



# Parks, Trails, & Open Space Master Plan

**Waller County**



Adopted  
5.19.21







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A photograph of a field of yellow flowers, likely Gaillardia, with a single red flower in the foreground. The flowers are tall and thin, with green foliage. The background is a clear blue sky.

## MASTER PLAN OVERVIEW

### **Executive Summary**

### **Master Plan Principles & Key Findings**



## Executive Summary

Waller County has undertaken several steps in the last 5 years to preserve its legacy and state as a region rich in varied and well-loved natural resources. As growth in the Houston region continues at a rapid pace and in broad swaths of development, Waller County is no stranger to growth and the pressures placed on open space, parks, trails, and other natural spaces for its residents. These pressures are particularly acute given the small number of cities and municipalities in the County empowered to regulate and direct development to the best locations while ensuring public natural spaces remain accessible and available.

*“Maintain and expand Waller County’s unique cultural, natural, and historical identity.”*

- 2017 Comprehensive Strategic Plan

In an effort to ensure that the County grows responsibly while retaining its natural legacy, the County undertook a Comprehensive Plan in 2017. Several goals and key areas of focus derived from the plan inspired leadership to examine opportunities to formalize a plan for County-operated parks, trails, and other open space facilities through the development of a formal parks system. In 2019, the Houston Endowment granted the Katy Prairie Conservancy funds to conduct a Parks, Trails, and Open Space Master Plan for Waller County. The County signed an interlocal agreement with the Conservancy allowing them to develop the master plan. The Conservancy hired Burditt Consultants to develop the plan in collaboration with the County, the Conservancy, Land-Water Associates, and several other stakeholders and influencers in Waller County.

The resulting Master Plan represents the culmination of a year’s worth of public workshops, and dozens of stakeholder meetings with communities, municipalities, and leaders in Waller County. As a result of the planning process, at least two landowners have come forward offering donations to the County for their properties to be utilized as large parks and nature centers for the public.



The Master Plan is a document designed to provide a road map to development of a County Parks System that responds to residents’ needs and hopes along with the best-fit facilities most readily accessible to County government and realistically capable of being constructed. It is not intended to supplant local municipal recreation programming or compete with private sector offerings. Rather, this plan will hopefully serve as a guide to filling gaps in facilities and in locations where municipal and private sector reach is severely limited. At its essence, the Master Plan is both aspirational and practical as a means to protect the natural and historical legacy of Waller County while providing its residents and visitors the ability to interact with its rich land.



# Master Plan Principles & Key Findings

The Master Plan is organized in six distinct plan components designed to establish facts, understand and collate demand from across the County, synthesize these two elements into an assessment of needs, then develop recommendations and toolkits for the County to develop a viable operating organization.

- Planning Areas
- Facility Inventory
- Demand Analysis
- Needs Assessment
- Recommendations
- Park Development Toolkit
- Implementation

Each recommendation and step for future development is contingent upon execution of a methodical approach to identifying opportunities financially accessible and relevant to community demand. The Plan provides some geographical direction on amenity types and spotlights some extraordinary opportunities that have arisen during the planning process. However, the planning team specifically did not identify other non-public lands as potential locations for recreation facilities so as to not inadvertently signal the County as “targeting” private properties for park development. Park and facility planning in the implementation phases will be an ongoing and separate process.

The planning team also wanted to avoid the use of political boundaries such as commissioner precincts in the planning process to ensure inventories, demand analysis, and recommendations could be arrayed according to opportunity and need. Sufficient gaps in recreation facilities and resulting prime goals apply broadly across the County so there will be ample opportunity for facilities to be developed across the entire swath of the community.

## PLANNING AREAS

Waller County includes a diverse landscape of terrain and population. The Master Plan divided the County into six distinct planning areas to account for unique land features and community clusters amenable to certain types of facilities. For example, large-scale playgrounds and on-road bike lanes are most appropriate in high density population centers while nature oriented facilities and rugged equestrian or bike trails best fit in open, less developed areas.

Planning areas attempt to focus attention to the unique features of each zone to direct future development of recreation facilities to the most appropriate spaces. The County can use these planning areas in the development of parks and other facilities in the implementation phases of the Parks Department.

## INVENTORY

Inventory exercises attempted to locate a broad spectrum of recreation facilities both publicly and privately owned. In addition to locating facilities within Waller County, the planning team also included facilities within a 10-mile radius of the County.

Currently, Waller County has approximately 1,044 acres of land being utilized for recreation purposes. 953 acres of that land is owned privately and primarily includes golf courses or sports facilities. According to the National Recreation and Parks Association (NRPA) median park land acreage for communities the size of Waller County is 7.7 acres of recreation properties per 1,000 residents in the typical parks system. Outside of golf course and private sports facilities, only 1.52 acres of land per 1,000 residents is currently utilized for recreation. To reach current NRPA standards, Waller county will need to develop approximately 400 acres of park or nature-related land.

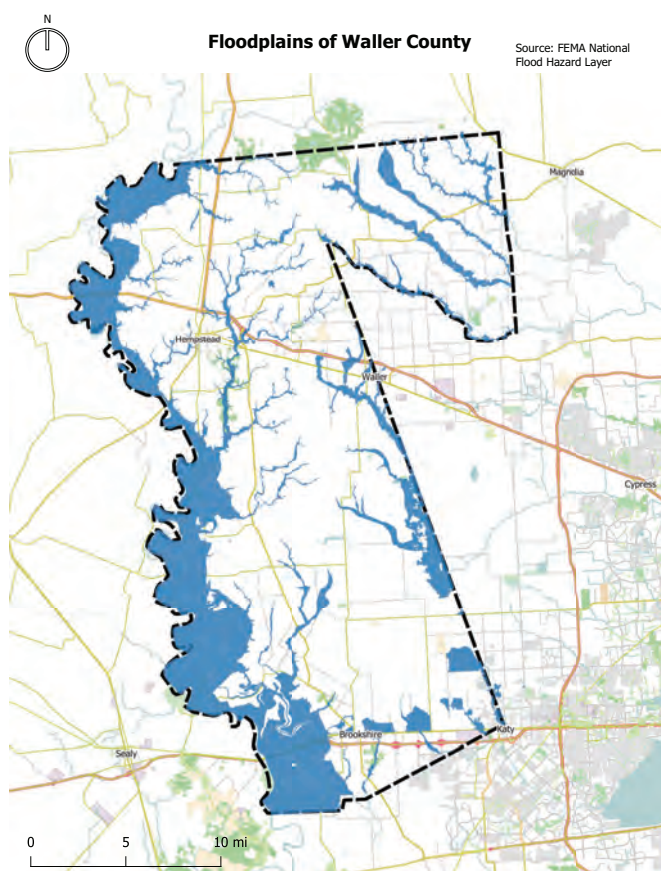
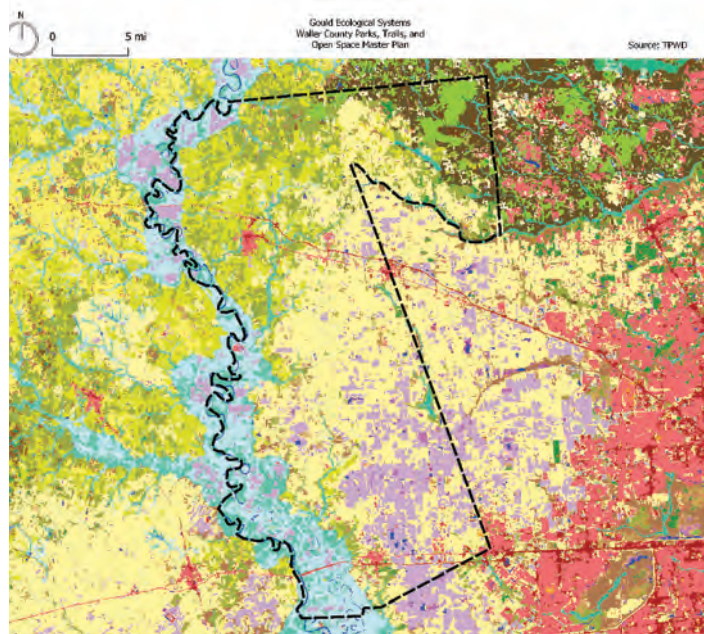


## INVENTORY Cont..

According to the NRPA, the typical park system for populations such as Waller County maintains an average of 11 miles of trails in varying types (bike, hiking, equestrian, etc). Ample opportunities exist in the County for development of a diverse array of trail types across the entirety of the landscape. Furthermore, a need for trails and overall connectivity was expressed as the top demand of public and other stakeholder feedback received throughout the plan.

A total of 178 recreation facilities were identified in or around the 10-mile radius of Waller County. Over 66% of these facilities are privately owned with only 10% owned by Harris (the vast majority), Ft Bend, or Waller County. In fact, Waller County only owns the Fairgrounds in Hempstead, the Community Center in Prairie View, and the Library in Hempstead. Only 37 total recreation facilities of any type were located inside Waller County with a substantial majority of public facilities comprised of sports fields, playgrounds, and other amenities primarily owned by school districts. Municipalities own a total of 16 parks, many of which are located primarily in Harris County.

Approximately 4,000 acres of land is under management or owned by the Katy Prairie Conservancy in Harris, Ft Bend, and Waller Counties. A sizable portion of these properties are found in the Central County planning area of Waller County. Another 5,000 acres of land is under conservation easement in the area. These lands are ideal for a variety of low-impact recreational opportunities via agreement with the KPC and land owners. Finally, other public or special use lands such as power or gas line easements represent ideal arrangements for agreements with the County for use as trails.





## DEMAND ANALYSIS & NEEDS ASSESSMENT

The planning process included 3 in-person, and 1 video conference, public workshops with nearly 100 attendees. An online survey was also posted over a two-month period in the late spring and early summer with 258 responses. A common goal across all venues and platforms was to maintain the natural beauty of Waller County, respect its agricultural and historical legacy, and provide opportunity for residents to access park and recreational facilities relevant to the diverse people currently living there as well as be a welcoming place for visitors and new residents.

Overwhelmingly, the public expressed consistent support for more recreational facilities to be located inside the boundaries of Waller County. 35% of survey respondents stated that “I want to do things in Waller County but there aren’t enough relevant facilities.” 56% said, “Adding recreation and trail facilities in Waller County should be one the County’s Top 5 priorities.” Only 8% of respondents rated the availability of recreation facilities to be satisfactory or better. These sentiments were emphasized in the public workshops as well. Residents of Waller County want and need appropriate recreational facilities in the County.

Demand was also highly consistent as to the types of facilities residents seek. In public workshop brainstorming and planning exercises, Pathways were consistently the top priority of most attendees. These Pathways included all forms of trail types, the only variances being in emphasis on type by geography. For example, in Pattison, a strong focus on equestrian trails was expressed while in Waller, on-road bike lanes were emphasized. Parks, natural open space, and nature-oriented facilities were consistently a Top 3 demand by workshop attendees as well as small outdoor event space such as small amphitheaters or gathering areas.



These results were mirrored in survey responses as well. Nature centers, trails, natural open space amenities (e.g. public fishing, parks, camping, pavilions, etc), and historical site/education were top priorities. Drilling further down into more detailed questions and answers, residents continually reinforced the importance of trails and low-impact parkland/natural open space. Waller County residents clearly value the beauty and diverse topography of the land. They were attracted to the County for many of these reasons and strongly wish to preserve and enjoy it. When asked about planning goals and most important implementation steps, participants consistently stated that acquisition of parkland and development of trails and parks should be the top priorities of any new County Parks Department. Land acquisition is one of the more difficult and expensive efforts for recreation facility development. Through partnerships with landowners, other public entities, and the extraordinary donation offers received to date, a substantial amount of cost defrayment can be achieved with financial focus instead on design and construction of facilities.



## DEMAND ANALYSIS & NEEDS ASSESSMENT Cont..

The planning team also evaluated publicly available recreation data segregated by zip code. This geocoded data examined recreation habits, recreation spending, and various related metrics of activity and commitment to recreation. These findings further reinforced the expressed intent of those who participated in workshops and the survey – Waller County has a strong proclivity of hiking, biking, and outdoor recreation with an active engagement in these activities both in action and financially.

Finally, workshop and survey participants acknowledged the necessity of public funding for a new Waller County Parks system and that requests would likely be made of users and taxpayers. 56% of survey respondents said they would be willing to spend \$10 to \$100 annually to support such an effort. 42% of survey respondents said they would be willing to spend \$100-\$300. Another 9% were willing to spend up to \$500 or more annually. Only 15% stated that they would be unwilling to spend additional monies to support the development of amenities.



## PARK DEVELOPMENT TOOLKIT

The Plan includes several prototypical park and trail examples to serve as a guide for specific facility planning. These prototypes provide basic design guidance and expectations of cost for dozens of amenities that might be included in a typical park or trail setup.

## RECOMMENDATIONS & IMPLEMENTATION

This Master Plan primarily serves as the answer to a question – “Is a parks system needed and viable in Waller County?” The dearth of facilities and high demand expressed by stakeholders and the public results in a resounding, “YES!” The consistency of wishes expressed by the public also provides a consensus pathway for the County as it takes the next steps towards implementation of a parks system. Trails of varying type, specific to the planning areas where they are located, and accompanied by park facilities along connections are the strongest recommendation the Master Plan can emphasize.

The Plan suggests a variety of routes, many of which are conveniently co-located with envisioned Transportation Plan routes. Others are focused on hot spots or areas of high population density. A particularly exciting pathway includes potential development of a Rail-to-Trail along the Business 290 corridor from Waller to Hempstead including pocket park trailheads in Waller, Prairie View, and Hempstead.

Specifically, the 290 Corridor is ideal for on-road bike paths given the high levels of bike traffic already present on roads from Waller, Prairie View, and Hempstead. Likewise, further to the south in the I-10 Corridor on-road bike lanes will be appropriate to help reduce potential conflict with automobile traffic.

Residents in the southern portion of the County also expressed great interest in equestrian trails sufficiently close to ensure high usage. Potential land for such trails are located nearby and is either owned or managed publicly making access for construction of such trails a high probability.

## RECOMMENDATIONS & IMPLEMENTATION Cont..

Two park opportunities along the 290 Corridor in the Hempstead area and in Northeast County have also been discovered, each with over 4 dozen acres of highly rich variation, easy access, historical value, and unique beauty. The County will begin working with these land owners to reach a mutually beneficial agreement that works to jumpstart park development.

The County should also begin discussions with groups such as the Katy Prairie Conservancy and other large not-for-profit or public entities for the use of their lands for recreation purposes consistent with the missions of the host groups. Likewise, negotiations with utility companies for development of trails on easements and rights-of-way may prove fruitful over the growth of the parks mission.

Formal creation of a Parks Department and appointment of a Parks Advocate to begin organizing and developing plans for implementation is a key activity County leadership must undertake early on. Some of the important steps that must be taken in the first two years involve identifying high priority projects for planning, design, and construction. Partnership opportunities primarily come from pursuing interlocal agreements between the County and other entities to develop parks, trails, or other nature-oriented spaces. Communication and active promotion of the parks mission will be crucial to finding and making use of such partnerships.

Financial planning activities include identification of grant funding, General Fund budget development, and capital planning. Counties of similar size to Waller typically spend approximately 2.5% to 3.5% of their General Fund budgets on parks operations. These are obviously commensurate with a fully developed parks system so early needs in Waller County will be significantly less, likely on the order of 1.5% to 2% of General Fund. Costs per household for a fully developed parks system are anticipated to be in the range of \$15-\$30 annually.

The Plan also recommends ways for the County to use its abatement policy to negotiate directed investments via Payment in Lieu of Taxes (PILOT) agreements with large developers or companies seeking to engage in large projects in the County.

Capital plans can be financed with a variety of grants and publicly held debt. Grants from Texas Parks and Wildlife are 50% matches, meaning the County only must provide 50% of the project costs while grants up to \$750,000 are available for construction costs. Waller County is well positioned to compete with other communities for these grants. Other entities also offer grants that would benefit parks and trail development in the County. Use of the County's debt capacity is also feasible and, depending on strategies approved by leadership, could result in large sums of money for development and construction of facilities. For example, using just \$.01 of the debt tax rate would generate between \$11 and \$15 million of capital for projects at current interest rates. As the county tax base continues to grow, the less pressure on tax rates for homeowners and more capital available for projects.







# WALLER COUNTY PARKS, TRAILS, & OPEN SPACE MASTER PLAN

**Introduction**

**Inventory of Capacity and Demand**

**Needs Assessment**

**Recommendations**

**Park Development Toolkit**



## Introduction

Waller County is experiencing rapid growth and development similar to that of many of the outlying counties in the Greater Houston Area. With this growth comes an increased demand for recreation including the need for parks, trails, recreation facilities, and open space. Waller County doesn't currently have any parks or recreation facilities, rather those amenities were provided by municipalities and private entities. With a relatively small population distributed throughout the County, there are significant gaps where parks, trails, and amenities are not conveniently close. The County recognizes the need to develop a system of parks, trails, open space, and natural areas to provide places for residents and visitors to get outside for enjoyment, exercise, nature appreciation, and community events.

The Houston Endowment and the Katy Prairie Conservancy also saw the need for Waller County to develop a plan ahead of the coming development to meet the recreation needs of current and future residents as well as to preserve important natural areas of the County that provide vital ecosystem services such as stormwater runoff reduction, filtering of air and water pollution, wildlife habitat, carbon sequestration and storage, and more. The Houston Endowment awarded the Conservancy a grant to fund the development of a Parks, Trails, and Open Space Master Plan for Waller County.

*According to the  
2020 NRPA Agency  
Performance Review,  
a typical park and  
recreation agency with  
a population between  
50,000 and 99,999  
people has 7.7 acres of  
park land per 1,000  
residents.*



## Vision and Goals

Waller County will be one of the first strategically planned counties in Texas with a focus on responsible growth that preserves the heritage of the County, its natural resources, and important agriculture lands. A facilities and services goal of the County Parks System includes providing a broad range of community services, safety initiatives, and recreational facilities for all residents of Waller County.

Additional goals and objectives are to enhance the 'brand' of Waller County's ecotourism and long-term quality of life by expanding parks and open spaces to meet the needs of residents and visitors for opportunities to experience outdoors for a myriad of benefits including healthy lifestyles, overall wellness and to educate future generations of the value of open spaces through ecosystem services that the land provides and habitat it supports.

Waller County is rich in natural resources and open space. It is also a dynamic and rapidly developing exurban region with key regional transportation infrastructure bisecting the County yet with significant gaps in local connectivity.

The County's open space continues to be attractive for residential and commercial development with the most profitable and environmentally resilient tracts largely in unincorporated areas of the County. As a result, a significant portion of the development mission in the County (i.e. subdivision regulation, natural space protection, parks development, mobility planning, etc.) falls heavily on Waller County government along with the County's small number of individual municipalities.

In pursuit of strategies to protect the natural lands, heritage, and beauty of the area while embracing the natural pace of change, the County completed a [Comprehensive Strategic Plan in 2017](#) in which the Plan identified the following key recommendations related to this specific project:

- Maintain and expand Waller County's unique cultural, natural, and historical identity.
- Create Future Land Use map for the County that includes development regulations such as rights-of-way, size of lots, green space, areas for residential and industrial growth, subdivision ordinances, and connectivity paths in residential areas.
- Develop and implement a Master Parks, Hike and Bike Trails Plan for the County to be known as a pedestrian-friendly county.
- Continually review land use and plan for future developments, taking into consideration other County Master Plans developed.
- Create a Master Drainage Plan with a Flood Plain Administrator.

Other key recommendations in the Plan focused on [drainage](#), [transportation](#), and [housing](#) also have relevance with the specific goals of the Parks, Trails, & Open Space Master Plan.



The Waller County Parks, Trails, & Open Space Master Plan represents a unique opportunity to study, integrate, and link a diverse array of existing county-wide parks and recreation facilities and to develop a plan with the goal of addressing current and future needs, renovations, expansions, prototypical acquisitions and future construction efforts that address an expanding and changing population.

The Master Plan seeks to provide a holistic approach to parks planning and allow the County to address urgent land acquisition needs, health and wellness objectives, community connectivity, outdoor recreation, conservation of ecosystems and natural resources, protection of agricultural land typology, and in developing a sense of community and gathering while proactively planning for future needs. It also allows for financing options to be explored relating to alternative funding means available to the County.

Development of the Master Plan required the assessment and evaluation of community facilities within the County with further analysis of input to be obtained from a variety of municipal leadership, user-organization leaders, activity groups, County department staff (who operate and maintain facilities), selected stakeholders, and the County's Commissioners and County Judge.

This information forms much of the basis from which the ambitions of the Master Plan are developed with extensive user input, opinions of probable costs (OPC), design intentions or guidelines, and identified hierarchy of options to carry the citizens of Waller County through the next 10 years and beyond.





## Methodology

Waller County is a diverse landscape of topography, wildlife, and plant species. Traveling from the southern rice fields and wide open flatlands north to the rolling hills of pine and oak forests one can experience the explicit intersection of coastal prairie, central Texas hardwood forests, and post oak savannah. As with the natural environment, the County includes a rich cultural legacy and diverse people which grow in population size, variety, and interests every month.

To best capture the interests, needs, and opportunities of Waller County for this study, the team developed a socio-geographic framework to create focused study areas for analysis for existing conditions, capacity, and evaluation for opportunities. This framework qualitatively aggregates population centers, transportation corridors, watershed behaviors, forestation patterns, development, and many other factors to identify an organic way to categorize unique sections of the County.

This scheme serves as a way to “eat the elephant one bite at a time” when assessing conditions and beginning to form recommendations with sufficient specificity but without getting lost in data clutter or the sheer mass of available information. Each study area possesses attributes of geography, terrain, land types, land uses, ownership, and population density that drive the appropriateness of various recommendations. For example, an area with roads popular for road biking may be suitable for improvements with bike lanes while another area may be ideal for mountain bike trails or water access yet another study area best accommodates large open space parkland.

By evaluating constraints and influences on opportunities, we are able to develop a plan that accommodates all types of needs and interests each planning area with relevant and appropriate facilities based on good science and data rather than strictly political needs or pressures. The uniqueness of each planning area provides implicit equity and focus without excluding other needs or interests.

From our discussions with leaders around the County and research, clear patterns based on these attributes have resulted in an initial 6 key study areas.

### Key Study Areas

**1** **Northeast County** – the northeast corner of the County.

**2** **Northwest County** – the northwest corner of the County from north of Hempstead east to approximately Walker Gladdish Road.

**3** **The 290 Corridor** – communities along SH 290 including Waller, Prairie View, Pine Island, and Hempstead.

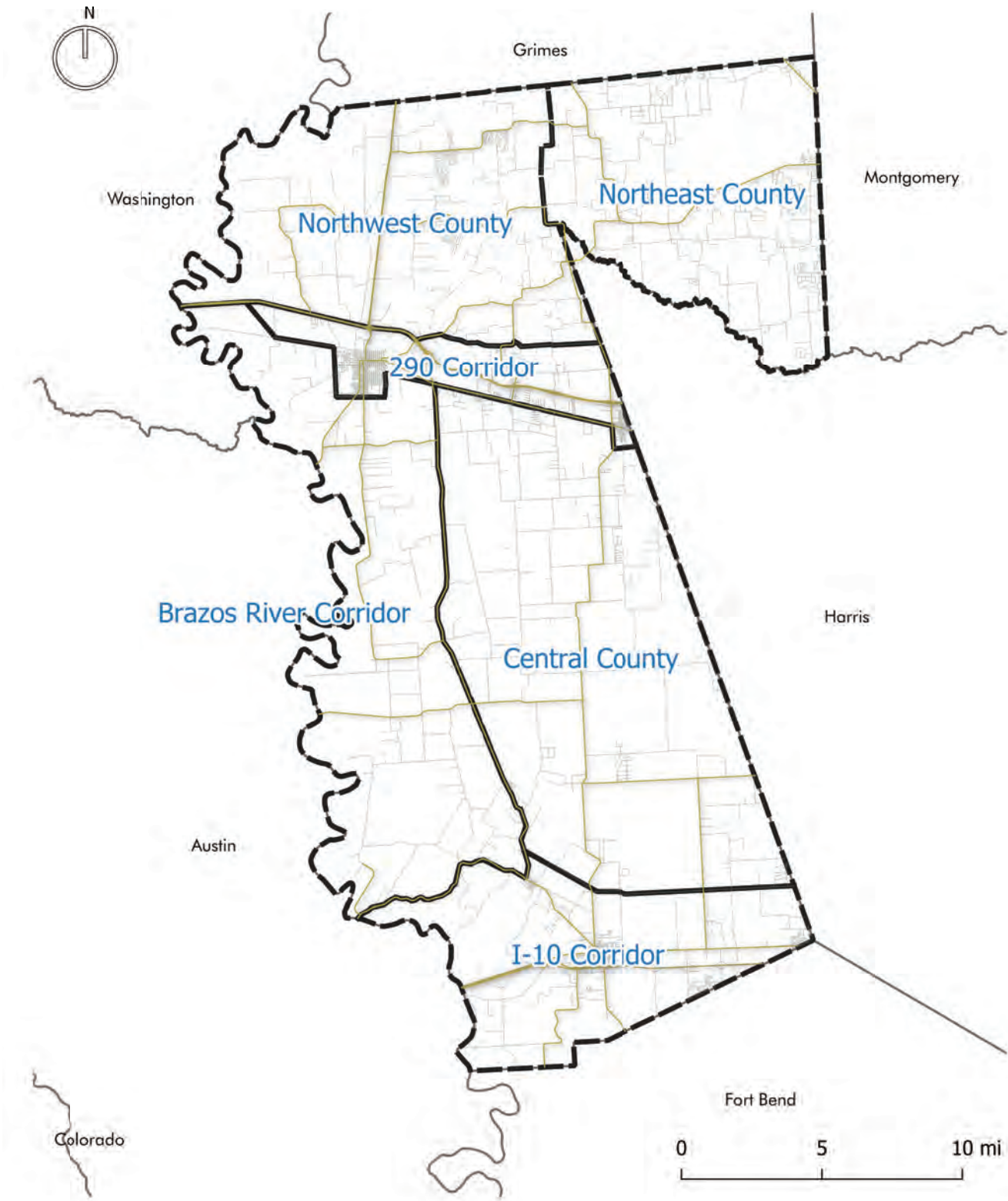
**4** **Central County** – from the Harris County line west to the SH359, north to Pine Island.

**5** **The Brazos River Corridor** – closely approximating SH359 from SH290 south and west to the Brazos River.

**6** **The I-10 Corridor** – communities along the I-10 corridor including Katy, Brookshire, and Pattison.

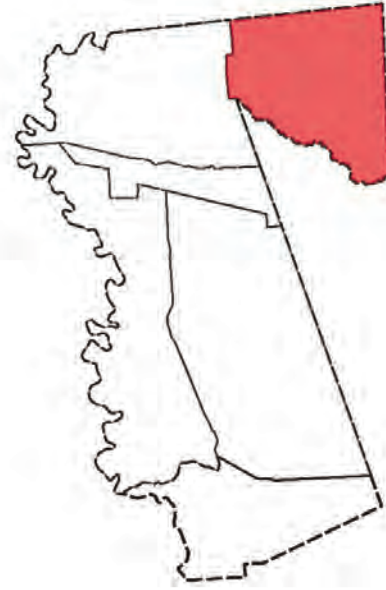
## Planning Areas

The County was divided into planning areas for development of Master Plan. Each planning area possesses attributes of geography, terrain, land types, land uses, ownership, and population density that drive the appropriateness of various recommendations.



## NORTHEAST

2020 HOUSEHOLD POPULATION: 9,601  
2025 HOUSEHOLD POPULATION: 10,300



### Community

The northeast portion of the county extends from the outskirts of Magnolia, Texas to Fields Store, Texas, and south to Spring Creek. Named after the owner of the first general store in the area, the community has sustained itself on agricultural enterprises over the years. Today the area remains largely rural in character, with farming, ranching, and small business in operation. Small residential subdivisions are scattered throughout the area with new ones under development.



### Geography

The Fields Store area is characterized as a transition between the pineywoods of East Texas and the Central Texas Prairie. The topography ranges from relatively flat to gently rolling hills, with open pastures interrupted by forests of mixed pine and hardwood species such as oaks, elms, pecans, and hackberries. Numerous creeks are distributed throughout this planning area, providing potential opportunities for recreation and nature enjoyment, should some become publicly accessible in the future. Notable creeks draining this planning area include Walnut Creek, Brushy Creek, Three Mile Creek, and Spring Creek. General flow of stormwater is eastward into Harris County.





## NORTHWEST

2020 HOUSEHOLD POPULATION: 3,839  
2025 HOUSEHOLD POPULATION: 4,148



### Community

The northwest planning area is bounded by the Brazos River on the west, Waller Gladish Road on the east side, and extends from SH 290 on the south to the county line. The northwest planning area has a relatively low population density and is comprised mostly of ranching and farming lands with a few residential subdivisions.

### Geography

The land in the northwest planning area transitions from upland hardwood forests in the north to coastal prairie with scattered forests as one moves south and west. Along the Brazos River land is comprised of pasture and bottomland forests. Major drainages include Donahoe Creek, Walnut Creek, Clear Creek, and Ponds Creek. These creeks generally flow to the west and south, and into the Brazos River.



## 290 CORRIDOR

2020 HOUSEHOLD POPULATION: 11,225  
2025 HOUSEHOLD POPULATION: 11,899



### Community

The State Highway 290 corridor has been highly influential in the growth and development of the surrounding area. The general alignment of the corridor reportedly has its roots in human travel dating all the way back to pre-European times when native peoples followed regular routes along a trail. Later this trail would become a well-traveled route leading to Harrisburg (Houston) during the mid 1800's. Continuing through its use as a military road during the Civil War, followed by continued development into a highway for automobiles, the corridor remains to this day, and important influence.

Today, the SH 290 corridor through Waller County is home to the cities of Waller Prairie View, and Hempstead, with most of the older development along Business 290 and highway commercial entities such as truck stops, convenience stores, and light commercial along SH 290.

### Geography

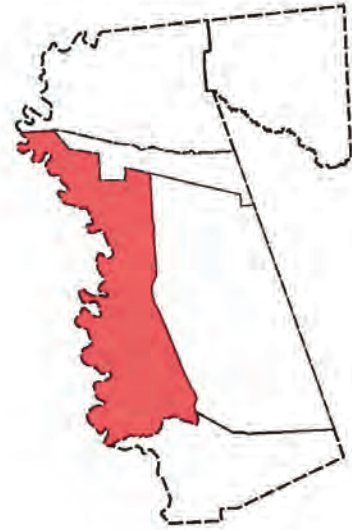
The geography within the SH 290 corridor is characterized by gently rolling prairies, with scattered forests of pine, oak, and elm species. The land is drained to the Brazos and San Jacinto rivers by a number of creeks spanning the County. Traditional use of the land is a mixture of pasture, row crops, and timber. Land use is gradually converting to commercial and rural-residential with newer subdivisions under development.





## BRAZOS RIVER CORRIDOR

2020 HOUSEHOLD POPULATION: 4,084  
2025 HOUSEHOLD POPULATION: 4,339



### Community

The land along the Brazos River has been an important cultural resource for thousands of years. As a consistent source of water, and as an important travel corridor, some of the early settlements in Waller County occurred along the river. One of the earliest settlements in Texas, San Felipe de Austin, lies just across the river on the southwest corner of the County. Other communities within the corridor include Monaville and Sunnyside. As a recreational resource, the river offers fishing and boating opportunities and the potential for hiking trails along its banks.

### Geography

The influence of the river on the land is significant, as the alluvial sediments deposited with the river valley have created rich soil for commercial and subsistence agriculture. On the other hand, the river has a long history of occasional flooding that must be taken into consideration during plans for development, lending the land to uses such as farming and ranching rather than residential development. Much of the land today is comprised of floodplain forests and bottomland ecological systems.





## CENTRAL COUNTY

2020 HOUSEHOLD POPULATION: 8,821  
2025 HOUSEHOLD POPULATION: 9,687

### Community

The Central County planning area extends from just north of the cities of Brookshire, Pattison, and Katy to Pine Island and the outskirts of Waller. Development is primarily comprised of rural-residential properties with most land in agricultural production for hay, row crops, rice farming, and ranching. Horse ranching and equine activities such as Polo and Dressage are popular. Significant acreage within this planning area is in conservation through the Katy Prairie Conservancy both as native prairie and working ranches. A popular private recreation offering in this planning area is Dewberry Farms, an agritainment venue offering a rich variety of activities for families to participate in ranging from train rides and unique playgrounds to Christmas tree harvesting.

### Geography

The terrain within the Central County planning area is relatively flat to slightly rolling hills. The southern half of the area is more frequently flooded during heavy rain events. Coastal prairies are the most common ecological system in the planning area with row crops and numerous ponds and wetlands providing attractive habitat for migratory waterfowl. A number of Ducks Unlimited installations have enhanced habitat in the area, and hunting is an important recreational pastime as well as an economic generator. Notable creeks included Live Oak Creek, Mound Creek, and Cypress Creek draining into Harris County; and Bessie's Creek draining towards the Brazos River.



## I-10 CORRIDOR

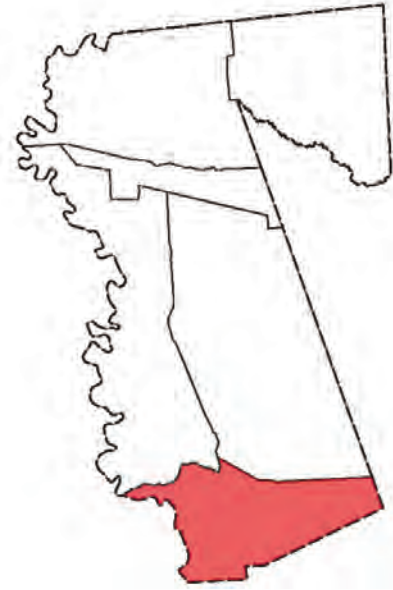
2020 HOUSEHOLD POPULATION: 15,499  
2025 HOUSEHOLD POPULATION: 18,970

### Community

The U.S. Interstate I-10 corridor is a vital economic and social fixture in the landscape of Waller County. Some of the most significant residential and commercial development occurs along this highway with notable populations living in the cities of Katy, Brookshire, and Pattison. Prior to the modern Interstate Highway System, old U.S. 90 and the railroad were pivotal in the development of these communities through the history of the area. This area of the County is experiencing some of the most significant growth in both master-planned communities as well as commercial interests along I-10. Notable commercial developments include large-scale warehousing and distribution such as Amazon, Costco, and Rooms to Go®. Retail and light manufacturing are also found along the corridor. Most of the recreation opportunities are provided by municipal governments, private companies, and master-planned communities.

### Geography

The land use in the I-10 corridor planning area is transitioning with development. The western third is comprised of floodplain and bottomland ecological systems with pasture land and horse ranching as primary uses. Bessie's Creek and the Brazos River have influenced the land significantly with deposition of sediments and formation of oxbow lakes along former stream alignments. The central third of the planning area transitions from bottomland forests to pastures to cultivated crops as one moves from west to east. Continued development will necessitate the need for large-scale stormwater management efforts to address an already challenging drainage situation. A future regional stormwater detention facility could provide dual use for recreation with careful planning and interlocal support.

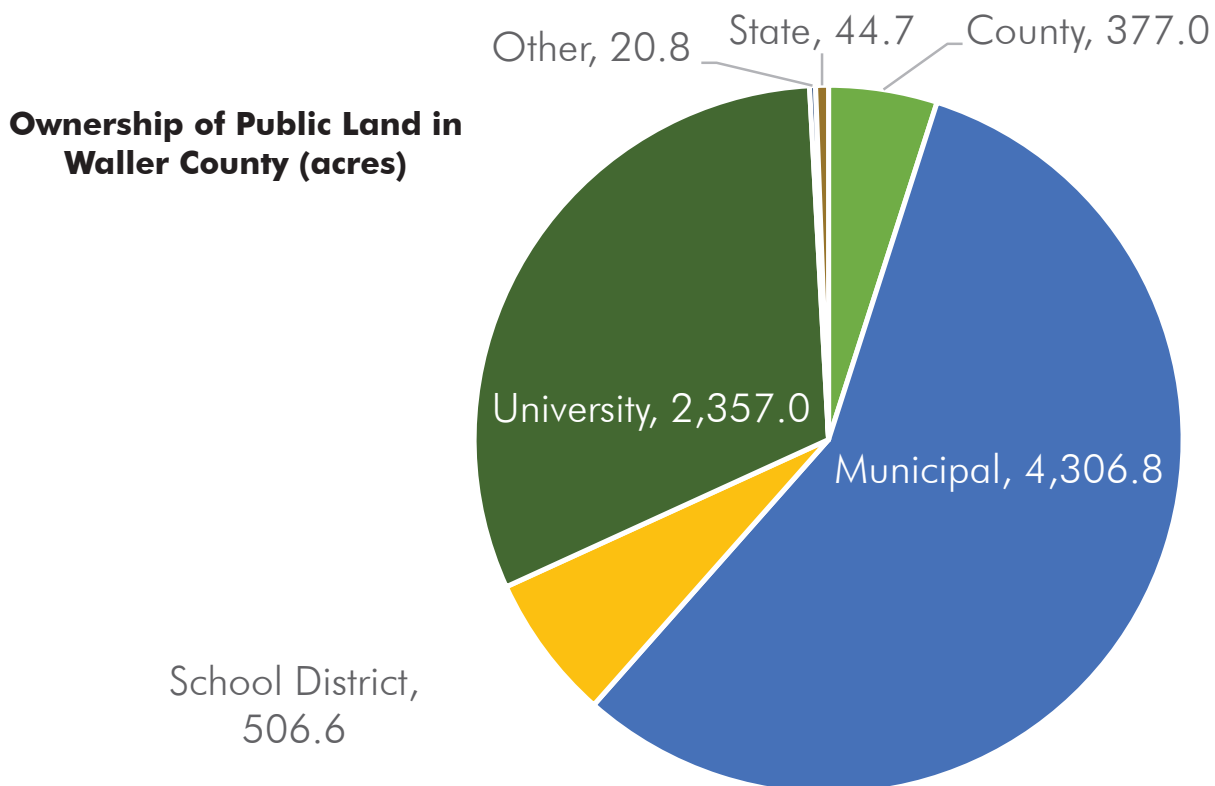


## Inventory of Capacity and Demand

### Natural Resources

The majority of land in Waller County, and in Texas as a whole, is under private ownership. There are an approximate 7,612 acres of land in the public domain, in addition to the road rights of way, and easements throughout the County. These lands are owned by the County, municipalities, Independent School Districts, Prairie View A&M University, and various other entities.

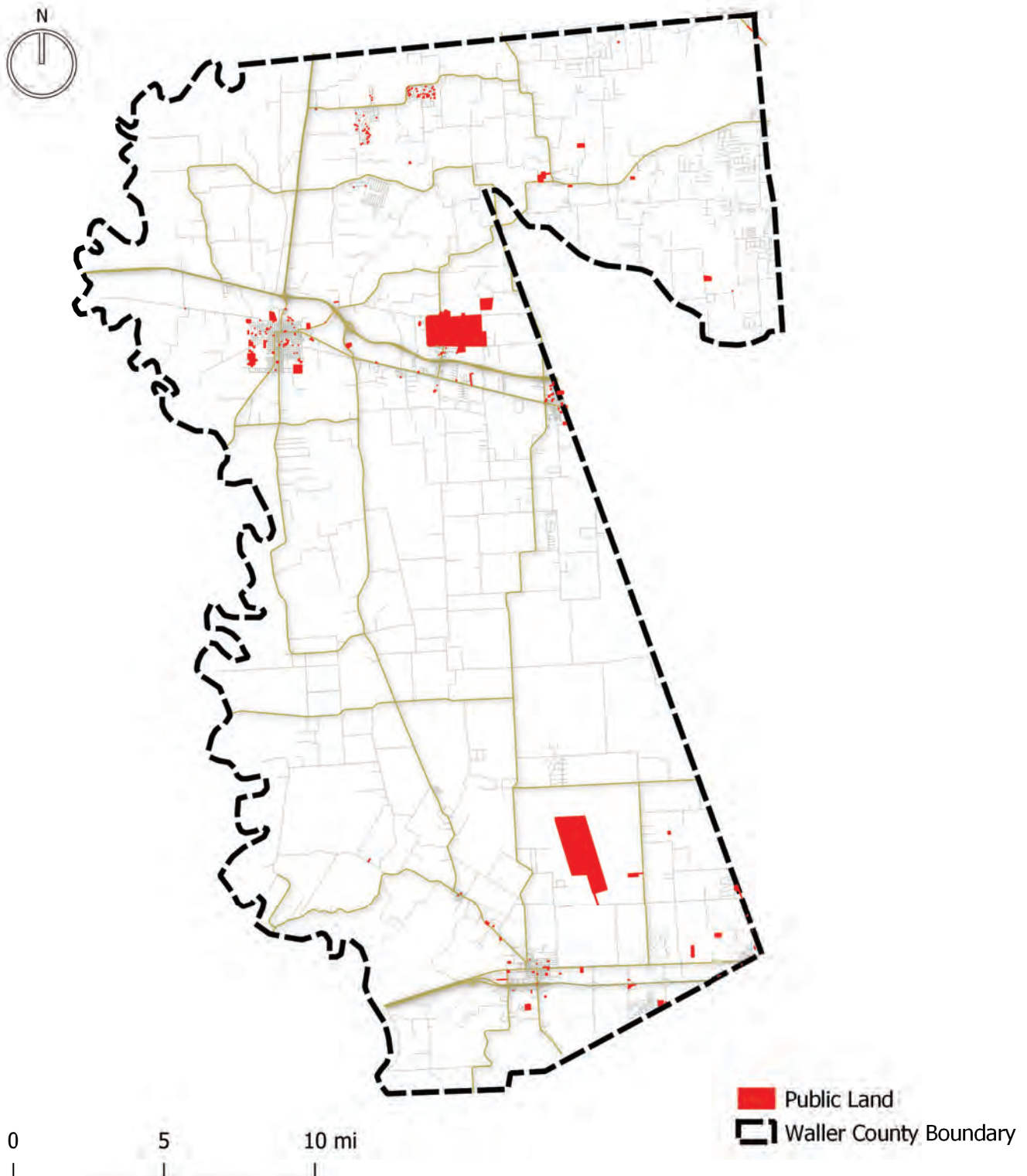
Some properties owned by entities other than Waller County present opportunities for partnerships to achieve mutual recreation goals were compatible. For example, approximately 1,908 acres of the Municipal public land is held by the City of Houston for conservation and wetlands mitigation purposes, which may be compatible for trails and open space access. Other parcels are held in trust by Waller County. These are generally properties that were acquired due to tax delinquency and could either be liquidated through auctions, or in some cases, developed into park spaces.





## Public Land

Public land in Waller County is limited, with a total of 7,612 acres in the public domain. The majority of this land is held by municipalities and Prairie View A&M University. Remaining acreage belongs to state, county, ISD's, and other entities. Acquiring land for parks and recreation will be an ongoing priority for the County.



## Natural Areas

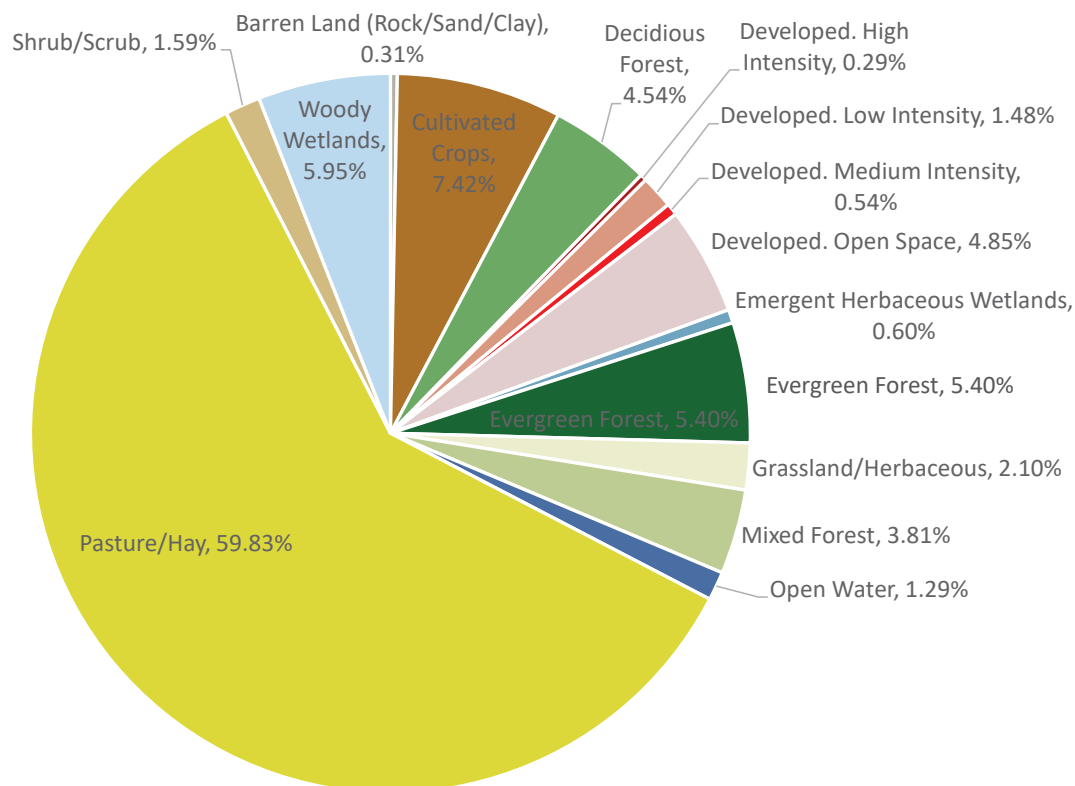
Waller County is comprised of a rich tapestry of natural systems that have largely determined the prevailing land use patterns since man first began living in the region. The story of Waller County is written in the landscape, as both natural systems and human activity continuously influence the soil, water, flora, and fauna.

Waller County is bounded on the west by the Brazos River, and the soils and topography have been deeply influenced by the river as it shifts its course over millennia, depositing rich sediments along the way. These sediments created the rich soil profile that allowed agriculture to flourish throughout the region. The native coastal prairies in the central and southern portions of the County provide habitat for local wildlife as well as migratory waterfowl including ducks, geese, egrets, and cranes of numerous species.

The rolling terrain in the north is home to upland and bottomland forests that transition to oak savannah and bottomland forests as one travels east. These forests were an important commodity during early settlement of the County. The savannah landscape has long provided suitable grazing for livestock and the culture that comes with it.

The residents of Waller County pride themselves on the rural and agricultural lifestyle and the land that allows them to enjoy it. Conservation of open space in its various forms will be important as the County continues to plan for potential growth and development in the coming years.

Waller County Land Cover - National Land Cover Database 2016





*Typical prairie wetland. In the Katy Prairie, these wetlands are vital for reducing downstream flooding during major flood events. Photo credit: Texas Community Watershed Partners*



*View of the Brazos River from the FM 159 bridge. Kayakers and canoeists have reported being able to paddle the 12-mile stretch between SH 290 and FM 159 in as little as 5 to 6 hours.*



*Oxbow lakes, such as these ones adjacent to the Brazos River in the southwestern portion of the County, are remnants of former river channel locations. As the river continuously moves over the millennia, it leaves behind oxbow lakes and emergent wetlands that provide excellent opportunities for eco-tourism and other recreational activities.*



*Native and restored prairies are a vital resource for wildlife and support a rich diversity of native grasses and herbaceous species.*





## Conservation Land

Coastal prairies are some of the most important ecosystems in Texas, providing vital ecological services such as wildlife habitat, flood reduction, filtering of rainwater, aquifer recharge, and more.

The Katy Prairie, in Waller and Harris Counties, is one of the most endangered ecosystems in the state due to development and overuse.

Significant efforts to conserve native prairie and agricultural lands in Waller County are taking place through conservation easements, land purchases, and donations of land to the Katy Prairie Conservancy. Within Waller, Fort Bend, and Harris Counties, almost 14,000 acres of land is owned by KPC, and another 4,000 acres is protected by conservation easements with private landowners. These efforts ensure that the properties will remain in their current state as native or agricultural lands in perpetuity.

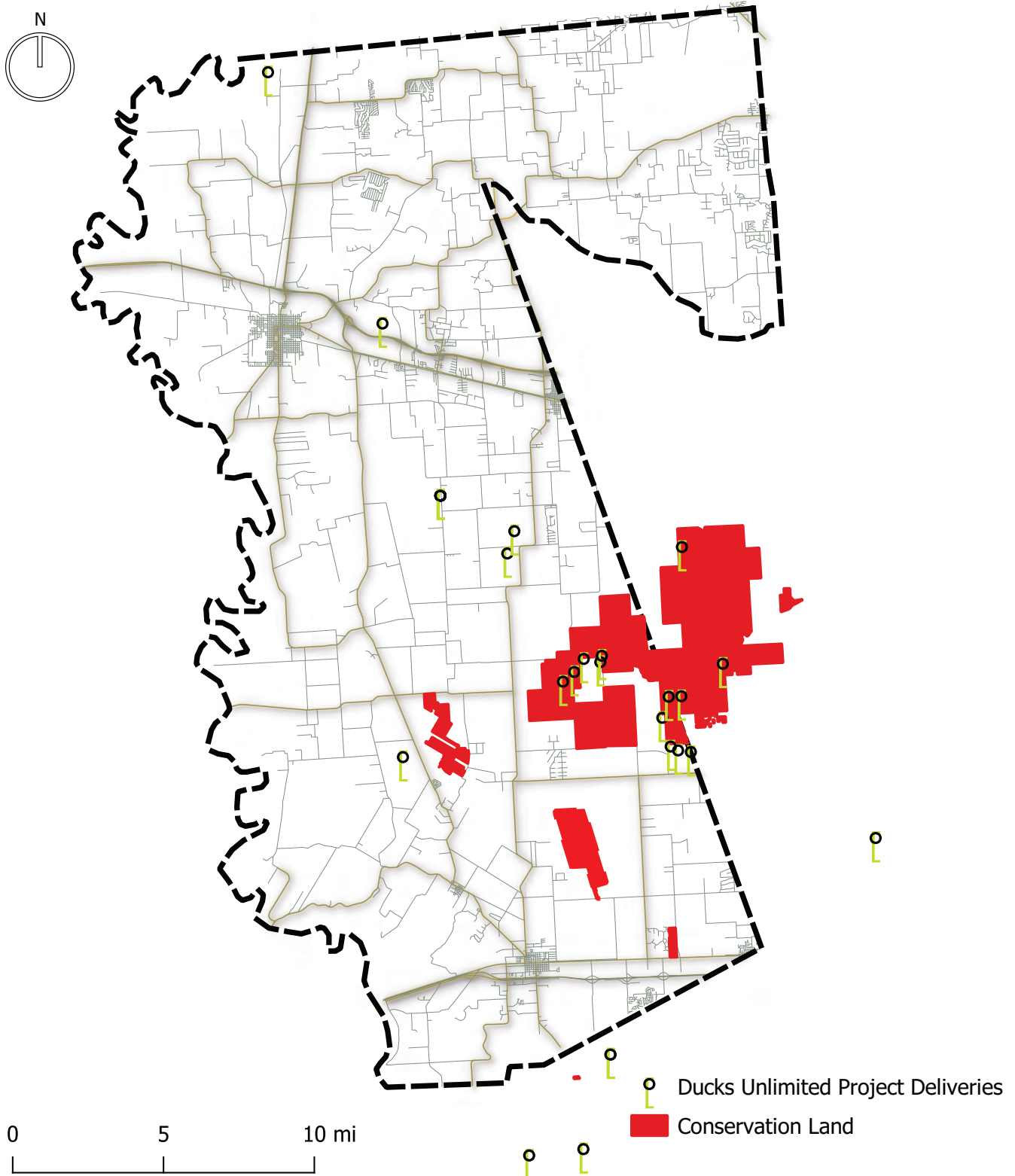
Conservation lands are highly compatible for a variety of recreation uses such as trails, camping, ecotourism, horseback riding, hunting, and many more. A number of properties managed by the Katy Prairie Conservancy offer public access to prairie and wetland ecosystems with hiking trails and wildlife viewing platforms. The Indiangrass Preserve and the Matt Cook Memorial Wildlife Viewing Platform are popular destinations with daytime hours for visitation.

Other conservation efforts seek to develop and maintain habitat for migratory waterfowl and songbirds. Waller County is located along primary migration routes for a great number of bird species that stop along the way, taking advantage of prairie and wetland ecosystems. Ducks Unlimited® is a non-profit organization with a primary mission of conserving and developing waterfowl habitat by working with landowners. Efforts for conservation include restoration of watersheds, grasslands, and forests on public and private lands.



Thousands of acres of conservation land are being preserved in Waller County. These prairies, wetlands, and working ranches are protected through ownership and/or conservation easements by the Katy Prairie Conservancy, a land trust organization. Other properties include constructed wetlands developed in partnership with Ducks Unlimited to create and maintain habitat for migratory waterfowl.

### Conservation Land in Waller County



## Existing Recreation Facilities

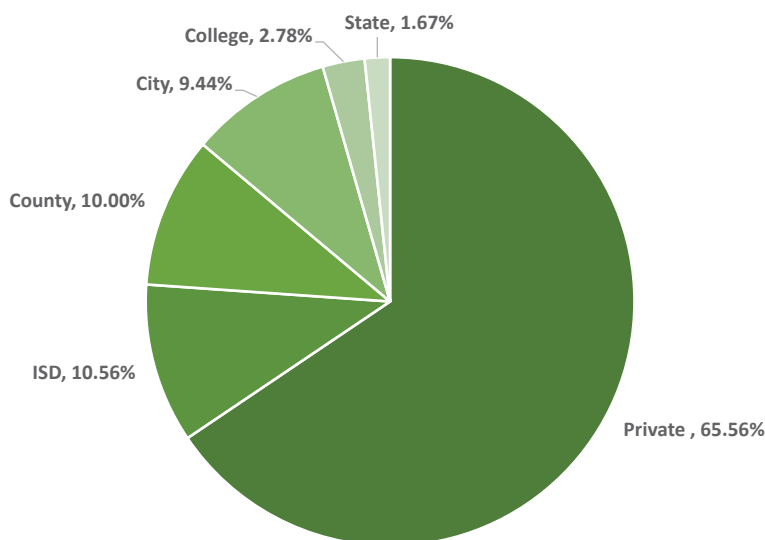
Planning future recreation in Waller County requires an understanding of what recreation opportunities already exist in the area. This helps with understanding where service gaps in both location and types of recreation facilities, amenities, and services may exist. The County may then choose to address these deficiencies by providing appropriate parks, trails, and amenities where needed. Some types of recreation, for example, water parks and fitness training, may be better delivered by private entities.

A search of recreation resources within a 10-mile radius of Waller County's boundary identified 178 recreation providers in the study area, including city, county, state, school district, and privately-owned facilities. This inventory includes resources that are outside of Waller County but are likely utilized by County residents.

The majority of the recreation resources were provided by the private sector, comprising 66% of all 178 providers. The "Private Sector" includes homeowner associations, businesses such as gyms and fitness facilities, and other non-government associations that are accessible to the public. Independent School Districts, City and County make up between 9% and 11% of all providers.

The school district facilities listed in this research are those that have outdoor recreation amenities such as sports fields, basketball courts, tennis courts, and playgrounds.

As expected, recreation resources within the County are generally located within or near developed areas. As the County continues to grow in population, it is likely that a similar pattern will occur in newly developed areas with many resources and services being provided by home owner's associations within master planned communities. It is important to note that rural areas, currently underserved with regard to recreation, may not experience the benefits of privately-provided recreation, underscoring the need for the County to consider development of parks, trails, and other resources to meet recreation needs.



*Recreation resources identified within a 10 mile radius of Waller County are mostly owned by private entities. Of the county-owned resources, the majority are owned and operated by Harris County.*







## MUNICIPAL FACILITIES

A total of 16 city-owned parks are available within communities in and around Waller County. Most city parks are focused on providing recreation opportunities for their residents, however they are often visited by people from other communities. The parks provided by cities serve as an integral component to the County's mission to provide parks and recreation facilities. The level of service provided by these parks will be considered when identifying under-served areas of the County.



*Play Station Park in Katy, Texas*



*Bostick Park in Brookshire, Texas*



*Hempstead City Park in Hempstead, Texas*



*Gazebo Park in Hempstead, Texas*



*Joe Scranton, Jr. Park in Sealy, Texas*



## COUNTY FACILITIES

A total of 18 parks and recreation facilities are provided by Waller, Montgomery, and Harris Counties that are within 10 miles of Waller County. Currently Waller County has the Waller County Community Center in Prairie View, TX, and the remaining parks and facilities are located in Montgomery and Harris Counties.

The County Library in Hempstead, Texas and the Waller County Community Center in Prairie View, Texas make up the extent of current social or recreational facilities owned and/or operated by the County.



*The Waller County Library in Hempstead is a well-used facility for a both recreation and resources.*



*The Waller County Community Center in Prairie View provides space for community meetings and events.*



*Zube Park, located in Harris County Precinct 3, is a popular destination for Waller County residents.*



*Bike route sign on FM 1488 outside of Hempstead. Signage for bike routes helps to educate motorists and promote safe cycling on the roadways.*



## SCHOOL DISTRICT FACILITIES

School playgrounds and athletic facilities are often a significant source of recreation for communities. When school is not in session, or after hours, playgrounds, tennis courts, tracks, and other features are often available for public use. Available recreation amenities include “Playgrounds”, “Swing Sets”, “Rectangular Fields”, “Tennis Courts”, and “Outdoor Basketball Courts”.

