



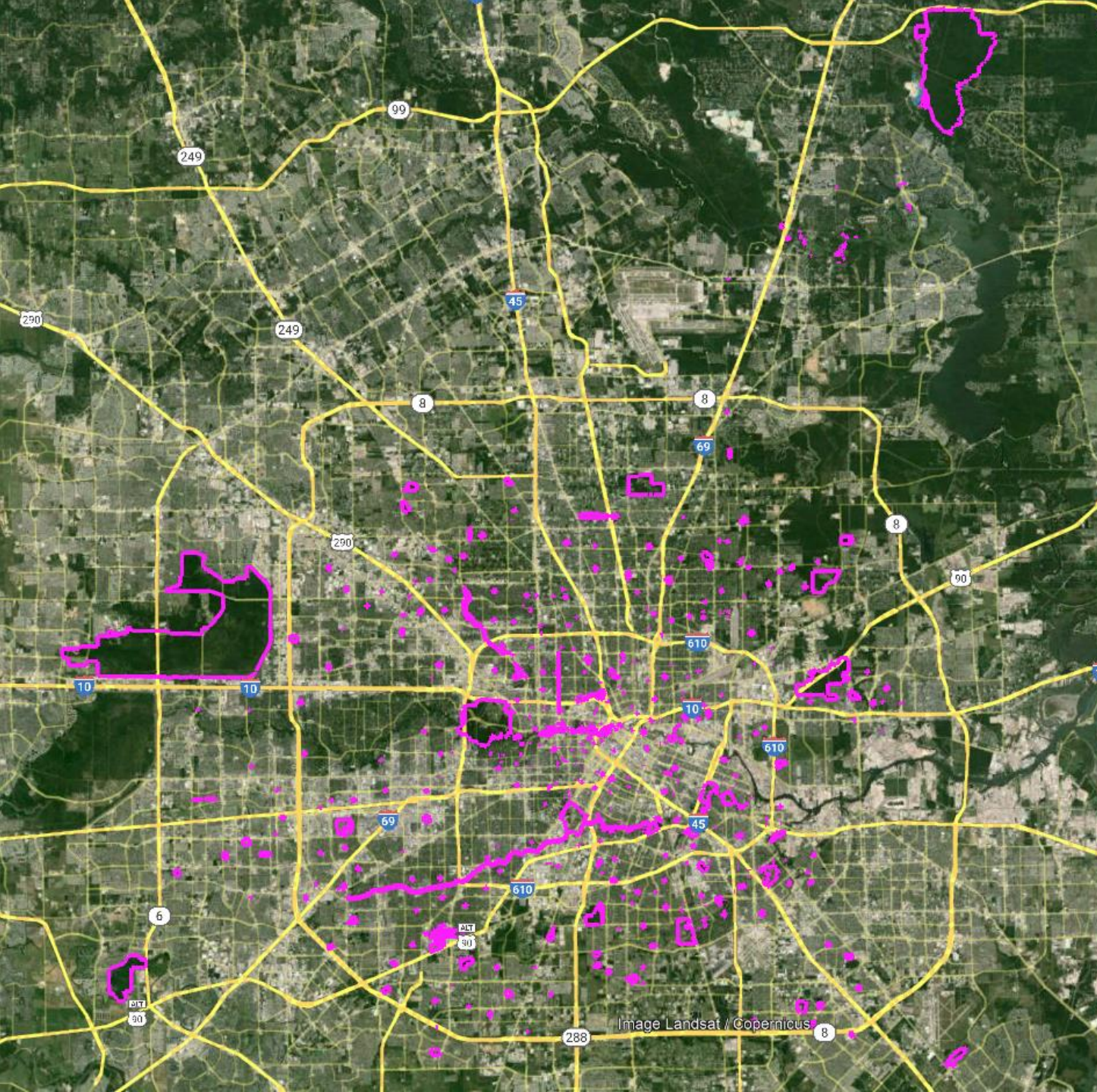
City of Houston Parks and Recreation Department

Natural Resources Division

**Cassidy Kempf, Habitat
Restoration Manager**



HPARD
**HOUSTON PARKS
AND RECREATION DEPARTMENT**
A CAPRA Accredited Agency



Houston Parks and Recreation Department

- Started in 1916 with two parks
- Over 380 parks
- Over 26,000 acres of land

Natural Resources Division

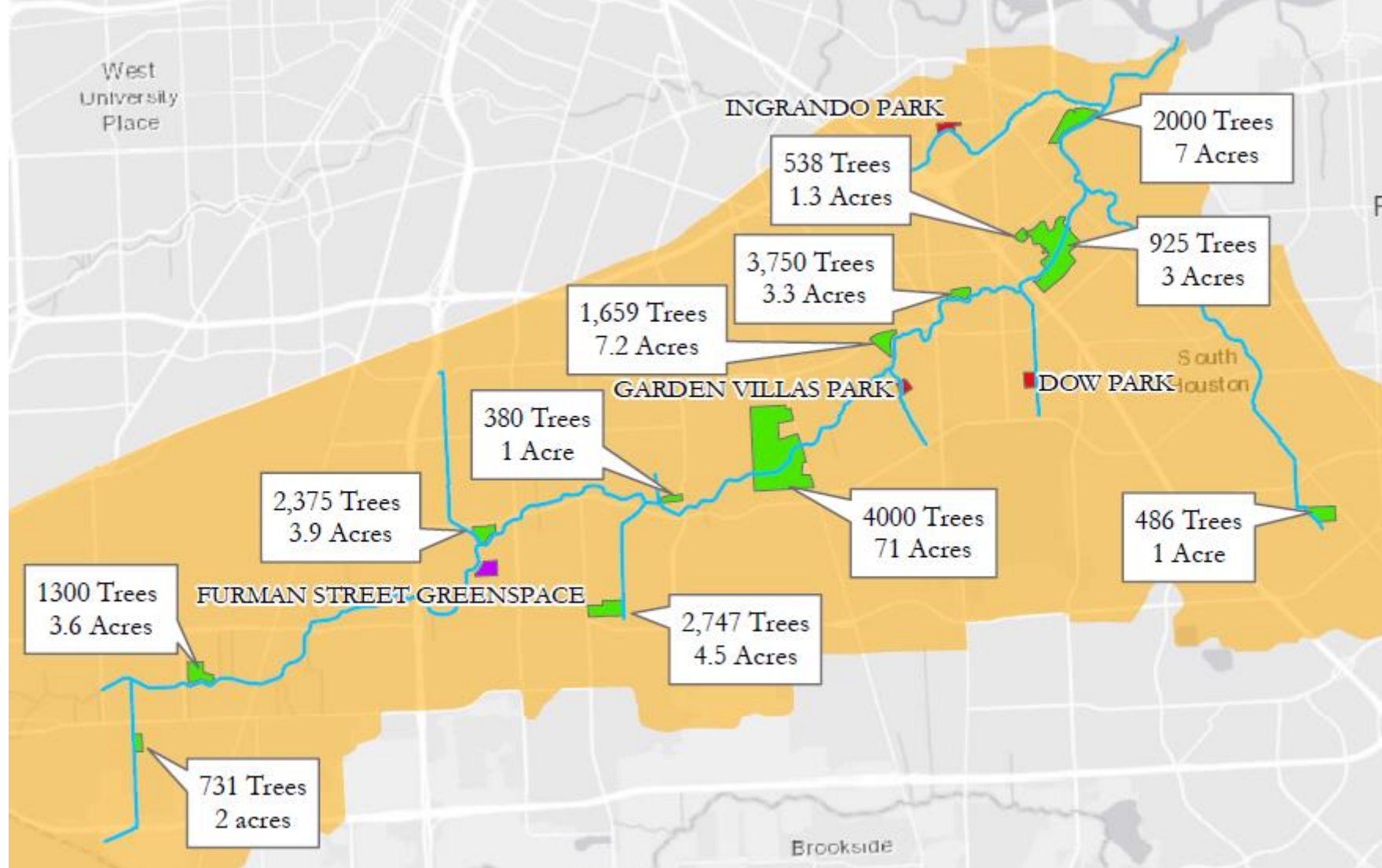
- Created in 2014
- Oversee natural areas in city parks
- Water features
- Wildlife
- Prairie and riparian restoration
- Nature Preserve Ordinance



