truck Supply Company**

**City – Houston**

**Address – 3229 Navigation Boulevard**

**Construction Date(s) – 1920-30**

Statement of Importance: The Wholesale Wire Rope Company was an oil field equipment supply company. Oil field equipment supply companies were concentrated along Buffalo Bayou in Houston's "East End" because of their proximity to the east Texas oil fields and the Houston Ship Channel and its associated oil refineries and natural gas and petrochemical plants. A number of such companies were located at or near the intersection of Engelke Street and Navigation Boulevard because of the area's proximity to the bayou and the Southern Pacific railroad tracks that bisected the intersection. The building is considered potentially eligible for listing in the National Register of Historic Places per listing in Eastend Guidebook Inventory (1995).

Integrity Assessment: The exterior of this brick building was curved to accommodate the railroad tracks that exist on the site. Although this structure currently serves as a trailer and supply company, its exterior retains a moderate degree of integrity and provides limited opportunities for preservation and interpretation of a historic structure relating to Buffalo Bayou's nationally significant "Energy" theme.

**Historic Name – San Jacinto Battlefield**

**Current Name – San Jacinto Battleground State Historical Site**

**City – LaPorte**

**Address – 3523 Battleground Road, LaPorte, Texas 77571 (Located 22 miles east of Houston on Texas State Highway 134)**

**Construction Date(s) – 1836 (date of battle); 1909 – established as State Park; 1936-1939 – monument (with museum at its base), reflecting pool, and landscaped grounds, dedicated on April 21, 1939.**

Statement of Importance: Here, near the mouth of Buffalo Bayou where it empties into the San Jacinto River, on April 21, 1836, the decisive battle of the Texas Revolution was fought. Some 900 men led by Gen. Sam Houston, Commander-in-Chief of all Texas forces, surprised the Mexican army under the command of President Antonio Lopez de Santa Ana, which was encamped on the San Jacinto River. In a battle lasting 18 minutes, the Texans routed the enemy, killing or capturing many Mexican soldiers. The following day, Santa Ana himself was captured, and was held hostage against further Mexican attack. The victory ultimately ensured independence of the Texas Republic from Mexico. Independence paved the way for annexation of Texas by the United States in 1845, which in turn brought on the Mexican War (1846-48) and the acquisition by the United States of the entire Southwest and California via the Treaty of Guadalupe Hidalgo (1848). San Jacinto Battlefield was listed in the National Register of Historic Places on October 15,

1966; designated as a National Historic Landmark on December 19, 1960; and designated as a National Historic Civil Engineering Landmark by American Society of Civil Engineers in 1992.

Integrity Assessment: San Jacinto Battleground State Historical Park preserves and interprets cultural and historic features associated with the Battle of San Jacinto. Between 1883 and 1901, the Texas state government worked to acquire land around the historic battlefield. Eventually, some 445 acres were purchased from various private owners and San Jacinto veterans helped to delineate the location of the battle. In 1909, the site was designated as a state park by the Texas legislature. In 1936, under the impetus of the state centennial celebration, extensive development of the battlefield park was undertaken by the state with the assistance of the Public Works Administration, including construction of a towering 570-foot reinforced concrete obelisk (monument) faced with Texas shell limestone and capped by a three-dimensional version of the Lone Star. High, raised terraces surround the base of the monument, which contains the San Jacinto Museum of History and an elevator that carries sightseers to an observation deck at the top of the shaft. Today the state historical site is administered by the Texas Parks and Wildlife Department and covers some 1,000 acres within a maze of oil refineries, petrochemical plants, and other industrial development. Markers at various numbered points along park roads interpret key points and features associated with the battle. Thus, the state historical park provides significant opportunities for ongoing historic preservation and interpretation related to Buffalo Bayou's nationally significant theme of Texas Independence.

The following historical markers are in the eastern part of the Buffalo Bayou study area and are associated with the Texas Independence theme:

Batterson Home, that is, "Near Site of Isaac Batterson Home" – Address: Galena Park City Hall (Clinton Drive and Eastway). This historical marker, erected by the State of Texas in 1969, commemorates the site of Isaac Batterson's home which was the source of the flooring used by the Texan army to build a raft on which they crossed Buffalo Bayou on April 19, 1836.

Battle of San Jacinto, that is, "Site of Battle of San Jacinto, 1836" – Address: Marker on west side of State Highway 134, north of State Highway 225. This Texas 1936 Centennial Marker commemorates the site where the Texan army was drawn up to attack Santa Anna's Mexican forces on the afternoon of April 21, 1836. The adjacent marker reads: "To the tune of 'Will You Come to the Bower,' the Texans advanced; 'Remember the Alamo! Remember Goliad!' was their cry. With cannons and gunshot, clubs and bowie knives they fought – no quarter was given; the rout was complete – the slaughter terrific."

"Capture Site of General Santa Anna" – Address: Marker adjacent to front gate of Pasadena Paper Company, Pasadena, facing Houston Ship Channel (stone monument marker in pocket park along south side of Houston Ship Channel). This historical marker, erected in 1916 by the San Jacinto Chapter of the Daughters of the Republic of Texas, the San Jacinto State Park Commissioners, and Governor O. B. Colquitt, commemorates the approximate site of the capture of General Santa Anna on April 22, 1836, by Texas Army soldiers.

De Zavala Homesite and Grave, that is, "Lorenzo de Zavala" – Address: 531 Crockett Drive, Channelview. This historical marker commemorates the homesite and grave of

Lorenzo de Zavala, a signer of the Texas Declaration of Independence and first vice-president of the Republic of Texas. The de Zavala home, a plank-covered log house overlooking Buffalo Bayou across from present-day San Jacinto Battleground State Historic Site (approximately three miles east of the marker), served as a hospital for both sides after the battle.