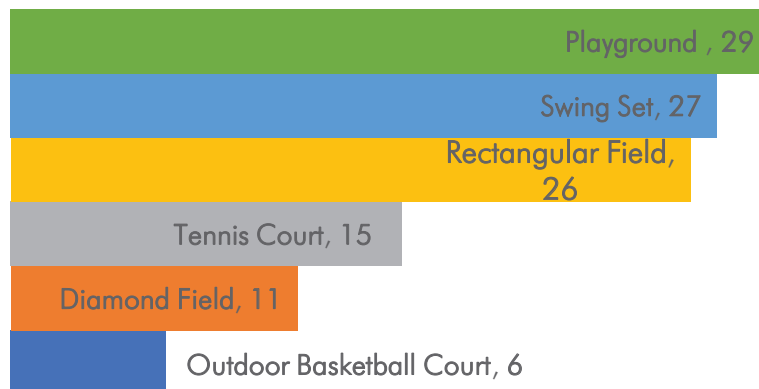


*The Waller High School tennis courts are available for public use and are a popular facility for local tennis clubs. photo credit: Waller ISD*



*Elementary school playgrounds are frequently used by area residents during after school hours and are an important component of a community's recreation system.*

## ISD Outdoor Amenities



*The Michael D. Holland Aquatics Center, owned and operated by the Magnolia ISD, is open to the public when not in use for school activities.*

## PRIVATE FACILITIES

The majority of recreation opportunities within Waller County and a ten mile radius outside of the County are provided by private entities including homeowners associations, campgrounds, gyms, and private sports organizations.



*Typhoon Texas Waterpark in Katy, Texas.*



*Master planned communities such as Woodcreek Reserve shown above provide parks, pools and amenity centers for residents. photo credit: Si Young Park*



*The Waller County Sports Association provides a private baseball/softball complex in Prairie View, Texas for league game play and practice.*



*Lone Star Jelly Stone RV Park provides a rich array of amenities for its guests including a water park, campgrounds, and playgrounds.*





*The Waller County Fair Association hosts the annual County Fair as well as rodeos and other events throughout the year.*



*The Kalsoom Prairie View Cricket Complex is currently under development and will become the largest cricket facility in the United States. This project includes 12 Cricket Fields, Training Centers, Coaching Centers, Practice Facilities, and Community Center.*



## COMMUNITY EVENTS

Communities and organizations host a variety of events throughout the year. Events such as the Waller County Fair, Brookshire's Freedom Festival, and the Katy Rice Festival bring County residents and visitors together for food, live music, games, and more.



*The Katy Rice Harvest Festival is a popular event that includes vendors, music, food, and a parade to Katy, Texas.*

Event	City	Date	Attendance
Waller Volunteer Fire Dept.. Annual Fundraiser	Waller	1st Saturday in May	400-500
Juneteenth Festival (barbeque, dance, auction, basketball tournament, softball tournament)	Brookshire	June 19th	
July 4th Freedom Festival (parade, craft, booths, kiddie rides, volleyball tournament, dance)	Brookshire	July 3 & 4	2000-3000
Waller County Fair (exhibits, dance, auction)	Hempstead	Last week in September	
PVAMU Homecoming (parade, football game)	Prairie View	1st week in November	9000
Brookshire Christmas Festival	Brookshire		
Christmas Parade	Waller	1st Saturday in December	200-300
Festival of Lights (craft booths, parade)			
Katy Rice Harvest Festival	Katy	October	

## Needs Assessment

### Current Recreational Profile

The Parks, Trails, and Open-Space Master Plan reaches fruition at implementation. These priorities are the response and recommendations based on all the information collected to date through inventory of existing conditions throughout the County with regard to recreation resources and opportunities, and stakeholder input throughout the planning process. The process seeks to identify recreation needs and prioritize them for implementation.

Following the prioritization phase, key projects will be developed with conceptual drawings and cost estimates to aid decision-makers in budgeting, land acquisition, design, and construction of capital projects. To prioritize these needs, public input, as well as the needs assessment and standards, are taken into consideration.

The recommendations in this action plan were prioritized based on the following criteria:

- Need based on direct citizen input (demand-based)
- Need based on benchmarks and recreation trends (standards-based)
- Opportunities based on existing conditions (resource-based)

### Supply and Demand

The parks and recreation marketplace functions much like a business, in that there are demands for a given recreation resource that seek to be met by a supply of parks, facilities, or programs from a service provider. In most cases, that demand is met through a variety of providers including municipal, county, and state parks and facilities, schools, and the private sector. In Waller County most parks and recreation facilities and programs are provided by other entities, with a majority of that supply coming from private providers such as fitness centers, private sports organizations, golf courses, homeowners associations, and other entities.

### Recreation Demand

Identifying the types of recreation features and amenities that the public desires to see in parks and facilities is an important first step in the development of a parks and recreation system. To understand how residents are currently recreating, and what activities they would like to participate in moving forward, a series of stakeholder engagement strategies were conducted including:

1. Public Workshops
2. Online Survey
3. Discussions with Staff and Elected Officials

## Public Feedback & Recreation Demand

### PUBLIC WORKSHOPS

A series of public workshops were conducted to meet with residents throughout the County to discuss the types of parks, trails, and amenities they would like to see in their community. Through January and February 2020, meetings were held in the Cities of Prairie View, Waller, and Pattison. The meetings were open to residents throughout the County and were advertised on municipal and county websites and Facebook.

#### Workshop Format

At each workshop, participants were asked to sit at tables in small groups of up to approximately 8 people. Facilitators provided an introduction to the master plan project, process, and evening agenda, and then each group was facilitated through a series of exercises to achieve the following:

#### Visioning

Participants were asked at the beginning of the event to write down their vision for their community in one to two sentences on index cards. After approximately five minutes, participants were invited to read their cards out loud to the rest of their group.

This activity had several benefits. First, the people in the room – the residents and stakeholders – had the first word about their hopes and aspirations for future parks, trails, open space, and overall quality of life.

Second, starting out with visions for the future instead of problems to address set a positive tone for the meeting. And hearing a few ideas out loud exposed fellow community members to visions they may share and possibilities they may not have thought of before.

#### Brainstorming

Brainstorming used the group's collective intellectual resources by allowing participants to generate ideas without stopping for discussion, evaluation, judgment or lengthy description. Ideas were recorded on a flip chart by one or more of the participants, or a group facilitator. Ideas generated would be prioritized, evaluated and/or refined later. At the end of the exercise, participants were asked to place a sticker on their favorite of the collective ideas from the group.

#### Location Exercise

Participants discussed with each other their ideal locations for County parks, trails, facilities, and open space. The goal of this exercise was not to identify specific properties for recreation features, rather to identify general areas of the county they thought were ideal for such facilities and why. Each participant was given three stickers to be placed on a map at their desired location for parks and facilities. Participants were asked to label desired recreation facilities on the map (i.e.: small park, trail, event facility, etc.).

#### Small Group Reports

Upon completion of the preceding exercises, the workshop as a whole came together to share their findings. A representative from each table was asked to present their table's collective vision, favorite ideas from the brainstorming session, desired locations for recreation facilities, and any other comments or conclusions from their discussions.

### Goals Identified from Stakeholder Input

- Create nature-oriented outdoor recreation
- Preserve the rural character, local history, and culture
- Utilize flood prevention sites for green open space
- Create accessible recreation facilities for all interest groups
- Minimize transportation and safety conflicts while increasing recreation opportunities
- Enhance Waller County's brand as a destination



## ONLINE SURVEY

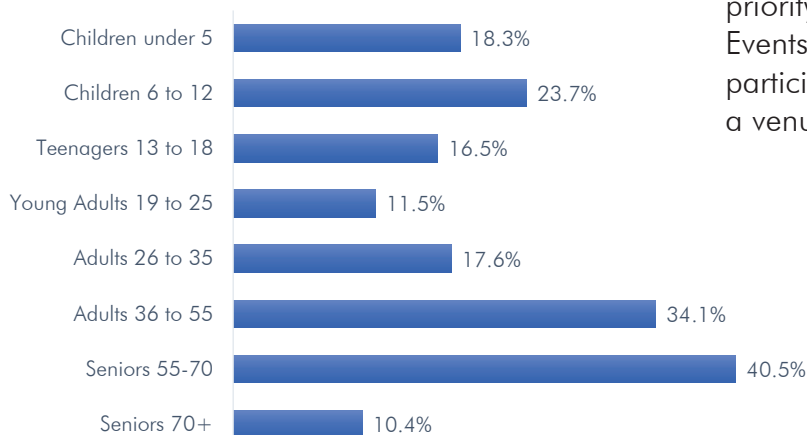
An online survey was conducted between January 24th and August 29th of 2020. A total of 284 responses were received. With a 2020 population of 56,828 residents, this represents a confidence level of 90.9% with a 5.8% margin of error.

The survey presented a range of questions to identify current recreation behaviors, desired future recreation activities, and priorities for development of specific parks, facilities, trails, and amenities. Additional questions sought to understand the representative nature of the survey sample with regard to residency status, age groups within households, and household location by zip code.

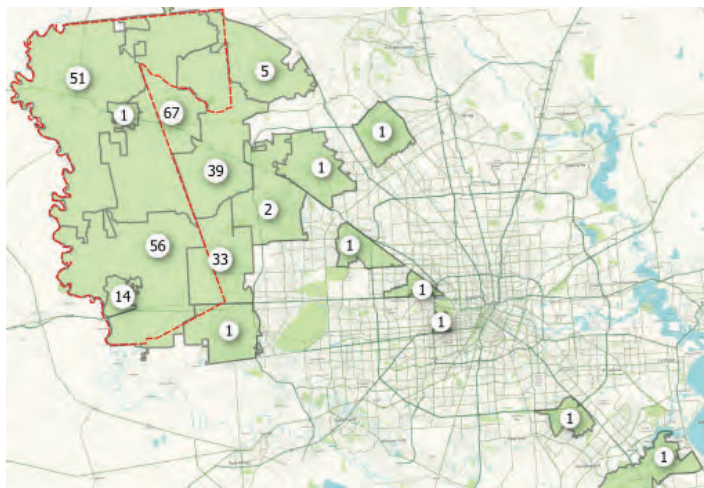
### Participant Profile

Survey participants were primarily comprised of Waller County residents with a total of 91.1% residing within the County and another 8.9% from other areas in the region. Location information from the survey reveals that participants came from 19 different zip codes, most within Waller County or the nearby area.

Participants were asked to identify the age groups represented in their households. Overall, there was a broad sample of age groups, with a remarkable pattern of Adults 35 to 55 years of age (34.1%) and Seniors 55-70 years of age (40.5%). This level of participation is slightly higher than the overall distribution of these age groups in the population.



*Age distribution of survey participants.*



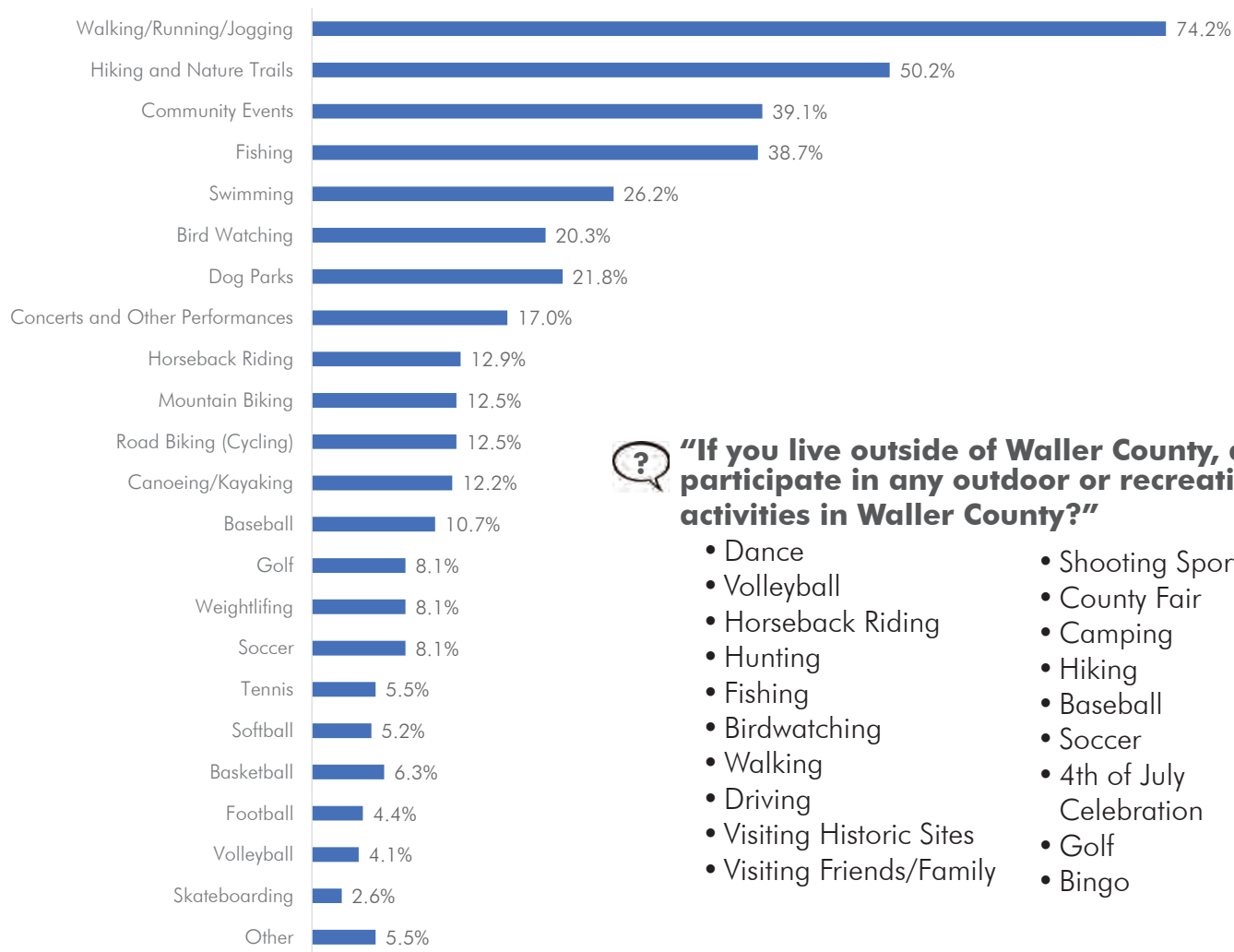
*Survey participation by zip code (# of responses).*

### Current Recreation Behavior

Understanding the types of recreation activities that residents currently participate in is vital to identifying the types of parks, trails, and facilities that Waller County needs to provide in the future. Survey participants were asked to identify the types of recreational activities in which they currently participate, and the results indicate a diverse range of interests.

Notably, trail-oriented activities such as walking, running, jogging, hiking, mountain biking, and horseback riding are quite popular. “Walking/Running/Jogging” and “Hiking and Nature Trails” ranked as the most frequent activities with 74.2% and 50.2% participation respectively. This pattern begs the need to consider trail development as a priority for meeting recreation demand. “Community Events” ranked third place in popularity, with 39.1% participation, indicating a potential need to provide a venue for such activity.

**“What are the top 5 recreational activities any members of your family currently participate in at least twice per month?”**

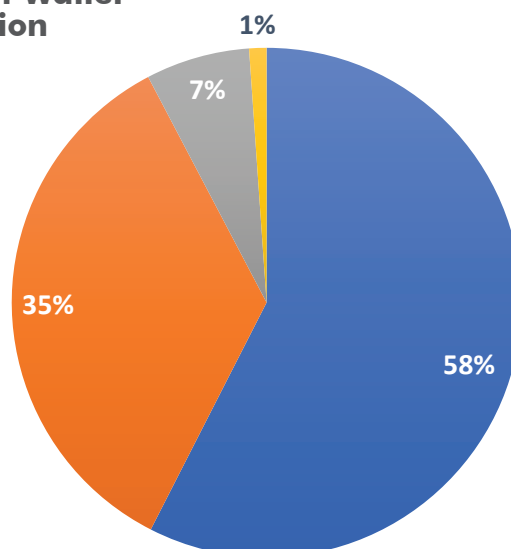


**“If you live outside of Waller County, do you participate in any outdoor or recreation activities in Waller County?”**

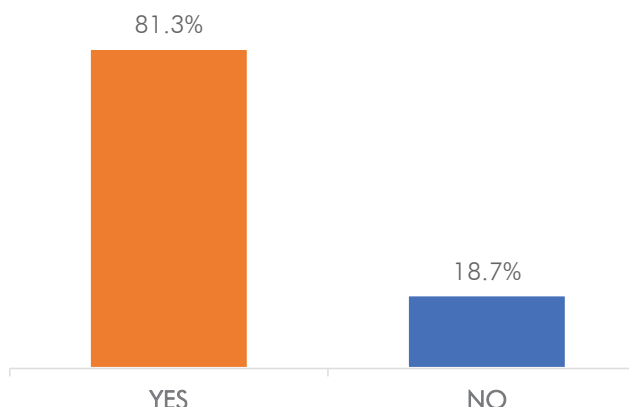
- Dance
- Volleyball
- Horseback Riding
- Hunting
- Fishing
- Birdwatching
- Walking
- Driving
- Visiting Historic Sites
- Visiting Friends/Family
- Shooting Sports
- County Fair
- Camping
- Hiking
- Baseball
- Soccer
- 4th of July Celebration
- Golf
- Bingo

**“What best describes your perception of Waller County as an attractive outdoor recreation destination?”**

- Adding recreation and trail facilities in Waller County should be one of the County's Top 5 priorities!
- I want to do things here but there aren't enough relevant facilities
- Satisfied - I don't care if we have more facilities in Waller County
- Extraordinary!! We have enough facilities to satisfy most of our residents.



**“Do you or members of your household drive somewhere outside of Waller County to use a specific park, recreational facility, or program at least 4 times per year?”**



## Recreation Outside of Waller County

With some types of recreation not currently available locally, 81.3% of survey participants routinely travel outside of Waller County. The locations and types of activities varied from state and local parks to private facilities, with a wide range of activities.

**"What parks, recreation facilities, or programs do you or your family visit outside of Waller County?"**

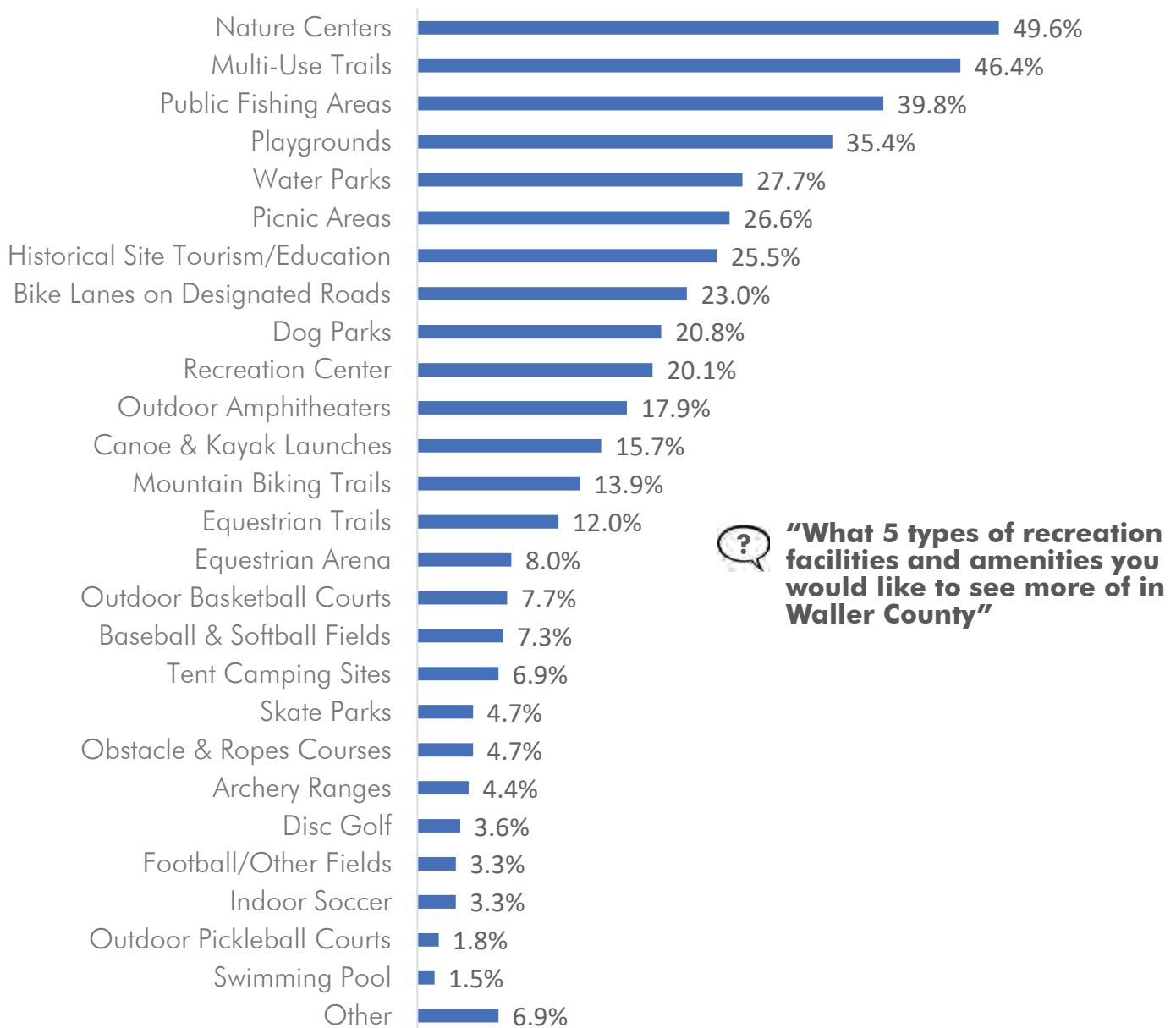




## Desired Recreation Amenities

Survey participants were asked to identify the types of recreation facilities and amenities that they would like to see more of in Waller County. A list of common parks, facilities, amenities, and activities were provided along with an option to write in other desired ones not listed.

The list of desired amenities is diverse, with a clear emphasis on outdoor recreation. “Nature Centers” ranked high with 49.6% of participants indicating a desire to see such amenities in Waller County. What a nature center means to a given person may vary from a formal facility for education and appreciation of nature to simply providing access to natural areas. Multi-use trails for pedestrian, bicycle, and equestrian activities were also identified as a priority. The important message is that residents seek to participate in a wide range of recreation, and the future parks and facilities should be developed as flexible spaces that allow for diverse uses.

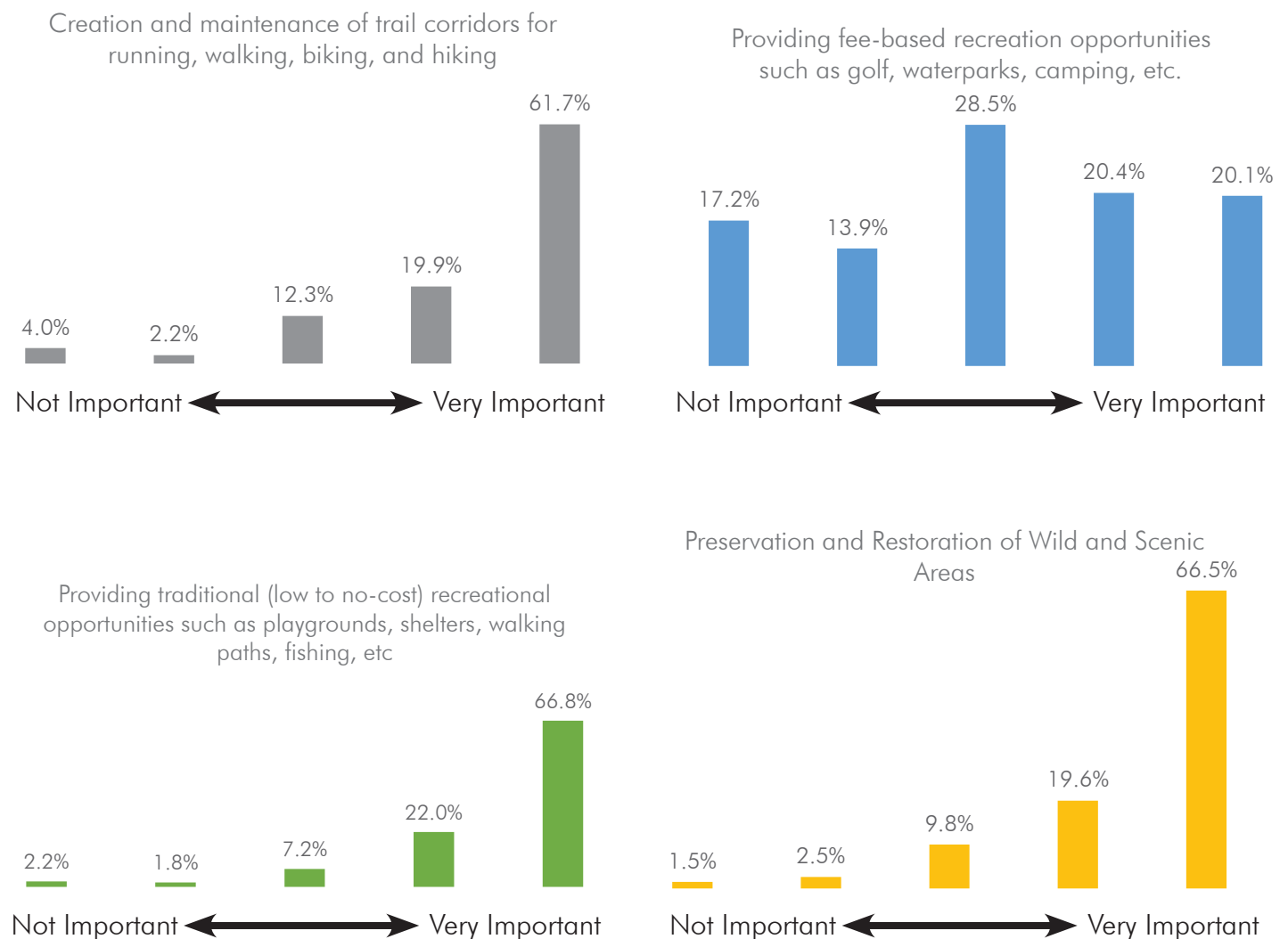


## Resident Priorities

Survey participants were asked to prioritize the level of importance they place on a selection of subjects regarding parks and amenities, trails, natural areas, and cultural heritage. With a five-point scale ranging from 'not very important' to 'very important', some strong patterns emerge as to residents' priorities for recreation that can guide the County through implementation of the Master Plan.

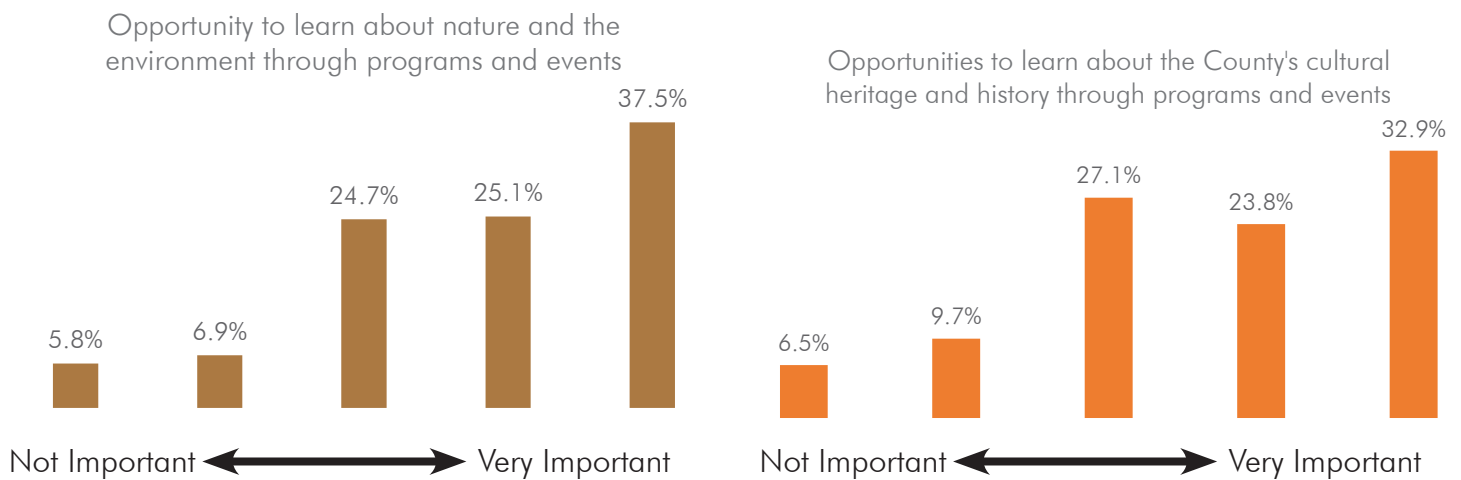
Traditional park features and amenities ranked high in importance among residents with an overwhelming majority of responses rating the provision of typical park amenities such as playgrounds, picnic shelters, walking paths, and fishing opportunities as 'important' to 'very important'. The creation and maintenance of trail corridors for pedestrian and bicycle activities also ranked high with 62.7% rating them as 'very important'.

When asked about the County providing fee-based recreation opportunities such as golf, waterparks, or camping, responses varied significantly from 'not important' to 'very important'. Such a pattern indicates that support for fee-based recreation will largely depend on the specific type of recreation provided. This may be less of a priority for the County to address than other types of parks, trails, and facilities.



Waller County has a rich cultural and natural heritage that is highly valued by its residents. The natural areas, agricultural lands, and the history of the people in Waller County are important considerations for preservation and promotion within a future recreation system. When asked to rate the importance of preserving and restoring wild and scenic areas, 66.5% of responses placed the priority as 'very important'.

Creating opportunities to learn about the County's cultural heritage and the environment through programs and events is also highly rated with more than 80% of responding as 'important' to 'very important'.





### Commitment to Funding a Parks System

One of the most important components of a parks and recreation system is establishing a budget for both capital improvements and the maintenance and operation thereafter. These funds may come a variety of sources, but ultimately are supported by the residents and businesses within the County.

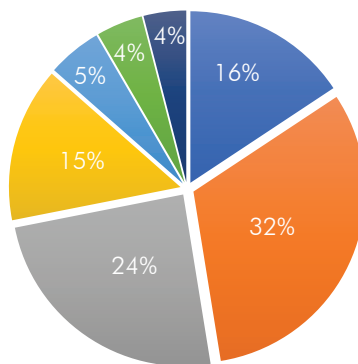
When asked how much survey participants would be willing to spend annually on parks and recreation amenities, there was a clear pattern of commitment to supporting such a parks system. A total of 87.8% of participants indicated a willingness to spend some money annually for improved parks and recreation amenities provided by the County. A total of 32% would be willing to spend between \$10 and \$50 annually. Another 24% would be willing to spend as much as \$50 to \$100 annually. Others would commit even more.

### How to Spend the Money

Having established a commitment to fund parks and amenities, the next step is to prioritize the use of those funds. Survey participants offered some insight into prioritization with a clear focus on acquisition of park land (60.2%) and conservation of natural areas for open space and public enjoyment (59.3%). A second level of priority is in the funding of park construction (36.1%) and trail construction (33.2%).

Land acquisition costs can be some of the most expensive undertakings in development of a parks system. With rising land prices across the region, capturing appropriate park land in a timely manner becomes even more important. Other opportunities may arise in the future with land donations from property owners who may wish to preserve their land for recreation use, rather than allow them to be developed for other purposes. With regard to recreation grants from the Texas Parks and Wildlife Department, land acquisition costs and the value of donated lands can be credited as 'in-kind' contributions that apply towards a required match of funds by the County.

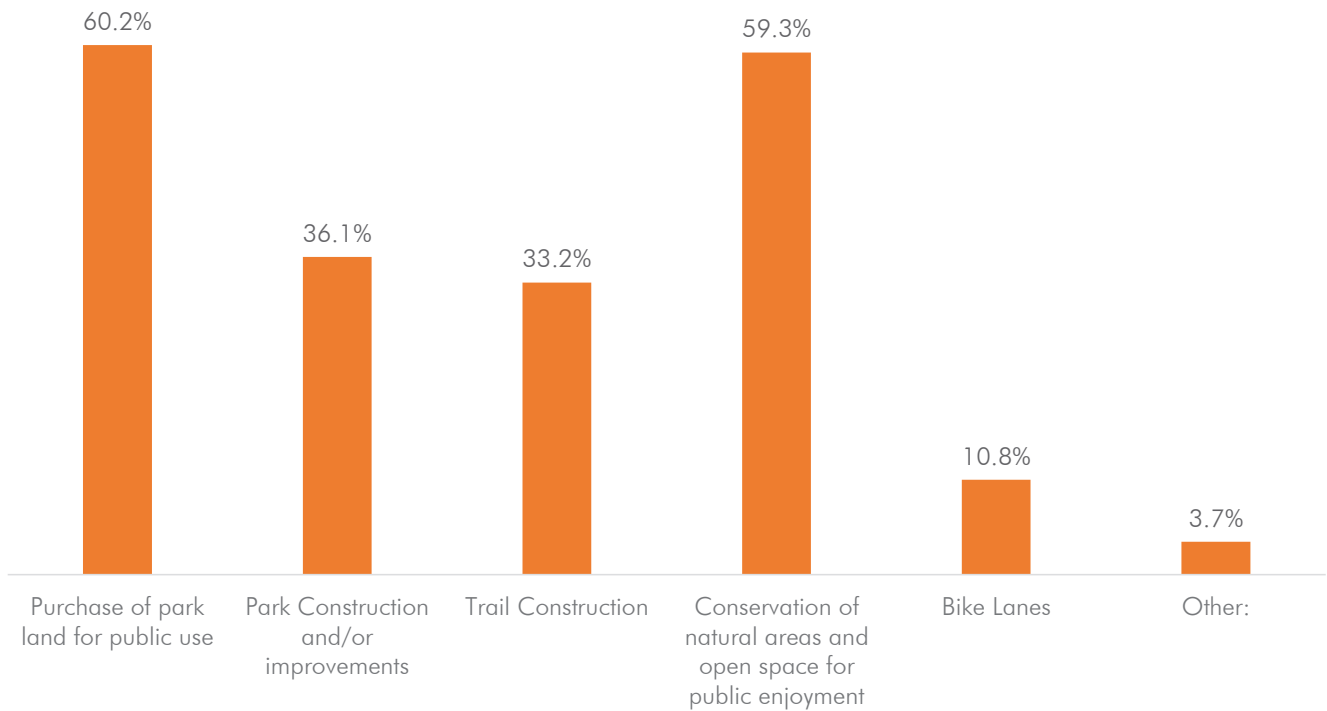
### ? "How much would you personally be willing to spend annually for improved parks and recreation amenities provided by the County?"



- I would not be willing to spend any additional money to support trails, parks, or other recreation in Waller County
- \$10 to \$50
- \$50 to \$100
- \$100 to \$300
- \$300-\$500
- \$500+
- Other



**"If Waller County forms a Parks Department, how should their initial expenditures be prioritized?"**



## Level of Service

The makeup of parks and recreation agencies varies greatly due to unique characteristics such as population density, demand for recreation, and available resources such as land, capital, and political will. As communities grow, the demand for parks and recreation facilities tends to increase as well.

Measuring Level of Service of a parks system provides an understanding of where ‘service gaps’ may exist with regard to parks, trails, amenities, and services. To measure Level of Service, the National Recreation and Parks Association (NRPA) collects nationwide data from parks and recreation agencies to serve as guidelines for communities to evaluate the type and number of facilities to provide for residents. Rather than serving as strict standards, the benchmarks should be used as a point of conversation as County staff, elected officials, planning groups, and other stakeholders plan for the future parks system.

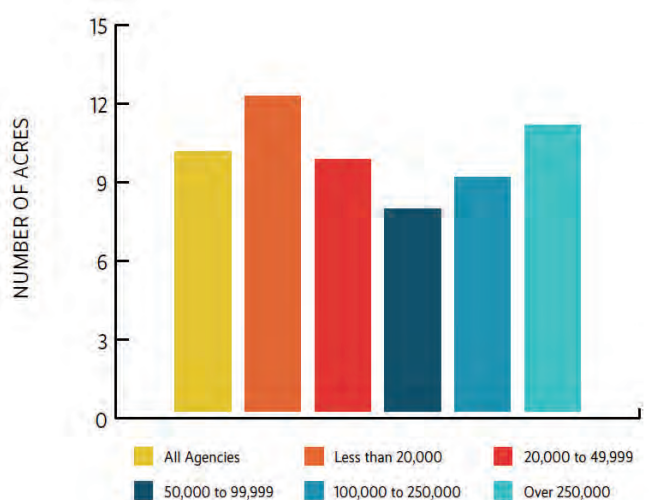
### Park Land and Facilities

These benchmarks typically provide a metric of park land, facilities, and services per 1,000 residents. For example, the 2020 NRPA Agency Performance Review reports that the typical park and recreation agency with a population between 50,000 and 99,999 people has 7.7 acres of park land per 1,000 residents.

In addition to park land, recreation facilities and amenities are also useful in understanding Level of Service. For instance, 93.9% of park and recreation agencies have playgrounds and 86.5% have basketball courts. The typical agency manages and/or maintains a total of 11.0 miles of trails for walking, running, hiking, and biking. These benchmarks are a useful starting point for evaluating Level of Service, and a great target to consider when developing a new parks system. However, the NRPA recommends that each agency consider local demand and resources rather than attempting to use these benchmarks as firm standards for Level of Service.

“The 2020 NRPA Agency Performance Review does not include ‘national standards,’ nor do the benchmarks represent any sort of standards against which every park and recreation agency should measure itself.”  
- 2020 NRPA Agency Performance Review

**Acres of Park Land Per 1,000 Residents  
(By Jurisdiction Population)**



	All Agencies	Less than 20,000	20,000 to 49,999	50,000 to 99,999	100,000 to 250,000	Over 250,000
Median	9.9	12.0	9.6	7.7	8.9	10.9
Lower Quartile	5.1	5.2	5.4	4.7	5.0	5.3
Upper Quartile	17.1	20.8	15.0	17.1	14.9	17.9

Source: 2020 NRPA Agency Performance Review.



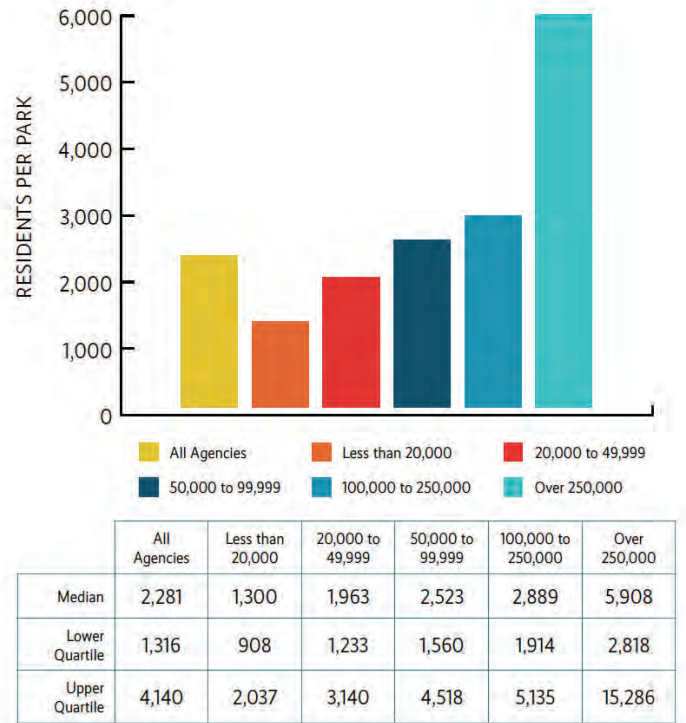
### Staffing and Budget

As the County's parks system develops, the need for personnel and operating expenses will increase. The NRPA reports that the typical established parks and recreation agency has 8.1 full-time equivalent staff (FTEs) for every 10,000 residents. For Waller County's current population (approximately 53,000), this would equate to a staff of 43 employees for maintenance and operation of a developed parks system.

For annual operating expenses, the NRPA reports that the typical agency spends \$81.19 per capita. For Waller County, this would equate to an operating budget of \$6.7M once the parks and recreation system has matured.

When looking at these benchmarks, it's important to be reminded that a parks system develops over time, and requisite budgets and staff would be added gradually as needs arrive.

**Residents Per Park  
(By Jurisdiction Population)**



*Source: 2020 NRPA Agency Performance Review.*

## Prioritization of Need

The culmination of the inventory of existing condition and stakeholder input yields a series of priorities to guide the County in the development of a parks and recreation system. These priorities are a summary of the identified demand for parks, trails, programs, and amenities, as well as the analysis of available resources and opportunities within the Waller County landscape.

### Goals Identified Through Stakeholder Input

The assessment of demand revealed the core values of residents with regard to parks, open space, culture, and recreation that can be summarized in the following goals. These goals serve as guidance for development of the Master Plan and future parks and recreation system:

- Create nature-oriented outdoor recreation
- Preserve the rural character, local history and culture
- Utilize flood prevention sites for green open space
- Create accessible recreation facilities for all interest groups
- Minimize transportation and safety conflicts while increasing recreation opportunities
- Enhance Waller County's brand as a destination

In addition to the overarching goals identified above, specific needs have been identified through the array of stakeholder input methods. These needs can be summarized into the following core categories:

- Parks
- Connectivity
- Natural/Open Space
- Preservation/Conservation
- Heritage/Culture
- Accessibility



### PARKS

- Establish parks with nature as an amenity
- Event/performance space
- Camping sites
- Aquatics
- Sports field/court/course
- Dog park
- Picnicking Area
- Equestrian facilities/grounds
- Fishing
- Shade and shelter



### CONNECTIVITY

- Walking/hiking trails
- Off-road bike path
- On-street bike lanes
- Equestrian trails
- Trails in natural area and near water
- Trails, connected Parks & recreation assets, relevant proximity to target communities



## NATURAL/OPEN SPACE

- Space for outdoor learning
- Access to institutional lands, floodplain and other natural areas
- Eco-recreation (e.g. bird watching, nature trails, etc.)



## HERITAGE/CULTURE

- Historical tour
- Historical buildings as museums
- Historical downtown elements
- Local cultural elements integrated in parks
- Historical sites with tourism and educational opportunities



## PRESERVATION/CONSERVATION

- Green open space, public land for low impact recreation
- Flood plain for open field sports
- Wetland with trails as natural park and wildlife habitat
- Preserve the natural land, Conserve the wetland, wildlife and water bodies



## ACCESSIBILITY

- Accessibility as a universal feature
- Family friendly recreation facilities



## Recommendations

### Building a Parks & Recreation System

#### Building a Parks and Recreation System

Waller County is in a unique position to be able to start a parks and recreation system from scratch with a plan for implementation. Parks systems are typically developed over many years, usually building one park at a time as land and resources become available. With a plan in place, Waller County can take a proactive approach by seeking specific types of property, partnerships, and funding tools to achieve recreation goals.

#### When Opportunity Knocks

With limited land in public ownership by the County, and no existing County park land, this master plan was developed to serve as a toolkit for identifying recreation opportunities and taking advantage of them when the time is right. For example, recommendations include a series of prototypical park concepts that provide appropriate land requirements and typical amenities associated with a given type of park such as a trailhead, a neighborhood park, or a community park. When the County finds an opportunity for acquisition of park land of a given size, the park prototype will help the County to budget for development of the park utilizing provided cost estimates.

Also included in this toolkit is a Hike and Bike Trail Master Plan. The plan identifies appropriate routes for development of trails and bike lanes along road rights-of-way and utility corridors. Other trail opportunities may include riparian corridors along rivers and creeks throughout the County. With most of the creeks on private property, it will be up to the County to seek access to land along these corridors as opportunities present themselves. For instance, when a residential developer plans a new community, the County may partner with the developer to plan and build trails along creeks and floodplains. As a value-add to any new development, such an opportunity would be mutually beneficial to the developer, future residents, and the County as a whole.

#### Planning Area Recommendations

Each planning area identified in this master plan has its own unique characteristics such as land cover, topography, hydrology, and development patterns. Recommendations for parks and recreation are applicable county-wide, but some planning areas may be more suitable for a given type of park, trail, or facility. For instance, highly-developed areas along the I-10 Corridor or the State Highway 290 Corridor may benefit more from urban on-road trails and bike lanes and small neighborhood parks, whereas largely rural areas in the Central County planning area may be more suitable for development of a larger, centralized County Park that serves the whole region. The Brazos River Corridor planning area is an obvious first choice for riverside trails or paddling trails, while the Northeast County planning area is ideally suited to trails along creeks and forested areas. The following are general recommendations for park and recreation development for each planning area:

#### 1 Northwest County

Creeks and floodplains are highly compatible for multi-use trails for pedestrian, bicycle, and equestrian activities. Utility transmission corridors offer additional trail development opportunities.

#### 2 Northeast County

Neighborhood Parks and Community Parks are appropriate for serving the numerous small residential subdivisions. Seek opportunities to develop multi-use trails along area creeks.

#### 3 290 Corridor

Develop on-road trails and trails along the railroad corridor. Seek partnerships with developers to secure parks and open space for public access.

#### 4 Central County

The central location makes this planning area ideal for a larger ‘County Parks’ with 20 or more acres of land. Seek opportunities for land acquisition and consider opportunities to showcase Waller County’s rich agricultural heritage. Consider incentives for private landowners to provide public access to lands for trails and equestrian activities.

#### 5 Brazos River Corridor

The Brazos River is the most prominent land feature and opportunity for recreation. Promote paddle trails and develop water access at select locations. Seek opportunities to develop trails along the banks of the river.

#### 6 Interstate I-10 Corridor

With numerous master-planned communities along the corridor, making trail connections between communities and across the County is a priority. Work with developers to identify opportunities to collaborate in development of trails and park land.

### Land Considerations

One of the highest priorities for development of a parks and recreation system is land acquisition. With ever-rising land values, it will be important for the County to strategically acquire park and open space land to maximize benefit. Recreation activities can successfully be facilitated on a wide range of property types, and in many cases on land that is not suitable for other land uses such as residential or commercial development. The following are target property types to consider for acquisition for parks and open space:

- **Floodplains** – land in the 100-year floodplain and/or floodway can often be highly suitable to recreation activities that do not require intensive development such as trails, campsites, athletic practice fields, picnic areas, and general open space. While certain development restrictions exist on these lands, low-impact development for access and use of floodplain land is usually achievable.
- **Creeks and the Brazos River** – The land along the county’s creeks and the Brazos River presents excellent opportunities for recreation development. Trails and river access are the primary recommendations for these types of properties. With most of the land in private ownership, working with the residential development community may yield partnerships that can result in public access along these waterways.
- **Closed Landfills** – There are several closed landfill sites in Waller County that have limitations on land use for activities that include development of structures due to soil constraints and other issues. Closed landfills have been successfully converted into parks and communities across the country, and the land may be attainable at lower cost than comparable non-landfill properties.
- **Land Donations** – Many families have owned land in Waller County for generations. In some cases, landowners may wish to preserve the land in its natural state rather than having it sold to become residential subdivisions or other development. Land donations to the County can be an excellent opportunity for adding much-needed land to the future parks system, creating a legacy that lasts a lifetime.

## Hike and Bike Trail Master Plan

Developing multi-use trails for hiking, biking, running, and horseback riding is the highest priority identified through stakeholder input. Pedestrian and bicycle activities are also the most popular recreation activity that residents currently participate in. To build a multi-use trail system, Waller County must be creative and persistent in the efforts to utilize existing rights-of-way and other public land, and either acquire land or access to land through purchase or partnerships. The Hike and Bike Trail Master Plan identifies opportunities and strategies from development of a trail system over time. The following are recommended trail locations for consideration:

**County Roads** – Some of the most feasible routes for creating pedestrian and bicycle infrastructure are available along the County road rights-of-way. With limited public land available, these rights-of-way make excellent options for beginning a trail system. The Waller County Transportation Plan has identified the need to create more multi-modal options for transportation as well as recreation. Selected roads in the Transportation Plan have been identified for either widening of the shoulders or addition of bike lanes. With sufficient right-of-way, other options could include off-road multi-use pathways adjacent to the road in a variety of configurations.

**Utility Corridors** – The large electrical transmission corridors that cross the county can provide extensive trail alignments across large areas. The State Legislature created a policy (HB 931) that protects the utility companies from liability, that now allows for public entities to utilize these corridors for recreation purposes. Development of trails along a utility corridor requires a formal agreement between the trail sponsor (county or municipality) and the utility company, and usually requires the trail sponsor to perpetually maintain the trail and immediate area along the trail.





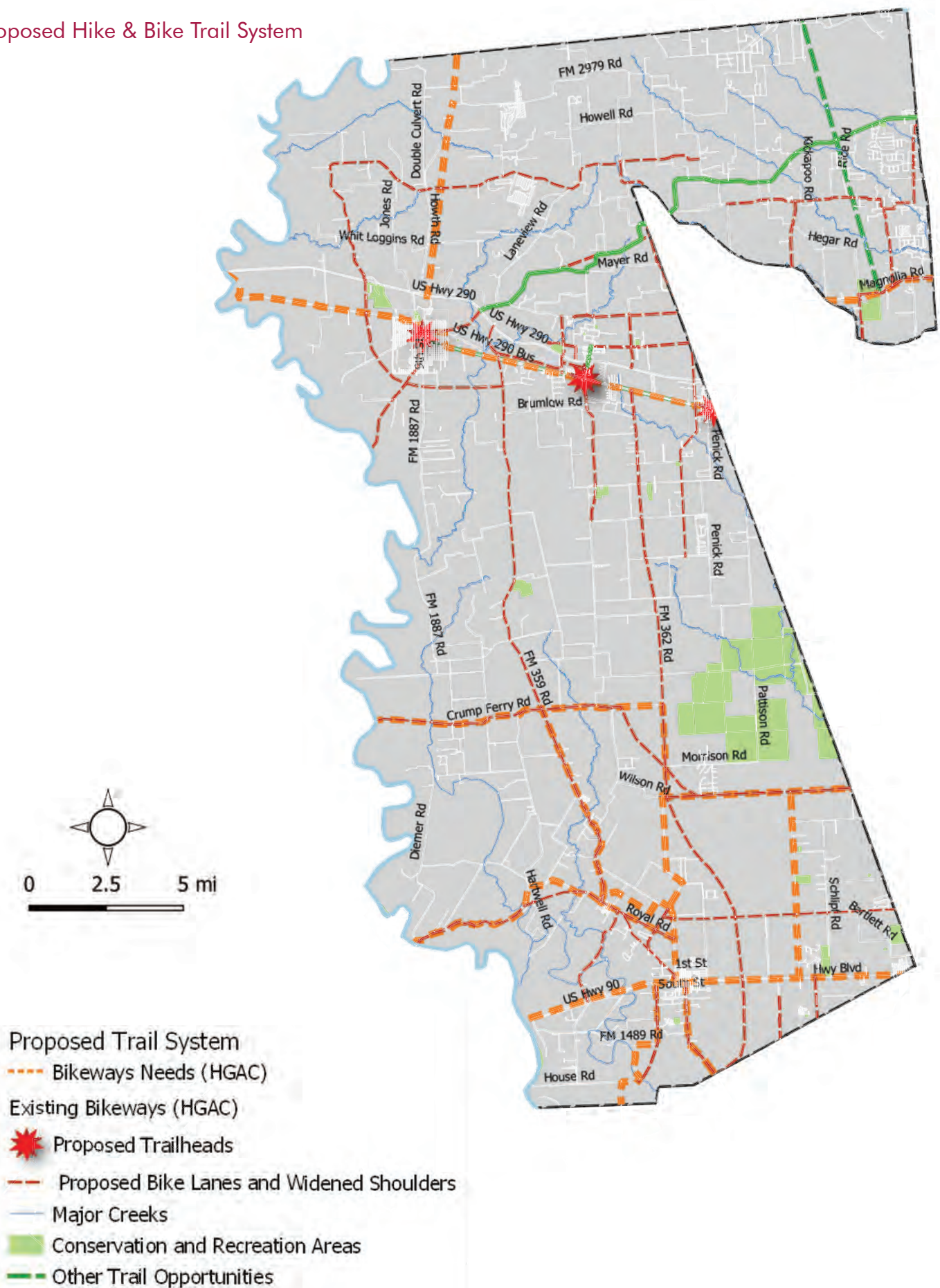


**Creeks and Floodplains** – Waller County’s numerous creeks and floodplain areas are ideal for trail development. These riparian corridors offer opportunities to enjoy natural open space. Working with the development community and private landowners to acquire access to these corridors should be a priority.

**Private Land Agreements** – Gaining access to private lands for equestrian trails is a growing trend across the nation. With most of Waller County in private ownership, exploring ways to work with landowners can yield surprising results. The Equine Land Conservation Resource (ELCR) is an organization that “builds awareness of the loss of lands available for horse-related activities and facilitates the protection and conservation of those lands working to ensure America’s equine heritage lives on and the emotional, physical and economic benefits of the horse-human relationship remains accessible. ELCR serves as an information resource and clearinghouse on conserving horse properties, land use planning, land stewardship/best management practices, trails, liability and equine economic impact”.



## Proposed Hike & Bike Trail System





## Spotlight Projects

As part of the development of the Trails Master Plan, the planning team collaborated to conceptually develop three existing parcels along the rail road right of way running along the SH 290 Business corridor as trail-heads for the proposed rail trails system. The following proposed trail-head projects begin to establish the character of the Waller County Trails System.

### HISTORIC RAIL TRAIL CONCEPT

The railroad corridor along today's State Highway 290 Business has a long history of use by travelers dating back to early settlement of what would become Waller County. From well-traveled footpaths of Native Americans and Spanish explorers to the modern roadways and railroad here today, the corridor continues to be an important connection through and between communities in the County. In the early 20th century this route was known as part of the Meridian Highway and was a popular road for automobile tourism.

Today, the railroad right-of-way is owned and operated by the Union Pacific Railroad Company, and has sufficient width to safely accommodate a paved, multi-use trail that connects from Waller to Prairie View and finally to Hempstead, with developed trail-heads in each city.

### HEMPSTEAD STATION

This proposed trail-head can provide trail users and local residents with recreational amenities and historical context for the city of Hempstead. By proposing circulation connections and multi-use trails, the pedestrian experience is enhanced. In this site plan, a celebrated historical labyrinth, comprised of interpretive elements of significant historical events in Hempstead, creates a gathering space with educational value. A large plaza with a children's play area and seating are provided to encourage play and gathering. The trail-head is connected with trails, shaded by intermittent trees, and buffered from the railroad with strategically planted landscapes, and a series of historical interpretive signage and wayfinding elements.



*Labyrinth*



*Playground with Sails*



*Shade Trees DG Plaza and Seating*



*Wayfinding Historic Signage*



## PRAIRIE VIEW STATION

Prairie View's proposed trail-head consists of proposed concrete trails, large shade trees, shaded nodes with seating, parking for visitors and a children's playground. Being that the area is surrounded by road and train tracks, the space is buffered with landscape elements and connected with large pedestrian crosswalks. The playground is protected by fencing and generously shaded, creating a wonderful place for families to gather. A bike pump station and a bottle-fill station caters to the needs of bikers utilizing the multi-use trails.



*Bike Pump Station*



*Wayfinding and Historic Signage*



*Shaded Trails*



*Child Play Area*

## WALLER STATION

In this proposed trail-head visitors are provided with an educational Visitors Center, and lush gateway landscaping features. The users of this park space can enjoy a connection with the outdoors as they stroll the proposed trails and gaze over large berms of wildflowers. Additionally, a fenced child play area encourages family gathering. Restrooms and a bike pump station are present at the beginning of the north-west facing trail. Seating and trail markers are scattered throughout the site to aid in wayfinding as well as connection with the outdoors.



