

# Rockwall County Open Space Master Plan





## Acknowledgements

### County Judge

David Sweet	2015-
Jerry Hogan	2011-2014

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Special thanks to Nell Welborn for providing many of the photographs in this plan.





# Rockwall County Open Space Master Plan

Prepared for Rockwall County

by Verdunity with WRT



December 28, 2015



# Foreword

Americans have a history of giving their time and talent for the benefit of future generations. The Open Space Alliance Executive Committee has followed that path to advance the development of an Open Space Master Plan with the support of the Rockwall County Commissioners Court and the cities within our County.

The resulting Plan supplements each city's planning efforts and identifies opportunities to connect open spaces, preserve natural resources and habitats, protect streams and waterways from pollution, and add economic value to properties. The Open Space Master Plan also offers other benefits:

- Communicates our future plans to potential residents, developers and businesses considering a move to Rockwall County,
- Identifies general locations for trail connections and assigns priorities,
- Reminds us that protecting our precious water is critical for a healthy community,
- Outlines ways to conserve land and suggests methods of funding, and
- Includes a guide for implementation and next steps.

Planned open spaces greatly improve the quality of life, have a positive effect on mental and physical health, and increase the economic value of properties while attracting residents and businesses that support a vibrant community. The population of our County is expected to more than double by 2040. Having a Master Plan as a guide is key to making the best use of our environmental assets.

It is up to all of us to treasure what we have and plan the future for our children and their children. Join us and become involved by using your talents and support to help provide for Open Spaces in all of Rockwall County.

## **Working Together to Keep Green Space in Our Growth**

### **Rockwall County Open Space Executive Committee**

Robert D. DeJean, Chair

Nell B. Welborn, Vice-Chair

Becky E. Burkett

Dale S. Morgan

Charlie Pratt



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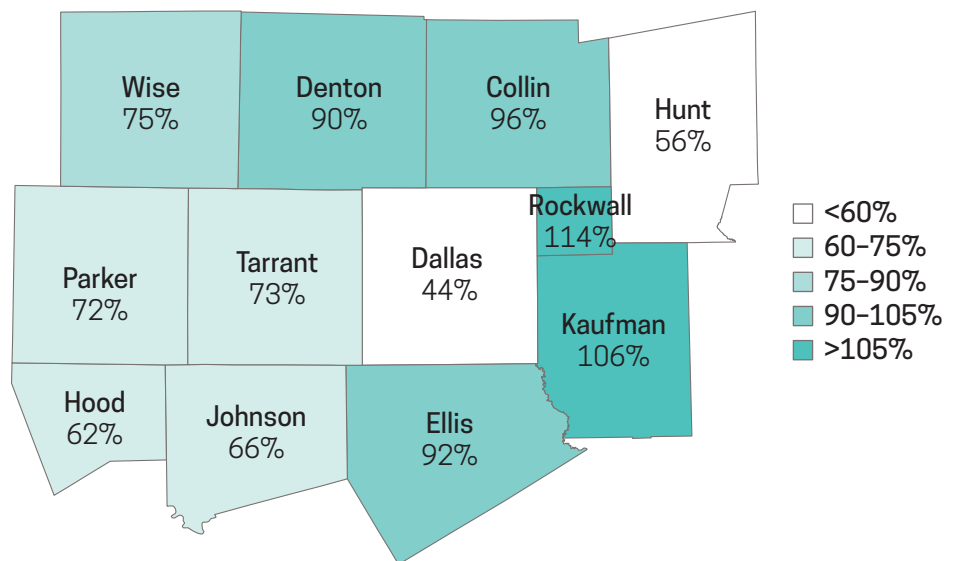


# Executive Summary

## Introduction

Rockwall County and the greater North Texas region are projected to experience dramatic growth in the next twenty to thirty years. The development pressure will place a tremendous burden on available natural and open space resources and on communities' fiscal responsibilities related to maintenance of roadways, utilities, recreational facilities and stormwater infrastructure. Many North Texas communities that have already experienced such surges in growth are now spending significant resources to upgrade existing infrastructure, infill under-utilized properties and create more green space and pedestrian-focused places to meet the demands of a larger population.

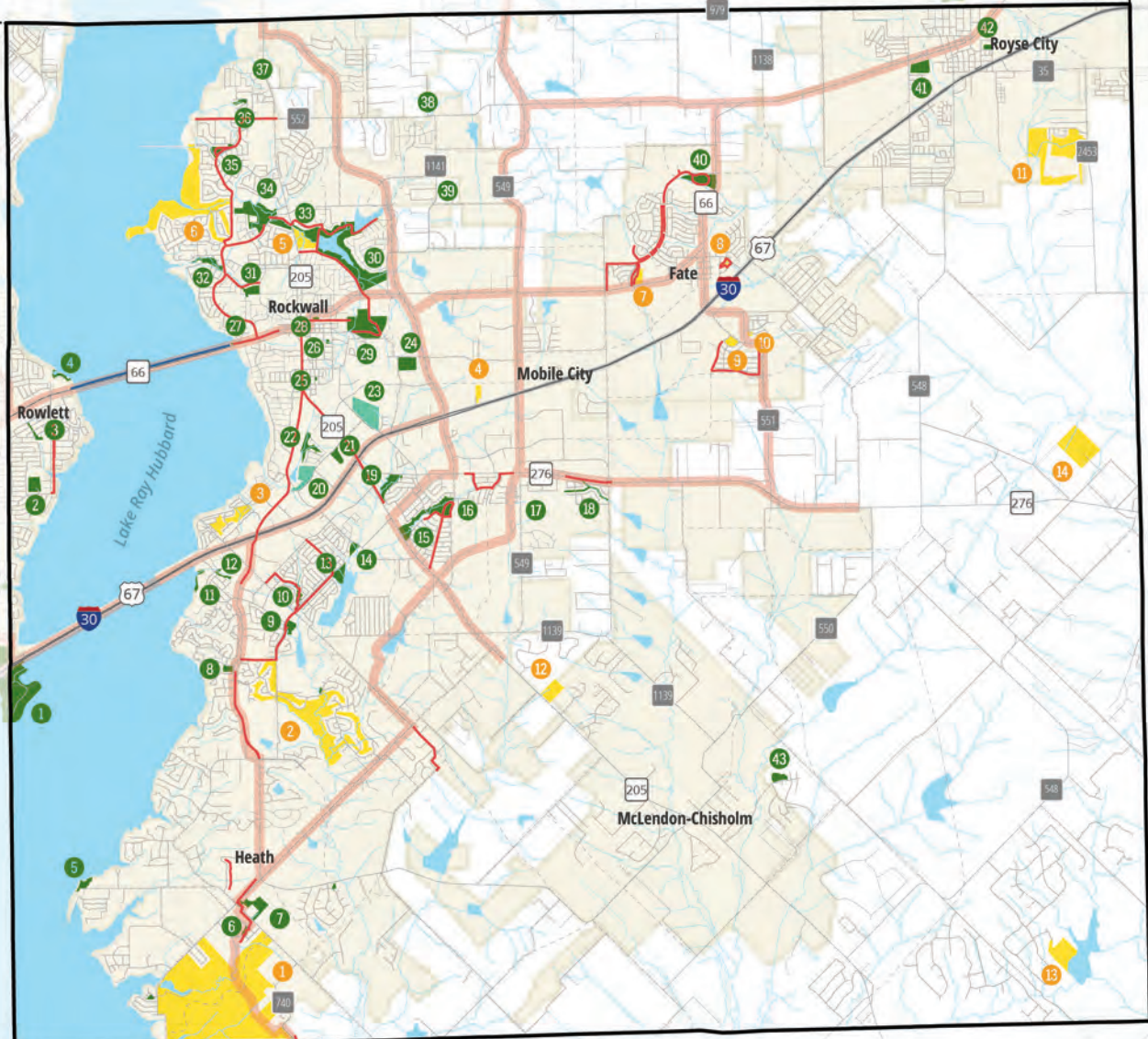
Percent Change in Population, 2010–2040



Source: NCTCOG GLUM 2040 Population Forecast

Still relatively undeveloped, Rockwall County has the opportunity to learn from older communities to its west, to position each of its cities for a fiscally and environmentally resilient future, and to preserve the character and quality of life that residents and businesses have come to expect.

The **Open Space Master Plan (OSMP)** includes a number of countywide and site-specific recommendations for expanding Rockwall County's network of green infrastructure, public open space, trail system.



HUNT

DALLAS

KAUFMAN

## Existing Open Space and Trails

Veloweb

Existing Off-Street Trail

Existing On-Street Trail

Existing Public Parks

Existing Private Parks

### City of Rowlett

- 1 Elgin B. Robertson
- 2 Shorewood Park
- 3 Highland Meadows Greenbelt
- 4 Scenic Point Park

### City of Heath

- 5 Terry Park
- 6 Towne Center Park
- 7 Heath Town Center Park
- 1 Heath Golf & Yacht Club
- 2 Buffalo Creek Golf Club

### City of Rockwall

- 8 Henry M. Chandler Park
- 9 Fox Chase Park
- 10 Windmill Ridge Park
- 11 The Harbor Park
- 12 Lago Vista
- 13 Lynden Park
- 14 Highland Meadows Greenbelt
- 15 Meadowcreek Park - Foxwood
- 16 Hickory Ridge Park
- 17 Fontana
- 18 Timbercreek Greenbelt
- 19 Meadowcreek Park - Madison
- 20 Spring Sports Complex
- 21 Yellowjacket Park
- 22 Waterstone Greenbelt
- 23 Aquatics Center/Stadium
- 24 Leon Tuttle Athletic Complex
- 25 Gloria Williams Park
- 26 Clark Street Park
- 27 SH 66 Boat Ramp
- 28 Lofland Park
- 29 Harry Myers Park
- 30 Raymond Cameron Lake
- 31 Northshore Park
- 32 Emerald Bay Park
- 33 Lakeview Summit
- 34 Dorba Trail

### City of Fate

- 35 Shores Park
- 36 Jewel Park
- 37 Lakeside Park
- 38 Dalton Ranch
- 39 North Country Lane
- 40 Lakeside Village Golf Course
- 41 A-1 Golf Center
- 42 Rockwall County YMCA
- 43 Rockwall Golf & Athletic Club

### City of Fate

- 40 Smith Family Park
- 7 Woodcreek Amenity
- 8 Woodcreek HOA

- 9 Chamberlain Crossing
- 10 Williamsburg

### Royse City

- 41 Walter Hawk Park
- 42 Fox Field Park
- 11 Stone River Golf Club

### City of McLendon-Chisholm

- 43 Sonoma Verde Park
- 12 Oasis Beach & Tennis Club

### Unincorporated Rockwall County

- 13 High Point Ranch Park
- 14 Sabine Creek Ranch

Sources: Rockwall County, TNRI, Rockwall County Historical Foundation

1 mile



For the County to remain competitive in recruiting and retaining businesses and residents, it will be important to retain and enhance an attractive system of open spaces.

Previous surveys conducted by individual cities and the county indicate that residents desire more quality open space amenities and trails; however, securing land and funding for these types of projects continues to be a challenge.

## Why Invest in a Countywide Open Space Plan?

For the county to remain competitive in recruiting and retaining businesses and residents, it will be essential to retain and enhance an attractive system of open spaces that contributes to the character of adjoining communities, complements city parks and facilities, and is connected by a robust network of on- and off-street trails to key destinations and activity centers throughout the county. Unique open space attractions can serve as destinations for residents of both the county and the rest of the North Texas region. Regional destinations such as Arbor Hills Nature Preserve in Plano, the Heard Museum in McKinney and the Dogwood Canyon Audubon Center in Cedar Hill are examples of open space amenities that provide considerable economic and environmental benefits to their respective counties and individual communities.

Creating such open space systems will require countywide planning and coordination in order to understand community priorities, build support, acquire land and easements, and secure funding for implementation. A coordinated planning effort between state and federal agencies, the regional council of governments, the county, cities and philanthropic organizations is a critical step to preserving the county's natural beauty and cultural and historic resources, while still embracing the growth that is coming. To be politically viable, economically feasible, and functionally effective, the county's open spaces and green infrastructure need to be conceived and implemented in a way that offers diverse benefits, so they can be championed by a broad cross-section of citizens and interest groups. Too often, planning and implementation fail to program for the full range of benefits possible from open space due to single-objective approaches to funding or piecemeal planning and design processes.

Previous surveys conducted by individual cities and the county indicate that residents desire more quality open space amenities and trails; however, securing land and funding for these types of projects continues to be a challenge. This plan attempts to address these issues by proactively identifying areas that present opportunities to maximize environmental and recreational benefits, and by recommending strategies for sharing costs and pursuing outside funding sources to help with implementation.

## Planning Context

This OSMP builds on a series of studies and efforts previously commissioned by the County with the aim of understanding citizens' priorities and level of support for countywide open space conservation. It is not intended to replace existing city plans. Rather, its purpose is to:

- serve as a resource that supplements the cities' planning efforts;
- provide an overarching vision and framework for open space planning;
- identify opportunities to preserve critical natural resources and habitat, protect and enhance the existing hydrologic systems, expand and improve recreation opportunities, and open up new economic development opportunities;

- assist in inter-city coordination and better position the county and cities for a variety of funding sources; and
- communicate the county's vision for the future to potential residents, developers and businesses.

## Open Space Master Plan

The OSMP aims to address the three primary objectives adopted by the Rockwall County Commissioners Court in 2009:

1. Preserve quality stormwater corridors, including creeks, channels, flood plains, tributaries and easements.
2. Explore community interest in, and potential locations for, a major preserve/public amenity that could potentially be developed in the future.
3. Protect and establish corridors essential for countywide open space connectivity for non-motorized mobility modes.

In addressing these goals, this plan emphasizes open space opportunities that are multifunctional and interconnected—enhancing quality of life in the county through a range of environmental, social, cultural, and economic benefits.

Chapter 2 establishes the context for the plan, in terms of existing conditions, trends, other documents and planning efforts. Chapter 3 describes the citizen and stakeholder involvement that went into this plan. Chapters 4 through 6 outline the three areas of focus for this plan, identify opportunity areas, and give broad recommendations for those areas. In the final two chapters, strategies and next steps are discussed.

## Primary Objective 1. Stormwater Management and Green Infrastructure

### Preserving quality stormwater corridors

Green infrastructure, understood broadly, is the interconnected network of stream corridors, floodplains, wetlands, water bodies, prairies, woodlands, and naturalized (built) stormwater systems. All of these green infrastructure elements work in tandem to:

- maintain ecosystem health;
- reduce stormwater impact and provide flood protection;
- preserve water and air quality;
- provide useful and diverse habitats; and
- mitigate climatic extremes.

Green infrastructure systems provide the most services when preserved at the watershed level by linking together stream networks, floodplains, conservation areas, parks and greenways.

Many communities in North Texas did not adequately plan to preserve and protect the function of the natural systems that once were linked throughout the region. Communities that lost these natural systems to development pressure are now trying to replace the functions these natural systems perform by using singular function grey infrastructure at great expense to the community, both in direct financial burden and in reduced quality of life. Rockwall County has the opportunity to take advantage of the ecological and economic services provided by the large green infrastructure network that still exists in the county.

## Watershed-Specific Recommendations

The green infrastructure chapter of this plan includes a detailed evaluation of each of the eight watersheds in the county and provides recommendations for strategies including floodplain conservation and management, stormwater infrastructure retrofitting and regional detention using existing water resources in the county.

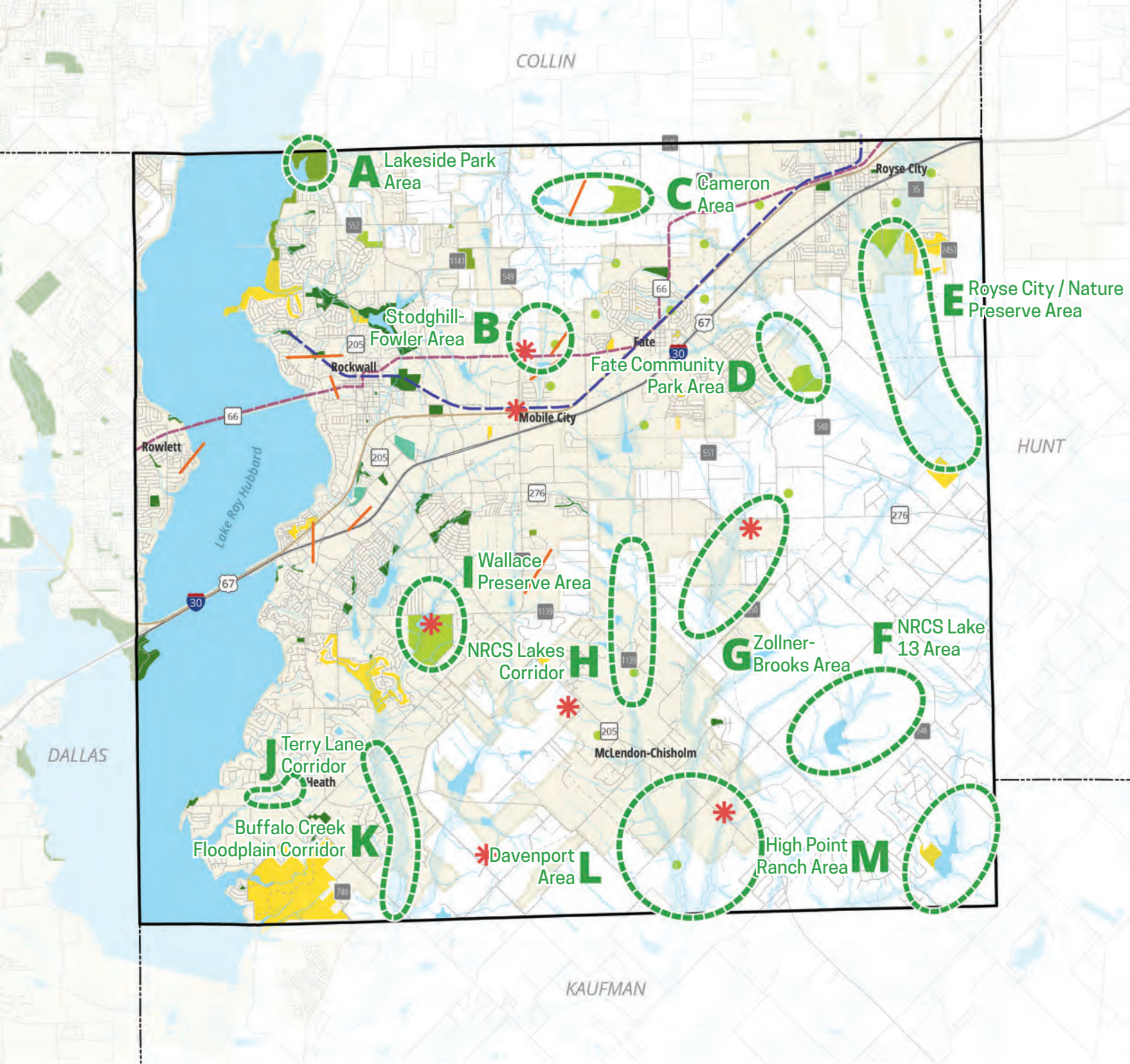
### Recommendations for Green Infrastructure Implementation

- Strategies for each watershed should cross jurisdictional boundaries.
- Green infrastructure should be considered along with capital improvement plans and stormwater permit updates.
- Floodplain preservation and regional detention may require modifications to development ordinances.
- Recommended strategies should be considered in comprehensive planning and zoning for each municipality.
- Green infrastructure strategies that provide multilayered benefits (environmental, recreational and economic development) should be prioritized. Where possible, green infrastructure should be tied to open space and trail plans.

The green infrastructure chapter concludes with key steps for preserving quality stormwater corridors that correspond with the following objectives:

- Restore Damaged Riparian Corridors
- Retrofit Lakes for Enhanced Stormwater Management
- Establish Stream Buffer Areas
- Retrofit Stormwater Infrastructure
- Create Stacked Function Stormwater Management Areas
- Establish Complimentary Stormwater Development Criteria





## Open Space Opportunities



Sources: Rockwall County, TNRI, Rockwall County Historical Foundation



## Primary Objective 2. Open Space

### Identifying opportunities for a major preserve/public amenity

The second objective of this OSMP is to explore community interest in, and potential locations for one or more major open space preserves/public amenity areas that could potentially be developed in the future.

Public priorities for open space include:

1. Create new open space and recreational opportunities for
  - a. educational and interpretive activities
  - b. exploration and experience with nature
  - c. outdoor special events
  - d. new water-oriented parks and recreational opportunities
2. Protect natural and cultural resources such as
  - a. rock wall outcroppings
  - b. historic farmsteads and ranches
  - c. prairie, native grasslands and old growth forests
  - d. wildlife and wildlife habitat

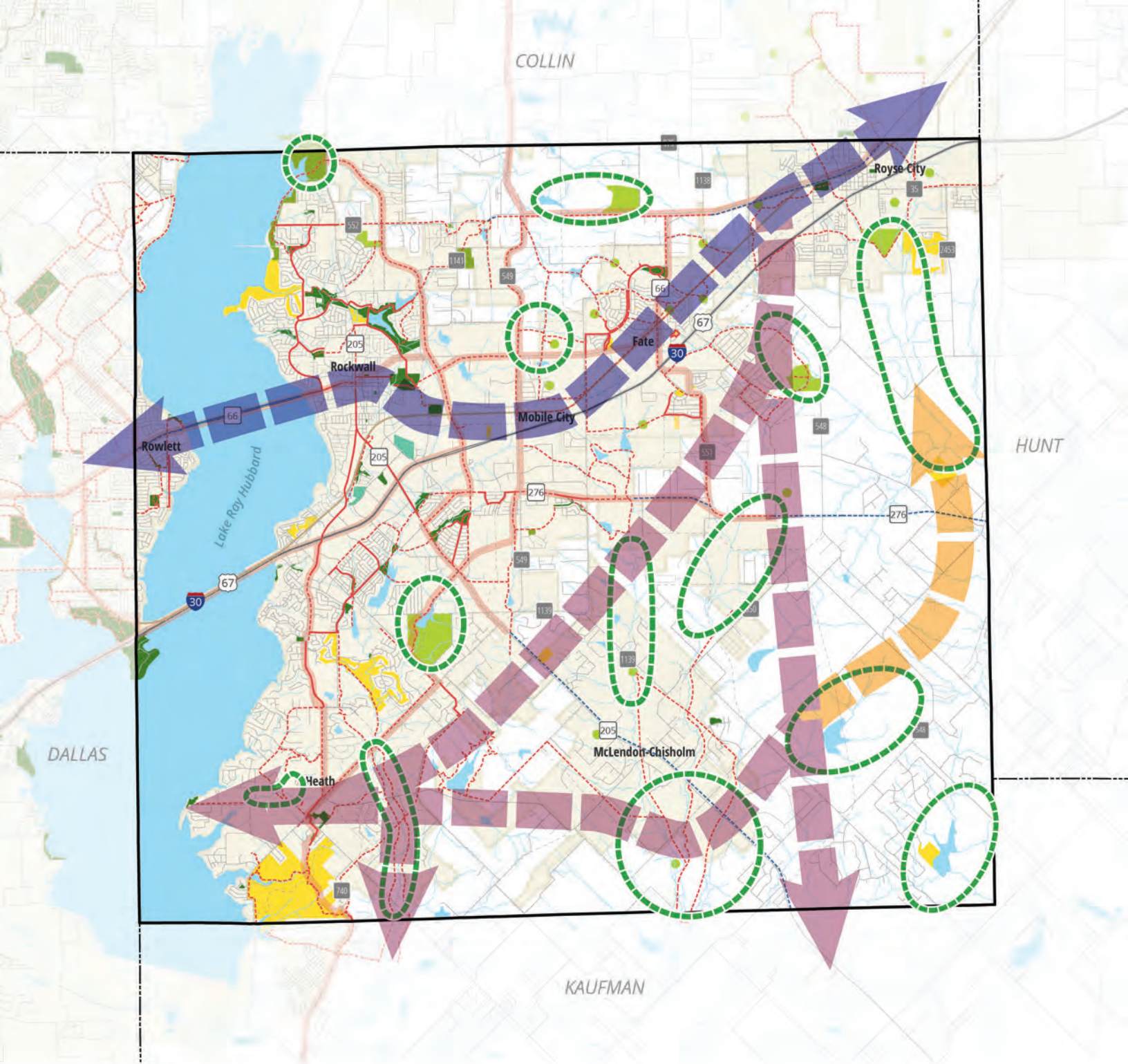
Open space can take many forms. Examples of open space areas found in North Texas include: river/stream-oriented greenways, lake-oriented parklands, bottomland hardwood forest, open and tallgrass prairies, conservation-oriented open spaces and cultural and historic open spaces.

Many survey respondents indicated they regularly leave the county to visit regional open space amenities such as White Rock Lake and the Heard Museum. A number of the regional public open spaces make use of floodplain and other key green infrastructure areas.

Over seventy sites were identified at the beginning of the planning process. The list was eventually refined to thirteen areas that present the best opportunities for large public open space amenities. Each was evaluated and ranked based on six criteria:


1. Location / Connectivity
2. Ecology / Environment
3. History / Culture
4. Recreational Opportunities
5. Land Ownership
6. Development Pressure







## Trail Opportunities


 Open Space Opportunity

 Existing Public Parks


 Undeveloped Public Parks


 Future Public Park


 Existing Private Parks


 Future Private Parks


 High Priority Trail Opportunity


 Medium Priority Trail Opportunity


 Low Priority Trail Opportunity

 Existing Off-Street Trail

 Planned Off-Street Trail

 Existing On-Street Trail

 Planned On-Street Trail

 Veloweb

Sources: Rockwall County, TNRI, NCTCOG



All of the identified opportunity areas are considered to be priorities for further consideration. Of these thirteen, the highest scoring areas were:

- B – Stodghill-Fowler Area
- A – Lakeside Park Area
- I – Wallace Preserve Area
- G – Zollner-Brooks Area
- C – Cameron Area
- E – Royse City/Nature Preserve Area

The Stodghill-Fowler area, given its location and capacity for integration with top trail and green infrastructure priorities, is the best opportunity to create a catalyst project for open space amenities. The cities of Rockwall and Fate have indicated strong interest, and this location should be explored as the top priority for a potential partnership between land owner(s), the County, the cities and other entities such as a local non-profit group. For this and the remaining areas, the County should proceed by holding site-specific discussions with cities and property owners in the identified opportunity areas in order to gauge interest. Prioritization of the opportunity areas may shift as more information is gathered.

The open space chapter concludes with key steps for securing one or more regional open space amenities that correspond with the following objectives:

- Complete park development scenarios
- Establish park programming and concepts

## Primary Objective 3. Trails and Connectivity

### Identifying corridors for county-wide open space connectivity

The third objective of this plan is to identify key corridors for creating and expanding a trail system in Rockwall County, with a focus on off-street trails and connections to open space opportunities. Among the most pressing open space needs in the county, according to survey respondents, were off-street trails for walking, running, and bicycling. To address this need, the trail section recommends and prioritizes general trail routes that link county destinations to the larger regional network of off-street trails known as the Regional Veloweb.