“Old Harrisburg” – Address: 8100 block of Lawndale and Frio, Houston (marker in front of Frost Burg Bank just south of Brays Bayou where it intersects with the Houston Ship Channel). This marker, which was erected by the State of Texas in 1965, reads in part:

Early Texas port and trading post. Site of state’s first steam saw, grist mills and railroad terminal. Town founded, 1826, by John R. Harris, who was first settler in 1823. Became shipping center for early colonies, established when Texas was part of Mexico, with boats carrying cargo to and from Texas ports and points in the United States and Mexico. . . . Became the seat of government of the Republic of Texas, March 22-April 13, 1836, when David G. Burnet, President of the ad interim government and several of his cabinet resided near here in the home of Mrs. Jane Harris, widow of town founder. Here President Burnet adopted the flag for the Texas Navy. In 1835, local resident, Mrs. Sarah Dodson, had made here the first tri-color lone star flag. General Santa Anna attacked the town with 750 Mexican soldiers on April 16 attempting to capture Burnet and his cabinet. The whole town was burned. After Texas gained its independence at nearby San Jacinto, the town was rebuilt and again thrived. . . .

Patrick Homesite, that is, “Dr. George Moffit Patrick Home” – Address: 2200 block of Tidal Road at Rohm and Haas Texas, Inc., Deer Park. This historical marker commemorates the site of the home of pioneer surveyor Dr. George Moffit Patrick in 1836. The Texan army encamped at the site after the Battle of San Jacinto, and Republic of Texas ad interim government cabinet meetings were held here.

Point Pleasant, that is, “Homesite (Point Pleasant) of William Scott” – Address: 500 Bayway Drive, Baytown. This historical marker commemorates William Scott, a planter, merchant, and stockraiser who received a headright grant of land at this site on the east bank of the San Jacinto River which he named Point Pleasant. A great supporter of Texas independence, Scott served in 1835 as captain of the Lynchburg Volunteers, a local militia company. Point Pleasant was a stopping place for many Texas revolutionary-era pioneers, including Lorenzo de Zavala.

“Texan Army Crossing of Buffalo Bayou” – Address: 12000 Lawndale Avenue, Houston (just west of entrance to Lyondell-Citgo Refining LP). This Texas 1936 Centennial Marker commemorates the site where the Texan Army crossed Buffalo Bayou between Sims Bayou and Vince’s Bayou on April 19, 1836.

“Texan Capture of Mexican Dispatchers” – Address: Bellaire Boulevard at Second Street, Bellaire. This historical marker, erected in 1989 and sponsored by the Bellaire Historical Society, commemorates the site of the Texan army encampment under General Sam Houston on April 18, 1836, opposite Harrisburg (about 800 yards downstream) which had been destroyed by fire by the Mexican army under General Santa Anna on April 17. Deaf Smith and Wax Kearnes crossed Buffalo Bayou and captured a Mexican courier confirming the location and troop strength of the Mexican Army under Santa Anna.

“Vince’s Bridge” – Address: North Richey Street, about one mile north of State Highway 225, Pasadena. This historical marker, erected by the San Jacinto Chapter of the Daughters of the Republic of Texas in 1912, commemorates the site of William Vince’s Bridge over Vince’s Bayou. The bridge was destroyed by Deaf Smith and others on April 21, 1836, to prevent the arrival of re-enforcements to Santa Anna’s Mexican Army. It also prevented both the Texan and Mexican Armies from retreating back along the road to Harrisburg from the battlefield at San Jacinto. Because the bridge was out, Santa Anna could not escape the battlefield area and was captured nearby on April 22, 1836.

### **Industrial Facilities Associated with the Theme of “Houston: Energy Capital of the World”**

All of the following industrial facilities are associated with the nationally significant theme of “Houston: Energy Capital,” and were constructed during the 1901 to c.1955 period of significance for that theme. As part of the larger industrial landscape of the bayou, each of these facilities is a significant component of the petrochemical complex of the Houston Ship Channel area. However, because of security and operational issues, none of these facilities were surveyed, and there was no assessment of their historic integrity and/or ability to provide opportunities for preservation and interpretation. Following are summaries of each facility’s history and statements of importance.

#### **Current Name – Albemarle Corporation**

**City/County – Pasadena/Harris County**

**Address – 2500 North South Street 77503, P.O. Box 2500, Pasadena, Texas 77501  
(Located north of State Highway 225)**

Company History/Construction Date(s): TEL (tetraethyl lead) operations were started at the site by the Ethyl Corporation in 1952; Albemarle spun off of Ethyl Corporation in 1994. Parts of the facilities were sold to MEMC Electronics (adjacent plant property at 3000 North South Street) in 1995. Linear olefins plant was sold to Amoco (now British Petroleum) in 1995.

Statement of Importance: This 600-acre catalyst and specialty chemical plant produces magnesium and aluminum alkyls (used as catalysts in the manufacture of polyolefins); alkenyl succinic anhydride (used in high-quality paper); methyl aluminum; orthoalkylated anilines (used in herbicides); and silane polysilicon (a building block of the electronics industry). Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

#### **Current Name – Arkema, Inc.**

**City/County – Houston/Harris County**

**Address – 2231 Haden Road, Houston, Texas 77015 (Located on Haden Road on east side of shopping center, south of Interstate Highway 10)**

Company History/Construction Date(s): The plant was started by Pennwalt in 1952. The French government nationalized the French chemical industry in 1981; as a result, Atochem was established in 1983. Elf acquired Pennwalt in 1989. Elf became a private company named Elf Atochem in 1994. Elf Aquitaine and TotalFina merged to form Atofina Chemicals in 2000. Arkema spun off from Total and became an independent chemical company in 2006.

Statement of Importance – This 20-acre specialty chemicals manufacturing plant produces dimethyl disulfide and mercaptans (methyl to dodecyl); the latter are used as odorants in natural gas and to regulate polymerization of SBR rubber. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – BP Chemicals**

**City/County – Pasadena/Harris County**

**Address – 1500 North South Street, P.O. Box 2016, Pasadena, Texas 77501 (Located on North South Street, north of State Highway 225)**

Company History/Construction Date(s): Plant site was part of the Ethyl Corporation complex constructed in 1952 to produce TEL. Albemarle spun off from Ethyl in 1994; purchased from Albemarle by Amoco in 1996. BP purchased Amoco in 1998. Company name changed to BP Chemicals in 2000.