*Wildflower Berms*



*Visitors Center*









# HEMPSTEAD STATION









## PRAIRIE VIEW STATION

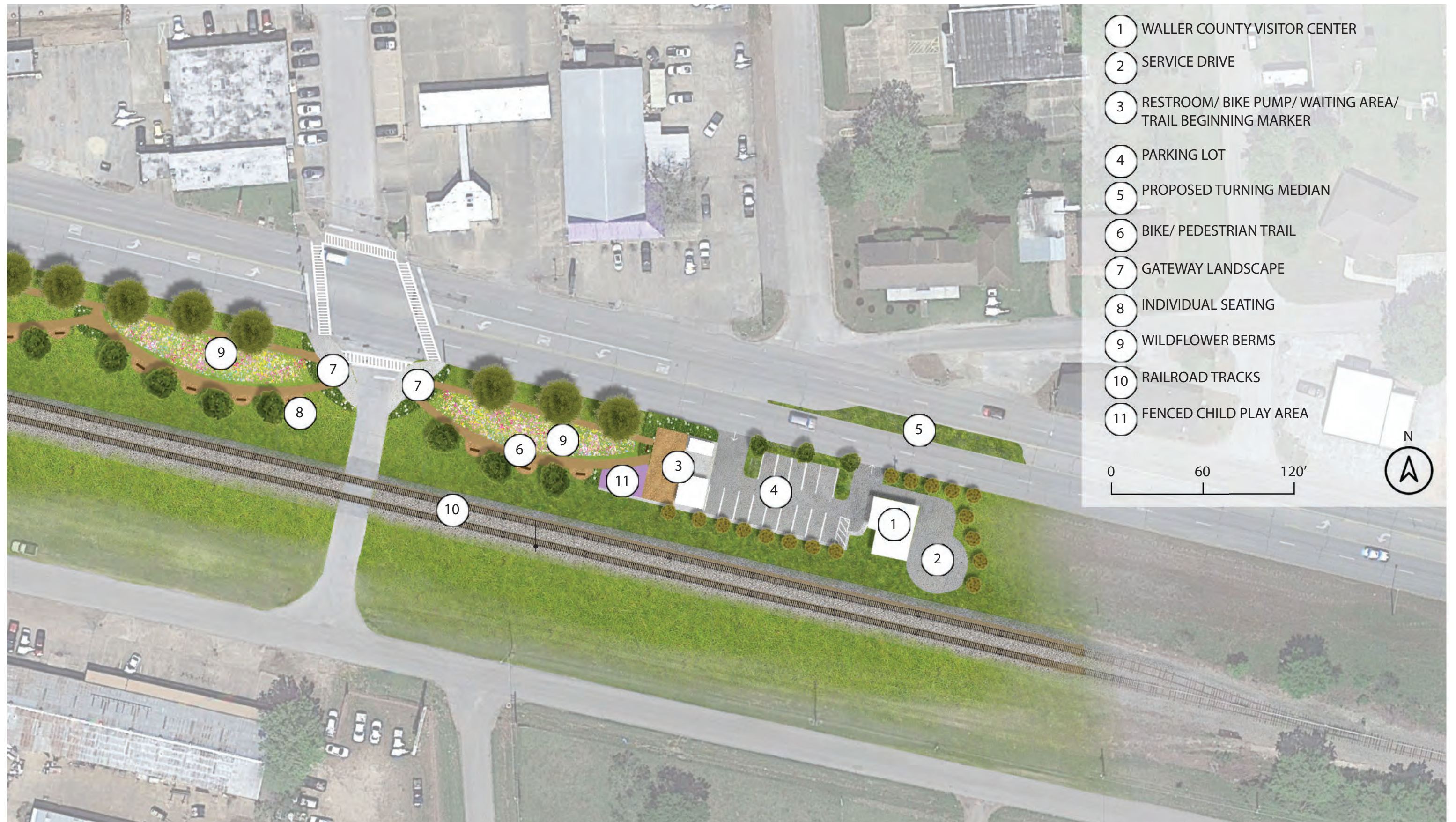








## WALLER STATION









# Park Development Toolkit

The Parks Planning Toolkit is included to help create a “*flight plan*” for development of facilities from the planning to execution phases. Most parks and trails include a fairly consistent set of specific rules of thumb and variety of amenities depending on specific missions, the type of land and terrain on which the facility is to be located, and various regulations related to land use, drainage, access, etc. The Toolkit provides a starting place to develop a coherent plan for a facility, envision and plan the development, and develop early budgets for design and construction.

The Toolkit consist of two main parts –

## 1 FACILITY PROTOTYPES

Trail Prototypes  
Parks Prototypes

## 2 FACILITY & COST PLANNING GUIDES

Facility Planning  
Cost Planning

The **Trail and Park Prototypes** section include illustrations and cross-sections of essential planning elements in a variety of facilities. These prototypes are not intended to serve as a turn-key planning solution. Rather they are intended to help engage a detailed planning process with intentional key amenities and, importantly, dimensions and scales.

The **Facility Planning Guide** lists important steps in the facility development process. Recreation facility construction involves more than the nuts and bolts of building features. Surveys, soil reports, engineering, design, potential regulatory costs, and general requirements unique to each site and type of amenity are forms of costs that must be considered when taking on a new project.

The **Cost Planning Guide** includes project pricing methods for various types of facilities and amenities. These costs are based on historical market values relevant from about 2018 to 2020 based on built projects in Texas designed by the planning team. In addition to prototypical parks amenities, the Guide also includes an a` la carte approach to a wide variety of typical parks amenities for planners to competently build cost models for almost any mix of features on a particular recreation facility. Finally, the wide variety of trails envisioned in Waller County translates to a wide variety of trail construction and materials types as well as dimension variations. The Cost Guide includes a convenient tool for estimating the cost of trail development for given material types and trail widths.

## Trail Prototypes

### ON-ROAD & OFF-ROAD TRAILS

Two basic types of trails are proposed for the Waller County network – **on-road trails** that run adjacent to the roadways and **off-road trails** that run throughout available greenways. While specific characteristics have been identified for the two different trail types, each corridor will be designed with consideration given to its unique topography, right-of-way, and site context. The ideal width for trails is 10 feet, but in areas of anticipated higher use; trails may be designed to 12 feet wide. In locations of constrained right-of-way, trails may be constructed as narrow as 6 feet in width.



*Prototypical trail section with ideal 20' wide pedestrian zone. Amenities may consist of 6' bike lane, 6' pedestrian lane, seating, lighting and buffer zones*

## ON-ROAD TRAILS - Overview

On-road trails may consist of bike lanes, bike routes, arterial bike routes, bike boulevards, and protected bike lanes as described below. The specific on-road trail type should be designed per site conditions such as available right-of-way, current and future land developments, safety needs, and community needs. An on-road bike trail may take advantage of the available right-of-ways, but may have short off-street meanders when land and connecting points are available.



*Bike Lanes are on-street facilities designated for bicyclists using stripes and stencils. Bike lanes may include buffer striping to provide greater separation between bicyclists and parked or moving vehicles. Bike lanes are the preferred treatment for all arterial and collector streets on the bikeway network, and not typically installed on low-volume, low-speed residential streets.*



*Bike Routes are streets designated for bicycle travel and shared with motor vehicles. While the only required treatment is signage, streets are designated as bike routes because they are suitable for sharing with motor vehicles and provide better connectivity than other streets.*



*Arterial Bike Routes are installed on arterial streets where bike lanes are not feasible, and parallel streets do not provide adequate connectivity. These streets may be designed to promote shared use with lower posted speed limits (preferably 25 mph), shared lane bicycle markings ("sharrows"), and signage.*



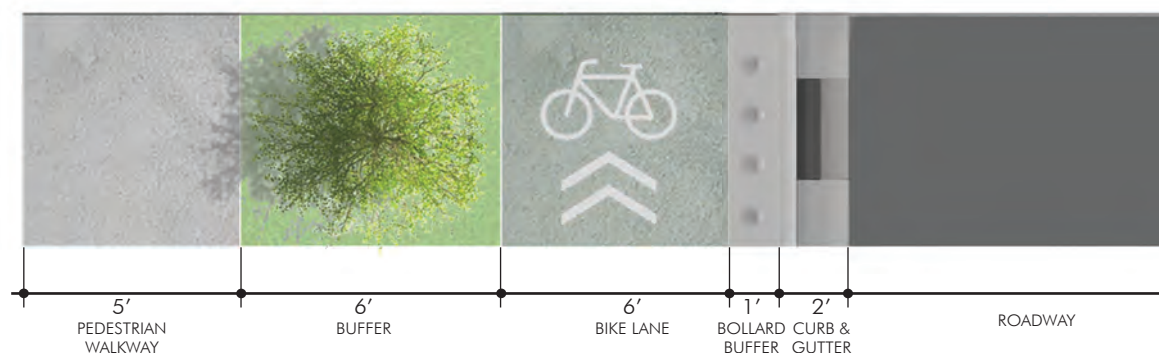
*Bike Boulevards are bike routes on residential streets that prioritize through trips for bicyclists. Traffic calming is included as needed to discourage drivers from using the boulevard as a through route.*



*Protected Bike Lanes provide space that is exclusively for bicyclists and separated from motor vehicle travel lanes, parking lanes, and sidewalks. Parked cars, curbs, bollards, or planter boxes provide physical separation between bicyclists and moving cars.*



## ON-ROAD TRAILS - Prototypes



**Protected Bike Lanes** - trails that run adjacent to the roadway with or without a buffer separation in between. The trails are ideally 12 to 14 feet in width and typically will be constructed with asphalt or concrete. When signalized crossings of roadways are not preferred or possible, elevated or tunneled trail crossings may be considered.

- Typically asphalt paving
- Concrete wall with handrails where needed
- Signalized roadway crossings or grade separations where needed
- Lighting with luminaires
- Trail-head signage, wayfinding signage, mile markers
- Restrooms and/or parking possible in key locations
- Construction costs may significantly vary based on the trail type, ranging from simple "share the road" signage to bike lane protection and pavement striping.

## OFF-ROAD TRAILS - Overview

Off-road trails are greenways and pathways that are not located along a roadway but instead follow their own alignment or possibly a stream or utility easement. The trails are ideally 8 to 12 feet in width and typically will be constructed with concrete as well as timber bridges and boardwalks around wetlands and other environmentally sensitive areas. A variety of trail width options are available based on the existing conditions and types of use. When signalized crossings of roadways are not preferred or possible, elevated or tunneled trail crossings may be considered. Restrooms and parking locations may be located at trail-heads and other key points along the path.



*Foot Paths are typically a single use trail type, mainly only for people on foot (hikers, runners, backpackers, walkers, etc.).*



*Bikeways are a single use trail type, for the use of mainly by bicyclists, though skaters and roller-bladers may also enjoy the trails.*



*Rails to Trails (or Rail Trails) more recently developed type of trails that converts old or abandoned railroad easements to trails, or utilizes rail road right-of-ways. These trails are generally aimed at the hiking and bicycling community.*



*Equestrian Trail (or Bridle Path) are typically a single use trail type thats specific to equestrians, though can function as a foot path given the proper space.*

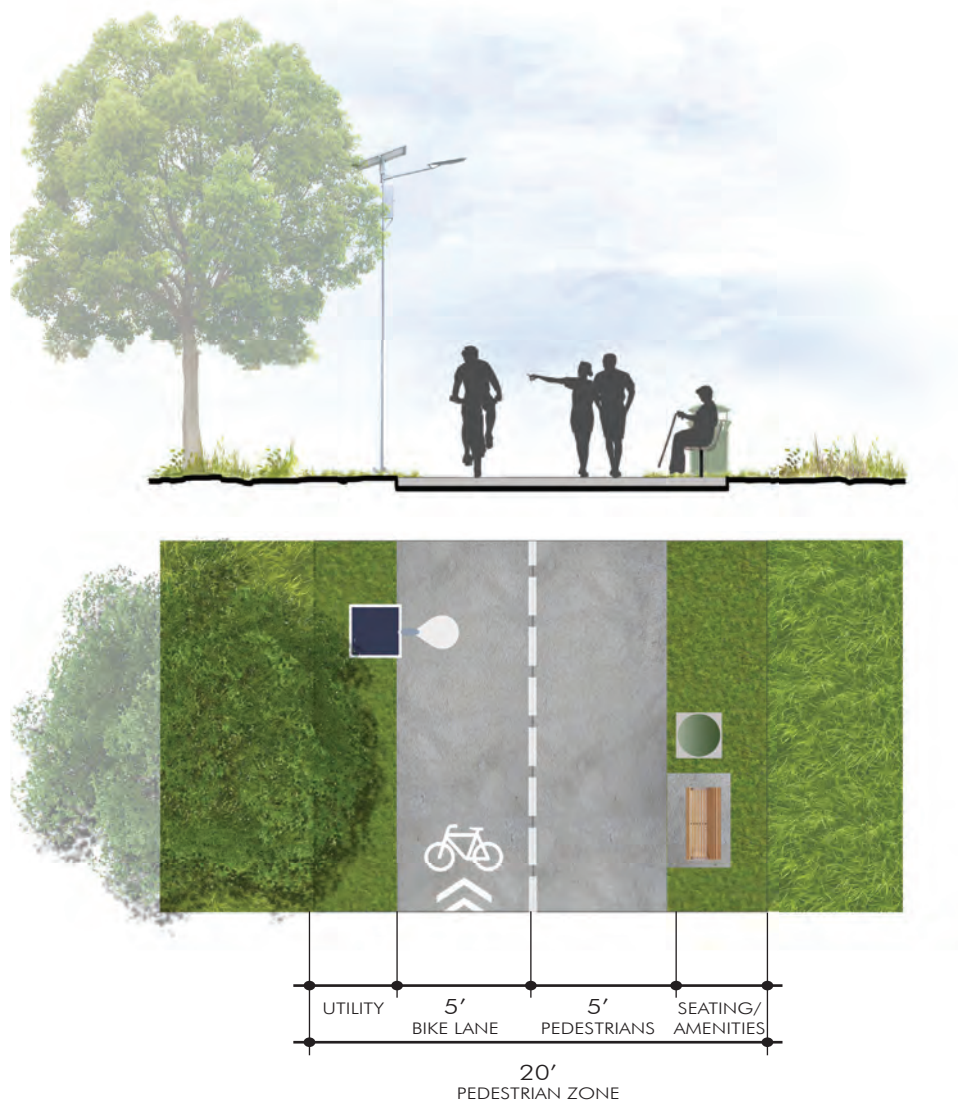


*Motorized Trails (or Off-Highway Trails) are not generally found locally, but allow for motorized use of the trail by dirt bikes and ATVs.*



*Single Track Trails are a type of mountain biking trail that is approximately the width of the bike with minimal clearance.*

## OFF-ROAD TRAILS - Prototypes



**Multi-Use Urban** trails are located within the more developed urban areas with easy access to utilities and connection opportunities to nearby destinations such as parks, schools and shopping centers. The trails are mainly located along greenways, easements and railways, but may connect temporarily to a side path along the roadways. The trails are ideally 8 to 12 feet in width and typically will be constructed with concrete, but may reduce down to 6' if little space is available.

- Typically concrete paving
- Timber bridge and boardwalks
- Concrete wall with handrails where needed
- Signalized roadway crossings or grade separation where needed
- Safety lighting
- Seating and water access
- Trail-head signage, wayfinding signage, mile markers
- Restrooms and/or parking in key locations



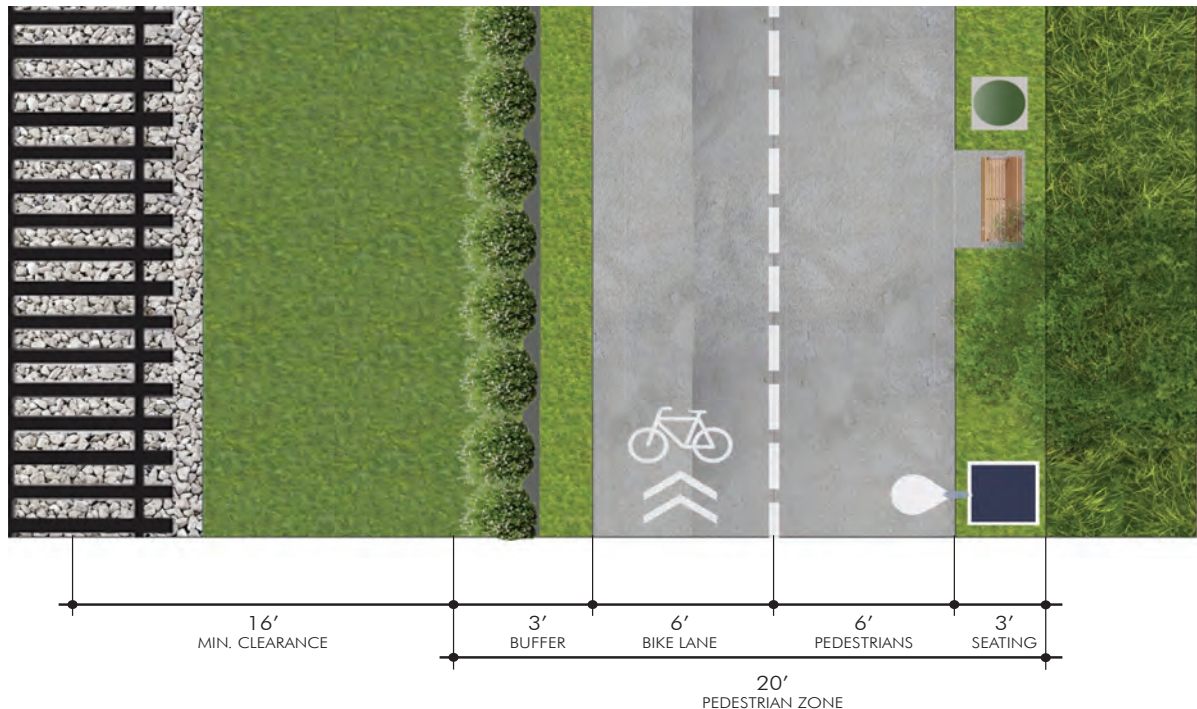
## OFF-ROAD TRAILS - Prototypes



**Multi-Use Rural** trails are located in the less developed areas, with limited access to utilities. There are regional connection opportunities to trail heads, regional parks and other trail loops. They are mainly located along streams, easements and railways. The trails are ideally 8 to 12 feet in width and typically will be constructed with concrete, but may reduce down to 6' as space is available.

- Typically concrete paving
- Timber bridge and boardwalks
- Concrete wall with handrails where needed
- Signalized roadway crossings or grade separation where needed
- Solar lighting where needed
- Seating at key points
- Trail-head signage, wayfinding signage, mile markers

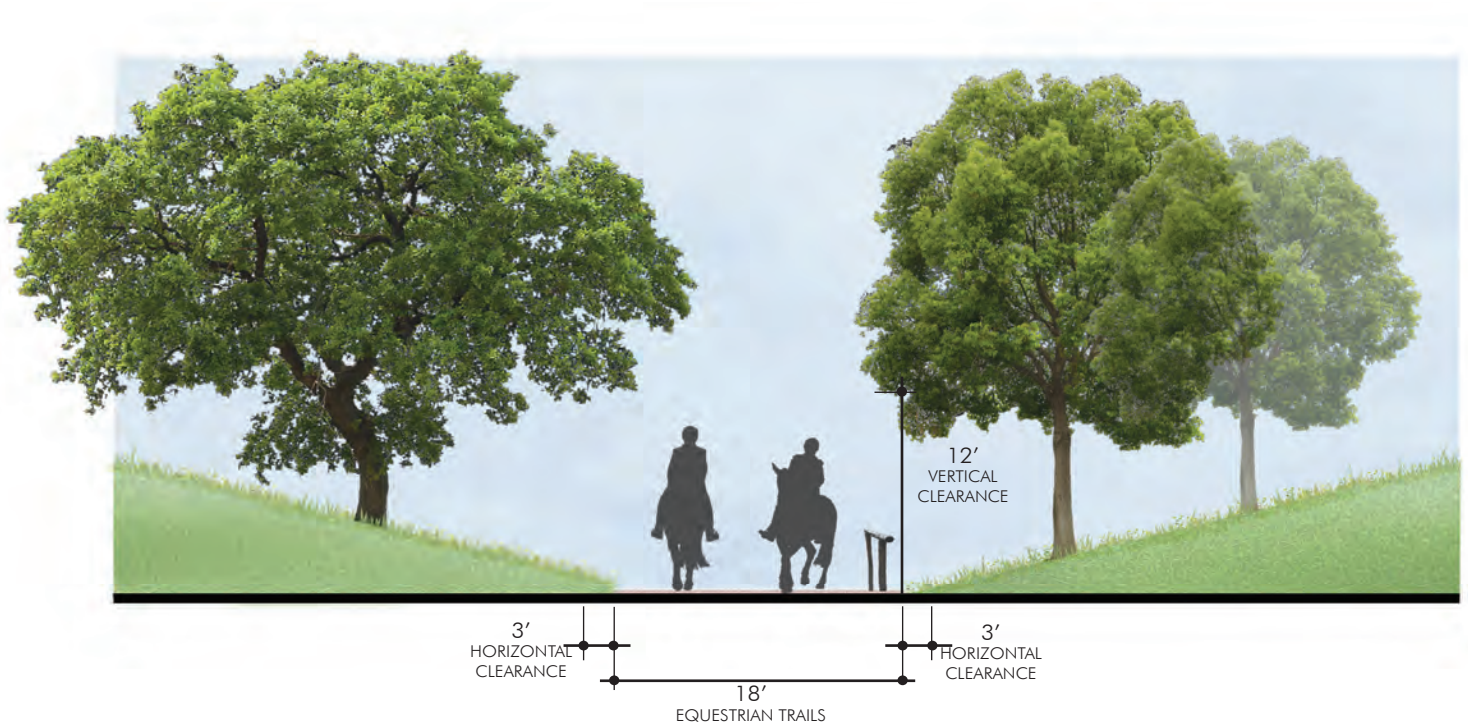
## OFF-ROAD TRAILS - Prototypes



**Rail Trails** are located along the rail road easements with the ability to further connect to neighboring counties along the rail roads. These trails are developed for long distance biking, but can also provide well needed parklets when space is available. The trails are ideally 8 to 12 feet in width and typically will be constructed with concrete.

- Typically concrete paving
- Timber bridge and boardwalks
- Concrete wall with handrails where needed
- Signalized roadway crossings or grade separation where needed
- Solar lighting where needed
- Seating at key points
- Park opportunities at key points
- Trail-head signage, wayfinding signage, mile markers

## OFF-ROAD TRAILS - Prototypes

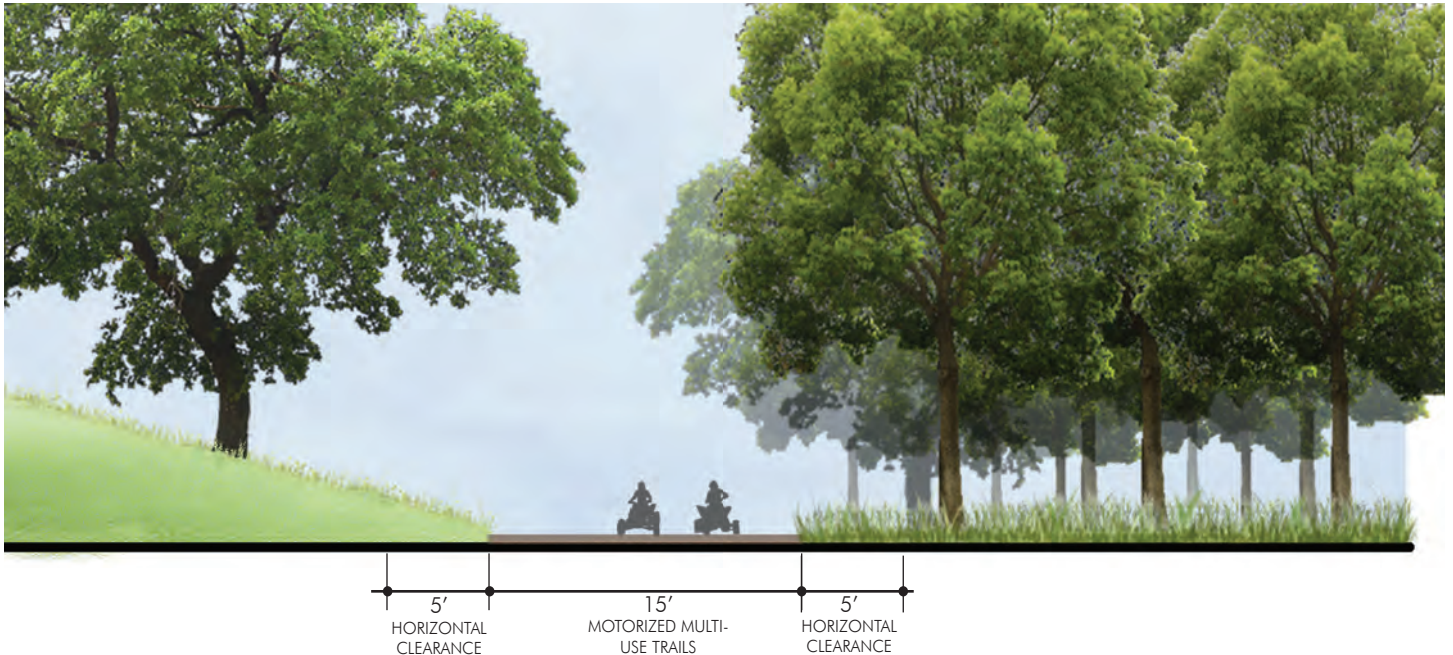


**Equestrian Trails** are located in rural areas. They are mainly located along streams and easements. The trails are ideally 10 to 12 feet in width and typically will be constructed of natural stabilized material.

- Typically natural surface
- Timber bridge and boardwalks
- Concrete wall with handrails where needed
- Hitching post
- Water hole
- Trail-head signage, wayfinding signage



## OFF-ROAD TRAILS - Prototypes



**Motorized Trails** are located in rural areas. They are mainly located along streams and easements and separated from equestrian trails. The trails are ideally 10 to 15 feet in width and typically will be constructed of natural stabilized material.

- Typically natural surface
- Timber bridge and boardwalks
- Trail-head signage, wayfinding signage

## OFF-ROAD TRAILS - Prototypes



**Single Track** hike and bike trails are located along heavier terrain, hard to develop lands such as streams and floodways. The trails are 3 to 6 feet in width and typically will be constructed of natural materials with stabilized slopes as needed.

- Typically natural surface
- Timber bridge and boardwalks
- Stone stabilization where needed

- Trail-head signage, wayfinding signage, mile markers

## Park Prototypes

### Trail-head Park (up to 3 acres)

Trail-head parks are parcels situated along the proposed trail routes, these parks would have minimal parking, rest stop and double as a small pocket park with a variety of amenity opportunities throughout the county. Single amenities like playgrounds, splash park, skate parks and small gathering spaces would be incorporated as needed.

A trail-head park development may have up to 10 parking spaces, family restroom, small pavilion, picnic, gathering plaza, and trail head. A small playground, splash pad or skate spot may also be incorporated as an added amenity.

A typical trail-head park type may range in costs of: \$160k to \$1.3M dependent on site and amenities.

*(See Table 04 for OPC breakdown)*

### County Park (20+ acres)

Large parcels of land give opportunity to create a regional style park with sports fields, amphitheater, disc golf and equestrian trails.

A county park development may have up to 100 parking spaces, restrooms, pavilions, large amphitheater with stage, community center and a two mile looped trail connecting to multiple areas.

A county sized park type may range in costs of: \$1.83k to \$10.5M dependent on site and amenities.

*(See Table 07 for OPC breakdown)*

### Dog Park (1-2 acres)

Dog parks are can range in size up to 2 acres with small and large dog areas. These parks can be stand alone or within a larger park. Surfaces and equipment would vary upon need and budget.

A dog park may have up to 10 parking spaces, pavilion, water feature, obstacle course and separate dog areas by size.

A typical dog park type may range in costs of: \$220k to \$575k dependent on site and amenities.

*(See Table 08 for OPC breakdown)*

### Natural Reserves

Large parcels of preserved areas, typically undevelopable within the flood plains. Light development with small parking areas, access trails and interpretive signage.

A reserve may have 10 to 20 low impact parking spaces, natural trails, open space, nature reserves and wayfinding.

*(See Table 03 for site amenity costs)*



## NEIGHBORHOOD PARK

A prototypical neighborhood park may range in size of 4 to 6 acres.

Small neighborhood sized parks would be ideal to create access to parks throughout the county. These parks would have the opportunity to add ball courts and open play for a variety of recreation activity ideal for parties, small pick-up games and community gatherings.

The park concept developed below represents the full development of a non-specific 6-acre parcel. The parcel development contains approximately 20 parking spaces, small restroom, pavilions, picnic, playgrounds, tennis and basketball courts, volley ball and open play fields and a half mile looped trail.

A typical neighborhood park type may range in costs of: \$850k to \$2.5M dependent on site and amenities.

(See Table 05 for OPC breakdown)







## COMMUNITY PARK

A prototypical community park may range in size of 5 to 15 acres.

Medium-sized community parks as land is available, these parks give opportunity to create larger gathering and open spaces. Practice fields, community pools and loop trails are ideal for this parcel size.

The park concept developed below represents the full development of a non-specific 15-acre parcel. The parcel development contains approximately 40 parking spaces, community pool, medium restroom, pavilions, picnic, playgrounds, tennis and basketball courts, volleyball and open play fields, 200' baseball field, small skate park, and a one mile looped trail with workout stations.

A typical community park type may range in costs of: \$1.5M to \$6.9M dependent on site and amenities.

(See Table 06 for OPC breakdown)







## Facility Planning Guide

When contemplating a new facility, several interrelated factors must be considered. For example early contemplation of issues generally applicable to the project and potential regulatory steps is helpful to anticipating additional costs that may not be universally applicable to all projects.

The following master list introduces several considerations at various stages of project development. A properly and fully conceived project includes consideration of as many known factors as possible before undertaking the project. Master Planning or Feasibility Studies for specific projects can assist with identifying impactful factors, developing solid design, regulatory, and construction costs, and exploring several conceptual options without committing to a final design before all factors are known.

### PLANNING STAGE

1. Determine if the project is of scope and scale sufficient to require a Master Plan or Feasibility Study.
  - a. Projects with large sites, significant programs, unknown construction costs, or with wide target audiences are best master planned.
  - b. Multiple projects as part of a single finance tranche or series of related goals are best master planned.
  - c. A Feasibility Study is useful for projects where site location for a type of facility is undetermined, revenues are expected from project amenities, market or public demand is not fully known, or in cases where the program is not fully conceived and the County wants to make smart choices between somewhat mutually exclusive yet potentially viable programs.
2. Identify Location & Site for the project.
3. Assess feasibility of both for the specific project goals
  - a. Does the site feature topography appropriate to the project goal?
  - b. Is it reasonably accessible by road, trail? Are roads appropriate to the volume of potential users?
  - c. Who will be affected by sound coming from the facility? What will the impact of site lighting be?
  - d. Is the site safe for the relevant audience? What features will be needed to mitigate risk and enhance safety/security?
4. Evaluate potential Regulatory or infrastructure impacts.
5. Program for amenities and features
  - a. Do we have a set amount of money and want to see what that will build? OR,
  - b. Do we have an idea of what we want but don't know how much we can build?
  - c. What are we planning to build and why? Who wants this?
  - d. Whom are these amenities to serve?
  - e. What experience do we want target audiences to have?
  - f. What features does the site require to accommodate the program?
  - g. NOTE: Master Plans are useful to explore the attractiveness of various design concepts and facility programs. Feasibility Studies can provide an idea of cost and market attractiveness of a pre-conceived concept(s) with the target audience.

6. Cost Planning is essential to establish initial budgets. This can be accomplished for smaller projects using tools like the Cost Planning Guide in this Plan or by establishing a set budget based on financial capacity then conducting a best-fit analysis for amenities and park development.
  - a. How much will the program cost?
  - b. Are site improvement cost requirements worth it?
  - c. Is a Master Plan or Feasibility Study appropriate to develop a more comprehensive and targeted cost budget?
  - d. Grant considerations
  
7. If a Master Plan or Feasibility Study is required, select qualified and experienced Landscape Architect for execution. Landscape Architects with planning capabilities/experience are best positioned to deliver high-quality plans and studies.
  - a. Requests for Qualification (RFQ) is most utilized method of procuring services.
  - b. Pre-Qualification may also be used to select a firm for combined Planning & Design services
  - c. Site-specific master plans/feasibility studies should include:
    - i. Public Input
    - ii. Stakeholder Input
    - iii. Programming of site and amenities
    - iv. Preliminary Design Concepts
    - v. Opinions of Probable Cost (OPC)
    - vi. If required, preliminary engineering studies can be conducted to understand and provide cost for site improvements
      - Conducted by engineers as subconsultants to the Landscape Architect
    - vii. Grant applications and coordination assistance when applicable



## FACILITY PLANNING GUIDE MASTER LIST

**Planning**

- **Location & Site**
  - Topography
  - Surrounding Environs (i.e. sound, light, traffic, etc)
  - Safety & Security
  - Access
  - Connectivity
- **Regulatory & General**
  - Drainage
  - Sewer (if applicable)
  - Survey (direct-to-vendor or as subconsultant to Landscape Architect)
  - Soil Reports (Geotechnical) (direct-to-vendor or as subconsultant to Landscape Architect)
  - GLO/USACE (water-based projects)
  - Interlocal Agreements
  - Local Permits/Reviews
  - Inter-agency Permits/Reviews (e.g. TxDOT, Texas Historical Society)
  - ADA Accessibility (direct-to-vendor or as subconsultant to Landscape Architect)
  - Grant Compliance
- **Programming**
  - Target Audiences
  - Vendor-Provided vs. Custom Designed/Built
  - Space Planning
  - Shade, Restrooms, Water, etc.
  - Parking
- **Cost Planning**
  - Determine construction budget based on financial capacity
- **Master Planning & Feasibility (as appropriate)**
  - Feasibility
    - » Cost Budgets
      - Capital
      - Operations
    - » Revenue Projections
      - Pro-Forma Revenue Projections
      - Cost Recovery Models
    - » Preliminary Engineering Studies
    - » Market Analysis
  - Master Planning

- » Concept Development & Options
- » Public Input
- » Stakeholder Input
- » Preliminary Engineering Studies

**Design**

- **Disciplines**
  - Landscape Architecture
  - Subconsultants to Landscape Architect as project needs determine
  - Civil Engineering
  - Architecture
  - Structural Engineering
  - Irrigation
  - MEP/Lighting
  - Turf Specialist (e.g. sports fields, if applicable)
- **Site**
  - Grading
  - Drainage
  - Utilities Infrastructure (Sewer, Electricity, Water)
  - Parking
  - Pathways
  - Landscaping
  - Irrigation
- **Amenities**
  - Non-Building Structures
  - Buildings
  - Restrooms
  - Pathways

**Construction**

- **Procurement**
  - Competitive Sealed Proposals
  - Job Order Contracting
  - Contractor Pre-Qualification
  - Best Value
  - Vendor-Provided (e.g. Buy Board)
- **Permitting/Review/Inspection**
  - Local (e.g. city, county, property owner, local jurisdictional authorities)
  - State (e.g. TxDOT, GLO, THS)
  - Federal (e.g. ADA, USACE)
  - Grant-based or 3rd Party (e.g. TPWD)
- **Construction Progress/Completion**
  - Construction Observation (Landscape Architect)
  - Regular project visits and meetings

## Cost Planning Guide

Capital costs in parks and recreation facility projects are broken into two major categories:

### 1 Soft Costs

### 2 Hard Costs

**Hard Costs** are those costs directly related to construction. Materials, labor, contractor's profit and overhead are all Hard Costs. These costs are often referred to as "construction costs." In contrast, Soft Costs are all other costs related to a specific project. These include land acquisition, permits, design and other professional services costs, fees, and design contingencies.

Importantly, for public projects utilizing grant funding, **Soft Costs** are often included as part of the matching funds generally required in grants. For example, Texas Parks & Wildlife grants allow Soft Costs, including the value of in-kind contributions such as land donations, to count towards the matching requirement of TP&W grant requirements.

Project Budgets include a combination of hard and soft costs. For purposes of this Plan and use by the County in development of potential projects, the following categories are used to develop Hard Costs:

#### Division 1 - Site Costs

- Sitework, Demo, Clearing, Site Utilities
- Typically a % of Base Construction Costs for Divisions 2 and higher

#### Division 2 - Parking

- Parking spaces/materials, striping, lighting, crosswalks

#### Division 3 - Structures

- Vertical structures such as restrooms, shelters, pavilions

#### Division 4 - Hardscapes

- Land-based structures such as trails, sidewalks, wing walls, amphitheaters, site furnishings, water fountains

#### Division 5 - Play Amenities

- Stand-alone structures and features such as playgrounds, fields, courts

#### Division 6 - Landscape

- Flora, non-play turf

#### Base Construction Costs

- Sum of all Divisions

#### Contractor's Profit/Overhead

- Typically a % of Base Construction Costs of approximately 20-35%

Design Contingency (a soft cost) is then added to the previously developed Project Hard Costs to create the overall Opinion of Probable Costs (OPC) and is often referred to as a “Design Budget”:

### Design Contingency

- Typically 5-10% of Hard Costs

### Professional Services

- Typically 10-20% of the Opinion of Probable Costs/Design Budget
- Includes design and engineering costs, survey, geotechnical, and other services required for construction

It is important to note that certain soft costs like land acquisition are held out separately from development of the Project Cost even though it is obviously important for planning (and potentially, for grant purposes).

### Project Cost Terms and Calculations

Sum of Divisions 2-6 + Division 1 = Base Construction Costs

Base Construction Costs + Contractor’s Profit/OH = Project Hard Costs

Project Hard Costs + Design Contingency = Opinion of Probable Costs (OPC)

### Prototype Park & Trail Development

This Cost Planning Guide provides prototypical cost budgets for 5 park types of varying size and amenities. These budget tables include fully developed construction and project costs (excluding land acquisition) for parks sized from small Trailhead/Pocket Parks up to 20+ acre County Parks with a mix of various amenities ranging from minimal to maximized park programs:

Table 04	Trailhead Parks	
Table 05	Neighborhood Parks	4-6 acres
Table 06	Community Parks	5-15 acres
Table 07	County Parks	20+ acres
Table 08	Dog Parks	

Site considerations and final program selections determine the level of development and complexity for each type of facility. However, these prototypical cost budgets provide substantial levels of information for County planners to create sound master budgets for capital planning purposes prior to design. Each prototype includes items that may be sized or “unplugged” as needed. Planners may select a level of park amenity development and adjust prototype costs accordingly.

Trail development costs are also included in Table 01 on a per mile basis for use in master budget planning. Different trail widths and materials are significant drivers of trail construction cost. Table 01 empowers planners to create big picture trail master plans with appropriate budget ranges for use in capital planning. These costs can also be broken down on a linear or square foot basis as well. Table 02 provides additional trail construction costs to further develop full trail project budgets.

For creation of de novo Parks or Trails projects, Table 03 a’ la carte Unit Costs provides useful planning information for most park amenities and construction costs with unit rates. Follow the steps in the [De Novo Project Cost Planning Process](#) to budget plan non-prototype parks and trails projects.



## DE NOVO PROJECT COST PLANNING PROCESS

### Step 1: Amenity/Feature Selection and Unit Cost Development

- a. Develop Division Costs for Divisions 2-6 by selecting amenities and developing parking requirements
- b. Determine quantities according to the unit assignments in Table 03 Ala Carte with unit cost rates and apply
- c. To determine Parking Surface Area, complete Worksheet A Parking Surface Area Calculation. Use Table 03 Ala Carte unit cost rates and apply.
- d. Subtotal each amenity/feature row
- e. Subtotal each Division's amenity/feature amounts
- f. Subtotal Amenity Construction Costs (sum of Divisions 2 through 6)

### Step 2: Division 1 Site Cost Development

- a. Multiply total Amenity Construction Costs Develop by each of the appropriate Site Development unit rates:
  1. General Requirements 5-8%
  2. Sitework 4-7%
  3. Demolition/Clearing 3-6%
  4. Site Utilities 3-5%
- b. Subtotal all items for Division 1

### Step 3: Base Construction Cost Development

- a. Sum Divisions 1-6
- b. This total represents Base Construction Costs

### Step 4: Develop Project Hard Cost by Calculating Contractor's Profit & Overhead

- a. Multiply Base Construction Cost subtotal by 20-25%
- b. Add to Base Construction Costs
- c. The new total represents Project Hard Costs

### Step 5: Develop Opinion of Probable Costs by Calculating Design Contingency

- a. Multiply Project Hard Costs by 5-10% for Design Contingency
- b. Add to Project Hard Costs
- c. The new total represents the Opinion of Probable Costs

### Step 6: Develop Professional Services Costs and Total Project Costs

- a. Multiply OPC by 15-20% for Professional Services Costs
- b. Add Professional Services Costs to the OPC for Total Project Costs

## Worksheet A: Parking Surface Area Calculation

## Parking Surface

$$\begin{array}{l} \# \text{ of Spots} \\ \times 162 \text{ SF/Spot} \end{array} = \underline{\hspace{2cm}} \text{ **Parking Stall Area Subtotal (SF)**}$$

$$\begin{array}{l} \# \text{ of Aisles} \\ \# \text{ of Spots/Aisle} \\ \text{Spots/Aisle} \times 9' \\ \text{Aisle Depth} \times 60' \end{array} = \begin{array}{l} \underline{\hspace{2cm}} \\ \underline{\hspace{2cm}} \\ \underline{\hspace{2cm}} \\ \underline{\hspace{2cm}} \end{array} \begin{array}{l} \\ \text{Aisle Depth} \\ \text{**Aisle Area Subtotal (SF)**} \end{array}$$

$$\begin{array}{l} \text{Parking Stall Area} \\ + \text{Aisle Area} \end{array} = \underline{\hspace{2cm}} \text{ **Total Parking Surface Area (SF)**}$$

Enter into Division 2 Parking Worksheet in Qty field

In order to develop an implementation strategy for the proposed trail system, a Planning Level Cost Per Mile chart has been developed. The cost of building materials and labor fluctuates from year to year and requires an in depth look at existing conditions for terrain, drainage and environmental impacts.

The following Table 01 “Planning Level” estimates include a 10% contingency to account for variables such as higher unit costs due to smaller project sections. An additional 15% fee has been added to account for surveying, design and construction administration associated with improvements.

NOT INCLUDED in the Per-Mile costs are the site specific items listed in TABLE 02

TABLE 01

**OFF-ROAD TRAIL MATERIALS COST (Cost Per Mile)**

Planning-Level Cost Estimates

<b>MATERIALS</b>	<b>WIDTH IN FT</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>12</b>
Natural		\$59,400	\$99,000	\$118,800	\$158,400	\$198,000	\$237,600
Decomposed Granite		\$99,000	\$165,000	\$198,000	\$264,000	\$330,000	\$396,000
Gravel		\$99,000	\$165,000	\$198,000	\$264,000	\$330,000	\$396,000
Concrete		\$118,800	\$198,000	\$237,600	\$316,800	\$396,000	\$475,200
Asphalt		\$79,200	\$132,000	\$158,400	\$211,200	\$264,000	\$316,800



TABLE 02

**SITESPECIFICCOSTCONSIDERATIONS (Unit Cost Considerations)**

Planning-Level Cost Estimates

<b>COST PER UNIT</b>	<b>UNIT</b>	<b>UNIT COST</b>
Demolition and Disposal	sf	\$1.65
Fine and Rough Grading	sf	\$2.50
Turf re-establishment	sf	\$0.55
Crosswalk Striping	ea	\$1,100
ADA Ramps	ea	\$1,500
Wooden Boardwalks	sf	\$45
Safety Signage (every 500')	ea	\$550
Pole Lighting (every 100')	ea	\$2,500
Culverts (when needed)	ea	\$1,200

TABLE 03

**A LA CARTE AMENITIES**

Opinion of Probable Costs (OPC) DRAFT

	Item / Description	Unit	Rate 1	Rate 2	Rate 3
<b>1</b>	<b>Site</b>				
1.1	General Requirements/Mobilization	%	5%	6%	7%
1.2	Sitework	%	7%	8%	9%
1.3	Demolition/Clearing & Grubbing	%	3%	4%	5%
1.4	Utilities	%	3%	4%	5%
<b>2</b>	<b>Parking</b>				
2.1	Pavement - Concrete	sf	\$8	\$9.50	\$11
2.2	Pavement - Gravel	sf	\$3	\$4	\$5
2.3	Pavement - Asphalt	sf	\$7	\$10	\$12
2.4	Pavement - Permeable	sf	\$10	\$12	\$15
2.5	Crosswalk & ADA Ramps	ea	\$1,250	\$1,500	\$1,600
2.6	Parking Lot Lighting	ea	\$3,500	\$4,000	\$4,500
<b>3</b>	<b>Structures</b>				
3.1	Restroom (family)	ea	\$75,000	\$100,000	\$125,000
3.2	Restrooms (4 stalls)	ea	\$175,000	\$200,000	\$225,000
3.3	Restroom (6 stalls)	ea	\$250,000	\$300,000	\$350,000
3.4	Pavilion ( Large 30x30)	ea	\$85,000	\$115,000	\$150,000
3.5	Pavilion ( Medium 20x20)	ea	\$30,000	\$35,000	\$40,000
3.6	Picnic Shelter (10x10)	ea	\$14,000	\$16,000	\$18,000
3.7	Amphitheater Stage - Covered (20x20)	ea	\$100,000	\$150,000	\$200,000
3.8	Amphitheater Stage - Uncovered (20x20)	ea	\$40,000	\$50,000	\$60,000
3.9	Shade Sails	ea	\$25,000	\$30,000	\$35,000
3.10	Kayak Launch	ea	\$65,000	\$70,000	\$75,000
3.11	Maintenance Building (30x40)	allow	\$75,000	\$150,000	\$250,000
<b>4</b>	<b>Hardscapes</b>				
4.1	Concrete Sidewalks	sf	\$5	\$5.50	\$6
4.2	Pavers	sf	\$8	\$9	\$10
4.3	Large Pedestrian Bridge (100')	ea	\$100,000	\$125,000	\$150,000
4.4	Small Pedestrian Bridge (30')	ea	\$40,000	\$50,000	\$60,000
4.5	Decomposed Granite	sf	\$5	\$5.50	\$6
4.6	Natural Mulch	sf	\$2	\$2.50	\$3.50
4.7	Boardwalk	sf	\$50	\$60	\$75
4.8	Artificial Turf	sf	\$9	\$10	\$12

TABLE 03 Cont..

Item / Description		Unit	Rate 1	Rate 2	Rate 3
<b>5</b>	<b>Play Amenities</b>				
5.1	Pre-fabricated Playground - 2-5/5-12	ea	\$150,000	\$250,000	\$350,000
5.2	Splash Pad	ea	\$200,000	\$300,000	\$400,000
5.3	Tennis Courts	ea	\$80,000	\$90,000	\$100,000
5.4	Basketball Courts	ea	\$55,000	\$60,000	\$75,000
5.5	Open Fields (multi-use)	ea	\$10,000	\$30,000	\$50,000
5.6	Volleyball Courts	ea	\$4,000	\$5,000	\$7,500
5.7	Baseball Field	ea	\$80,000	\$150,000	\$350,000
5.8	Workout Stations	ea	\$2,500	\$3,500	\$5,000
5.9	Skate Park	allow	\$250,000	\$400,000	\$500,000
<b>6</b>	<b>Landscape</b>				
6.1	Trees	ea	\$300	\$400	\$500
6.2	Landscape Beds & Mulch	sf	\$12	\$14.50	\$16.50
6.3	Grass - Sodded	sf	\$0.55	\$0.65	\$0.75
6.4	Grass - Fine Grading, Seeded	ac	\$3,200	\$3,800	\$4,500
6.5	Irrigation - Grass	sf	\$0.80	\$1.10	\$1.45
6.6	Irrigation - Planting Beds	sf	\$1.45	\$1.95	\$2.10
6.7	Irrigation Drip - Trees	ea	\$200	\$2.25	\$2.50
6.8	Tree Preservation	lf	\$12.50	\$13.50	\$15.50
<b>7</b>	<b>Site Furniture</b>				
7.1	Water Fountains	ea	\$5,000	\$7,000	\$7,500
7.2	Litter Receptacles	ea	\$1,500	\$2,000	\$2,500
7.3	Bike Racks	ea	\$600	\$1,200	\$1,600
7.4	Picnic Tables	ea	\$2,500	\$3,500	\$5,000
7.5	Pet Waste Station	ea	\$300	\$400	\$500
7.6	Backless Bench	ea	\$1,200	\$2,500	\$3,500
7.7	Bench with Back	ea	\$1,800	\$3,200	\$3,800
7.8	Exterior Lighting (Pedestrian-Bollard)	ea	\$500	\$1,000	\$1,500
7.9	Exterior Lighting (Pedestrian-Pole)	ea	\$1,000	\$2,000	\$2,500
7.10	Solar Parking Lights	ea	\$2,500	\$3,000	\$4,500
7.11	Solar Pathway Lights	ea	\$1,500	\$2,000	\$3,000



TABLE 04

**TRAILHEAD PARKS (up to 3 acres)**

Opinion of Probable Costs (OPC) DRAFT

Item / Description		Qty	Unit	Rate	Cost Range		
					Min. Development	Med. Development	Max. Development
<b>1</b>	<b>Site</b>				<b>\$16,704</b>	<b>\$100,548</b>	<b>\$125,993</b>
1.1	General Requirements/Mobilization	1	5%	\$0.05	X	X	X
1.2	Sitework	1	7%	\$0.07	X	X	X
1.3	Demolition/Clearing & Grubbing	1	3%	\$0.03	X	X	X
1.4	Utilities	1	3%	\$0.03	X	X	X
<b>2</b>	<b>Parking</b>				<b>\$23,800</b>	<b>\$60,500</b>	<b>\$60,500</b>
2.1	Pavement - Concrete (10 spaces)	2,200	sf	\$7.50		X	X
2.2	Pavement - Concrete Roadway (100 lf)	2,400	sf	\$7.50		X	X
2.3	Pavement - Gravel (10 spaces)	2,200	sf	\$3.00	X		
2.4	Pavement - Gravel Roadway (100 lf)	2,400	sf	\$3.00	X		
2.5	Crosswalk & ADA Ramps	4	ea	\$1,500.00	X	X	X
2.6	Striping & Signage	1	allow	\$4,000.00	X	X	X
2.7	Parking Lot Lighting	4	ea	\$4,000.00		X	X
<b>3</b>	<b>Structures</b>				<b>\$16,000</b>	<b>\$185,000</b>	<b>\$201,000</b>
3.1	Restroom (family)	1	ea	\$100,000.00		X	X
3.2	Pavilion (Large 30x30)	1	ea	\$85,000.00		X	X
3.3	Picnic Shelter	1	ea	\$16,000.00			X
<b>4</b>	<b>Hardscapes</b>				<b>\$29,800</b>	<b>\$98,700</b>	<b>\$115,460</b>
4.1	6' Concrete Sidewalks	100	lf	\$33.00		X	X
4.2	Site Furnishings (litter, benches, bike racks, picnic)	1	allow	\$25,000.00	X	X	X
4.3	Plaza - Pavers (40'x40')	1600	sf	\$8.00			X
4.4	Exterior Lighting (Pedestrian-Pole)	6	ea	\$1,500.00		X	X
4.5	Decomposed Granite Trails (1/4 mile)	1320	lf	\$30.00		X	
4.6	6' Concrete Trails (1/4 mile)	1320	lf	\$33.00			X
4.7	Water Fountains	1	ea	\$7,000.00		X	X
4.8	Natural Picnic Areas (40'x40')	1600	sf	\$3.00	X	X	X
4.9	Wayfinding/Signage	1	allow	\$10,000.00		X	X

TABLE 04 Cont..

Item / Description		Qty	Unit	Rate	Cost Range		
					Min. Development	Med. Development	Max. Development
<b>5</b>	<b>Play Amenities</b>				<b>\$-</b>	<b>\$180,000</b>	<b>\$270,000</b>
5.1	Pre-fabricated Playground - 2-5/5-12	1	ea	\$150,000.00			X
5.2	Nature Playgrounds - 2-5/5-12	1	ea	\$80,000.00		X	
5.3	Skate Spot	1	ea	\$100,000.00		X	
5.4	Splash Pad	1	ea	\$120,000.00			X
<b>6</b>	<b>Landscape</b>				<b>\$23,200</b>	<b>\$34,400</b>	<b>\$53,000</b>
	<b>Contractor's OH/Markup</b>		<b>25%</b>		<b>\$27,376</b>	<b>\$164,787</b>	<b>\$206,488</b>
	<b>Contingency</b>		<b>5%</b>		<b>\$6,844</b>	<b>\$41,197</b>	<b>\$51,622</b>
	<b>Professional Services Allowance</b>		<b>15%</b>	<b>\$0.15</b>	<b>\$21,559</b>	<b>\$129,770</b>	<b>\$162,609</b>
<b>Total Project Cost Range</b>					<b>\$165,283</b>	<b>\$994,902</b>	<b>\$1,246,673</b>

TABLE 05

**NEIGHBORHOOD PARKS (4 to 6 acres)**

Opinion of Probable Costs (OPC) DRAFT

Item / Description		Qty	Unit	Rate	Cost Range		
					Min. Development	Med. Development	Full Development
<b>1</b>	<b>Site</b>				<b>\$85,554</b>	<b>\$195,300</b>	<b>\$249,610</b>
1.1	General Requirements/Mobilization	1	5%	\$0.05	X	X	X
1.2	Sitework	1	7%	\$0.07	X	X	X
1.3	Demolition/Clearing & Grubbing	1	3%	\$0.03	X	X	X
1.4	Utilities	1	3%	\$0.03	X	X	X
<b>2</b>	<b>Parking</b>				<b>\$64,200</b>	<b>\$162,000</b>	<b>\$162,000</b>
2.1	Pavement - Concrete (20 spaces)	4,400	sf	\$7.50		X	X
2.2	Pavement - Concrete Roadway (500 lf)	12,000	sf	\$7.50		X	X
2.3	Pavement - Gravel (20 spaces)	4,400	sf	\$3	X		
2.4	Pavement - Gravel Roadway (500 lf)	12,000	sf	\$3	X		
2.5	Crosswalk & ADA Ramps	6	ea	\$1,500	X	X	X
2.6	Striping & Signage	1	allow	\$6,000	X	X	X
2.7	Parking Lot Lighting	6	ea	\$4,000		X	X
<b>3</b>	<b>Structures</b>				<b>\$132,000</b>	<b>\$317,000</b>	<b>\$349,000</b>
3.1	Restroom (family)	1	ea	\$100,000	X		
3.2	Restroom (4 stalls)	1	ea	\$200,000		X	X
3.3	Pavilion ( Large 30x30)	1	ea	\$85,000		X	X
3.4	Pavilion ( Medium 20x20)	1	ea	\$32,000			X
3.5	Picnic Shelter (10x10)	2	ea	\$16,000	X	X	X
<b>4</b>	<b>Hardscapes</b>				<b>\$128,000</b>	<b>\$168,100</b>	<b>\$188,820</b>
4.1	6' Concrete Sidewalks	300	lf	\$33	X	X	X
4.2	Site Furnishings (litter, benches, bike racks, picnic)	1	allow	\$30,000	X	X	X
4.3	Plaza - Pavers (40'x40')	1600	sf	\$8			X
4.4	Exterior Lighting (Pedestrian-Pole)	10	ea	\$1,500		X	X
4.5	6' Decomposed Granite Trails (1/2 mile)	2640	lf	\$30	X	X	
4.6	6' Concrete Trails (1/2 mile)	2640	lf	\$33			X
4.7	Water Fountains	2	ea	\$7,000	X	X	X
4.8	Natural Picnic Areas (40'x40')	1600	sf	\$3	X		
4.9	Wayfinding/Signage	1	allow	\$20,000		X	X



TABLE 05 Cont..

Item / Description		Qty	Unit	Rate	Cost Range		
					Min. Development	Med. Development	Full Development
<b>5</b>	<b>Play Amenities</b>				<b>\$94,000</b>	<b>\$354,000</b>	<b>\$510,000</b>
5.1	Pre-fabricated Playground - 2-5/5-12	1	ea	\$200,000		X	X
5.2	Nature Playgrounds - 2-5/5-12	1	ea	\$80,000	X	X	X
5.3	Tennis Courts	1	ea	\$78,000			X
5.4	Basketball Courts	1	ea	\$60,000		X	X
5.5	Open Fields (multi-use)	1	ea	\$10,000	X	X	X
5.6	Volleyball Courts	1	ea	\$4,000	X	X	X
<b>6</b>	<b>Landscape</b>				<b>\$57,100</b>	<b>\$83,900</b>	<b>\$176,900</b>
	<b>Contractor's OH/Markup</b>		<b>25%</b>		<b>\$140,214</b>	<b>\$320,075</b>	<b>\$409,082</b>
	<b>Contingency</b>		<b>5%</b>		<b>\$35,053</b>	<b>\$80,019</b>	<b>\$102,271</b>
	<b>Professional Services Allowance</b>		<b>15%</b>	<b>\$0.15</b>	<b>\$110,418</b>	<b>\$252,059</b>	<b>\$322,152</b>
<b>Total Project Cost Range</b>					<b>\$846,539</b>	<b>\$1,932,453</b>	<b>\$2,469,835</b>

TABLE 06

**COMMUNITY PARKS (5 to 15 acres)**

Opinion of Probable Costs (OPC) DRAFT

Item / Description		Qty	Unit	Rate	Cost Range		
					Min. Development	Med. Development	Full Development
<b>1</b>	<b>Site</b>				<b>\$156,762</b>	<b>\$305,532</b>	<b>\$695,218</b>
1.1	General Requirements/Mobilization	1	5%	\$0.05	X	X	X
1.2	Sitework	1	7%	\$0.07	X	X	X
1.3	Demolition/Clearing & Grubbing	1	3%	\$0.03	X	X	X
1.4	Utilities	1	3%	\$0.03	X	X	X
<b>2</b>	<b>Parking</b>				<b>\$86,400</b>	<b>\$212,000</b>	<b>\$212,000</b>
2.1	Pavement - Concrete (40 spaces)	8,800	sf	\$7.50		X	X
2.2	Pavement - Concrete Roadway (500 lf)	12,000	sf	\$7.50		X	X
2.3	Pavement - Gravel (40 spaces)	8,800	sf	\$3	X		
2.4	Pavement - Gravel Roadway (500 lf)	12,000	sf	\$3	X		
2.5	Crosswalk & ADA Ramps	8	ea	\$1,500	X	X	X
2.6	Striping & Signage	1	allow	\$12,000	X	X	X
2.7	Parking Lot Lighting	8	ea	\$4,000		X	X
<b>3</b>	<b>Structures</b>				<b>\$132,000</b>	<b>\$549,000</b>	<b>\$2,431,000</b>
3.1	Restroom (family)	1	ea	\$100,000	X		
3.2	Restroom (6 stalls)	1	ea	\$250,000		X	X
3.3	Pavilion ( Large 30x30)	1	ea	\$85,000		X	X
3.4	Pavilion ( Medium 20x20)	1	ea	\$32,000	X		X
3.5	Picnic Shelter (10x10)	4	ea	\$16,000		X	X
3.6	Amphitheater Stage (20x20)	1	ea	\$150,000		X	
3.7	Community Swimming Pool	1	allow	\$2,000,000			X
<b>4</b>	<b>Hardscapes</b>				<b>\$260,000</b>	<b>\$311,500</b>	<b>\$345,420</b>
4.1	6' Concrete Sidewalks	500	lf	\$33		X	X
4.2	Site Furnishings (litter, benches, bike racks, picnic)	1	allow	\$30,000	X	X	X
4.3	Plaza - Pavers (40'x40')	1600	sf	\$8			X
4.4	Exterior Lighting (Pedestrian-Pole)	10	ea	\$1,500		X	X
4.5	8' Decomposed Granite Trails (1 mile)	5280	lf	\$40	X	X	

TABLE 06 Cont..