Investing in a strong network of trails can:

- increase residents' time spent outdoors, which can foster environmental awareness and demonstrate to residents the value of preserving open space.

- improve stress recovery and reduce mental fatigue, by connecting users to nature.
- create healthy recreation opportunities by providing people of all ages with attractive, safe, accessible and low- or no-cost places to bird-watch, cycle, walk, hike, jog or skate.
- have significant economic impact, increasing value and desirability of nearby properties and creating attractive business locations.
- help reduce vehicle-miles-traveled, resulting in a decrease in air pollution, traffic accidents and traffic congestion.
- provide safe, alternative routes to school for students who live within walking or biking distance.
- provide opportunities for more social interaction.

## Trail System Goals

- Link together the county's open spaces
- Provide connections between the cities
- Create a safe, comfortable, and useful pedestrian/bicycle network
- Expand opportunities for recreation and enjoyment of nature
- Foster economic growth near trail development

Trails are often best developed along existing corridors. The trails chapter identifies and gives recommendations for placing trails along street and road rights-of-way, rail corridors, utility easements and riparian corridors.

Using these potential corridors, along with the existing and planned trails outlined in the various city plans, five countywide trail connections were identified and outlined broadly. They were evaluated for priority based on how well they fit the following criteria:

- Connects to population centers and gathering places
- Fills in gaps between city trails
- Can make use of preexisting corridors
- Helps complete a countywide trail loop
- Has potential for economic development
- Faces near-term development pressure

All of the routes represent opportunities to connect the county's residents to important destinations and one another. No specific alignments are proposed in this plan. Further study and planning—as well as extensive collaboration between the counties and cities—are needed on any route the county decides to pursue.

The trail route of highest priority in the near term is one that would serve the rapidly developing areas north of Interstate 30, running from Rowlett to Royse City. Input from stakeholders was in favor of a trail that largely makes use of



the historic interurban rail corridor and connects city centers. Of all corridors considered, it has the best chance to have immediate economic impact, appears to face the fewest barriers to implementation and is under the greatest development pressure. The routes identified as medium-priority regional connections should also be considered as resources become available and development continues.

The trails and connectivity chapter concludes with key steps for establishing regional trail corridors that correspond with the following objectives:

- Complete Trail Development Scenarios
- Develop Trail Master Plans

## Implementation Strategies and Next Steps

The plan closes with strategies for land conservation and funding, an implementation plan, and general recommendations regarding partnerships, master plan updates, development controls and regulations, marketing and education, and project management.

### 1. Enhance Countywide Open Space Planning Efforts *Program Management and Coordination*

- A Modify Planning Consortium meeting structure to incorporate open space into monthly meetings. Meetings should be the forum used to discuss and coordinate next steps required for implementation of the OSMP recommendations.

Category	Timing	Champion	Partners	Notes
Program Management	Immediate	County	Planning Consortium, Agencies, Consultant	Invite key partners such as NCTCOG, NTMWD, TPL, TP&W, USACE to participate similar to how agencies are included in transportation discussions.

- B Set up County Open Space Fund program using Collin County program as model. Steps include establishing Advisory Board, setting annual budget, conducting bond election, and establishing evaluation process and criteria

Category	Timing	Champion	Partners	Notes
Incentive Programs	Short	County	Program Advisory Board	Program should be focused on funding projects that support recommendations in the OSMP and have countywide benefits and maximize return on taxpayer investment.

- C Identify and pursue grants that could help fund catalyst projects for watershed studies, open space amenity planning and development, and trail design and construction.

Category	Timing	Champion	Partners	Notes
Program Management	Immediate	County	Cities, Consultant	Grant programs such as NCTCOG's TAP and various Texas Water Development Board grants can help fund implementation projects. Applications for 2017 funds are generally being accepted through the spring of 2016.

## 2. Educate the Public about the Benefits of Open Space Protection

### *Education and Outreach*

	Category	Timing	Champion	Partners	Notes
A	<b>Print and distribute copies of OSMP Executive Summary to city officials and community leaders</b>				
	Category	Timing	Champion	Partners	Notes
	Education & Outreach	Immediate	County	Consultant, Open Space Alliance	
B	<b>Present OSMP findings to city councils, P&amp;Z commissions, Chambers, Rotary and other community organizations</b>				
	Category	Timing	Champion	Partners	Notes
	Education & Outreach	Immediate	County	Consultant, Open Space Alliance	
C	<b>Partner with ISDs to distribute information via school newsletters and integrate concepts into education programs</b>				
	Category	Timing	Champion	Partners	Notes
	Education & Outreach	Immediate/ Short	County	Consultant, Open Space Alliance	
D	<b>Continue using Open Space Alliance website and social media channels to distribute information and updates</b>				
	Category	Timing	Champion	Partners	Notes
	Education & Outreach	Ongoing	Open Space Alliance		
E	<b>Complete small demonstration projects such as planting milkweed and constructing Monarch butterfly gardens, installing signage and benches at existing park and trail locations.</b>				
	Category	Timing	Champion	Partners	Notes
	Education & Outreach	Immediate/ Short	Open Space Alliance	Community Organizations, Citizen Volunteers	

### 3. Preserve Quality Stormwater Corridors

#### *Stormwater Management and Green Infrastructure*

	Category	Timing	Champion	Partners	Notes
A	<b>CATALYST/PILOT PROJECT: Complete study for Camp Creek watershed to determine floodplain buffer limits, LID strategies and coordinate improvements with Open Space Ops B and C. A variety of grant funds are available to fund this study.</b>				
	Category	Timing	Champion	Partners	
	Studies & Design	Immediate/Short	Rockwall	County, Fate, Consultant	This area combines fast pace of development, top-rated open space opportunity (Op B), and areas with above-average ecological importance. Great opportunity for stacked function benefits of open space, green infrastructure strategies, trail connectivity and developer participation if area is studied soon. Sabine Creek, Big Brushy Creek and Buffalo Creek watersheds should also be considered for study, especially if an open space opportunity in one of these watersheds is selected for additional study (instead of Op B).
B	<b>Review ordinances and design standards related to open space, trails and stormwater/floodplain management and consider incorporating stronger controls in line with best practices.</b>				
	Category	Timing	Champion	Partners	
	Development Controls & Regulations	Short	County and Cities		Until ordinances can be updated, County and city staff should find ways to partner with developers to integrate green infrastructure strategies for each watershed into development as it goes in.
C	<b>Review master plans and consider incorporating OSMP recommendations in future updates.</b>				
	Category	Timing	Champion	Partners	
	Master Plan Updates	Short	Cities		Until master plans can be updated, County and city staff should find ways to partner with developers to integrate green infrastructure strategies for each watershed into development as it goes in.

#### 4. Identify Opportunities for a Major Open Space/Public Amenity

##### Open Space

Category	Timing	Champion	Partners	Notes
A CATALYST/PILOT PROJECT: Complete study and conceptual plan for development of Open Space Opportunity B (Stodghill/Fowler Area). Study would include meetings with land owners and representatives from Rockwall and Fate to refine the limits and scope of improvements to develop a publicly accessible open space amenity. Study results would be used to pursue grant funding for subsequent next steps.				
Category	Timing	Champion	Partners	
Studies & Design	Immediate/Short	County	Fate, Rockwall, Consultant	Opportunity B (Stodghill/Fowler Area) was the top-rated open space opportunity. It is centrally located in the middle of the county and presents an opportunity for Rockwall, Fate and the County to partner to develop a public amenity that would benefit residents throughout the entire county. Opportunity Areas C, E and G could also be candidates for this initial study and pilot project.
B Visit with land owners in the vicinity of all recommended opportunity areas to determine level of interest in collaborating to preserve open space and/or develop as public open space amenity in the future.				
Category	Timing	Champion	Partners	
Land Acquisition	Short	County	Cities	Recommendations in this plan are based on data and technical analysis and input from community surveys. Discussions with property owners will help to refine opportunities to specific properties and inform future master plan updates.
C Review master plans and consider incorporating OSMP recommendations in future updates				
Category	Timing	Champion	Partners	
Master Plan Updates	Short	Cities		In the interim until master plans and can be updated, County and city staff should find ways to partner with land owners and developers looking to develop in the vicinity of recommended open space opportunity areas.
D Land acquisition for conservation easements and future open space development				
Category	Timing	Champion	Partners	
Land Acquisition	Mid	Cities	County, Non-Profits	Where there is interest from property owners, County and cities should work together (and with other non-profit entities, where possible) to secure easements or property outright.
E Construction of open space amenity				
Category	Timing	Champion	Partners	
	Long			

## 5. Identify Corridors to Ensure Countywide Connectivity and Non-Motorized Mobility Options

### *Trails and Connectivity*

Category	Timing	Champion	Partners	Notes
<b>A CATALYST/PILOT PROJECT: Complete alignment study and conceptual plan for trail from Rowlett to Royse City. Study would include meetings with land owners and representatives from each of the cities to refine the limits and scope of improvements. Study results would be used to pursue grant funding from TAP and other sources for subsequent next steps.</b>				
Category	Timing	Champion	Partners	
Studies & Design	Immediate/ Short	County	Rowlett, Rockwall, Fate, Royse City, Consultant	A multi-purpose off-street trail connecting communities north of I-30 together was one of the most popular projects discussed during the planning process.
<b>B Visit with land owners in the vicinity of all recommended trail corridors to determine level of interest in collaborating to develop off-street multi-purpose trails in the future.</b>				
Category	Timing	Champion	Partners	
Land Acquisition	Short	County	Cities	Recommendations in this plan are based on data and technical analysis and input from community surveys. Discussions with property owners will help to refine trail corridors and inform future master plan updates.
<b>C Review master plans and consider incorporating OSMP recommendations in future updates</b>				
Category	Timing	Champion	Partners	
Master Plan Updates	Short	Cities		In the interim until master plans and can be updated, County and city staff should find ways to partner with land owners and developers looking to develop in the vicinity of recommended trail corridors.
<b>D Land acquisition for conservation easements and future open space development</b>				
Category	Timing	Champion	Partners	
Land Acquisition	Mid	Cities	County, Non-Profits	Where there is interest from property owners, County and cities should work together (and with other non-profit entities, where possible) to secure easements for future trail construction.
<b>E Construction of multi-purpose off-street trail network</b>				
Category	Timing	Champion	Partners	
	Mid/Long	Varies	County, Cities, Developers, Non-Profits	Trail segments will likely be constructed by a combination of developers, non-profits, cities and county.







# 1. Introduction

## A Unique Opportunity

Rockwall County and the greater North Texas region are projected to experience dramatic growth over the next twenty to thirty years. This growth and development pressure will place a tremendous burden on available natural and open space resources and communities' fiscal responsibilities related to maintenance of roadways, utilities, recreational facilities and stormwater infrastructure.

Many North Texas communities who have already experienced such surges in growth are now spending significant resources to replace deteriorating infrastructure, mitigate impacts on water and air quality, provide more green space, and create more pedestrian-focused places to meet the demands of a larger and more diverse population. To address these complex challenges, federal, state and regional planning agencies are asking cities and counties to incorporate more open space, green infrastructure and trail systems into the built environment. North Texas communities such as Plano, Richardson and Frisco have done this, and they are seeing results in terms of increased economic development activity, rising property values, and improved community health. However, making these changes after development has occurred is much more challenging and costly than if it had been planned ahead of time and implemented as part of the development and growth.

For Rockwall County to remain competitive in recruiting and retaining businesses and residents, it will be important to protect and enhance an attractive system of open spaces that contributes to the character of adjoining communities, complements city parks and facilities, and is connected by a robust network of on- and off- street trails to key destinations and activity centers throughout the county. As a small and relatively lightly developed county, Rockwall County has a unique opportunity to learn from the experience of communities to the west and work together with the cities, other organizations, land owners and developers to proactively plan and develop a county-wide open space network at a significant cost savings compared with developed communities. A forward-thinking and unified approach by the County and cities can maximize environmental, recreational and economic benefits and return on taxpayer dollars, while also preserving the character and quality of life residents and businesses have come to expect.





## Aerial Photograph



-  Rockwall County Boundary
-  Adjacent County Boundaries





Figure 1. Aerial Photograph  
(facing page)

For the County to remain competitive in recruiting and retaining businesses and residents, it will be important to retain and enhance an attractive system of open spaces.

## Why Invest in a Countywide Open Space Master Plan?

Previous surveys conducted by individual cities and the County indicate that residents desire more quality open space amenities and trails, but securing land and funding for these types of projects continues to be a challenge. To be politically viable, economically feasible, and functionally effective, the county's open spaces, trail network and green infrastructure systems need to be conceived and implemented to offer many benefits, so that it can be championed by a broad cross-section of citizens and interest groups. Too often planning and implementation fails to program for the full range of benefits possible from open space due to short-term return-on-investment pressure or piecemeal planning and design processes.

This OSMP will help address these interests and challenges, and provide the following benefits:

### Improved Functionality and Efficiency

Existing trail systems in the county are mostly local in nature and lack connections between the cities and key destinations throughout the county. Strategically planning the location, types and uses of the trail network throughout the county will result in increased usage and community activity, improved safety, new economic development opportunities and enhanced property values. In terms of water quality, stormwater management and habitat preservation, there are opportunities to achieve greater benefits and enhance surrounding land values by implementing coordinated green infrastructure strategies for each of the watersheds within the county and cities adopting stronger ordinances to control development in critical areas.

### Expanded Recreational and Educational Opportunities for Residents

Individually, the cities in Rockwall County generally lack the resources or land to provide the amount and diversity of public spaces and trail systems that other larger communities in the Metroplex are able to offer. Collectively, however, Rockwall County can provide an extremely competitive open space system that addresses the recreational and educational needs of its residents. Larger scale open space amenity areas can also serve as destinations not only for county residents, but for others outside the county. Regional destinations such as Arbor Hills Nature Preserve in Plano, The Heard Museum in McKinney, and Dogwood Canyon Audubon Center in Cedar Hill are examples of large open space amenity areas that provide tremendous economic, as well as environmental, benefits to their respective counties and individual communities.

## Shared Costs and Access to Additional Funding Sources

Land acquisition, construction and maintenance of larger open space and trail systems is more expensive and complex than local projects. Most cities cannot afford to do projects of this scale on their own, so identifying other groups to share costs is critical. Fortunately, there are a variety of funding programs for open space projects available via federal, state and regional organizations. Philanthropic organizations and local community activist groups are also a popular source of resources for implementation of open space projects. Many of these programs reward interagency cooperation and tend to invest in projects that benefit broader geographic areas and a breadth of issues including but not limited to recreation, environmental metrics, health and wellness, and mobility. A countywide plan that organizes and connects the efforts and interests of the multiple cities together can improve chances at securing grant funding, enhance and guide developer participation, and spread costs for mutually beneficial projects out across multiple entities.

## Overarching Vision and Coordination

Creating such open space systems will require countywide planning and coordination in order to understand community priorities, build support, acquire land and easements, and secure funding for implementation. A coordinated planning effort between state and federal agencies, NCTCOG, the county, cities and philanthropic organizations is a critical step to preserving the county's natural beauty and cultural and historic resources, while still embracing the growth that is coming.



Tate Farms  
Residential subdivision meets  
working farm.

This plan is not intended to replace existing city plans, but rather to serve as a strategic planning resource that supplements the cities' planning efforts. This plan provides an overarching vision and framework for open space planning that identifies opportunities to preserve critical natural resources and habitat, protect and enhance the existing hydrologic systems, expand and improve recreation opportunities, and open up new economic development opportunities. Each of the cities will have this plan as a resource to reference for future planning and development and investment decisions. It will assist in intra-city coordination and help position the county and cities for a variety of funding sources and partnerships focused on regional mobility, environmental and quality of life goals. Finally, this plan will be a valuable resource in communicating the future of the county to potential residents, developers and businesses considering a move to Rockwall County.

## Open Space Initiative Background and Prior Studies

This **Open Space Master Plan (OSMP)** builds on the findings from a series of studies and efforts previously commissioned by the County with the aim of understanding citizens' priorities and level of support for open space conservation within the county.

### Rockwall County Open Space Planning Position

On February 5, 2008, the Rockwall County Commissioners' Court adopted a policy position on open space stating the following: "The dynamics of Rockwall County's geography and its rapid population growth present a very small window of opportunity to act on the quality of its future. Therefore, our future is now."

Three open space planning/conservation visioning objectives were also identified at this time:

1. **To preserve quality stormwater corridors**
2. **To protect/establish corridors essential for open space connectivity countywide**
3. **To secure a major central park**

### 2008 Open Space Goals and Finance Assessment

Later in 2008 the Trust for Public Land (TPL), in cooperation with North Central Texas Council of Governments (NCTCOG), performed an "Open Space Goal and Finance Assessment" study to assess priorities, opportunities and funding strategies for open space and natural resource protection within the county.

Three direct recommendations resulted from the assessment process:

1. Enhance countywide open space planning efforts
2. Educate the public about the benefits of open space protection
3. Explore existing and new sources of funding to create additional parks and trails in Rockwall County

"The dynamics of Rockwall County's geography and its rapid population growth present a very small window of opportunity to act on the quality of its future. Therefore, our future is now."

*Rockwall County  
Commissioners Court*

## Rockwall County Open Space Alliance

A group of citizens passionate about these issues volunteered to form an Executive Committee, and the Commissioners Court formally created the Open Space Alliance in 2012. Since its establishment, the Alliance has created a website ([www.rockwallosa.org](http://www.rockwallosa.org)) and Facebook page, and conducted numerous education and outreach activities across the county.

## 2013 Current Conditions Report and Conservation Finance Feasibility Study

The County partnered with the Trust for Public Land again in 2013 to update relevant elements of the 2008 report, specifically the current conditions and conservation finance components. The 2013 study found that citizens continued to express a desire for, and interest in, protecting cultural and natural resources and expanding the system of parks and trails throughout the county, and that there was an even more pressing need for enhanced open space protection and implementation of green infrastructure to maintain a high quality of life and desirable community for future generations.

## Rockwall County Bike Master Plan

In 2013, Rockwall County released a Bicycle Master Plan that catalogued the various city trail plans, documented roadway conditions and made countywide bicycle planning and design recommendations. Additionally, the plan analyzed corridors identified by NCTCOG as potential segments of the Regional Veloweb (a network of off-street pedestrian/bicycle paths in North Texas) within the county.

Kayaking at the Harbor in Rockwall



## Open Space Master Plan

This Open Space Master Plan (OSMP) aims to address the three primary objectives adopted by the Rockwall County Commissioners Court in 2009:

1. **Preserve quality stormwater corridors, including creeks, channels, flood plains, tributaries and easements.** Water quality depends foremost on the health of these natural drainage and water management systems. Naturally functioning water corridors create rich ecosystems, which in turn maintain biodiversity and regulate water flow and quality. This plan evaluates each of the watersheds within the county and recommends green infrastructure strategies to preserve and enhance critical areas.
2. **Explore community interest in, and potential locations for, a major open space preserve/public amenity that could potentially be developed in the future.** A large nature preserve or public open space amenity would complement the neighborhood and community park systems in the surrounding cities and provide opportunities for recreational and educational activities that county residents currently leave the area to participate in. Many times, these facilities are branded as a regional destination, providing additional economic development and branding opportunities for surrounding communities. This plan does not recommend one single area, but instead identifies multiple open space opportunity areas that could potentially be developed into one or more regional open space amenities for county residents to enjoy.
3. **Protect and establish corridors essential for countywide open space connectivity for non-motorized mobility modes.** Community surveys highlight residents' safety concerns about on-street trails and a desire for a more robust network of multi-use greenway trails connecting residents to natural areas, parks, public spaces, schools, local businesses and each other. This plan explains different types and uses of trails and identifies the top priority corridors that present that best opportunities to address community interests.

In addressing these goals, this Plan emphasizes open space opportunities that are multifunctional and interconnected—enhancing quality of life in the county through a range of environmental, social, cultural, and economic benefits.

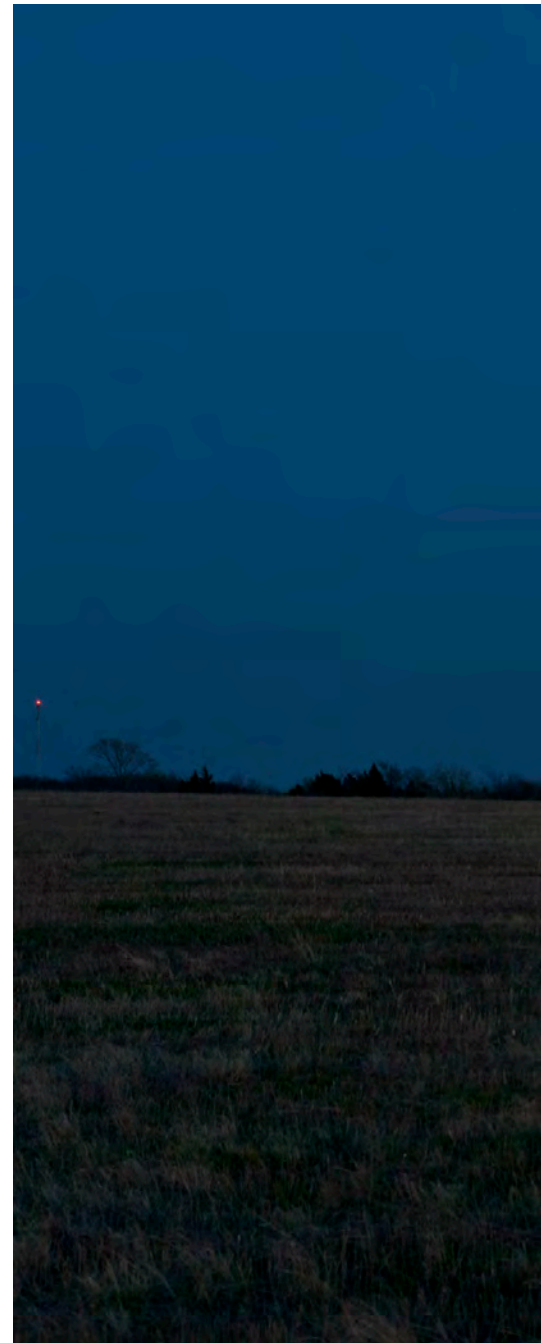


## Planning Process

The planning process consisted of four primary phases:

1. **Data Collection and Inventory:** Review previous county open space efforts and existing plans; collect and review available data; assess community needs and trends.
2. **Needs Assessment and Analysis:** Compare existing and planned activities with the available resources and assets, projected needs of the county's current and future residents, and industry best practices.
3. **Synthesis:** Refine and prioritize open space projects, trail corridors and green infrastructure implementation strategies that align community values and needs with available opportunity sites.
4. **Implementation Strategies:** Match priorities with conservation tools and funding sources, and recommend strategies for county, cities and other partners to work together to secure land and implement the necessary steps to achieve the community's vision and goals.

The plan builds on the community input and data presented in the 2008 and 2013 TPL studies, and supplements this information with input from a Steering Committee, the Alliance and a series of community surveys and workshops. Ideas about specific topics were collected through a series of themed focus group discussions, and meetings were held periodically with representatives from each of the cities to collect information on existing plans and processes and get feedback on proposed opportunities.





John King Boulevard, Rockwall  
Rare blue moon over empty field







## 2. Context of the Plan

### Government and Regulatory Environment

#### Relationship to Other Plans

This countywide **Open Space Master Plan** is intended to fill a void between individual city plans and those of regional organizations like North Central Texas Council of Governments (NCTCOG) and North Texas Municipal Water District (NTMWD). Regional plans such as Vision North Texas 2050 and Mobility 2035 discuss regional needs related to housing, jobs, mobility, water and the environment, but lack the specificity required to make decisions at the local level. Local municipal plans such as comprehensive plans or park master plans identify specific needs and implementation projects within individual cities, but many times miss opportunities to capture and create additional benefits that could be gained by planning at a level outside jurisdictional lines. This plan provides additional information that can be used by the individual cities to guide future land use, planning, design and investment decisions specifically related to open space, trails and green infrastructure so that local zoning and development marries up better with regional initiatives and funding sources.

#### Ordinances, Design Standards and Other Implementation Tools

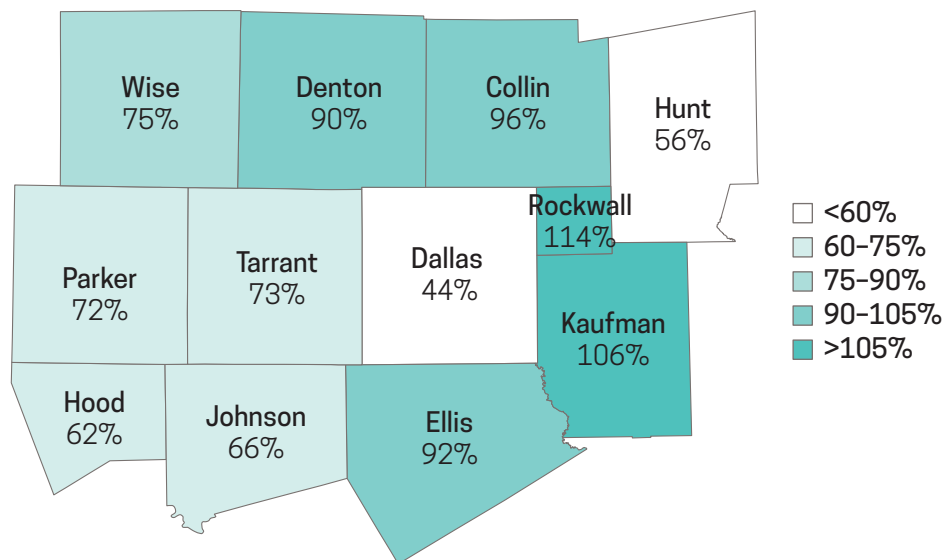
While comprehensive plans and other master plan-type documents provide the policies that articulate community values and goals, subdivision and development ordinances and accompanying design standards are the tools most commonly used to guide development and conserve resources. These may include specific ordinances and guidelines related to floodplain protection, stormwater management, tree preservation, park dedication and trail construction. The county and each of the cities utilize these tools with varying degrees of effectiveness to conserve habitat and floodplain areas, preserve land for future parks and secure developer contributions to help fund land acquisition and construction of park and trail systems in their communities. There is, however, room for improvement with respect to establishing higher standards for open space conservation and protecting water quality in creeks and streams. This can be accomplished first by coordinating stormwater management at a watershed scale, and, secondly, by adopting more detailed and stronger ordinances consistently through all of the cities so that no one city is more lenient than another. Examples of such ordinances and standards are included in the Appendix, and these should be considered and discussed amongst the cities as part of the implementation efforts following the release of this plan.

## Demographic Context, Regional Dynamics, and Projected Growth

The North Central Texas Council of Governments (NCTCOG) projects that the Dallas-Fort Worth Metroplex population will grow by more than 68% between 2010 and 2040. Located east of Dallas County, Rockwall County is the smallest county in Texas and has historically been a more rural area of the Metroplex. In recent years, Rockwall County has consistently been one of the fastest growing counties in the state, growing from a population of 43,080 in 2000 to 78,337 in 2010. Population in the county is projected to more than double by 2040 (Figure 2).