Riparian Restoration Initiative

- Creation or enhancement of forested riparian buffers in all parks adjacent to waterways
- Over 70 parks and 1,000 acres of restoration. 25 currently ongoing or complete.
- Began in 2017 with Milby Park
- Included in the Resilient Houston Plan





Waterways

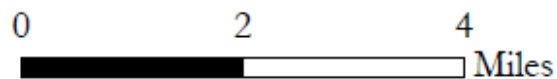
Sims Bayou Watershed

Park Status

Completed Riparian Restoration

Funded and Upcoming Riparian Restoration

Proposed Riparian Restoration



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Enhancement



Creation

White Oak Parkway Native Habitat Restoration and Outreach

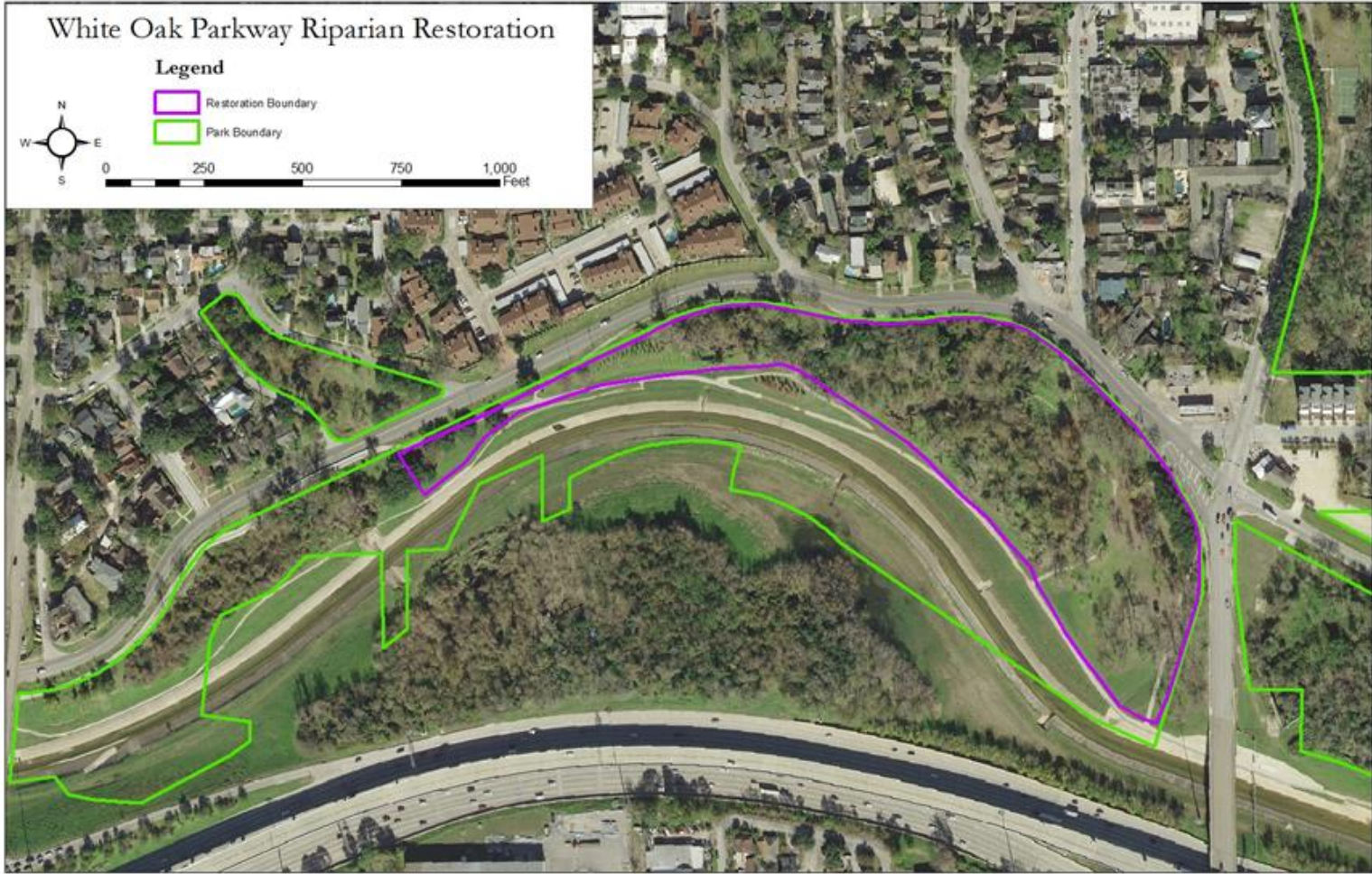
Public Participation and Education Subcommittee (2017) - \$45,000

Partners – Student Conservation Association, Houston Audubon

White Oak Parkway Riparian Restoration

Legend

- Restoration Boundary
- Park Boundary







- **Invasive Species Removal**

- Elephant Ear
- White Mulberry
- Air potato Vine
- Bamboo

- **Tree Planting**

- **Pop-up birding station, volunteer events, education**



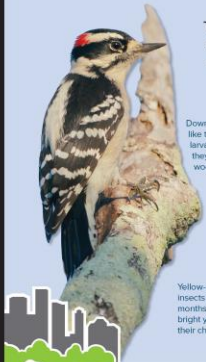
An Amazing Place...

Did you know that over 150 species of birds have been seen here in White Oak Parkway—just a short distance from Downtown Houston?

The surrounding riparian forest provides resident and migratory birds all they need to thrive: shelter for nesting, food in the form of insects and plants, and water for bathing and drinking.

Get Involved!

White Oak Park is a location for Houston Audubon's exciting Bird-Friendly Communities Initiative. Volunteers are helping to remove invasive plants, restore native habitat, and clean up plastic debris before it can be swept into White Oak Bayou—and eventually out into Galveston Bay. To find out more, contact Houston Audubon at www.houstonaudubon.org.



Downy Woodpeckers like to eat beetle larvae and ants that they find inside wood or tree bark.