Item / Description		Qty	Unit	Rate	Cost Range		
					Min. Development	Med. Development	Full Development
<b>4</b>	<b>Hardscapes</b>				<b>\$260,000</b>	<b>\$311,500</b>	<b>\$345,420</b>
4.6	8' Concrete Trails (1 mile)	5280	lf	\$44			X
4.7	Water Fountains	2	ea	\$7,000	X	X	X
4.8	Natural Picnic Areas (40'x40')	1600	sf	\$3	X	X	X
4.9	Wayfinding/Signage	1	allow	\$20,000		X	X
4.10	Amphitheater Lawn	1	allow	\$20,000		X	X
<b>5</b>	<b>Play Amenities</b>				<b>\$314,000</b>	<b>\$524,000</b>	<b>\$680,000</b>
5.1	Pre-fabricated Playground - 2-5/5-12	1	ea	\$250,000	X	X	X
5.2	Tennis Courts	1	ea	\$78,000			X
5.3	Basketball Courts	1	ea	\$60,000		X	X
5.4	Open Fields (multi-use)	1	ea	\$10,000	X	X	X
5.5	Volleyball Courts	1	ea	\$4,000	X	X	X
5.6	Baseball Field	1	ea	\$150,000		X	X
5.7	Workout Stations	5	ea	\$10,000	X	X	X
5.8	Skate Park	1	allow	\$300,000			X
<b>6</b>	<b>Landscape</b>				<b>\$78,500</b>	<b>\$100,900</b>	<b>\$193,900</b>
<b>Contractor's OH/Markup</b>		<b>25%</b>			<b>\$256,916</b>	<b>\$500,733</b>	<b>\$1,139,384</b>
<b>Contingency</b>		<b>5%</b>			<b>\$64,229</b>	<b>\$125,183</b>	<b>\$284,846</b>
<b>Professional Services Allowance</b>		<b>15%</b>	<b>\$0.15</b>		<b>\$202,321</b>	<b>\$394,327</b>	<b>\$897,265</b>
<b>Total Project Cost Range</b>					<b>\$1,551,127</b>	<b>\$3,023,175</b>	<b>\$6,879,033</b>



TABLE 07

**COUNTY PARKS (20+ acres)**

Opinion of Probable Costs (OPC) DRAFT

Item / Description		Qty	Unit	Rate	Cost Range		
					Min. Development	Med. Development	Full Development
<b>1</b>	<b>Site</b>				<b>\$158,235</b>	<b>\$393,921</b>	<b>\$904,011</b>
1.1	General Requirements/Mobilization	1	5%	\$0.05	X	X	X
1.2	Sitework	1	7%	\$0.07	X	X	X
1.3	Demolition/Clearing & Grubbing	1	3%	\$0.03	X	X	X
1.4	Utilities						
<b>2</b>	<b>Parking</b>				<b>\$141,600</b>	<b>\$357,000</b>	<b>\$357,000</b>
2.1	Pavement - Concrete (60 spaces)	13,200	sf	\$7.50		X	X
2.2	Pavement - Concrete Roadway (1000 lf)	24,000	sf	\$7.50		X	X
2.3	Pavement - Gravel (60 spaces)	13,200	sf	\$3	X		
2.4	Pavement - Gravel Roadway (100 lf)	24,000	sf	\$3	X		
2.5	Crosswalk & ADA Ramps	12	ea	\$1,500	X	X	X
2.6	Striping & Signage	1	allow	\$12,000	X	X	X
2.7	Parking Lot Lighting	12	ea	\$4,000	\$-	X	X
<b>3</b>	<b>Structures</b>				<b>\$132,000</b>	<b>\$549,000</b>	<b>\$3,681,000</b>
3.1	Restroom (family)	1	ea	\$100,000	X		X
3.2	Restroom (6 stalls)	1	ea	\$250,000		X	X
3.3	Pavilion ( Large 30x30)	1	ea	\$85,000		X	X
3.4	Pavilion ( Medium 20x20)	1	ea	\$32,000	X		X
3.5	Picnic Shelter (10x10)	4	ea	\$16,000		X	X
3.6	Amphitheater Stage (20x20)	1	ea	\$150,000		X	X
3.7	Community Center	1	allow	\$3,000,000			X
<b>4</b>	<b>Hardscapes</b>				<b>\$586,800</b>	<b>\$908,240</b>	<b>\$973,840</b>
4.1	6' Concrete Sidewalks	1000	lf	\$33		X	X
4.2	Site Furnishings (litter, benches, bike racks, picnic)	1	allow	\$30,000	X	X	X
4.3	Plaza - Pavers (40'x40')	1600	sf	\$8			X
4.4	Exterior Lighting (Pedestrian-Pole)	10	ea	\$1,500		X	X
4.5	10' Decomposed Granite Trails (2 miles)	10560	lf	\$50	X	X	

TABLE 07 Cont..

Item / Description		Qty	Unit	Rate	Cost Range		
					Min. Development	Med. Development	Full Development
<b>4</b>	<b>Hardscapes</b>				<b>\$586,800</b>	<b>\$908,240</b>	<b>\$973,840</b>
4.6	10' Concrete Trails (2 miles)	10560	lf	\$55			X
4.7	Water Fountains	2	ea	\$7,000	X	X	X
4.8	Natural Picnic Areas (40'x40')	1600	sf	\$3	X	X	X
4.9	Wayfinding/Signage	1	allow	\$20,000		X	X
4.10	Amphitheater Lawn	1	allow	\$10,000	X	X	X
4.11	12' Equestrian Trails (2 miles)	10560	lf	\$24		X	X
<b>5</b>	<b>Play Amenities</b>				<b>\$100,000</b>	<b>\$695,000</b>	<b>\$805,000</b>
5.1	Pre-fabricated Playground - 2-5/5-12	1	ea	\$250,000		X	X
5.2	Nature Playgrounds - 2-5/5-12	1	ea	\$80,000	X		X
5.3	Open Fields (multi-use)	2	ea	\$10,000	X	X	X
5.4	Baseball Field	2	ea	\$150,000		X	X
5.5	Workout Stations	10	ea	\$10,000		X	X
5.6	Equestrian Amenities (stable,hitch post, water hole)	1	allow	\$30,000			X
5.7	Disc Golf (18 hole)	1	allow	\$25,000		X	X
<b>6</b>	<b>Landscape</b>				<b>\$94,500</b>	<b>\$116,900</b>	<b>\$209,900</b>
<b>Contractor's OH/Markup</b>		<b>25%</b>			<b>\$303,284</b>	<b>\$755,015</b>	<b>\$1,732,688</b>
<b>Contingency</b>		<b>5%</b>			<b>\$75,821</b>	<b>\$188,754</b>	<b>\$433,172</b>
<b>Professional Services Allowance</b>		<b>15%</b>	<b>\$0.15</b>		<b>\$238,836</b>	<b>\$594,575</b>	<b>\$1,364,492</b>
<b>Total Project Cost Range</b>					<b>\$1,831,076</b>	<b>\$4,558,405</b>	<b>\$10,461,102</b>

TABLE 08

**DOG PARKS (1 to 2 acres)**

Opinion of Probable Costs (OPC) DRAFT

Item / Description		Qty	Unit	Rate	Cost Range		
					Min. Development	Med. Development	Full Development
<b>1</b>	<b>Site</b>				<b>\$21,924</b>	<b>\$41,220</b>	<b>\$58,104</b>
1.1	General Requirements/Mobilization	1	5%	\$0.05	X	X	X
1.2	Sitework	1	7%	\$0.07	X	X	X
1.3	Demolition/Clearing & Grubbing	1	3%	\$0.03	X	X	X
1.4	Utilities	1	3%	\$0.03	X	X	X
<b>2</b>	<b>Parking</b>				<b>\$24,800</b>	<b>\$61,500</b>	<b>\$61,500</b>
2.1	Pavement - Concrete (10 spaces)	2,200	sf	\$7.50		X	X
2.2	Pavement - Concrete Roadway (100 lf)	2,400	sf	\$7.50		X	X
2.3	Pavement - Gravel (10 spaces)	2,200	sf	\$3	X		
2.4	Pavement - Gravel Roadway (100 lf)	2,400	sf	\$3	X		
2.5	Crosswalk & ADA Ramps	4	ea	\$1,500	X	X	X
2.6	Striping & Signage	1	allow	\$5,000	X	X	X
2.7	Parking Lot Lighting	4	ea	\$4,000		X	X
<b>3</b>	<b>Structures</b>				<b>\$32,000</b>	<b>\$32,000</b>	<b>\$64,000</b>
3.1	Pavilion ( Medium 20x20)	1	ea	\$32,000		X	X
3.2	Picnic Shelter (10x10)	2	ea	\$16,000	X		X
<b>4</b>	<b>Hardscapes</b>				<b>\$41,800</b>	<b>\$56,100</b>	<b>\$89,300</b>
4.1	6' Concrete Sidewalks	100	lf	\$33		X	X
4.2	Site Furnishings (litter, benches, waste station, picnic, bike rack)	1	allow	\$30,000	X	X	X
4.3	Plaza - Pavers (20'x20')	400	sf	\$8			X
4.4	Exterior Lighting (Pedestrian-Pole)	4	ea	\$1,500		X	X
4.5	6' Decomposed Granite loop trails	1000	lf	\$30			X
4.6	Water Fountains	1	ea	\$7,000	X	X	X
4.7	Natural Picnic Areas (40'x40')	1600	sf	\$3	X	X	X
4.8	Wayfinding/Signage	1	allow	\$5,000		X	X
4.9	5' Perimeter Fencing (1/2 acre)	600	lf	\$12	X	X	X
4.10	5' Perimeter Fencing (2 acres)	1180	lf	\$12	X	X	X
4.11	Artificial Turf (50'x100')	5000	sf	\$9			X



TABLE 08 Cont..

Item / Description		Qty	Unit	Rate	Cost Range		
					Min. Development	Med. Development	Full Development
<b>5</b>	<b>Play Amenities</b>				<b>\$-</b>	<b>\$45,000</b>	<b>\$55,000</b>
5.1	Pre-fabricated Obstacle Course	1	ea	\$30,000		X	X
5.2	Nature Natural Obstacle Course	1	ea	\$15,000		X	X
5.3	Grooming Station	1	ea	\$10,000			X
<b>6</b>	<b>Landscape</b>				<b>\$23,200</b>	<b>\$34,400</b>	<b>\$53,000</b>
	<b>Contractor's OH/Markup</b>		<b>25%</b>		<b>\$35,931</b>	<b>\$67,555</b>	<b>\$95,226</b>
	<b>Contingency</b>		<b>5%</b>		<b>\$8,983</b>	<b>\$16,889</b>	<b>\$23,807</b>
	<b>Professional Services Allowance</b>		<b>15%</b>	<b>\$0.15</b>	<b>\$28,296</b>	<b>\$53,200</b>	<b>\$74,990</b>
<b>Total Project Cost Range</b>					<b>\$216,933</b>	<b>\$407,863</b>	<b>\$574,927</b>



# IMPLEMENTATION & BUSINESS PLAN



**Building the Department of Parks, Trails, & Open Space**



## Building the Department of Parks, Trails, & Open Space

The key to any successful plan is implementation and execution of key tasks aligned with the goals and mission of County leadership and stakeholders. These tasks are a function of opportunities and constraints existing both currently and within the timeline of desired plans. The following Business Plan focuses on necessary steps within the development, nurturing, and sustainment of a responsive and meaningful parks mission for Waller County.

The Business Plan envisions a two to four year process from inception to development of initial park amenities and a functional, mature Department of Parks and Open Space. This plan is broken into the following components:

- Operational Methodology
- Organization Structure
- Finance
  - Capital Finance
  - Operations & Maintenance Finance
  - Pro Forma Budgets
- Mission Development Phases & Tasks

The initiation of this mission through its initial development of parks facilities to the existence of a mature Department is expected to be a 2-4 year exercise. The plan breaks the path into three phases involving specific steps to undertake in areas of Policy, Operations, Finance, and Communications.

## Operational Methodology

### VISION AND MISSION

The primary mission of the Waller County Department of Parks and Open Space will be to provide recreational and open space amenities for the general public with particular focus on Waller County residents. This mission will seek to fill the park infrastructure gaps currently unable to be satisfied by municipalities in the County. While many public parks operations provide both amenity/facility infrastructure as well as recreational programming, Waller County's need for amenities and facilities is acute and requires a significant focus on fulfilling the fundamental requirements of space long before contemplating recreational programming as a service. This is further necessitated by the amount of capital required for development of facilities and the importance of first establishing the parks mission before taking on the cost and burden of developing recreational programs.

Furthermore, this mission will be intently honed on outdoor park and open space needs. Indoor recreational space is ample in the region and requires large expenditures of capital to satisfy even the smallest appetites. The County can best leverage its capital financing position and operational dollars by working to provide ample, well-designed, well-maintained, and attractive park and open space facilities. This is consistent with the demand feedback from the public and stakeholders throughout the master planning process. This plan authentically follows a vision centered around, "Build great, relevant, responsive facilities, and the public will come."

The resulting synopsis of this approach yields a parks mission essentially oriented around:

- A distributed system spread among key County locations based on population, geography, and available, accessible land
- A variety of targeted relevant facilities with self-serve amenities (e.g. playgrounds, trails, pavilions)
- Superior maintenance
- Minimal recreational programming
- Emphasis on outdoor, open space, flexible spaces

Organizational structures and finance concepts will be aligned with this approach.

## Organization Structure

Development of the Department staff makeup will occur in multiple iterations as described in the phasing plan in more detail (see Mission Development Phases & Tasks).

### PHASE A – Q3 FY20-21 TO Q4 FY21-22

- Appointment of Parks Advocate
- Appointment of Ad Hoc Parks, Trails, and Open Space Advisory Committee
- Selection of professional services firm for consultation and facility planning

The first steps involve the appointment of a Parks Advocate and the Ad Hoc Parks, Trails, and Open Space Advisory Committee. The Advocate would serve as the primary point of contact and administrator of the parks mission for the first 12-18 months of the plan. Their task would be to marshal the efforts of the Advisory Committee in line with Commissioner Court goals and direction. This person may or may not ultimately be the Parks Director but certainly needs to be someone with high energy and enthusiasm, possessing strong project management skills, and the ability to work with other entities and multi-task. The Advocate is intended to establish lines of communication and community relationships seeking opportunities for development of parks facilities and being a “cheerleader” for County efforts.

The Ad Hoc Parks, Trails, and Open Space Advisory Committee would also be appointed by Commissioners Court for a period of 12-18 months. Their primary purpose will be to provide feedback and important advice and consultation to the County via the Parks Advocate. This committee would include supportive individuals both within and outside of county government to ideally include representatives from: municipalities, school districts, EDC’s, PVAMU, cycling clubs, recreational non-profits, the Katy Prairie Conservancy, other political entities, and the general public. This committee may be as large as 18-24 individuals.

While this is a large group, their purpose is to provide essential buy-in and interest from around the County, particularly in finding prime opportunities for placement of facilities and identifying partnership opportunities between entities. Finally, this committee will provide a force multiplier effect to the County Parks Advocate in his or her efforts to guide the business plan implementation and establish a first round of project priorities. This committee will also be important in the search and recommendation to the County of its first permanent Director of Parks, Trails, & Open Space.

Finally, the County should select a professional services and design firm to provide facility and organizational planning support to the Advocate and Advisory Committee as the first round of projects are vetted and planned. This consultant would also provide grant and coordination support with Texas Parks & Wildlife as well as other entities as financing plans are created.



### PHASE B – Q3 FY21-22 TO Q2 FY22-23

- Appointment of Parks Director
- Appointment of Parks, Trails, and Open Space Board

The primary organizational steps in the second phase involve selection and appointment of a permanent Director of Parks, Trails, and Open Space. Once this person is appointed by Commissioners Court, the Ad Hoc Advisory Committee should be dissolved and a permanent Board/Commission appointed of approximately 12-18 individuals made up of both private citizens and professional leaders making up a cross section of County stakeholders and partners. Ideally, private citizens would serve in 2-year increments with appointments made by County Commissioners and the County Judge.

If each Commissioner and the Judge were to appoint 1-2 people (one appointment being a 1-year appointment, the other a 2-year appointment) and then create 8 permanent positions annually rotating between municipalities, PVAMU, and other entities in the County, a healthy mix of perspectives and interests can be allowed to thrive with sufficient turnover to keep the body fresh, innovative, and responsive to ever changing needs.

### PHASE C – Q3 FY22-23 TO Q2 FY25-26

- Hiring of Staff

Once the initial rounds of projects are selected, designed, and construction started, the new Parks Director can begin hiring support and maintenance staff. Staffing can be broken into 3 parts:

- Administration & Marketing
- Operations & Projects
- Maintenance

The Administration Division will grow over time as facilities come online and budget, grant compliance, and general administrative tasks begin to burden the department. Potential positions may include:

**Parks Director** - oversees and manages strategic and daily operations, community relations, intergovernmental relations, facilities, and budget responsibilities.

**Communications Manager** – This is also a position best filled upon mid-level maturation of the Department. This position would be responsible for marketing materials, website management, public information, and intergovernmental communication. The Communications Manager position would become appropriate when daily tasks required of the Director become too cumbersome to effectively manage communications and promotion of the parks mission.

**Administrative Assistant/Office Manager** – provides support to Parks Director and other Division managers. An administrative assistant will likely suffice in the first years of the department until facility development fully matures and staff grows.

**Maintenance Manager** – This position would be created once facilities begin to come online. Early parks maintenance is probably best carried out via contract with a 3rd party. As this task grows with the addition of more facilities, the addition of a Maintenance Manager to staff would be appropriate.

**Figure 1** depicts a typical department during the early stages of Department growth. Note that this would likely be a period during the design and programming stages of the initial round of parks facilities.

Once the Department reaches later stages of mid-level maturity of development, additional staff will certainly be required. This stage of development is likely best defined as the County having multiple facilities and undergoing substantial growth in park attendance along with opportunities for additional short-term development.

Additional positions at this stage are dependent on maintenance strategies for facilities. At this stage, the County will want to conduct cost-benefit analysis to determine if bringing maintenance into the County or outsourcing via contract best serves the mission. Regardless, as multiple facilities are built, the need for a single source of maintenance oversight will be required. **Figure 2**

At Department maturity serving several facilities, the addition of an Assistant Parks Director may be appropriate to handle day-to-day management of Operations and Maintenance. An Operations Division with a Park Specialist and Trail Specialist, each focused on rentals, security, programming, and ongoing improvements to facilities, will be essential to maintaining effectiveness and conditions. **Figure 3.** The addition of large, County-scaled parks will likely mean the addition of discrete Park Managers to be assigned to each of these larger, more complex facilities that involve high levels of traffic and visitation. Finally, the development of a regular maintenance crews will be needed at this stage should the County decide to bring these duties in-house in latter stages of development.

*Figure 1 - Early Department Staffing Plan Through Early Stages of Maturation*



*Figure 2 - Staffing Plan at Late Stages of Mid-Level Maturity*

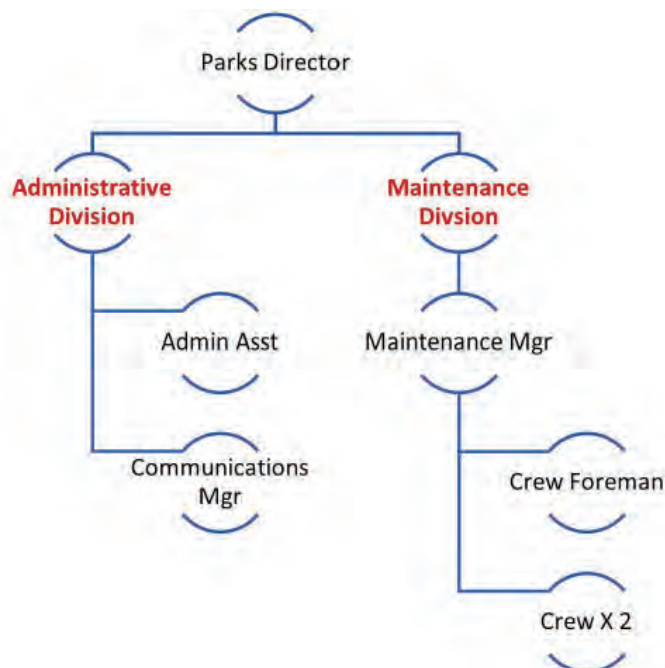
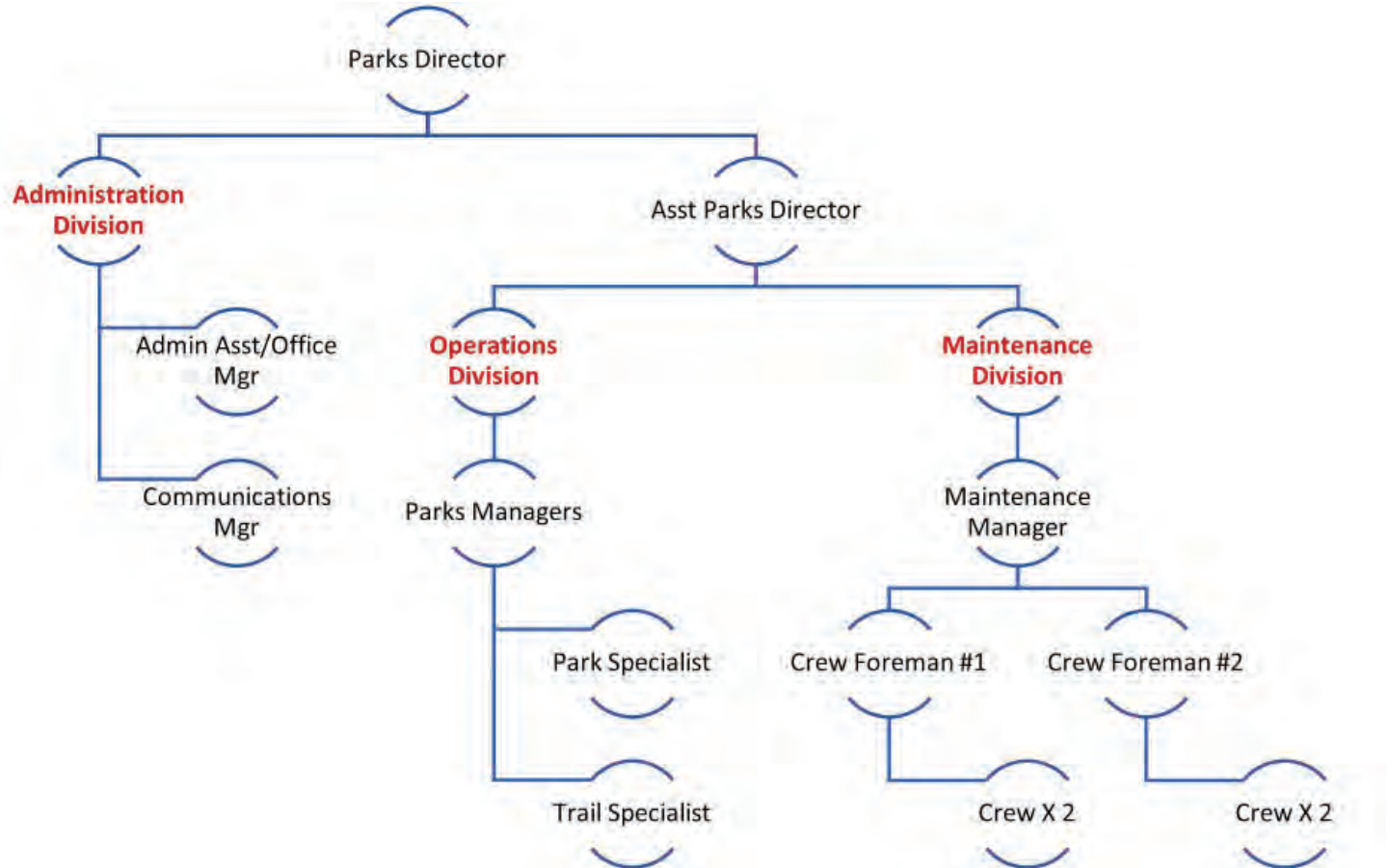


Figure 3 - Staffing Plan at Full Maturity (w/ large County Park in inventory)



A staff of 11-14 positions in a fully mature system is consistent with NRPA findings in its 2020 Agency Performance Review. Communities with 50,000 to 100,000 residents had parks staffs ranging from 32.4 FTE's to as high as 123.1 FTE's. The median for all reporting agencies was 60.2 FTE's. However, two factors have substantial impact on staffing levels that apply to Waller County.

First, population density is a significant driver of staffing levels. Communities with population densities less than 500 people per square mile typically have staffs of 5.1 FTE's per 10,000 people. Waller County's population density is approximately 90 people per square mile. This would equate to a staffing level in a mature system of about 31 FTE's even with the County's significant growth curve.

The other major driver of staffing levels are the types of tasks staff are involved in. The average parks department sees 31% of staff time involved with hosting and conducting recreational programming. 18% of staff time is involved in administration, largely a function of higher levels of recreational programming and public interaction with recreational program participants. This yields about 40% of staffing levels driven by recreational programming; again, an operational consideration that Waller County will not have to deal with given it will be predominantly focused on providing and maintaining facilities rather than providing recreational programming. **As a result, staffing levels for a mature Parks department in Waller County could be as low as 9-18 FTE's, largely determined by the need for maintenance crews.**

As the parks mission begins to fill out and clarity develops as to the types of facilities developed and needs for their ongoing support and maintenance, the County will be able to draw from multiple models in regards to employee types and assignments.



## Finance

### CAPITAL BUDGETS

The primary focus of the new Department will be to develop parks and open space facilities that address the needs and desires of Waller County residents. The two largest drivers of capital expenditures in parks are land acquisition and construction. To the greatest extent possible, Waller County should focus on reducing land acquisition costs by finding land opportunities via its existing properties, partnerships with local municipalities, school districts, Prairie View A&M University, public utilities (i.e. ROW access easements with pipelines and electrical providers), and through private donations of land. These strategies can help reduce capital requirements substantially freeing up budget dollars for actual development of amenities.

Capital expenditures studied in thousands of parks agencies nationwide in the 2020 NRPA Agency Performance Review show that departments in communities between 50,000 and 100,000 people typically have 5 year capital plans of just under \$8.8 million. These are primarily established systems so early investments for Waller County to “catch up” with facilities will be necessary. A smart strategy to get the most benefit and impact for each dollar of capital is crucial to establishing credibility and a responsive park program that will secure long-term public support.

An early focus on trailhead parks and commensurate trail systems would provide a broad array of small to medium sized financial commitments leverage significant multiple opportunities across Waller County with an immediate impact in resolving the demand for park and open space as voiced by the public during the master plan. Furthermore, these types of amenities require far less cost to develop; yet, they deliver instant and meaningful impact.

One of the most important implementation steps for the first 12 months of the plan will be to prioritize targets for development, plan, and budget accordingly. As referenced earlier, by identifying partnerships for land and utilizing donated land, the County can focus capital budgets on construction. **Early estimates for an effective rollout of park amenities over the next 3-5 years would likely require \$6-\$10 million for an array of smaller parks, several miles of trails over multiple trail complexes, and potentially, the development of one larger County-scaled park.**

Most park development is typically accomplished with General Obligation (GO) bonds in counties’ debt budgets. Voter approval for highly specific bond elections are required to take on such debt. The County has historically carried a low Interest & Sinking (I&S) tax rate. The current rate of just over \$.06 has been used to finance justice-focused projects as the County has grown. This is still a relatively low level of tax liability for a fast-growing county. Indeed, County taxable values have grown an average of 12% annually for the last 10 years with recent growth spikes of 9-14% year to year. Every 10% in taxable value growth results in a reduction of \$.01 in the debt tax rate.

Notwithstanding capital financing via GO bonds, funding can also be accomplished with the use of Revenue Bonds (Certificates of Obligation, “CO”) which can be financed through the General Fund without voter approval. Furthermore, CO’s also provide far more flexibility to County decision-makers than GO bonds do; when coupled with grants, this form of financing can be very effective in providing fast and efficient delivery of projects.

Regardless of which financing methods are chosen, the steady growth of Waller County's tax base provides ample opportunity to dedicate some portion of tax rates to the parks mission. **A dedicated \$.01 tax rate on current values would be sufficient to yield \$10 million of capital via a 20-year bond assuming 3% interest rates. Current average interest rates for General Obligation bonds are actually lower at 2.3% as of early April 2021.** The use of CO's would likely require a higher interest rate but even at 4.5% rates, tax burden for a CO of \$10 million would only require \$.0114 per hundred of value.

## OPERATING BUDGETS

Several Texas counties provide parks services at varying levels of amenity and recreational program levels. The master plan examined seven counties (Brazoria, Chambers, Ft Bend, Galveston, Williamson, Hays, Kendall) to develop benchmarks for comparison to a potential Waller County Department of Parks. These counties were selected for a variety of reasons based on proximity, geographic makeup, or rural-urban dynamics.

These counties showed operational budgets ranging from approximately \$710,000 to \$5.6 million annually. The average share of the Operations & Maintenance (O&M) General Fund budget dedicated to parks was 1.48% although counties surrounding Waller County were closer to between 3-4% of General Fund budgets. Median operating expenditures per capita in Texas benchmark systems was \$7.18 per person. By comparison, a National Parks and Recreation Association (NRPA) study of 84 counties across the country showed that median expenditures are about \$16.76 per person. The higher amounts largely accounted for heavy recreational programming which require significant staffing levels.

Staffing accounts for between 60-70% of operating budgets in both the benchmark Texas counties and nationally. As discussed earlier, Waller County should be able to accomplish lower staffing levels in a mature department due to being focused less on recreational programming and more on providing facilities and amenities. The most important operational budgeting factors for Waller County will be maintenance and promotional/marketing expenses.

Controlling for the recreational component, it appears that both nationally and in the Texas benchmark counties, per capita operational expenditures are best based between \$6 and \$15 per person. **For Waller County, this means an operational budget maturity of between \$360,000 and \$900,000 will ultimately be commensurate with both the Texas benchmark counties and other counties nationwide (based on current population estimates of approximately 60,000 people).**

This operations budget will obviously be determined by operational needs driven primarily by staffing which are in turn going to be determined primarily by maintenance and support for developed facilities. As a result, two dynamics are important to remember:

- 1) early focus should be on capital spending to develop amenities and facilities,
- 2) operational budgets should not be developed without first determining the operations needs of built facilities.

Early operating budgets will also be affected by design and engineering fees associated with development of new facilities. These expenses will transition to other costs as the construction components begin to be fulfilled.

According to the NRPA, parks departments in areas the size of Waller County typically spend about \$3,941 per acre of parkland. A \$600,000 operating budget would provide for about 152 acres of parkland for Waller County based on this standard. An important caveat to this benchmark will be the type of facilities created which have a major impact on expenditures.

With a focus on developing, constructing, and maintaining facilities rather than recreational programs, it is possible Waller County may be able to successfully suppress operating budgets to below the median seen elsewhere while still providing robust parks and open space amenities to the public.

## PROFORMA BUDGETS

Two pro forma budgets have been devised for the next 7 years. An Aggressive Budget Pro Forma (Table 02) targets extremely aggressive projections of cost and inflation escalation along with the assumption of up to \$10 million in capital expenditures. The Conservative Budget Pro Forma (Table 03) reduces operational spending by 60% and assumes \$2.5 million in capital investments.

The following summary (Table 01) illustrates that ultimate impacts on tax rates are fairly benign. A maximum tax rate of \$.01775 in the Aggressive Pro Forma vs \$.00843 in the Conservative version only saves just \$9.32 per \$100,000 of taxable value while reducing the average operating budget by over \$300,000 annually and reducing capital expenditures by \$7.5 million.

Choices will clearly have to be made regarding the value of these services and feedback from taxpayers as to their appetite for supporting parks and trails. Opportunities for grants and partnerships can help reduce the overall level of capital expenditures. Furthermore, tying operating cost structures to actual parkland and trails served can be a useful tool for projecting and controlling operating costs.

Cost recovery strategies for direct operating costs can also provide relief to the tax base with cost sharing from revenue producing amenities or other fee-based facilities. Cost recovery goals are typically as much as 25% of direct operating costs garnered through entry, clean up, and parking fees, memberships, private donations, event revenues, etc. Use of special permit fees with private groups for concession or other business ventures can help activate parks and provide revenue simultaneously. Partnerships with cycling and nature clubs to provide key trail or amenity support via volunteerism can substantially assist with reducing maintenance and labor costs, particularly for trail facilities. Several municipalities in the region have established partnerships with such organizations to provide trail maintenance labor and even materials.

TABLE 01

### Summary of Pro Forma Analysis

	Aggressive	Conservative
Average FTE	6.29	3.00
Acres of Parkland/Trails	160	60
Operating Budget Low Year	\$115,000	\$76,000
Operating Budget High Year	\$835,663	\$396,365
Operating Budget Average	\$563,482	\$247,331
Capital Expenditures	\$10,000,000	\$2,500,000
Operating Cost per FTE	\$105,768	\$86,592
Operating Cost per Acre	\$7,767	\$10,707
Total Expenditures per Acre	\$19,306	\$27,088
M&O Tax Rate (maximum)	\$0.009	\$0.004
Debt Tax Rate (maximum)	\$0.010	\$0.005
Total Tax Rate (maximum)	\$0.018	\$0.008



The key to an impactful parks mission requires a mix of sources of funding and establishment of priorities. Ideally, a focus on capital investment at impactful levels coupled with interlocal and volunteer group partnerships to help reduce operations costs along with reasonable fee structures for clean up and use cost-sharing can create a robust opportunity to keep tax burdens in the range of \$.012 to \$.015.

TABLE 02

**Aggressive Budget Pro Forma**

Operating Budget Pro Forma								
	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	7-Yr Avg
FTE	1	2	4	6	9	10	12	6
Salaries & Payroll Costs	\$50,000	\$103,500	\$207,000	\$310,500	\$465,750	\$517,500	\$621,000	\$325,036
Operations	\$10,000	\$10,000	\$20,000	\$30,000	\$35,000	\$40,000	\$45,000	\$27,143
Marketing/Training/Conferences	\$5,000	\$5,500	\$6,600	\$7,260	\$7,986	\$8,785	\$9,663	\$7,256
Maintenance (incl supplies)	\$-	\$15,000	\$30,000	\$60,000	\$60,000	\$70,000	\$90,000	\$46,429
Equipment Acquisition/Maintenance/Leasing	\$-	\$5,000	\$15,000	\$20,000	\$50,000	\$50,000	\$50,000	\$27,143
Contractual Services	\$50,000	\$200,000	\$200,000	\$200,000	\$100,000	\$20,000	\$10,000	\$111,429
Non-CIP Capital Outlay								
Equipment	\$-			\$20,000		\$20,000		\$13,333
Other	\$-	\$5,000	\$5,000	\$5,000	\$5,000	\$10,000	\$10,000	\$5,714
<b>Total Operating Budget</b>	<b>\$115,000</b>	<b>\$344,000</b>	<b>\$483,600</b>	<b>\$652,760</b>	<b>\$723,736</b>	<b>\$736,285</b>	<b>\$835,663</b>	<b>\$563,482</b>
Capital Budget Pro Forma								
Acres of Parks/Trails	-	20	40	80	120	130	160	
Capital Fund Balance (via Debt issuance)		\$10,000,000						
Acquisition	\$-	\$200,000	\$400,000	\$400,000				\$-
Development	\$-	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$1,000,000		\$-
<b>End of Year Capital Fund Balance</b>	<b>\$-</b>	<b>\$7,800,000</b>	<b>\$5,400,000</b>	<b>\$3,000,000</b>	<b>\$1,000,000</b>	<b>\$-</b>	<b>\$-</b>	
<b>Debt Payments (\$10 million, 20 yr, 4% interest)</b>	<b>\$-</b>	<b>\$735,818</b>	<b>\$735,818</b>	<b>\$735,818</b>	<b>\$735,818</b>	<b>\$735,818</b>	<b>\$735,818</b>	
Analysis								
								Average
Ops Expenditures per FTE	\$115,000	\$172,000	\$120,900	\$108,793	\$80,415	\$73,628	\$69,639	\$105,768
Ops Expenditures per Acre	\$-	\$17,200	\$12,090	\$8,160	\$6,031	\$5,664	\$5,223	\$7,767
Capital Expenditure per Acre	\$100,000	Total						
<b>Total Expenditures per FTE (Ops + Debt Service)</b>	<b>\$115,000</b>	<b>\$539,909</b>	<b>\$304,854</b>	<b>\$231,430</b>	<b>\$162,173</b>	<b>\$147,210</b>	<b>\$130,957</b>	<b>\$233,076</b>
<b>Total Expenditures per Acre</b>	<b>\$-</b>	<b>\$53,991</b>	<b>\$30,485</b>	<b>\$17,357</b>	<b>\$12,163</b>	<b>\$11,324</b>	<b>\$9,822</b>	<b>\$19,306</b>
Taxable Value (5% annual growth)	\$6,765,625,089	\$7,103,906,343	\$7,459,101,661	\$7,832,056,744	\$8,223,659,581	\$8,634,842,560	\$9,066,584,688	
Effective M&O Tax (Parks)	\$0.002	\$0.005	\$0.006	\$0.008	\$0.009	\$0.009	\$0.009	
Effective Debt Tax (Parks)	\$-	\$0.010	\$0.010	\$0.009	\$0.009	\$0.009	\$0.008	
<b>Total Tax Burden (Parks)</b>	<b>\$0.002</b>	<b>\$0.015</b>	<b>\$0.016</b>	<b>\$0.018</b>	<b>\$0.018</b>	<b>\$0.017</b>	<b>\$0.017</b>	

TABLE 03

**Conservative Budget Pro Forma**

<b>Operating Budget Pro Forma</b>								
	<b>FY 20-21</b>	<b>FY 21-22</b>	<b>FY 22-23</b>	<b>FY 23-24</b>	<b>FY 24-25</b>	<b>FY 25-26</b>	<b>FY 26-27</b>	<b>7-Yr Avg</b>
<b>FTE</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>3</b>
Salaries & Payroll Costs	\$50,000	\$103,500	\$103,500	\$155,250	\$155,250	\$207,000	\$310,500	\$155,000
Operations	\$4,000	\$4,000	\$8,000	\$12,000	\$14,000	\$16,000	\$18,000	\$10,857
Marketing/Training/Conferences	\$2,000	\$2,200	\$2,640	\$2,904	\$3,194	\$3,514	\$3,865	\$2,902
Maintenance (incl supplies)	\$-	\$6,000	\$12,000	\$24,000	\$24,000	\$28,000	\$36,000	\$18,571
Equipment Acquisition/Maintenance/Leasing	\$-	\$2,000	\$6,000	\$8,000	\$20,000	\$20,000	\$20,000	\$10,857
Contractual Services	\$20,000	\$80,000	\$80,000	\$80,000	\$40,000	\$8,000	\$4,000	\$44,571
Non-CIP Capital Outlay								
Equipment	\$-	\$-	\$-	\$8,000	\$-	\$8,000	\$-	\$2,286
Other	\$-	\$2,000	\$2,000	\$2,000	\$2,000	\$4,000	\$4,000	\$2,286
<b>Total Operating Budget</b>	<b>\$76,000</b>	<b>\$199,700</b>	<b>\$214,140</b>	<b>\$292,154</b>	<b>\$258,444</b>	<b>\$294,514</b>	<b>\$396,365</b>	<b>\$247,331</b>
<b>Capital Budget Pro Forma</b>								
<b>Acres of Parks/Trails</b>	<b>-</b>	<b>10</b>	<b>10</b>	<b>20</b>	<b>40</b>	<b>50</b>	<b>60</b>	
Capital Fund Balance (via Debt issuance)		\$2,500,000						
Acquisition	\$-	\$50,000	\$100,000	\$100,000			\$-	
Development	\$-	\$500,000	\$500,000	\$500,000	\$500,000	\$250,000	\$-	
<b>End of Year Capital Fund Balance</b>	<b>\$-</b>	<b>\$1,950,000</b>	<b>\$1,350,000</b>	<b>\$750,000</b>	<b>\$250,000</b>	<b>\$-</b>	<b>\$-</b>	
<b>Debt Payments (\$2.5 million, 20 yr, 4% interest)</b>	<b>\$-</b>	<b>\$367,909</b>	<b>\$367,909</b>	<b>\$367,909</b>	<b>\$367,909</b>	<b>\$367,909</b>	<b>\$367,909</b>	
<b>Analysis</b>								
								<b>Average</b>
Ops Expenditures per FTE	\$76,000	\$99,850	\$107,070	\$97,385	\$86,148	\$73,628	\$66,061	\$86,592
Ops Expenditures per Acre	\$-	\$19,970	\$21,414	\$14,608	\$6,461	\$5,890	\$6,606	\$10,707
Capital Expenditure per Acre	\$25,000	Total						
Total Expenditures per FTE (Ops + Debt Service)	\$76,000	\$283,804	\$291,024	\$220,021	\$208,784	\$165,606	\$127,379	\$196,088
Total Expenditures per Acre	\$-	\$56,761	\$58,205	\$33,003	\$15,659	\$13,248	\$12,738	\$27,088
Taxable Value (5% annual growth)	\$6,765,625,089	\$7,103,906,343	\$7,459,101,661	\$7,832,056,744	\$8,223,659,581	\$8,634,842,560	\$9,066,584,688	
Effective M&O Tax (Parks)	\$0.001	\$0.003	\$0.003	\$0.004	\$0.003	\$0.003	\$0.004	
Effective Debt Tax (Parks)	\$-	\$0.005	\$0.005	\$0.005	\$0.004	\$0.004	\$0.004	
<b>Total Tax Burden (Parks)</b>	<b>\$0.001</b>	<b>\$0.008</b>	<b>\$0.008</b>	<b>\$0.008</b>	<b>\$0.008</b>	<b>\$0.008</b>	<b>\$0.008</b>	

## Mission Development Phases & Tasks

The development of a sustainable and effective Department of Parks & Open Space is proposed as a three-phase effort to occur over the next 2-4 years. These phases will involve specific key tasks that build upon each other, develop buy-in from the community and partners, and establish a foundation from which to build relevant projects and maintain a responsive Parks mission for Waller County in the years to come.

The three phases are designed to direct efforts on the most crucial steps in 4 discrete areas of focus throughout each of the phases.

- Policy
- Operations
- Finance
- Communications

The phases combine a series of tasks in each of these four focus areas throughout specific time frames for execution. However, some tasks, primarily in the arena of Communications, are meant to be consistent and ongoing throughout the life of the implementation and beyond.

### PHASE A

Initiation and Launch will focus largely on creation of the Department, its mission, and development of a framework for the construction of the Department and successful execution of its goals. This phase should begin in the 3rd quarter of FY 20-21.

### PHASE B

Functionality and Operability will focus on utilizing the framework established in Phase A for creation of projects and development of a Department. The first tranche of project financing, design, and construction should begin in this second phase as well as development of a functional Department. Some of these steps should begin as early as the 3rd quarter of FY 20-21 with most initiated in the first two quarters of FY 21-22 and additional momentum for perhaps through FY 22-23.

### PHASE C

Delivery and Sustainability will focus on fostering mature business operations, implementation of maintenance standards and programs, staff development, and ongoing project delivery goals. This phase is somewhat concurrent with Phase B with several areas of overlap as the Department mission, capabilities, and responsibilities grow. This stage of growth will likely begin around the time of the first tranche of FY 21-22 projects being constructed and be an on-going exercise in operational performance.



### Summary of Mission Development Phases & Tasks

Task		FY 20-21				FY 21-22				FY 22-23			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
P1	Adoption of Parks, Trails, & Open Space Master Plan			X									
P2	Department Creation				X								
P3	Appointment of Parks, Trails & Open Space Advocate				X								
P4	Appointment of Ad Hoc Parks, Trails & Open Space Advisory Committee				X								
P5	Develop Parkland Dedication Standards				X								
P6	Adopt Parkland Dedication Standards				X								
O1	Develop project priorities for next 2-5 years				X								
F1	Identify and evaluate relevant grant programs				X								
F2	Establish fundraising opportunities and set goals				X								
C1	Establish communication lines with municipalities				X								
C2	Establish communication lines with relevant governmental agencies				X								
C3	Establish communication lines with relevant not-for-profits				X								
C4	Establish relationship with TPWD				X								
C5	Establish relationship with PVAMU				X								
P7	Mission Statement Development					X							
P8	Adoption of Mission Statement					X							
O2	Identify Tier 1 Projects for construction in Parks Finance Round 1					X							
F3	Develop initial O&M Budget for FY 21-22					X							
F4	Parks Finance Round 1 planning and programming					X							
F5	Develop draft planning Capital Budget for Parks Finance Round 1					X							
F6	Parks Finance Round 1 early fund development & associated finance activities					X							
C6	Develop Parks website					X							
O3	Master Plan key projects in Tier 1 and 2 for Parks Finance Round 1						X						
P9	Appointment of Parks Director							X					
F7	Private fundraising activities (Ongoing and Special Project)							X					
F8	Identify appropriate grants for pursuit Parks Finance Round 1							X					
P10	Dissolution of Ad Hoc Parks, Trails & Open Space Advisory Committee								X				
P11	Appointment of Parks, Trails & Open Space Board								X				
O4	Design selected projects for Parks Finance Round 1								X				
F9	Secure capital financing for Parks Finance Round 1									X			
F10	Develop forward-looking O&M Budget for FY 22-23									X			
F11	Apply for relevant grants									X			
O5	Construct Parks Finance Round 1 projects										X		
O6	Develop Maintenance Standards and Program											X	
O7	Hire staff as appropriate & begin initiation/training											X	

## Phase &amp; Task Completion Checklist

Phase & Task Completion Checklist				Start					
		Primary Responsibility	Detail	Qtr	FY	Phase A	Phase B	Phase C	Notes
Policy									
P1	Adoption of Parks, Trails, & Open Space Master Plan	Commissioners Court	Resolution	3	20-21	X			
P2	Department Creation	Commissioners Court	Resolution	4	20-21	X			
P3	Appointment of Parks, Trails & Open Space Advocate	Commissioners Court	Resolution	4	20-21	X			
P4	Appointment of Ad Hoc Parks, Trails & Open Space Advisory Committee	Commissioners Court	Resolution + Community Partners	4	20-21	X			
P5	Develop Parkland Dedication Standards	Advocate	In conjunction w/ Engineer & Comm Court	4	20-21	X			
P6	Adopt Parkland Dedication Standards	Commissioners Court	Resolution to amend development standards	4	20-21	X			
P7	Mission Statement Development	Advocate	In conjunction w/ Adv. Cmte & Comm Court	1	21-22	X			
P8	Adoption of Mission Statement	Commissioners Court	Follows P6	1	21-22	X			
P9	Appointment of Parks Director	Commissioners Court	Full-Time	3	21-22		X		
P10	Dissolution of Ad Hoc Parks, Trails & Open Space Advisory Committee	Commissioners Court		4	21-22		X		
P11	Appointment of Parks, Trails & Open Space Board	Commissioners Court	Follows P9 & P10	4	21-22		X		
Operations									
O1	Develop project priorities for next 2-5 years	Advocate	In conjunction with Adv. Cmte. & Comm. Court	4	20-21	X			
O2	Identify Tier 1 Projects for construction in Parks Finance Round 1	Advocate	In conjunction with Adv. Cmte. & Comm. Court	1	21-22	X			
O3	Master Plan key projects in Tier 1 and 2 for Parks Finance Round 1	Advocate	Consultant	2	21-22	X			
O4	Design selected projects for Parks Finance Round 1	Parks Director	Consultant	4	21-22		X		
O5	Construct Parks Finance Round 1 projects	Parks Director	Contractor	2	22-23		X		
O6	Develop Maintenance Standards and Program	Parks Director		3	22-23			X	
O7	Hire staff as appropriate & begin initiation/training	Parks Director		3	22-23			X	
Finance									
F1	Identify and evaluate relevant grant programs	Advocate		4	20-21	X			
F2	Establish fundraising opportunities and set goals	Advocate	In conjunction with Adv. Cmte.	4	20-21	X			
F3	Develop initial O&M Budget for FY 21-22	Advocate		1	21-22	X			
F4	Parks Finance Round 1 planning and programming	Advocate	In conjunction with Adv. Cmte. & Consultant	1	21-22		X		
F5	Develop draft planning Capital Budget for Parks Finance Round 1	Advocate	In conjunction with Adv. Cmte. & Consultant	1	21-22		X		
F6	Parks Finance Round 1 early fund development & associated finance activities	Commissioners Court		1	21-22		X		
F7	Private fundraising activities (Ongoing and Special Project)	Parks Director	In conjunction with Adv. Cmte.	3	21-22	X			
F8	Identify appropriate grants for pursuit Parks Finance Round 1	Parks Director		3	21-22		X		
F9	Secure capital financing for Parks Finance Round 1	Commissioners Court		1	22-23		X		
F10	Develop forward-looking O&M Budget for FY 22-23	Parks Director		1	22-23		X		
F11	Apply for relevant grants	Parks Director		1	22-23		X		
Communications									
C1	Establish communication lines with municipalities	Advocate		4	20-21	X			
C2	Establish communication lines with relevant governmental agencies	Advocate		4	20-21	X			
C3	Establish communication lines with relevant not-for-profits	Advocate		4	20-21	X			
C4	Establish relationship with TPWD	Advocate		4	20-21	X			
C5	Establish relationship with PVAMU	Advocate		4	20-21	X			
C6	Develop Parks website	Advocate		1	21-22	X			







## APPENDIX

**Works Cited**  
**Existing Conditions Report**  
**Waller County Conservation Funding Study**

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Cover Page –

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Pg. 3 – <https://www.evahotels.com/en/story/first-running-steps>

Pg. 5 – Burditt Consultants LLC

Pg. 11 – Burditt Consultants LLC

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Pg. 18 – <https://www.google.com/maps>, <https://www.viprealestate.com/houston-waller-homes-for-sale.php>

Pg. 19 - [https://www.zillow.com/homedetails/24120-Plantation-Lake-Ct-Hempstead-TX-77445/220088589\\_zpid/](https://www.zillow.com/homedetails/24120-Plantation-Lake-Ct-Hempstead-TX-77445/220088589_zpid/), Burditt Consultants LLC

Pg. 20 - <https://www.pvamu.edu/bsrv/campusplanningspacemanagement/campus-resource-2/space-management/>

Pg. 21 - <https://rootsrated.com/dallas-ft-worth-tx/flat-water-paddling/brazos-river-paddling>, <https://farmandranch.com/property/deer-run-ranch>

Pg. 22 - <https://everythingautism.org/dewberry-farms-katy/>, <https://www.katyprairie.org/plan-your-visit>

Pg. 23 - <https://www.pinterest.com/pin/437693657506679645/>, <https://www.bessiescreek.org/about/>

Pg. 27 - Texas Community Watershed Partners, <https://www.google.com/maps>,

Pg. 28 – Katy Prairie Conservancy

Pg. 32 - <https://365thingsinhouston.com/2018/08/15/park-spotlight-katy-city-park/>, <https://www.google.com/maps>, Burditt Consultants LLC, Stephanie A. Google Maps Local Guide, [http://www.ci.sealy.tx.us/page/scranton\\_park](http://www.ci.sealy.tx.us/page/scranton_park)

Pg. 33 - <https://www.google.com/maps>, Judge Trey Duhon, <https://www.pct3.com/Parks/Zube-Park>, Burditt Consultants, LLC

Pg. 34 - [https://www.youtube.com/watch?v=bdhm3b9\\_QCE](https://www.youtube.com/watch?v=bdhm3b9_QCE), <https://www.yourconroenews.com/neighborhood/moco/sports/article/Magnolia-Aquatic-Club-awarded-Gold-Medal-Club-12442663.php>, <https://www.google.com/maps>

Pg. 35 - [https://www.zillow.com/homedetails/4419-Silvergrass-Ln-Katy-TX-77493/2079644654\\_zpid/?mmlb=g,8](https://www.zillow.com/homedetails/4419-Silvergrass-Ln-Katy-TX-77493/2079644654_zpid/?mmlb=g,8), Siyoung Park, Waller County Sports Association, <https://rvtexasyall.com/blog-texas-rv-parks/lone-star-jellystone-park-review>



Pg. 36 – Burditt Consultants LLC, Waller County Fair Association, Community Impact Magazine

Pg. 59 - <https://gardendrum.com/2012/09/13/a-new-herb-garden/>, <https://www.rgbstock.com/photo/rAqT24W/shaded+playground+equipment1> ( Tacluda), <https://www.pinterest.com/pin/96968198216101331/>, <https://www.americantrails.org/resources/interpretive-signs-and-displays-along-trails>

Pg. 60 - <https://huntco.com/deluxe-public-work-stand>, <http://www.bayerla.com/brickyard-trail-sandra-l-frankel-nature-park>, <https://www.shoemaker-haaland.com/civil-engineering/trails-and-recreation/>, <https://twitter.com/parkprotecto>, <https://www.centraltexasgardener.org/2019/08/connecting-borders-with-plants/>

Pg. 70 - <https://www.bikecleveland.org/bike-cle/news/sharrows-bike-lanes-and-cycle-tracks-whats-the-difference/2015/04/>, [https://store.hallsigns.com/D11-1-Bike-Route\\_p\\_2982.html](https://store.hallsigns.com/D11-1-Bike-Route_p_2982.html), <https://www.cbc.ca/news/canada/montreal/sherbrooke-street-bike-paths-montreal-1.4912677>, <https://www.bikemore.net/news/west-baltimore-bike-boulevards-project-update>, <https://www.phillymag.com/news/2019/07/11/two-way-protected-bike-lanes/>

Pg. 81 - <https://www.wallercountyhistory.org/>

Pg. 101 – Burditt Consultants LLC

Pg. 115 – Burditt Consultants LLC





# **EXISTING CONDITIONS REPORT**

## **An Interim Report of the Waller County Parks, Trails, & Open Space Master Plan**



# Acknowledgments

## Waller County

Judge Carbett “Trey” J. Duhon III, County Judge  
 John A. Amsler, Precinct 1 Commissioner  
 Walter E. Smith, Precinct 2 Commissioner  
 Jeron Barnett, Precinct 3 Commissioner  
 Justin Beckendorff, Precinct 4 Commissioner

## Steering Committee

Trey Duhon, County Judge  
 Justin Beckendorff, Commissioner Precinct 4  
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 Gene Schmidt, City of Waller  
 David Allen, Mayor, City of Prairie View  
 Joe Garcia, Mayor, City of Pattison  
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 Steve Nagy, Mayor, Township of Pine Island  
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## Partners

The Houston Endowment  
 Katy Prairie Conservancy  
 Land Water Associates

## Institutional

Prairie View A&M University

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J. Shane Howard, Program Manager  
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## Existing Conditions Report

The Existing Conditions Report is a summary of current resources for recreation, natural and cultural heritage, and conservation that have been identified within Waller County. This Report is an interim product of the larger, layered Master Plan which will be assembled in the coming weeks and months.

The inventory of resources contained in this Report considers both the natural characteristics of the Waller County landscape as well as man-made components such as existing municipal parks and trails, and private recreation providers such as gyms, campgrounds, and sporting facilities. It also begins to translate the demographic and behavioural attributes of the County's peoplescope to focus relevance and specificity coupled with needs/wants as a basis for future recommendations.

Finally, the Existing Conditions Report serves primarily as a foundation upon which to begin applying public and stakeholder feedback garnered in survey and public workshop data. This document will be followed with additional interim reports that begin to explore specific and detailed aspects of Waller County recreation habits, opportunities, recommendations, and plans for implementation. These will ultimately culminate in a cohesive Parks, Trails, and Open Space Master Plan containing the full spectrum of data, input, findings, recommendations, cost projections, and plans.



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# Introduction

## Planning Context

Waller County is rich in natural resources and open space. It is also a dynamic and rapidly developing exurban region with key regional transportation infrastructure bisecting the County yet with significant gaps in local connectivity.

The County's open space continues to be attractive for residential and commercial development with the most profitable and environmentally resilient tracts largely in unincorporated areas of the County. As a result, a significant portion of the development mission in the County (i.e.... subdivision regulation, natural space protection, parks development, mobility planning, etc.) falls heavily on Waller County government along with the County's small number of individual municipalities.

In pursuit of strategies to protect the natural lands, heritage, and beauty of the area while embracing the natural pace of change, the County completed a Comprehensive Strategic Plan in 2017 in which the Plan identified the following key recommendations related to this specific project:

**Maintain and expand Waller County's unique cultural, natural, and historical identity.**

**Develop and implement a Master Parks, Hike and Bike Trails Plan for the County to be known as a pedestrian-friendly county.**

**Create Future Land Use map for the County that includes development regulations such as rights-of-way, size of lots, green space, areas for residential and industrial growth, subdivision ordinances, and connectivity paths in residential areas.**

**Continually review land use and plan for future developments, taking into consideration other County Master Plans developed.**

**Create a Master Drainage Plan with a Flood Plain Administrator**

Other key recommendations in the Plan focused on drainage, transportation, and housing also have relevance with the specific goals of the Parks, Trails, & Open Space Master Plan.

The Waller County Parks, Trails, & Open Space Master Plan ("The Master Plan") represents a unique opportunity to study, integrate, and link a diverse array of existing county-wide parks and recreation facilities and to develop a plan with the goal of addressing current and future needs, renovations, expansions, prototypical acquisitions and future construction efforts that address an expanding and changing population.

The Plan required the assessment and evaluation of community facilities within the County with further analysis of input to be obtained from a variety of municipal leadership, user-organization leaders, activity groups, County department staff (who operate and maintain facilities), selected stakeholders, and representatives of Prairie View A&M University as well as the County's Commissioners and County Judge.

This information forms much of the basis from which the ambitions of the master plan are developed with extensive user input, opinions of probable costs (OPC), design intentions or guidelines, and identified hierarchy of options to carry the citizens of Waller County through the next 10 years and beyond.