Rockwall County is projected to more than double its 2010 population by 2040.

Figure 2. Percent Change in Population, 2010–2040



Source: NCTCOG GLUM 2040 Population Forecast



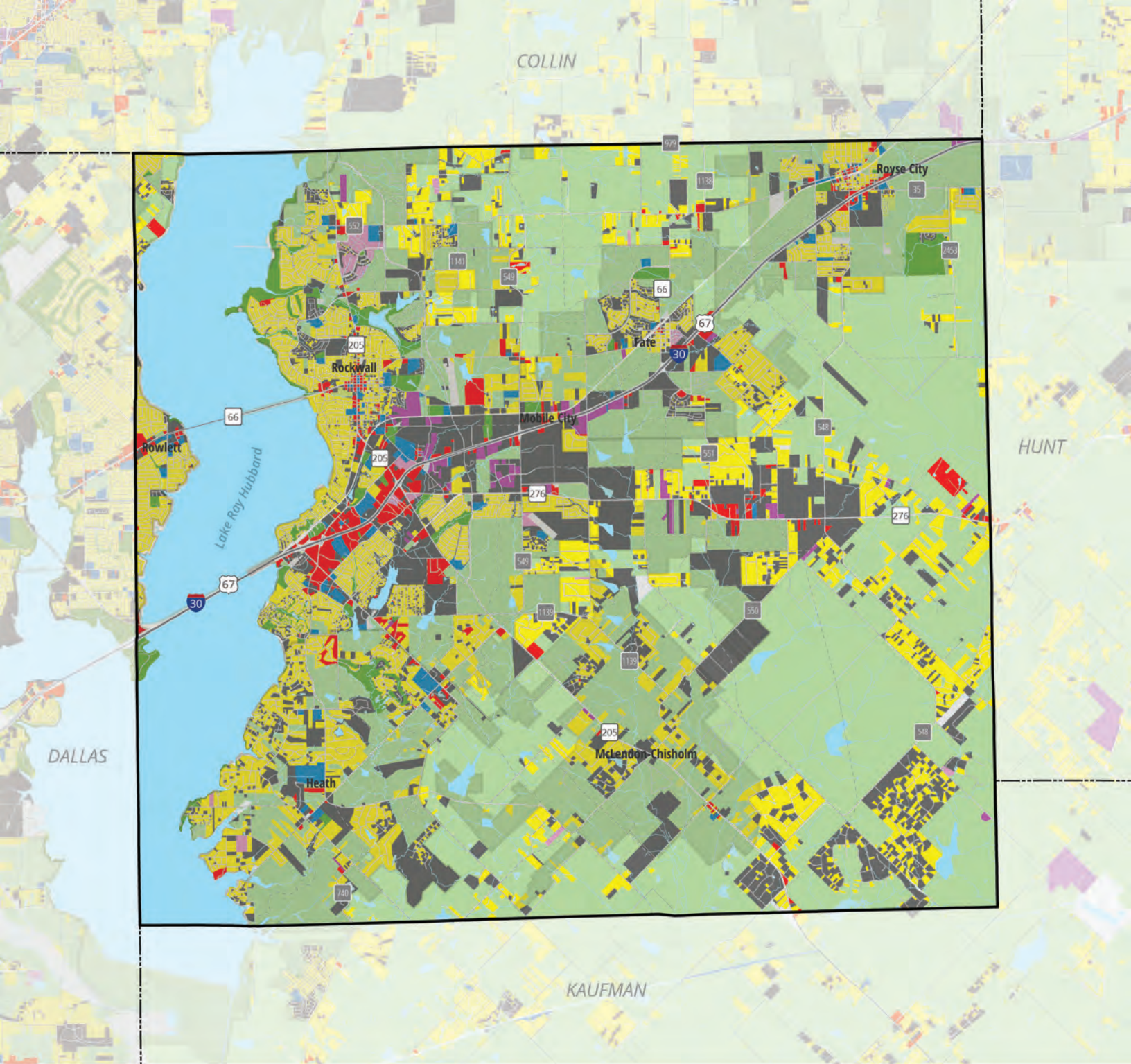
Residential Subdivisions Are Replacing Existing Farms and Open Space



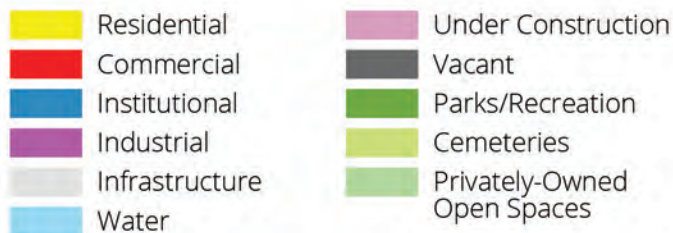
High Point Ranch Park Adjacent  
to an NRCS Lake

To better understand the way current and future population interacts with open space, a demographic analysis was performed to identify areas of the county with higher than average growth or concentrations of particular age, ethnicity and income groups. The majority of the population in the county is located in the western half of the county in Rockwall and Heath, but growth is now expanding to the east into Fate, Royse City and areas of McLendon-Chisholm. The area in the southeastern portion of the county is expected to be slowest to develop. The average age in the county is decreasing, primarily due to the number of young families moving into the area. Analysis maps showing areas of population growth, median household income, and percentage of families with children under 18 are included in Appendix B.





## Land Use



Sources: Rockwall County, TNIRIS





Figure 3. Land Use (facing page)

Privately-owned open space makes up 73% of the County's land area, while permanently protected public open space accounts for 2%.

## Existing Land Use

Rockwall County spans about 149 square miles, or 95,200 acres. About 15 percent of the county is surface water, including Lake Ray Hubbard, creeks, streams, conservation lakes, and other water bodies. Nearly all of the remaining land area is split between privately-owned open space (73 percent of land area) and residential land (20 percent of land area). Privately-owned open space includes ranch land, farmland and other undeveloped residential land. It is a mixture of grassland, pasture and cultivated crops. Of the residential land, 86 percent contains single-family houses. Permanently protected public open space accounts for about two percent of Rockwall County's land area.

## Natural Habitats and Wildlife

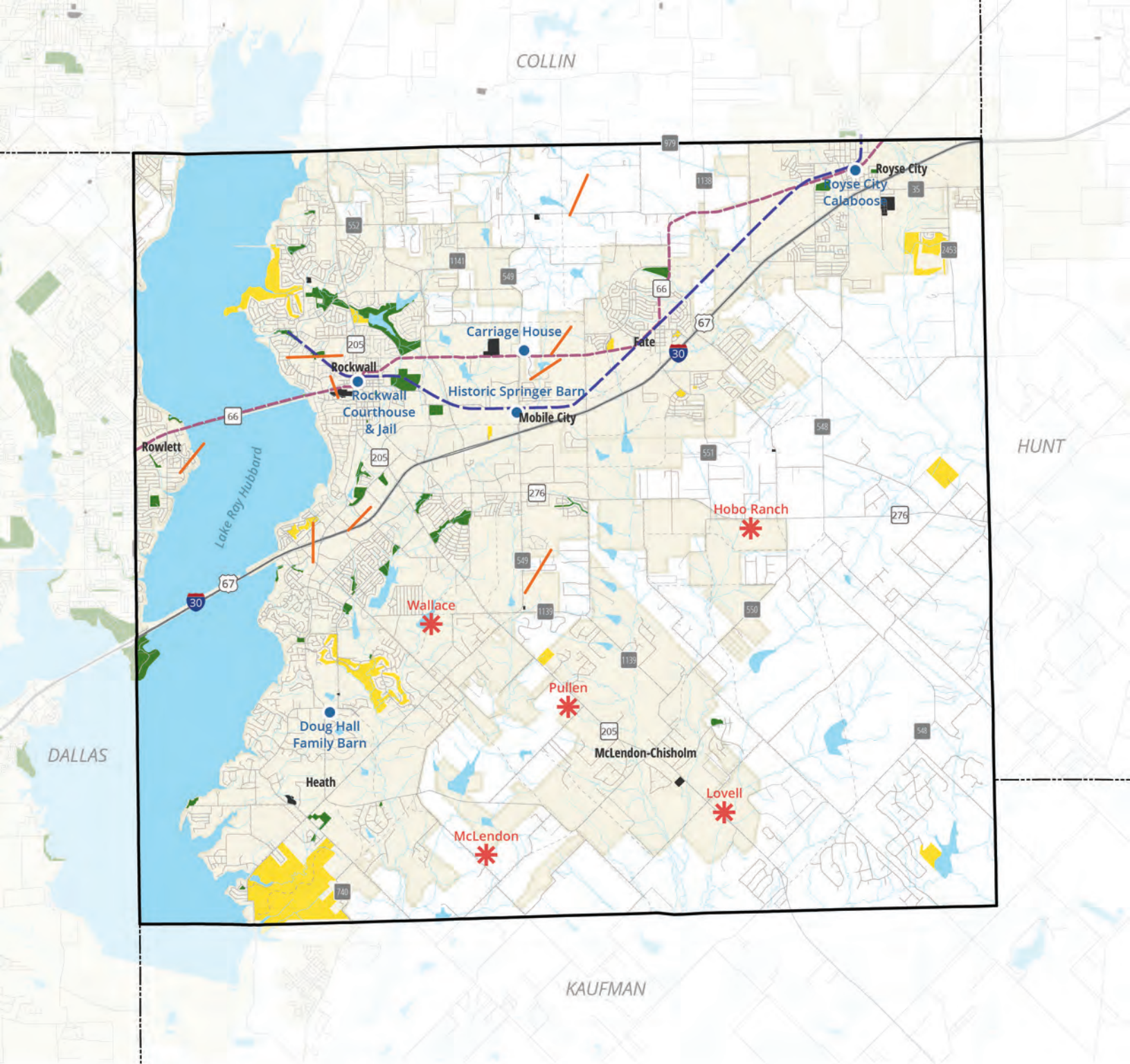
Much of the county is open grassland, containing some native grass meadows, but most pasturelands are covered with bermuda grass, clover, or Johnsongrass. Along streams and in lower lying areas, a mix of hard and softwood trees can be found—including oak, elm, Osage-orange, mesquite and pecan.

A number of federally-listed threatened and endangered species are found in the area, including the piping plover and the whooping crane. The peregrine falcon, American peregrine falcon, and bald eagle are all proposed for federal delisting as their numbers have rebounded in recent years.

In addition, State-listed threatened and endangered species with habitat areas in Rockwall County include the Texas horned lizard, alligator snapping turtle, timber/cranebrake rattlesnake, white-faced ibis, and wood stork. North Central Texas is also a key region for the migration of the Monarch butterfly. The Monarch's survival depends heavily on the availability of milkweed. One option for protecting the Monarch butterfly and other travelling pollinators is to add useful vegetation to utility corridors, creating miles of continuous, useful habitat.

## Physical Character

Rockwall County has the opportunity to take advantage of the ecological and economic services provided by the large network of green infrastructure systems that exists in the county. There are eight distinct watersheds located in the county, and each offers unique opportunities to protect, preserve and enhance the natural systems that provide significant services that are key to the community's vitality and wellbeing. Rockwall County has more than 27 square miles of floodplain and over 275 miles of stream corridor distributed throughout the county. The county also has more than twenty Natural Resources Conservation Service (NRCS) ponds, Lake Ray Hubbard and wetland areas distributed throughout. These aquatic features of the system, along with the land features that lie in the upland areas outside of the floodplain, are described in further detail in Chapter 4: Stormwater Management and Green Infrastructure.



## Historic and Cultural Sites

- Rock Wall Outcrops (approximate)
- ✱ Historic Farmsteads
- Historic Structures
- Historic Bankhead Highway
- Interurban Rail Route
- Cemeteries

Sources: Rockwall County, TNRI, Rockwall County Historical Foundation



Figure 4. Historic and Cultural Sites (facing page)

## Historic and Cultural Resources

The area now known as Rockwall County has a long history of habitation before the arrival of Anglo-Americans. By the early 1800s, it was occupied by a number of Caddo Indian tribes. Cherokees, Creeks, and others began to arrive in the 1820s and 1830s, driven from their territories in Louisiana, and clashed with the peaceful Caddo tribes. White immigrants arrived to the area from the United States around 1840, during the brief period of Texas' independence, finding the tribes at war. They built on the trend of Anglo-Americans moving west to begin new settlements.

### The Rock Wall

The smallest county in Texas was established in 1873 after residents of northern Kaufman County insisted the location of the county seat was inconvenient. In the 1850s, farmers digging a well discovered a mostly subterranean wall crossing the county. Folk histories spread about prehistoric natives, but scientific analyses have generally concluded the wall is a natural geological formation. The wall became the namesake for the new county.

### Bankhead Highway

In the mid-1840s, the Central National Road of Texas was surveyed and constructed, running from the Dallas area to the Red River, through present-day Rockwall County. It was a significant undertaking for its time; as population centers shifted over time, however, the route lost importance. Early in the following century, the Bankhead Highway—which stretched from San Diego to Washington, D.C.—was constructed, passing through Rockwall County. It was one of the nation's earliest transcontinental highways.

### Interurban Railroad

The Eastern Texas Traction Company proposed an electric interurban railway in 1911 that would connect Garland to Greenville via the communities of Rowlett, Rockwall, Fate, Royse City, Josephine and Caddo Mills. Construction was started in the winter of 1912, and grading and bridges were complete by summer of 1913. In the summer of 1914, work was put on hold due to the First World War, and in 1917 the effort was abandoned and assets were sold to Greenville businessman S.B. Brooks. Mr. Brooks declared bankruptcy in 1919 and died soon after. Dallas County acquired the right-of-way in Dallas County, and the remainder was returned to previous owners. Portions of the rail were eventually completed and are still active today, while other parts of the abandoned rail bed are still visible.

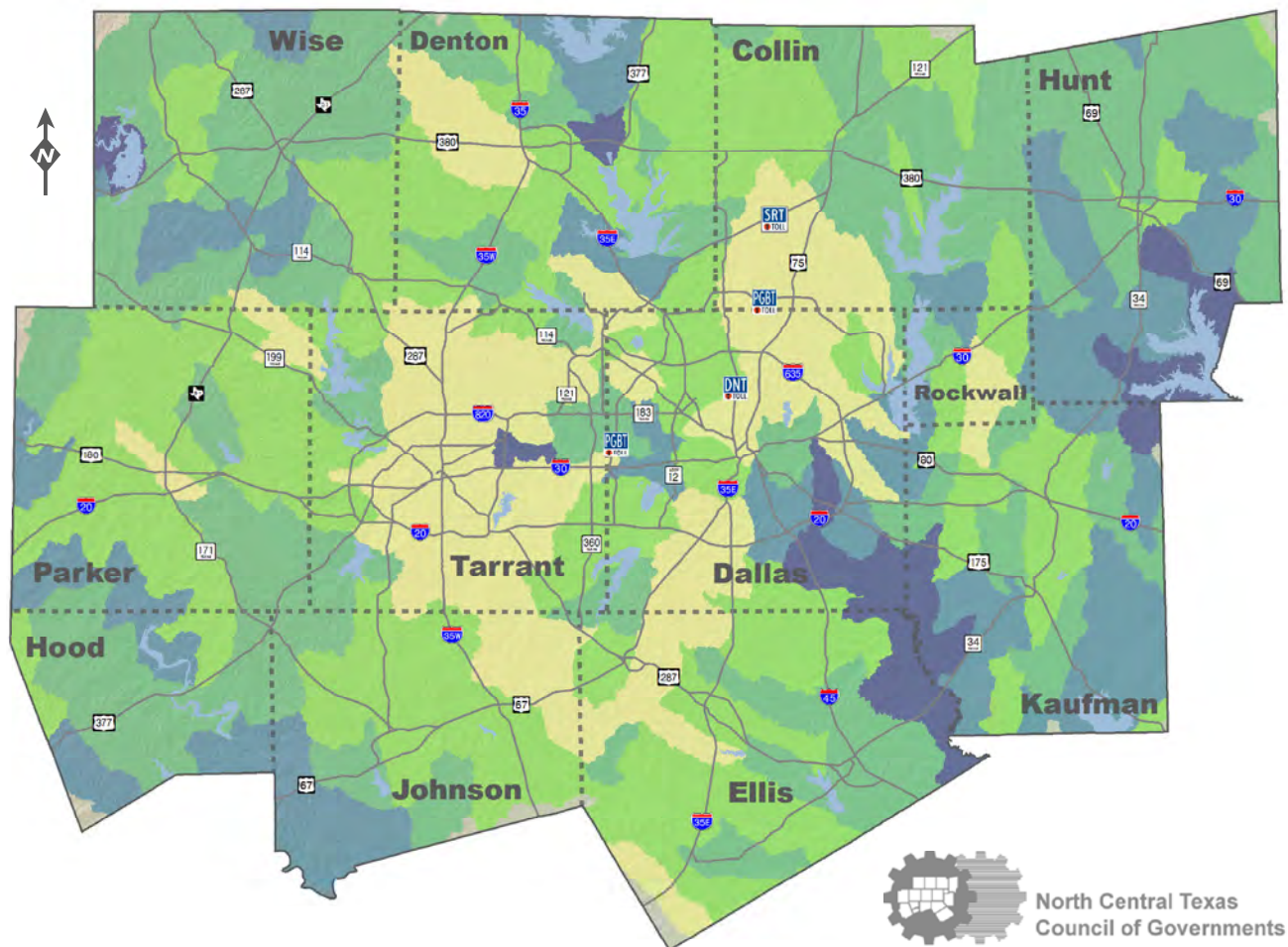
### Historic Farmsteads

From its beginnings Rockwall County was dominated by agriculture. In 1900, the county boasted more than 1,000 farms. The number of individual farms has greatly diminished as population has grown, but a few historic farmsteads remain.



Rockwall County Historical Foundation Marker at Wallace Farmstead



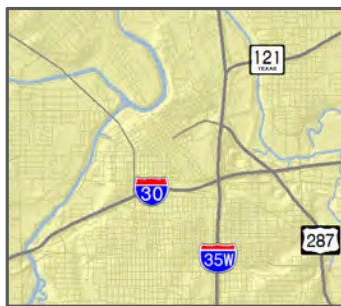


## Regional Ecosystem Framework

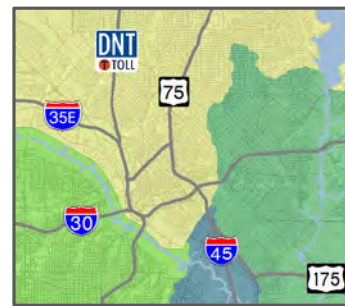
### VEIL Composite Score

12 to 18	Some Resources of Concern
19 to 22	
23 to 26	
27 to 31	Greater Resources of Concern
32 to 40	

Fort Worth CBD



Dallas CBD



The Regional Ecosystem Framework: VEIL Composite score represents the combined score of all 10 VEIL layers. A higher score indicates that resources of relatively high concern may be present and that additional review, documentation, and consultation with the applicable agency may be needed. The VEIL layers include: Green Infrastructure (Wildlife Habitat, Natural Areas, Agricultural Land); Water Quality and Flooding (Impaired Water Segments, Flood Zones, Surface Water Quantity, and Wetlands); and Ecosystem Value (Rarity, Diversity, and Ecosystem Sustainability). Data sources include the Texas GRID and EPA Region 6 Regional Ecosystem Assessment Protocol data. This information has been developed for the Dallas-Fort Worth MPA for use in long-range planning. These scores are meant to be used as a preliminary screening tool for potential impact identification. For more information on the calculations for this layer, please visit [www.nctcog.org/REF](http://www.nctcog.org/REF).



Figure 5. Regional Ecosystem Framework (facing page)

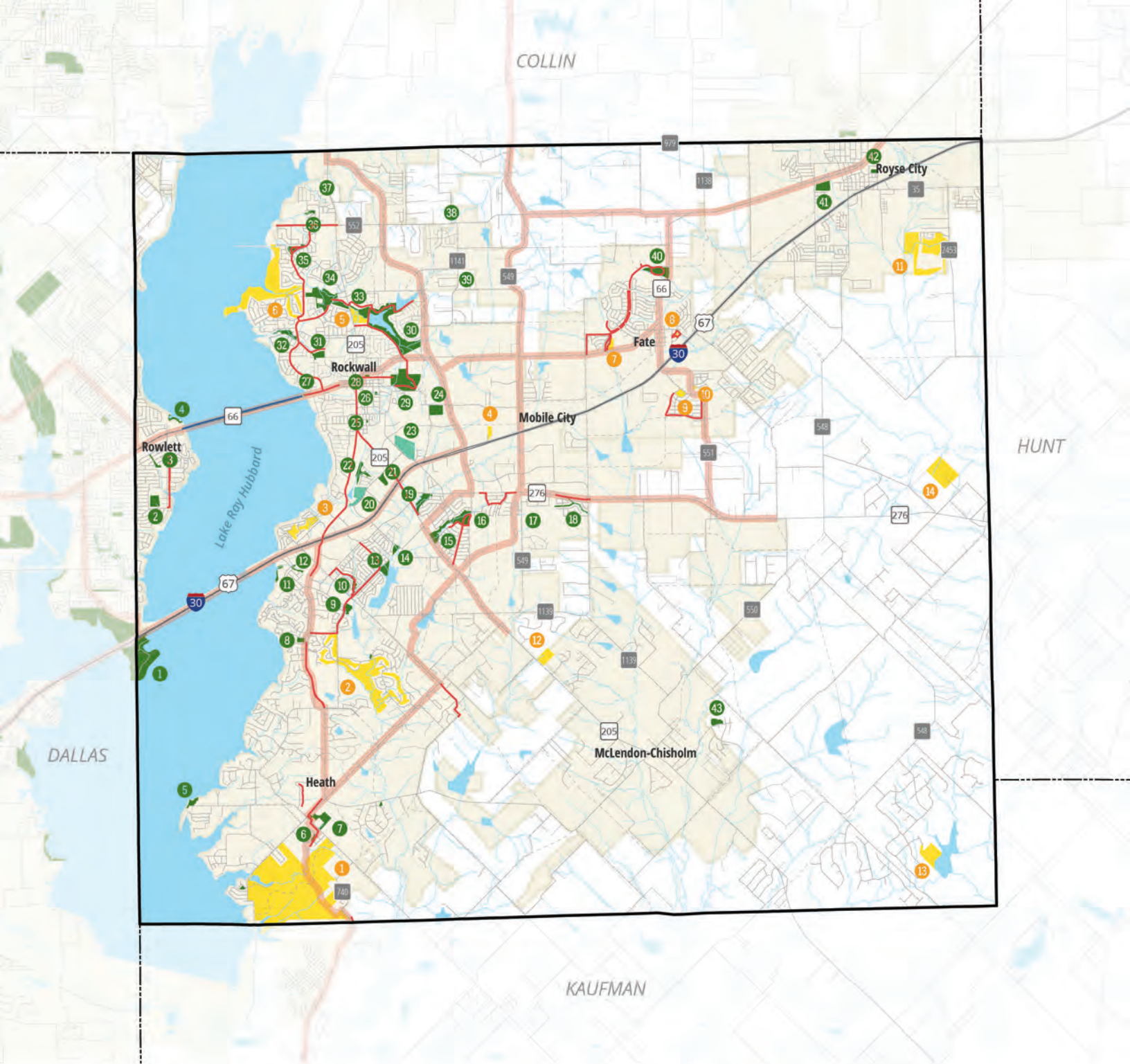
## Climate

In Rockwall County, as in the rest of North Texas, the climate is subtropical with hot summers, frequent and severe storms in the spring (though widely varying annual precipitation), and mostly mild winters. Periods of drought are becoming more prevalent in recent years.

## NCTCOG's Regional Ecosystem Framework

NCTCOG is continuing to develop the Regional Ecosystem Framework (REF) for the North Texas region (Figure 5). The REF is a GIS based tool that can be used to inform planning and development of infrastructure projects. It consists of ten Vital Ecosystem Information Layers (VEIL) focused on three central ecological parameters: Green Infrastructure, Water Considerations and Ecosystem Value. The system is built to assist watershed based planning approaches with a focus on conservation and ecosystem based priorities. The Open Space Plan for Rockwall County refers to the REF to help identify priority conservation areas and to establish their potential to provide valuable ecosystem services. The ten VEIL layers provided in the REF include:

1. Wildlife Habitat: Score represents quantity of wildlife habitat based on levels of forest lands, shrublands, grasslands, wetlands and open water located in the subwatershed
2. Natural Areas: Score represents the quantity of floodplains, major public parks and open spaces, shores along major lakes and potential connections between these natural assets.
3. Agricultural Lands: Score represents subwatershed's quantity of agricultural lands classified as 2001 NLCD agricultural land
4. Impaired Water Segments: Score represents quantity of impaired water segments based on Clean Water Act 303 (d) criteria.
5. Flood Zones: Score represents subwatershed's area located within 100-year and 500-year floodplain
6. Surface Water Quantity: Score represents quantity of surface water bodies located in the subwatershed including streams, rivers and lakes
7. Wetlands: Score represents quantity of woody wetlands and emergent herbaceous wetlands located in the watershed
8. Rarity: Score represents level of rare vegetation, natural heritage ranking, taxonomic richness and rare species found in the subwatershed.
9. Diversity: Score represents watershed's level of ecological diversity
10. Sustainability: Score represents an aggregate of multiple environmental stressors identified in the subwatershed. Areas with higher levels of development typically have lower sustainability scores



## Existing Open Space and Trails

Veloweb

Existing Off-Street Trail

Existing On-Street Trail

Existing Public Parks

Existing Private Parks

### City of Rowlett

- 1 Elgin B. Robertson
- 2 Shorewood Park
- 3 Highland Meadows Greenbelt
- 4 Scenic Point Park

### City of Heath

- 5 Terry Park
- 6 Towne Center Park
- 7 Heath Town Center Park
- 1 Heath Golf & Yacht Club
- 2 Buffalo Creek Golf Club

### City of Rockwall

- 8 Henry M. Chandler Park
- 9 Fox Chase Park
- 10 Windmill Ridge Park
- 11 The Harbor Park
- 12 Lago Vista
- 13 Lynden Park
- 14 Highland Meadows Greenbelt
- 15 Meadowcreek Park - Foxwood
- 16 Hickory Ridge Park
- 17 Fontana
- 18 Timbercreek Greenbelt
- 19 Meadowcreek Park - Madison
- 20 Spring Sports Complex
- 21 Yellowjacket Park
- 22 Waterstone Greenbelt
- 23 Aquatics Center/Stadium
- 24 Leon Tuttle Athletic Complex
- 25 Gloria Williams Park
- 26 Clark Street Park
- 27 SH 66 Boat Ramp
- 28 Lofland Park
- 29 Harry Myers Park
- 30 Raymond Cameron Lake
- 31 Northshore Park
- 32 Emerald Bay Park
- 33 Lakeview Summit
- 34 Dorba Trail

### City of Fate

- 35 Shores Park
- 36 Jewel Park
- 37 Lakeside Park
- 38 Dalton Ranch
- 39 North Country Lane
- 40 Lakeside Village Golf Course
- 4 A-1 Golf Center
- 5 Rockwall County YMCA
- 6 Rockwall Golf & Athletic Club

### City of Fate

- 40 Smith Family Park
- 7 Woodcreek Amenity
- 8 Woodcreek HOA

### Royse City

- 9 Chamberlain Crossing
- 10 Williamsburg
- 41 Walter Hawk Park
- 42 Fox Field Park
- 11 Stone River Golf Club

### City of McLendon-Chisholm

- 43 Sonoma Verde Park
- 12 Oasis Beach & Tennis Club

### Unincorporated Rockwall County

- 13 High Point Ranch Park
- 14 Sabine Creek Ranch

Sources: Rockwall County, TNRI, Rockwall County Historical Foundation

1 mile



Figure 6. Existing Parks and Trails (facing page)

## Existing Open Space and Trail Networks

Each of the communities within the county have developed, to varying degrees, park and trail master plans and open space preservation strategies to meet the needs and desires of their citizens (Figure 6). Larger cities like Rockwall and Rowlett have done an excellent job of providing quality neighborhood parks and outdoor programming for residents. Smaller communities, like Royse City and Fate, are in the early stages of growth and are still developing their local park systems. The more rural communities of Heath and McLendon-Chisholm complete the diverse mix within the county. The predominance of larger lot developments and a more rural environment for residents has resulted in less demand for neighborhood parks.