Statement of Importance: This 680-acre detergent raw materials facility is one of the largest plants in the world specializing in the production of alpha olefins and alcohols. The plant produces one-half of the world's supply of alpha olefins. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – BP Solvay Polyethylene North America**

**City/County – Deer Park/Harris County**

**Address – 1130 Battleground Road, P.O. Box 1000, Deer Park, Texas 77536 (Located on east side of State Highway 134, south of San Jacinto Battleground State Historic Site)**

Company History/Construction Date(s): The PE (polyethylene) plant was constructed by Celanese in 1957; taken over by Solvay in 1974. Solvay added the PP (polypropylene) Unit and Technical Center (1230 Battleground Road) in 1978. Solvay and La Porte Plc Great Britain commenced a joint venture to make hydrogen peroxide and sodium percarbonate in 1978. Sodium percarbonate production commenced in 1980. A joint venture – named Solvay Interlox, Inc. – with British Petroleum and Solvay occurred in 2001 (applies to the PP Unit only). The percarbonate unit was expanded in 2003.

Statement of Importance: The BP Solvay Polyethylene plastics manufacturing plant was the first polypropylene facility in the United States designed to run high-yield catalyst. The facility also produces polyethylene. The Solvay Interlox Company has more than 100 years of experience in peroxygen chemistry, and its 18 production units scattered around the globe are collectively the world's largest producers of hydrogen peroxide and derivatives. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – ChevronPhillips Chemical Company, LP**

**City/County – Pasadena/Harris County**

**Address – 1400 Jefferson Road, P.O. Box 792, Pasadena, Texas 77501. Located north of State Highway 225 between Federal Road and Beltway 8 (East Sam Houston Tollway)**

Company History/Construction Date(s): The plant was purchased by Phillips Chemical Company from the U.S. government in 1948. A \$6 million ammonium sulphate unit, producing 266,000 tons a year, was constructed in 1949. Pyridine (pyridines are intermediaries for wool-like and other synthetic fibers) plant, which used nitrogen (ammonia) as one of its materials, was constructed in 1951. Anhydrous ammonium plant

and unit producing superphosphates was constructed in 1952. Ammonium sulphate unit was enlarged in 1954. The plant suffered a major explosion in 1989. Two new PE units were placed on-stream in 1991. A hexene-1 unit was completed in 1999. Chevron and Phillips combined to form Chemical Businesses in 2000. The company also suffered a major explosion in 2000, which resulted in accelerated industrial safety programs throughout the ship channel area.

Statement of Importance: This 700-acre polymers manufacturing complex produces hexene-1 (used in perfumes), HD polyethylene, polypropylene, and styrene butadiene. The firm is also committed to an extensive research effort relating to the environment. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Crown Central Petroleum Corporation**

**City/County – Houston/Harris County**

**Address – 111 Red Bluff Road, Pasadena, Texas 77506, Mailing address – P.O. Box 1759, Houston, Texas 77251, Located on Red Bluff Road just south of the Washburn Tunnel (Federal Road Tunnel)**

Company History/Construction Date(s): Refinery operations (under the name Crown Oil and Refining Company) commenced in 1919 with lube oil as its only product. The refinery began manufacturing gasoline in 1925, the same year the company was incorporated as the Crown Central Petroleum Company. During early 1930s, the company purchased a tank wagon and began to sell products through a chain of 30 stations in the Houston area. The company, which became a publicly traded corporation in 1935, pioneered in the manufacture of 100-octane aviation gasoline during World War II; began a start-up of new reformat splitter in 1996; and installed an automated (DCS) control system in 1997. Crown became a privately held company in 2001, suffering a fire that same year. On March 2, 2005, the company merged into Crown Central LLC.

Statement of Importance: This 174-acre high conversion fuels refinery with a capacity to process 100,000 barrels of crude oil a day, along with its 130-acre terminal on the Houston Ship Channel, was one of the earliest oil refineries to be constructed along the Houston Ship Channel. Thus, this facility constitutes a significant component of the petrochemical complex in the ship channel area.

**Current Name – Dixie Chemical Company, Inc.**

**City/County – Pasadena/Harris County**

**Address 10701 Bay Area Boulevard, Pasadena, Texas 77507 (Located on west side of Bay Area Boulevard near Red Bluff Road)**

Company History/Construction Date(s): The company, established in 1946, installed a 3,000-gallon multi-purpose plant in 1997.

Statement of Importance: This 45-acre specialty chemicals and custom synthesis facility produces pharmaceutical intermediates, alkaline-based paper-sizing chemicals, epoxy curing agents, and specialty diols. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Dow Chemical Company, Houston Operations, La Porte Site**

**City/County – La Porte/Harris County**

**Address – 550 Battleground Road, P.O. Box 685, La Porte, Texas 77572 (Located on east side of State Highway 134, north of State Highway 225)**

Company History/Construction Date(s): Operations at this plant commenced in 1954. The start-up of the specialty chemical unit began in 2000. The closing of the PMDI unit by 2005 was announced in 2001.

Statement of Importance: This polyurethane foam raw materials plant produces chloroformates, acid chlorides, carbamates, and carbonates as well as MDI and other intermediates that are used in polyurethane foams. Several years ago Dow initiated a Waste Reduction Always [WRAP] program that reduced air emissions by more than 30 percent. The program included installation of vent condensers, pressure vessels, and a swing adsorption unit. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Dow Chemical Company, Houston Operations, Deer Park Site (Hampshire Chemical Corporation)**

**City/County – Deer Park/Harris County**

**Address – 739 Battleground Road, P.O. Box A, Deer Park, Texas 77536 (Located on west side of State Highway 134 just north of State Highway 225)**

Company History/Construction Date(s): Hampshire established and later purchased by W.R. Grace in 1958 (became known as the Organic Chemicals Division of Grace). Vestar acquired division from Grace in 1992 and used the Hampshire name. The company was acquired by Sentrachem (South Africa) in 1995. Sentrachem was acquired by Dow in 1998 (acquisition included Hampshire). Dow Hampshire was formed by combining Dow Contract, Haltermann & Hampshire in 2001.