## **Project Vision and Goals:**

Waller County will be one of the first strategically-planned counties in Texas with a focus on responsible growth that preserves the heritage of the County, its natural resources, and important agriculture lands. A facilities and services goal of the County Parks System includes providing a broad range of community services, safety initiatives, and recreational facilities for all residents of Waller County.

Additional goals and objectives are to enhance the 'brand' of Waller County's ecotourism and long-term quality of life by expanding parks and open spaces to meet the needs of residents and visitors for opportunities to experience outdoors for a myriad of benefits including healthy lifestyles, overall wellness and to educate future generations of the value of open spaces through ecosystem services the land provides and habitat it supports.

The Master Plan seeks to provide a holistic approach to parks planning and allow the County to address urgent land acquisition needs, health and wellness objectives, community connectivity, outdoor recreation, conservation of ecosystems and natural resources, protection of agricultural land typology, and in developing a sense of community and gathering while proactively planning for future needs. It also allows for financing options to be explored relating to alternative funding means available to the County.

The Master Plan is also a key element in successfully competing for parks, open space, and trail grants.

# Report Methodology

Waller County is a diverse landscape of topography, wildlife, and plant species. Travelling from the southern rice fields and wide open flatlands north to the rolling hills of pine and oak forests one can experience the explicit intersection of coastal prairie, central Texas hardwood forests, and post oak savannah. As with the natural environment, the County includes a rich cultural legacy and diverse people which grow in population size, variety, and interests every month.

To best capture the interests, needs, and opportunities of Waller County for this study, the team developed a socio-geographic framework to create focused study areas for analysis for existing conditions, capacity, and evaluation for opportunities. This framework qualitatively aggregates population centers, transportation corridors, watershed behaviors, forestation patterns, development, and many other factors to identify an organic way to categorize unique sections of the County.

This scheme serves as a way to “eat the elephant one bite at a time” when assessing conditions and beginning to form recommendations with sufficient specificity but without getting lost in data clutter or the sheer mass of available information. Each study area possesses attributes of geography, terrain, land types, land uses, ownership, and population density that drive the appropriateness of various recommendations. For example, an area with roads popular for road biking may be suitable for improvements with bike lanes while another area may be ideal for mountain bike trails or water access even while yet another study area best accommodates large open space parkland.

By evaluating constraints and influences on opportunities, we are able to develop a plan that accommodates all types of needs and interests each county precinct with relevant and appropriate facilities based on good science and data rather than strictly political needs or pressures. The uniqueness of each study area provides implicit equity and focus without excluding other needs or interests.

From our discussions with leaders around the County and research, clear patterns based on these attributes have resulted in an initial 6 key study areas:

**Fields Store** – the northeast corner of the county

**Savannah Northwest** – the northwest corner of the county from north of Hempstead east to approximately Walker Gladdish Road

**The 290 Corridor** – communities along SH 290 including Waller, Prairie View, Pine Island, Hempstead.

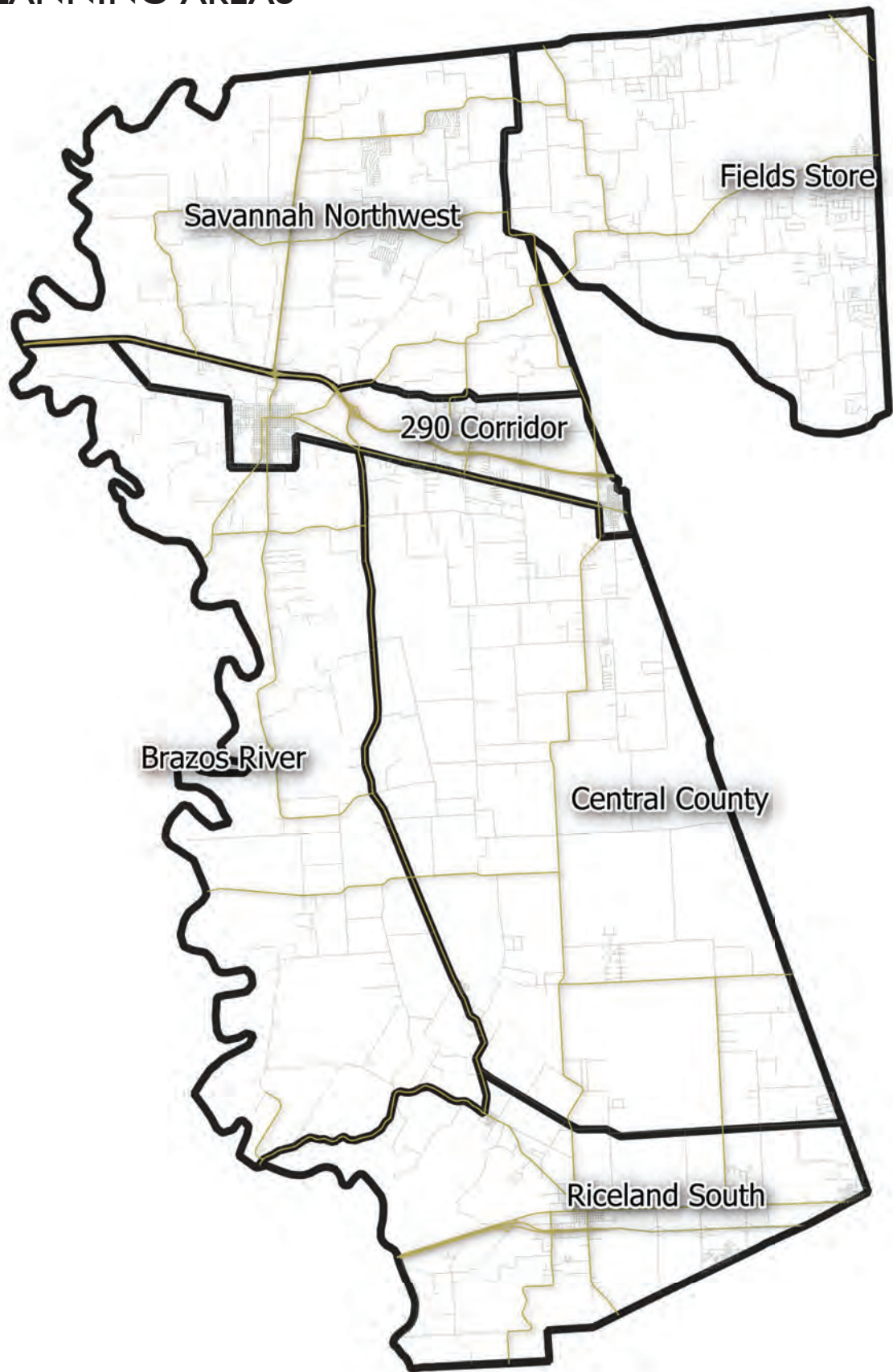
**The Brazos River Corridor** – closely approximating SH359 from SH290 south and west to the Brazos River

**Central County** – from the Harris county line west to the SH359, north to Pine Island (southern edge of 290 Corridor) and south to Riceland South study area

**Riceland South** – communities along The I-10 corridor including Katy, Brookshire, and Pattison.



## PLANNING AREAS





# PEOPLE



Photo Credit: Northwest Cycling Club



# The History of Waller County

Waller County, created in 1873 from Austin and Grimes Counties, is located in a favorable geographic environment. Today the county is on the frontlines of the dynamic and explosive regional growth of the Houston metropolitan area. This is part of a long trend which began in the late nineteenth century with the implementation of the Houston and Texas Central Railway which helped stimulate the regional expansion. If the railway helped to develop the area in the beginning of the century, the highway network has had the same impact today. Bounded on the west by the Brazos River, the County shares borders with Harris and Montgomery counties to the east, Fort Bend and Austin counties to the south and Grimes County to the north.

Two important transportation corridors serve Waller County; US 290 which connects the state Capitol to Houston, and Interstate 1-10, which crosses Texas connecting Houston to San Antonio and on through to El Paso and beyond. The strategic location of these two major corridors along with anticipated development of more north-south corridors makes Waller an important piece in the region's economy, and at the same time challenges county development.

The expansion of Waller was led by the development of what was once its major transportation hub. Hempstead, the county seat and the major city in the County, was originally a municipality developed by the railway companies. It was one of the most powerful development forces in the US in the late eighteenth century.

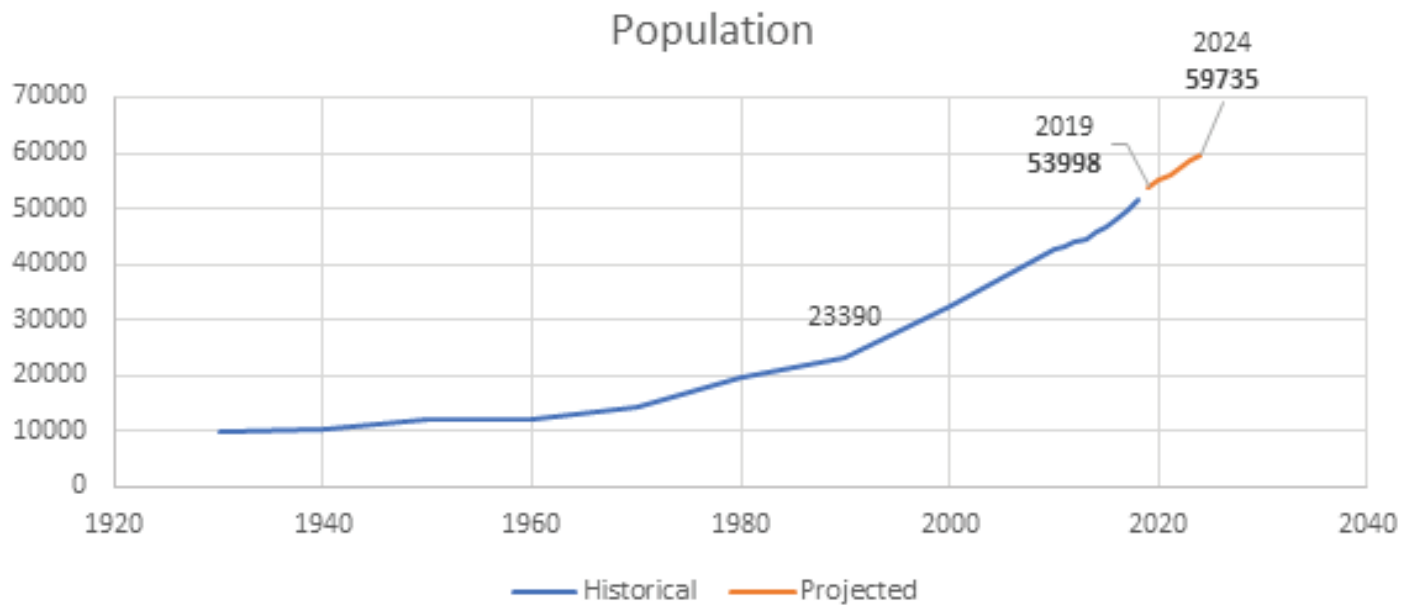
From the same pattern of development came the town of Brookshire, which was developed just after the Missouri, Kansas and Texas Railway passed through the city from Houston in 1893. Today, both

railways are property of the Union Pacific Railway network.

The area took advantage of the available transportation system and this helped with shipping cotton production out to the country. In the late 1800's, cotton was the major product in the county's economy, along with cattle. In the area of what today is Waller County, perhaps, was one of the first plantations in the southern part of the country. The discovery of oil would completely change the regional economy, but it would not occur until the 1930's.

An economy originally based in cotton production and agriculture brought a great number of African Americans to the county both during and after slavery was ended. The 1880 census reported 65% of its population as African American.

After emancipation, the participation of African Americans in politics of Waller County increased and many black Waller County residents were elected to local and state offices. Cultural diversity enhanced with immigrants from Central and Eastern Europe, Ireland, and Italy arriving in the late nineteenth century, together with Germans, Polish and Czech immigrants arriving in the beginning of the twentieth Century. (source: <http://www.co.waller.tx.us/page/History>).



source: Esri Demographics

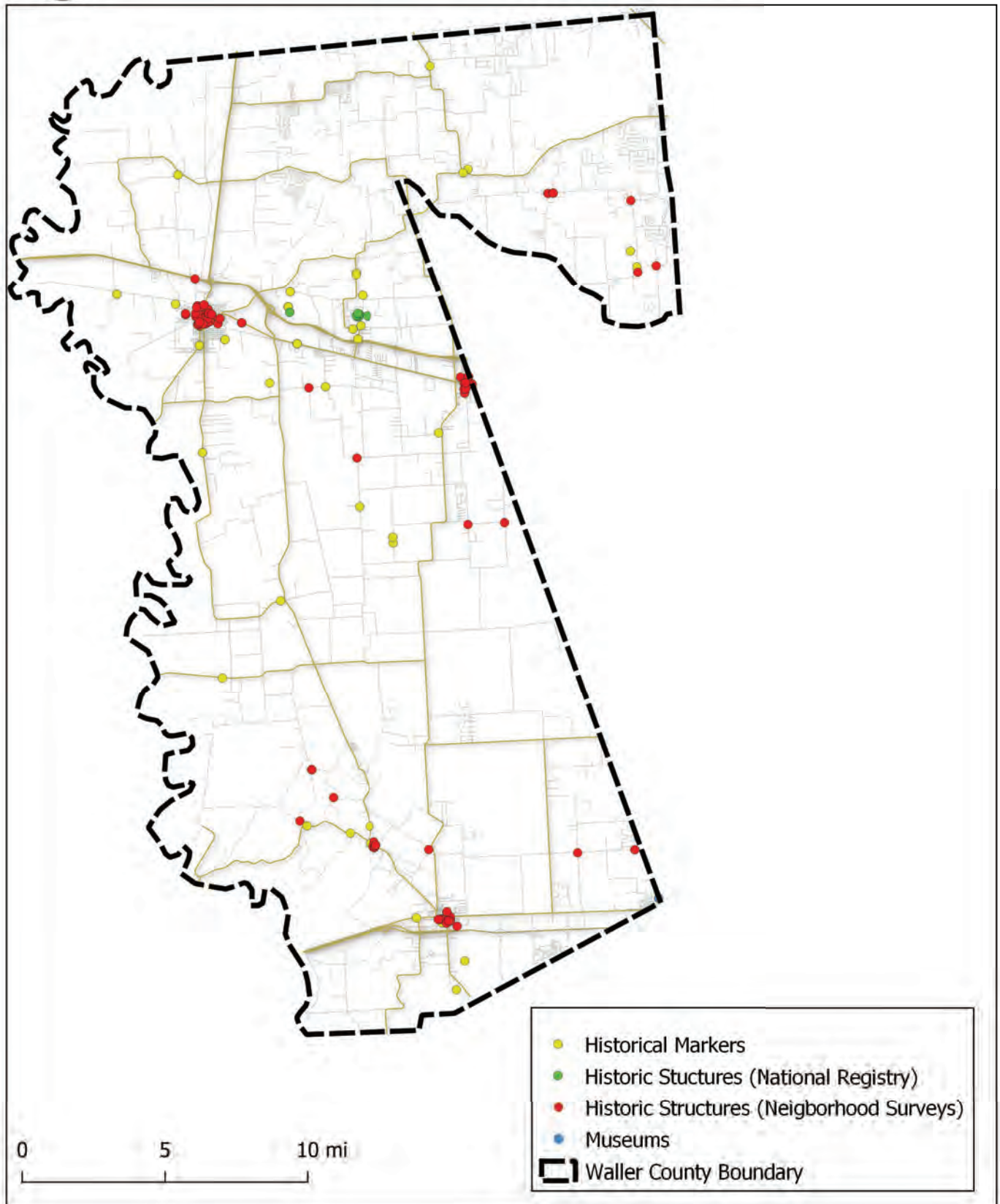


Architect Arthur Osborne Watson. Postcard image courtesy courthousehistory.com



## Historical Resources Inventory

Source: Texas Historical Commission



Historical resources are found throughout Waller County, with a total of 51 Historical Markers, 7 structures on the National Registry of Historic Places, and 84 inventoried historical structures.



Waller County has a rich history that can be explored by residents and visitors. A total of 144 historical sites are identified including 51 Historical Markers, 7 structures on the National Registry of Historic Places, and 84 inventoried Historic Structures.

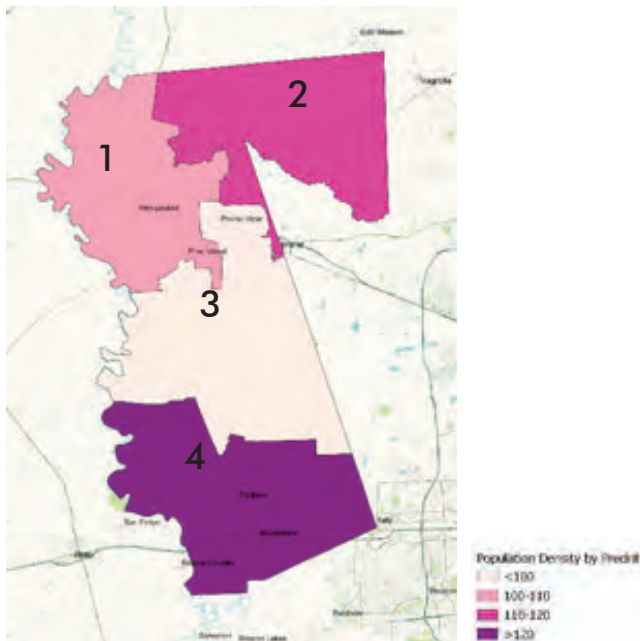


# Population Characteristics

## Population

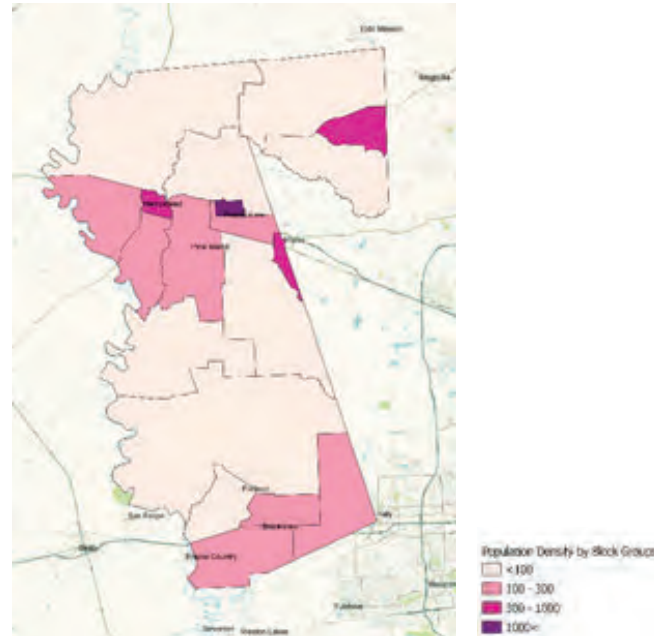
Waller County has experienced steep population growth since 1990. The population has more than doubled in the last thirty years; estimated 2019 population is 53,998 within the county and is expected to reach 59,735 by 2024, at an estimated annual growth rate of 2.04%.

The majority of Waller County is rural in character, with less than 500 hundred people per square mile. Prairie View has the highest population density of more than 1,000 people per square mile.



Population Density by Precinct

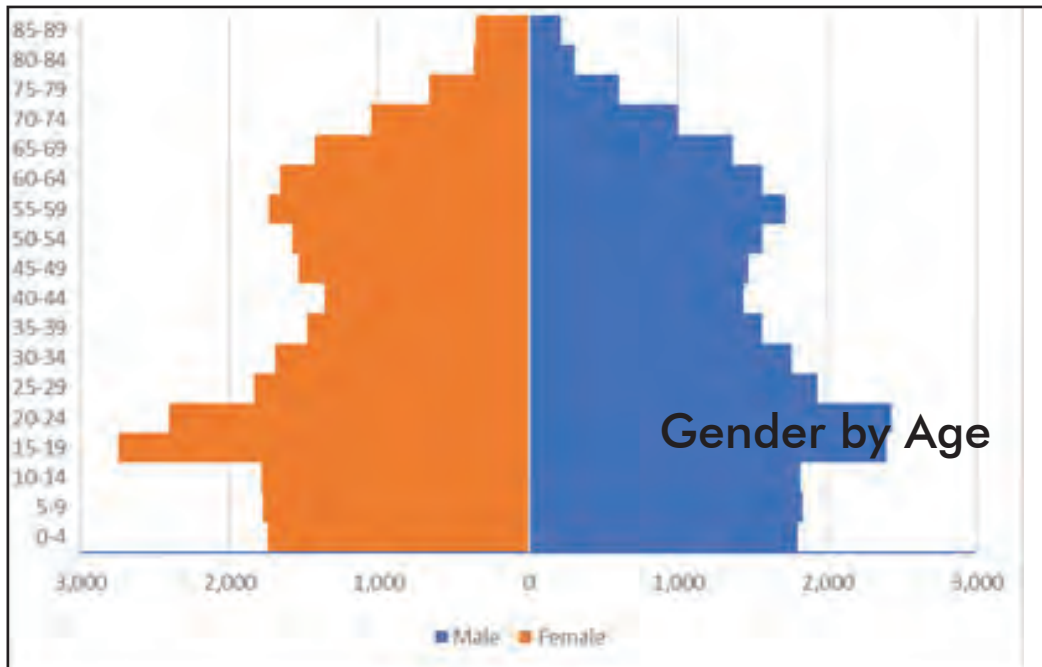
Source: Esri Demographics



Population Density by Census Block Groups

## Age Distribution

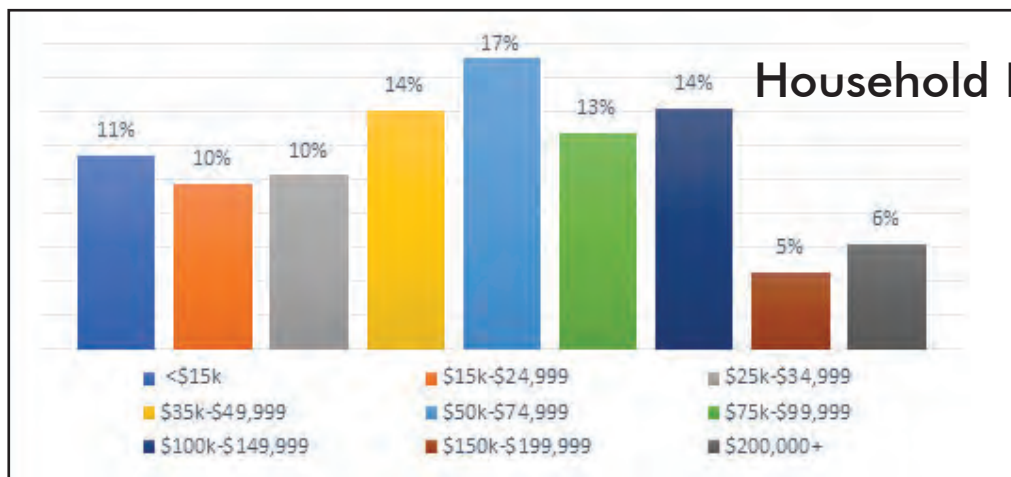
Waller County tends to trend young in its median age. Waller County has a median age of 28.9 years old while the median age in Texas overall is 33.9 years old. In Waller County, the 15-19 year-old and 20-24 year-old age groups are the two single largest age groups, representing 10% and 9% of the total population, respectively. This is likely due to the number of students enrolled at Prairie View A&M University but is also reflective of the ingress of younger families moving into the County.



Source: Esri Demographics

## Household Income

Waller County annual median household income is \$55,028 in 2019, while Texas median household income in 2018 was at \$59,785. Approximately 17% of the households in Waller County earn between \$50,000 to \$74,999 per year. The poverty rate in Waller County is approximately 18% compared to about 14% in Texas generally. A significant contribution to these disparities lies in part with a lower median age and college student population. Notwithstanding these lower than median incomes and a slightly higher poverty rate, Waller County does possess sufficient economic power and economic diversity so that public efforts for the good of the County are capable of being well-financed and simultaneously highly beneficial to residents particularly given the higher than median incomes of many new residents moving into the County.



Source: Esri Demographics



## Tapestry Segmentation

Demographic data can serve as a set of powerful tools for articulating and understanding populations in a given area. When used properly, large demographic datasets can yield meaningful conclusions. The Environmental Systems Research Institute, Esri, is a leader in geographic information systems software, but also in providing rich demographic datasets for use in all scales of planning.

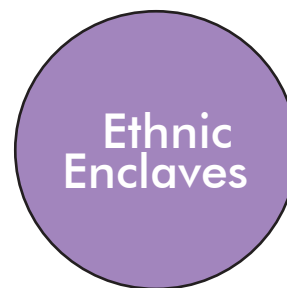
One such dataset called “Tapestry Segmentation” accurately describes populations all the way down to the neighborhood scale utilizing the latest available data from a variety of sources such as the U. S. Census Bureau, industry surveys, and other market data.

The Tapestry Segmentation data summarizes U.S. populations into 67 distinctive categories known as “Segments” and 14 LifeMode Groups based on socioeconomic and demographic composition.

The following LifeMode Groups are those most prevalent in Waller County and provide helpful insight to general interests, economic mobility, and lifestyle choices relevant to the Master Plan.



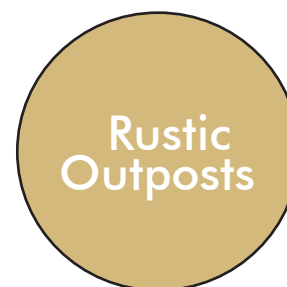
Med. Household Income: \$67,997  
Med. Disposable Income: \$56,204  
Med. Age: 47



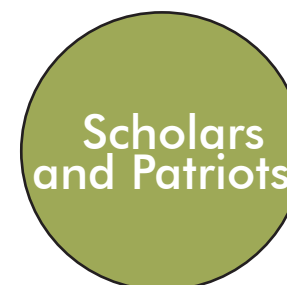
Med. Household Income: \$34,920  
Med. Disposable Income: \$31,283  
Med. Age: 31



Med. Household Income: \$70,439  
Med. Disposable Income: \$57,284  
Med. Age: 36



Med. Household Income: \$53,752  
Med. Disposable Income: \$44,538  
Med. Age: 37

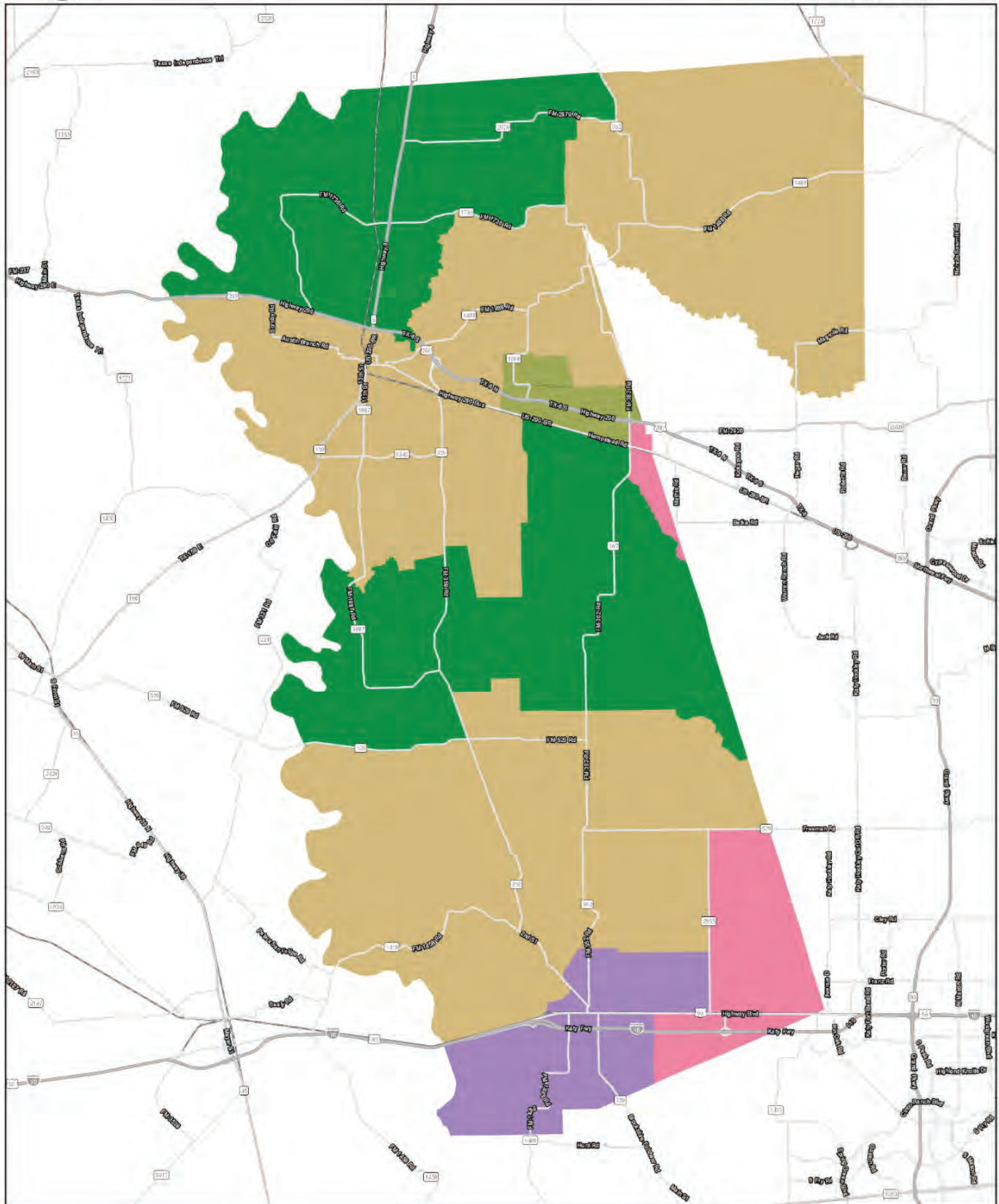


Med. Household Income: \$13,725  
Med. Disposable Income: \$12,280  
Med. Age: 24



## Tapestry Segment LifeMode Groups

source: Esri



## Tapestry Segmentation - Summary LifeMode Groups

### Family Landscapes

- Successful young families in their first homes
- Non-diverse, prosperous married-couple families, residing in suburban or semi-rural areas with a low vacancy rate (second lowest)
- Homeowners (79%) with mortgages (second highest %), living in newer single-family homes, with median home value slightly higher than the U.S..
- Two workers in the family, contributing to the second highest labor force participation rate, as well as low unemployment
- Do-it-yourselfers, who work on home improvement projects, as well as their lawns and gardens
- Sports enthusiasts, typically owning newer sedans or SUVs, dogs, and savings accounts/plans, comfortable with the latest technology
- Eat out frequently at fast food or family restaurants to accommodate their busy lifestyle
- Especially enjoy bowling, swimming, playing golf, playing video games, watching movies rented via Redbox, and taking trips to a zoo or theme park

### Cozy Country Living

- Empty-nesters in bucolic settings
- Largest Tapestry group, almost half of households located in the Midwest
- Homeowners with pets, residing in single-family dwellings in rural areas; almost 30% have 3 or more vehicles

and, therefore, auto loans

- Politically conservative and believe in the importance of buying American
- Own domestic trucks, motorcycles, and ATVs/UTVs
- Prefer to eat at home, shop at discount retail stores (especially Walmart), bank in person, and spend little time online
- Own every tool and piece of equipment imaginable to maintain their homes, vehicles, vegetable gardens, and lawns
- Listen to country music, watch auto racing on TV, and play the lottery; enjoy outdoor activities, such as fishing, hunting, camping, boating, and even bird watching

### Ethnic Enclaves

- Established diversity—young, Hispanic homeowners with families
- Multilingual and multi-generational households feature children that represent second-, third- or fourth-generation Hispanic families
- Neighborhoods feature single-family, owner-occupied homes built at city's edge, primarily built after 1980
- Hard-working and optimistic, most residents aged 25 years or older have a high school diploma or some college education
- Shopping and leisure also focus on their children—baby and children's products from shoes to toys and



- games and trips to theme parks, water parks or the zoo
- Residents favor Hispanic programs on radio or television; children enjoy playing video games on personal computers, handheld or console devices
- Many households have dogs for domestic pets

#### Rustic Outposts

- Country life with older families in older homes
- Rustic Outposts depend on manufacturing, retail and healthcare, with pockets of mining and agricultural jobs
- Low labor force participation in skilled and service occupations
- Own affordable, older single-family or mobile homes; vehicle ownership, a must
- Residents live within their means, shop at discount stores and maintain their own vehicles (purchased used) and homes
- Outdoor enthusiasts, who grow their own vegetables, love their pets and enjoy hunting and fishing
- Technology is cost prohibitive and complicated. Pay bills in person, use the yellow pages, read newspapers, magazines, and mail-order books

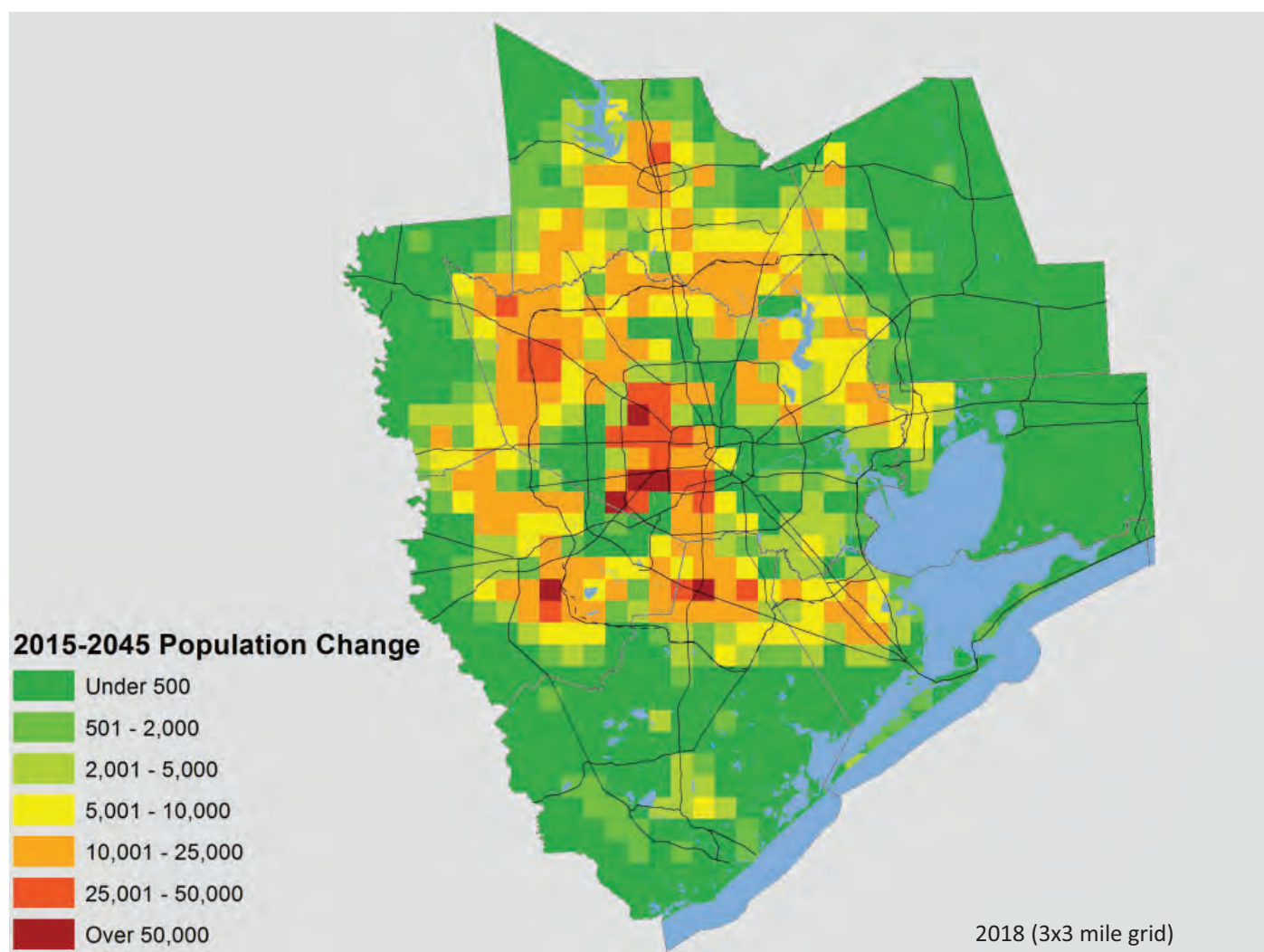
#### Scholars and Patriots

- College and military populations that share many traits due to the transitional nature of this LifeMode Group
- Highly mobile, recently moved to attend school or serve in military
- The youngest market group, with a majority in the 15 to 24 year old range
- Renters with roommates in non-family households
- For many, no vehicle is necessary as they live close to campus, military base or jobs
- Fast-growing group with most living in apartments
- Part-time jobs help to supplement active lifestyles
- Millennials are tethered to their phones and electronic devices, typically spending over 5 hours online every day tweeting, blogging, and consuming media
- Purchases aimed at fitness, fashion, technology and the necessities of moving
- Highly social, free time is spent enjoying music, being out with friends, seeing movies
- Try to eat healthy, but often succumb to fast food

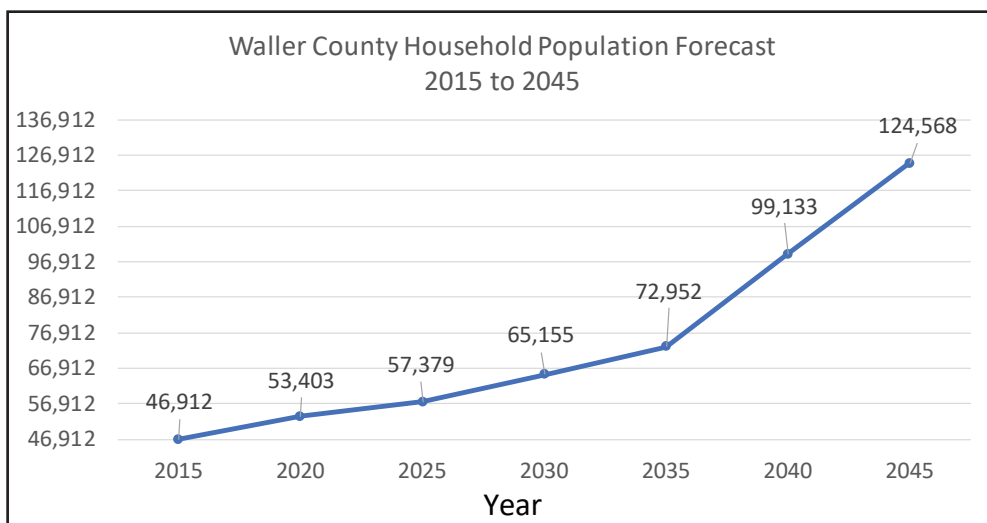
# Regional Growth

Waller County is located on the edge of one of the largest metropolitan areas in the United States. The Houston region reached an estimated population of 7,000,000 in 2019, with continued growth expected. The Houston Galveston Area Council (HGAC) Regional Growth Forecast projects a significant population increase with Waller County reaching a population of 124,569 residents by the year 2045. With such growth within and around Waller County, it's important to consider regional

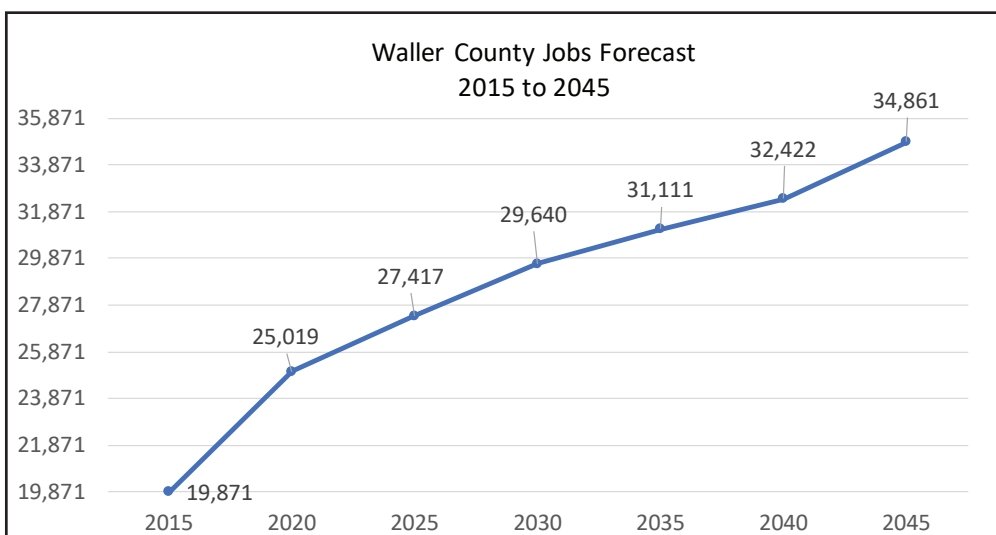
planning efforts and the impacts of growth on open space as well as the need to address increased demand for parks, trails, and recreational facilities.



Projected population change from 2015 to 2045, HGAC Regional Growth Forecast.



The HGAC 2018 Regional Growth Forecast predicts a steady increase in population with a total growth of 165.5% by the year 2045.



The HGAC 2018 Regional Growth Forecast predicts a steady increase in jobs with a total growth of 75.4% from 2015 to 2045.

City	2010 Census	2016 Estimated	Growth	Growth Rate
Katy	14,109	17,116	3,007	21.31%
Hempstead	5,771	7,457	1,686	29.22%
Prairie View	5,571	6,442	871	15.63%
Brookshire	4,702	5,233	531	11.29%
Waller	2,330	2,767	437	18.76%
Pine Island	977	1,100	123	12.59%
Pattison	476	560	84	17.65%

US Census City/Town Population estimates



# Recreation Behavior

## Recreation Trends

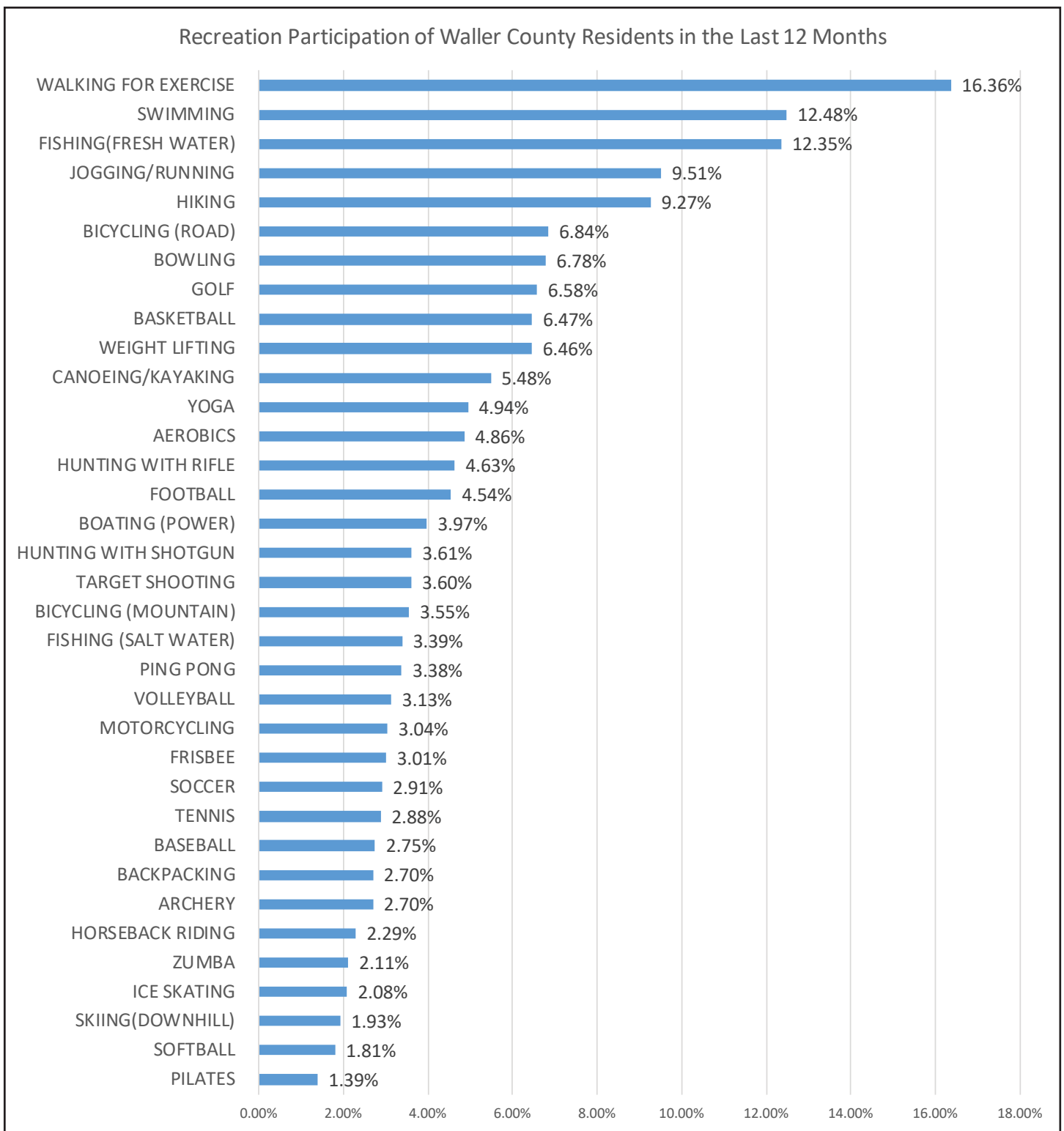
Waller County residents live active lifestyles with a wide range of interest in recreational activities. Taking advantage of 'big data' available in the marketplace, much can be learned about how Waller residents live, work, and play.

A search Esri's Living Atlas database within the Waller County boundary reveals that residents participate in many different types of activities, with some of the most popular activities including:

- Walking (16.36%)
- Swimming (12.48%)
- Fishing (12.35%)
- Jogging/Running (9.51%)
- Hiking (9.27%)
- Cycling (6.84%)



2019 Outdoor Recreation Expenditures by Residents of Waller County	Total Expenditures
Sports/Rec/Exercise Equip	\$3,392,615
Recreational Vehicles & Fees	\$2,204,607
Hunting & Fishing Equipment	\$1,324,533
Payments on Boats/Trailers/Campers/RVs	\$1,111,906
Exercise Equip & Gear/Game Tables	\$956,066
Camp Fees	\$589,811
Bicycles	\$427,869
Rental of Boats/Trailers/Campers/RVs	\$373,178
Camping Equipment	\$346,306
Water Sports Equipment	\$126,833
Other Sports Equipment	\$106,247
Winter Sports Equipment	\$61,238



Esri Demographics identifies recreation behaviors from quarterly surveys. It is clear from the data that pedestrian-oriented activities such as walking, jogging/running, and hiking are among the most popular

## Cycling and Running Activity

Cycling, also known as road-bicycling, is a popular past-time in Waller County, drawing cyclists from across the region every weekend to ride the backcountry roads. Houston area cycling clubs organize events throughout the year for local rides and also host annual events that draw riders from across the state. The Katy Flatland Century, a 100 mile trek from Katy to Hempstead and back, is one such event that draws as many as 2,300 riders to brave the summer heat and complete the challenge.

### Leveraging User-Provided Data

The prevalence of location-aware devices such as cellular phones, smartwatches, fitness trackers has provided for rich datasets that yield insight into recreation activities. Strava™ is a company that provides an online platform and associated apps for mobile devices to allow users to upload their physical tracking data and keep records of their activities while cycling, running, or participating in similar recreational activities.

The aggregated data are available for review as part of an interactive Global Heatmap that illustrates the level of activity for a given area by color coding the routes based on the amount of activity. The resulting map is powerful in its ability to highlight the most popular routes for cycling or pedestrian activities in a given area.



Riders in the Katy Flatland Century cycling event. (Photo credit: Jeff Rohling)

In addition to Strava™, other web platforms allow people to upload their tracking data for similar purposes. The popular mapmyride.com provides access to riders' routes if they are made public by the user. Combined with the data from Strava, patterns of where people ride and run are made clear. This can be useful in identify candidate routes for proposed trails, bike lanes and share-the-road routes throughout the County.

The map on the adjacent page highlights the most popular routes identified from the combined patterns of the Strava™ Global Heatmap and mapmyride.com

# STRAVA

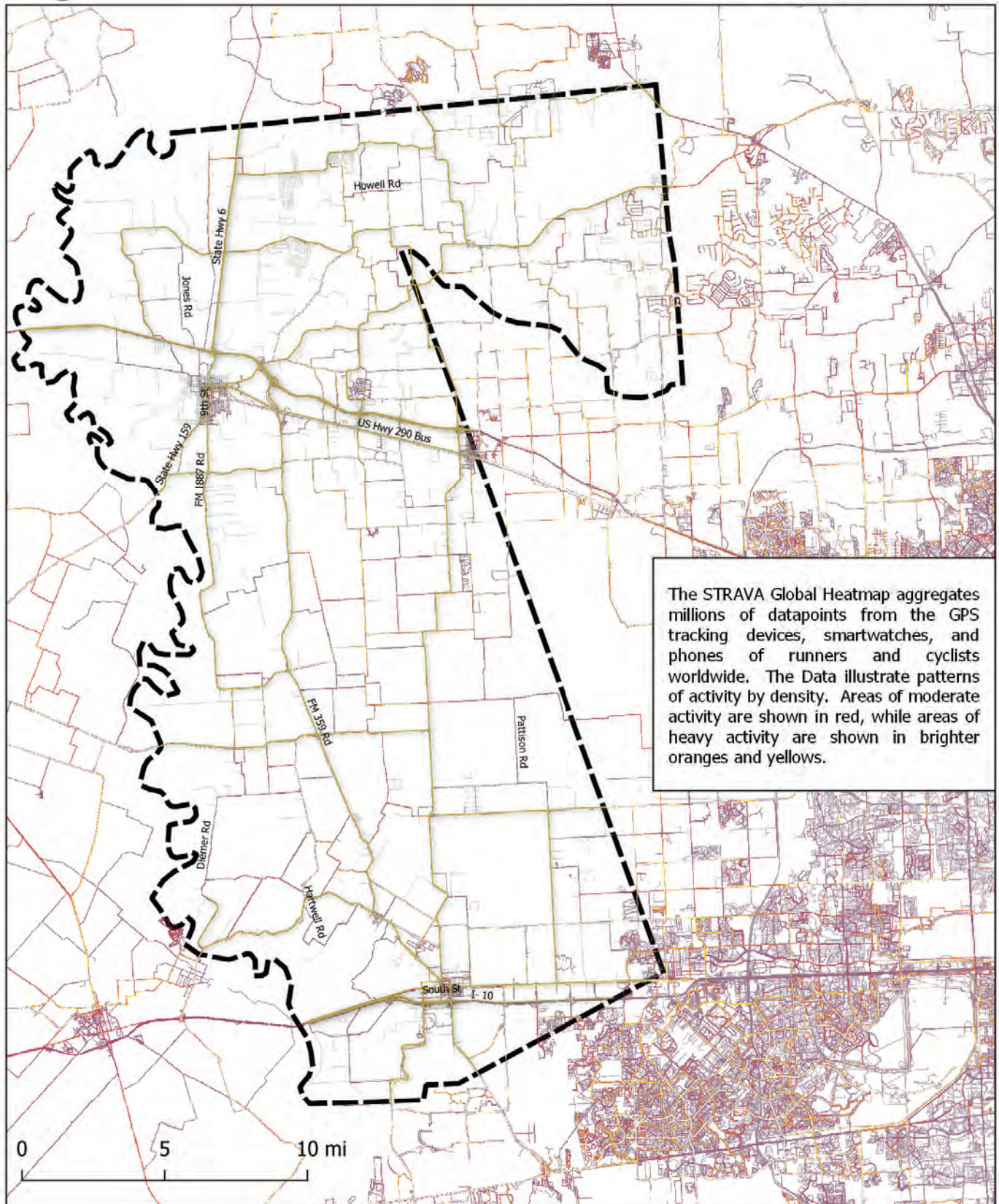






## Cycling Activity in Waller County

**STRAVA RIDE**

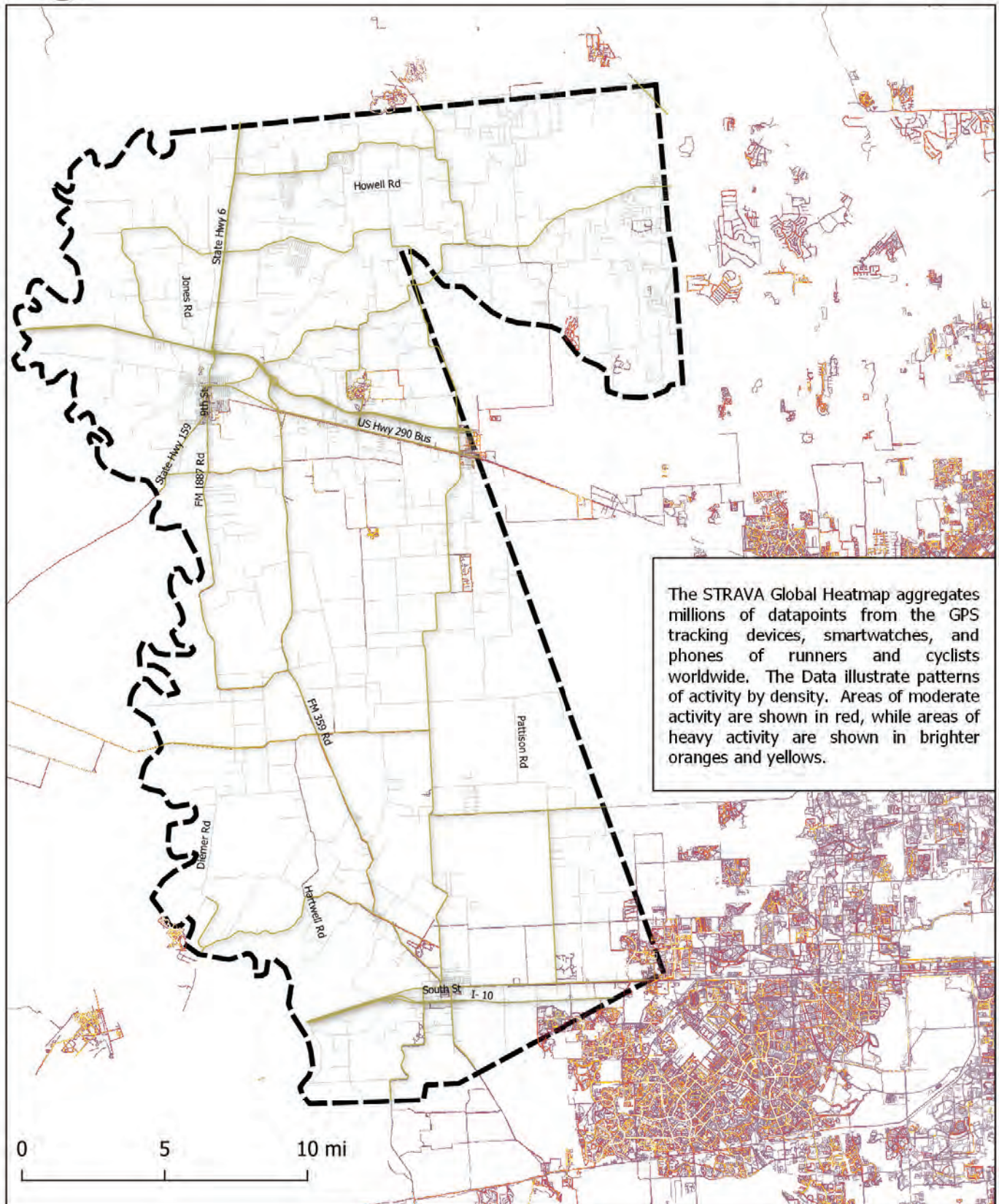






## Running Activity in Waller County

### STRAVA RUN



## Area Cycling Clubs & Events

Six active cycling clubs and eleven cycling events were identified in the study area. The cycling clubs are the ones that active in the study area. Detailed information of the clubs can be found below:

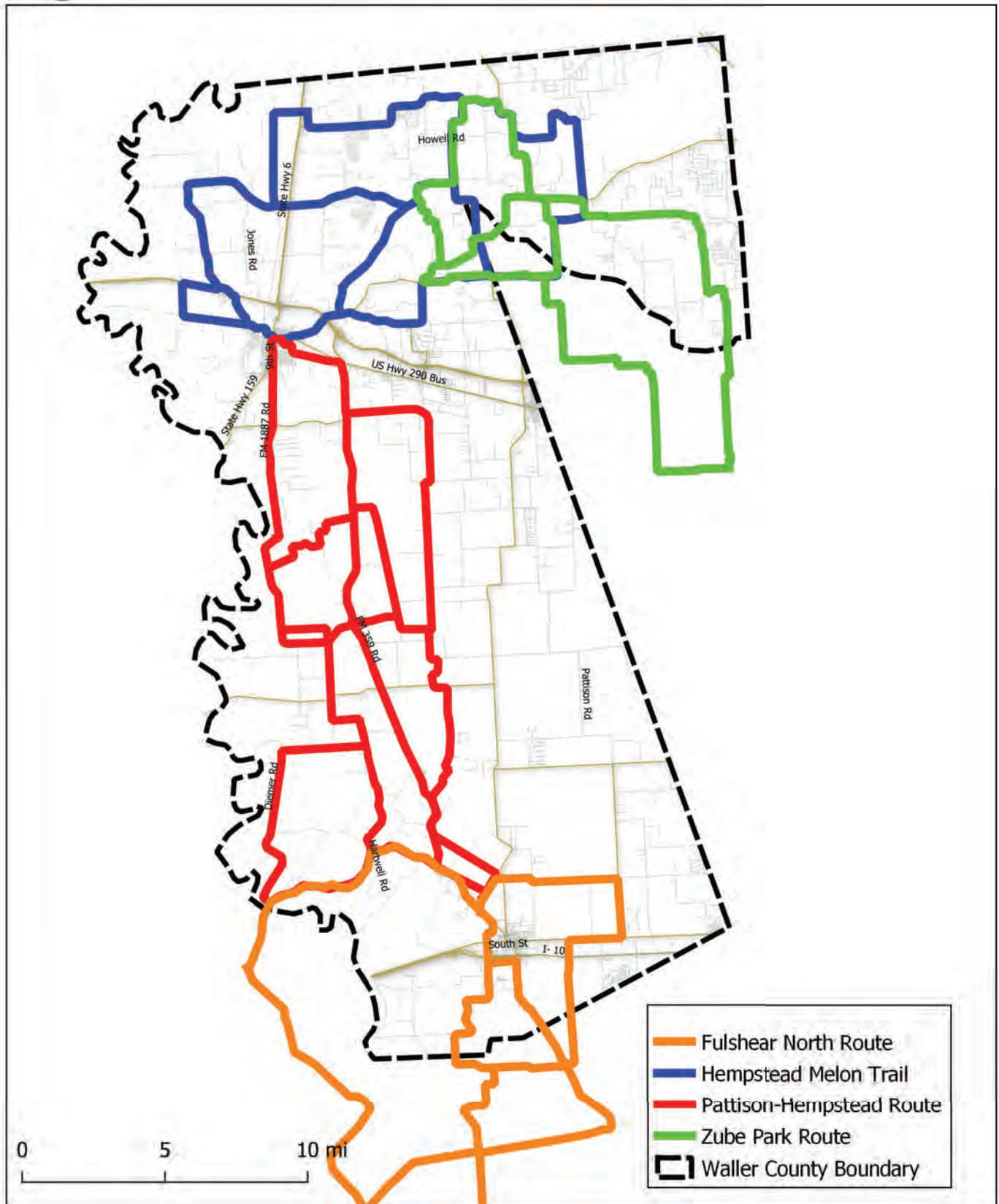
Cycling Club	Cycling Site	Routes info	Contact
North West Cycling Club Houston, Texas	Zube Park and other places in Houston	<a href="https://ridewithgps.com/routes/29003881">https://ridewithgps.com/routes/29003881</a>	
Greater Houston Cycling Foundation	Alkek Velodrome		
Bike Land Developmental Factory Team	on-street and bmx park in the Woodlands		281-362-9253, 281-364-9253
Bike and Barn Houston	Houston Street		
Brazos Valley Cyclists	College Station, Texas	<a href="https://brazoscyclists.org/rides-and-routes/">https://brazoscyclists.org/rides-and-routes/</a>	
Houston Bicycle Club	Houston Area		

Event	Activity Area or Start Location	Sponsor	Organizer	Routes
Pedalling the Prairie	Hempstead, Texas	Waller County Fair Grounds	Eagle Initiative	
Just Ride for a Just Cause	Simonton, Brookshire, Pattison, Texas	Multiple		
Bike for Little Heroes	Waller, Texas Waller High School Football Stadium	Individuals		
Tour de RACHA	Waller, Texas Waller Junior High School Football Stadium		Family Ties	
Bluebonnet Express	Waller, Texas Waller ISD Stadium			<a href="http://bbx.bike/routes">http://bbx.bike/routes</a>
Pedal for a Purpose Bike Ride	Waller, Texas		Boys and Girls Country	
Katy Ram Challenge	Katy, Texas			<a href="https://www.scribblemaps.com/maps/view/Katy_Ram_Challenge/jNNhFsPUBE">https://www.scribblemaps.com/maps/view/Katy_Ram_Challenge/jNNhFsPUBE</a>
Katy Flatland Century	Katy, Texas			<a href="http://kfc.bike/index.php/routes">http://kfc.bike/index.php/routes</a>
Tour de Goya	Prairie View, Texas	Multiple	American Diabetes Association	
Kiwanis Sealy Fall Classic	Sealy, Texas	Multiple	Kiwanis Club of Houston	<a href="https://kiwanishouston.org/resources/Documents/Bike%20Ride%20Documents/2018%20Route%20map-%20KOC.PDF">https://kiwanishouston.org/resources/Documents/Bike%20Ride%20Documents/2018%20Route%20map-%20KOC.PDF</a>
B-geO Magnolia Miles	Magnolia, Texas	Multiple		



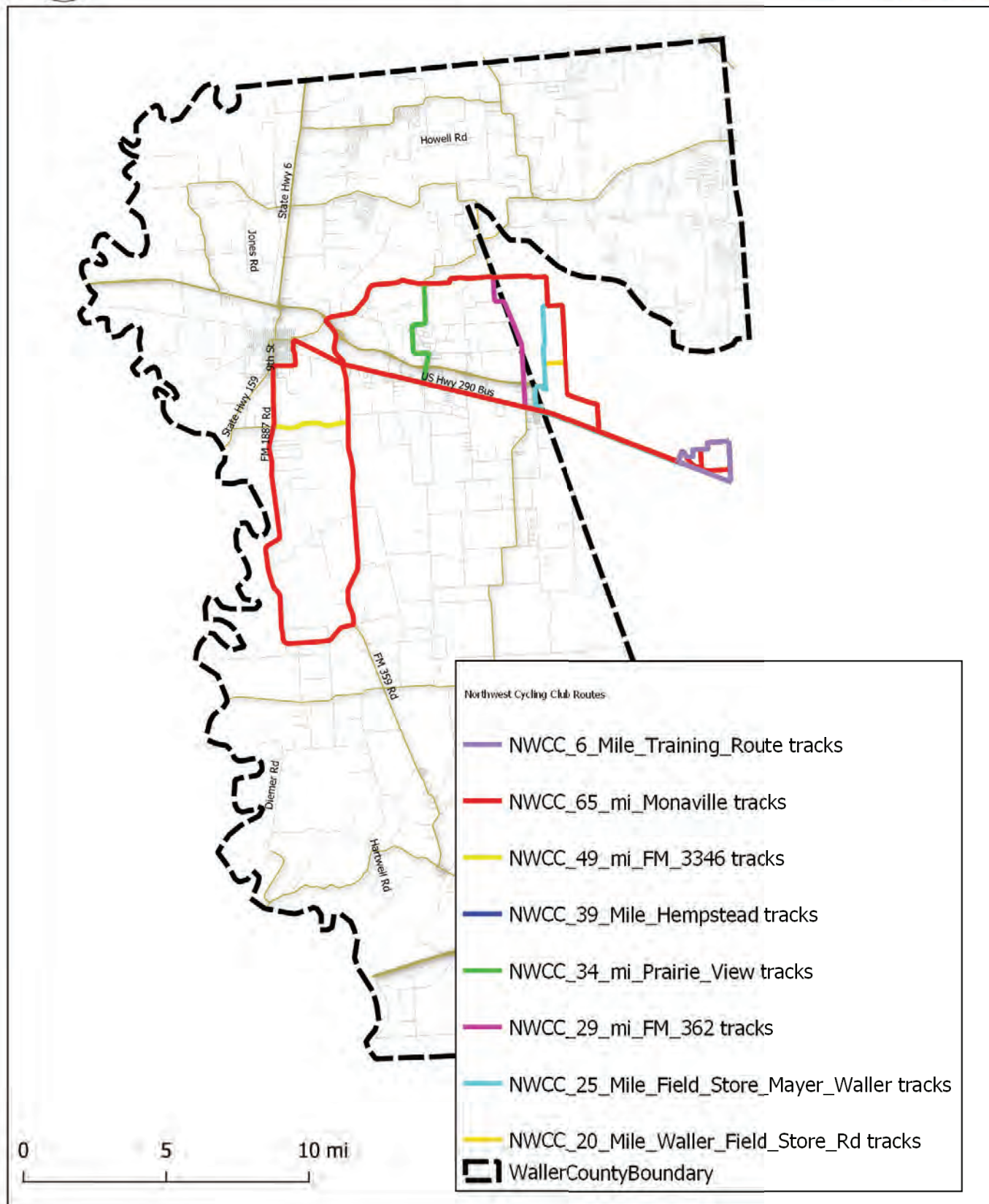


## Houston Bicycle Club Routes





## Northwest Cycling Club Routes









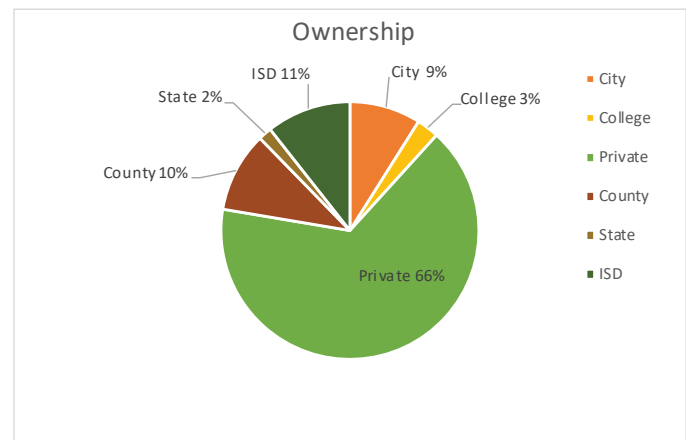


# **INVENTORY OF RECREATION PROVIDERS & ASSETS**

# Existing Recreation Providers

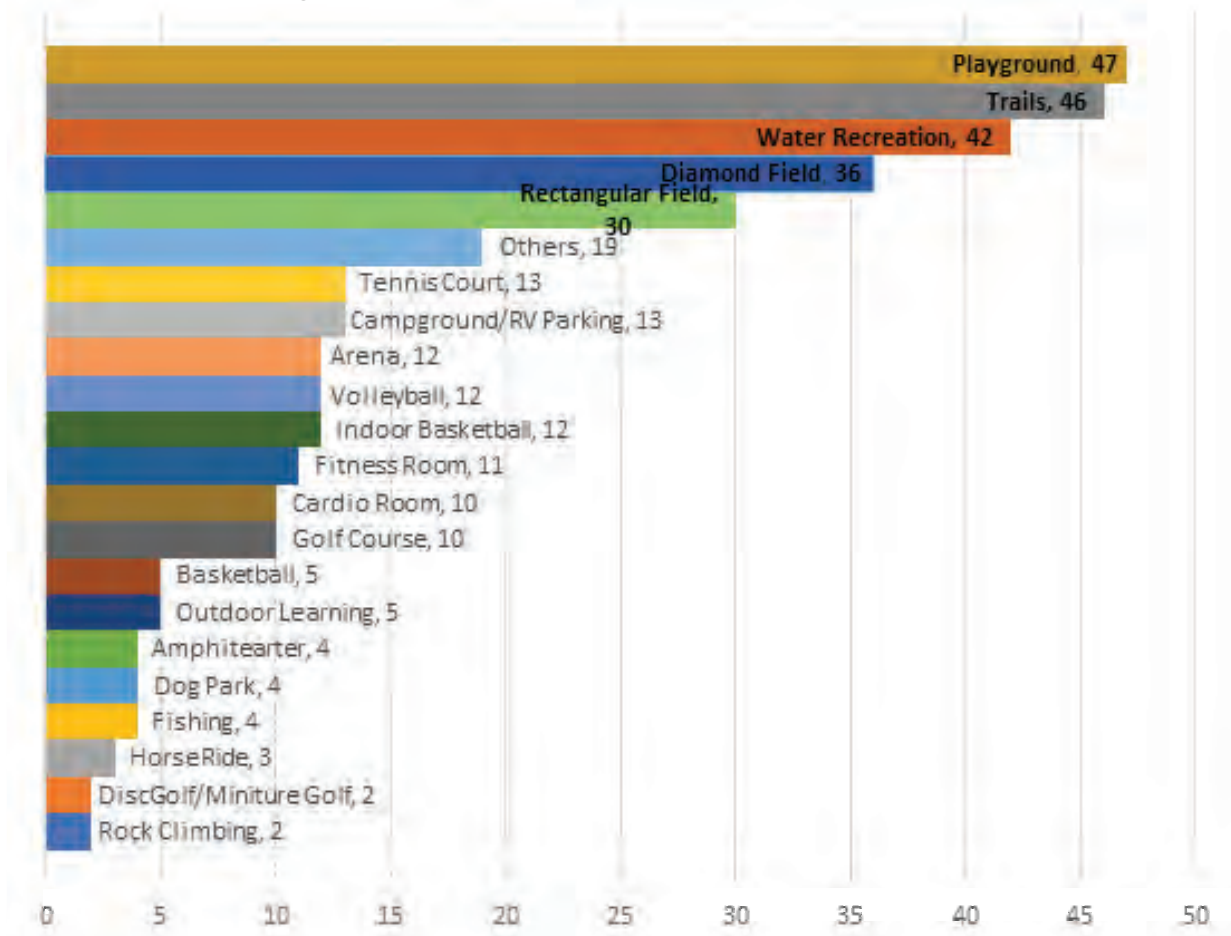
A search of recreation resources within a 10-mile radius of Waller County's boundary reveals a total of 178 recreation providers in the study area, including city, county, state, school district, and privately-owned facilities. This inventory includes resources that are outside of Waller County but are likely utilized by County residents.

The majority of the recreation resources were provided by the private sector, comprising 66% of all 178 providers. The "Private Sector" includes homeowner associations, businesses such as gyms and fitness facilities, and other non government associations that are accessible to the public. Independent School Districts, City and County make up between 9% and 11% of all providers. The school district facilities listed in this research are those that have outdoor recreation amenities such as sports fields, basketball courts, tennis courts, and playgrounds



Playgrounds, Trails, Water Recreation, Diamond Field and Rectangular field are the top five most commonly seen amenities among all recreation providers.

## Existing Recreation Resources in or Within 10 Miles of Waller County









## Municipal Facilities

A total of 16 city-owned parks are available within communities in and around Waller County. Most city parks are focused on providing recreation opportunities for their residents, however they are often visited by people from other communities. The parks provided by cities serve as an integral component to the County's mission to provide parks and recreation facilities. The level of service provided by these parks will be considered when identifying under-served areas of the County.



Play Station Park in Katy, Texas



Bostick Park in Brookshire, Texas



Hempstead City Park in Hempstead, Texas



Gazebo Park in Hempstead, Texas



Joe Scranton, Jr. Park in Sealy, Texas



## County Facilities

A total of 18 parks and recreation facilities are provided by Waller, Montgomery, and Harris Counties that are within 10 miles of Waller County. Currently Waller County has the Waller County Community Center in Prairie View, TX, and the remaining parks and facilities are located in Montgomery and Harris Counties.



The Waller County Library in Hempstead is a well-used facility for a both recreation and resources.

The County Library in Hempstead, Texas and the Waller County Community Center in Prairie View, Texas make up the extent of current social or recreational facilities owned and/or operated by the County.



The Waller County Community Center in Prairie View provides space for community meetings and events.



Zube Park, located in Harris County Precinct 3, is a popular destination for Waller County residents.



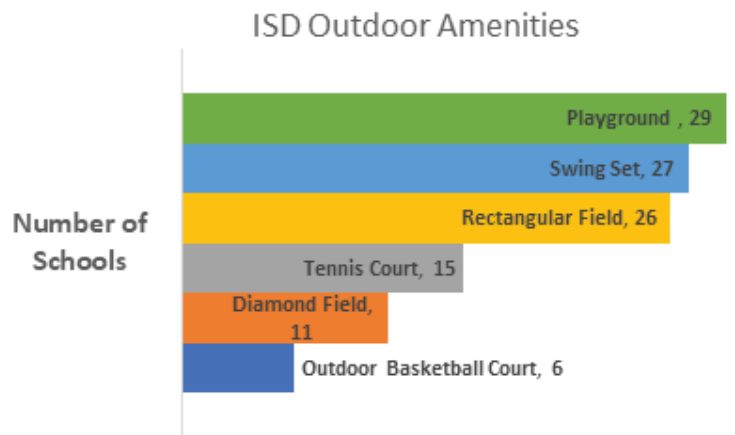
Bike route sign on FM 1488 outside of Hempstead. Signage for bike routes helps to educate motorists and promote safe cycling on the roadways.

## School District Facilities

School playgrounds and athletic facilities are often a significant source of recreation for communities. When school is not in session, or after hours, playgrounds, tennis courts, tracks, and other features are often available for public use. Available recreation amenities include “Playgrounds”, “Swing Sets”, “Rectangular Fields”, “Tennis Courts”, and “Outdoor Basketball Courts”.



The Waller High School tennis courts are available for public use and are a popular facility for local tennis clubs. photo credit: Waller ISD



The Michael D. Holland Aquatics Center, owned and operated by the Magnolia ISD, is open to the public when not in use for school activities.

Elementary school playgrounds are frequently used by area residents during after school hours and are an important component of a community’s recreation system.



## Private Facilities

The majority of recreation opportunities within Waller County and a ten mile radius outside of the County are provided by private entities including homeowners associations, campgrounds, gyms, and private sports organizations.



Typhoon Texas Waterpark in Katy, Texas.



Master planned communities such as Woodcreek Reserve shown above provide parks, pools and amenity centers for residents. photo credit: Siyoung Park



The Waller County Sports Association provides a private baseball/softball complex in Prairie View, Texas for league game play and practice.



Lone Star Jelly Stone RV Park provides a rich array of amenities for its guests including a water park, campgrounds, and playgrounds.





The Waller County Fair Association hosts the annual County Fair as well as rodeos and other events throughout the year.



The Kalsoom Prairie View Cricket Complex is currently under development and will become the largest cricket facility in the United States. This project includes 12 Cricket Fields, Training Centers, Coaching Centers, Practice Facilities, and Community Center.

## Community Events

Communities and organizations host a variety of events throughout the year. Events such as the Waller County Fair, Brookshire's Freedom Festival, and the Katy Rice Festival bring County residents and visitors together for food, live music, games, and more.



The Katy Rice Harvest Festival is a popular event that includes vendors, music, food, and a parade to Katy, Texas.

Event	City	Date	Attendance
Waller Volunteer Fire Dept.. Annual Fundraiser	Waller	1st Saturday in May	400-500
Juneteenth Festival (barbeque, dance, auction, basketball tournament, softball tournament)	Brookshire	June 19th	
July 4th Freedom Festival (parade, craft, booths, kiddie rides, volleyball tournament, dance)	Brookshire	July 3 & 4	2000-3000
Waller County Fair (exhibits, dance, auction)	Hempstead	Last week in September	
PVAMU Homecoming (parade, football game)	Prairie View	1st week in November	9000
Brookshire Christmas Festival	Brookshire		
Christmas Parade	Waller	1st Saturday in December	200-300
Festival of Lights (craft booths, parade)			
Katy Rice Harvest Festival	Katy	October	



# Implementation Tools

As a county with somewhat limited financial resources, as compared to Montgomery and Harris Counties, Waller County will likely need to consider a variety of approaches to implement park land acquisition and development.

Some approaches such as Fee Simple Acquisition will rely entirely on Waller County's financial resources, where as other approaches such as partnerships with municipalities and/or Municipal Utility Districts (MUDs) would involve the participation of multiple parties to achieve mutual benefit.

The following approaches to implementation take advantage of available policy tools, partnerships, grants and other resources to facilitate park land acquisition and development:

- Fee Simple Acquisition - Purchasing lands with general revenues, bonds, grant funds.
- Right of First Refusal - Agreements by which a landowner promises to offer a county, city, or other entity the first opportunity to purchase the land should the landowner choose to sell.
- Land Trades - Land swaps between the County and another public or private entity.
- Joint Use - Taking advantage of existing public or semi-public properties such as utility corridors, railroad rights-of-way, and easements for recreation features such as trails.
- Leases - Leasing land from other public or private entities for recreational uses.
- Private Donations - Acquisition of land, buildings, or funds from private parties for recreation or other uses.

A remarkable example of such as donation occurred in Georgetown, Texas where Jack and Cammy Garey donated a 525 acre family ranch to the City's parks system. The flagship park offers a playground, splash-pad, dog park, equestrian arena, event facilities, and 7 miles of hiking and equestrian trails.

- Conservation Easements - Conservation easements are interests in real property established by agreement between the landowner and a qualified private land conservation organization or government unit that restrict certain activities such as development of the land to achieve benefits such as water quality, wildlife habitat, stormwater runoff reduction, or even to preserve agricultural heritage. Organizations such as the Katy Prairie Conservancy are actively using this tool in Waller County for multiple benefits.
- TRPA Grants Program - potential funding: \$500,000 (match grant) The Texas Recreation and Parks Account (TRPA) is funded by a portion of Texas sales tax received on selected sporting goods.

These grants are awarded to applicants annually at varied levels depending on project type and available resources for the funding cycle. These funds are administered by the Texas Parks and Wildlife Department's Recreation Grants Branch for five programs including 1) Outdoor Recreation 2) Indoor Recreation 3) Small Community 4) Regional 5) Community Outdoor Outreach Program.

- Community Development Block Grants - The Department of Housing and Urban Development (HUD) provides assistance to communities across the nation for a wide range of activities

through the Community Development Block Grants Program. These funds are often distributed to individual communities by the state as match-grants to fund projects supporting economic development and improved quality of life. Texas Parks and Wildlife Department awards grants from this program annually to develop and enhance parks and open space.

(limited to 5 percent of a State's funds).

– State administrative costs related to this program (limited to 7 percent of a State's funds).

- Transportation Equity Act (SAFETEA-LU) - Recreation Trails Program The Transportation Safety Act, also known as the Safe, Accountable, Flexible, Efficient Transportation Act: A Legacy for Users (SAFETEA-LU), provides for the distribution of funds from the Federal Highway Administration (FHWA).

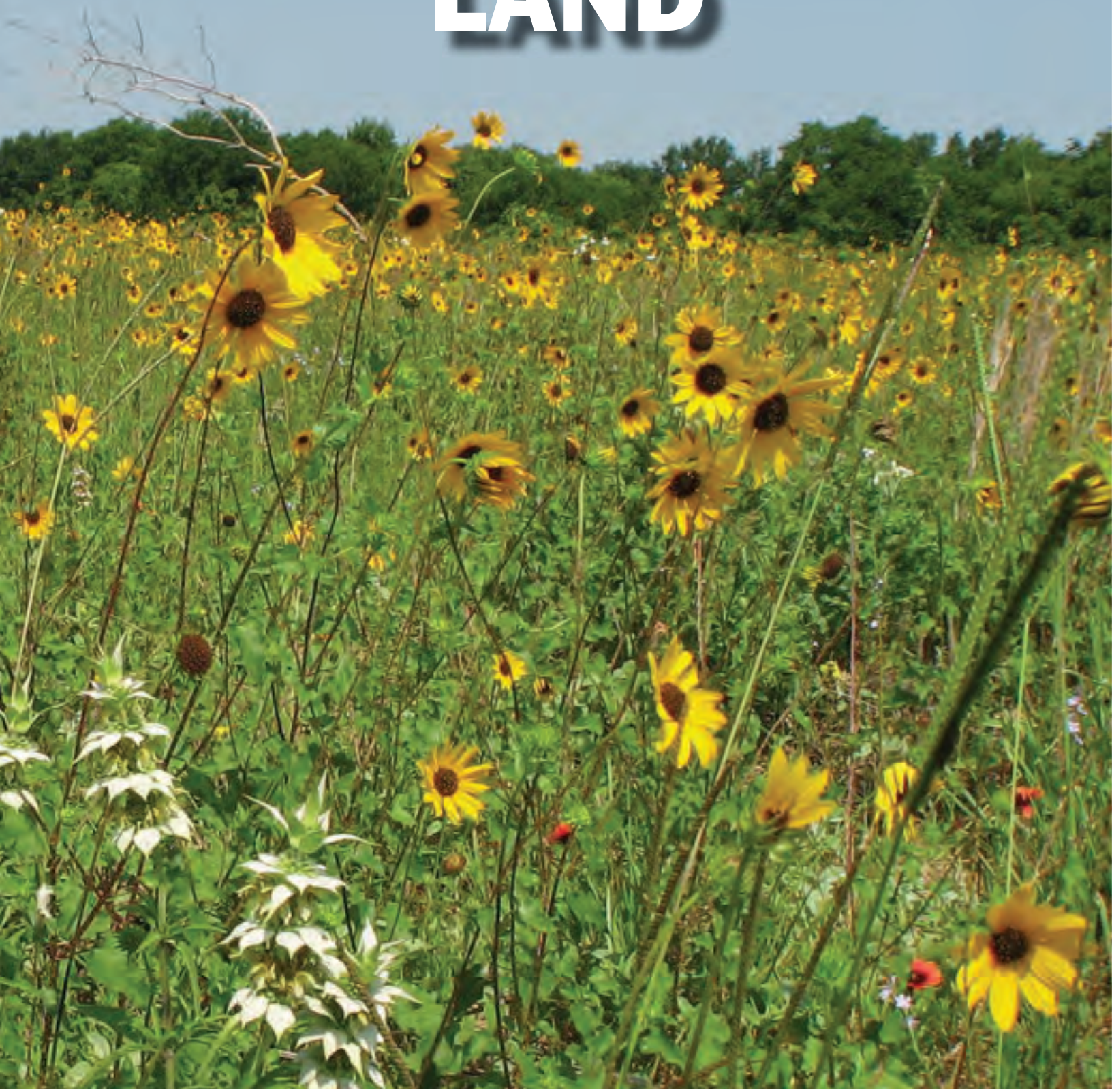
The Federal Highway Administration is the largest source of funding for shared use paths, trails and related projects. The Recreational Trails Program, an assistance program to FHWA, distributes funds for a range of activities including:

- Maintenance and restoration of existing trails.
- Development and rehabilitation of trailside and trailhead facilities and trail linkages.
- Purchase and lease of trail construction and maintenance equipment.
- Construction of new trails (with restrictions for new trails on Federal lands).
- Acquisition of easements or property for trails.
- Assessment of trail conditions for accessibility and maintenance.
- Development and dissemination of publications and operation of educational programs to promote safety and environmental protection related to trails (including supporting non-law enforcement trail safety and trail use monitoring patrol programs, and providing trail-related training)





# LAND



# Natural Features

Waller County is comprised of a rich tapestry of natural systems that have largely determined the prevailing land use patterns since man first began living in the region. The story of Waller County is written in the landscape, as both natural systems and human activity continuously influence the soil, water, flora, and fauna.

Waller County is bounded on the west by the Brazos River, and the soils and topography have been deeply influenced by the river as it shifts its course over millennia, depositing rich sediments along the way. These sediments created the rich soil profile that allowed agriculture to flourish throughout the region. The native coastal prairies in the central and southern portions of the County provide habitat for local wildlife as well as migratory waterfowl including ducks, geese, egrets, and cranes of numerous species.

The rolling terrain in the north is home to upland and bottomland forests with that transition to oak savannah and bottomland forests as one travels east. These forests were an important commodity during early settlement of the County. The savannah landscape has long provided suitable grazing for livestock and the culture that comes with it.

The residents of Waller County pride themselves on the rural and agricultural lifestyle and the land that allows them to enjoy it. Conservation of open space in its various forms will be important as the County continues to plan for potential growth and development in the coming years.







Credit: Lynn Greenwood [instagram.com /lgmacro](https://www.instagram.com/lgmacro)



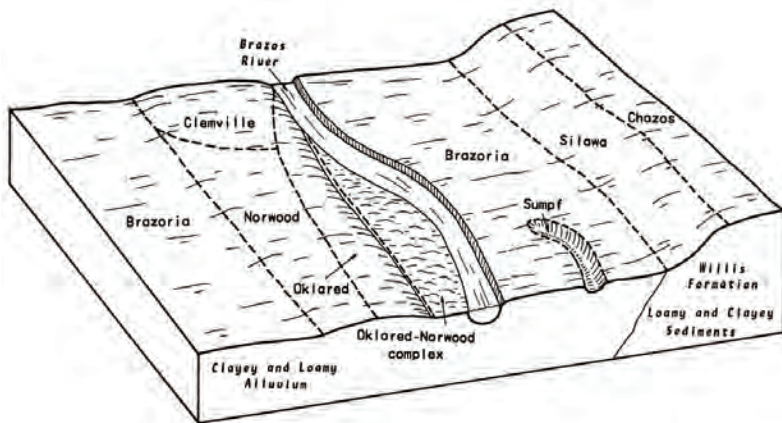
## Soils and Geology

The geologic history of an area is the primary influence for the flora, fauna, hydrology, and ecological systems that develop. Much of Waller County is directly influenced by the Brazos River and its long history of change.

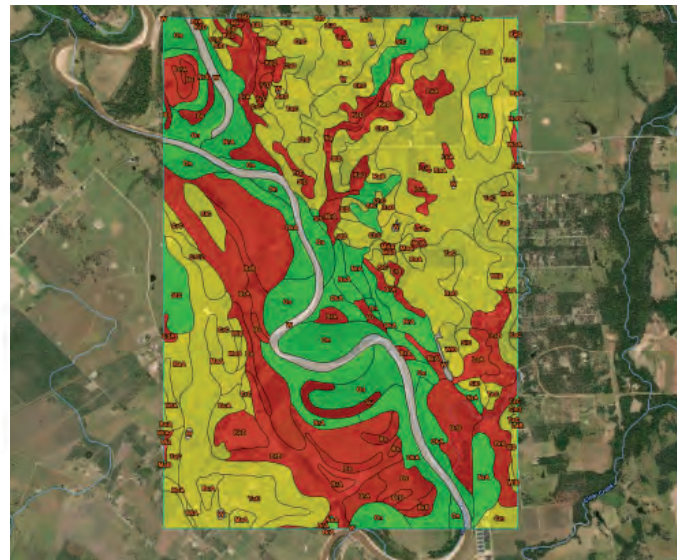
Rivers are not static and will occasionally change their alignment. These shifts deposit sediments in new areas over time, forever changing the landscape. The Brazos River deposited soils across the broad floodplains that would later become the diverse ecological systems of Waller County. These rich sediments, called alluvium, provide the environment for the native vegetation that make up Waller County, and are the reason certain land uses have prevailed such as cultivated crops and ranching.

For recreational development, soils can influence the practicality of constructing some features. For example, in some soils may have poor drainage characteristics with shallow depths to ponding and heavy clay layers. These characteristics are limiting for trail construction in some areas.

Other soil characteristics, such as shrink-swell conditions found in heavy clay soils, can become limiting for development of parking lots, driveways, and building foundations. In many cases, new soils can be brought in to allow development to happen, but early investigation of soils during site evaluation can reduce budget impacts and inform the design of recreation features and amenities.



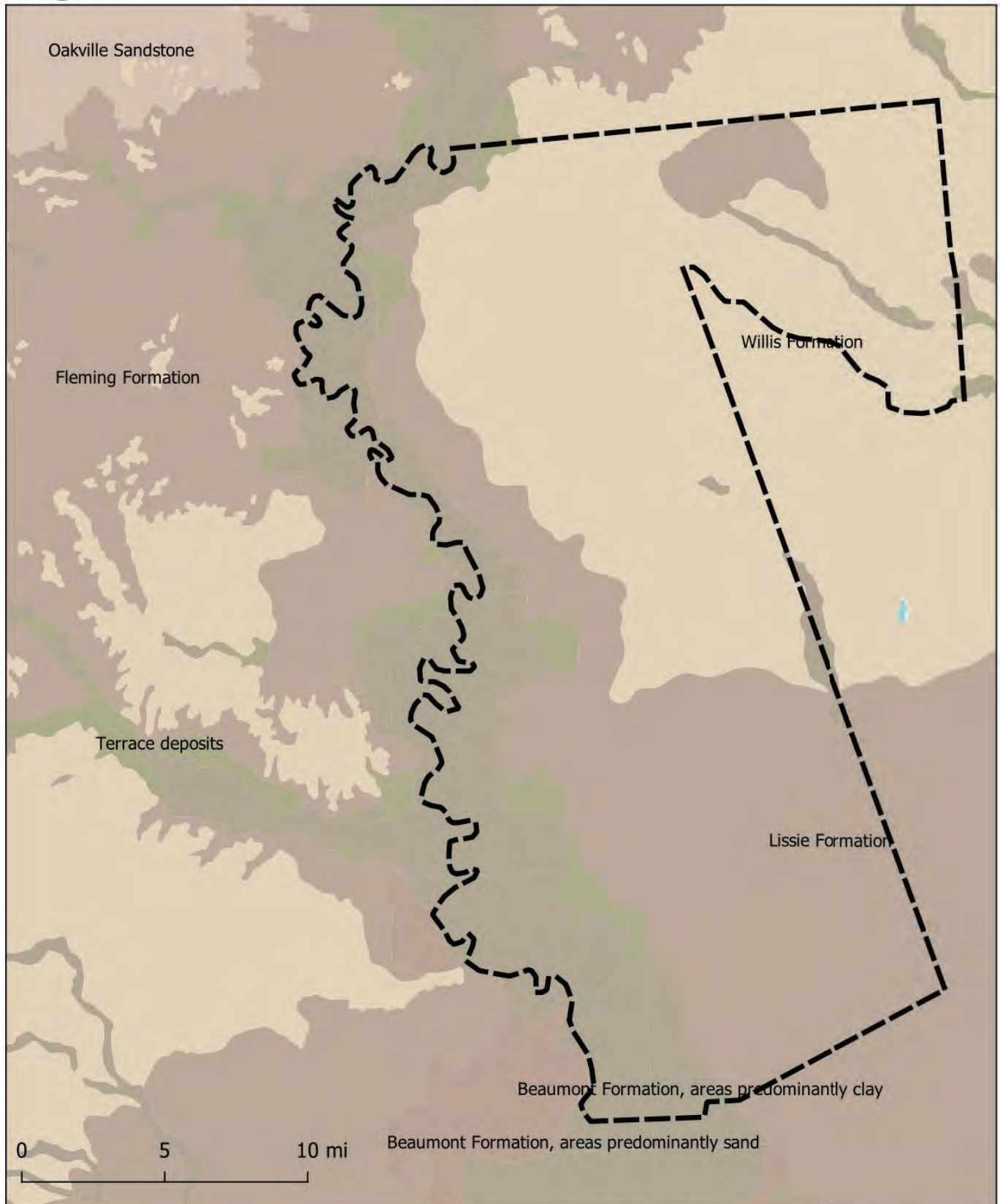
Pattern of soils in the Willis Formation, a primary unit in the classification of geology found in Waller County.



The USDA Web Soil Survey provides detailed analysis of individual soil series with ratings for the suitability of a given soil for development of various types. The map above illustrates the suitability of each soil type in the sample area with regards to development of concrete driveways and sidewalks. Areas in green are Not Limited, areas in yellow are Somewhat Limited, and areas in red are Very Limited due to ponding, high shrink-swell conditions, flooding, and/or acidity.



## Geologic Classes

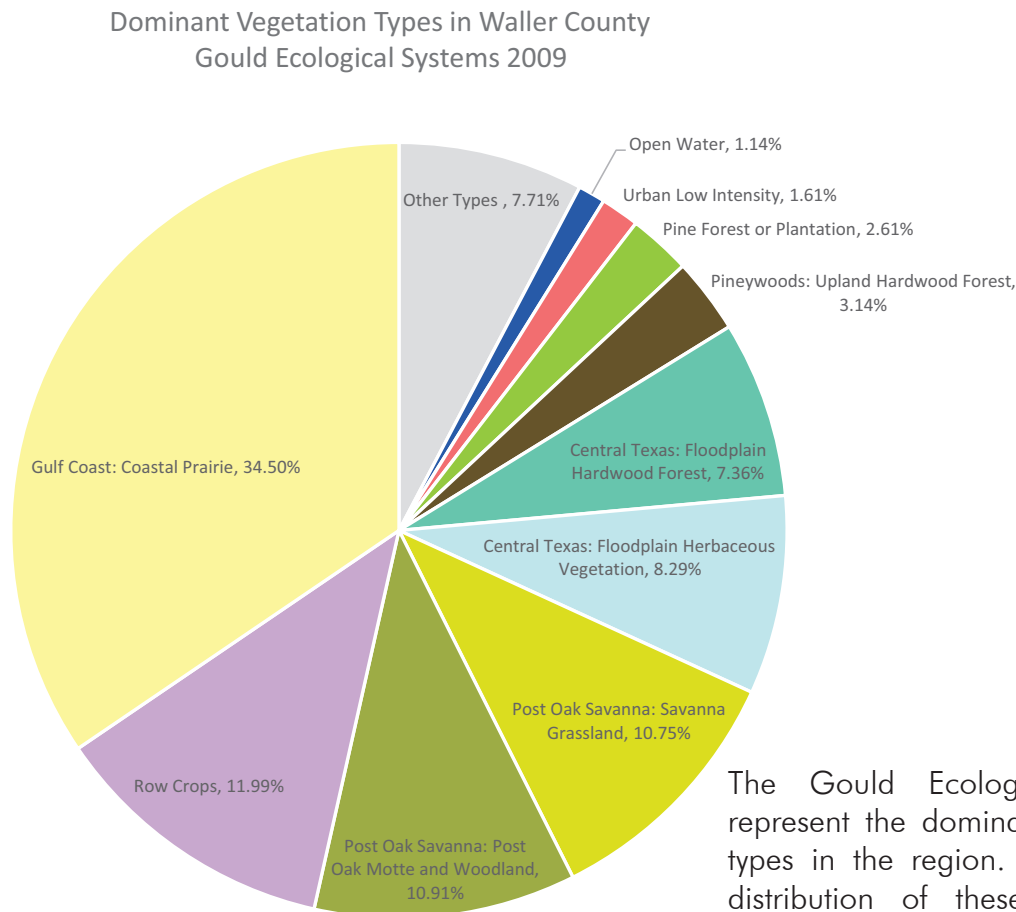


The major geologic units in Waller County are the Willis, Lissie, and Fleming Formations. The resulting soils are a mixture of weather parent material and sediments deposited from the river.

# Ecological Systems

The Texas Parks and Wildlife Department (TPWD) developed the Texas Ecological Systems Database Project in 2009, whereby vegetation across the State was classified with the use of 30 meter resolution satellite imagery, existing soil surveys and topography. The resulting database created a classification of primary ecological systems. Upon completion of the remote sensing component of the analysis, field observations were made to verify the key characteristics of each mapped vegetation type. The resulting data is useful in understanding local conditions as well as the patterns of vegetation across the entire region.

Within Waller County the dominant vegetation type is Coastal Prairie, making up 34.5% of the land cover at the time of the study. Row Crops make up 11.9% of cover, followed by Post Oak Motte and Woodland (10.91%), Savanna Grassland (10.75%), and Floodplain Hardwood Forest (7.36%). A total of 57 vegetation types were identified within Waller County, with the remaining types making up less than 7% of the land area.



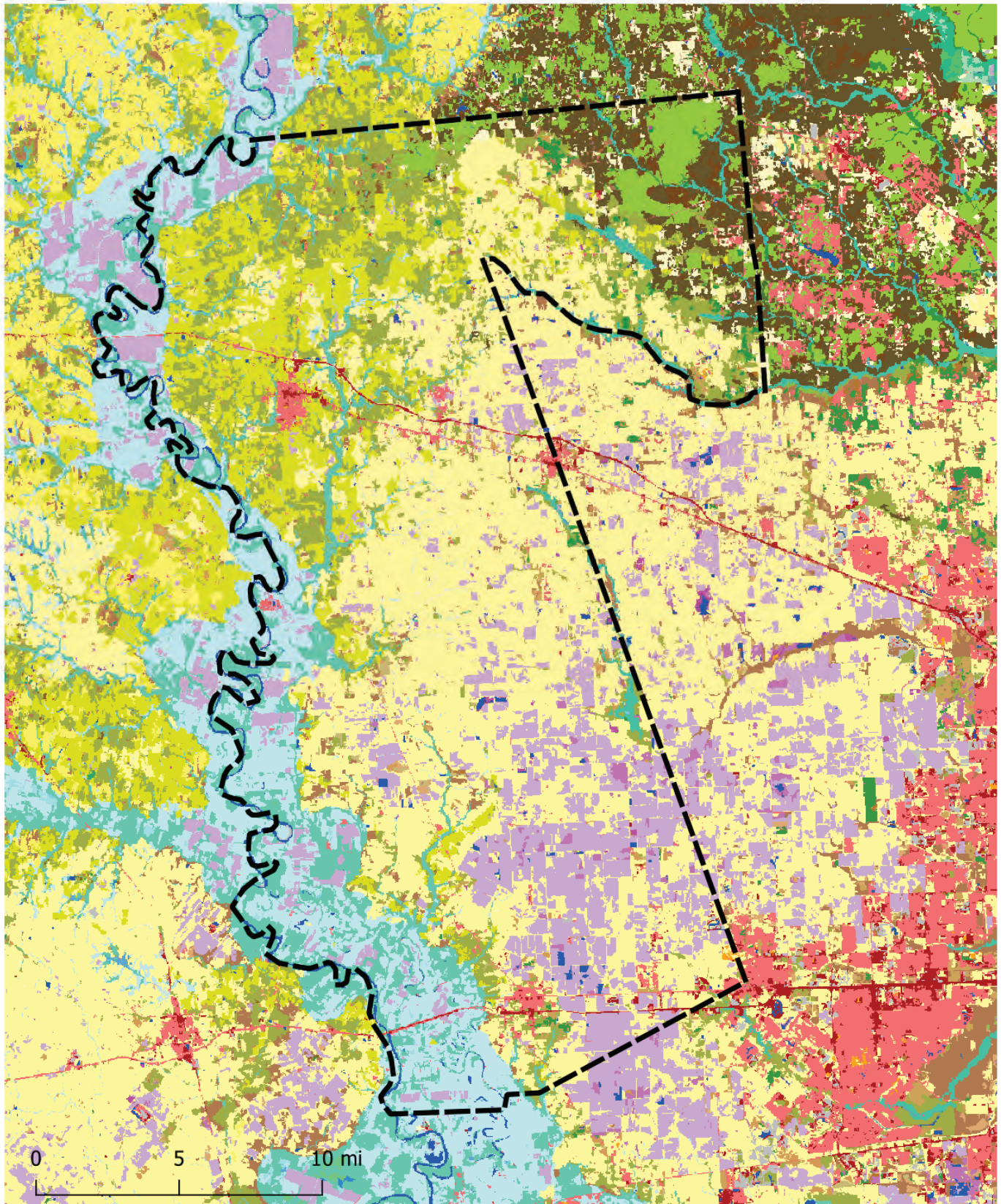
The Gould Ecological Systems represent the dominant vegetation types in the region. The relative distribution of these systems in Waller County are shown at left, with colors corresponding to the map on the following page.





## Ecological Systems

Source: TPWD

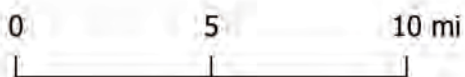
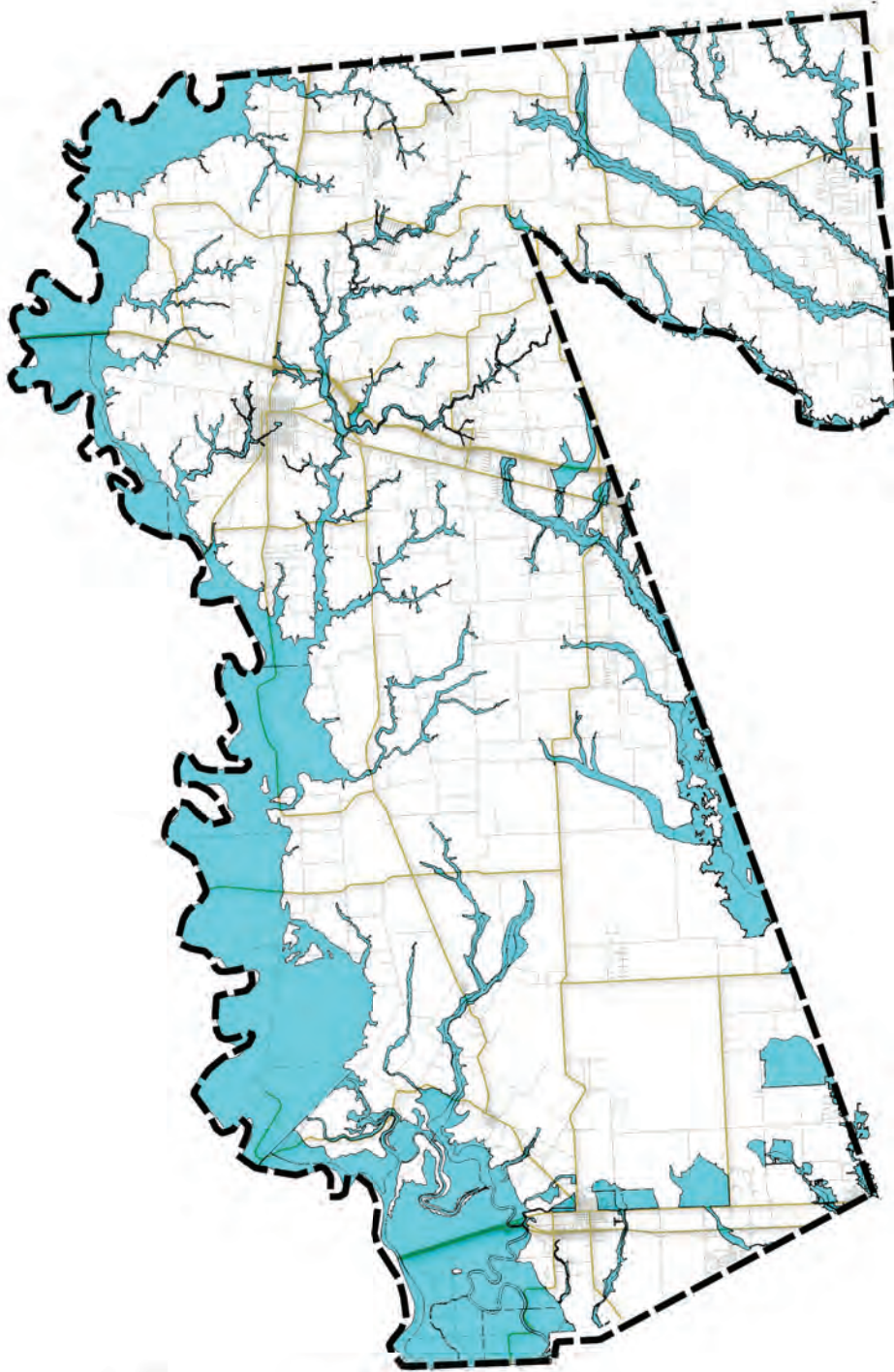






## 100 Year Floodplain

Source: FEMA



## Flooding in Waller County

Flooding along the Brazos River and the many creeks throughout Waller County is a continuous challenge for land uses in the area. The lands are often developed at risk of flooding, or they remain in agricultural or undeveloped states.

While often not suitable for many other land uses, floodplain land along riparian corridors can serve many important purposes. The abundant vegetation within floodplain areas serves an important role in reducing downstream flooding by absorption of stormwater runoff. Additionally, the vegetation helps to filter runoff and reduce erosion.

Often overlooked is the potential to take advantage of floodplain corridors for recreational uses. Linear corridors make excellent locations for local and regional hiking trails. Other floodplain areas can serve as athletic practice fields during non-flood periods, while serving their role in flood management when needed.



Pre-Harvey aerial photo taken at the intersection of the Brazos River and Interstate Highway 10 on 11-20-2016



Post-Harvey aerial photo taken at the intersection of the Brazos River and Interstate Highway 10 on 08-30-2017



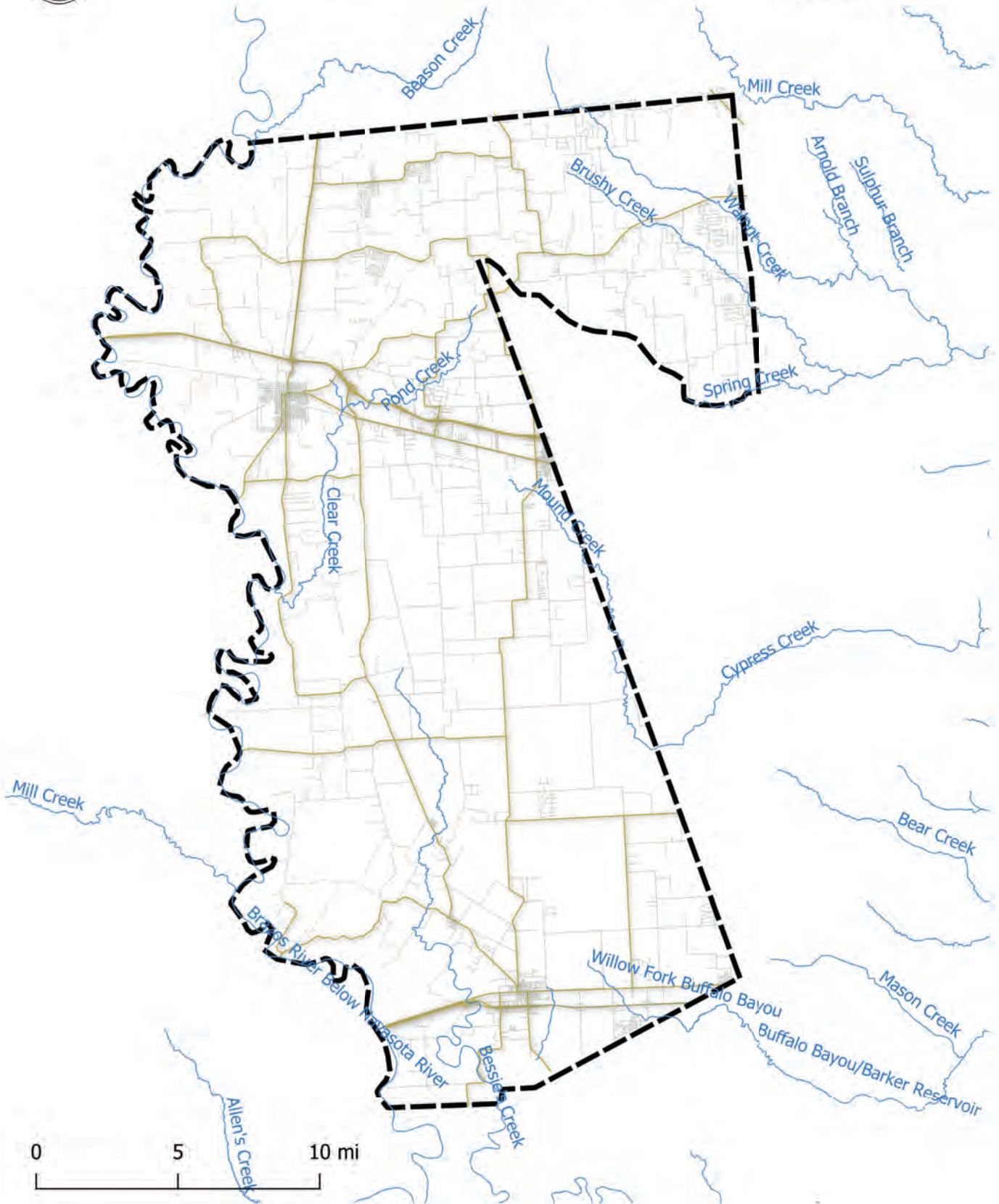
View of the Spring Creek Greenway Trail in Humble, TX. photo credit: Daniel Christianson.





## Major Creeks and Rivers

Source: TCEQ



## Major Creeks and Rivers

Creeks and rivers are some of the most significant natural features in Waller County with great potential for both conservation and recreational uses. The creeks are a vital part of the ecosystem, providing wildlife habitat, stormwater management, water quality management through filtration and capture of sediments. Major creeks can offer sources of recreation for fishing, canoeing and kayaking, hiking, birdwatching and other activities.

The primary consideration for recreation use in and along creeks is access. Most of the land along the creeks in Waller County is private property, however, the streambed and water of some creeks are considered to be public property owned by the State of Texas.

Texas law declares all “navigable” streams within the State to be public and provides two tests for determination. A stream can be considered “navigable in fact” if it can serve as a “common highway for trade and travel”, or can be determined to be “navigable in law” if the streambed maintains an average width of at least 30 from the mouth up (see Texas Natural Resources Code Section 26.001(c)).

Some creeks, such as Bessie’s Creek in Waller County, may have sections that are deemed navigable, while others are not. Bessie’s Creek is remarkably wide, exceeding 375’ in width for some sections. However, there are many sections where low-water crossings and dams prevent physical access, and it is illegal to cross through private lands to access public waters without permission.

The Brazos River is another waterway with great potential for water-based recreation. Kayaking and canoeing are popular activities along certain sections of the Brazos when water conditions are good. Access is generally available from County and State highway crossing of the river, although the steep bank conditions are a concern in some areas.

Due to frequent flood events, the Brazos is not an ideal candidate for development of formal kayak launch infrastructure, however designation of launch sites and parking areas would help facilitate access.



Bessie’s Creek, shown here from the US 90 bridge, is one of the larger creeks running through Waller County.



View of the Brazos River from the FM 159 bridge. Kayakers and canoeists have reported being able to paddle the 12-mile stretch between SH 290 and FM 159 in as little as 5 to 6 hours.



# National Wetlands Inventory

Wetlands are vital natural systems that provide a valuable ecosystem services including stormwater run-off reduction, water filtration, and wildlife habitat.

Wetlands can become an important component of a parks and recreation system by providing eco-tourism and educational opportunities such as birdwatching and nature tours. Water access for kayaking and canoeing can be provided in certain types of wetlands such as old oxbow lakes and some perennial wetlands.

While wetlands are usually unsuitable for development due to regulation or impracticality, they can be well-suited for limited development of boardwalks and educational signs that allow for access by visitors.



Oxbow lakes, such as these ones adjacent to the Brazos River in the southwestern portion of the County, are remnants of former river channel locations. As the river continuously moves over the millennia, it leaves behind oxbow lakes and emergent wetlands that provide excellent opportunities for eco-tourism and other recreational activities.

Wetland Type	Acres
Riverine	13,871.08
Freshwater Emergent Wetland	8,260.52
Freshwater Forested/Shrub Wetland	7,575.82
Freshwater Pond	2,917.42
Lake	621.43
Other	142.89

In Waller County, a variety of wetlands have been identified by the National Wetlands Inventory. The majority of the wetlands are Riverine and associated with the Brazos River and major creeks, and the Freshwater Emergent Wetlands found in low-lying prairies and pasture lands.



Boardwalks through wetlands provide access for nature appreciation and education. photo credit: Cibolo Creek Nature Center, Boerne, TX



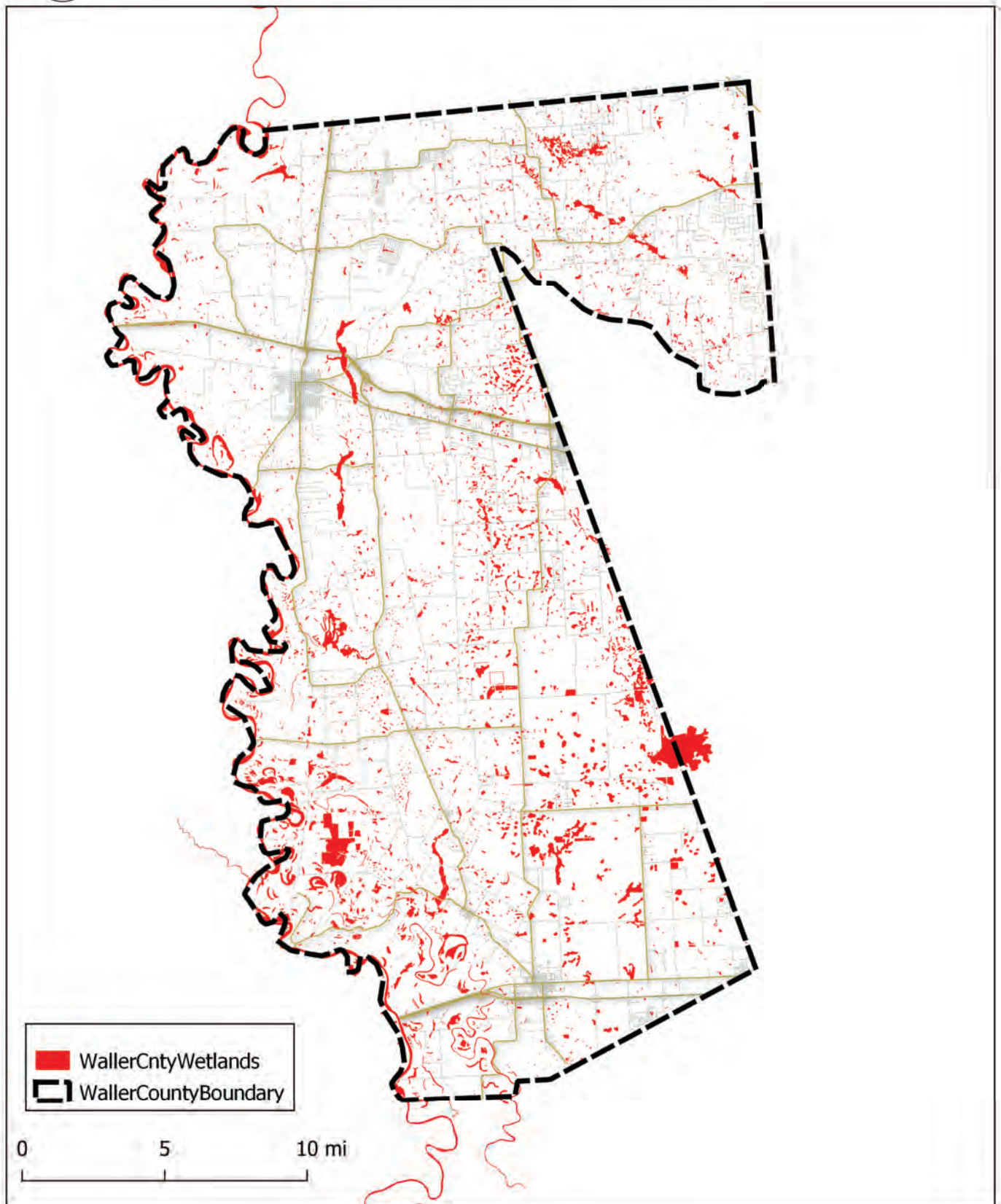
Typical prairie wetland. In the Katy Prairie, these wetlands are vital for reducing downstream flooding during major flood events. photo credit:

Texas Community Watershed Partners  
Waller County Parks, Trails, & Open Space Master Plan





## National Wetlands Inventory



## Conservation Lands

Protecting native and agricultural lands from development is vital for conservation of native ecological systems. Tools such as conservation easements are a powerful method of ensuring that important ecosystems will continue to exist.