At the time this plan was published:

- Fate was in the final stages of updating their comprehensive plan, which included an update to the Park and Trail Plan. Recommendations from the September 2015 draft were incorporated into this document.
- McLendon-Chisholm was also updating their comprehensive plan during the time this plan was developed. A draft of the updated information was not made available prior to publishing this document, so recommendations were made based on the most recent approved version of McLendon-Chisholm's plans.
- Heath and Royse City were both just starting updates to their comprehensive plans at the time this plan was published. Initial discussions were held with staff and leadership from both cities to encourage them to incorporate information and recommendations from this Plan into updates to their plans and policies.
- Rockwall's Comprehensive Plan was last updated in 2012. The City was getting started with updating its Parks & Recreation Master Plan. City staff indicated they would consider recommendations in this plan, but they reserved the right to modify those and make their own recommendations as required to meet the interests and needs of Rockwall's citizens and land owners.
- Rowlett's last Park Master Plan update was done in 2011, and an update to the plan is scheduled to be done in the near future. Conversations with staff indicated the city would consider information in this plan in future updates to their plans, as well as ordinance and policies related to green infrastructure and stormwater management.

Harry Myers Park, Rockwall



Existing open spaces that can be considered “community” or “regional” in nature are limited to The Harbor, Harry Myers and Squabble Creek, all in Rockwall. All three of these are often overcrowded, demonstrating the need for more similar sized open spaces to serve the increasing number of county residents. There are also some privately-owned open space areas that serve public functions. In particular, Sabine Creek Ranch regularly hosts retreats, camps and banquets.

Trail systems are mostly limited to loop systems in local neighborhood parks, wide sidewalks and a few off-street facilities. Community surveys and analysis showed strong interest in, and a need for, more large open space amenities with a variety of types and uses throughout the county. There is a similar need and interest in having a network of off-street trails that connects the cities and open space areas together in a manner that provides opportunities for cyclists, runners, equestrians and other users.

Maps of each of the cities' plans at the time this document was published are included in Appendix A for reference.

## NCTCOG Regional Veloweb & On-Street Bicycle Network

### Regional Veloweb

The Regional Veloweb is an extensive network of existing and planned shared-use trails coordinated by NCTCOG and North Texas communities (Figure 6). The aim of the Veloweb is to create a safe, efficient and interconnected system of off-street trails that serves both residents at both the local and regional scale—an “interstate for bicyclists and pedestrians.” This network is separate from, but complementary to, an on-street bicycle network. Each county and city is expected to form its own plans for a pedestrian bicycle networks; the role of NCTCOG in creating the Veloweb and cataloging the on-street bike network is to promote coordination across local governments on these planning efforts. Corridors that qualify for inclusion as “planned” segments of the Veloweb may also be prioritized for future funding.

### The On-Street Bicycle Network

In addition to the off-street Veloweb, NCTCOG includes an inventory of the region's on-street bicycle facilities in its Regional Veloweb map. Rockwall County's most recent thoroughfare plan, in an effort to make streets and roads more bicycle-friendly, requires all new TxDOT roads will to include either a wide (14-foot) outside lane or a separated bike lane. Streets and roads with these added accommodations—whether newly constructed or retrofitted—will be included in NCTCOG's maps of the regional bicycle network, alongside the Veloweb. On-street bike facilities are not considered part of the Veloweb, however, as that designation is reserved for off-street paths. (On-street bicycle facilities are an important piece of an inclusive transportation network, but they fill a different need and serve a narrower portion of users than do off-street paths. Their presence in the county should complement and connect to off-street bike/pedestrian trails.) Creating links between the off-street Veloweb and the on-street network is highly encouraged, since it makes each network more useful.



## Planned Trails

The number of existing trails in Rockwall County remains low, as does the degree of connectivity between them. Most of the cities have identified future trail routes in planning documents, but there has been little collaboration between the cities regarding trail connections or design standards. During the planning process for the 2013 Rockwall County Bicycle Master Plan—which, among other things, examined corridors identified by NCTCOG as potential Veloweb connections—NCTCOG noted that the existing facilities along these corridors do not meet AASHTO standards for off-street shared-use trails. It also noted that, due to various constraints, it may not be feasible to upgrade these facilities for use as regional off-street trail network. Instead, many of the roads identified in for Veloweb facilities will likely feature on-street bicycle facilities (which do not serve the same broad user group as off-street shared-use trails). If this proves to be the case, alternative routes need to be identified and included in the Regional Veloweb plan.

Squabble Creek Trail, Rockwall









### 3. Citizen and Stakeholder Priorities and Aspirations

#### Steering Committee

A steering committee was formed at the beginning of the planning process to provide information and feedback to the planning team. Members of the Commissioners Court and each city were asked to nominate a citizen from their precinct or city to serve on the committee. The Open Space Alliance Executive Committee members then identified additional citizens from across the county to round out the ages, interests and experience of the Steering Committee. Meetings were held with the Steering Committee periodically throughout the process to collect and review information, present ideas, and get feedback on potential opportunities and recommendations. The full list of Steering Committee members is included on the Acknowledgements page of this plan.

#### Focus Group and Stakeholder Interviews

Group interviews and email surveys were conducted to get input from sub-groups with interest and knowledge about specific topics related to the open space planning effort. These included a youth group with students from Rockwall and Royse City ISD; wildlife and nature advocates; equestrian, cycling and running groups; leadership from both school districts and Texas A&M-Commerce; city leadership; representatives from federal, state and regional agencies; and the community's economic development and Chambers of Commerce. Some of the key feedback received from these discussions included:

- The Youth Group focused on how overcrowded existing outdoor facilities were and expressed an interest in more recreational facilities like hiking and mountain biking, rock climbing walls, fishing and off-road vehicles.
- Nature enthusiasts expressed concerns about the rapid development and associated reduction in natural areas and habitat. They would like to see more areas preserved and have more public accessible areas for nature walks and wildlife observation.
- Equestrian related activities are popular in the southern part of the county. There are several facilities that board horses and conduct training and riding activities, along with a number of private ranches and properties that own horses. Equestrians currently ride primarily on private property or quiet, less traveled county roads in the southern part of the county. Participants

expressed an interest in having more publicly accessible equestrian trails in areas amenable for riding.

- Cycling and running groups focused on their concern about safety when riding/running in existing roadways, and expressed an interest in a connected network of off-street bicycle/pedestrian shared use paths similar to those around White Rock, Katy Trail and the Plano/Richardson area.
- The education group got excited about the concept of incorporating more outdoor education into their programs. There was significant interest in a nature preserve/education center similar to The Heard Museum in McKinney.
- Representatives from economic development corporations (EDCs) in the area highlighted the importance of quality parks and trails to recruiting businesses. Jim Grabenhorst from Rowlett's EDC specifically mentioned a recent example where they lost a business to Richardson because the company's CEO said Richardson had a more robust trail system for his employees to use for commuting and recreational purposes.
- The municipality leadership group emphasized that the cities are ultimately responsible for planning and implementation within their limits, and expressed concerns about property rights and funding. There was a general willingness to work together and interest in pursuing potential funding sources.
- NCTCOG hosted a meeting at their offices in Arlington and invited representatives from various federal and state agencies tasked with overseeing various aspects of floodplain and stormwater management, parks and wildlife, regional mobility, water (supply and quality), and recreation. The primary takeaway from this discussion was that many of the agencies emphasized the importance of integrated planning for open space and stormwater, and they were excited about the County's proactive vision for open space planning. Information on various funding sources was provided, and a follow-up meeting with this same group to discuss implementation priorities is highly recommended once the plan is finalized.

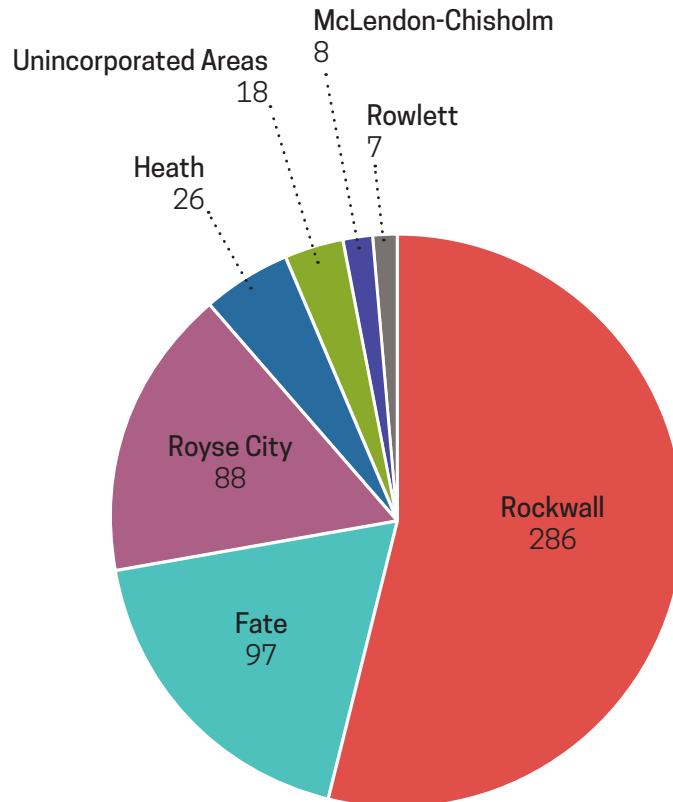
## Online Survey Results

An online survey was conducted to gather input from citizens and stakeholders across Rockwall County regarding the current state and desired future of open space across the county. The survey was offered online starting in early March 2015 and ending early April 2015 with a total of 573 respondents.



It was important that responses were obtained from all cities located within the county so that results were not too far skewed to one or two communities within the county. In relation to respective city populations, the response rate per city was mostly consistent, with the highest response rate being from the City of Fate. Just over half of the responses came from Rockwall residents.

Figure 7. Number of Online Survey Respondents by Geographic Location



The survey results were presented to the Steering Committee on April 13, 2015 for feedback. There was lengthy discussion over several of the survey question results, but the general consensus of the Steering Committee was the need to provide more publicly accessible open space, while maintaining the rural character of the county as much as possible. In order to achieve this, the Steering Committee agreed that public education would be key to the success of the county's open space preservation efforts and ability to secure funding for implementation. The committee also confirmed the importance of getting each community and city behind the plan for successful implementation.

The survey consisted of twenty-one questions. The results of the survey have been synthesized below.

## Importance of Open Space

Over 95 percent of stakeholders surveyed believe it is important to have quality open space in order to maintain a healthy and active lifestyle, and that this open space is important to the overall quality of life in Rockwall County.

Over 95 percent of stakeholders surveyed believe open space is important to maintain a healthy and active lifestyle and to the overall quality of life in Rockwall County.

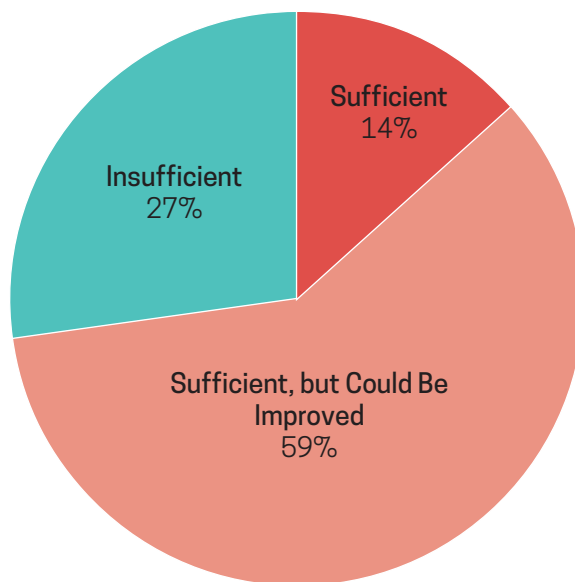
## Condition of Existing Open/Recreation Space

Knowing that the vast majority of respondents hold quality open space in high regard, it was important to gauge how they perceived the quality of open space currently available in the county. The results show that, while about half of the respondents believe that the county's open space amenities (including parks, trails and other public open spaces) are excellent or good, there is room for improvement.

## Public Access to Existing Open/Recreation Space

When asked how available existing open and recreation space was in the county, the results show that, while a significant portion of respondents believe it is sufficient, the majority believe that it could be improved.

Figure 8. Public Access to Existing Open/Recreation Space

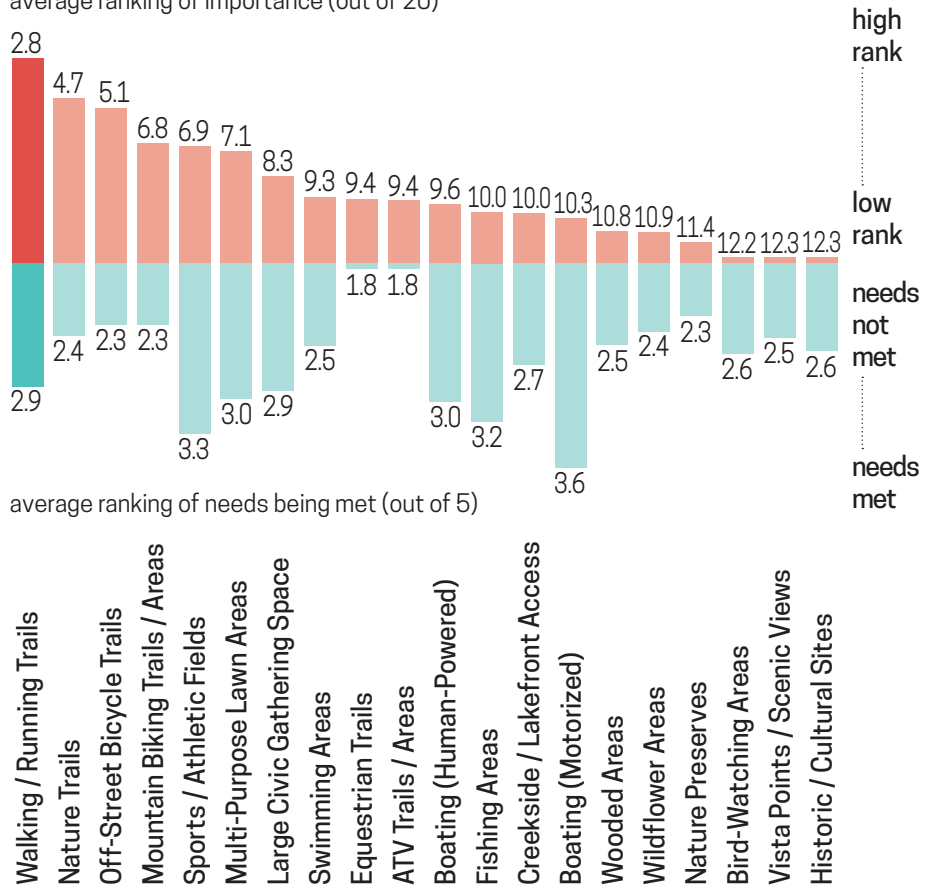


## Most Important Uses of Open Space in Rockwall County

Respondents were asked to rank the importance of twenty open space uses to their household. Almost half of the respondents ranked walking and running trails as the most important open space use to their household. Over eighty percent of the respondents ranked walking and running trails in their top five. When compared to all other open space uses, walking and running trails were by far the most desired uses.

Figure 9. Most Important Uses of Open Space and Open Space Needs Currently Being Met in Rockwall County

average ranking of importance (out of 20)



“Our neighborhood parks are wonderful, but we need more larger parks like Harry Myers. Harry Myers is always crowded.”

—online survey respondent

When this data was presented to the Steering Committee, it was pointed out that the county is experiencing a demographic trend where young professionals are moving out of the more urban areas in the Metroplex into Rockwall County when they are ready to start a family. These young professionals are seeking affordable housing and better schools, but still want the amenities that they have become accustomed to in more urban areas. This trend is expected to continue into the future.

### Open Space Needs Currently Being Met in Rockwall County

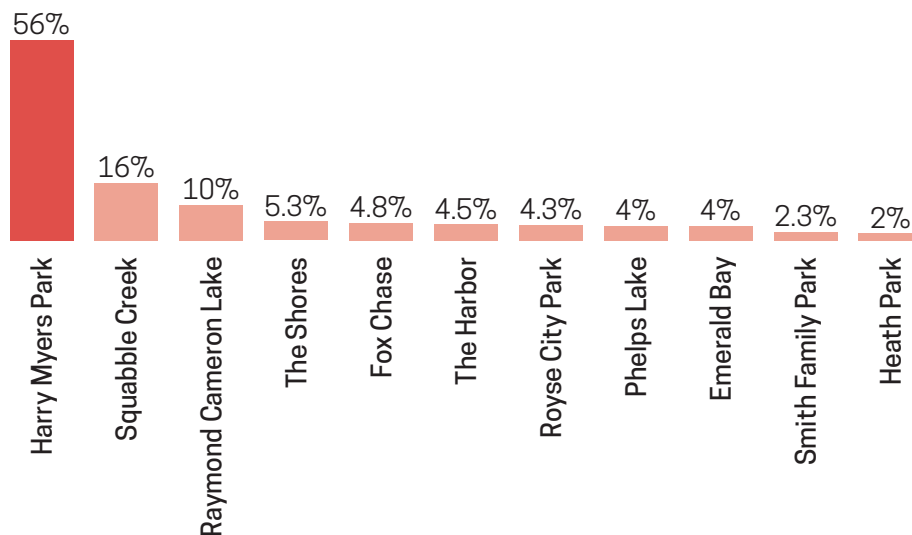
Respondents were asked to score the same twenty open space uses on how well current needs for those uses were being met. The score for walking and running trails indicates that respondents believed that the need for this use was only marginally addressed. Further, the next two most important uses (nature trails and off-street bicycle trails) were scored poorly.



## Frequently Visited Open Space in Rockwall County

With over three times the number of votes as the next most frequently visited open space in Rockwall County, Harry Myers Park was the overwhelming favorite. The hiking and mountain bike trails at Squabble Creek were also popular, followed by local neighborhood parks. A significant number of respondents commented that they were unsure where the existing parks and trails throughout the county were located.

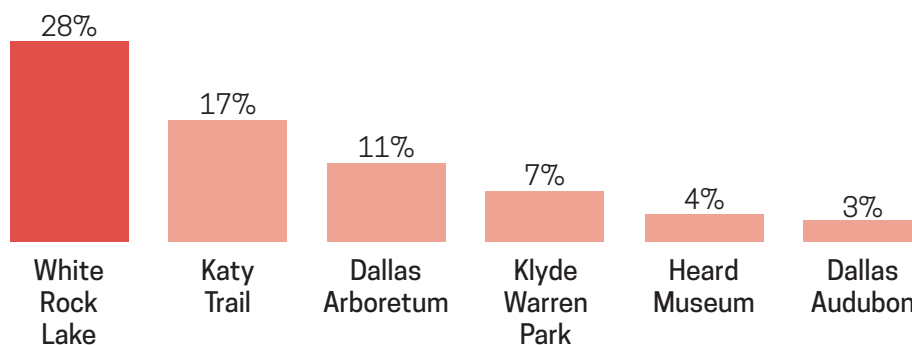
Figure 11. Frequently Visited Open Space in Rockwall County  
percentage of respondents



## Frequently Visited Open Space Outside of Rockwall County

In an effort to better understand the types of open spaces desired in Rockwall County, it was important to understand the types of places that respondents were willing to travel further distances to get access to. Given the fact that the majority of respondents previously indicated that walking/running trails were very important to their household, it is not surprising that a majority of respondents traveled to White Rock Lake and the Katy Trail.

Figure 12. Frequently Visited Open Spaces Outside of Rockwall County  
percentage of respondents

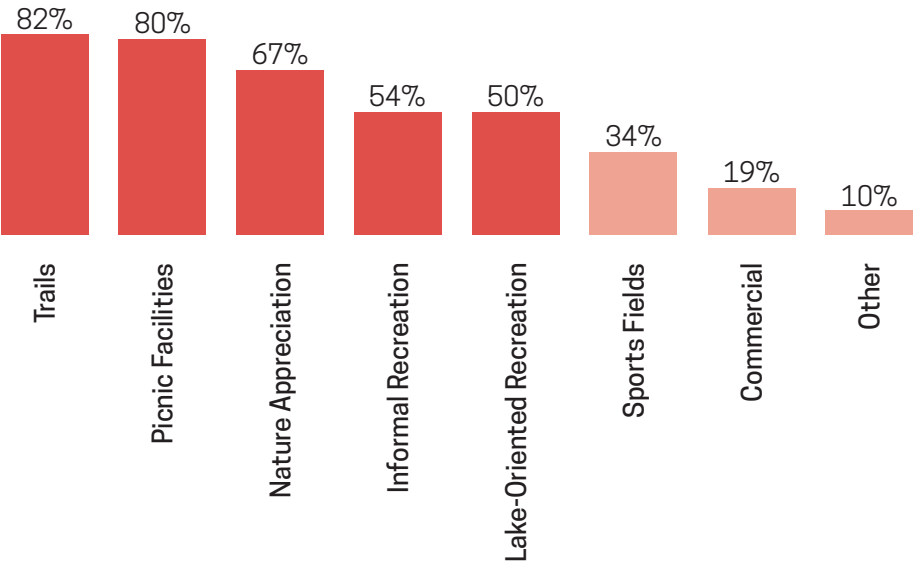


Given the fact that the majority of respondents indicated that walking/running trails were very important, it is not surprising that a majority of respondents travel to White Rock Lake and the Katy Trail.

### Preferred Activities for a Centralized Open Space in Rockwall County

When asked what activities citizens would like for a centralized open space amenity to provide, trails and picnic facilities were top choices, followed by opportunities to explore nature for recreation or educational purposes.

Figure 13. Preferred Activities for a Centralized Open Space in Rockwall County  
percentage of respondents

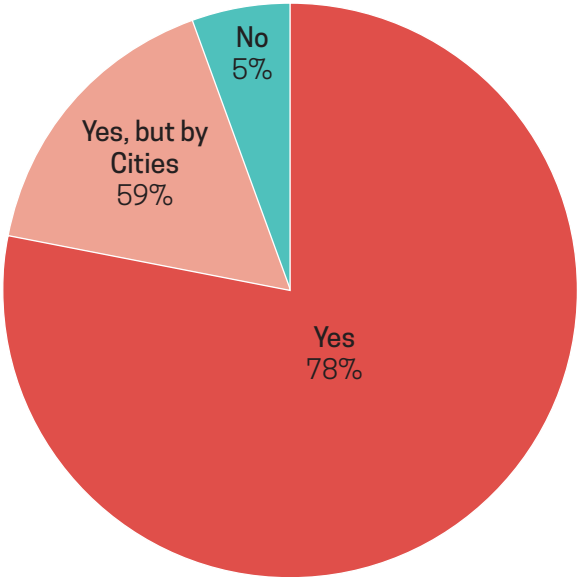


Nearly all (95%) respondents indicated that it would be beneficial for Rockwall County to have a connected trail network linking key locations across the county.

### Would Rockwall County Benefit from a Countywide Trail System

Approximately 95 percent of respondents indicated that it would be beneficial for Rockwall County to have a connected trail network linking key locations across the county. Out of this 95 percent, approximately 16 percent indicated that they thought these trails should be the responsibility of the individual cities.

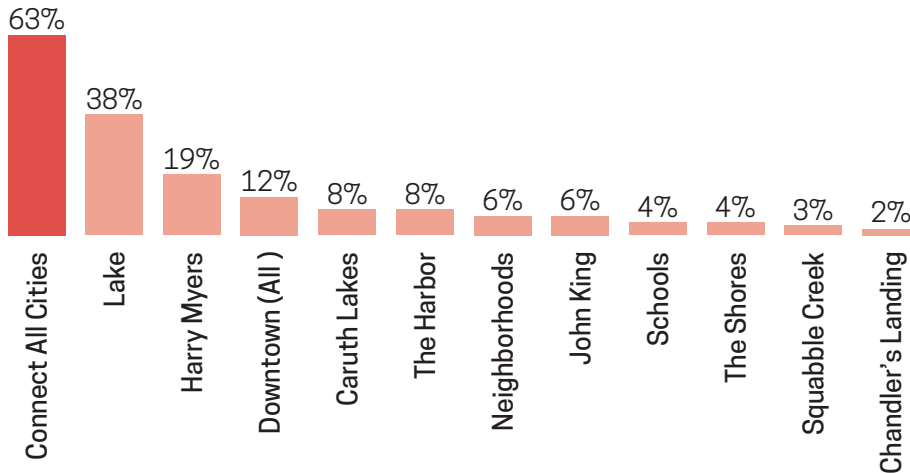
Figure 14. Would Rockwall County Benefit from County-Wide Trail System



## Preferred Connections along Countywide Trail System

Since the majority of respondents were supportive of a countywide trail system, it was important to get feedback on the key locations that the trail should connect. A majority of respondents wanted to see a countywide trail connecting the cities, providing an alternate route between cities for pedestrian and bicyclists.

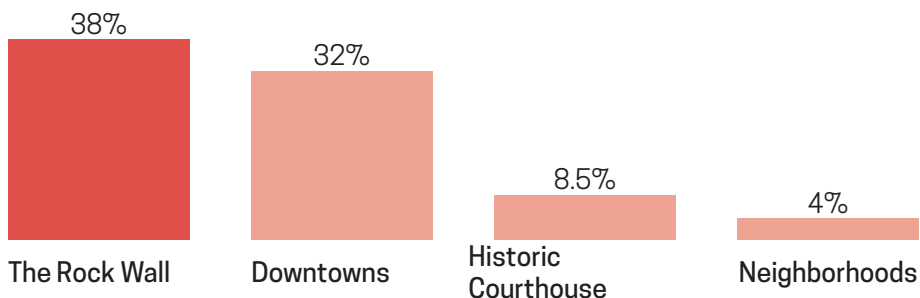
Figure 15. Preferred Connections along Countywide Trail System  
percentage of respondents



## Public Spaces to Be Preserved

The rock wall has significant cultural and historic value to the county. A portion of survey respondents felt it was important to preserve at least one of the original locations for public access.