Yellow-rumped Warblers forage for insects and fruit during the winter months. Look for the flash of their bright yellow rumps, and listen for their chip notes in the trees.



Red-shouldered hawks are fairly common in Houston's woodlands.



Snowy Egrets have distinctive yellow feet which are sometimes known as "golden stilts."

Caroline Chickadees are year-round residents that feed their young thousands of caterpillars.

RESTORE HOUSTON • WHITE OAK BAYOU



Welcome to White Oak Parkway

Come and discover nature close to home in this 23.3-acre park along White Oak Bayou—you'll be amazed at the birds and other wildlife you'll see right in the middle of the city!

Thick and tangled woodlands once grew all along our bayous and these riparian corridors provided a rich and diverse habitat for all kinds of birds and other wildlife. Unfortunately this habitat has been degraded over time due to development and invasive vegetation.

The Houston Parks and Recreation Department is working with Houston Audubon and other

project partners to restore 10-acres of native woodland habitat to White Oak Parkway. This will not only enhance urban bird and wildlife habitat in this park, but also improve the recreational experience for all Houstonians here along White Oak Bayou.

Why not stay awhile, relax and enjoy?

You might even be lucky enough to see a magnificent Bald Eagle along White Oak Bayou!



Volunteers with the Student Conservation Association are working with other project partners to remove invasive species and restore native habitat in White Oak Parkway.



This short loop trail takes you through White Oak Parkway—take time to look around as you explore!



Along the way you will notice a small wetland which was once a natural meadow in White Oak Bayou before the bayou was straightened and channelized in the 1950s to improve drainage.

Come and Help Us

Houston Parks and Recreation Department's Natural Resources Management Program is building a network of riparian buffers and nature preserves within Houston's parks. We need volunteers!

For more information go to: www.houstontx.gov/parks/naturalresources



Houston Parks and Recreation Department's
Habitat Restoration Project



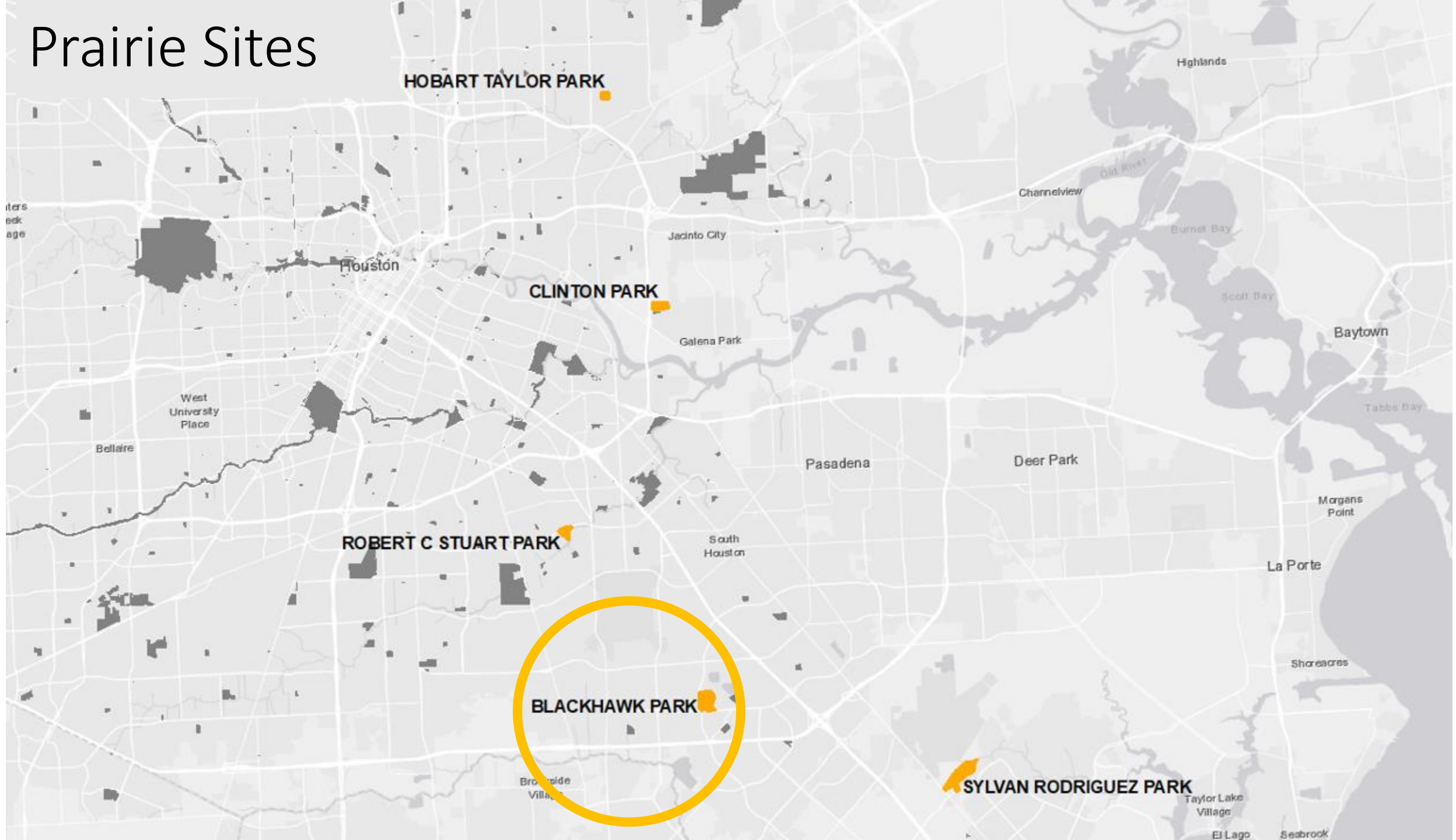
Blackhawk Park Habitat Restoration Project