Statement of Importance: This specialty chemicals plant specializes in difficult to handle raw materials. It produces cyanide derivatives, such as amino polycarboxylic acids that are used by the detergent and paper industries, and dispersants that are used in concrete, wallboard, paint, and brick manufacturing. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – DuPont Company**

**City/County – La Porte/Harris County**

**Address – 12501 Strang Road, P.O. 347, La Porte, Texas 77572 [Located west of State Highway 146 and north of State Highway 225 near the new bridge on State Highway 146]**

Company History/Construction Date(s): DuPont purchased the plant, which had been used as a World War II shipyard, in 1944. The company commenced fungicide manufacture in 1946. A sulfuric acid unit was added in 1961; a HF unit was added in 1964; a THF unit was added in 1969; a PVA unit was added in 1972; and an Isocyanates unit was added in 1989. The company received the Governor's Environmental Award in 1992.

Statement of Importance: This 800-acre chemical manufacturing complex is the largest polyvinyl alcohol plant in the world. The facility produces hydrofluoric acid (for internal use); PTMEG, an intermediate for Lycra, Spandex, and Fiber; butanediol; and vinyl acetate. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Equistar**

**City/County – Channelview/Harris County**

**Address – 8280 Sheldon Road, P.O. Box 777, Channelview, Texas 77530 (Located approximately five miles north of Interstate Highway 10 on east side of Sheldon Road)**

Company History/Construction Date(s): Operations at this facility commenced in 1955 (originally part of Texas Butadiene Company). The plant was purchased by Sinclair in 1962. Sinclair merged with Atlantic Richfield in 1969. The company became Lyondell in 1985. Equistar was formed as a joint venture of Lyondell & Millennium Chemicals in 1997 (joint venture was given Lyondell's MTBE Channelview Unit). Lyondell purchased OxyVinyls 29.5 percent share in Equistar in 2002.

Statement of Importance: This 2,900-acre plant is one of largest olefins manufacturing facilities in the United States. Its products include ethylene, isopropyl alcohol, alkylate, butylenes, Poly BD, isoprene, DCP, BTX, MTBE, styrene, malice, and anhydride. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Equistar Chemicals, LP**

**City/County – Deer Park/Harris County**

**Address 1515 Miller Cut Off Road, P.O. Drawer D, Deer Park, Texas 77536 (Located on west side of Miller Cut Off Road, north of State Highway 225)**

Company History/Construction Date(s): Two PE reactors were constructed by USI in 1959; the plant became Quantum Division of USI in 1987. The start-up of the QE-1 Ethylene Unit began in 1991. Quantum became Millennium in 1997. Equistar formed as a joint venture of Lyondell & Millennium Chemicals in 1997. The company permanently closed a HDPE reactor in 2001. Lyondell purchased OxyVinyls 29.5 percent share in Equistar.

Statement of Importance: This ethylene and ethylene derivatives plant produces acetylene; LLD, LD, and HPDE – microthene and polyethylene; EVA copolymer; and methanol. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Ethyl Corporation**

**City/County – Pasadena/Harris County**

**Address – 1000 North South Avenue, P.O. Box 472, Pasadena, Texas 77501. Located along north side of State Highway 225, west of Beltway 8 (East Sam Houston Tollway)**

Company History/Construction Date(s): Operations at this facility commenced in 1952 as part of a \$50 million complex constructed by Ethyl Corporation, then the world's largest producer of anti-knock compounds for gasoline. The plant annually produced 150 million pounds of tetraethyl lead as well as ethyl chloride, sodium, and chlorine used in the process for producing Ethyl compounds. Albemarle spun off from Ethyl in 1994. The largest portion of the plant was sold to Amoco in 1995. The specialties operation was sold to MEML Electronics Company in 1995. The company completed a \$80 million lube additives plant in 1995.

Statement of Importance: This 600-acre lubricating oil additives plant produces antioxidants, anti-wear agents, corrosion inhibitors, detergents, dispersants, pour point depressants, and V I improvers. Research support for the facility is provided by Ethyl's

laboratory in Richmond, Virginia. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – ExxonMobil Company**

**City/County – Baytown/Harris County**

**Address – P.O. Box 3950, Baytown, Texas 77522 (Headquarters located at 2800 Decker Drive, Baytown)**

Company History/Construction Date(s): Ground was broken for the refinery on April 16, 1919. The refinery commenced operations as Humble Oil and Refining Company in 1920 with a capacity of 10,000 barrels per day. To finance construction of the refinery, 50 percent of the company stock was sold to the Standard Oil Company of New Jersey. Oil was charged to the first battery of atmospheric crude stills on May 11, 1920 (first crude oil charged was Burkburnett crude). By August 1921, the refinery consisted of 20 atmospheric crude stills, 16 Burton pressure stills, four steam stills, three filter wash stills, and a full complement of agitators, treaters, filter houses, boilerhouses, and accompanying equipment. Additional shell stills and thermal cracking were added in the early and mid-1920s to respond to increasing product demand and the need for improved product quality. Vacuum crude stills were added for rerunning kerosene and naphtha during the late 1920s to improve product quality, and facilities were built to improve the finishing of refined oils.

Baytown's first pipe still was placed in operation in 1930, allowing more efficient distillation of crude oils than was possible with the older type crude stills. Polymerization units were built in the mid-1920s to increase the octane number of motor and aviation fuels. Baytown developed the alkylation process and put into operation the world's first commercial alkylation plant in 1938. Several light ends fractioning facilities were built during the late 1930s to separate light hydrocarbons used as raw materials for alkylation.

During World War II, Baytown produced more 100-octane aviation gasoline than any other refinery in the nation and, by December 1944, the refinery had produced its billionth gallon. Catalytic cracking facilities were brought on-stream in 1942-44 to replace thermal cracking. First Baytown catalytic reforming unit was constructed during 1942-44. Humble constructed and operated several plants for the government during World War II, including the Baytown Ordnance Works (first commercial synthetic toluene plant in the world, which produced 5.5 million barrels or nearly half of the nation's supply) and the Butyl Rubber Plant, which produced synthetic rubber for the war effort. Last of the old shell stills were replaced with a group of atmospheric-vacuum pipe stills following the war. Hydrotreating facilities were constructed to treat middle distillates during the early 1950s. First hydrodesulfurization capacity was built to improve product quality during the late 1950s. Additional catalytic cracking and catalytic light ends capacity was added in 1958. Additional lube processing facilities were added during the late 1950s, making Baytown's lube processing facilities the largest in the world.