Figure 16. Public Spaces to Be Preserved  
percentage of respondents







Section of Rockwall County's  
Namesake Rock Wall Temporarily  
Exposed







## 4. Stormwater Management and Green Infrastructure

Green infrastructure provides multiple critical services for the community and region by absorbing and dispersing storm water, recharging water sources and moderating flow regimes, preserving water and air quality, providing a variety of useful habitats and maintaining climate adaptability.

Green infrastructure makes use of an interconnected network of green spaces, waterways and naturalized systems to maintain ecosystem health, reduce stormwater impact, improve water quality and mitigate climatic extremes. Green infrastructure systems provide the most services when preserved at a watershed scale by linking together stream networks, the land adjacent to the streams, conservation areas, parks and greenways.

This natural network of stream corridors, floodplains, wetlands, water bodies, prairies and woodlands function as an interconnected whole. The system provides multiple critical services for the community and region by absorbing and dispersing stormwater, recharging water sources and moderating flow regimes, preserving water and air quality, providing a variety of useful habitats and maintaining climate adaptability.

Many communities in North Texas did not plan to preserve and protect the function of the natural systems that once were linked throughout the region. Natural systems were frequently considered hindrances to development; consequently, these systems have been encroached upon, disconnected from each other and in many cases, were eliminated altogether. Communities that lost these natural systems to development pressure are now trying to replace the functions of flood and water quality management, heat mitigation and air quality enhancement using singular function grey infrastructure at great expense to the community both in direct financial burden and in reduced quality of life.

Rockwall County has the opportunity to take advantage of the ecological and economic services provided by the large network of green infrastructure systems that exists in the county. There are eight distinct watersheds located in the county, and each offers unique opportunities to protect, preserve and enhance the natural systems that provide significant services that are key to the community's vitality and wellbeing. The most critical and highest functioning pieces of the Rockwall County green infrastructure system exist within more than 140 square miles of floodplain and over 275 miles of stream corridor distributed throughout the county. The pieces of the system, along with those that lie in the upland areas outside of the floodplain, are described in the following section.



## Goals and Priorities

### Goals

- Preserve and improve water and air quality.
- Reduce stormwater impact and erosion.
- Preserve functioning ecosystems and restore those that have been damaged.
- Ensure that the green infrastructure network is fully interconnected at a watershed scale.

### Priorities

- Restore damaged riparian corridors.
- Retrofit lakes for enhanced storm water management.
- Establish stream buffer areas.
- Retrofit stormwater infrastructure.
- Create stacked function stormwater management areas that can serve recreational use.
- Establish complimentary stormwater development criteria.

## Function

The watersheds in Rockwall County contain a variety of green infrastructure elements that add considerable value to the area through the ecological, environmental and recreational services they provide at limited cost to the community. The major green infrastructure system elements include riparian corridors, floodplain, grassland/prairie, woodland, wetlands and lakes/ponds. Each element provides unique infrastructure services.

### Riparian Corridors

Riparian corridors are the areas that run along stream or river; their vegetative, wildlife and soil makeup is heavily influenced by the stream's flow, as floodwaters saturate fertilized surrounding soils and raise the level of the local water table. Where undisturbed by croplands or other development, North Texas riparian zones are typically densely forested with a grass and shrub understory; these lush corridors play host to a variety of aquatic and terrestrial wildlife. Healthy, vegetated riparian zones improve water quality by providing natural biofiltration (diminishing erosion and pollution), stabilizing stream banks and maintaining natural levels of stream flow. While the size of a riparian corridor varies based on a number of factors, a 100-foot forested strip on both sides of the stream will generally perform most of the functions that preserve stream health.



Riparian Corridor in Breckinridge Park, Richardson

## Floodplain

Extending beyond the bounds of the riparian corridor, a floodplain is a relatively flat, low-lying area adjacent to a stream or river that is prone to frequent flooding during high flow events, and is formed over time as floodwaters deposit sediment in layers. Floodplains serve as an adjustment mechanism in periods of high water discharge, dissipating the extra flow energy, absorbing sediment and temporarily storing excess water. Due to the periodic influx of nutrient-rich sediment, these dynamic areas support especially abundant and diverse ecosystems. Where streams are highly confined, however, streambeds become channelized, and flood flows cannot access the floodplain, resulting in increased (and more severe) flooding elsewhere. Maintaining natural, vegetated floodplains—especially upstream—is vital to the health of riparian areas and is an essential part of mitigating the destructive effects of wider flooding.

FEMA is in the process of updating the Federal Flood Risk Management standard, which will potentially modify the current 100-year and 500-year floodplain boundaries. The change is being made to update the hydrologic data to reflect recorded data from more recent storm events. This more accurate meteorological data will be used to determine the floodplain boundaries and in many cases will likely expand the boundaries due to the expected higher intensity design storms.

## Grassland/Prairie

Grassland and prairie areas perform a variety of ecosystem services in addition to offering recreational opportunities. Much of the undeveloped areas in Rockwall County outside of the wetland and creek areas is either native grassland or was once native grassland prior to being modified by farming activities. Grassland areas provide habitat for song birds, game birds and pollinating insects such as bees, butterflies and ants. Native grasslands require very little maintenance because the plant species have adapted to the local growing conditions. Drought and widely varying temperatures have little effect on native plant species resilience. The native plants also have deep root systems that provide the added benefit of soil stabilization and improved soil quality. Grasslands also play a role in protecting water resources as they improve water filtration and slow down stormwater runoff. Tall grass prairies are ideal buffers adjacent to the banks of creeks to filter stormwater runoff prior to discharge into the creek and to anchor soils, reducing erosion during flood events.



Oak Point Nature Preserve,  
Plano

## Woodland

There is limited woodland in Rockwall County, with most of the wooded areas located along the stream corridors. Some of the woodland is considered urban woodland and the remainder, which exists outside of the developed areas, is peri-urban woodland. Both types of woodland can foster greater biodiversity and provide recreational and educational opportunities, heat island mitigation, air and water quality improvement and flood reduction. Because the woodland areas are located almost exclusively within the stream corridors, the undisturbed woodland areas provide necessary connectivity for wildlife and can be ideal locations for shaded greenway trails.

## Wetlands

Wetlands are distinct (and particularly rich) ecosystems where water saturation (either seasonal or permanent) determines the types of plant and animal communities living in the soil and on the surface. These organisms are adapted for wet soil conditions. Beyond providing essential habitat, wetlands serve a variety of ecological functions. They act as natural sponges, absorbing inundations of water and slowly releasing it, thereby reducing the impact of flooding. Wetlands that are connected to groundwater systems or aquifers replenish those sources by allowing for slow infiltration, and those that are connected to surface water streams and water bodies assist in maintaining stream flow and water levels. Due to this, and their effectiveness in sinking carbon, wetlands serve a mitigating function with regards to climate change. Additionally, wetlands purify the water that passes through them—by trapping and filtering out the sediment that carries nutrients and pollutants like heavy metals—before it reaches groundwater or surface water sources.

## Lakes and Ponds

Although some occur naturally, most of the ponds and lakes in Texas are the result of human-made dams, constructed to hold water for human use, such as a source of drinking water, electric power production, water for agricultural purposes, and recreation. They support ecosystems whose makeup varies based on size and depth, but the health of these ecosystems can be undermined by polluted water running off from surrounding lands. Fertilizer and pesticide runoff, for example, can affect a pond's natural nutrient cycle, resulting in eutrophication when an excess of nutrients spurs dense plant and algae growth and causes aquatic life to die from lack of oxygen.



Subdivision Detention Pond



## Manmade Green Infrastructure

Managed systems are designed and constructed to mimic the function of the natural environment. These provide for infiltration, increase evapotranspiration and treat polluted runoff at a much higher cost for implementation and maintenance and with much lower efficiency. These elements are best instituted as retrofits in areas that have encroached upon and eliminated natural systems.

### Constructed Ponds

Retention basins are artificial ponds with vegetation along the perimeter, designed to hold water permanently. Stormwater runoff is treated by allowing sediment to settle at the bottom, where algae take up the nutrients and pollutants, resulting in a cleaner water source. They also help protect downstream channels from erosion and reduce flooding. Using large, shallow basins, pathogens in wastewater can be treated entirely through natural processes, requiring only sunlight energy. These ponds are effective (particularly in sunny, temperate areas) and inexpensive to maintain, but they require large amounts of land.

### Constructed Wetlands

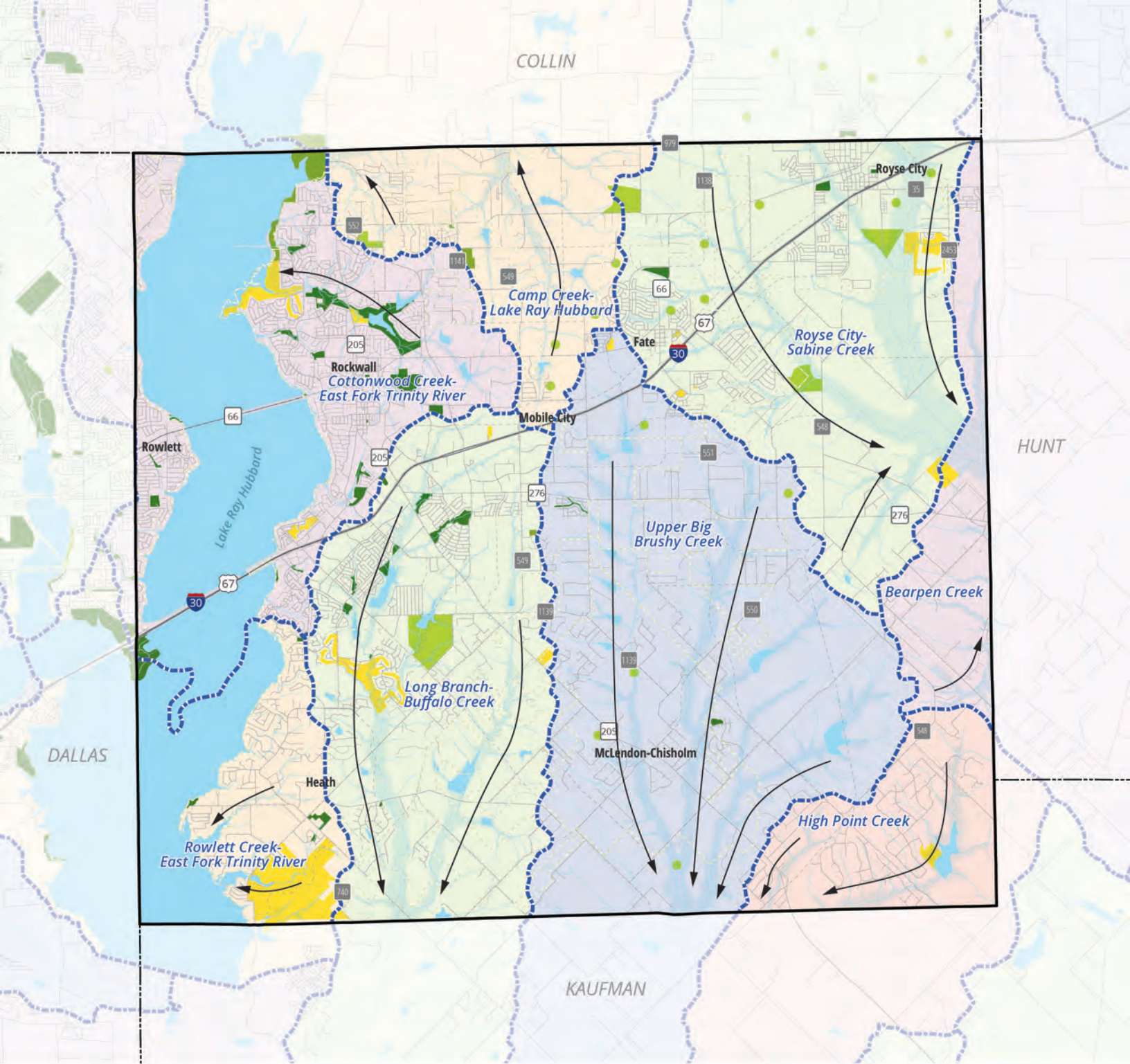
Given the water filtration effectiveness of natural wetlands, engineers now commonly create artificial wetlands to improve water quality by emulating these natural sediment-removing processes. Using wetland vegetation and soils, more pollutants are trapped and removed from wastewater and stormwater runoff as it flows through the system. This form of urban stormwater treatment tends to be more aesthetically pleasing and less expensive to maintain than typical 'grey' infrastructure. Some constructed wetlands also function as wildlife habitat.

## Benefits





Green infrastructure systems provide a myriad of services that result in many benefits for the community and region. These benefits include:

- Water Quality
- Flood Protection
- Air Quality
- Heat Island Mitigation
- Resilience
- Aesthetic Value – Community Attractiveness – Brand Building
- Economic Competitiveness
- Enhanced Quality of Life

A well-maintained green infrastructure network provides a region with a host of long-term benefits. Healthy floodplain and riparian zones—combined with artificial systems designed to emulate natural drainage—improve the quality of our water supply by filtering out pollutants, slowing harmful runoff and recharging groundwater sources. This natural system also offers a measure



## Watersheds

-  Watershed Boundary
-  Waterway Flow Direction
-  100-Year Floodplain
-  City Boundary

Sources: Rockwall County, TNIRIS



Figure 17. Watersheds  
(facing page)

of flood protection, as the effects of high flow events are dispersed. A healthy network of green infrastructure improves overall air quality and lessens heat stress, by acting as a heat and carbon sink. Each of these elements makes an area more resilient and adaptable in the face of climate change, which intensifies local extremes and puts a strain on ecosystems and built environments alike.

Green infrastructure also serves to enhance the aesthetic value and attractiveness of a community (which also offers opportunities for brand building). People enjoy greenery and open spaces, and they are often willing to pay more to be near these areas, increasing the value of land and providing economic benefits to a community. Proximity to greenspace, moreover, has a demonstrably positive impact on physical, social and mental health; helps reduce stress; and provides opportunities for recreation and learning.

## The Hydrologic Context

Despite the relatively small land size of Rockwall County, which spans approximately 149 square miles, the county contains eight unique watershed areas (Figure 17). Each watershed is characterized by a variety of land cover types, topography and levels of development. Six of the watersheds, making up more than eighty percent of the land area, drain into the Trinity River; the remaining two watersheds, located along the eastern boundary of the county, drain to the Sabine River.

The majority of the county is open land terrain comprising meadows, pastures and open areas with grasses, herbs and shrubby plants in undeveloped areas. Rangeland terrain consisting of hardwood trees and shrubs exists in the transitional areas between the open land areas in higher terrain and the riparian corridors that traverse each of the watersheds. Wetland areas comprise the lowest percentage of land area, and are found adjacent to lakes and stream corridors and in other low-lying areas with significant contributing drainage areas.

## Watersheds

There are eight unique watersheds located within Rockwall County:

- Cottonwood Branch
- Long Branch - Cottonwood Creek
- Bearpen Creek
- High Point Creek
- Sabine Creek
- Upper Big Brushy
- Camp Creek
- Rowlett Creek - East Fork Trinity

Most of these watersheds drain to the Trinity River, while the Bearpen Creek and Sabine Creek watersheds drain to the Sabine River.



## NRCS Lakes

The Natural Resources Conservation Service (NRCS)—formerly the Soil Conservation Service (SCS)—constructed 28 soil conservation dams and associated primary and emergency spillways in Rockwall County during the 1970s and 1980s. The vast majority of the soils found in Rockwall County are clay soils with very low permeability and high susceptibility to erosion. These structures are located in all of the county’s watersheds except for the Bearpen and Sabine Creek watersheds in the eastern part of the county. They were constructed to provide sediment storage for crop production areas throughout the county, to reduce flooding within the receiving streams and to increase productive land area adjacent to the streams.

Development upstream of most of these NRCS lakes has increased stormwater runoff volumes discharging into the lakes and has also increased sediment loads accumulating in the ponds. The ponds have consequently lost significant storage volumes to manage the higher volume stormwater discharges associated with urbanization in the watershed. Many of the dams have been classified as “high hazard” by the Texas Commission of Environmental Quality due to the additional stress placed on the dams by upstream development and the high potential of damage to downstream development in the event that a dam breaches. These dams are inspected regularly, and the “high hazard” term does not imply that they are in danger of failing. Only a few of the NRCS dams in Rockwall County are located downstream of undeveloped areas.

The majority of the NRCS lakes in the county are located on private property, but a few of them have been converted into public amenities. The most prominent of these is the area around Raymond Cameron Lake and Phelps Lake in Rockwall.

Many of these dams will require extensive maintenance efforts in the near future, which the county and cities will be responsible for. While there are funds available to assist the county and cities with these repairs, the number of facilities requiring service is anticipated to far exceed the amount of funding available in the program’s current structure. Some communities have had success combining maintenance improvements with converting lakes to public recreation amenities, thereby expanding the pool of funding sources and improving the probability of securing outside funding. Several examples of this have been referenced as case studies throughout this plan.

## Water Quality

The health of all ecological communities depends in large part on water quality. The quality of a given water source is determined by geological and ecosystemic factors as well as human use (or misuse) of the water system, including wastewater discharge, agricultural runoff, industrial pollution and usage levels. Maintaining a high standard of water quality for human use (which generally entails ensuring sufficiently low levels of contaminants such as pathogens, herbicides and pesticides, heavy metals and chemical contaminants from petroleum use) is a key means of protection against disease.

### Case Study Regional Detention and NRCS Dam Retrofit Collin County, TX

NRCS Site 4 was included in a USDA funded rehabilitation partnership project with Collin County and the City of McKinney. The retrofit of the existing NRCS lake is currently being designed. The lake provides flood protection for more than 1,500 residents living and working downstream of the dam. The lake also protects six city streets and one U.S. Highway that support nearly 40,000 vehicles daily. The retrofit project is expected to provide approximately \$1.5 million in annual flood damage reduction benefits.

### Case Study Stormwater Management Harris and Bexar Counties, TX

Harris County, which includes Houston, has been a leader in Texas with regards to stormwater management, driven largely by its water district. Its document of regulations for stormwater quality management, in use since 2001, is wide-ranging and particularly useful.

The San Antonio River Authority has also made strides in recent years (following a number of water quality issues), attempting to educate citizens regarding sustainable watershed management and implementing low impact development and other green infrastructure strategies.

Figure 18. Impaired Streams around Rockwall County

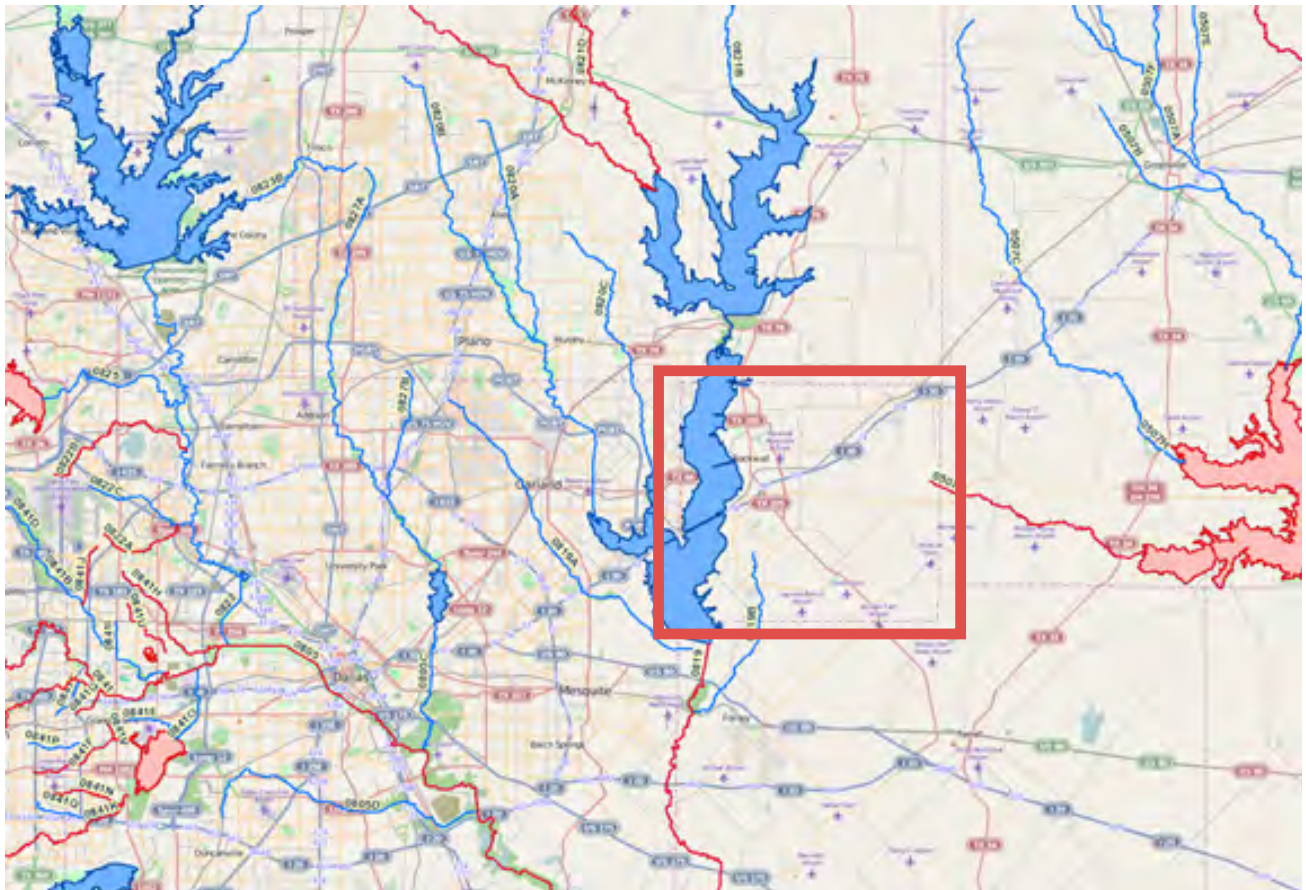


Figure 19. Impaired Streams in Rockwall County



Deteriorating water quality is a growing and increasingly costly problem in the North Texas region. The Texas Commission of Environmental Quality (TCEQ) monitors the streams throughout Texas and updates its list of impaired streams on an annual basis. Per TCEQ, “impaired” means that these are waters that are too polluted or otherwise degraded to meet water quality standards. Figure 18 is a map of the North Texas region. Monitored streams are shown in blue, and those TCEQ is classifying as impaired are shown as red. Figure 19 shows the monitored streams located in Rockwall County watersheds. Two stream segments are classified by TCEQ as impaired: Stream 0819 (the East Fork of the Trinity River) and Stream 0507G (the South Fork of the Sabine River).

Key indicators of water quality used by TCEQ include:

- Dissolved Oxygen (DO): High levels of oxygen can harm fish and other aquatic organisms. Sewage and runoff pollution cause changes in DO levels.
- pH: Extreme alkalinity or acidity can be deadly to most organisms. Sewer overflow and agricultural runoff can alter pH.
- Water temperature: Organisms depend on certain temperature ranges to survive. Weather changes and urban discharges can affect temperature.
- E. coli: High levels of E. coli bring bacteria and viruses that cause diseases. Flooding can increase these levels.
- Transparency: The amount of sunlight that enters a water body affects its ecological composition. Runoff from rainfall often alters water clarity.
- Nitrates: High levels of nitrates intensify algae growth, lowering DO levels and eventually killing aquatic life. In drinking water high levels pose dangers to humans. Human and animal waste and fertilizer runoff contribute to increased nitrates.

Separate standards are used for measuring water for human consumption, industrial use, or environmental impact.

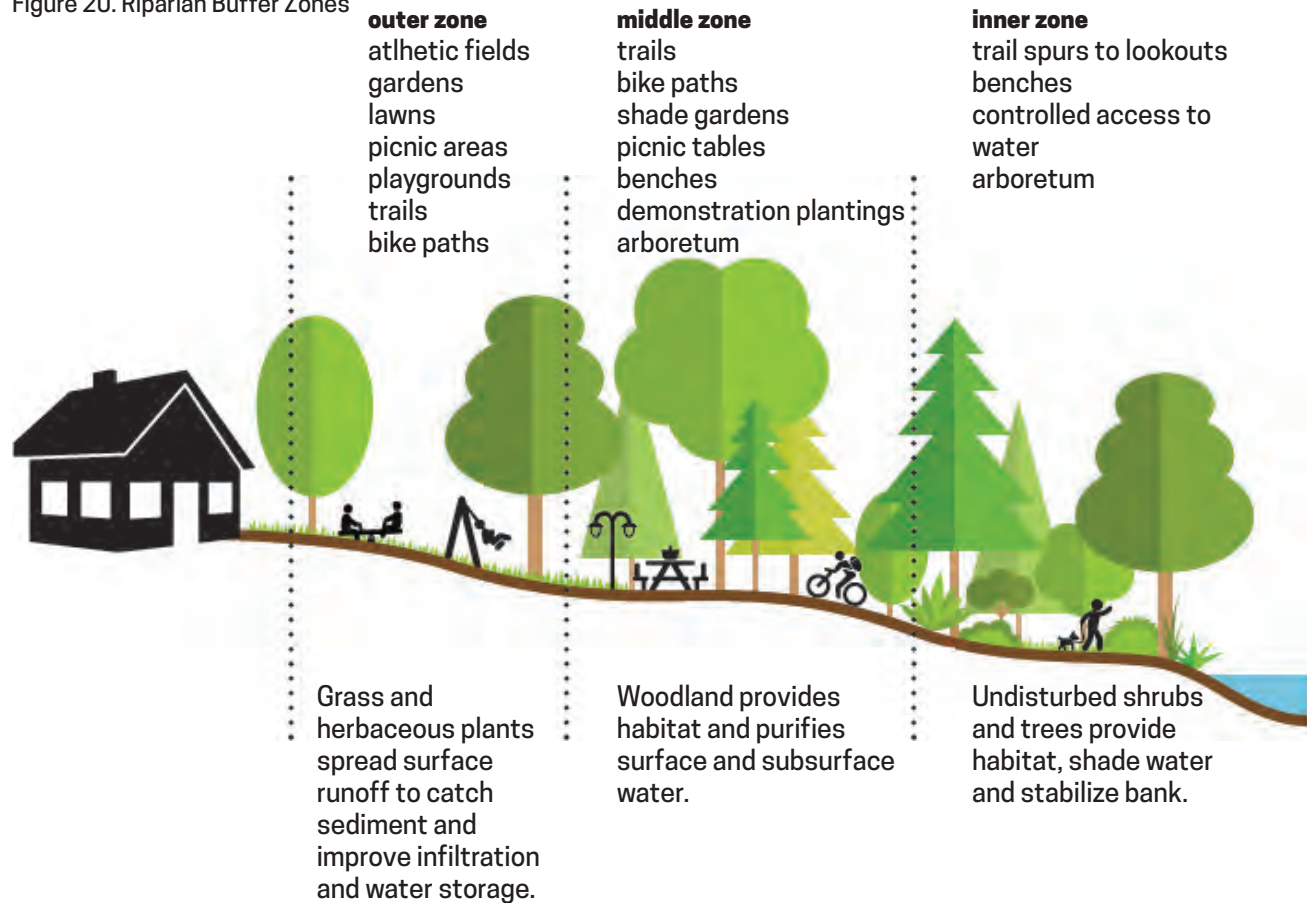
## Streams and Floodplains

There are more than 275 miles of significant creeks and associated tributaries in Rockwall County (Figure 17). More than 27 square miles of floodplain extend beyond the banks of these creeks and tributaries. Approximately 20 percent of the land in Rockwall County is located within the boundaries of the 100-year floodplain. Residential and commercial development adjacent to these floodplain areas have historically extended to the edge of the 100-year floodplain boundaries and often have encroached beyond that boundary constricting the flood management corridor.