A conservation easement is a voluntary, legal agreement that permanently limits uses of the land in order to protect its conservation values. The agreement is typically made between the landowner and a land trust or similar organization. Some conservation easements do not allow public access to the land, however they still protect the ecosystems within in perpetuity. Other agreements may allow for open public access with restrictions on the activities that may occur.

### The Katy Prairie Conservancy

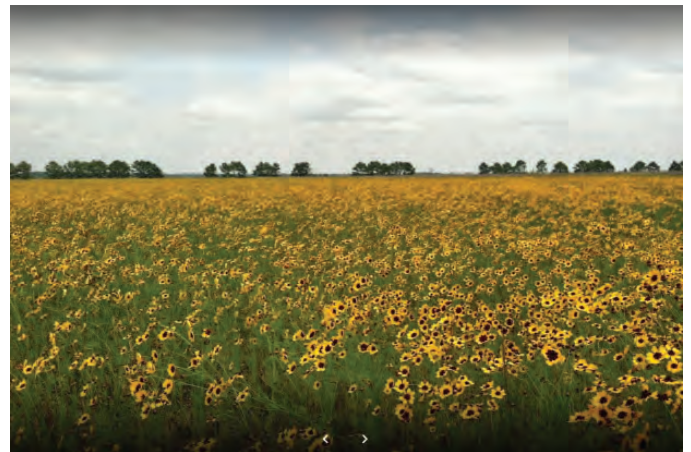
The Katy Prairie Conservancy (KPC) was established in 1992 to conserve the Katy Prairie. The Katy Prairie is part of the Western Gulf Coastal grasslands and is a rapidly decreasing natural system in need of conservation. KPC owns or has conservation easements on approximately 24,000 acres in western Harris and Waller

Counties.

KPC protects lands that are native prairie as well as lands that are active working farms and ranches. The Nelson Farms Preserve is a working rice farm with beneficial agricultural wetlands that provide habitat for migratory waterfowl, songbirds, and mammals.

The Warren Ranch, one of the largest working ranches on the Katy Prairie, is owned and managed in a partnership with the Warren Family. The Warren Ranch manages cattle and lease operations for pasture and hunting through the Texas Parks and Wildlife Department's Annual Public Hunting program.

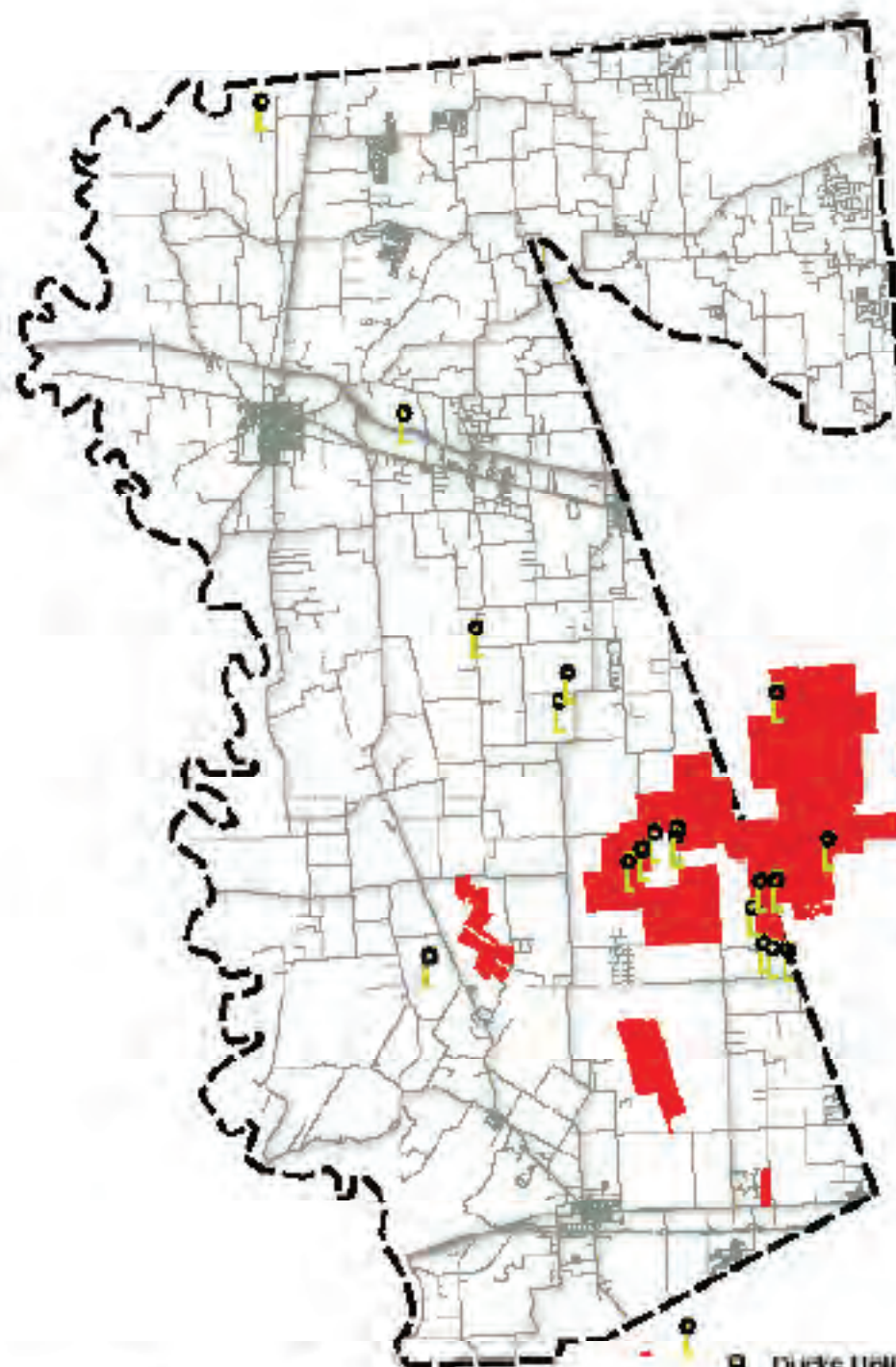
The Williams Prairie Preserve is another conservation easement on 10 acres of remnant prairie with native grasses, wildflowers and depressional wetlands. Recreation on KPC's lands is provided to the public through a variety of activities including hunting, birding, hiking, and educational programs.







## Conservation Land



**Ducks Unlimited**  
Another conservation easement program, similar to is through an organization called Ducks Unlimited. Ducks Unlimited is a non-profit organization that protects vital habitat through restoration of grasslands, wetlands, replanting forests, and restoration of watersheds.

Ducks Unlimited also creates management agreements with some landowners, sometimes including financial incentives for managing land for waterfowl habitat for a designated period of time. A total of 25 Ducks Unlimited projects have been delivered within Waller County.

-  Ducks Unlimited Project Deliveries
-  Conservation Land



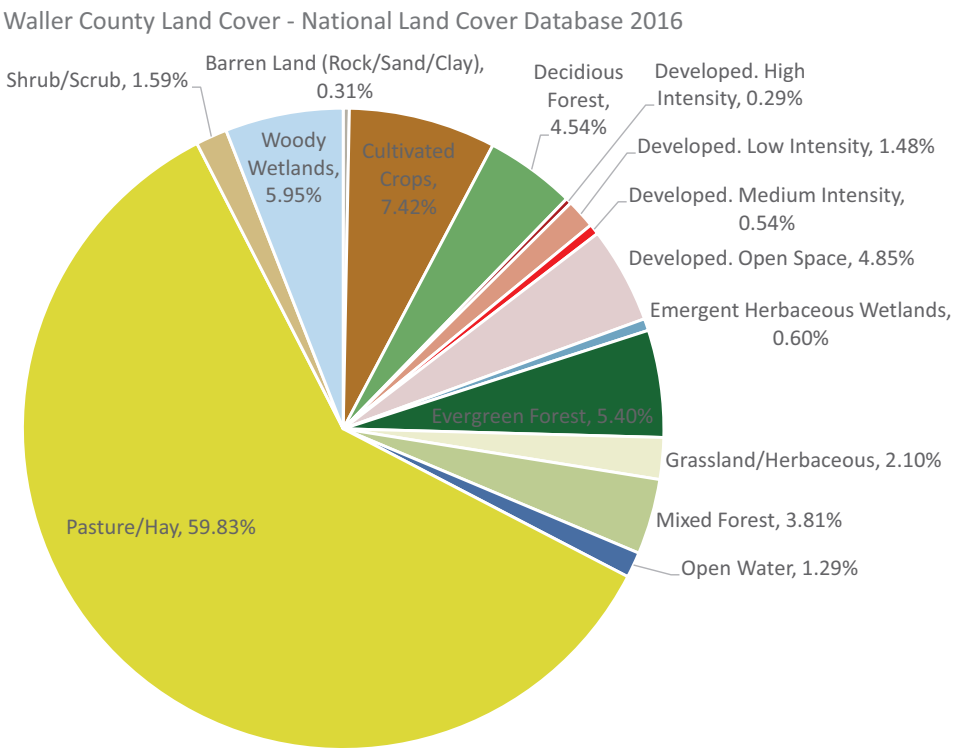
# Man-Made Features

## Land Use/Land Cover

Land use in Waller County is primarily cultivated crops, pasture, range, and woodland. Pasture and range lands are mostly used for cattle production, while the cultivated crops are mostly comprised of rice, cotton, and feed grains. Cultivated crops are located mostly in southern portions of the County, while pasture and range lands are more common in central and northern areas.

## Development Patterns

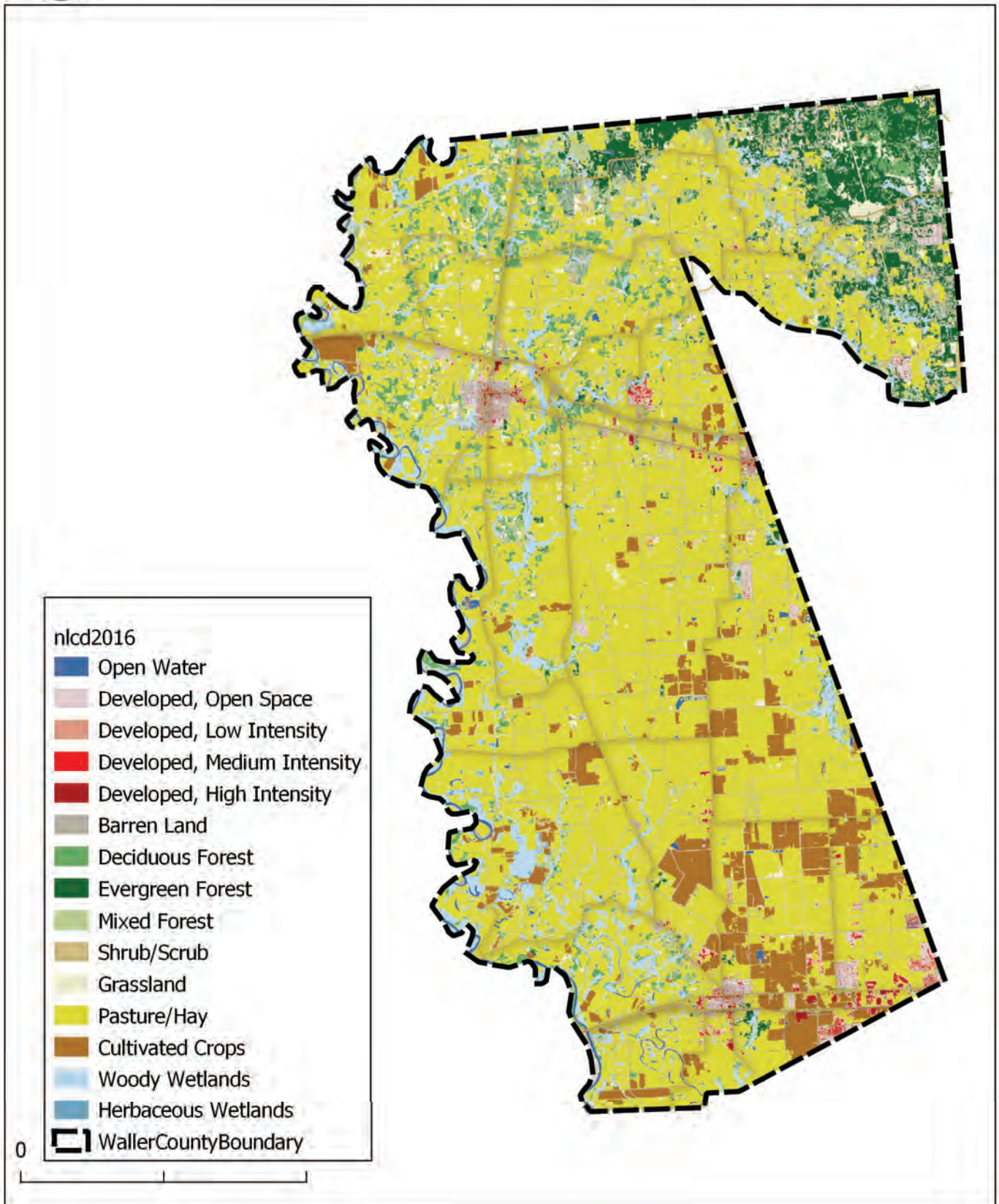
Though still largely rural in nature, Waller County is growing rapidly, especially along the State Highway 290 and Interstate Highway 10 corridors. As of 2016, a total of 23,698 acres of land have been developed into homes, commercial properties, roads, and other man-made uses. This represents an approximate 7.16% of the total land area in Waller County.





## 2016 Land Cover

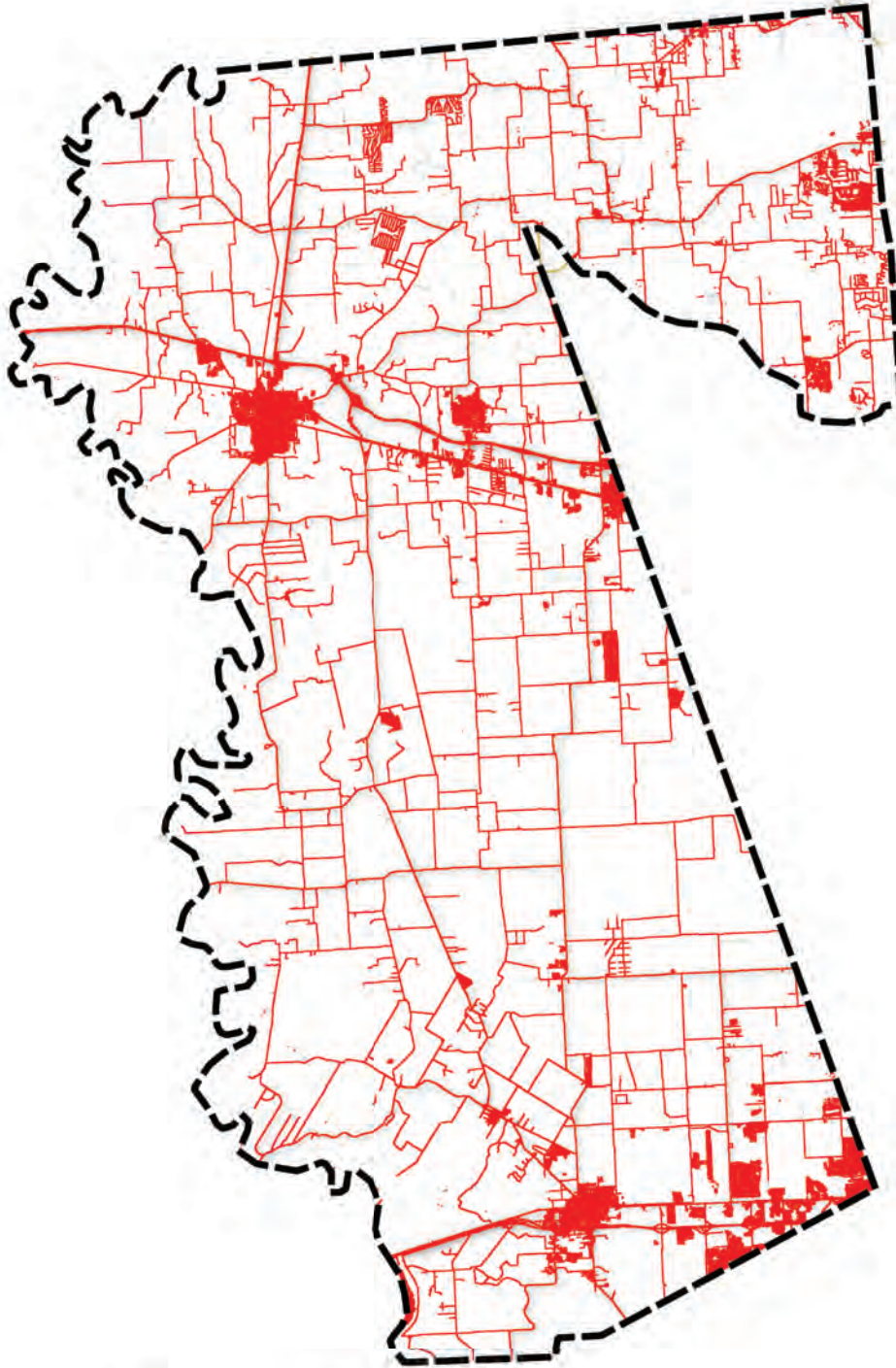
source: National Land Cover Database





## Developed Land

Source: National Land Cover Database 2016



0 5 10 mi



## Transportation

There are a total of 1,447 miles of State, County, and Local roadways within Waller County. Major transportation corridors, such as State Highway 290 and Interstate 10, are driving factors in the determination of growth and development.

Other corridors, such as rural county roads, have become a source of recreation for cycling enthusiasts. Many of the popular routes for cycling are along narrow highways that have inadequate width to accommodate both vehicular traffic and cycling.

An important consideration in future additions and improvements to the transportation system will be to keep in mind that the roads are shared by vehicular, farm, and cycling traffic and may need to be widened along the shoulders to accommodate such uses. Using “share the road” signage along selected corridors can help to ease conflicts between motorists and cyclists in a cost-effective manner.

In addition to the roadway, some corridors may be suitable for pedestrian pathways adjacent to the road. Off-street trails and dedicated bike lanes are two options that can allow multi-modal transportation without disrupting traditional motor vehicle traffic.



Share the road route signage is an important tool for educating motorists about cycling traffic. Signage can be a cost effective way to reduce conflicts between motorists and cyclists.



Off-street trails along roadways provide safe routes for cyclists and pedestrians. Example above is the Hancock Trail in Lake County, Florida photo source: [bikeorlando.net](http://bikeorlando.net)

## Utility Corridors

Electrical transmission corridors transect rural and developed areas all across the country. In Texas, most of these corridors are under the control of private companies, thereby limiting public access. due to concerns over liability. The corridors have great potential to create pedestrian and bicycle connections across communities and even across whole counties.

Recent legislation in Texas has addressed the concerns about liability on the part of the utility companies through the passing of House Bill 200 during the 83rd legislative session, and House Bill 931 during the 85th legislative session. Combined, these bills provide for limitations of liability on the part of the utility companies for allowing public access to a corridor for development and use of recreational trails.

HB-200 states “ An electric utility, as the owner, easement holder, occupant, or lessee of land, may enter into a written agreement with a political subdivision to allow public access to and use of the premises of the electric utility for recreation, exercise, relaxation, travel, or pleasure.” This bill further delineates the limits of liability on the part of the owner as well as the responsibilities of the other party, which will likely be a political subdivision such as a county or municipality.

Later legislation in HB-200, 85th legislative session opens up the opportunity to counties adjacent to counties with a population of 4 million or more. This opens up significant opportunities for trail development along utility corridors in Waller County.

Other recreational opportunities along corridors can include limited development of parks. One such example is the 3.5 acre Danny Jackson Family Dog Park in Houston, Texas. This park, is actually on land between Westpark Tollway and a Centerpoint utility right-of-way. Such a park could be developed within rights-of-way in the future.



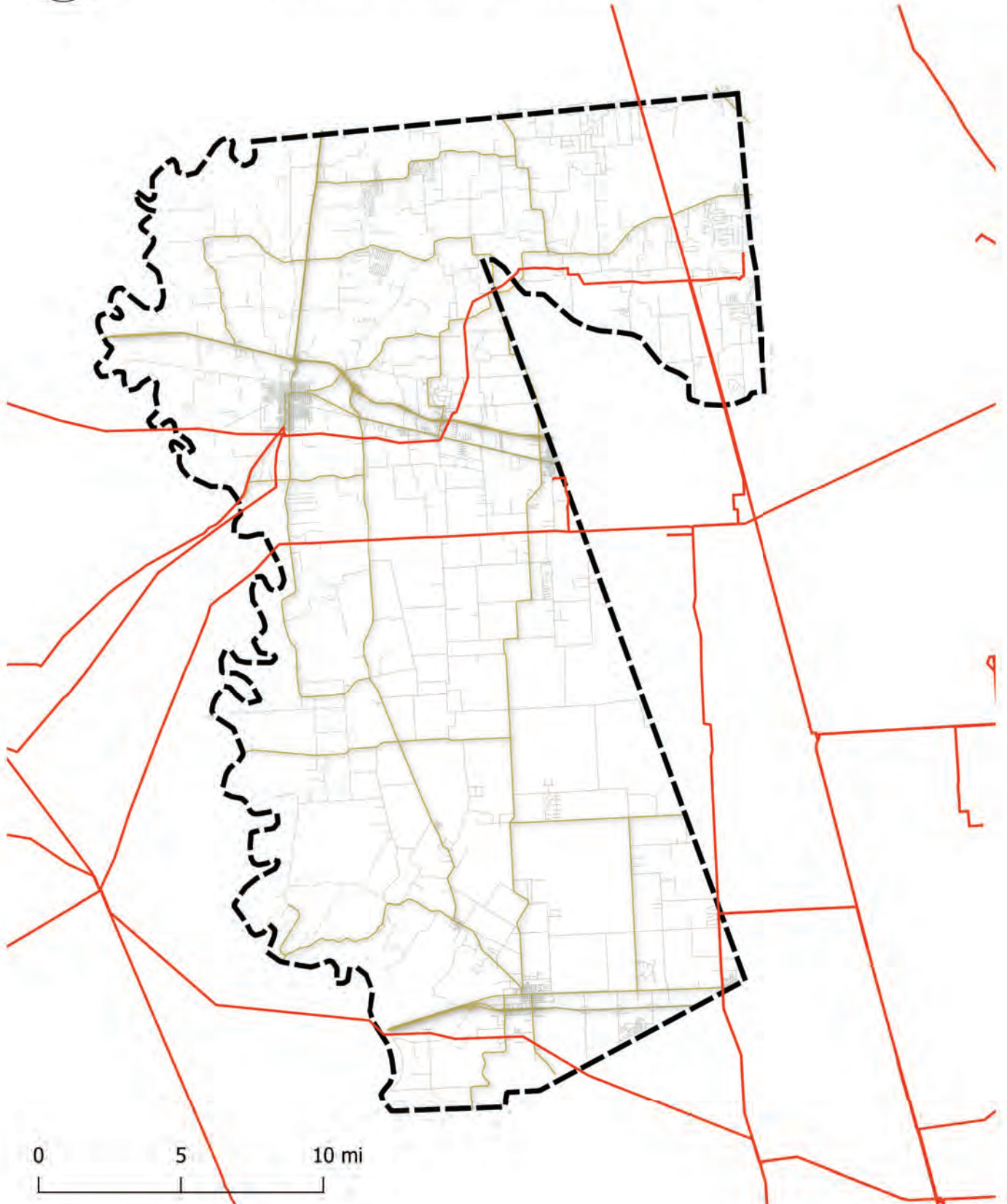
Utility corridor trail in Jefferson County, Colorado.  
photo credit: americantrails.org



Danny Jackson Dog Park adjacent to utility corridor  
along Westpark Drive in Houston, Texas.



## Electrical Transmission Lines





## Public Lands

The majority of land in Waller County, and in Texas as a whole, is under private ownership. There are an approximate 4,306 acres of land in the public domain, in addition to the road rights of way, and easements throughout the County. These lands are owned by the County, municipalities, Independent School Districts, Prairie View A&M University, and various other entities.

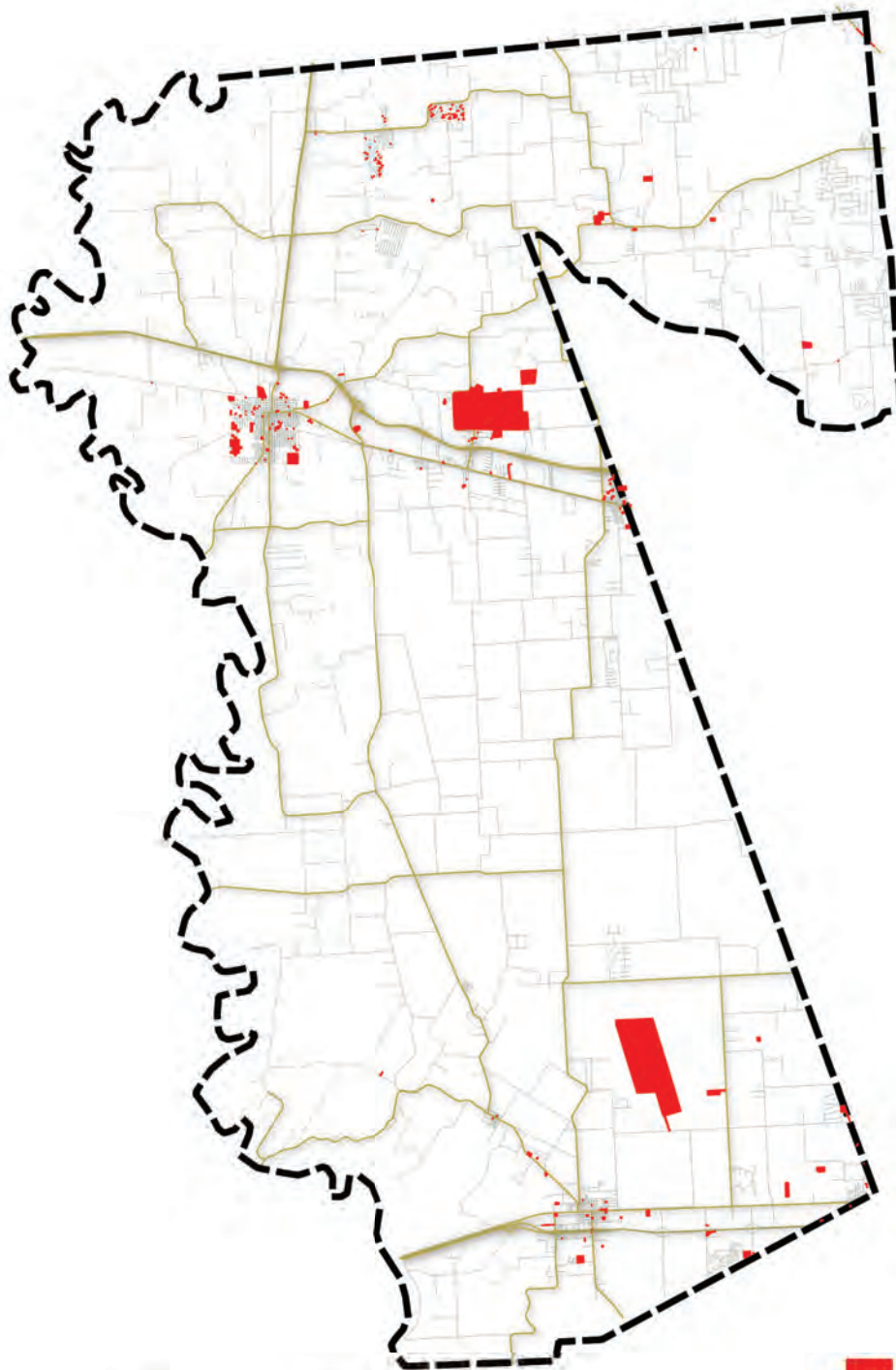
Some properties, such as the large holdings of the City of Houston, present opportunities for parks and open space and warrant further exploration upon identification of priority projects. Many parcels are held in trust by Waller County. These are generally properties that were acquired due to tax delinquency and could either be liquidated through auctions, or in some cases, developed into park spaces.

OWNER NAME	ACRES
CITY OF HOUSTON	1908.92
PRAIRIE VIEW A & M UNIVERSITY	1741.46
CITY OF HEMPSTEAD	149.65
WALLER ISD	129.34
WALLER COUNTY	62.59
CITY OF KATY	52.58
WALLER COUNTY IN TRUST	46.33
STATE OF TEXAS	44.71
KATY ISD	40.35
CITY OF BROOKSHIRE	40.34
WALLER COUNTY IMPROVEMENT DISTRICT # 2	25.3
WALLER ISD TRUSTEE	12.81
CITY OF PRAIRIE VIEW	11.57
WALLER CITY OF	9.91
ROYAL ISD IN TRUST	9.45
WALLER COUNTY MUD #9A	6.13
CITY OF WALLER	5.05
WALLER COUNTY/STATE OF TEXAS	3.84
WALLER VOLUNTEER FIRE DEPT	1.9
WALLER COUNTY HOSPITAL	1.66
FORT BEND COUNTY	0.76
WALLER COUNTY RID #1	0.65
CITY OF PATTISON	0.39
TRI-COUNTY VOLUNTEER FIRE DEPT	0.37
WALLER COUNTY ROADS	0.3
HEMPSTEAD INDEPENDENT SCHOOL DISTRICT	0.25
CITY OF HEMPSTEAD IN TRUST	0.19



4306.8



## Public Land



0 5 10 mi

 Public Land  
 Waller County Boundary





A photograph of a field with yellow Black-eyed Susan flowers and a purple Salvia plant. The flowers are in various stages of bloom, and the leaves are green and serrated. The background is slightly blurred, showing more of the same plants.

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# Waller County Conservation Funding Study

**NOVEMBER 2020**

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# Executive Summary

The Waller County Conservation Feasibility Study explores public funding options to implement the forthcoming Waller County Parks and Conservation Master Plan. The feasibility study analyzes a range of public funding options for parks and land conservation in Waller County, including an examination of county finance mechanisms focusing on broad-based tax and bond options, an assessment of public funding at the municipal level, and a summary of relevant state and federal programs. Specifically, the feasibility study explores:

**County Mechanisms:** Debt mechanisms, such as general obligation bonds; tax options; several special districts, such as a conservation and reclamation district. Research includes implementation process, revenue projections, and estimates of costs to homeowners and/or taxpayers where possible. The report briefly covers school-community partnerships such as the Houston SPARK program.

**Municipal Mechanisms:** The assessment of the opportunities at the municipal level includes charter amendments to dedicate taxes, sales tax, tax increment financing, parkland dedication ordinances and hotel/motel tax.

**State Programs:** Texas has a long history of funding conservation, recently bolstered by the passage of two constitutional amendments on the ballot in November 2019. Voters overwhelmingly approved Proposition 5, which will stabilize robust funding for state parks and local park grants. Texas voters also approved Proposition 8, a constitutional amendment providing for the creation of the Flood Infrastructure Fund (FIF) to assist in the financing of drainage, flood mitigation, and flood control projects. The report provides an overview of the Texas Farm and Ranchland Protection program and the Supplemental Environmental Project which allows environmental violation penalties to be used for pre-approved beneficial projects including conservation projects.

**Federal Programs:** Federal grant programs can serve to supplement local conservation efforts. Programs of particular relevance to Waller County include the National Recreation Trails program and programs administered by the U.S. Department of Agriculture (USDA): the Natural Resources Conservation Service (NRCS) Agricultural Conservation Easement Program (ACEP), and the Community Forest Program (CFP). The report also highlights the potential to better utilize State Revolving Funds authorized by the Clean Water Act for land conservation to protect water resources.

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# Waller County Overview<sup>1</sup>

The county of Waller is the 84th largest of the 254 counties in Texas. The majority of Waller County is in the Texas Gulf Coastal Plain, and the northern 20% is a rolling timberland. The Brazos River defines the county's western boundary, and its landscape is typified by hardwood bottomland forest. The Spring Creek-Buffalo Bayou watersheds provide drainage for the eastern portion of the county, and the Austin-Oyster Creek watersheds provide drainage to the southern portion of the county. Much of the vegetation consists of cultivated prairie grass-land and pastureland. Recreation consists of fishing, hunting, historic sites, historical museum and the Waller County fair.

The cities of Hempstead, Prairie View and Waller are located in southeast Texas along the U.S. Highway 290 corridor in Waller County, approximately 40 miles northwest of the central business district of the City of Houston.

County Commissioners serve as the County government. Mayor-Alderman is the form of municipal government. The cities of Hempstead, Prairie View, Waller, Pattison, and Brookshire are incorporated under the statutes and general laws of Texas which provide for General Law Cities.

The local economy is based on oil, agribusiness, retail, manufacturing and Houston area growth. Nearly one quarter of the population is employed in the manufacturing sector. Educational services are the second largest employment sector. Although agriculture remains the mainstay of the local economy, agrarian dominance is being challenged by the heavy influx of people into the farm and ranch lands. Many Houstonians have purchased small farms in the area, and the number of local residents who commute to jobs in Houston has grown steadily over the past decade. Much of the countryside has been subdivided for home sites. The trend toward urbanization is expected to continue.

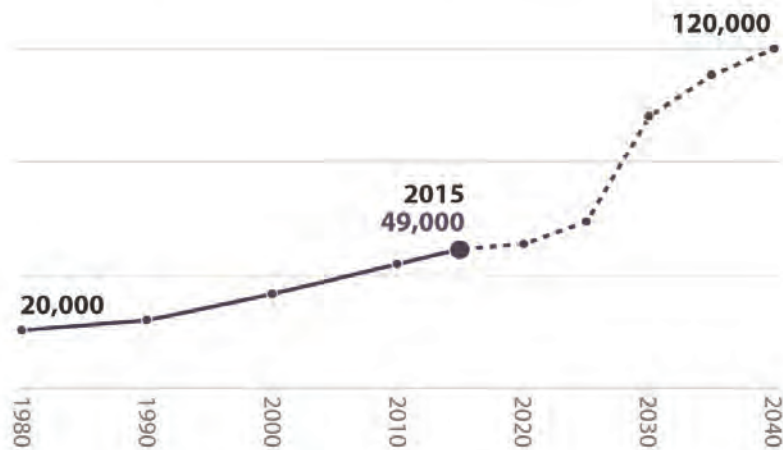
Waller County's 2016 estimated population of 50,115 represents a growth rate of 146% between 1980 and 2016. The population is expected to grow to 120,000 by 2040. Hempstead is the county seat and largest community with an estimated population of 7,457, which is followed closely in population size by Prairie View, with an estimated population of 6,442. Roughly half of the population of Waller County (25,538) resides in unincorporated areas.

The City of Prairie View is home to Prairie View A&M, a land-grant, Historically Black University that is part of the Texas A&M system. Prairie View A&M had an enrollment of 8,762 in 2016, making it the largest population center in the county when in session.

Waller County has experienced multiple flood events over the past few years. Typically, Waller County is more affected by riverine flooding than sheet flooding. Rainfall upriver from Waller County can cause the Brazos River to break its banks and flood properties.

### Population Growth Forecast

Waller County grew by 146% from 1980 to 2015 and is expected to reach 120,000 residents by 2040.



### Municipal Populations

The City of Hempstead is Waller County's largest incorporated municipality.

7,457 Hempstead

6,442 Prairie View

5,233 Brookshire

2,278 Waller\*

1,100 Pine Island

560 Pattison

1,507 Katy\*

25,538 Unincorporated

\*The municipality spans multiple counties. Only the population residing in Waller County is shown here.

Source: Waller County Economic Resilience Profile.

## County Finance and Revenue Mechanisms

### Debt Issuances<sup>2</sup>

There are various debt instruments available to counties and cities to support capital improvements including parks, trails, land conservation, and recreation facilities. Different requirements exist for each type of instrument. Some require or may require an election while others do not. The length of time for the financing differs with the type of instrument. The primary instruments local governments use are ad valorem tax-backed financing such as General Obligation Bonds, Certificates of Obligation, and Tax Notes, and Revenue Bonds backed by a pledge of project revenues.

<sup>1</sup> Source: This section is largely excerpted from: <http://www.wallercountyland.com/community.htm>

<sup>2</sup> Sources: Pollan, Thomas, *Public Finance Handbook for Texas Counties*, Texas Association of Counties, 2012; Texas Comptroller at <https://comptroller.texas.gov/economy/fiscal-notes/2017/january/co.php>



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## General Obligation Bonds

Counties in Texas have the authority under the state Constitution to issue general obligation bonds payable from property taxes for general fund, permanent improvement fund, road and bridge fund, and jury fund purposes. State laws and codes stipulate various limitations on debt capacity and associated taxes. For example, property taxes levied to pay the debt service on county bonds (also known as Interest and Sinking, or I&S rates)<sup>3</sup> are limited to \$0.80 per \$100 of taxable value with majority approval of the qualified voters. For obligations backed by the \$0.80 per \$100 valuation limit, the Attorney General of Texas has limited the amount of bonds eligible for approval to an amount, which produces debt service requirements of \$0.40 of the \$0.80 limit or less, calculated at 90 percent collections.<sup>4</sup> Local charters may further limit debt capacity. Waller County's I&S tax rate (\$0.0762)<sup>5</sup> is well below the limits. General obligation bonds that are to be paid from property taxes require voter approval at an election.<sup>6</sup>

## Implementation

Since a county can only call a bond election on the May and November Uniform Election Days,<sup>7</sup> that time must be factored in. The county must call the election at least 62 days (70 days for the November date in even-numbered years) prior to the proposed election day or it will have to wait until the next cycle. Plus, once the bond election has been approved, the county still will not be able to sell bonds until 30 days from the canvass so that the time has passed for an election contest.

In making a time line, it is important to remember that a county will need to approve the order to issue the bonds or other tax-backed obligations at a regularly scheduled meeting of the commissioners court. The order authorizing the bonds is also the order authorizing the sale and the levy of the tax to support debt service on the bonds. Since a tax is being levied, Section 81.006 of the Local Government Code must be followed:

### § 81.006. Quorum; Vote Required for Tax Levy

- (a) Three members of the commissioners court constitute a quorum for conducting county business except the levying of a county tax.
- (b) A county tax may be levied at any regularly scheduled meeting of the court when at least four members of the court are present.
- (c) A county may not levy a tax unless at least three members of the court vote in favor of the levy.

## Certificates of Obligation

A certificate of obligation (CO) is a debt instrument that can be issued by a city, county, or health/hospital district to: (1) pay for the construction of a public work; (2) purchase materials, supplies, equipment, machinery, buildings, land, and right-of-way for authorized needs and

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purposes; and (3) pay contractual obligations for professional services. COs function similarly to bonds, but with fewer procedural requirements. COs are issued for terms of up to 40 years and usually are supported by property taxes or other local revenues.

## Implementation

Unlike general obligation bonds, COs don't require up-front voter approval. Only if the city receives a petition protesting the issuance of the CO that is signed by five percent of the city's qualified voters must an election be held. A city must publish notices in a newspaper of general circulation in the area that the city intends to issue COs. The notice must be published once a week for two consecutive weeks, with the date of the first publication occurring before the 30th day before the date tentatively set for the passage of the order or ordinance authorizing the issuance of the COs.

Proponents tout the flexibility CO bonds afford local officials in responding to critical and emerging public needs, allowing them to act without having to wait for — or pay for — an election. And unlike general obligation bonds, a single CO can be issued to support more than one purpose or project, reducing the cost of issuance. Opponents argue that COs do not allow for adequate citizen input or approval, and that the ability to fund multiple projects with a single CO issuance is confusing and disguises public indebtedness.

Legislation passed in 2015 prohibits the issuance of COs for any project voters rejected in the preceding three years.

## Tax Notes or Limited Tax Notes

Anticipation notes, also known as tax notes or limited tax notes, are a financing option made available to cities and counties by the Legislature in 1993. Anticipation notes can be secured by pledging either ad valorem taxes or revenue, or both. In the case of a revenue pledge, the county must give specific authority to permit the particular revenue source to be used for the note. Most counties issue anticipation notes limited by the \$.80/\$100 tax rate (limited tax notes).

The process for issuing tax notes is relatively streamlined and there is no election or publication requirement. The notes do have a short maturity that cannot exceed seven years from the date of the attorney general's approval.

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<sup>3</sup> Interest and Sinking (I&S) Tax Rate is the tax rate levied by districts to pay for any bond debt that may have been issued to fund capital improvements.

<sup>4</sup> Pollan, Thomas M. 2012. Public Finance Handbook for Texas Counties. Prepared for The Texas Association of Counties. Also Texas Administrative Code, Title 1, Part 3, Chapter 53: (2) General law cities of under 5,000 population shall have a total tax allowable of \$1.50 per \$100 valuation, and a bond allowable of \$1.00 per \$100 valuation.

(3) Home rule cities and general law cities of over 5,000 population shall have a total tax allowable of \$2.50 and shall have a bond allowable of \$1.50 per \$100 valuation (unless city charter provides less).

(6) Counties have a total tax available of \$.80 per \$100 valuation and shall have a bond allowable of \$.40 per \$100 valuation.

<sup>5</sup> Waller County FY2019 Adopted Budget.

<sup>6</sup> Gov't Code § 1251.001.

<sup>7</sup> An amendment to Section 41.001 of the Election Code prohibits a county from holding a May election in even-numbered years.

Anticipation notes can be used to:

- Pay for construction of a public work.
- Pay for purchase of materials, supplies, equipment, machinery, buildings, lands, and rights of way for the issuer's authorized needs and purposes.
- Pay for professional services such as engineers, architects, attorneys and financial advisers.

## Revenue Bonds

Revenue Bonds, unlike general obligation bonds, do not involve an ad valorem tax pledge. Revenue bonds are secured by the pledge of revenues of a project of the issuer. These bonds are not subject to a demand for payment from taxes. No election is required under state law to issue revenue bonds. Most counties generally do not have projects which will support revenue bonds.

## Waller County Credit Rating

At September 30, 2018, Waller County governmental activities had total general debt outstanding of \$43,760,000. The Commissioners' Court keeps maturity dates confined to no more than 30 years. The County has an underlying credit rating by Standard & Poor's of "AA" and an underlying rating by Moody's of "Aaa". These ratings indicate high quality investment allowing for the issuance of relatively low cost debt. See appendix A for additional information on Waller County debt.

## Waller County Revenue and Cost Estimates

The table below includes bond projections for a range of potential debt issuances in Waller County. For example, the county could issue a \$10 million bond at an average annual cost of about \$18 for the typical homeowner based on an average home assessed value of \$179,800 and a 30-year maturity. This would represent a property tax increase of \$0.01 per \$100 of assessed value.

Waller County Bond Financing Costs			
<i>Assumes a 30-year bond issue at 4.0% Interest Rate</i>			
<i>2019 Assessed Valuation= \$5,890,388,046. *</i>			
Bond Issue	Annual Debt Service	Tax Increase	Annual cost/ Avg. Household**
\$5,000,000	\$289,150	0.005	\$9
\$10,000,000	\$578,301	0.010	\$18
\$15,000,000	\$867,451	0.015	\$26
\$20,000,000	\$1,156,602	0.020	\$35
\$25,000,000	\$1,445,752	0.025	\$44
<i>*Source: Waller County FY2019 Adopted Budget.</i>			
<i>**Based on median homestead assessed value of \$179,800. Source: average of US Census, Bershire Hathaway, &amp; Realtor.com, less 20% exemption.</i>			



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Waller County currently provides a 20 percent optional homestead exemption to all homeowners. This means, for example, that if a home is valued at \$100,000, the exemption will reduce its taxable value for Waller County taxes by \$20,000 to \$80,000.

The bond cost calculations provide an estimate of debt service, tax increase, and cost to the average homeowner in the community of potential bond issuances for land conservation. Assumptions include the following: the entire debt amount is issued in the first year and payments are equal until maturity; and a 4 percent interest rate.<sup>8</sup> Property tax estimates assume that the county would increase property taxes to pay the debt service on bonds; however, other revenue streams may be used. The cost per household represents the average annual impact of increased property taxes levied to pay the debt service. The estimates do not take into account growth in the tax base due to new construction and annexation over the life of the bonds, the property tax collection rate, or the costs of issuing the bonds. The jurisdiction's officials, financial advisors, bond counsel and underwriters would establish the actual terms.

## Property Tax

The property tax is the single largest revenue source for many local jurisdictions in Texas and the proceeds may be expended for parks and open space. However, property taxes cannot be dedicated to specific purposes and therefore funding is subject to the annual budgeting process and appropriations made by the Commissioners Court.

### County property tax rates and limits<sup>9</sup>

A county property tax rate may be composed of as many as three individual rates for a total rate not to exceed \$1.25 per \$100 of value. Not all counties levy all three taxes. The Texas Constitution sets the following rate limits:

- \$0.30 per \$100 for farm-to-market/ flood control,
- \$0.80 per \$100 for general fund, permanent improvement fund, road and bridge fund, jury fund,<sup>10</sup> and
- \$0.15 per \$100 for the maintenance of public roads, which is commonly referred to as the "special road and bridge fund."

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<sup>8</sup> Waller County's Series 2018 General Obligation Bonds were expected to carry a 5% interest rate in the first several years of debt service and then tapering off to 3% toward maturity (30 years). Source: Waller County Official Statement dated June 6, 2018, p. ii.

<sup>9</sup> [http://www.tacaofexas.org/upload/page/0019/docs/MVBA\\_TruthinTaxation\\_LR.pdf](http://www.tacaofexas.org/upload/page/0019/docs/MVBA_TruthinTaxation_LR.pdf), A Guide for Setting Tax Rates. McCreary Veselka Bragg & Allen P.C. Attorneys at Law, 2018.

<sup>10</sup> Texas Const., Art. VIII §9. The legislature may authorize levies in excess of this limit for specific purposes such as farm-to-market roads or flood control. Texas Constitution, Article VIII, Section 1.

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The total amount of property taxes imposed in any year may not exceed the amount imposed in the preceding year unless the governing body gives notice of its intent to increase taxes and holds a public hearing.<sup>11</sup>

A county quorum is required for property tax implementation. At least four members of the county commissioners' court must be present for a county to adopt a tax rate; at least three must vote for the rate. The county judge is considered a member for this purpose.

If a city or county wants to increase general fund property tax revenue by more than 3.5% over the previous year, they need voter approval in an election (specifically a November election). In the past, the cap was 8 percent before an election could be called. In the past, voters had to petition for an election. As of January 2020, this provision will be automatic.

To illustrate, the calculation now looks like this:

*Voter-Approval Rate = (No-New-Revenue Maintenance and Operations Rate x 1.035) + current debt service tax rate*

Local government leaders who want to increase their revenue above the "no-new-revenue" limit must do so in a recorded vote, and at least 60% of the board must approve the increase. As part of the resolution, this statement must be included: "This tax rate will raise more taxes for maintenance and operations than last year's tax rate." The statement must show the increase and give an estimate on a \$100,000 home.

Cities, counties and other taxing units subject to the reduced election trigger can bank unused revenue growth for three years, allowing them to exceed the 3.5% threshold in some of them.

### Waller County Property Tax Levies

- General Levy     \$0.507765
- Road & Bridge    \$0.070000
- Farm to Market   \$0.032878
- Debt Service       \$0.76213

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<sup>11</sup> *Id.* at §21.

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# Special Districts in Texas

## Conservation and Reclamation Districts

The Texas Constitution (Section 59, Article XVI) authorizes the creation of conservation and reclamation districts to conserve and develop the state's natural resources and authorizes such districts to incur indebtedness, including bonds supported by taxes, to finance improvements related to the state's natural resources. Conservation and reclamation districts, often referred to as "water districts," may be created for a wide variety of purposes, including river authorities, groundwater districts, and municipal utility districts. These districts may be coterminous with a single county, comprise multiple counties, or operate in only a portion of a city or county.

Waller County is one of the handful of counties specifically cited by the constitution in which a conservation and reclamation district may finance recreational developments through bonds backed by taxation.<sup>12</sup> Section 59, Article XVI, does not limit the amount of bonds or the tax rate. Voter approval is required.

Although the Texas Commission on Environmental Quality is authorized to approve the formation of new conservation and reclamation districts, in practice they are most often created by a special act of the Texas Legislature. This allows a district to be tailored to unique circumstances. The authority of water districts to generate revenue varies widely, and most districts do not have the ability to levy ad valorem taxes

The Harris County Flood Control District is a conservation and reclamation district created by the Texas legislature in 1937 after community leaders petitioned for assistance in response to devastating floods in 1929 and 1935. While the District does not run a parks system, it allows for and encourages third parties to build and maintain trail systems and other park amenities, as well as create greenway corridors, in channel and detention rights-of-way. The District has dedicated staff members who work with third parties to assist in making the multi-use of District facilities a reality. Both public and private entities are teaming up with the District for multi-use projects along channels and on detention basin sites.

### Creating a Conservation and Reclamation District

Below are the steps required to create a conservation and reclamation district as stated in the Texas Constitution, Article 16, Section 59:

1. Notice of intention to introduce a bill creating a conservation and reclamation district must be published at least 30 days and not more than 90 days prior to the introduction of the bill in a newspaper or newspapers having general circulation in the county or counties in which the district would be located.



- 
2. A copy of the notice and the bill must be delivered to the Governor, who then submits the notice and bill to the Texas Water Commission, which files its recommendation on the bill with the Governor, Lieutenant Governor and Speaker of the House of Representatives within 30 days from the date it was received by the Texas Water Commission.
  3. At the time the notice is published as provided above, a copy of the proposed bill must be delivered to the commissioners court of each county in which the district or any part thereof would be located and to the governing body of each incorporated city or town in whose jurisdiction the district or any part thereof would be located.
  4. Each commissioners court and governing body receiving the notice may file its written consent or opposition to the creation of the proposed district with the Governor, Lieutenant Governor and Speaker of the House of Representatives.
  5. If the district is then approved and created by the state legislature, the district may issue bonds after gaining approval by the voters in the district. The Texas Constitution does not stipulate any requirements for when the bond election can take place.

With approval of the Texas Legislature, Waller County could create a countywide park district with the authority to levy ad valorem taxes and issue bonds for acquisition and development of conservation and recreation resources. The district could serve simply as a means to finance parks and land conservation. But it could also own and operate parks, with its own staff. The district's purposes could also include flood control, which is often linked with creation of parks in flood-prone riparian zones. All of these activities could be carried out directly by Waller County, but there might be advantages in creating a district that has voter-approved dedicated ad valorem taxes.

## **Brazos River Authority**

The Brazos River Authority (BRA) is a conservation and reclamation district<sup>13</sup> created by the Texas Legislature in 1929 as the first government entity in the United States created specifically for the purpose of developing and managing the water resources of an entire river basin. The Brazos River is the longest river flowing entirely in Texas, with its watershed stretching from New Mexico to the Gulf of Mexico. See the map in Appendix B. The Authority is governed by a twenty-one member Board of Directors appointed by the Governor and approved by the State Senate for six-year terms.

The BRA develops and distributes water supplies, provides water and wastewater treatment, monitors water quality, and pursues water conservation through public education programs. The Brazos River Authority is entirely self-supporting, except for occasional governmental grants to help pay the costs of specific projects. The BRA is authorized to issue bonds payable from ad valorem

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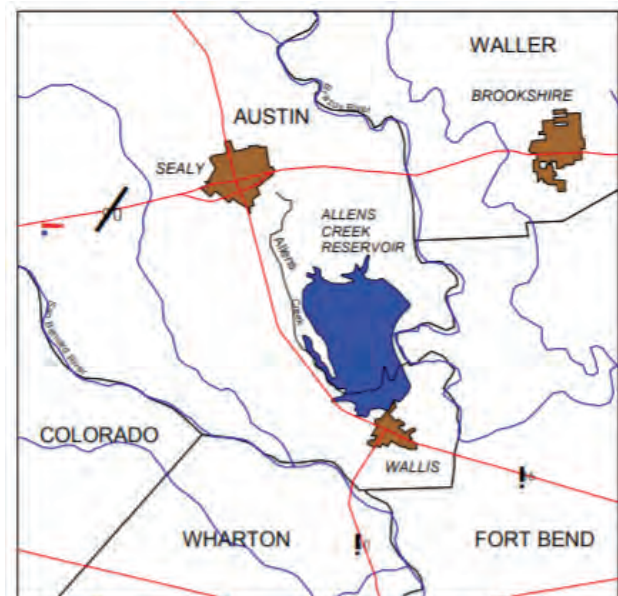
<sup>12</sup> Texas Legislative Council, *Analysis of Proposed Constitutional Amendments* 2003, p. 33.

<sup>13</sup> Texas Special District Code, Title 6, Subtitle G, Chapter 8502.

taxes after gaining majority approval from the voters within the Authority's boundaries.<sup>14</sup> However, the river authority does not seem to utilize this authority. A recent summary of outstanding debt states: "The Brazos River Authority does not levy taxes. None of the BRA's debt is supported by ad valorem taxes."<sup>15</sup> The BRA's largest operating revenue is raw water sales (\$39 million, or 65 percent of total operating revenues, in FY 2017).<sup>16</sup>

The BRA water supply system includes 11 reservoirs scattered across the 42,000 square mile river basin. Three of the man-made lakes were built, and are owned and operated by the BRA, while eight are owned and operated by the U.S. Army Corps of Engineers. The three BRA reservoirs were built for water supply, and the Corps reservoirs were built primarily for flood control. The reservoirs also provide an opportunity for recreation with parks and boat ramp access. BRA reservoirs include camping and picnic areas, boat ramps, restrooms and more. Recreation amenities at reservoirs run by the U.S. Army Corps of Engineers are available at a nominal fee for park and lake access.<sup>17</sup> None of the BRA reservoirs are located in Waller County.

Allens Creek Reservoir is a planned off-channel water storage reservoir that will be constructed on Allens 14 Creek, a tributary of the Brazos River, in Austin County. An off-channel reservoir impounds water pumped from an adjacent river or stream when flows are adequate for storage and subsequent use. The dam for Allens Creek Reservoir will be located on Allens Creek; however, the primary water source for the reservoir will be flows pumped from the Brazos River. Currently, the BRA, the City of Houston, and the TWDB are partners in the project. The project partners purchased the property where the reservoir will be located from Houston Lighting and Power, now known as NRG Energy, in the year 2000. Swimming, boating, and fishing facilities will be available to the general public. However, because the reservoir's primary purpose will be for water supply, there will be years that the water levels will fluctuate significantly.



<sup>14</sup> SPECIAL DISTRICT LOCAL LAWS CODE, TITLE 6, SUBTITLE G, CHAPTER 8502. BRAZOS RIVER AUTHORITY

<sup>15</sup> Brazos River Authority, Outstanding Debt Obligations as of Fiscal Year End 8/31/17 (<https://www.brazos.org/Portals/0/generalPDF/Debt-Info20170831.pdf?ver=2017-09-06-085626-117>)

<sup>16</sup> Brazos River Authority 2017 Comprehensive Financial Annual Report

<sup>17</sup> <https://www.brazos.org/About-Us/Reservoirs>

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## Guadalupe-Blanco River Trust

Established by the Texas Legislature, the Guadalupe-Blanco River Authority (GBRA) was first created in 1933 under Section 59, Article 16 of the Constitution of Texas as a water conservation and reclamation district. The GBRA provides stewardship for the water resources in its ten-county statutory district, which begins near the headwaters of the Guadalupe and Blanco Rivers, ends at San Antonio Bay, and includes Kendall, Comal, Hays, Caldwell, Guadalupe, Gonzales, DeWitt, Victoria, Calhoun and Refugio counties. GBRA does not have the power of taxation and relies upon user fees to provide these services.

The Guadalupe-Blanco River Trust is a 501(c)(3) nonprofit land trust organization that was founded in 2001 by the Guadalupe-Blanco River Authority to conserve land in the Guadalupe River Watershed for its natural, recreational, scenic, historic and productive value. The mission of the Guadalupe-Blanco River Trust is to preserve the unique natural heritage of the Guadalupe watershed for future generations, by protecting open landscapes, working farms and ranches, and wildlife habitat through conservation easements, education, and outreach that connects people to the water and the land. The GBRT has protected over 15,000 acres.

In 2018, the Texas Parks and Wildlife Department awarded \$200,000 in Recreational Trails Grant funding to the Guadalupe-Blanco River Trust. Funding will support the development and construction of the Plum Creek Wetland Preserve Community Trail. The GBRT has also received grants from the Texas Farmland and Ranch Land Conservation Program and the Cooperative Endangered Species Conservation Fund.

As private, nonprofit organizations, land trusts can often work with private landowners more effectively than a public park or conservation agency to put land in conservation status, typically through a conservation easement. However, land trusts do not typically own and operate public parks and recreation resources, and Waller County already has a land trust – the Katy Prairie Conservancy – that is positioned to work anywhere in the county. So there does not seem to be any value in considering the establishment of another land trust to operate in Waller County.