Humble merged with Standard Oil of New Jersey in 1959. To increase gasoline production, a hydrocracking unit was built in 1966. In 1969, a new and larger catalytic reformer went into operation replacing an older, inefficient unit, and larger and more efficient facilities were constructed to improve Baytown's light ends handling. Humble name was used until 1972, when Standard Oil Company of New Jersey became known as the Exxon Corporation. In 1977, the Baytown Fuels Expansion project, representing a large and complex technical achievement in planning, design, engineering, and facility start-up, went on-stream. In 1986, the Baytown Refinery Upgrade Project was completed; major new

facilities included a new vacuum pipe still (VPS 8) and the Flexicoker, which enhanced the refinery's capability to process heavy, sour crudes and convert them into light clean products, such as gasoline and heating oil. By 1995, the refinery produced 426,000 barrels of oil per day and employed some 2,000 workers. Exxon Corporation merged with Mobil in 1998.

In addition to the Baytown refinery, ExxonMobil and ExxonMobil Chemical have a number of other facilities in the Baytown area. These include: Natural Gas Processing Plant in Pasadena, which commenced operations in 1986; Houston Olefins Plant, which was constructed in 1965; Baytown Olefins Plant, a steam cracking facility that resulted from a major Exxon facility expansion in 1997; Baytown Polymers Center, a research and development organization that commenced operations in 1982; Baytown Basic Chemicals and Intermediates Technology, a technical support unit that began operating as a separate group in 1982; and Mont Belvieu Plastics Plant, which began operations in 1982.

Statement of Importance: One of the earliest oil refineries to be constructed along the Houston Ship Channel, ExxonMobil is the largest refinery in the United States and one of the largest in the world (capacity to process 523,000 barrels of crude oil per day), producing a complete slate of petroleum products as well as chemical feedstocks. The refinery has the flexibility to process heavy, high-sulfur and high-metal crude oils into a full range of petroleum products, including motor gasoline, jet and diesel fuels, heating oil, and coke. It is also the largest lube basestock plant in the world and produces products such as lube oils, waxes, fluids, and specialties in various blends and grades. The refinery is fully integrated with the company's chemical and olefins plants and is a major source of petrochemical feedstocks for these plants. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area. In 1989, the Texas Historical Commission erected a Texas State Historical Marker at the main entrance of the refinery at Decker Road/Rollingbrook Drive.

**Current Name – ExxonMobil Chemical Company**

**City/County – Baytown/Harris County**

**Address – 5000 Bayway Drive, P.O. Box 2123, Baytown, Texas 77520 (Located on Bayway Drive, west of State Highway 146)**

Company History/Construction Date(s): The facility commenced operations as Humble Oil and Refining Company in 1940, and became Exxon when Standard Oil of New Jersey became Exxon. The propylene unit was expanded in 1996. Exxon merged with Mobil in 1998.

Statement of Importance: This large chemical plant utilizes olefins to produce intermediates and polymers such as butyl polymers, specialty fluids, and polypropylene. The olefins plant, which was founded in 1979, produces olefin products, with ethylene accounting for about three-fourths of the annual production. The olefins plant is the largest, single-train ethylene facility in the world. The chemical plant and its nearby olefins facility employ a total of some 1,500 persons and manufacture nearly 9 billion pounds of chemical products per year. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

Although administrative offices likely contain some historic materials, such as photographs, archives, and artifacts, this facility has donated, and intends to continue donating, historic materials and artifacts to the Baytown Historical Museum (operated by the Baytown Historical Society at 220 West Defee, Baytown).

**Current Name – Goodyear Tire and Rubber Company****City/County – Houston/Harris County****Address – 2000 Goodyear Drive, P.O. Box 5397, Houston, Texas 77012 (Located south of State Highway 225 just east of Interstate Highway 610 Loop)**

Company History/Construction Date(s): The plant, which was constructed in 1943 by the U.S. government as part of a World War II synthetic rubber effort, was purchased by Goodyear in 1955. The plant underwent a major modernization project in 1996, and closed NBR production in 2000.

Statement of Importance: This synthetic rubber plant is the largest SBR (plioflex) plant in the world. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Haldor Topsoe, Inc.****City/County – Pasadena/Harris County****Address – 10010 Bayport Road, Pasadena, Texas 77507 [Mailing Address – P.O. Box 58767, Houston, Texas 77258] (Located on Bayport Road, a short street extending off Bay Area Boulevard near its south end – near Red Bluff Road)**

Company History/Construction Date(s): The company was established in Denmark by Dr. Haldor Topsoe in 1940. It commenced operations at the Bayport facility, making ammonia synthesis catalyst, in 1956.

Statement of Importance: This 135-acre facility manufactures catalysts and also maintains a research and development unit in catalysis. Haldor Topsoe and Air Liquide America Corporation (11400 Bay Area Boulevard, Pasadena) have formed a strategic alliance in the areas of hydrogen, carbon monoxide, and synthesis gas under which Air Liquide will use Haldor Topsoe catalysts. Thus, Haldor Topsoe is a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Lubrizol Corporation****City/County – Deer Park/Harris County****Address – 41 Tidal Road, P.O. Box 158, Deer Park, Texas 77536. Located on north side of State Highway 225, east of Beltway 8 (East Sam Houston Tollway). The Lubrizol Corporation also has a Bayport Plant located at 12801 Bay Area Boulevard in Pasadena.**

Company History/Construction Date(s): Graphite Oil Products Company was established in Ohio in 1928; the company name was later changed to Lubrizol. Operations commenced in Deer Park in 1952.