Approximately 20 percent of the land in Rockwall County is located within the boundaries of the 100-year floodplain.



Figure 20. Riparian Buffer Zones



## Case Study

### Buffer Program

#### Mecklenburg County, NC

Mecklenburg County in North Carolina was one of the first counties to adopt a buffer program that was created through collaboration between the development community, county and city staffs and other stakeholders. This initiative is called the Surface Water Improvement and Management Initiative which created variable width buffers or 'no build zones' along local creeks. The primary function of the buffers is to: reduce some flood risks by absorbing excess stormwater runoff, act as natural filters to limit the amount of pollution reaching the creeks and to provide greenspace for trails and parks. The program was adopted by the City of Charlotte and the Mecklenburg County Board of County Commissioners in 1998. The six towns in the county adopted buffer ordinances in 1999 and 2000.

## Best Management Practices (BMPs) and Precedents

### Floodplain Conservation and Management

Floodplains play important roles in reducing downstream flooding, controlling erosion, providing wildlife habitat, improving water quality and recharging groundwater. The conservation of the remaining natural floodplains is essential to the health and stability of Rockwall County. Streams and rivers require relatively flat, pervious surrounding areas to dissipate the energy of high water events. Developing close to the edge of a stream and filling in floodplain land to add more properties (as has been the trend) constricts the stream flow, which results in increased flooding due to greater intensity of water flow. Many streams in Rockwall County have been encroached upon by development and croplands. Where possible, riparian/floodplain vegetation should be restored. Restored and maintained areas can help ensure that the county has richer wildlife habitat, cleaner water and air, less intense flood events, greater climate adaptability and increased access to nature for education and recreation. Most jurisdictions in Texas seek to limit development within the FEMA regulated 100 year floodplain primarily to reduce risk of flood damage to property and potential loss of life during flooding events. This is a standard requirement for communities that participate in the National Flood Insurance Program. Current policies in Rockwall

County will allow alteration of and development within the floodplain if it can be shown that the modifications will not affect adjacent, upstream and downstream properties by increased flood elevations. Development often significantly alters the floodplain and stream channel by removing existing vegetation and creation of hard armored channels to offset the potential rise in flood elevations caused by the encroachment into the floodplain. This effectively eliminates quality habitat and opportunities for safe and aesthetic pedestrian greenways within the stream corridor.

Establishing or maintaining sufficient buffers is essential to the preservation of waterways and their functions (Figure 20). A good buffer includes three zones—inner, middle and outer—which are distinguished by function, allowable uses and vegetation. The target vegetation for the inner zone adjacent to the stream channel (which also includes any wetland or critical habitats) is generally mature forest, and its uses should be heavily restricted, as it serves particularly to protect the ecological and physical integrity of the water system. The middle zone, typically characterized by managed forest and restricted to some recreational uses, stormwater BMPs and bike paths. The outer zone, which functions to prevent encroachment and to slow and filter runoff, can consist of a variety of vegetation, and has fewer use restrictions. Generally, a buffer of 100 feet provides adequate protection for streams, but this may vary depending on slope and the 100-year floodplain. The width of these buffer zones vary based on topography, contributing watershed area, geologic characteristics and existing development within the watershed.

Stormwater runoff in Rockwall County discharges into three major water bodies including Lake Ray Hubbard to the west, Lake Tawakoni to the southeast and the Trinity River to the south. Lake Ray Hubbard and Lake Tawakoni are critical water supply reservoirs for the North Texas region. These reservoirs are managed by North Texas Municipal Water District and Dallas Water Utilities. Poor stewardship of water resources and areas near streams has a direct financial impact on the cost to treat raw water to drinking water standards. The costs of this mismanagement will eventually be passed on to customers. Rockwall County should be proactive and take the opportunity to preserve its water quality for current and future generations. Water concerns related to quality and available quantity are becoming ever more prevalent in the region. Rockwall County can position itself as a forward-thinking, water conscious community.

## Regional Detention and Stacked Function Stormwater Management

Regional detention basins and similar stacked function stormwater management systems are becoming more desirable in communities as they offer many more benefits beyond just flood control and water quality improvement. Careful planning for these systems with open space conservation goals and future development goals in mind allows for the creation of stormwater management systems that complement these goals. Regional detention that is planned for and designed in this goal oriented context can provide many benefits to the

### Case Study Voluntary Buffer Incentives Frisco, TX

The City of Frisco has created voluntary buffer incentives for development in an effort to preserve areas adjacent to natural waterways in the community. The ordinance provides density bonuses for developments that integrate adequate buffers. These requirements can be found in the city's zoning ordinance in section 4.11.04.

### Case Study Regional Detention and NRCS Dam Retrofit Williamson County, TX

Federal funding from the American Recovery and Reinvestment Act paid \$1.86 million for the retrofit of the NRCS Lower Brushy Creek Watershed dam 4a. The project repaired side slopes of the dam that had been damaged by wave erosion. The repairs maintain the integrity and function of the dam while providing other benefits including downstream protection of farms, communities and bridges from flooding, reduced sedimentation into lakes and waterways and enhancement of riparian area wildlife habitat. The project is expected to provide approximately \$220,000 in annual benefits to downstream properties.



White Rock Lake Acts as a Utility and a Recreational Space, Dallas

community as a recreational resource as well as an enhancement to surrounding development and its economic performance. Many communities in North Texas are taking this approach and moving away from singular function stormwater management on the singular site level which complicates development and provides minimal stormwater management benefits as it creates an inefficient fragmented system. Local examples can be found in McKinney, Texas where planned developments around NRCS lakes, such as Adriatica, have been very successful. These NRCS lakes have been retrofitted to provide enhanced management performance with funding provided by the development that is served by the system. The developer and city have also partnered together to update areas around these ponds to include programmed recreational facilities including sports fields and hike and bike trails. This approach works well with both residential and commercial development and has been proven to enhance the economic performance and quality of the surrounding community.

## Watershed-Based Opportunities

Identification of green infrastructure opportunities requires a thoughtful examination of the individual watersheds as each possess unique characteristics such as land use, topography and vegetation. Green infrastructure strategies work best when they function in a manner that closely mimics the natural hydrologic conditions of the watershed. The recommended strategies for this plan were developed based on the observed conditions within each of the watersheds located in Rockwall County.



## Cottonwood Branch

The Cottonwood Branch watershed covers about 17.5 square miles of the northwestern quadrant of Rockwall County, draining toward Lake Ray Hubbard via multiple discharge locations along the shoreline. Major creeks and their associated tributaries within this watershed include: Squabble Creek, South Prong Squabble Creek, Stream No. 3 and Stream No. 5. The headwaters of Squabble Creek begin just upstream of Boles Lake, which discharges toward the northwest and Raymond Cameron Lake. Both lakes are NRCS ponds, and a third NRCS pond, Phelps Lake, is located immediately upstream of Raymond Cameron Lake. The better part of this watershed has been built out, as it encompasses most of the City of Rockwall, from its urban center to surrounding subdivisions. Although development has encroached upon and constricted the creek corridors within this watershed, there are significant opportunities for restorative green infrastructure projects.

### Recommended Green Infrastructure Strategies

1. Develop a riparian corridor restoration plan along the main stem of Squabble Creek from Raymond Cameron Lake to the boundary of the Rockwall Golf & Athletic Club. Explore opportunities to extend a hike and bike trail along this segment, as well as potential connectivity to the Lake Ray Hubbard shoreline. Corridor restoration plan elements should focus on development of stormwater management facilities at stormwater outfall locations along the segment that can also serve as connection points to adjacent neighborhoods.
2. Develop a riparian corridor restoration plan along Squabble Creek Tributary E, which receives significant stormwater discharges from the northern portion of the City of Rockwall downtown area. Identify undeveloped areas that could provide trail connectivity opportunities through the South Prong corridor to Raymond Cameron Lake.
3. Develop a riparian corridor restoration plan along the main stem of Stream No. 3 from Northshore Park to Emerald Bay Park and its discharge to Lake Ray Hubbard.
4. Develop a riparian corridor restoration plan along the South Prong of Squabble Creek, extending from the E. Bourn Street and Rockwall County Jail area northward to Harry Meyers Park and toward Raymond Cameron Lake. Investigate stream restoration opportunities along South Prong through the City-owned Harry Myers Park alignment.
5. Explore a potential park development along the western shore of Boles Lake to include water quality enhancements for discharges from Ralph Hall Rockwall Airport. Develop a riparian corridor preservation and restoration plan along Squabble Creek downstream to Raymond Cameron Lake. Retrofits to Boles Lake for enhanced flood protection, water quality performance and ecosystem health should also be considered.
6. Preserve riparian corridors upstream of Phelps Lake and create trail connectivity to future development to the northeast.
7. Investigate and consider retrofits to Raymond Cameron Lake and Phelps Lake to enhance flood mitigation, water quality performance and ecosystem health.



Figure 21. Cottonwood Branch Watershed Map

8. Develop a riparian corridor restoration plan along Stream No. 5 from Goliad Street to its discharge into Lake Ray Hubbard. This corridor could potentially provide trail connectivity from Rockwall High School to the southern boundary of the downtown corridor.



### Benefits

By restoring these damaged stream corridors, a more natural state would benefit the native species that require such habitat, make the region more adaptable in a changing climate, improve water quality and availability in the watershed, reduce flooding (saving money and resources over time), and offer residents valuable access to greenspace. Making trails a part of this strategy is important for providing recreational opportunities, strengthening interconnectivity, increasing awareness of the significance of these areas, and boosting the economic competitiveness of the region.

## Camp Creek

The Camp Creek watershed covers approximately 10.9 square miles of north-central Rockwall County and drains toward the Collin County border and eventually Lake Ray Hubbard via multiple discharge locations along the northern shoreline. Major creeks and their associated tributaries within this watershed include Thompson Branch, Camp Creek and Nelson Creek. There are four NRCS ponds located within this watershed: Stodghill Lake, Nelson Lake, Crenshaw and Burnett Lake and Crenshaw Lake. The watershed comprises mostly agricultural parcels, which hold a number of small stock ponds. Residential development does exist within this area, but the vast majority of the major stream corridors have not been encroached upon. Green infrastructure strategies in this watershed should focus on preservation of these corridors and enhancement of existing NRCS ponds, to provide sufficient stormwater management and recreational functions that can accommodate future development.

### Recommended Green Infrastructure Strategies

1. Develop a preservation strategy for the Thompson Branch corridor and explore trail connectivity between JW Williams Middle School and the Collin County boundary. The headwaters of Thompson Branch fall within the boundary of the middle school. This portion of the stream corridor offers potential educational opportunities for green infrastructure elements constructed on the school property, such as bioretention basins, filter strips and stream buffer enhancements. Restoring natural riparian habitat would also serve both ecological and educational functions.
2. Develop a retrofit plan to enhance the environmental performance of Stodghill Lake, Nelson Lake, Crenshaw Lake and Crenshaw Burnett Lake. These ponds are undersized for management of flood discharges under fully developed conditions but could potentially be modified to provide appropriate stormwater management and enhanced amenities for integrated community developments in the future.
3. Develop a preservation strategy for Camp Creek, Nelson Creek and their tributaries from Stodghill Lake to the Collin County boundary. Review future land use plans and develop regional stormwater management strategies adjacent to the tributaries to prevent future direct discharge of untreated stormwater into the watercourse. These areas can also provide connection points for potential hike and bike trail systems connecting to Collin County to the north.

### Benefits

If the county is proactive in protecting the integrity of the stream corridor network where it has not yet been damaged, those riparian areas will continue to function as natural water treatment and management systems, easing the





Figure 22. Camp Creek Watershed Map



load on areas of future development and allowing space for native riparian species. The possible connection with schools would offer important resources for educating students about local plant and animal habitat and the necessity of preserving those spaces. Additionally, the incorporation of trails provides a useful recreational resource that gives these spaces more visibility.

## Sabine Creek

The Sabine Creek and Bearpen Creek watershed covers approximately 32 square miles of eastern and northeastern Rockwall County, draining toward the Hunt County border and eventually into Lake Tawakoni. Major creeks and their associated tributaries within this watershed include Parker Creek, Pond Branch, Sabine Creek, Klutts Branch and Renfro Branch. No NRCS ponds are located within this watershed. There are, however, many small stock ponds, as the watershed consists of mostly agricultural parcels south of developed areas in Fate and Royse City. Green infrastructure strategies in this watershed should focus on preservation of the natural stream corridors south of the developed areas of Fate and Royse City, as well as retrofits within the developed areas to alleviate the frequent flooding and negative impacts on downstream water quality caused by the substantial encroachment of development on the stream corridors.

### Recommended Green Infrastructure Strategies

1. Develop a restoration plan for Pond Branch and Sabine Creek north of I-30, where development has encroached on the stream corridor and impacted its flood carrying capacity and water quality. Integrate north-south trail connections and outfall retrofits to improve conditions and provide additional flood mitigation capacity.
2. Evaluate a potential regional park location within the combined floodplain of Pond Branch and Sabine Creek south of I-30 and develop a stream corridor preservation and greenway development plan for both streams to the Hunt County border.
3. Evaluate a potential nature preserve near the confluence of Parker Creek and Sabine Creek and investigate potential greenway connections to existing development in Fate. Include potential retrofits of existing outfalls to restore the impacted stream corridor.

### Benefits

Maintaining the existing healthy riparian zones saves money in the short and long runs, and protects crucial habitat. Restoring those stream corridors that have been degraded by the encroachments of development and agriculture to a more natural state serves to benefit the native species that require such habitat, make the region more adaptable in a changing climate, improve water quality and availability in the watershed, reduce flooding (saving money and resources over time) and offer residents valuable access to greenspace.



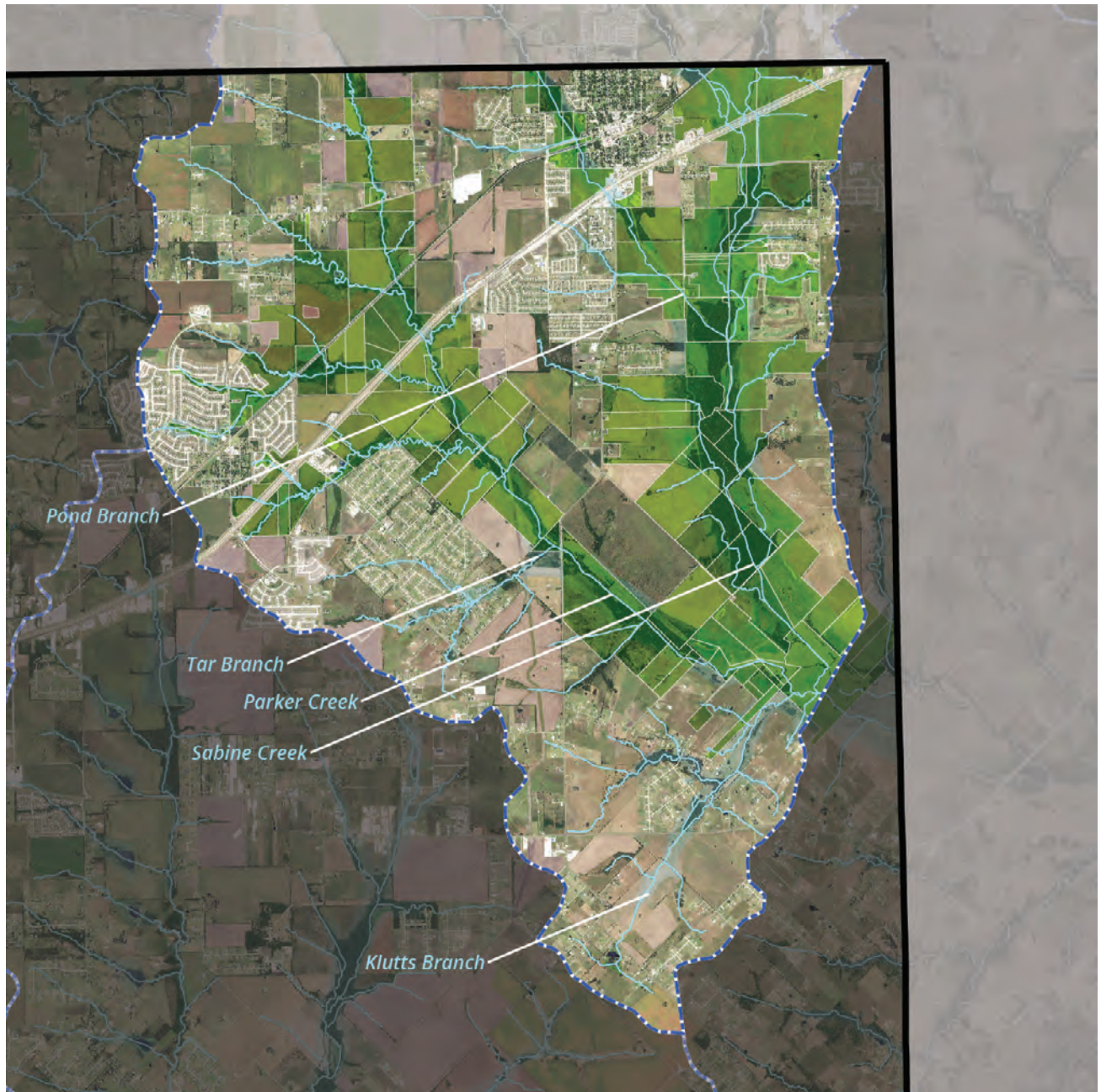


Figure 23. Sabine Creek Watershed Map





## High Point Creek

The High Point Creek watershed covers approximately 8 square miles of the county's southeast corner, and drains toward the Kaufman County border and eventually to the Trinity River. Major creeks and their associated tributaries within this watershed include High Point Creek and Tributaries 6 and 8 of Berry Creek. Two NRCS ponds are located within this watershed—NRCS 16a and NRCS 16—as well as many small stock ponds. This watershed contains mostly large lot residential parcels. Green infrastructure strategies in this watershed should focus on stream corridor preservation. The majority of the stream and tributary corridors are situated on and between residential lots that have not been excessively encroached upon the stream systems.

### Recommended Green Infrastructure Strategies

1. Develop a program to encourage residential property owners to implement best practices that enhance the quality of stormwater runoff into the stream systems.
2. Investigate opportunities to create a nature preserve area surrounding the NRCS 16a pond.

### Benefits

Buy-in from local property owners with regards to protecting streams and their surrounding areas—coupled with active preservation of the land inside the floodplain—can have dramatic and lasting impacts on the health of the watershed, and, by extension, water and air quality, flood protection and recreational opportunities. A nature preserve would help meet the needs of both the local ecosystem and residents of the region.

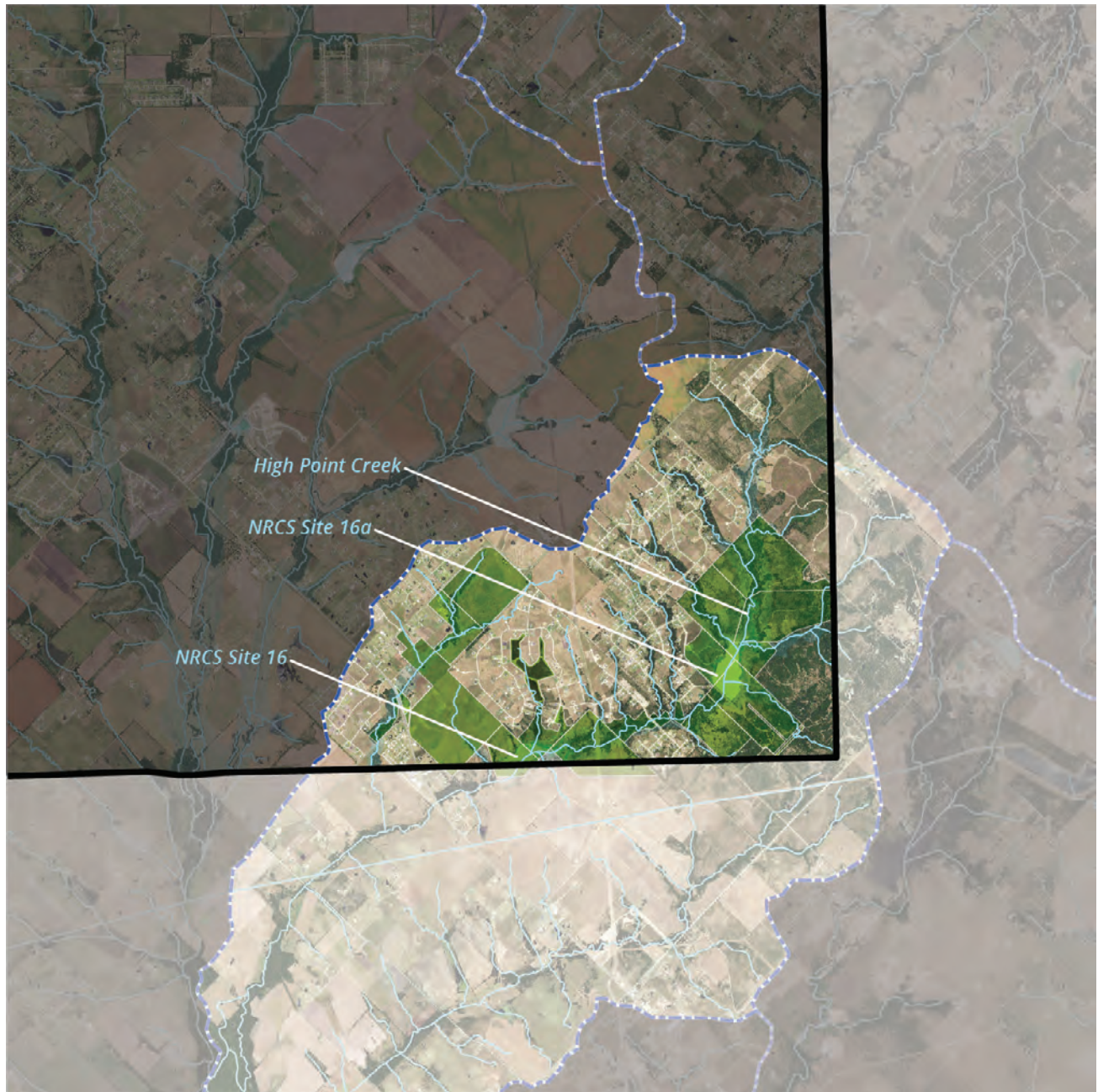
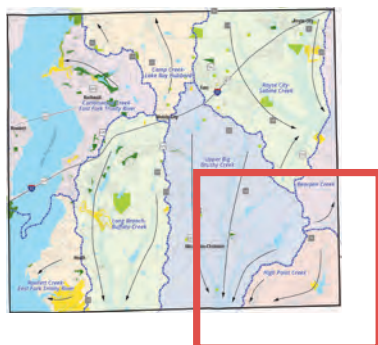


Figure 24. High Point Creek Watershed Map



## Big Brushy Creek

The Big Brushy Creek watershed covers approximately 33 square miles of the central and southern portion of Rockwall County, draining toward the Kaufman County border and eventually to the Trinity River. Major creeks and their associated tributaries within this watershed include Brushy Creek, Hackberry Creek and Berry Creek. There are eleven NRCS ponds located within this watershed—NRCS sites 1a, 2, 3, 4, 5, 6, 7, 8, 11, 13 and 14a— as well as various small stock ponds. The watershed includes mostly large agricultural use parcels and residential parcels within subdivisions of medium to light densities. Green infrastructure strategies in this watershed should focus on preserving the stream corridors.

### Recommended Green Infrastructure Strategies

1. Develop a retrofit and planned development integration plan for each of the eleven NRCS ponds located in the watershed. NRCS 1a could potentially be retrofitted to provide improved flood storage capacity and water quality enhancements for stormwater runoff discharged by existing and future commercial, residential and industrial development along and nearby the Interstate 30 corridor. Retrofits to NRCS Site 1a could include concepts creating a new public park surrounded by a mixed use of developments that feature the pond as an amenity.
2. The series of NRCS ponds along the western side of Brushy Creek have smaller contributing drainage areas and do not offer as much opportunity to increase flood storage capacity but do have adequate size to benefit from retrofits that will enhance the quality of water discharged into Brushy Creek.
3. Hackberry Creek is mostly undisturbed and intersects many large agricultural parcels. There are no NRCS ponds located along this corridor. Planned development within this area could benefit from locating one or more new regional retention ponds adjacent to the stream corridors. These would ideally be located near the top (north end) of the watershed, just south of Highway 276. Smaller implementation strategies, including the preservation of stream buffers and inclusion of water quality measures, integrated with linear parks and trail systems, should be considered between the location of larger regional systems and the downstream intersection with the Kaufman County line.