Public Participation and Education Subcommittee (2018) - \$53,600

Natural Resources Uses Subcommittee (2022) - \$50,000

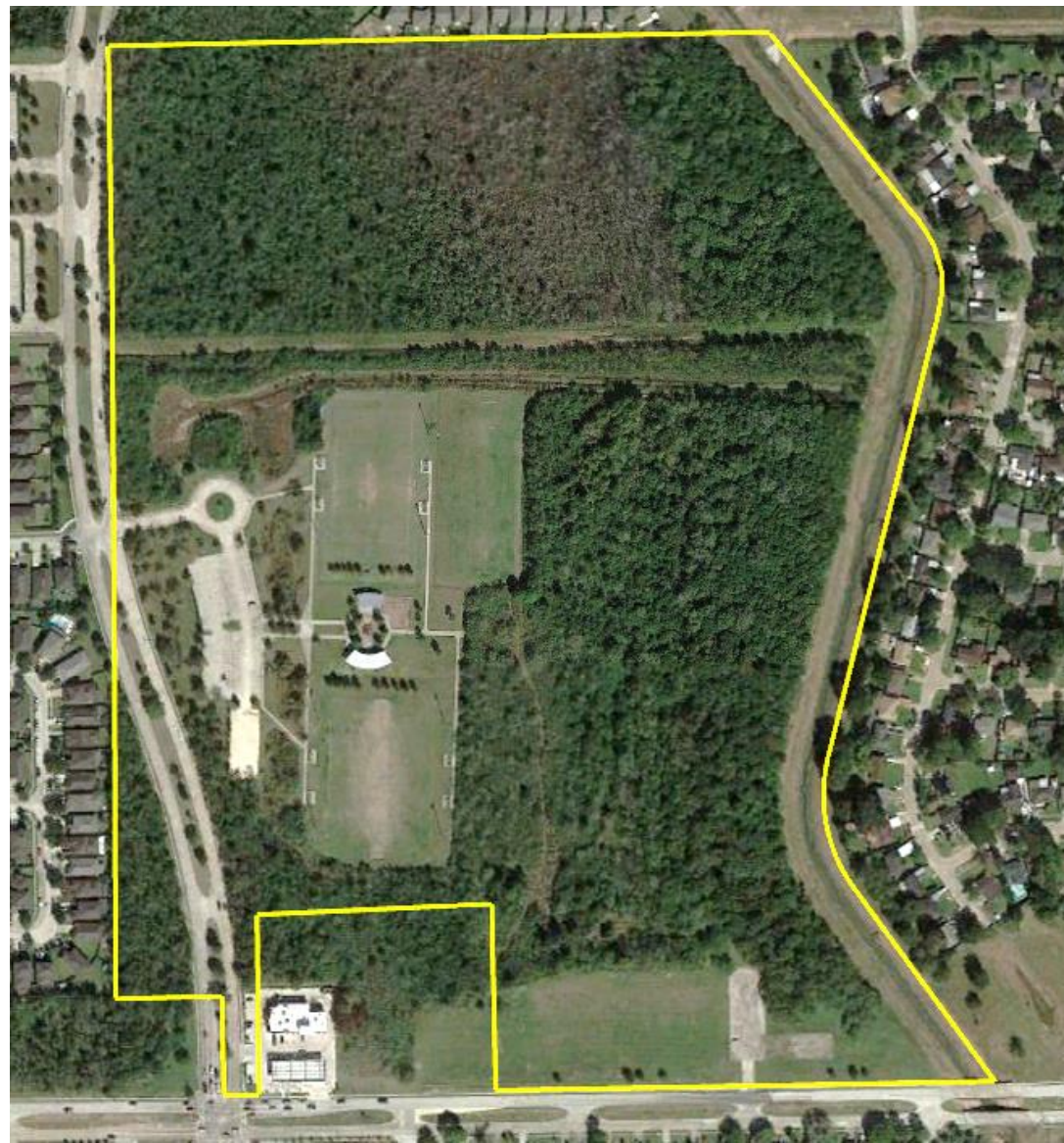
Partners – Student Conservation Association

Prairie Sites





1944



2017

Seed Bank

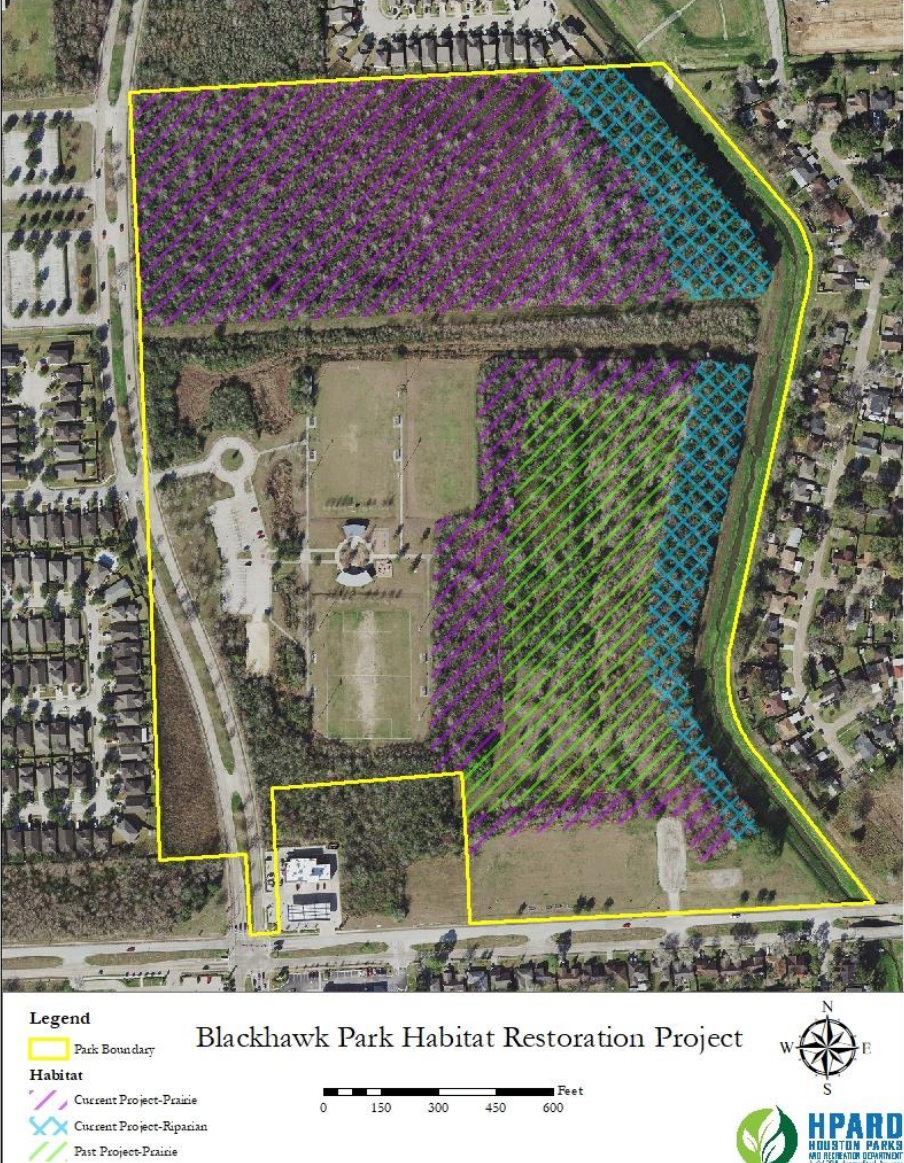
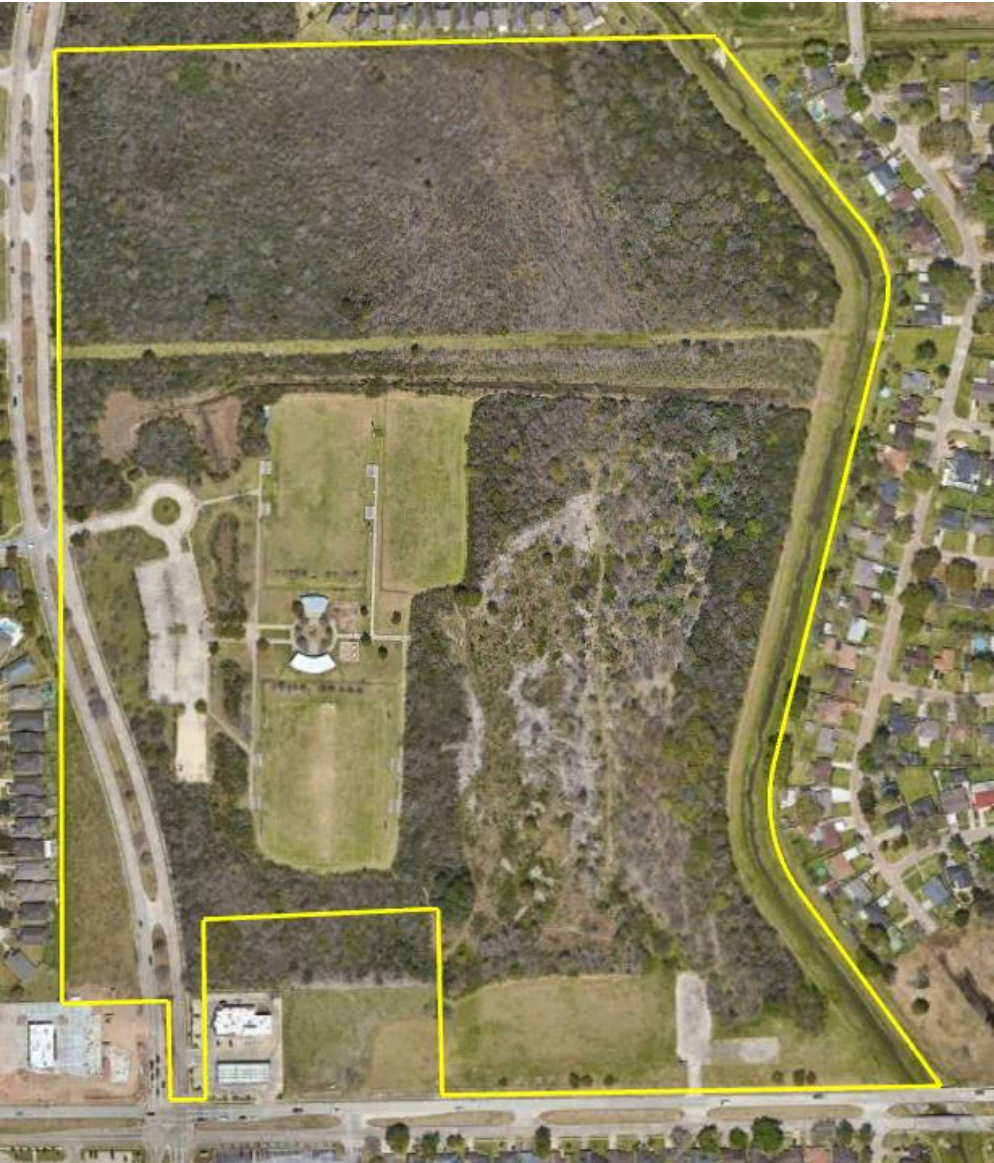