Statement of Importance: This petroleum additives and lubricants plant produces additives for a wide variety of lubricating oils. The additives fall into five categories: detergents, dispersants, inhibitors, pour point depressants, and viscosity modifiers. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Lyondell-Citgo Refining, LP****City/County – Houston/Harris County****Address – 12000 Lawndale, P.O. Box 2451, Houston, Texas 77017 (Located north of State Highway 225, east of Interstate Highway 610 Loop)**

Company History/Construction Date(s): Construction of the Sinclair Oil Company refinery commenced on the former Allen Ranch in 1918. By the end of 1920, the average output was 2,700 barrels per day. Dredging was done to create a permanent dock. A second crude oil distillation unit, chemical treating facilities, and additional tankage were installed in 1923, enabling the refinery to produce a complete line of fully refined gasolines and other light oil products. Two additional crude and rerun stills, capable of handling 20,000 barrels of crude oil per day, were added in 1924. First shell still crude battery, with a capacity of 500 barrels per day, went on-stream in January 1920. First tank car trainload of finished lubricating oils went out that month. Oil industry's first thermal cracking unit went on-stream at the refinery in 1926, enabling the production of the industry's original high-octane (72-octane) premium gasoline. Propane-phenol lube solvent treating unit completed in 1941, which helped the refinery improve heavy duty and aviation lube oils for the armed forces, including special-purpose oils for high-altitude, long-range bombers. MEK dewaxing unit, wax treating, and loading facilities also went into production during the war to furnish needed wax for waterproofing and food container applications for U.S. allies. Houdry cat cracker and alkylation unit went on-stream during war, enabling the refinery to produce 25,000 barrels a day of 100-octane aviation fuel during the first two years of the war – equivalent to the daily aviation fuel output of entire U.S. industry before the war. A new fluid catalytic cracking unit was placed on-stream in 1953, which was one of the largest units in the country with throughput of 40,000 barrels a day. Its innovations included a first for the petroleum industry – a boiler that converted waste gas into steam power, creating large fuel savings. A \$11 million catalytic reforming unit, using a platinum catalyst, was installed in 1956 – initial capacity was 24,000 barrels per day, later debottlenecked to reach 40,000 barrels per day.

The refinery entered the petrochemicals arena in 1958 with installation of an aromatics recovery unit, which produced paraxylene and other aromatics for manufacture of synthetic fibers. The refinery expanded in 1961 with the installation of new crude units for the processing of both sweet and sour (high-sulfur) domestic crudes. The Houdry unit was demolished in 1966 to make room for a benzene-toluene unit to manufacture petrochemicals. A centralized refinery computer control system was installed in 1968 to improve product yield and quality while reducing operating costs.

When Atlantic Richfield Company acquired the assets of Sinclair, the refinery became part of ARCO Petroleum Products Company. The plant's largest expansion to date occurred in 1976 with a \$350 million project (first step toward processing heavy crude oil) that increased its capacity by 95,000 barrels to 300,000 barrels. As a result, the plant's daily production increased to 8.8 million gallons of gasoline and heating oil, plus 40,000 pounds of feedstocks for olefins.

The refinery and a portion of ARCO Chemical Company's Channelview complex (also a former Sinclair operation) were combined to create the Lyondell division of ARCO in 1985 (refinery operated under Lyondell name from 1985 to 1993). Lyondell Petrochemical became a wholly owned subsidiary of ARCO in 1988; Lyondell became a publicly traded company in 1989. The Lyondell-Citgo joint venture was created through an agreement with Petroleos de Venezuela, S.A. (PDVSA) in 1993 (PDVSA had acquired 50 percent of CITGO from the Southland Corporation in 1986 and the remaining 50 percent in 1990). A \$1.1 billion expansion to utilize heavy Venezuelan crude oil began in 1994. Central to the expansion was a new coker, upgrades to the 536 crude unit installed in 1976, and a new 100,000 barrel-per-day heavy crude unit. Lyondell owns 58.75 percent of the joint venture.

**Statement of Importance:** This 680-acre high conversion oil refinery was one of the earliest refineries (and the first for a large petroleum company) to be constructed along the Houston Ship Channel. It is the oldest of those now operating along the Houston Ship Channel, and it is one of the largest refineries in the United States designed to process heavy, high sulfur crude oil. It has a rated capacity of 268,000 barrels of oil per day – third largest in the Houston area. Major products include gasoline (120,000 barrels per day); diesel (95,000 barrels per day); benzene (10 million gallons per year); paraxylene (266 million gallons per year); and orthoxylene (226 million barrels per year). Other petroleum products include heating oil, jet fuel, olefins feedstocks, aromatics, lubricants, and petroleum coke. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

Consultations with company officials and engineers resulted in the conclusion that there are few, if any, extant 1950s-era historic buildings, structures, or technology/machinery components. A building with some 1950s-era machinery may remain extant in an isolated portion of the refinery complex. The company's library contains historical photographs and documents, but these are not organized. Various administrative offices also have historic photographs and archives.

**Current Name – Merisol Company**

**City/County – Houston/Harris County**

**Address – 1914 Haden Road, Houston, Texas 77015 (Located on Haden Road on east side of shopping center, south of Interstate Highway 10). The Merisol Company also has a Research and Development facility at 1503 Central Avenue in Houston.**

**Company History/Construction Date(s):** Operations commenced as the Merichem Company in the 1940s. A \$50 million investment program began in 1991. A 1997 formed joint venture with Sasol resulted in a name change to Merisol.

**Statement of Importance:** This specialty chemicals manufacturing plant extracts chemicals from refinery by-products. Its products include cresylic acids; phenol; o-, m-, and p-cresols; naphthenic acids; xylenols; sodium sulfides (used in paper mills); and sodium carbonate. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name -- Natural Gas Odorizing, Inc.**

**City/County – Baytown/Harris County**

**Address 3601 Decker Drive, P.O. Box 1429, Baytown, Texas 77522 (Located along Decker Drive just north of ExxonMobil Chemicals)**

**Company History/Construction Date(s):** The company introduced its first product in 1942 and later became part of Helmerich & Payne. It was acquired by OxyChem in 1998.