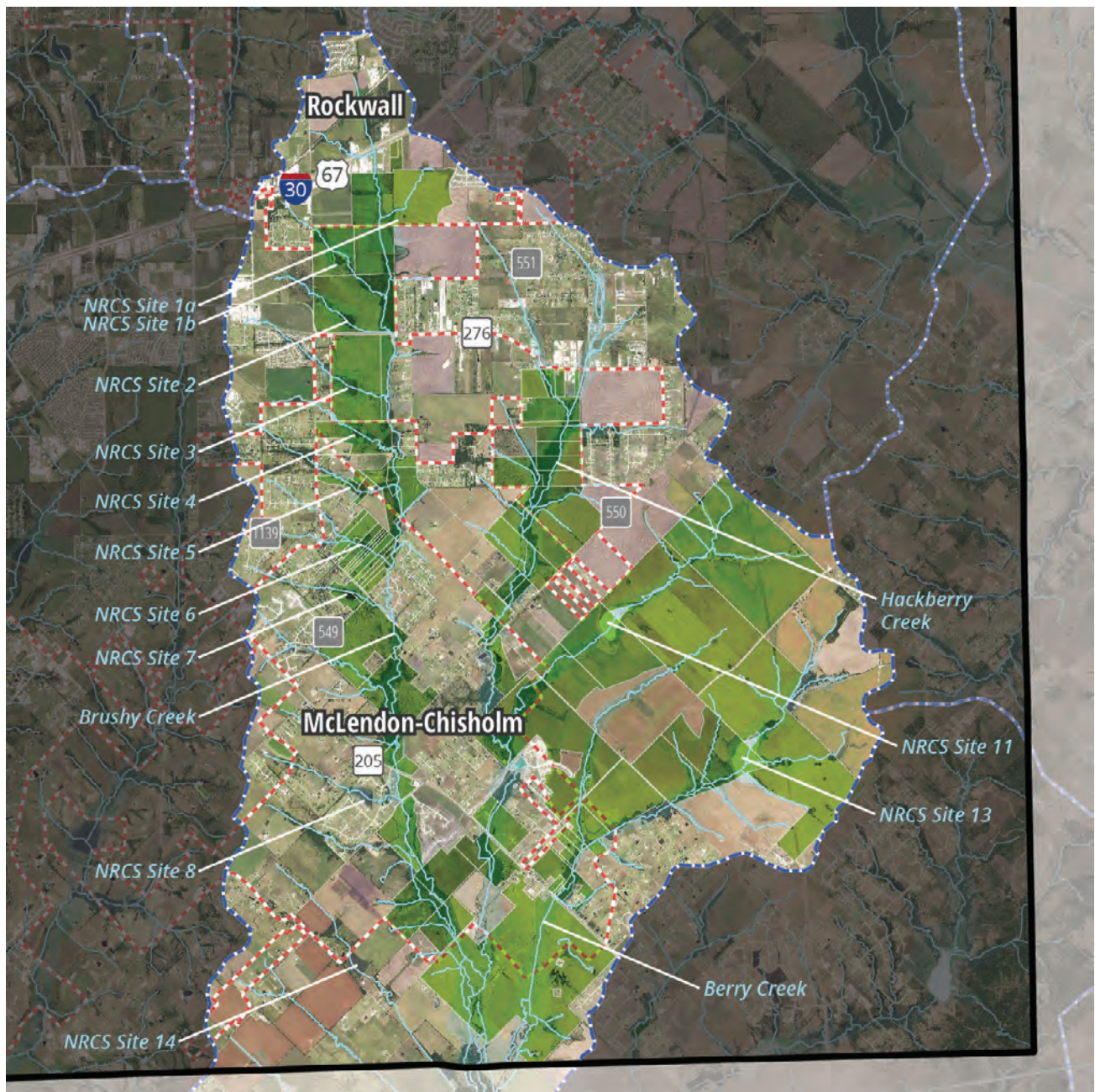
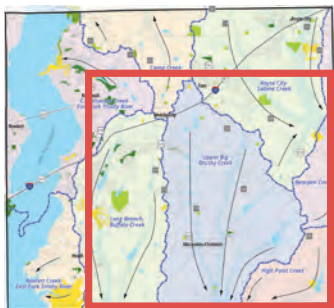


Figure 25. Big Brushy Creek Watershed Map

### Benefits

Careful management of the NRCS ponds can benefit the county's residents by providing better water quality and flood storage and offering recreation opportunities and aesthetic features. In addition, native species stands to benefit from retrofitting these water bodies to create more natural ecosystems.



## Buffalo Creek

The Buffalo Creek watershed covers approximately 24 square miles in southwestern Rockwall County and drains toward the Kaufman County border and eventually to the Trinity River. Major creeks and their associated tributaries within this watershed include Buffalo Creek, Brockway Branch, Little Buffalo Creek and Long Branch. There are six NRCS ponds located within this watershed: Rockwall Lake, Rainbow Lake, Wallace Lake and NRCS sites 6 and 7. There are also many small stock ponds. Along Long Branch are mostly large agricultural use parcels and residential parcels in subdivisions of medium to light densities. Urban commercial and industrial developments and higher density subdivisions line the Interstate 30 corridor. Green infrastructure strategies in this watershed should focus on preservation of the undisturbed stream corridors and restoration of the stream corridors in the upstream portion of the watershed that have been impacted by encroaching development.

### Recommended Green Infrastructure Strategies

1. Preserve and enhance the riparian corridor along Buffalo Creek, and include a trail connection from the Rockwall Technology Park to Rockwall Lake. Identify opportunities to retrofit stormwater outfalls from existing developments adjacent to the stream corridor.
2. Create a natural preserve area with trails, wetlands and education areas between 205 and Rockwall Lake.
3. Retrofit Rockwall Lake with a vegetated shelf and accessible sediment forebay, and evaluate the condition of the earthen dam.
4. Retrofit Rainbow Lake with a vegetated shelf and accessible sediment forebay, and evaluate the condition of its earthen dam. Assess the potential to create a park area between Tubbs Street and the lake. Connect to Fox Chase Park and Windmill Ridge Park via trail.
5. Retrofit Wallace Lake with a vegetated shelf and accessible sediment forebay, and evaluate the condition of the earthen dam. Evaluate the potential to increase flood storage capacity and reduce flooding of adjacent development.
6. Preserve the Little Buffalo Creek stream corridor from headwaters south of Teagle Drive to the headwaters of Wallace Lake. Review potential development in the corridor and integrate preservation of Little Buffalo Creek and its riparian corridor into the overall development plans.
7. With the exception of the headwater area of Long Branch, the majority of the stream corridor has been undisturbed. Develop a preservation plan that protects the corridor and integrates it as an amenity for future development plans. Evaluate potential for the corridor to provide a greenway connection between Heath and Rockwall.
8. Develop preservation plan for Long Branch and Buffalo Creek downstream of Wallace Lake and Rockwall Lake to the Kaufman County line and evaluate potential to create connecting greenway.





Figure 26. Buffalo Creek Watershed Map



## Benefits

Creating space for trails as a part of restoration and preservation efforts allows residents greater access to greenspace, which is important for mental, physical and social health and for strengthening the bond between people and their natural surroundings. Trails and parks linked to preservation areas help increase the likelihood that those spaces will be protected in perpetuity, as they serve both an ecological and cultural function. (Ensuring that these spaces are connected in a greenway network, moreover, enhances both of these functions.) NRCS ponds can be retrofitted to better manage sediment, process inflow nutrients and control water temperature—improving overall water quality and to enrich each pond's ecosystem.



## East Fork Trinity

The East Fork Trinity watershed covers approximately 8.5 square miles of the southwestern quadrant of Rockwall County and drains toward Lake Ray Hubbard. Major creeks and their associated tributaries within this watershed include Yankee Creek, Rush Creek and Chandler Creek; there are no NRCS ponds in the watershed. Most of this watershed has been developed with higher density commercial near I-30 and varying densities of residential to the south. Green infrastructure strategies in this watershed should focus on preservation of the undisturbed stream corridors and restoration of those stream corridors in the upstream portion of the watershed that have been impacted by encroaching development.

### Recommended Green Infrastructure Strategy

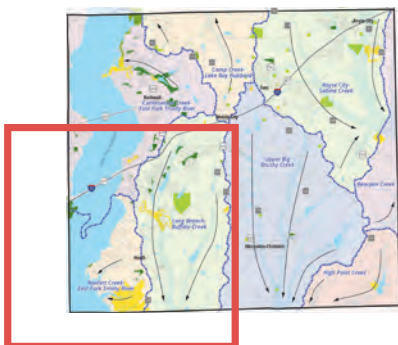
1. Preserve and enhance the riparian corridor along Yankee Creek and Rush Creek, including trail connections from Rockwall–Heath High School and Heath town center to the Lake Ray Hubbard shoreline.

### Benefits

Protecting the environmental integrity of the streams flowing into Lake Ray Hubbard is essential to sustaining the both the health of the lake and the surrounding open space. Much of this watershed has been developed, so preserving the stream corridors that have yet to be disturbed will allow them to continue to provide natural drainage and flood mitigation, in addition to ecosystem services. Restoring damaged (developed) stream corridors where possible can begin to undo some of the environmental harm done and possibly provide new areas for recreation and interaction with nature.



Figure 27. East Fork Trinity Watershed Map



## Recommendations

Specific recommendations for each of the watersheds have been outlined above. General recommendations to address and improve stormwater management and green infrastructure implementation throughout the county include the following:

1. Restore damaged riparian corridors to a more natural state using site-specific green infrastructure strategies.
2. Conduct studies and consider retrofitting existing NRCS lakes to enhance flood protection and water quality enhancement functionality, particularly within watersheds with existing and near term development.
3. Review existing ordinances and consider establishing more stringent requirements for stream buffer areas and conservation of undisturbed natural floodplain and riparian corridors.
4. Identify and retrofit existing stormwater infrastructure that will significantly reduce continued degradation of water quality in the receiving streams and lakes.
5. Incorporate integrated stormwater management best practices into future developments.
6. Incorporate integrated stormwater management best practices to ensure stacked functionality of parks, trails and open spaces.

It is important to note that each city is responsible for its own approach to stormwater management, including ordinances and infrastructure design standards. These recommendations are intended to be a resource and guide to address issues that require interagency collaboration, and to improve planning and communication between cities that share a watershed so that stacked function benefits can be maximized. Implementation of these recommendations will require additional review of the identified opportunities by each of the cities to determine costs and benefits, feasibility and timing for implementation. Ideally, future updates to city master plans, ordinances and design standards related stormwater and open space will incorporate these recommendations.



## Implementation: Key Steps for Preserving Quality Stormwater Corridors

Goal	Key Steps
Restore Damaged Riparian Corridors	<ol style="list-style-type: none"> <li>1. Create needs inventory.</li> <li>2. Identify priority restoration areas and develop restoration plans.</li> <li>3. Identify synergies with other open space initiatives.</li> <li>4. Identify project partnerships.</li> <li>5. Develop funding strategies.</li> <li>6. Design and construct.</li> </ol>
Retrofit Lakes for Enhanced Stormwater Management	<ol style="list-style-type: none"> <li>1. Evaluate existing capacity and conditions of lakes.</li> <li>2. Establish risk levels to inform prioritization.</li> <li>3. Property owner engagement.</li> <li>4. Develop retrofit concept plans.</li> <li>5. Identify synergies with other open space initiatives.</li> <li>6. Outreach to state and federal agencies to identify grant opportunities.</li> <li>7. Outreach to development community to identify potential partnerships.</li> <li>8. Prioritize retrofits.</li> <li>9. Design and construct.</li> </ol>
Establish Stream Buffer Areas	<ol style="list-style-type: none"> <li>1. Develop buffer establishment criteria and incentives.</li> <li>2. Identify critical areas for buffer establishment.</li> <li>3. Identify synergies with other open space initiatives.</li> <li>4. Finalize buffer recommendations for selected streams and explore development ordinance updates.</li> </ol>
Retrofit Stormwater Infrastructure	<ol style="list-style-type: none"> <li>1. Create needs inventory.</li> <li>2. Identify priority retrofit projects with maximum water quality and quantity service benefits to expenditure ratio.</li> </ol>
Create Stacked Function Stormwater Management Areas	<ol style="list-style-type: none"> <li>1. Identify open space areas amenable to provide for recreational use, storm water management for existing and future development.</li> <li>2. Integrate preliminary investigation of potential shared stormwater management areas during development planning process.</li> </ol>
Establish Complimentary Stormwater Development Criteria	<ol style="list-style-type: none"> <li>1. Identify barriers to utilization of shared open space for both recreation and stormwater management purposes.</li> <li>2. Facilitate discussions between government entities to establish common goals for stormwater management.</li> </ol>



## 5. Open Space

The second objective of this OSMP is to explore community interest in, and potential locations for, a major open space preserve/public amenity that could potentially be developed in the future. The term “open space” is broad and sometimes unclear, encompassing a wide range of configurations and uses. It is important for the county to have a clear understanding of what kinds of open spaces it seeks to have in which places, what their intended functions are and how their surroundings may enhance their use and preservation. This section outlines goals and priorities for open space preservation, briefly explains the different types of open space and provides details and evaluation of thirteen open space opportunity areas throughout the county that best address the community’s goals and interests.

### Open Space Goals and Priorities

#### 1. Create new parks, and provide recreational opportunities.

Over 95 percent of survey respondents think that quality open space is either very important or somewhat important to a healthy and active lifestyle and overall quality of life in Rockwall County. However, only 14 percent of survey respondents felt, without qualification, that there is sufficient public access to recreational areas. When asked to identify examples of open space environments they would like to have in Rockwall County, survey respondents indicated they wanted open spaces that include lakes, nature appreciation and water-oriented recreation.

- a. Provide educational and interpretive activities for adults and children.
- b. Encourage exploration and experience with nature.
- c. Facilitate outdoor special events.
- d. Develop new parks and recreational opportunities around water resources.

#### 2. Protect natural and cultural resources.

Cultural and historic centers and conservation and preservation areas are among the top 3 types of public open spaces residents leave the county to visit, each identified by about two-thirds of survey respondents.

- a. Preserve segments of rock wall outcroppings.
- b. Preserve historic buildings and downtowns.
- c. Preserve historic farmsteads and ranches.
- d. Protect prairie, native grasslands and old growth forests.
- e. Preserve wildlife and wildlife habitat.



## Open Space Types

### River/Stream-Oriented Greenway

Greenways are corridors that may vary in width and typically follow and protect natural systems. River- or stream-oriented greenways follow the course of these waterways and can include the riparian zone at their banks, floodplains and other natural landscapes beyond these zones. These varying conditions offer diverse scenic experiences. Recreation along these greenways may provide physical and/or visual access to the rivers and streams, capitalizing on a natural draw towards water. If physical access is provided, recreational opportunities may include swimming, fishing and boating.

### Lake-Oriented Parkland

As with river- and stream-oriented greenways, lake-oriented parkland takes advantage of an interest in water and provides physical and/or visual access to the water bodies.

### Bottomland Hardwood Forest

Bottomland hardwood forest areas are found in broad lowland floodplains along streams and lakes. Frequent flooding of these areas allow for the build up of alluvial soils that support gum, oak and bald cypress trees. These open spaces often intersect with greenways and provide shaded relief for trails and overlooks.



### Case Study

#### Trinity River Audubon Center Dallas, TX

The Trinity River Audubon Center is a nature center and natural history museum situated within the Great Trinity River Forest urban park in Dallas. The Audubon Center has become a regional attraction since opening in 2008, making a significant contribution to education about—and conservation of—the area's birds, wildlife and diverse ecosystem.

### Case Study

#### Oak Point Park & Nature Preserve Plano, TX

Now the largest park in Plano (at 800 acres), Oak Point Park & Nature Preserve has expanded incrementally since 1982, comprising 29 separate lots purchased from 22 different owners. The properties were acquired to provide a sanctuary from the bustle of the built environment, to offer education and leisure opportunities, and to preserve their ecological value. It plays host special and events throughout the year.

Funding for recent developments within the park has been approved by voters in bond referendums. The park and nature preserve is managed and maintained (as are all Plano parks) by the city's Parks and Recreation Department and the Parks and Recreation Planning Board; the nonprofit Plano Parks Foundation also works to encourage increased public funding and obtain private donations, as well as boost community stewardship of Plano parks.

Elgin B. Robertson Park Oriented to Lake Ray Hubbard, Rowlett

Natalie's Butterfly Sanctuary,  
Heath

## Case Study

### **Dallas Arboretum and Botanical Garden** Dallas, TX

A year-round favorite of Dallas residents and visitors alike, the Dallas Arboretum and Botanical Garden sits on 66 acres on the southeastern shore of Dallas' White Rock Lake. Open to the public since 1984, it comprises two formerly private estates and now features a variety of named gardens, fountains, and a gazebo. The opening was the culmination of ten years' work: in 1974, the Dallas Arboretum & Botanical Society (DABS) formed as a nonprofit organization. Once the first estate was identified as the right location for a botanical garden (it had been purchased by the City), the organization began raising funds and awareness for the project in 1978. With the support of local businesses and citizens, DABS had enough money to purchase the adjacent property two years later, and created the combined 66-acre property shortly thereafter. The houses and original gardens from these properties are preserved, and additional gardens have been constructed as funding allows.

The arboretum hosts seasonal festivals and other events, which are mainly funded by members, ticket sales, and donations. Many of the gardens were made possible by private individuals or families, some of which are still being constructed. Though the original proponents of the arboretum did not possess the funds for the project themselves, their focused passion and ability to engage local support made possible what is now a local landmark.



## Open and Tallgrass Prairies

Prairies in Rockwall County were established by a combination of agricultural usage for crops and grazing by large mammals. This periodic disturbance of the soils and vegetation regulates tree encroachment resulting in vast open spaces with sweeping views.

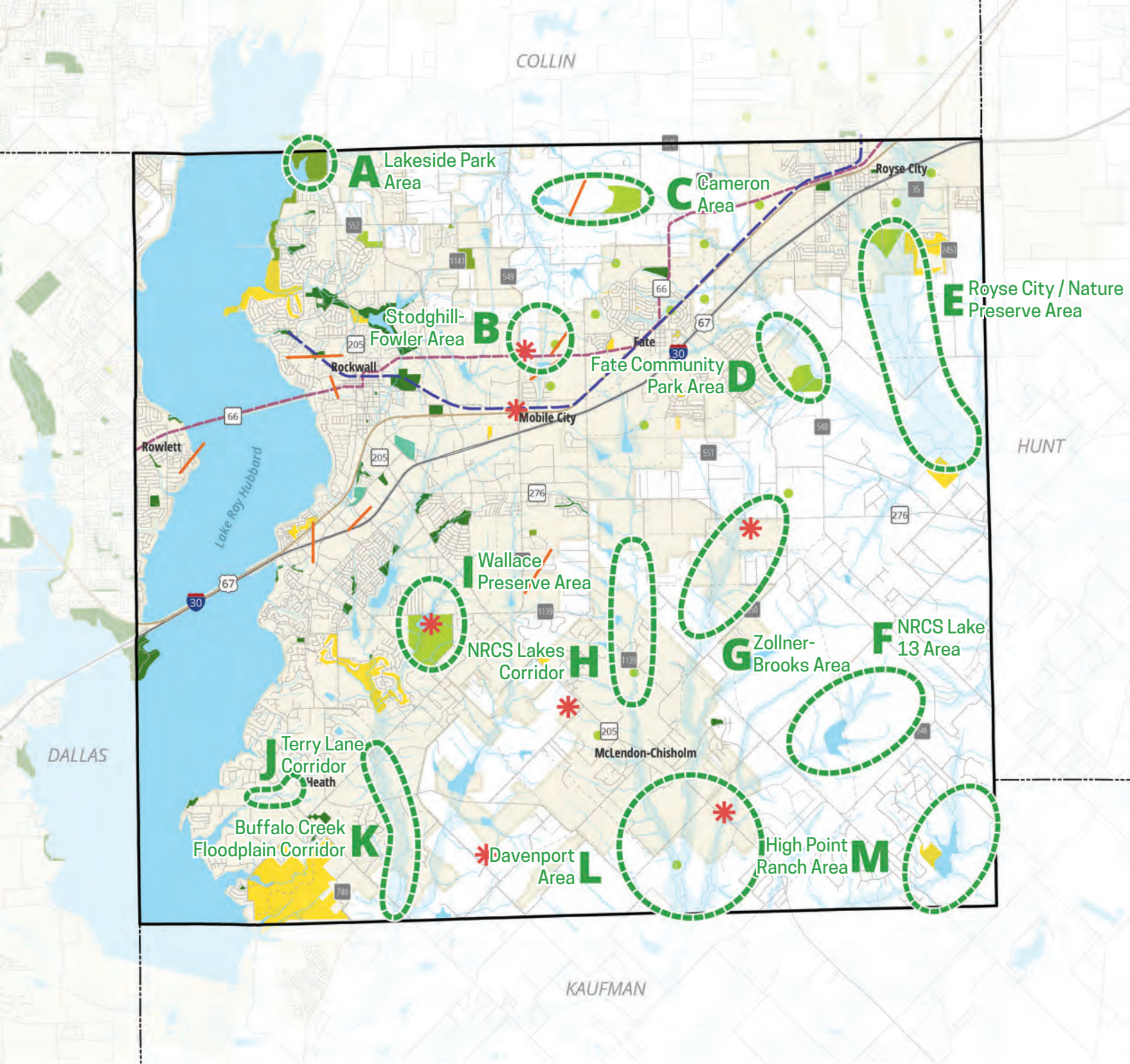
## Conservation-Oriented Open Space

Conservation-oriented open space may include floodplains, ridge lines and significant habitat areas that contribute to healthy ecological systems. Recreational experiences in conservation areas should be limited or restricted to protect their integrity.

## Cultural and Historic Open Spaces

Open spaces may also be designed places with cultural or historic value. Such assets may provide educational or economic value through tourism. They can be used to preserve the character of a place in the face of changing landscapes.





## Open Space Opportunities



Sources: Rockwall County, TNRI, Rockwall County Historical Foundation





Figure 28. Open Space and Trail Opportunities (facing page)

## Case Study

### Arbor Hills Nature Preserve

#### Plano, TX

Arbor Hills Nature Preserve, a 200-acre park in Plano, Texas, features a diverse, multi-use trail system, a playground, an observation tower, three pavilions and a variety of wildlife and three distinct ecoregions—all surrounded by suburban residential development. Following a parks and recreation master plan, the City of Plano acquired the property in 1990, as surrounding development was increasing. Part of the property was used as a dumpsite during construction of neighboring tracts; subsequent restoration efforts have helped bring back a thriving ecosystem to which nearby residents have easy access. Importantly, officials were aware of development trends and the increasing need for large preserved open space as population grows. Their proactive approach to preservation continues to be of invaluable service to both native wildlife and residents of the region.

## Open Space Opportunities

Over seventy sites were identified at the beginning of the planning process. These sites were eventually reduced down to thirteen areas that present the best opportunities for large public open space amenities.

### Evaluation Criteria

Potential open space opportunity areas in Rockwall County have been identified and evaluated based on the following set of criteria. Criteria were selected using a combination of sources including NCTCOG's Regional Ecosystem Framework, Texas Parks and Wildlife and other sources that are commonly used to evaluate funding requests and guide design. Some of the opportunity areas identified provide stronger ecological benefits or hold greater historical or cultural value than others. Some are under greater development pressure, while some have more advantageous ownership situations.

#### Location / Connectivity

The location of an open space opportunity can affect its use and its availability to the public, depending on:

- whether and how it connect to existing trails, parks, public open space, schools and/or neighborhoods
- its possible incorporation into planned local or regional trails
- the degree of remoteness: existence of infrastructure adjacent to or within the property, and the proximity of existing or future utilities
- whether it is in an area that is not currently served by existing permanently protected open spaces

#### Ecology / Environment

The ecological and environmental importance of an open space opportunity is greater if it:

- contains significant waterways with a relatively undisturbed riparian zone and floodplain
- contains streams and/or other water resources that can be rehabilitated to enrich ecosystem value and watershed health, prevent erosion and runoff and better mitigate stormwater and flooding
- serves as useful plant and wildlife habitat, with sufficient size, connectivity and edge length to accommodate a diverse mix of species
- can be used to foster awareness, appreciation and stewardship of natural systems
- could provide for acquisition and preservation of significant wetland area
- could provide for acquisition and preservation of natural open space land or water for human use and enjoyment that is relatively free of man-made structures

- could provide significant opportunities to employ low impact development/ green infrastructure strategies complementary of stormwater management plan goals
- provides opportunity to mitigate environmental impacts from existing development and surface infrastructure
- provides opportunity to preserve native tree canopy
- scores high on NCTCOG's Regional Ecosystem Framework VEIL Score

## History / Culture

An opportunity area may have higher historic or cultural value to the community if it:

- contains or offers scenic views
- houses significant historic or archaeological features
- is associated with architecture, events, or persons that contributed to the history or culture of Rockwall County.

## Recreation

The opportunity area provides an outlet for passive and/or active recreation that:

- serves multiple age segments
- promotes community health and well-being
- develop new parks and recreation opportunities around water resources
- could provide campground area
- could provide sports fields/athletic courts
- could provide playgrounds
- could provide picnic areas
- could provide trails
- could provide passive recreation
- could provide an amphitheater
- could provide natural areas
- could provide fishing facilities
- could provide stream-based recreation opportunities
- could provide pond-based recreation opportunities
- could provide significantly new and different recreational opportunities

## Ownership

The ease of acquiring land for open space use depends on a number of factors:

- publicly owned (federal, state, county, or city) vs. privately owned
- number of owners
- willingness of owners to donate or sell the property for open space use
- relative land value

## Case Study

### Erwin Municipal Park McKinney, TX

Erwin Park in northern McKinney is a popular destination for recreation, nature appreciation, camping and community events. The park's 212 acres feature mountain biking and hiking trails, fishing areas, playgrounds, picnic areas, woodlands and rolling meadows with expansive views. The park also provides important habitat to native wildlife in an area that continues to see rapid development and decrease in preserved natural spaces.

The remote tract of land was donated to the Texas Conservation Foundation in 1971 by the Erwin family, and has belonged to the City of McKinney since 1973. The City developed the property as a community park (leaving much of the natural area preserved), and continues to oversee its upkeep. The Dallas Off-Road Bicycle Association designed the bike trail and is responsible for its maintenance. Camping onsite is allowed for a nominal fee; reservations are required from the McKinney Parks Department.

## Case Study

### Heard Natural Science Museum & Wildlife Sanctuary McKinney, TX

Comprising 289 acres of wildlife sanctuary (with five different habitats), five miles of hiking trails, fifty acres of wetlands, a native plant garden, indoor and outdoor exhibits and a butterfly house, The Heard Natural Science Museum and Wildlife Sanctuary is one of McKinney's popular attractions. Opened in 1967 with the threefold mission of education, conservation and preservation, the property draws more than 100,000 annual visitors, and is a prime bird-watching location. The Heard is a nonprofit that operates with the support of national and local businesses and individual members. It is a prime example of preserved open space serving both an ecological and cultural function.

## Development Pressure

Those opportunity areas most under pressure for development should be considered a high priority in the near term. Preserving natural systems that are currently functioning is much more cost effective than restoring broken systems in the future. Factors evaluated include if the property:

- has near-term development pressure;
- could provide mitigation for surrounding development;
- would require significant alteration of floodplain, natural areas and wetlands to allow development;
- could substantially enhance the value of adjacent development;
- provides opportunity to mitigate environmental impacts from existing development and surface infrastructure

## Evaluation Summary

The table below summarizes the number of criteria each open space opportunity met in each category and prioritizes each opportunity for conservation. Each opportunity and its scores are described in more detail on the following pages.

Opportunity	Location/Connectivity (max 4)	Ecology/Environment (max 14)	History/Culture (max 3)	Recreation (max 16)	Ownership (max 6)	Development Pressure (max 5)	Conservation Priority
A Lakeside Park Area	4	12	1	15	6	3	high
B Stodghill-Fowler Area	4	13	3	16	3	5	high
C Cameron Area	3	10	3	16	3	2	medium
D Fate Community Park Area	4	8	1	12	3	5	low
E Royse City/Nature Preserve Area	2	11	2	13	3	5	medium
F NRCS LAke 13 Area	2	7	2	15	3	3	low
G Zollner-Brooks Area	3	10	2	13	4	5	medium
H NRCS Lakes Corridor	3	7	1	10	2	4	low
I Wallace Preserve Area	4	11	3	15	3	5	high
J Terry Lane Corridor	4	13	2	9	2	3	low
K Buffalo Creek Floodplain Corridor	4	11	1	9	1	5	low
L Davenport Area	2	6	1	11	4	3	low
M High Point Ranch Area	1	8	2	13	4	2	low



## Opportunity A Lakeside Park Area

### Location / Connectivity



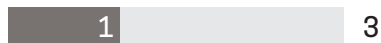
This site is located in the far northwest corner of the county on the eastern shore of Lake Ray Hubbard. Shown in Rockwall's 2010 Master Plan as a "Regional Park," this is one of a diminishing number of locations left to provide lakefront access in the county. The city of Rockwall has completed a master plan for this area and is involved in ongoing discussions with the city of Dallas to acquire the property. The site is accessible via SH205 and existing sidewalk and future trails will connect to the park to the surrounding neighborhoods.