iNaturalist Observation © brocknedland



iNaturalist Observation © Jed Aplaca

Phases







January 2024



Our Vanishing Prairie Heritage

Native grasslands once stretched as far as the eye could see across the Texas coastal plain. Today, less than 1% of our coastal prairies remain—most have been lost to development and agriculture long ago.



Over nine million acres of native prairie existed along the Gulf Coast prior to Anglo settlement.

A Work in Progress

The Houston Parks and Recreation Department is working to restore Blackhawk Prairie using modern land management tools to prevent the encroachment of brush and to establish native prairie vegetation. Non-native shrubs and trees will be removed from the site and replaced with native grasses and wildflowers to provide high quality habitat for migratory songbirds, insect pollinators, and other native wildlife.



The few remaining natural coastal prairies in the Houston area contain an incredible diversity of native plants. The Houston Parks and Recreation Department works to hand-collect seed from these locations and reintroduce native species back into our prairie restoration sites during volunteer planting events.



Non-native or invasive trees such as Chinese privet and Chinese tallow were introduced long ago as ornamental plants. Unfortunately, with the loss of grazing, bison and wildlife, they establish quickly and turn prairie habitat into non-native forests.



Both lightning and Native Americans created wildfires which helped maintain our coastal prairies by reducing woody vegetation and supporting the growth of native prairie grasses and forbs.

Where the Buffalo Roam...

When vast herds of bison historically grazed this landscape, they spread native seeds and helped to control the spread of woody vegetation.



Did You Know?

Prairies are now human-dependent ecosystems. To prevent a prairie from gradually becoming a forest, prairies must be mowed, grazed or burned.

Houston Parks and Recreation Department • Habitat Restoration Project



An Ocean of Grass

Come and Help Us!

The Houston Parks and Recreation Department's Natural Resources Management Program is restoring Blackhawk Prairie to provide a refuge for wildlife and to provide benefits to surrounding areas through the ecosystem services that natural habitat provides. For more information or to volunteer, go to: www.houstontx.gov/parks/naturalresources.

Standing here 150 years ago, you would have been surrounded by a vast prairie which stretched like an ocean of grass as far as the eye could see.



La Cotte's Sparrow

Bumblebee

Urban habitats play a critical role in sustaining native wildlife populations.

Did You Know?

Ecosystem services are the benefits that people gain from natural systems such as flood protection, water purification, pollution reduction, and erosion control.



Texas Coneflower

Studded with small woodlands and wetlands, this coastal prairie was carpeted with wildflowers in springtime and home to an incredible diversity of wildlife, from the smallest insects and butterflies to bison and even red wolves.

Coastal prairies are places where our roots run deep. They're places where you can feel your senses come alive. As the Houston Parks and Recreation Department works to restore the surrounding Blackhawk Prairie, you should soon be able to observe a higher diversity of birds and other wildlife seeking food and shelter here.

Take time to look around you today. What can you see?



Northern Harrier



Indian Blanket



Bushy Bluestem



Five acres of mowed parkland were restored to coastal prairie habitat in Hobart Taylor Park.