**Statement of Importance:** This facility, the largest of its kind in the United States, manufactures specialty chemicals that are used as odorants in natural gas distribution systems so that leaks can be detected. Its products, which are marketed under the Captain label, include tertiary butyl mercaptan (most resistant to oxidation – most commonly used), isopropyl mercaptan (commonly used to depress freezing point), and DMS/MES (do not oxidize in pipelines). Thus, this facility is a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Oxy Vinyls, LP (Deer Park Plant Chlor-Alkali Site) – Main Plant**  
**City/County – Deer Park/Harris County**  
**Address – 1000 Tidal Road, P.O. Box 500, Deer Park, Texas 77536 (Located near north end of Tidal Road)**

Company History/Construction Date(s): Operations at this plant commenced as Diamond Shamrock in 1948. A perchloroethylene unit was added in 1956; a CIHC unit was added in 1968; a Chlorowax unit was added in 1976; and a Co-Generation unit was added in 1985. OxyChem purchased Diamond in 1986. Oxy Vinyls' joint venture with Geon was announced in 1998 (OxyChem – 76% and Geon – 24%).

In addition to its main plant facility, Oxy Vinyls has five other facilities in its Houston Chemical Complex – Battleground Plant near south border of San Jacinto Battleground State Historic Site (chemical plant commenced by Diamond Shamrock in 1974); Deer Park PVC 3 Plant (PVC plastic manufacturing plant commenced by B.F. Goodrich in 1976); Deer Park VCM Site 4 Plant (VCM Unit commenced by Shell Chemical in 1971 – facility inside Shell Deer Park complex); Pasadena PVC Site 5 Plant (PVC plastic plant commenced by Tenneco in 1975); and La Porte Intermediates Plant 6 (vinyl intermediates plant commenced by Diamond Shamrock in 1977-78).

Statement of Importance: This 289-acre chlorine and derivatives plant (includes some facilities at Shell) produces vinyl chloride, monomer, chlorowax/solvents, and sodium hydroxide. Chlorine is used to make PVC to protect drinking water and to manufacture many other useful chemicals. Thus, this facility is a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Reagens**  
**City/County – Pasadena/Harris County**  
**Address – 9640 Bayport Boulevard, Pasadena, Texas 77507 (Located near intersection of Red Bluff Road and Bay Area Boulevard)**

Company History/Construction Date(s): This privately-owned company was established in the 1950s.

Statement of Importance: This facility is a PVC and plastic stabilizers plant that produces stabilizers for PVC and other plastics, including repak, reblend, calcium and zinc-based, and lead sulphate. Thus, it is a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Reichhold, Inc.**  
**City/County – Houston/Harris County**  
**Address – 1503 Haden Road, P.O. Box 96128, Houston, Texas 77015 (Located along Haden Road on east side of shopping center, south of Interstate Highway 10)**

Company History/Construction Date(s): The company was established by Dr. Henry Reichhold in 1927. It commenced operations at Houston in 1955; and was acquired by Dianippon Ink & Chemical in 1987. Dianippon Ink & Chemical acquired Kopper's & Spencer's resin businesses in 1989. GP closed the formaldehyde unit in 2001.

Statement of Importance: This resin manufacturing plant produces resins that are used primarily in building construction. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Rhodia Eco Services****City/County – Baytown/Harris County****Address – 3439 Park, P.O. Box 3331, Baytown, Texas 77522 (Located almost within ExxonMobil refinery; enter from Decker Drive)**

Company History/Construction Date(s): The plant was acquired by Stauffer in 1955, with a corporate acquisition by Cheseborough Ponds in 1986, and later by ICI. The company was acquired by Rhone-Poulenc in 1987; the company name changed to Rhodia in 1998 (RP spun off Rhodia).

Statement of Importance: This plant produces sulfuric acid for ExxonMobil and other customers. Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Rhodia****City/County – Houston/Harris County****Address – 8615 Manchester, Houston, Texas 77012 (Located just south of the Houston Ship Channel; almost under the Interstate Highway 610 Loop)**

Company History/Construction Date(s): The plant was constructed by the Texas Chemical Company in 1917, and acquired by Consolidated Chemical Companies in 1937. By 1955, the plant was producing sulfuric acid, which was supplied to area's refineries on a large scale; aluminum sulphate; ammonium sulphate; and bone meal. The company was acquired by Stauffer in 1955, with a corporate acquisition in 1986 by Cheseborough Ponds, later by ICI. The company was acquired by Rhone Poulenc in 1987; the name was changed to Rhodia in 1998 (RP spun off Rhodia).

Statement of Importance: This 200-acre facility was the first chemical plant to be constructed on the Houston Ship Channel, and today it is one of the world's largest sulfuric acid plants. For a period of time this was the only plant in the United States that manufactured bone char. Texas Ultra Pure (a subsidiary of Mitsubishi) packages high-purity sulfuric acid at this plant for sale to semiconductor manufacturers. Thus, it is a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Rohm and Haas Texas, Inc.****City/County – Deer Park/Harris County****Address – Houston Plant, 1900 Tidal Road, Deer Park, Texas 77536 (Located west of State Highway 134, north of State Highway 225)**

Company History/Construction Date(s): Rohm and Haas began as a partnership between Dr. Otto Rohm and Otto Haas to manufacture leather tanning chemicals in 1909. Operations commenced at Deer Park in 1949. Five major plant expansions occurred during 1950-60; and ten major plant expansions occurred during 1980-2000. Lone Star Plant in Deer Park commenced operations in 1996. Rohm and Haas established a MMA joint venture with Stockhausen called StoHaas in February 2000; Rohm and Haas joined with Atofina to expand MMA plant in September 2000. In addition to its Houston Plant, Rohm and Haas Texas, Inc., operates the following facilities: Lone Star Plant in Deer Park; Engineering Division in Deer Park; and Bayport Plant in La Porte.

Statement of Importance: This 800-acre chemical intermediates plant, which is the largest acrylate ester facility in the world, produces methacrylates (used to make acrylic sheet), acrylic acids and esters, Primene (high MW amines), Triton surfactants, and ammonium

sulfate. Rohm and Haas brought acrylic technology to market that led to production of easy-to-use water-based paints. Today the company is the largest manufacturer of methacrylic and acrylic monomers in the world. Thus, it is a significant component of the petrochemical complex in the Houston Ship Channel area.