## Groundwater Conservation Districts<sup>18</sup>

Local groundwater conservation districts (GCDs) are another form of conservation and reclamation district. They are the state's preferred method of groundwater management. GCDs are charged to manage groundwater by providing for the conservation, preservation, protection, recharging, and prevention of waste of the groundwater resources within their jurisdictions.

As of February 2019 there are 99 groundwater conservation districts (GCDs) in Texas. GCDs are created either by the Texas Legislature subject to the authority, conditions, and restrictions of Article XVI, Section 59 of the Texas Constitution, or by the Texas Commission on Environmental Quality



through a local petition process (Texas Water Code §36.013 - §36.015). Most districts are created by action of the Texas Legislature. Registered voters within the proposed district must confirm the creation of the GCD, appoint its directors, and set its tax rates in an election.

GCDs are authorized with powers and duties that enable them to manage groundwater resources. The three primary GCD legislatively-mandated duties include: permitting water wells; developing a comprehensive management plan; and adopting the necessary rules to implement the management plan.

The Texas Water Code, Chapter 36, allows groundwater districts to levy property taxes to pay maintenance and operating expenses at a rate not to exceed 50 cents on each \$100 of assessed valuation. Districts surveyed by the Texas Agricultural Extension reported ad valorem tax rates of \$0.0045 to \$0.0575 per \$100 valuation. Hence, the annual tax paid on property valued at \$100,000 ranges from \$4.50 to \$57.50. Some districts are financed through user fees, which are assessed on the basis of the volume of water pumped or the volume permitted/allocated. Other sources of revenue include permitting fees, permit application fees, and fees for services (water analyses, etc.) provided outside district boundaries. In theory, a groundwater conservation district could undertake land conservation to protect recharge zones, and that conserved land could also serve compatible park and recreation purposes. However, there are no known examples of a groundwater conservation district in Texas carrying out such a program.

### Bluebonnet Groundwater Conservation District<sup>19</sup>

The Bluebonnet Groundwater Conservation District was created in 2001 by adoption of H.B. 3655 by the 77th Texas Legislature. The District was created in Austin, Grimes, Walker, Waller and Washington counties subject to a confirmation of the District by the electorate in each county. In November, 2002 the District was confirmed in Austin, Grimes and Walker Counties. In February of 2007 the Commissioners Court of Waller County adopted an Order requesting that the entire county of Waller be annexed into the District. The annexation of Waller County into the District was approved by the District Board of Directors in July, 2007 and the voters of Waller County confirmed the annexation of the county into the District in November, 2007. With this annexation the District became a four (4) county District with jurisdiction in Austin, Grimes, Walker and Waller Counties.



<sup>18</sup> Sources: Dana Porter, Russell Persyn and Juan Enciso, *Groundwater Conservation Districts: Success Stories*, Texas Agricultural Extension Service, <https://www.rrc.state.tx.us/media/2825/gwsuccessstories.pdf>; Texas Agricultural Law Blog, <https://agrilife.org/texasaglaw/2013/11/04/texas-water-groundwater-conservation-districts-part-i/>; Texas Water Development Board.

<sup>19</sup> Source: This section is largely excerpted from: <http://www.wallercountyland.com/community.htm>

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The District was created to provide a locally controlled groundwater district in order to protect and recharge groundwater, to prevent pollution or waste of groundwater, to control subsidence caused by withdrawal of water from the groundwater reservoirs in the area, and to regulate the transport of water out of the boundaries of the district. The District is governed by a 16-member Board of Directors appointed by the Commissioners Courts of the counties in the District. The District was created without taxing authority and has not undertaken any land conservation/conservation easement projects to date.

## Municipal Utility Districts

A Municipal Utility District (MUD) is a political subdivision of the State of Texas authorized by Article XVI, Section 59 of the Texas Constitution and Chapter 54 of the Water Code to provide water, sewage, drainage and other services within the MUD boundaries. Originally designed to provide water supply to unincorporated areas, a MUD may participate in various activities, including (but not limited to) wastewater and stormwater services; fire protection; drought planning; and the provision of parks and recreation facilities.

In Texas, a MUD is funded by charges, fees and taxes. There is conflicting information on the authority of MUDs to use ad valorem taxes and bonds supported by ad valorem taxes to provide parks and recreational facilities within the district.<sup>20</sup> Legal counsel should be consulted to confirm the feasibility of MUD general obligation bonds for these purposes. A MUD may include the area in all or part of any county or counties including all or part of any cities and other public agencies. The land comprising a district may consist of separate bodies of land separated by land that is not included in the district. With that said, most MUDs comprise only 200 to 800 acres. Cities must consent to be included.

In order to establish a MUD in Texas, the following procedure must be followed:

1. A majority (50 percent or more) of property owners in an area must petition the Texas Commission of Environmental Quality (TCEQ) to create a MUD. If there are more than 50 persons holding title to the land in the proposed district the petition is sufficient if it is signed by 50 holders of title to the land.
2. The landowners must submit a request to cities for written consent to include land that is located within the corporate limits of the city or its extraterritorial jurisdiction.
3. A public hearing is held and the TCEQ will either approve or deny the petition.

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<sup>20</sup> For example, the Texas Water Code, §54.201(7) Municipal Utility Districts section states that the Powers and Duties include “provide parks and recreational facilities...subject to the provisions of Chapter 49.” However, Chapter 49 allows bonds for recreational facilities only in the 10 counties specified

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A MUD may also be established by the Texas Legislature. For example, Montgomery County Municipal Utility District No. 113 (MUD 113) is a political subdivision of the State of Texas, operating pursuant to Article XVI, Section 59 of the Texas Constitution and Chapter 8212 of the Texas Special District Local Laws Code. The Texas Legislature created MUD 113 in 2007. Originally, the district consisted of 735 acres. MUD 113 currently encompasses approximately 2,159 acres in central Montgomery County, approximately 38 miles northwest of downtown Houston. The district is located entirely within the extraterritorial jurisdiction of the City of Conroe. Currently, all of the residential development in Woodforest has occurred in MUD 113. Inside the boundaries of MUD 113, Woodforest Development, Inc. constructed 8 parks, an open playground, an approximately 7.63 mile trail system, 4 fountains and 3 lakes. Woodforest Development Inc. has also constructed Forest Island, a 20-acre recreational facility that includes a 6,500 square foot resort-style pool, a 10,000 square foot pool deck, 2 water slides, a basketball court, a 5,000 square foot splash pad, 2 tennis courts, restroom facilities, and a food vending area.

The voters in the District have authorized a total of \$170,220,000 principal amount of unlimited tax bonds for the purpose of acquiring or constructing a water, sewer and drainage system to serve the District and \$16,445,000 principal amount of unlimited tax bonds for parks and recreational facilities.

## Additional Finance Mechanisms Available to Municipalities

### Charter Amendments

Cities that have populations of more than 5,000 have the option to adopt home rule charters. Voters must approve the charter and subsequent changes to it. Currently, there are three home rule municipalities in Waller County: Hempstead, Katy, and Prairie View.

A charter amendment could potentially be used in these jurisdictions to dedicate a property tax for parks and recreation but implementation remains subject to annual approval by the city council. Generally, municipal property tax rates are adopted each year as part of the budget process and there is no statutory provision for cities to dedicate a property tax. However, home rule cities may allow for such a provision in their charters. The City Council could ask voters to amend the city charter to dedicate a property tax. In addition, citizens could petition the city council to call an election on a proposed charter amendment to dedicate tax revenue to parks and recreation. Then, it is up to the city council to decide if it will impose the tax increase each year.



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A charter amendment cannot bind nor require the City Council to annually levy a dedicated property tax. Even if a charter amendment is approved by voters that creates a dedicated parks fund from a property tax increase, the City Council is not required to levy the property tax increase each year.<sup>21</sup>

If a majority of the voters at the election approve the charter amendment, the governing body of the city must enter an order in the record of the city (e.g. minutes of a council meeting) declaring the adoption of the charter amendment. The mayor or the chief executive officer of the city must certify to the secretary of state an authenticated copy of the charter amendments under the city's seal showing the approval of the amendment by the voters of the city.<sup>22</sup> When a city holds a charter amendment election and adopts one or more amendments, it must wait a full two years before holding another such election.

### Corpus Christi Proposition 3

In 2016, voters in Corpus Christi approved a charter amendment authorizing the city council to levy, assess, and collect a property tax not to exceed six cents per one hundred dollars of assessed value for the purpose of residential street reconstruction. This proposition creates a new, dedicated property tax that would generate funds to be placed in a restricted fund and used solely for residential street reconstruction.<sup>23</sup>

The proposed tax rate maximum of six cents would raise approximately \$10.2 million annually in additional funding, and will restrict the funding to *residential street reconstruction costs only*. With the two-cents per year cap on annual increases, the increased burden on a property with a \$100,000 taxable value would be \$20 per year, increasing to an overall cap of \$60 in increased property taxes on a property with a \$100,000 taxable value.<sup>24</sup>

In September 2017, the Corpus Christi City Council members voted unanimously to keep the city's tax rate at the previous year's level and not to include the two-cent increase approved by voters. The City Council did include a two-cent increase for residential streets in the FY 2018-2019 budget.

### Rebuild Houston

In November 2010, voters in Houston approved an amendment to the city charter which requires the city to establish a dedicated pay-as-you-go drainage and street renewal fund to provide for

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<sup>21</sup> Generally, a home rule charter provision technically overrides state law if there is a conflict, a court would likely find that voter referenda on property tax adoption are preempted by the Tax Code. When a state statute comprehensively covers an area of the law, as the Tax Code does with property taxes, local governments are preempted from changing the law locally.

<sup>22</sup> Texas Local Government Code, Sections 9.005 & 9.007.

<sup>23</sup> City of Corpus Christi Notice of Election for November 8, 2016 (<http://cms.cctexas.com/sites/default/files/CTYSEC-2016-6-special-english.pdf>).

<sup>24</sup> The Paper Trail, City Charter Review Ad Hoc Committee Presents Final Report, posted June 15, 2016 (<http://www.thepapertrailnews.com/tag/propositions-for-amendment-to-city-charter/>).

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enhancement, improvement and ongoing renewal of the city’s drainage and streets.<sup>25</sup> The fund is supported by several revenue sources, including a property tax allocation.

In August 2019, Houston residents filed a lawsuit against Houston Mayor Sylvester Turner and city council, accusing them of failing to follow the will of voters who approved a charter amendment last year for funding drainage and street repairs. The lawsuit accuses city leaders of shortchanging the dedicated drainage fund by failing to transfer the full amount required by last year’s ballot proposition. The outcome of this suit may further clarify if a charter amendment dedicating property tax revenue is binding upon a city council.

## Sales Tax

The state of Texas currently imposes a sales tax rate of 6.25%. No jurisdiction of the state may have an aggregate of local sales taxes that exceeds 2%. This limit includes county and municipal sales and use taxes, transit authority taxes and special purposes district taxes. Accordingly, no region in the state may have a total sales and use tax exceeding 8.25%. A county may not adopt a local sales and use tax if as a result of the adoption of the tax the combined rate of all sales and use taxes imposed by the county and other political subdivisions of the state having territory in the county would exceed two percent at any location in the county. Therefore, Waller County is currently precluded from imposing a county sales tax. Just two jurisdictions in Waller County are below the 2% local tax cap: Katy and Pine Island.

Waller County 2018 Local Sales Tax		
Jurisdiction	Tax Rate	Taxable Sales
Waller County	0%	\$561,172,773
Brookshire	2%	\$44,614,164
Hempstead	2%	\$67,133,695
Katy	1%	n/a
Pattison	2%	\$1,864,929
Pine Island	0%	n/a
Prairie View	2%	\$37,668,498
Sunny Side	2%	n/a
Waller	2%	n/a

According to The Trust for Public Land, three municipalities in Texas have successfully dedicated a sales tax to parks and open space: Grand Prairie, Highland Village, and San Antonio.<sup>26</sup>

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<sup>25</sup> City of Houston Proposition 1 Charter Amendment ([www.rebuildhouston.org/proposition-1-charter-amendment](http://www.rebuildhouston.org/proposition-1-charter-amendment)).

<sup>26</sup> The Trust for Public Land, LandVote®, 2019, [www.landvote.org](http://www.landvote.org).

# Tax Increment Financing

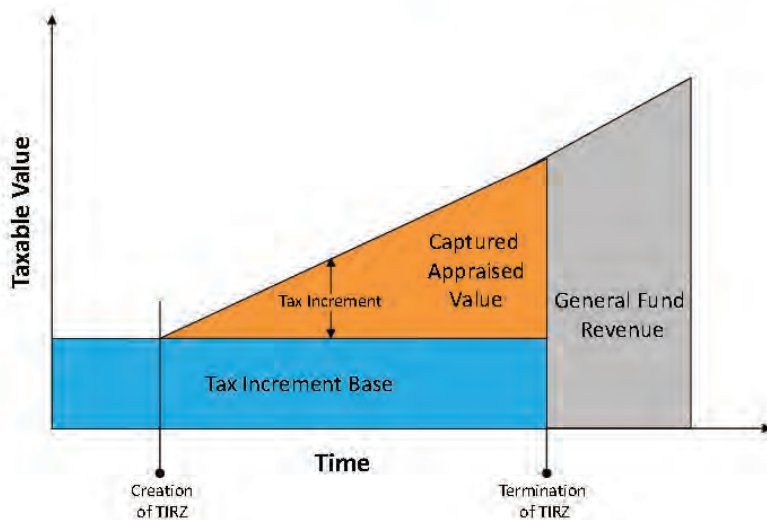
## Background

Fundamentally, tax increment financing involves a base value, which is the amount of property values frozen as of a particular date within a district or "zone," and a captured increment value, which is the enhanced amount of the same property values above the frozen value in subsequent years. Though a taxing unit's tax levy may be the same percentage for all appraised value for property within a zone and property outside of the zone, the portion of the tax levy on the captured increment is not used for the taxing entity's general revenue fund but is instead pledged or dedicated to funding particular projects as authorized by statute.

## TIF, TIRZ Defined

Tax increment financing (TIF) is method local governments can use to pay for improvements that will draw private investment to an area that would otherwise not attract sufficient market development in a timely manner. Tax increment financing isn't a new tax; instead, it redirects some of the ad valorem tax from property in a geographic area designated as a Tax Increment Reinvestment Zone (TIRZ) to pay for improvements in the zone. Tax Code Chapter 311 governs tax increment financing.

### What Are TIRZs/TIFs?



Future tax revenues from each participating taxing unit that levies taxes against a property are used to pay for the cost of improvements to an area. Each taxing unit may dedicate all, a portion of, or none of the tax revenue that is attributable to increased property values brought about by improvements within the reinvestment zone. The additional tax revenue received from the affected properties is referred to as the tax increment



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Tax increment bonds and notes are payable solely from the tax increment fund established for the reinvestment zone. The governing body of the municipality may pledge irrevocably all or part of the fund for payment of tax increment bonds or notes. A tax increment bond or note is not a general obligation of the municipality issuing the bond or note and does not give rise to a charge against the general credit or taxing powers of the municipality. Tax increment bonds are issued by ordinance of the municipality without any additional approval other than that of the attorney general.

Only a city or county may initiate tax increment financing. Tax increment financing requires the governing body of a city or county to create a Tax Increment Reinvestment Zone (TIRZ). A county TIF must be countywide or the mechanism may be subject to legal challenge for violating the constitutional equal and uniform requirement article VIII, section 1(a). A constitutional amendment provides cities and town and exemption from this provision. The governing body by ordinance may: designate a contiguous or noncontiguous geographic area (a) within the corporate limits of the jurisdiction; (b) in the extraterritorial jurisdiction, or (c) in both to be a reinvestment zone.

There is some history of cities using this mechanism for creating parks, notably in Austin and Houston. In May 2018, the Austin City Council voted to devote \$110 million in TIF revenues into the Waller Creek chain of parks. The money committed by the city is part of a long-term \$375 million project to turn 35 acres of land along the creek into a chain of parks and civic spaces. The other \$275 million is supposed to come from private fundraising conducted by the Waller Creek Conservancy, a nonprofit.

The Waller Creek Tax Increment Reinvestment Zone (TIRZ), was initially set up in 2007 to fund construction of the Waller Creek Tunnel, which would protect much of the surrounding area from flooding, thereby making it more attractive to development and more valuable. At the same time, the Waller Creek Conservancy was formed to raise money to build the parks.

## Hotel Occupancy Tax<sup>27</sup>

The Texas Legislature has authorized municipalities and some counties to levy and collect local hotel occupancy taxes (HOT), however, there are several restrictions on how revenues may be spent. As such the hotel occupancy tax is unlikely to be a viable revenue source for parks and recreation purposes in most cases.

Texas law for county hotel tax sets the cap for county HOTs at between 0.75 percent and 9 percent, depending on factors such as the county's population, the population of cities within its borders and

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<sup>27</sup> This summary is largely excerpted from: Bill Longley, *The Hotel Tax "Two-Step,"* Texas Municipal League.

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geographical features such as proximity to Mexico, the Gulf of Mexico, the Neches River or a national park.

The statute governing the maximum city hotel tax rate caps the tax at 7 percent, 8.5 percent or 9 percent, depending on factors such as the city's population and its proximity to the Gulf of Mexico, the state of Louisiana, Lake Palestine or a coastal barrier island.

A hotel occupancy tax must be levied by ordinance. No election or other approval of the citizens is required.

A city with a population under 35,000 may extend the application of its hotel occupancy tax by ordinance to the extraterritorial jurisdiction (ETJ) of the city. However, a city under 35,000 population may not apply its hotel occupancy tax in the ETJ if, as a result of the adoption of the city tax, the combined rate of state, county, and city hotel taxes would exceed fifteen percent at hotels in the ETJ.

Expenditures of local HOT revenues are restricted to certain categories of projects. The Texas Municipal League calls this a two-part test. The first element of the two-part test is this: Every expenditure of hotel taxes must put "heads in beds." What this means is that every funded project must attract overnight tourists to the jurisdiction's hotels and motels, thus promoting the local hotel industry.

Every expenditure of hotel taxes must also fit into one of nine statutorily authorized categories. These are the nine categories: (1) convention and visitor centers; (2) convention registration; (3) advertising the city; (4) promotion of the arts; (5) historical restoration and preservation; (6) sporting events in a county under one million in population; (7) enhancing or upgrading existing sports facilities or sports fields (only in certain cities); (8) tourist transportation systems; and (9) signage directing the public to sights and attractions that are visited frequently by hotel guests.

A city may levy a hotel occupancy tax at a rate not to exceed two percent on all hotels in the city to fund certain venue projects (if approved by voters), except that a city may not propose a hotel occupancy tax rate that would cause the combined hotel occupancy tax rate imposed from all sources at any location in the city to exceed 17 percent of the price of a room. Revenue generated by the venue hotel occupancy tax may *not* be spent on park and recreation systems, watershed protection and preservation projects.<sup>28</sup>

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<sup>28</sup> Bill Longley, Legal Q&A, TML Legislative Counsel. <https://www.tml.org/DocumentCenter/View/231/Venue-Taxes---2015-06-PDF?bidId=>, accessed on 10/12/19.

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## Parkland Dedication Ordinance

A parkland dedication ordinance is a local government requirement imposed on subdivision developers or builders, mandating that they dedicate land for a park and/or pay a fee to be used by the government entity to acquire and develop park facilities. These dedications are a means of providing park facilities in newly developed areas of a jurisdiction without burdening existing city residents. The philosophy is that because new development generates a need for additional park amenities, the people responsible for creating that need should bear the cost of providing the new amenities.

Cities derive the authority to enact parkland dedication ordinances from case law. In 1984, the Texas Supreme Court concluded in *City of College Station vs Turtle Rock Corporation* that requiring parkland dedication or fees in lieu “was a valid exercise of the city’s police power because it was substantially related to the health, safety and general welfare of the people.” About 50 cities in Texas have adopted parkland dedication ordinances. Counties do not have express authority to enact parkland dedication ordinances. A brief internet search did not reveal any examples of parkland dedication ordinances in Waller County.

The *Turtle Rock* case established the constitutionality of parkland dedication in Texas, but it required that “regulation must be reasonable.” It defined reasonable as “a reasonable connection between the increased population arising from the subdivision development and increased park and recreation needs in the neighborhood.” A decade later in *Dolan v. City of Tigard*, the U.S. Supreme Court ruled that there must be a “rough proportionality” between the conditions imposed on a developer and the demand from the projected development. These and other cases suggest that four broad criteria may be used to assess the constitutionality of parkland dedication ordinances in Texas:

- The method of calculating a parkland dedication requirement must demonstrate that it is proportionate to the need created by a new development.
- The ordinance must adhere to the nexus principle.
- The time limit must be set for expending fees-in-lieu.
- The scope and range of the ordinance must be delineated.

The dedication requirement in a parkland dedication ordinance should comprise three elements:

- A land requirement
- A fee-in-lieu alternative to the land requirement
- A parks development fee

According to the 2015 study, *Parkland Dedication Ordinances in Texas: A Missed Opportunity?*, by Professor John Crompton at Texas A&M University, existing residential fees imposed by Texas municipalities ranged from roughly \$500 per dwelling unit to more than \$1,800 per dwelling unit.



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## Joint Use Agreement with Schools

Opening schoolyards and school playgrounds outside of school hours is one approach to addressing parks and recreation facility deficits that is growing in popularity around the country. This arrangement is usually implemented with a joint-use agreement with schools and the local government entity. Studies suggest that challenges to shared use include additional cost, liability protection, communication among constituencies interested in sharing space, and decision-making about scheduling and space allocation. The Center for City Park Excellence at the Trust for Public Land conducted research on joint-use agreements from 20 of the largest US cities and analyzed the best practices within those agreements, available at <https://www.parkology.org/>.

## Houston/Harris County SPARK Parks

The SPARK School Program is a leading nearby example of joint use agreements with schools. SPARK works with schools and neighborhoods to develop community parks on public school grounds. In the past 30 years, SPARK has built over 200 community parks throughout the Houston/Harris County area. Each park is unique, with its design based on ideas and needs of the school and surrounding neighborhoods. While all of the parks are different, a typical park consists of modular playground equipment, a walking trail, benches, picnic tables, trees, an outdoor classroom, and a public art component. SPARK Parks are available for public use after the school day (including after-school programs) has ended and on weekends.<sup>29</sup>

To apply, the principal of the school should send a request on school letterhead to SPARK asking to be considered as a site selection. In January or February of each year, the SPARK staff makes a site visit to all schools that have applied in the past year to discuss the request with the principal and other interested parties. Site visits by SPARK staff confirm existing relationships between school and community—through churches, businesses, and civic clubs. The neighborhood must demonstrate a willingness to help plan and fund the park. In March, the SPARK Board will consider all applications and make site selections for the coming year. In May the SPARK staff meets with principals of selected schools to outline the park construction process. The goal is for parks to be completed within 12–18 months.<sup>30</sup>

A new “Park Desert” initiative, which focuses efforts on park underserved areas, was borne in partnership with the Houston Endowment and the Kinder Foundation and funded with a combined \$5 million from the foundations. The initiative includes an additional \$450,000 in Community Development Block Grant funds from the City of Houston and support from other local funders,

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<sup>29</sup> <http://sparkpark.org/wordpress/>

<sup>30</sup> <http://sparkpark.org/wordpress/about/#apply>

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including the Powell Foundation. Initial plans include the construction of 25 new SPARK parks on school campuses across greater Houston and renovation of another five existing parks.<sup>31</sup>

## State Conservation Funding Programs

This section provides information on available state conservation funding programs, which are presented in alphabetical order. The State of Texas utilizes an allocation from sales tax revenue generated by sporting goods to provide funds for park operations, restoration and acquisition throughout the state, and offers outdoor recreation grants to local governments. Voters in Texas also approved (with 63 percent support) a \$100 million bond measure in 2001 for park facilities (primarily major repairs to state parks), but the bond issuance did not include any funds for park land acquisition. In 2007, Texas voters approved Proposition 4, which authorized the issuance of up to \$1 billion in general obligation bonds for construction projects, including \$52 million to state parks. Other state funding programs with a park land acquisition component receive federal funding.

The Texas Legislature is authorized to make appropriations from the collection of sales tax on sporting goods to support state parks, historic sites, and local park grants. The Sporting Goods Sales Tax is a portion of the existing 6.25 percent general sales tax levied by the state. The allocation to parks was capped at \$32 million per year until 2007. Today, the allocation for the support of parks is limited to up to 94 percent of the Sporting Goods Sales Tax revenue (Texas Tax Code Chapter 151, Subchapter M., Sec. 151.801). In recent years it has generated between \$75 and \$125 million per year for outdoor recreation. However, the Texas Legislature has consistently appropriated less than the 94 percent permitted. Instead, lawmakers left portions of the Sporting Goods Sales Tax revenue in the general fund to support other needs and balance the state budget.

The 2015 State Legislature took major steps to improve the Sporting Goods Sales Tax program with two modifications. First, it eliminated the prescribed distribution of funds between accounts to give the Legislature discretion on how to direct funds and adapt to changing priorities and needs. Second, it passed legislation that statutorily dedicated the full 94 percent of the Sporting Goods Sales Tax to the Texas Parks and Wildlife Department, as was originally intended by the 2007 legislation. For the first time, the full 94 percent of the Sporting Goods Sales Tax was appropriated to the Texas Parks and Wildlife Department for the 2016-2017 biennium, amounting to more than \$261 million—more than a million dollars above any prior appropriation. But the 2015 legislation was deemed invalid for technical reasons, and in the 2017-2018 biennium, the legislature once again appropriated less than the full amount of available funds.

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<sup>31</sup> <https://www.houstonendowment.org/feature/spark/>

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Appropriated funds are disbursed to Texas State Parks for several purposes, including operations, capital improvements, and local park grants. Since the cap was changed to 94 percent of revenue in 2007, State Parks generally receives 80 to 90 percent of the funds for operations and capital projects; local park grants receive the balance. Each biennium, Texas State Parks submits its appropriations request for operations and capital projects. State Parks has developed a system to quantify, measure, and rank its capital project priorities based on four categories: health and safety issues, regulatory compliance, continuity of business services, and conservation and stewardship. Historically, the State Parks appropriation request is not fully included in legislative budget bills, and State Parks leadership and advocates must make their case each biennium to increase appropriations.

## November 5, 2019 - Proposition 5

In the November 2019 election Texas voters overwhelmingly approved Proposition 5<sup>32</sup>, which will stabilize funding for state parks. The constitutional amendment dedicates money accumulated from the existing Sporting Goods Sales Tax to be used for the Texas Parks and Wildlife Department and the Texas Historical Commission.

***Proposition 5: "The constitutional amendment dedicating the revenue received from the existing state sales and use taxes that are imposed on sporting goods to the Texas Parks and Wildlife Department and the Texas Historical Commission to protect Texas' natural areas, water quality, and history by acquiring, managing, and improving state and local parks and historic sites while not increasing the rate of the state sales and use taxes."***

Tax revenues from sporting goods sales will automatically be appropriated to the Texas Parks and Wildlife Department and the Texas Historical Commission. The legislature would have the power to decide how the funds would be used and how they would be allocated. The Texas Conservation Alliance estimates the proposition would generate \$183 million in 2021, the first year it would take effect. Based on current allocations, 94 percent of that money will benefit state parks or municipal or county parks awarded grants by the Texas Parks and Wildlife Department. The other 6 percent will support state historic sites run by the Texas Historical Commission.

## TWDB Flood Infrastructure Fund

Also in the November 2019 election, Texas voters approved Proposition 8, a constitutional amendment providing for the creation of the Flood Infrastructure Fund (FIF) to assist in the financing of drainage, flood mitigation, and flood control projects. In addition to other existing state flood programs, the Texas Water Development Board (TWDB) will be administering a new state and

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<sup>32</sup> The measure passed with 88 percent approval statewide; 90 percent in Waller County.



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regional flood planning process with flood planning regions based on river basins. The regional flood planning process will be developed and initial regional flood planning groups formed by mid-2020; the first regional flood plans will be due in 2023, and the first state flood plan will be due September 1, 2024.<sup>33</sup>

The legislature also made a one-time transfer of \$793 million from the state's Economic Stabilization or "Rainy Day" Fund to create a new flood funding program to be administered by the TWDB. The program will be designed to make the implementation of drainage and flood projects more affordable for Texas communities and to meet immediate needs for funding by providing grants and low-cost loans for drainage, flood mitigation, and flood control projects. The funding will become available in 2020. In addition, the legislature provided the TWDB with funds to collect more flood-related data, advance its river and coastal modeling capabilities, and distribute critical flood information through an online dashboard.

The public rulemaking process for the FIF will consider what types of flood projects will be eligible for funding. Both non-structural and structural projects will be eligible for funding from the FIF and may be included in the regional and state flood plans. Structural mitigation can include levees, dikes, floodwalls, dams, culverts, and detention and retention basins. Major structural projects generally require more funding, time, and effort to complete due to regulatory requirements, their multi-jurisdictional nature, and project scale. Non-structural mitigation can include education and training; local mitigation plans; early warning systems; restoration and conservation of wetlands, forests, and open space; feasibility, design, and engineering studies; and policy and regulatory activities such as setbacks, building codes, and zoning ordinances. Participation in the National Flood Insurance Program is also considered a non-structural mitigation activity.

Communities and other eligible entities would apply for financial assistance, and the TWDB would evaluate projects according to specific application requirements. Funds would be disbursed for projects that meet all requirements, rank within the amount of funds available, and receive a formal commitment from the TWDB's governing Board.

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<sup>33</sup> Once the plans are in place only projects included in the plans will be eligible for funding. [http://www.twdb.texas.gov/home/tabs/doc/FAQ\\_Flood-Implementation-Fund.pdf?d=1573416899726](http://www.twdb.texas.gov/home/tabs/doc/FAQ_Flood-Implementation-Fund.pdf?d=1573416899726)

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## Local Park Grants

Texas State Parks manages the Sporting Goods Sales Tax revenue for local park grants, and treats the funds similarly to state-side Land and Water Conservation Fund (LWCF) grants. The demand for grants is greater than the amount available in each biennium and applying local entities generally need to match the federal and state grant funds with local resources. They award funds in four categories related to outdoor recreation:

- Community Outdoor Outreach Program (COOP) grants for local government and nonprofit programming that brings outdoor recreation to underserved populations such as low-income, minorities, handicapped, elderly, and others. Grants are up to \$50,000 and no match is required. Approximately \$1.25 million is awarded in this category each year.
- Small Communities Grants are awarded to local governments of communities with a population of less than 20,000. Grants are up to \$75,000 and require a 50 percent match. (These communities can also apply in the non-urban category.) Approximately \$750,000 is awarded in this category each year.
- Outdoor Recreation Grants are awarded to local governments of communities with a population of 500,000 or less. Approximately 60 percent of remaining funds are awarded in this category. Grants are capped at \$500,000.
- Urban Outdoor Recreation Grants are awarded to local governments of communities with a population of more than 500,000. Approximately 40 percent of remaining funds are granted in this category. Grants are capped at \$1 million.

In March 2019, The Texas Parks and Wildlife Commission approved just over \$16 million in competitive local park grants to help fund projects that will create and enhance outdoor recreational opportunities like nature trails, native gardens, playgrounds, splash pads, dog parks and sports fields at 38 community parks across the state. Given the added funding assured by the passage of Proposition 5 in 2019, the total amount of funds granted annually is likely to increase. Applications for all categories are accepted annually. It should be noted that the Sporting Goods Sales Tax is not eligible to pay for land acquisition for new parks or conservation areas. State grants for land acquisition are only possible through allocations of the federal Land and Water Conservation Fund, and these amounts are very limited.

## Texas Farm and Ranch Lands Conservation Program

The Texas Legislature created the Texas Farm and Ranch Lands Conservation Program in 2005 and subsequently provided a \$2 million allocation to the program in 2015. At that time management of the program was moved from the General Land Office to the Texas Parks and Wildlife Department. The program provides state funds to nonprofits — often land trusts — to purchase conservation easements. Funding for the Texas Farm and Ranchlands program has been stable since the 2016-17 biennium at \$2.0 million in General Revenue each biennium. Since 2016, 14 projects covering roughly 26,000 acres, out of 29 applications, have been approved for funding.

## Supplemental Environmental Project<sup>34</sup>

When a plant or facility is found to be in violation of state environmental laws or regulations, they may be assessed a monetary penalty or fine by the Texas Commission on Environmental Quality. Penalties are paid to the TCEQ and deposited into the state's General Revenue Fund. As an alternative to paying a penalty to the TCEQ, state law allows the respondent facility to put a portion of the penalty to work closer to home and help improve the environmental quality of the region where the violation occurred. This option is called a Supplemental Environmental Project, or SEP.

SEPs advance the goals of cleaner air, water, and soil throughout Texas and enhance the environment in communities affected by environmental violations. There are three types of SEPs: pre-approved, custom, and compliance. Opting for a pre-approved SEP makes the individual SEP proposal process simpler and less time consuming. Pre-approved SEPs are fully designed and ready to be implemented or are already in progress. Pre-approved SEPs are implemented by Third-Party Administrators such as nonprofit organizations and government entities. Rather than paying a penalty to the Texas General Revenue Fund to resolve an enforcement case, a respondent can opt to pay a specific portion of the penalty to a pre-approved SEP. The benefit to contributing to a pre-approved SEP is that the respondent does not need to plan and propose its own project; rather, the respondent can simply choose a project from an approved list and send its penalty offset to the Third-Party Administrator of the project. The TCEQ maintains a list of pre-approved SEPs online at <https://www.tceq.texas.gov/compliance/enforcement/sep/pre-approved-seps.html>.

In order to be considered acceptable as a SEP, a project must meet the following three principal criteria:

- The project must be environmentally beneficial
- The project must be performed as a result of a settlement agreement
- The project must go beyond what is required for compliance

A third party that is interested in obtaining and using SEP funds to implement an environmental-enhancement project must meet the criteria for an acceptable SEP listed above. In addition, eligible third-party organizations must have status under Internal Revenue Code section 501(c)(3) as a nonprofit organization, or be a governmental organization. In addition, the TCEQ requires detailed

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<sup>34</sup> This section is largely excerpted from the Texas Commission on Environmental Quality, Supplemental Environmental Projects, [https://www.tceq.texas.gov/assets/public/comm\\_exec/pubs/gi/gi-352.pdf](https://www.tceq.texas.gov/assets/public/comm_exec/pubs/gi/gi-352.pdf).



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SEP Quarterly Reports for the project each quarter, reporting on each contribution and expenditure and providing supporting documents.

None of the existing pre-approved SEPs could fund parks or land conservation in Waller County. The County could apply to establish a SEP for this purpose. For example, the Bayou Land Conservancy has a SEP that funds land acquisition and conservation along Spring Creek, on the border of Harris and Montgomery Counties. Brazoria County has a SEP dedicated to septic system repair and replacement. That SEP is eligible for settlement payments related to environmental violations in dozens of Texas counties. Any SEP funding for parks or land conservation in Waller County would be very unpredictable.

The application for a Third-Party Administrator SEP is available on the TCEQ's website at <https://www.tceq.texas.gov/assets/public/legal/sep/2019/3rd%20Party%20SEP%20Application.pdf>.

### SEP Example

The Trust for Public Land's ("TPL") Galveston Bay Natural Area Acquisition and Conservation Program utilizes funds from the Supplemental Environmental Program to provide for acquisitions that will preserve open space in the Galveston Bay watershed, thereby contributing to improved water quality, conserving wetlands and other special habitats, and increasing public access to the Bay, its tributaries, and their habitats. TPL's professional staff (a) works with local interests to identify acquisition projects, (b) purchases the land to remove it from the market, and (c) transfers the land to a public agency or nonprofit organization, which will be the ultimate fee title holder and permanent steward of the property. TPL will ensure that each property is encumbered with a conservation easement that will preserve the property into perpetuity. SEP Funds will be used for the purchase of land. This project may receive contributions from Brazoria, Chambers, Galveston, and Harris counties. TPL indicated that the revenue stream for projects is unpredictable and that the organization received various small and large payments, but over time aggregated into a reasonable amount of money that the organization could put into projects that supported water quality into Galveston Bay.

## Federal Conservation Programs

### National Recreational Trails Fund

TPWD administers the National Recreational Trails Fund (NRTF) in Texas under the approval of the Federal Highway Administration (FHWA). The National Recreational Trails Fund supports recreational trail construction, renovation and acquisition. The grants are funded from a portion of the federal gas tax generated by gasoline purchases for off-road motorcycles and four-wheelers. Thirty percent of the total NRTF grants must be earmarked for motorized recreational trails, while another 30 percent

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must be spent on non-motorized trail projects. The remaining 40 percent is discretionary. The reimbursable grants can be up to 80% of project cost with a maximum of \$200,000 for non-motorized trail grants and a maximum award of \$400,000 for motorized (off-highway vehicle) trail grants.

In May 2019, the Texas Parks and Wildlife Commission approved \$3.81 million dollars in grants to fund 22 motorized and non-motorized recreational trail-related projects across the state.

## Clean Water and Drinking Water State Revolving Funds

The U.S. Environmental Protection Agency is charged with implementing both the Clean Water Act and the Safe Drinking Water Act, two landmark pieces of legislation whose respective goals are to clean up America's waterways and to ensure that the public has safe water to drink. Conservation is an eligible activity under both laws. Both programs utilize "State Revolving Funds" or SRFs to fund projects that improve water quality and enhance drinking water supplies. Every year, Congress appropriates funds that are apportioned out to the states on a formula basis to fund the SRFs.

### Clean Water Act Funding

Established by the 1987 amendments to the Clean Water Act (CWA), the U.S. Environmental Protection Agency (EPA) awards capitalization grants to states to create and maintain State Revolving Funds (SRFs). EPA capitalization grants fund both the Clean Water State Revolving Fund (CWSRF) and the Drinking Water State Revolving Fund. States are required to match these capitalization grants with 20 percent of their own funds. Through section 604(b) of the CWA, states allocate CWSRF funding specifically to water quality management planning. CWA Section 319(h) funds are provided to designated state and tribal agencies to implement their nonpoint source management programs.

### Clean Water State Revolving Fund (Section 212)<sup>35</sup>

Through the CWSRF program, each state maintains a revolving loan fund to provide a source of low-cost financing for a wide range of water quality infrastructure projects. For Fiscal Year 2020, Congress appropriated \$1.78 billion for the CWSRF, distributed as capitalization grants among the states. Federal funds must be matched by 20% non-federal funds.

States use these capitalization grants to provide loans to public and private borrowers, including municipalities, inter-municipal, interstate, or state agencies, or qualified nonprofit entities. Interest rates must be at or below market rate, including interest-free, with a maximum term of 30 years. In some instances, additional subsidization can be provided in the form of principal forgiveness, negative interest rate loans, or grants.

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<sup>35</sup> *Clean Water State Revolving Fund System*. A Trust for Public Land report by Matt Zieper, Brian Shillinglaw, Pat O'Connell and Honora Freeman.

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Each year, states file an Intended Use Plan (IUP) with the EPA that describes how they will allocate their CWSRF funds. CWSRF funding has traditionally been used for wastewater treatment upgrades, though surface water protection and restoration and habitat protection and restoration are eligible activities. Roughly six percent of annual funds go towards non-point source pollution protection. Building off of the Green Project Reserve, which was established in 2009, and requires funding for alternative, green projects, the EPA established the Green Infrastructure CWSRF Policy in 2016 to promote activities such as the protection of natural areas.

Land or easement acquisition is permitted with CWSRF funds as a method to reduce nonpoint source pollution. The CWSRF system is a significant potential source of funds for land conservation. CWSRF loans can be used to finance land acquisition, including the purchase of a conservation easement, to protect the quality of streams, rivers and other local drinking water sources. Yet, only 4 percent of CWSRF assistance provided, or \$4.6 billion, has gone to nonpoint source projects and a sliver of that for land conservation.<sup>36</sup> Each state has great leeway to establish CWSRF programs that can support land conservation but lack of loan repayment sources for land conservation is a significant barrier. For example, California has already used \$112 million of its CWSRF funds to acquire over 29,000 acres of land for water quality benefits.

### Clean Water State Revolving Fund in Texas<sup>37</sup>

For State Fiscal Year 2020, at least \$525 million is available under the CWSRF for all financing options including \$28.6 million in principal forgiveness. The Texas Water Development Board (TWDB) is the agency that is involved most closely with water issues in Texas and focuses on data collection, planning, and financing of water programs. To encourage funding of green projects, the TWDB allocated 7.5% of the capitalization grant, or \$4,544,800, as a targeted subsidy for green project costs in FY 2018. Eligible green projects were offered a subsidy in the form of loan forgiveness for 15% of the green project costs, provided the green costs were at least 30% of the total project costs. The TWDB committed to fund \$29,336,372 in green project costs during SFY 2018.

The Green Project Reserve, or GPR, required an amount equivalent to a specified portion of the capitalization grant allotment must be offered to projects that address green infrastructure, water efficiency, energy efficiency, or other environmentally innovative activities. The EPA defined innovative environmental activities as those that demonstrated new or innovative approaches to prevent or remove water pollution in an economically and environmentally sustainable way.

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<sup>36</sup> <https://www.govinfo.gov/content/pkg/GAOREPORTS-GAO-06-579/html/GAOREPORTS-GAO-06-579.htm>, accessed on 11/3/19.

<sup>37</sup> <http://www.twdb.texas.gov/publications/reports/administrative/doc/FY18-CWSRF-AnnualReport.pdf>



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For the SFY 2018 IUP, the TWDB applied separate rating criteria for NPS and estuary management projects. The SFY 2018 IUP reserved 7% of the total funds available, or \$36,750,000, for NPS and estuary management projects. Eleven eligible applicants, with project costs totaling \$126,889,460, were rated using the NPS criteria, were listed under the NPS category in the IUP, and were invited to apply for financing. As of August 31, 2018, two projects received commitments to fund a NPS project. The TWDB did not receive any interest in estuary management financial assistance.

Eligible uses of CWSRF funding in the Texas Intended Use Plan include acquisition of conservation easements and permanent or long-term acquisition of water rights by entities eligible under state law that will result in a substantial public water quality benefit.

### Drinking Water State Revolving Fund

The Drinking Water State Revolving Fund (DWSRF) program was established by the 1996 Safe Drinking Water Act Amendments, under which EPA provides grants to States to establish revolving loan funds from which they provide loans and other types of financial assistance to public water systems for eligible infrastructure improvements. Since its inception, Congress has directed \$4.2 billion for the DWSRFs. In FY 2020, states were awarded \$1.30 billion in capitalization grants for their DWSRFs.

Loans under the DWSRF are typically low interest and can be repaid over 20 years. There is some flexibility given to the states to allow them to waive the principal repayment, offer negative interest rates or extend the loans to 30 years in specific hardship cases.

Up to 31 percent of these capitalization grants can be set-aside to administer the SRF and state source protection programs and to fund source water protection activities, including land acquisition. Up to 15 percent of the set-aside can be used for land conservation and voluntary, incentive-based protection measures, with no more than 10 percent used for a single type of activity, such as land protection.

Conservation easements and fee simple acquisition are permitted with these funds. However, since its inception, only \$2.7 million has been for acquisition to protect less than 2,000 acres of land under the DWSRF. The EPA has begun a concerted effort to focus more attention on protecting “source water,” which they roughly define as “untreated water from streams, rivers, lakes, or underground aquifers which is used to supply private wells and public drinking water.” There is growing recognition that protecting the source from contaminants is often more efficient and cost-effective than treating drinking water later.

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Through Fiscal Year 2019, the DWSRF has committed approximately \$3 billion for projects across Texas. For Fiscal Year 2020, at least \$250 million is available under the state DWSRF for all financing options including \$30 million for principal forgiveness.<sup>38</sup>

## Community Forest Program

The USDA Community Forest and Open Space Conservation Program (Community Forest Program, or CFP) of the Forest Service is a competitive grant program that provides financial assistance to tribal entities, local governments, and qualified conservation non-profit organizations to acquire and establish community forests that provide community benefits. Community benefits include economic benefits through active forest management, clean water, wildlife habitat, educational opportunities, and public access for recreation. Total project funding for 2019 was \$4 million.

Grants are available for the acquisition of lands at least five acres in size and 75% forested that provide community benefits and public access. The program pays up to 50% of the project costs and requires a 50% non-federal match.

### City of San Marcos CFP

The City of San Marcos will receive a \$423,500 grant from the United States Forest Service to fund the land purchase of the Sink Creek Community Forest Tract. This is the first Community Forest and Open Space Program grant awarded to a project in Texas. The City purchased the 102-acre tract through a three-year lease with The Trust for Public Land in 2017 for a total purchase price of \$1.27 million. City Council approved the lease-purchase agreement with the expectation that external funding sources would be sought to match the commitment of public funds. “The city targeted this property for conservation so it can serve as a buffer from development in a particularly sensitive area,” said City of San Marcos Urban Forester Kelly Eby. “By awarding these funds to the City, the U.S. Forest Service is joining our efforts to achieve strategic environmental planning.”

## Agricultural Conservation Easement Program

The Agricultural Conservation Easement Program (ACEP) provides financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits. Under the Agricultural Land Easements component, NRCS helps Indian tribes, state and local governments and non-governmental organizations protect working agricultural lands and limit non-agricultural uses of the

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<sup>38</sup> State of Texas, Intended Use Plan, FY2020; [http://www.twdb.texas.gov/financial/programs/DWSRF/doc/SFY2020/SFY2020\\_DWSRF\\_IUP.pdf](http://www.twdb.texas.gov/financial/programs/DWSRF/doc/SFY2020/SFY2020_DWSRF_IUP.pdf)

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land. Under the Wetlands Reserve Easements component, the Natural Resources Conservation Service (NRCS) helps to restore, protect and enhance enrolled wetlands. ACEP is a new program that consolidates three former programs – the Wetlands Reserve Program, Grassland Reserve Program and Farm and Ranch Land Protection Program.

Land eligible for agricultural easements includes cropland, rangeland, grassland, pastureland and nonindustrial private forest land. NRCS will prioritize applications that protect agricultural uses and related conservation values of the land and those that maximize the protection of contiguous acres devoted to agricultural use. Land eligible for wetland reserve easements includes farmed or converted wetland that can be successfully and cost-effectively restored. NRCS will prioritize applications based the easement's potential for protecting and enhancing habitat for migratory birds and other wildlife.

To enroll land through agricultural land easements, NRCS enters into cooperative agreements with eligible partners who will purchase and manage the easements. NRCS makes grants to these partners, who must provide matching funds. To enroll land through wetland reserve easements, NRCS itself enters into purchase agreements with eligible private landowners or Indian tribes that include the right for NRCS to develop and implement a wetland reserve restoration easement plan. This plan restores, protects, and enhances the wetland's functions and values.

The Natural Resources Conservation Service accepts applications from landowner and eligible partners on a continual basis throughout the year. Application deadlines for consideration in fiscal year 2020 will be announced in the near future.

## **Natural Resources Conservation Service (NRCS) Emergency Watershed Protection Program Floodplain Easement (EWPP-FPE)**

Floodplain easements provide landowners with another option for frequently flooded properties such as agricultural fields, forested land, fallow land, pasture and in certain situations residential areas in cooperation with a qualified sponsor.

Through the EWP-FPE program, eligible applicants voluntarily agree to sell a permanent conservation easement to the United States through NRCS. EPW-FPE is administered in locations where a Presidential Disaster Declaration has been made or areas identified and funded through Congressional legislation. For eligibility, the applicant must have documented evidence of flooding which occurred at least once within the previous calendar year or at least twice within the previous 10 years. (Waller County has been included in a presidential disaster declaration more than twice in the past 10 years.) Lands inundated or damaged because of dam breach also qualify. Compensation is based on fair market value.



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A major goal of EWP–FPE is to restore the floodplain functions and values to the greatest extent practicable. Structures, including buildings, fences, pipes, etc., within the floodplain easement must be demolished and/or removed, or relocated outside the affected floodplain area. The costs of all restoration practices are also paid for through the program, and the landowner can participate in the restoration efforts.<sup>39</sup>

## Hazard Mitigation Assistance Grants

The Federal Emergency Management Agency (FEMA) has three Hazard Mitigation Assistance (HMA) grant programs to support states, tribal governments, and local communities in implementing acquisition projects. All three HMA programs share the purpose of protecting communities from natural disasters, but they have different periods of funding availability.

- Before a disaster – The Pre-Disaster Mitigation (PDM) program is a competitive national program that annually provides funds to states and communities, including tribal governments, to manage risk by implementing hazard mitigation planning and mitigation projects before a disaster.
- After a disaster – The Hazard Mitigation Grant Program (HMGP) provides funds to states, tribes, and local communities after a Presidential disaster declaration to protect public or private property through various mitigation measures based on state/tribal priorities.
- Every year – The Flood Mitigation Assistance (FMA) program is another competitive national program that annually provides funds to states and local communities for projects that reduce or eliminate the long-term risk of flood damage to buildings, homes, and other structures that are insured under FEMA’s National Flood Insurance Program.

Participation in FEMA’s acquisition programs is strictly voluntary and property owners are not required to participate. FEMA has two types of acquisitions: (1) property acquisition and structure demolition, and (2) property acquisition and structure relocation. Property acquisition and structure demolition allows the community to purchase the structure and the land, while property acquisition and structure relocation allows the community to purchase only the land and assist the property owner with relocating the structure to an area outside the flood zone. Property owners are paid fair market value for their property.

Generally, FEMA pays up to 75 percent for hazard mitigation projects. The remaining 25 percent is the responsibility of the applicant. FEMA may contribute up to 90 percent for PDM projects and up to 100 percent for FMA projects that meet certain criteria. In recent years FEMA has shown greater flexibility in considering grants that include land acquisition and conservation purposes. Even if there is no structure to be removed, funding for floodplain acquisition can be justified if improvements are

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<sup>39</sup> Largely excerpted from <https://www.nrcs.usda.gov/wps/portal/nrcs/main/tx/programs/planning/ewpp/>

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being made to the property that will reduce hazards (e.g., construction of a detention basin). In evaluating the benefit/cost ratio of proposed projects, FEMA will also now take into account the value of “environmental services” such as protection of habitat for endangered species.

After a property is acquired, it must be dedicated and maintained in perpetuity as open space for the conservation of natural floodplain functions. However, the following land uses are allowed:

- Parks for outdoor recreational activities
- Wetlands management
- Nature reserves, cultivation, grazing, and camping (except where adequate warning time is not available to allow evacuation)
- Unimproved, unpaved parking lots
- Buffer zones
- Other uses FEMA determines compatible.

The application process begins with individuals or communities meeting with the local floodplain or housing manager to start an application. The application requires input and information from the community and all interested property owners. The community sends the application to the State Hazard Mitigation Officer (SHMO), who will review it for eligibility, prioritize it among other eligible applications received, and submit the prioritized applications to FEMA for approval. FEMA then reviews applications to ensure they meet HMA program requirements, are cost-effective and feasible, and address environmental/historic/cultural resource issues. Once approved, FEMA awards mitigation grant funds to the state, which disburses those funds to communities. Once the funding is received, the community will purchase the property, remove or demolish the structure, and deed restrict the land as open space.<sup>40</sup>

In Texas, the Division of Emergency Management<sup>41</sup> administers the HMGP and PDM programs. The Texas Water Development Board<sup>42</sup> administers the FMA program.

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<sup>40</sup> FEMA Frequently Asked Questions – Property Acquisitions for Open Space ([https://www.fema.gov/media-library-data/1487973067729-d34bd451527229a45bad0ef5ac6ddf93/508\\_FIMA\\_Acq\\_FAQs\\_2\\_24\\_17\\_Final.pdf](https://www.fema.gov/media-library-data/1487973067729-d34bd451527229a45bad0ef5ac6ddf93/508_FIMA_Acq_FAQs_2_24_17_Final.pdf)).

<sup>41</sup> Visit [www.dps.texas.gov/dem/](http://www.dps.texas.gov/dem/) for more information.

<sup>42</sup> Visit [www.twdb.texas.gov/flood/index.asp](http://www.twdb.texas.gov/flood/index.asp) for more information.

## Appendix A –Waller County Debt Analysis

### Long-Term Debt

The County issues general obligation bonds, certificates of obligation bonds, notes payable and capital lease obligations to provide funds for the acquisition and construction of major capital facilities. These issues are direct obligations and pledge the full faith and credit of the County.

<u>General Debt Currently Outstanding</u>					
	<u>Original Issue</u>	<u>Beginning Balances</u>	<u>Net Changes</u>	<u>Ending Balance</u>	<u>Amounts Due Within One Year</u>
General Obligation Bonds:					
2018 Series	\$ 28,930,000.00	28,930,000.00	-	28,930,000.00	\$ 765,000.00
2017 Series	9,375,000.00	\$ 9,375,000.00	\$ -	\$ 9,375,000.00	315,000.00
Tax Notes 2018 Series	455,000.00	455,000.00	(80,000.00)	375,000.00	90,000.00
Certificates of Obligation:					
2014 Series	5,000,000.00	3,623,000.00	(481,000.00)	3,142,000.00	493,000.00
Total General Long-Term Debt	<u>\$ 43,760,000.00</u>	<u>\$ 42,383,000.00</u>	<u>\$ (561,000.00)</u>	<u>\$ 41,822,000.00</u>	<u>\$ 1,663,000.00</u>

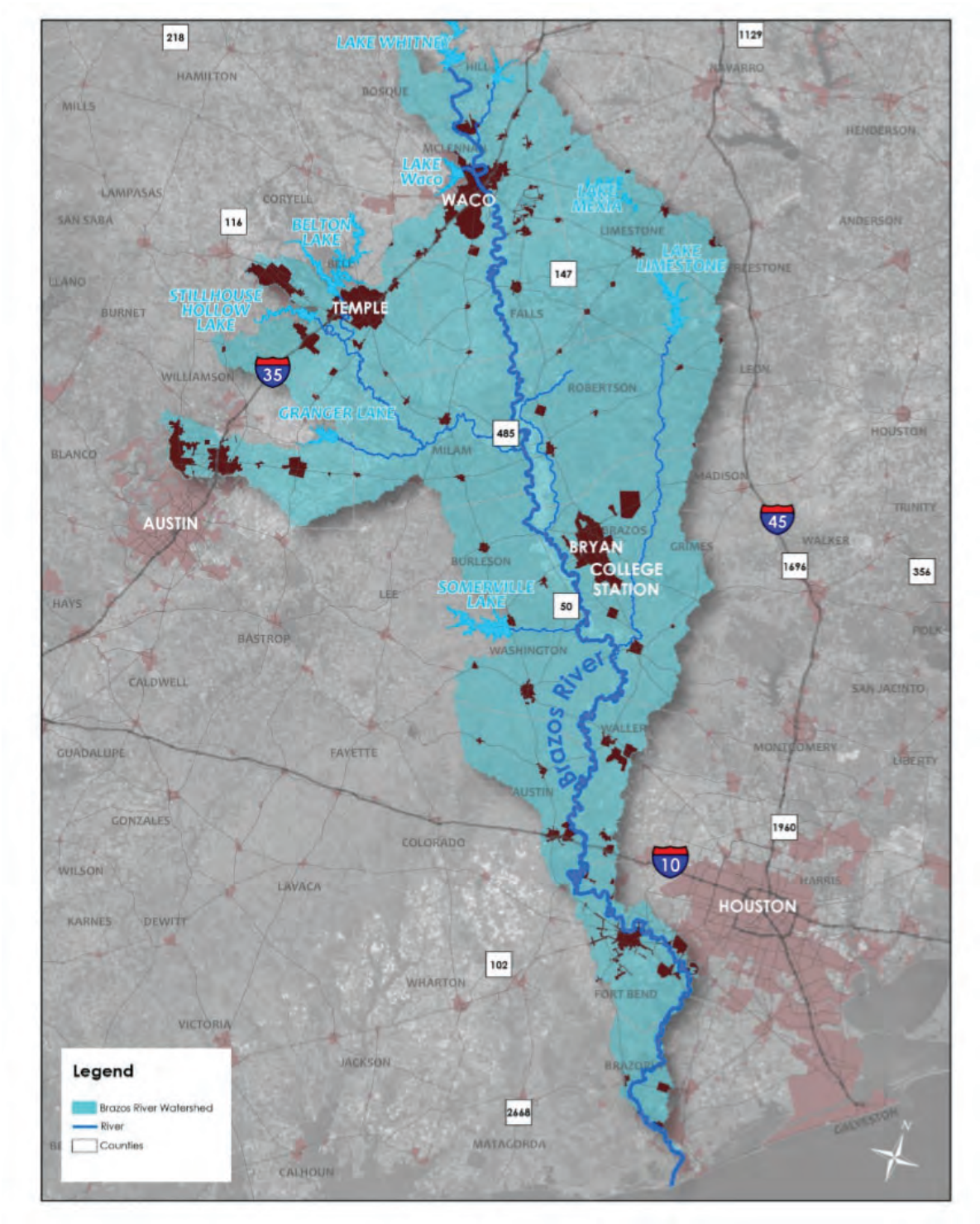
Debt service requirements on long term debt as of December 2018 are as follows:

<u>General Debt</u>			
<u>Year Ending December 31, 2018</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2019	\$ 1,663,000.00	1,662,210.25	\$ 3,325,210.25
2020	1,890,000.00	1,442,176.96	3,332,176.96
2021	1,987,000.00	1,367,849.16	3,354,849.16
2022	2,075,000.00	1,289,836.86	3,364,836.86
2023-2027	9,362,000.00	5,244,419.60	14,606,419.60
2028-2032	10,200,000.00	3,276,343.80	13,476,343.80
2033-2037	11,995,000.00	1,477,459.41	13,472,459.41
2038-2042	2,650,000.00	45,600.00	2,695,600.00
Totals	<u>\$ 41,822,000.00</u>	<u>\$ 15,805,896.04</u>	<u>\$ 57,627,896.04</u>

Source: Waller County Comprehensive Annual Financial Report, 2018.



Appendix B -Brazos River Watershed Map



Source: Lower Brazos Flood Protection Planning Study 2019