Houston Parks and Recreation Department • Habitat Restoration Project



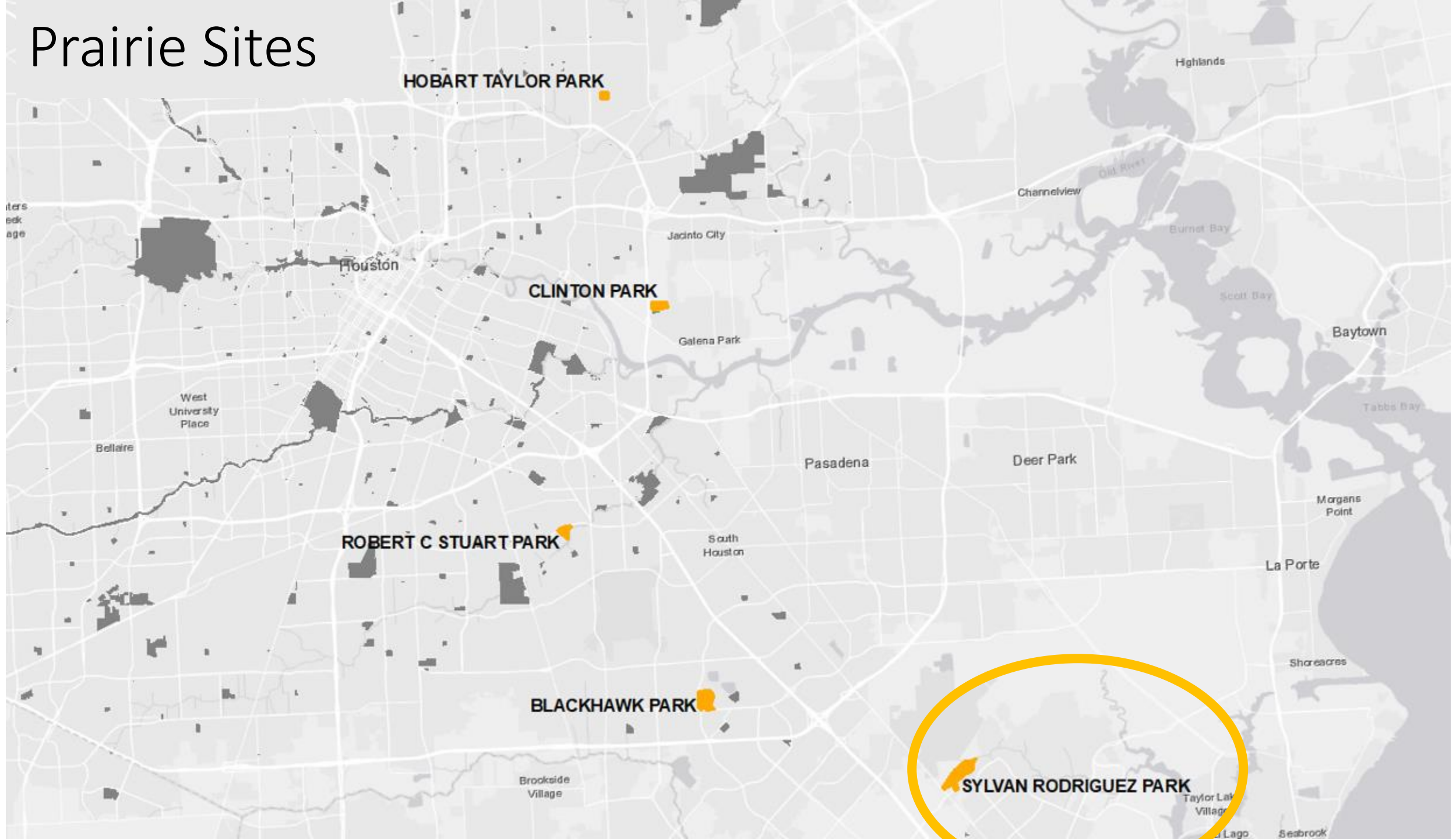
Sylvan Rodriguez Habitat Restoration Project