**Current Name – Shell Deer Park Refining Limited Partnership and Shell Deer Park Chemical Plant**

**City/County – Deer Park/Harris County**

**Address – 5900 Highway 225, P.O. Box 100, Deer Park, Texas 77536 (Located on Center Street just north of State Highway 225)**

Company History/Construction Date(s): Construction of the refinery commenced in November 1928. The first run of gasoline was produced on August 6, 1929, and the refinery officially came on-stream seven days later. By the end of 1929, construction was completed and the plant was in full operation with a work force of 600. Groundbreaking for the new Shell Chemical Division adjacent to the refinery began in 1940; chemical operations commenced in 1941. A multi-million-dollar unit producing epon resins, used in special-purpose paints, was put in operation in 1954; OP2 constructed in 1971. Refinery and chemical operations combined under unified management and new name – Deer Park Manufacturing Complex – in 1974.

By the time of its 50th anniversary in 1979, the complex was Shell Oil Company's largest combined refinery and chemical complex, with 3,700 employees and the capacity to process almost 300,000 barrels of crude oil a day. Start-up of OP3 occurred in 1979. The company received Shell's Environmental Excellence Award in 1987. The Vinyls Intermediates Unit was sold to OxyChem in 1987. Shell Oil Company and PMI Norteamerica, S.A. de C.V., a subsidiary of Petroleos Mexicanos (PEMEX), formed a 50-50 joint venture – Deer Park Refining Limited Partnership. There was a major refinery upgrade in 1993. Deer Park Refinery and Deer Park Chemical became two separate businesses in 1995. An explosion rocked the facility in 1997. Shell announced merger of its downstream operations with Texaco and the Texaco-Saudi Aramco venture, Star Enterprises, in 1997. Shell and PEMEX announced plans for Maya II in 1998. The beginning of The Big 5 Turnaround – largest series of major turnarounds in the history of the Deer Park complex, 60,000-barrel per day refinery expansion) – began in 1999. The chemical plant divested its resins business to Hexion Specialty Chemicals in 2000. Phenol Unit expanded in 2000. The \$1 billion Maya II start-up – a record year for income – occurred in 2001; Maya II components include the feed-in of the Prost Fractionator of Selective Hydrocracker Unit, new SR-8 Sulfur Plant feed-in, and completion of the Distillate Hydrotreater. \$400 million ethylene expansion to 2.9 barrels per year went on-stream in 2001. OP-2D start-up and refinery earned OSHA Voluntary Protection Program Merit Site status in 2004.

In addition to the refinery, the 1,500-acre Shell Deer Park complex includes an olefins and downstream chemical derivatives facility (commenced operations in 1941) and a lubricating oils plant. The complex employs approximately 1,700 persons plus contractors' employees. Shell Oil Products also operates a facility along Clinton Drive in Galena Park.

Statement of Importance: This oil refinery is one of the earliest and largest facilities of its kind to be constructed along the Houston Ship Channel. The refinery is the largest of seven refineries owned by Shell and is the sixth largest in the United States with a crude oil capacity of 340,000 barrels a day. Approximately 70 percent of the crude oil processed at the refinery is Maya and Olmeca crude imported from Mexico. The refinery also

processes oil from Venezuela, Africa, and other countries, and the balance is domestic crude, mostly from Texas and Louisiana. The refinery produces 140,000 barrels of gasoline per day and 90,000 barrels of diesel and jet fuel per day, plus furnace oil, ship, and utility fuels.

The olefins and downstream chemical derivatives have consistently been on the leading edge of America's petrochemical technology. It was the world's first toluene, butadiene, solid epoxy resins in bead form, and continuous liquid resin plant. Among its products are IPA, isobutylene, butadiene, DCP, isoprene, phenol, acetone, and glycol ethers. Today, it is the world's largest plant that produces phenol acetone, bisphenol acetone, and epoxy resins.

Annually, an average of more than 2,500 vessels are loaded or off-loaded at the Shell Deer Park complex, representing about 100 million barrels of processed crude oil and products for the refinery and chemical plant. The dock facility ranks, in volume of materials, as one of the 25 largest ports nationwide. The chemical plant manufactures 3.2 million tons of base chemicals or raw materials per year that go into thousands of products. Most chemicals are produced in about 25 major process units. Thus, the refinery and chemical plant constitute a significant component of the petrochemical complex in the Houston Ship Channel area.

This facility was visited and photographed during the NPS survey. Consultations with company officials resulted in the conclusion that the overall perimeters of the 1940s/1950s-era refinery and chemical facility complex remain largely intact. However, there are few, if any, extant historic buildings, structures, or technology/machinery components dating to the period of historic significance.

The Shell Deer Park Historical Society operates a small historical museum near the main entrance gate to the Shell Deer Park complex. Established in 1983 and housed in its present location since 1990, the museum includes the display of hundreds of items of Shell company memorabilia and historical objects that have been donated by Shell employees and retirees over the years. Although the museum is open to the public one day per week, visitors must be processed through security to gain admittance.

**Current Name – Texas Petrochemicals Company, LP**

**City/County – Houston/Harris County**

**Address – 8600 Park Place Boulevard, Houston, Texas 77017 (Located south of State Highway 225, east of Interstate Highway 610 Loop)**

Company History/Construction Date(s): This facility was constructed as part of the U.S. Government's synthetic rubber program and operated by Sinclair Corporation during World War II; it was later purchased by Petro-Tex (Tenneco and FMC). Petro-Tex sold the polychloroprene rubber unit to Denka in 1976. Tenneco purchased FMC's interest in the joint venture in 1978. David Swalm purchased Petro-Tex from Tenneco in 1984. The company became part of Cain Chemical (Texas Olefins) in 1996. The facility suffered a major fire in 2001. The Texas Petrochemicals Company also operates a Baytown Plant at 4604 Baker Road.

Statement of Importance: This synthetic rubber raw materials plant produces polyisobutylene, dimmer, MTBE (used in gasoline blends), butadiene, and butene-1 (used as a co-monomer in polyethylene). Thus, this facility constitutes a significant component of the petrochemical complex in the Houston Ship Channel area.

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