Natural Resources Uses Subcommittee (2021) - \$100,000

Natural Resources Uses Subcommittee (2022) - \$75,300

Partners – Student Conservation Association

Prairie Sites






1944







2017


Sylvan Rodriguez Park
Habitat Restoration Project

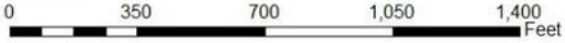
Figure 5. Restoration Phases Map
Legend

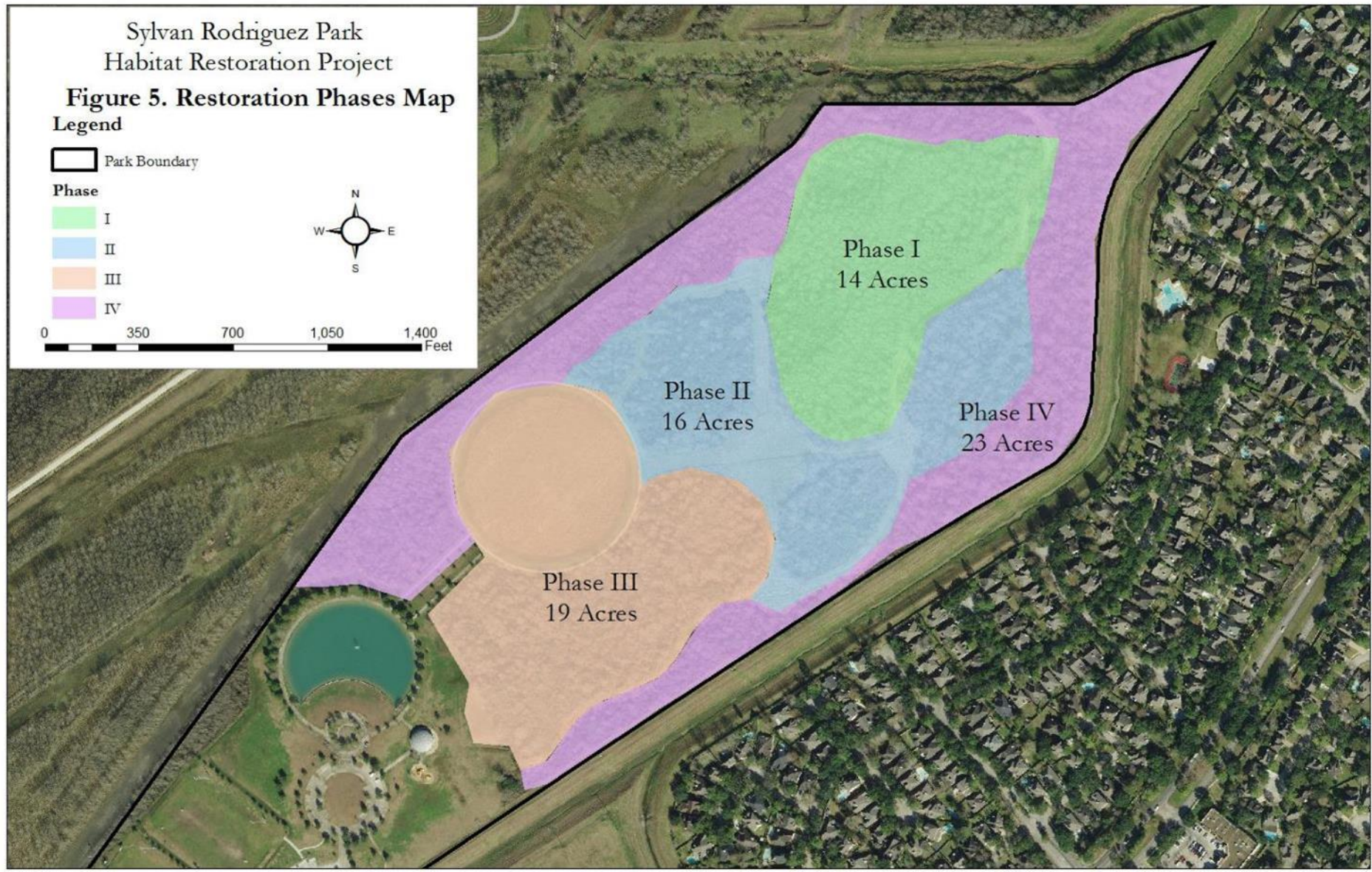
 Park Boundary

Phase

-  I
-  II
-  III
-  IV



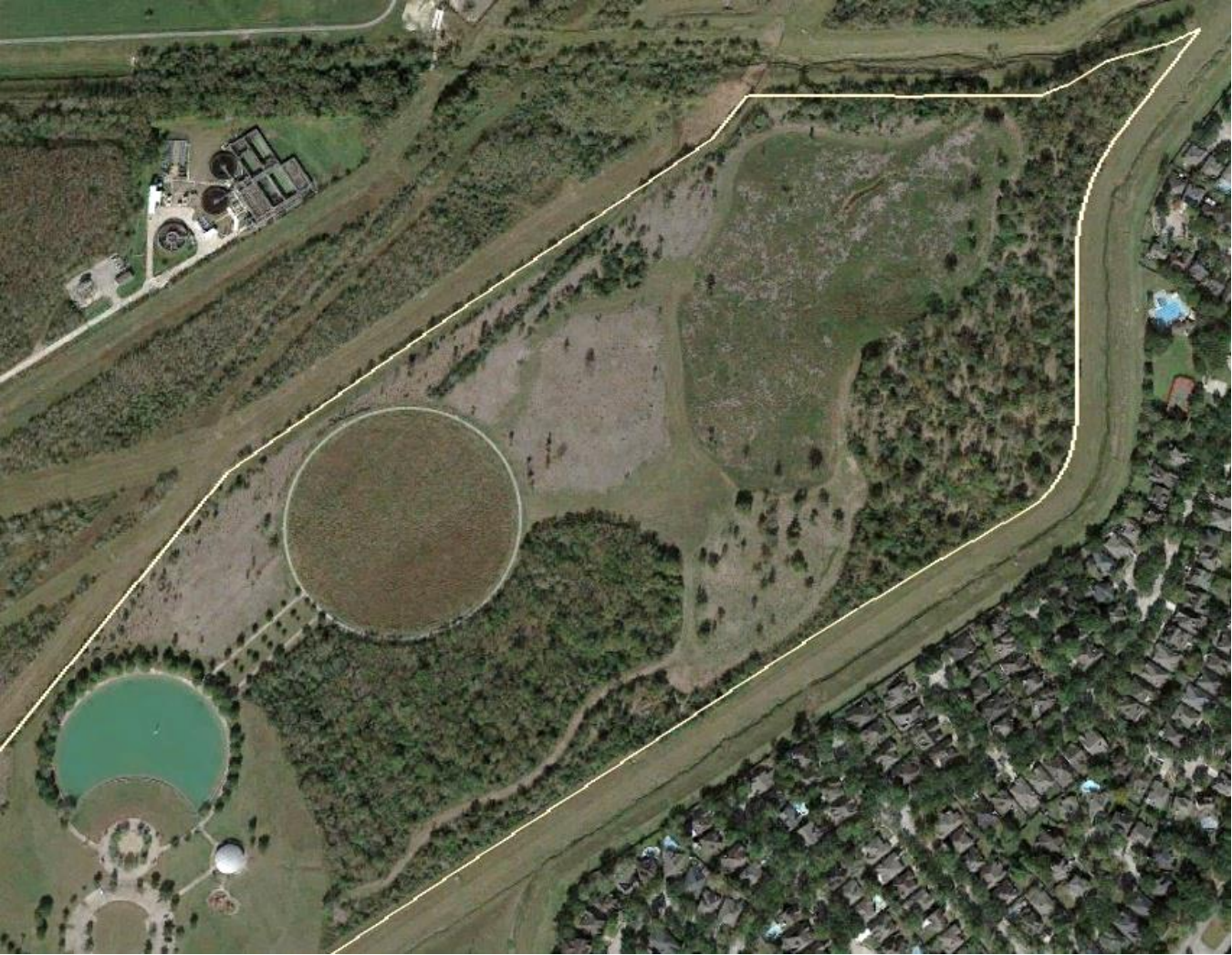
 0 350 700 1,050 1,400 Feet



Phase 1



Phase 2 and 4

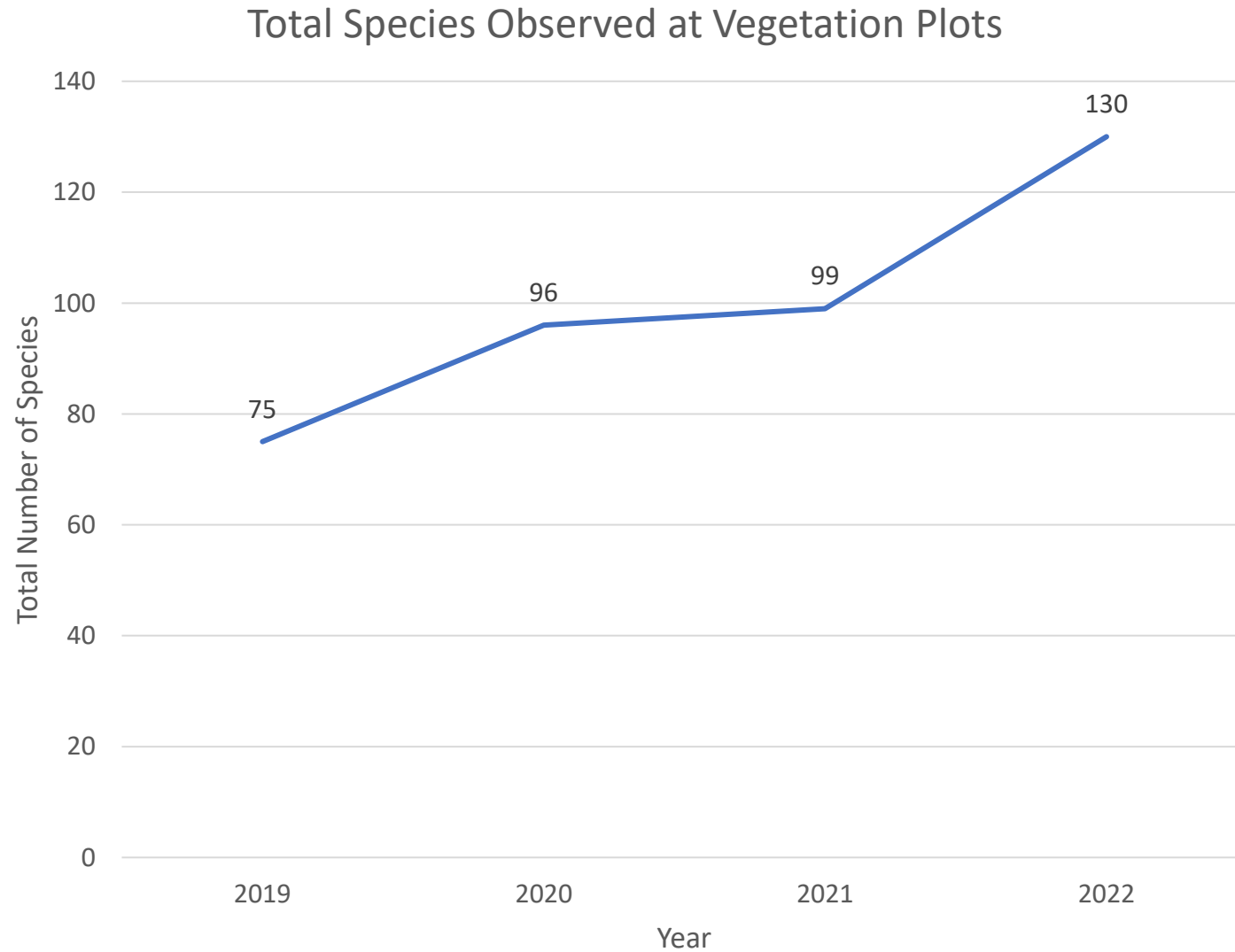


Phase 3





Species Diversity Increasing



97 native species that were not planted





Prescribed Fire

After One Week



After Two Months





Park Improvements

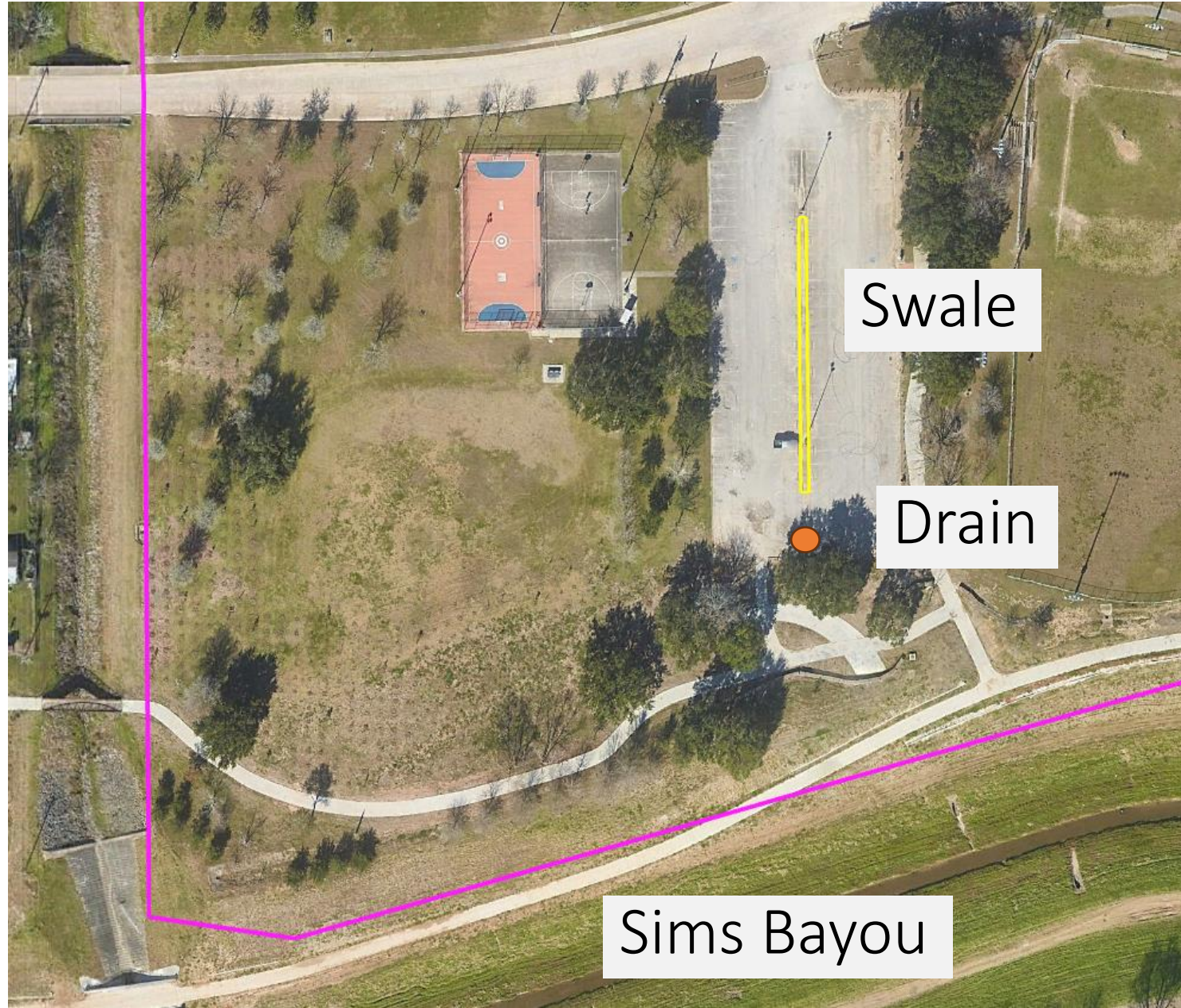
Volunteer Engagement

- Over 15,000 plants installed
- Monthly volunteer group
 - 2nd Wednesdays



Townwood Park Green Stormwater Infrastructure

Water and Sediment Quality Subcommittee (2022) - \$80,000







Vegetated Swale

Bioswale



Using Nature to Clean Water

Bioswales are special features that capture and transport rainwater. As water passes through a bioswale, it is filtered and cleaned before entering our bayous. Bioswales also cool surrounding areas and provide habitat for wildlife!



The plants in this bioswale are native to the Houston area! This means that these plants have special relationships with our local wildlife and provide critical habitat in this urban setting.



Monarch butterflies drink nectar from native wildflowers.



Native bees like this eastern carpenter bee gather pollen from flowers to feed their young.



Savannah sparrows eat the seeds of our native grass species.

Did You Know?

Green Stormwater Infrastructure uses natural systems to manage stormwater, and includes bioswales, rain gardens, and constructed wetlands.



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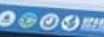
Using Nature to Clean Water

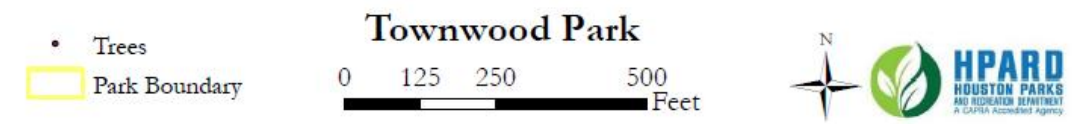
Retention basins capture runoff and prevent it from entering a stormwater system. In retention basins, runoff is slowed down, allowing it to infiltrate the ground and be filtered by soil and plants. This process is called bio-retention and is a natural way to clean water.



Retention basins are designed to capture and store runoff from a specific area. This allows the water to infiltrate the ground and be filtered by soil and plants. This process is called bio-retention and is a natural way to clean water.

Did You Know? Retention basins can also be used to store water for irrigation. This is a great way to conserve water and reduce the need for a separate irrigation system.





HPARD Water Management Plan

Water and Sediment Quality Subcommittee (2022) - \$50,000

Methods

- Analyze water meter reports
- Departmental information gathering
- Create new SOP's
 - Pesticides
 - Fertilizer
 - Irrigation and watering



Annual Water Use by Use Type (2019-2023)



NaturalResources@HoustonTX.gov