### Ecology / Environment



About 90 percent of this location falls within the 100-year floodplain; its preservation would offer strong environmental benefits. It is an excellent opportunity for stream and habitat restoration and ensuring sediment/trash loading reductions into Lake Ray Hubbard. The site offers ample opportunities for outdoor education and wildlife observation. This area is in the upper middle of NCTCOG's VEIL score brackets.

### History / Culture



Utilizing this lakefront site for public enjoyment is especially important, given the rapid pace of development in the county and the citizens' interest in publicly accessible areas along the lake. This site offers tremendous value not only for city of Rockwall residents, but for residents of the entire county.

### Recreation



The characteristics for this site are prime for passive recreation amenities such as picnic tables, walking trails, fishing areas, butterfly gardens and other nature-oriented activities. The concept plan that Rockwall has prepared for the area incorporates a variety of recreational uses into the park.

### Ownership



The land for this park must be acquired from the City of Dallas; the City of Rockwall is currently in discussions with the City of Dallas.

### Development Pressure

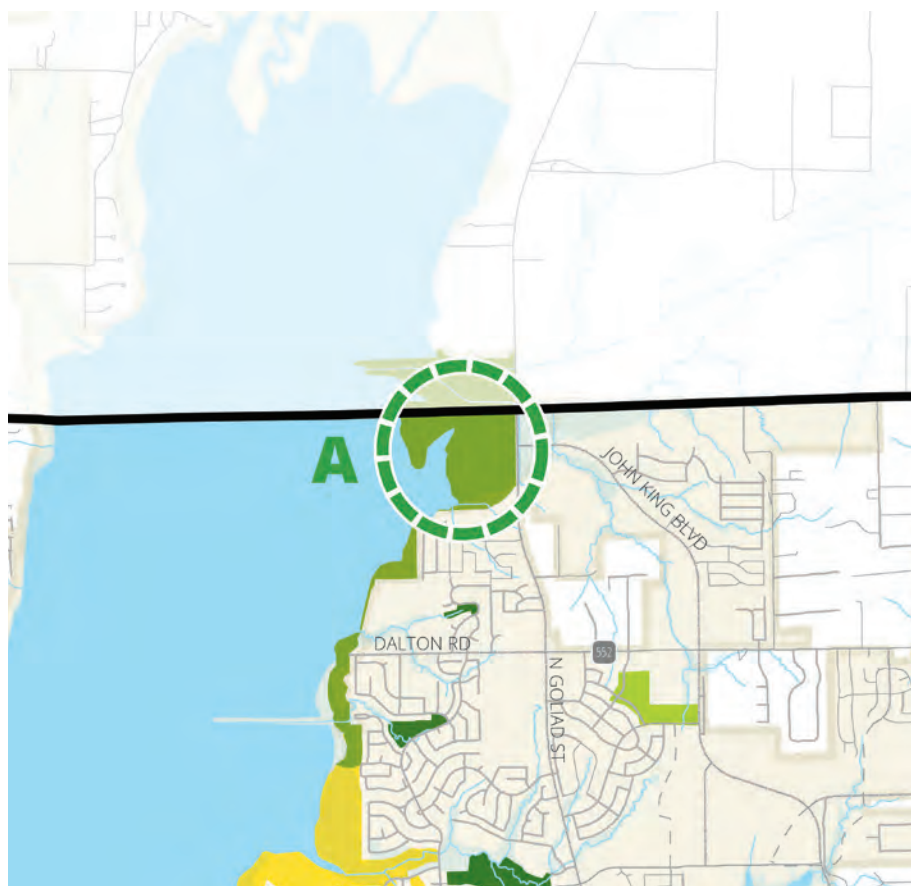
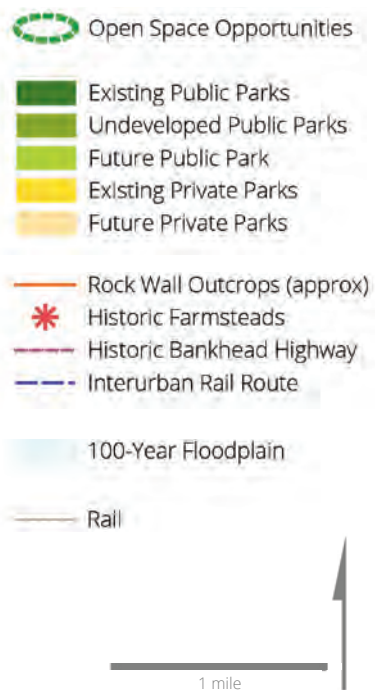


Development is occurring around the property, but the site itself is mostly floodplain and doesn't appear to be at risk of development. The site is ideal for mitigating impacts of adjacent development, while improving the area as a public park would add value to surrounding properties as well.

### Conservation Priority



Figure 29. Open Space Opportunity A Map and Aerial Photo



## Opportunity B Stodghill-Fowler Area

### Location / Connectivity



This site is centrally located and around the intersection of SH66 and Stodghill Road. The properties owned by the Stodghill/Fowler family on the north side of SH66 and the nearby NRCS lake present a unique opportunity to combine cultural, recreational and environmental benefits all together in one location. The site is included in Fate's master plans as a possible future community park, has good roadway access, and has future trail connections planned.

### Ecology / Environment



This is one of the highest scoring environmental areas in the county. Camp Creek, which runs through the property downstream from an NRCS lake, is currently stable. From ecological and hydrological standpoints, it will be beneficial to have open space plans that preserve the floodplain and create buffers between the creek and future development. This area is in the upper middle of NCTCOG's VEIL score brackets.

### History / Culture



The Stodghill/Fowler property is a historically significant piece of Rockwall County. A part of the rock wall for which the county is named is to be found onsite, and the historic Carriage House was recently located here. The late Sheri Stodghill-Fowler was actively involved with the Rockwall County Historical Foundation and Rockwall ISD.

### Recreation



The site's topography and characteristics provide ample opportunities for all types of recreational activities and facilities.

### Ownership



There are limited land owners to coordinate with for this area, and the family that owns the property on the north side of SH66 has been an advocate of sharing the culture and history of Rockwall County.

### Development Pressure



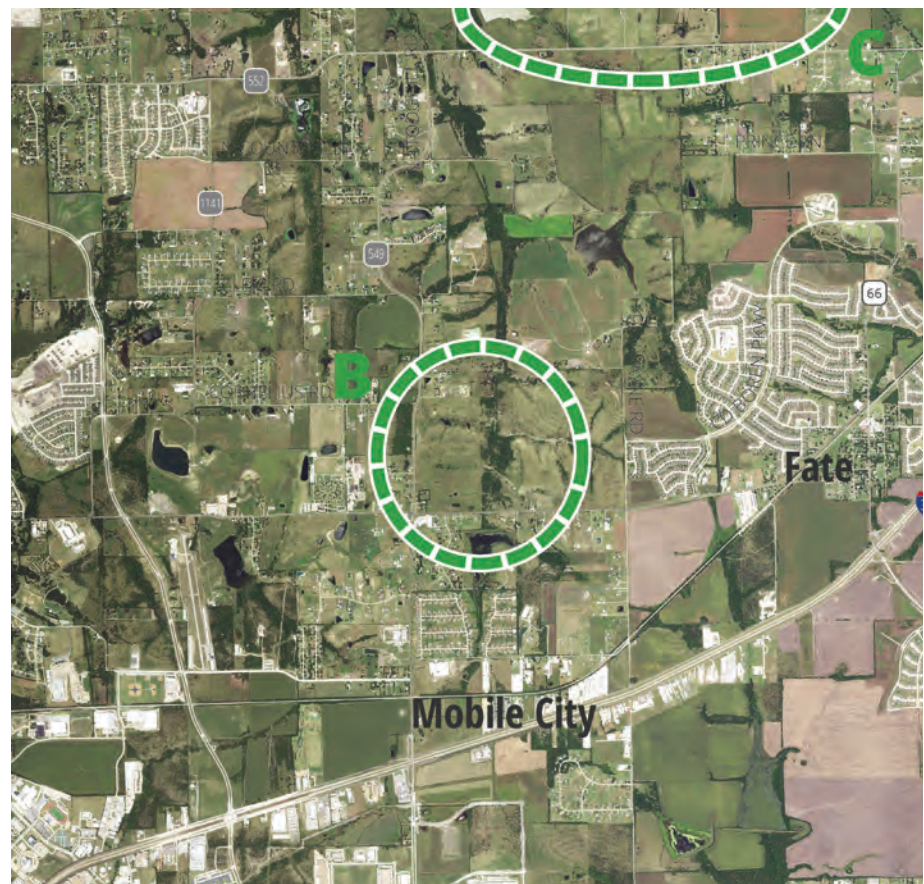
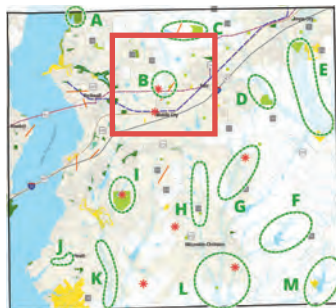
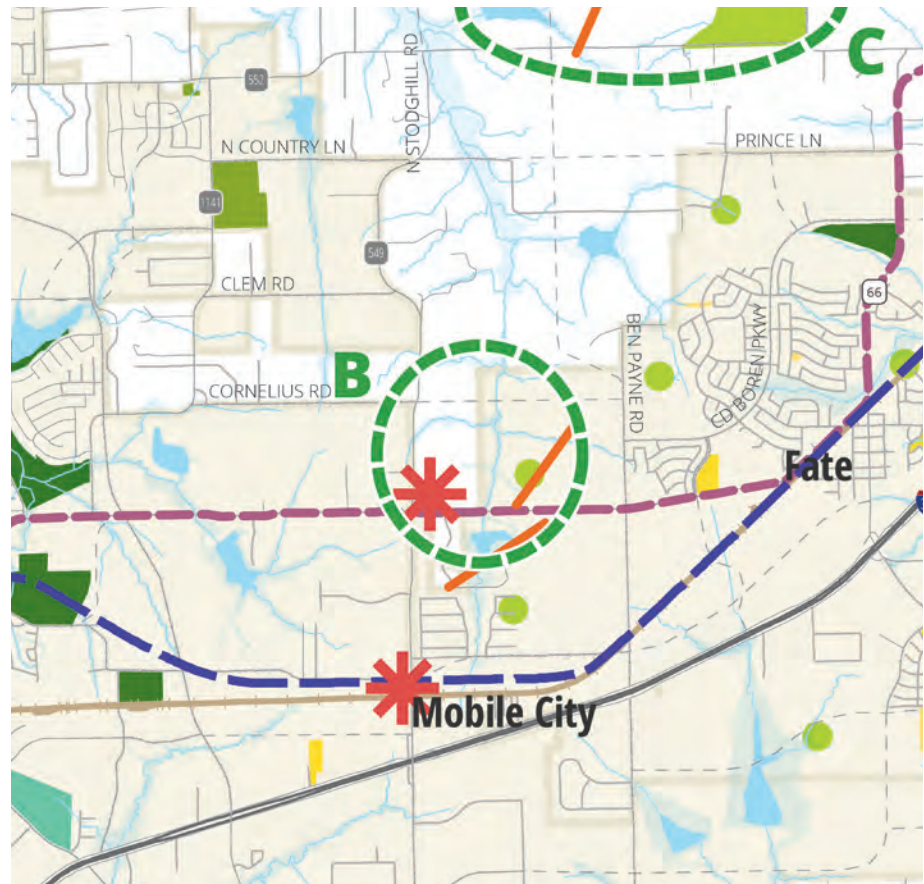
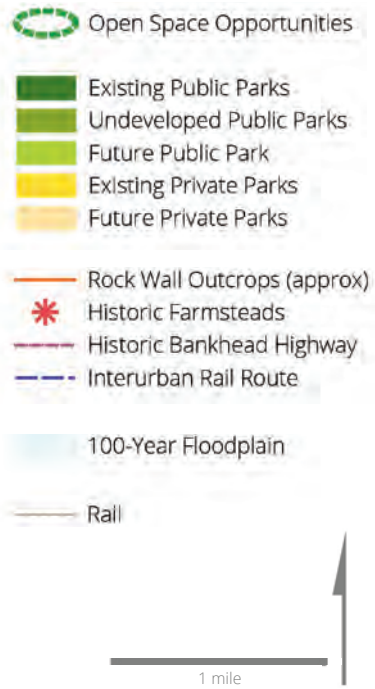
Development activity in this area is increasing as Rockwall and Fate continue to grow together. This site provides opportunities to mitigate impacts from surrounding development and add value to adjacent neighborhoods.

### Conservation Priority





Figure 30. Open Space Opportunity B Map and Aerial Photo



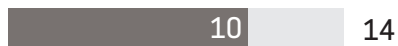
## Opportunity C Cameron Area

### Location / Connectivity



This opportunity is located on the north side of 552 near the county's northern edge in Fate's ETJ. The general area includes the NRCS lake (Crenshaw Lake) and the Cameron family property. The site is not included as a future park site in Fate's draft Park Master Plan, but could be added in a future update as growth extends into the area. It is accessible via FM552, but does not have strong trail connections at this time.

### Ecology / Environment



The portion of this site containing the NRCS lake provides strong environmental and ecology opportunities. This area is in the upper middle of NCTCOG's VEIL score brackets.

### History / Culture



The section of the rock wall that was featured in the History Channel's 2014 documentary is located on the Cameron tract. The Cameron family has a strong history in the county and has been a vocal supporter of open space preservation.

### Recreation



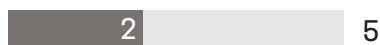
The site's topography and characteristics provide ample opportunities for all types of recreational activities and facilities.

### Ownership



There are limited land owners to coordinate with for this area. The Cameron family has been an advocate of preserving open space and the character of Rockwall County.

### Development Pressure



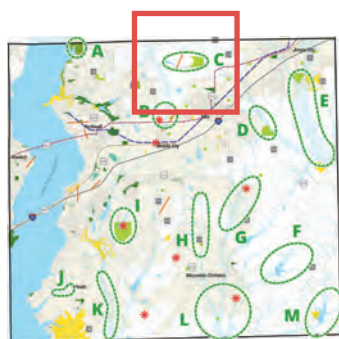
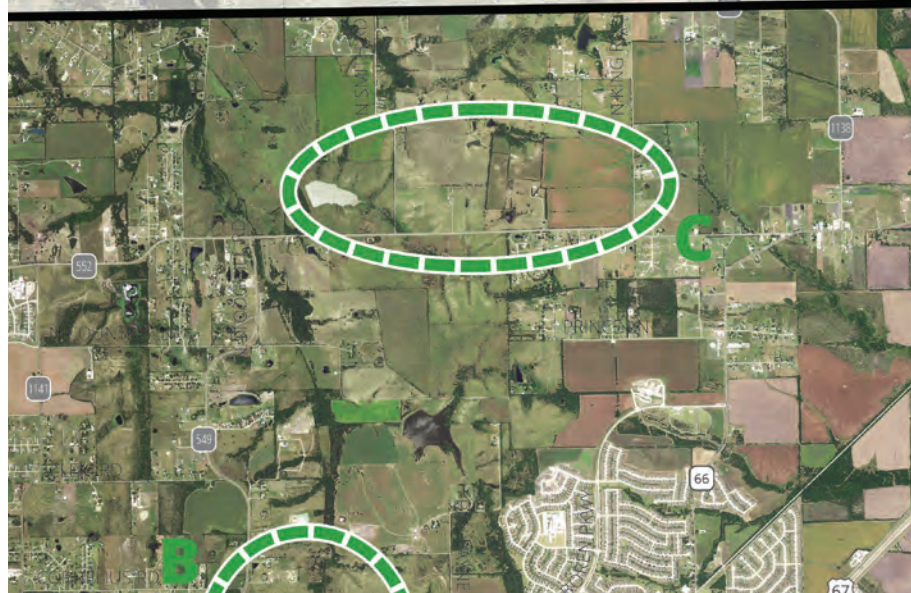
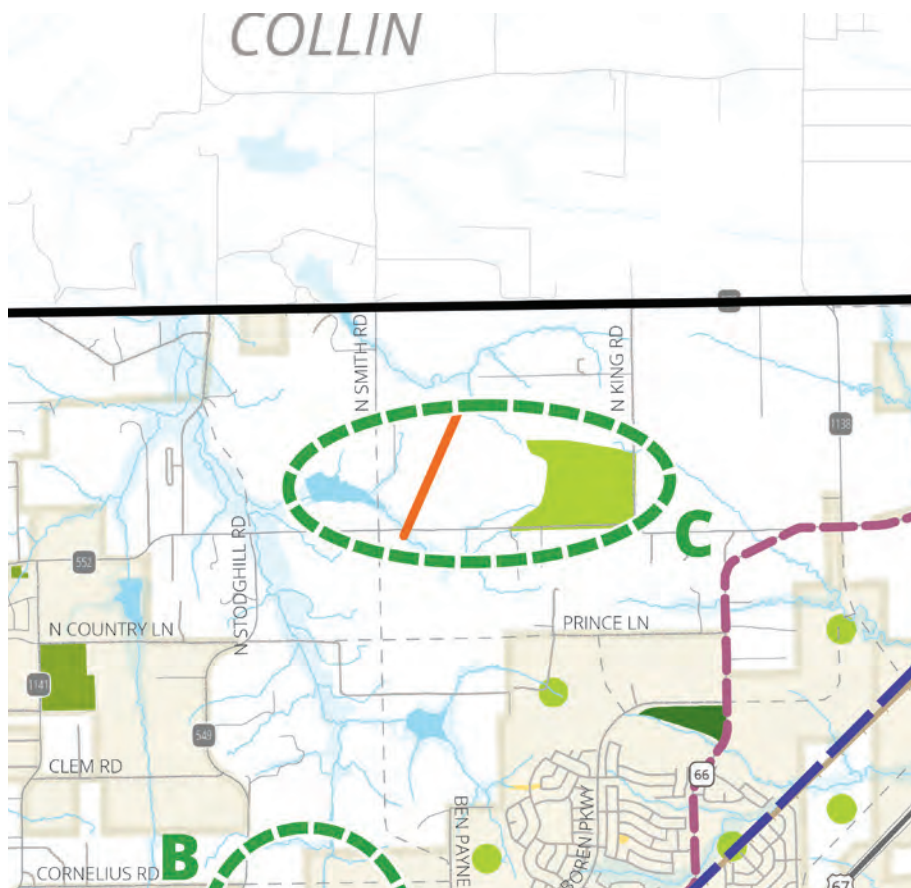
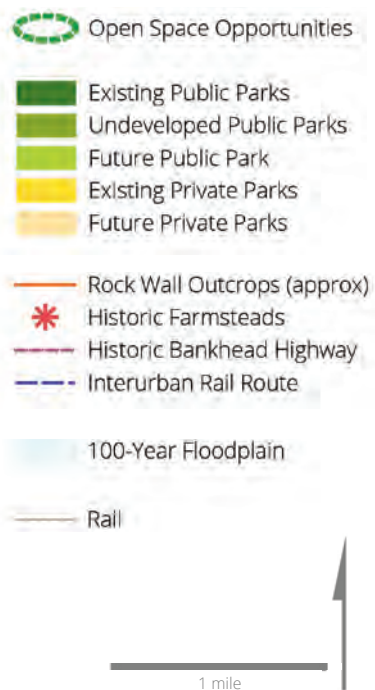
Development activity in this area is increasing as Rockwall and Fate continue to grow together. The NRCS lake area presents opportunities to mitigate impacts from surrounding development when it occurs, and a large open space amenity in the area would enhance property values in the vicinity.

### Conservation Priority





Figure 31. Open Space Opportunity C Map and Aerial Photo





## Opportunity D

### Fate Community Park Area

#### Location / Connectivity



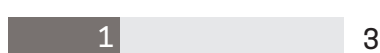
This site is located on the eastern edge of Fate where several creeks, floodplain areas and Oncor easements all intersect. It has been included in Fate’s most recent draft of their Park Master Plan as a “Community Park”. The central location in the county combined with the natural assets and proximity to several of the proposed regional trail corridors make it an ideal location for an open space amenity that also serves as a major trailhead—a hub to trail “spokes” to other parts of the county.

#### Ecology / Environment



The area presents some opportunities for stormwater management and habitat preservation, but is not as strong as some of the other opportunity areas. This area is in the lower middle of NCTCOG’s VEIL score brackets.

#### History / Culture



The area offers some scenic views and natural habitat, but does not have any historic or cultural value.

#### Recreation



The site’s topography and characteristics provide ample opportunities for all types of recreational activities and facilities. If the regional trail system is built, this location is an ideal location for a trailhead that provides access to multiple trail segments and could potentially provide recreational amenities and facilities that serve cyclists, runners and others using the various trails.

#### Ownership



This opportunity area is divided between multiple land owners, but each of the tracts is large. Land in this part of the county is less expensive than land further west.

#### Development Pressure



Development pressure in this area is increasing, but is not as active as other parts of the county. A large open space amenity in this area could enhance property values in surrounding neighborhoods and potentially a broader portion of the county if it does develop into the central trailhead of a countywide trail network.

#### Conservation Priority

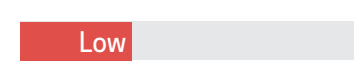
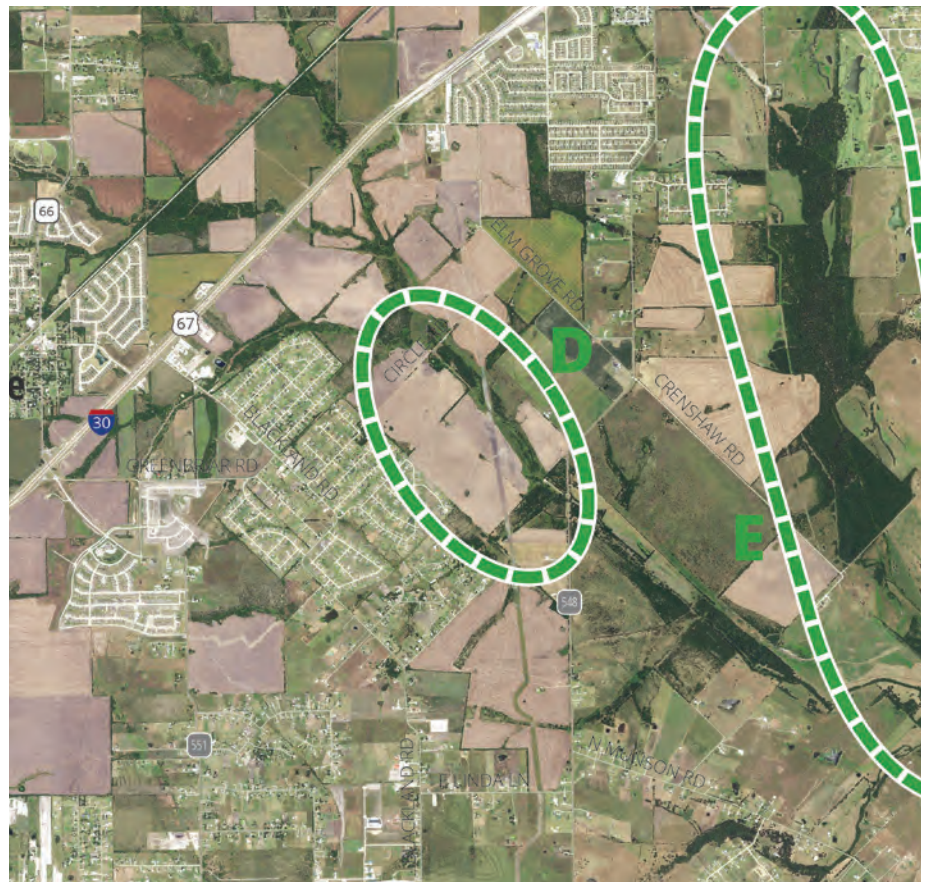
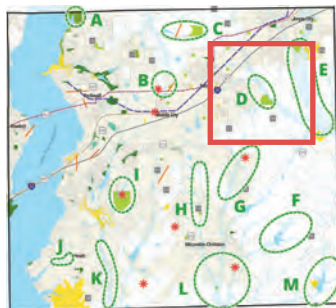
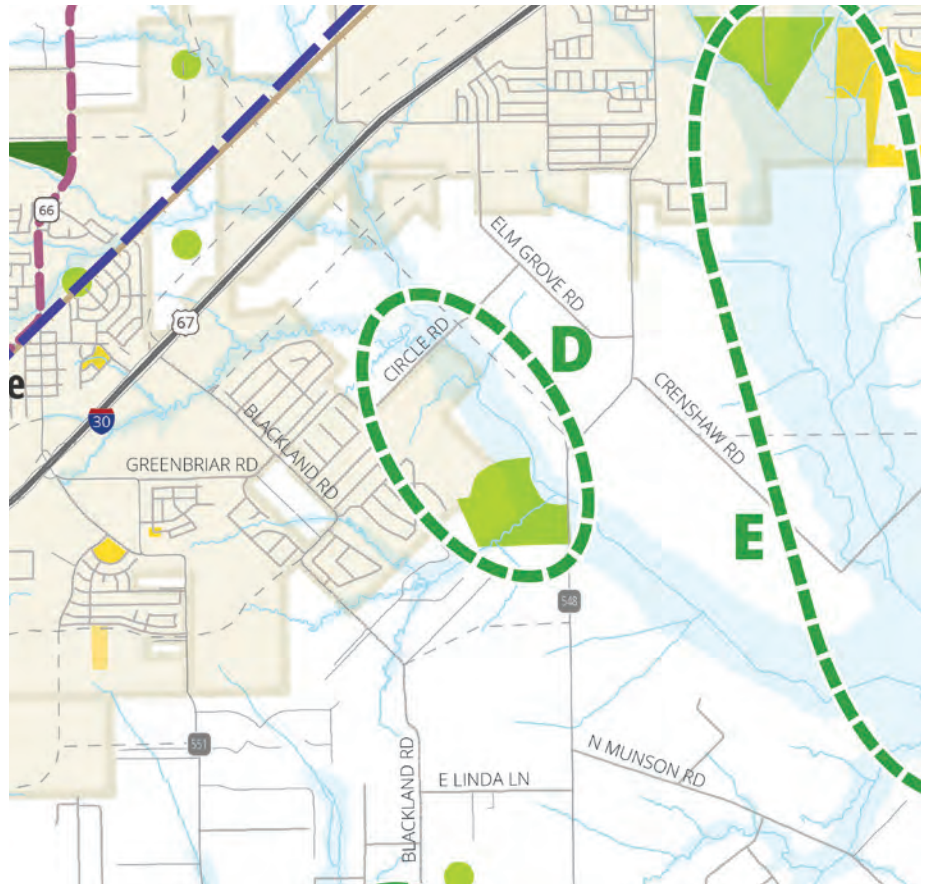
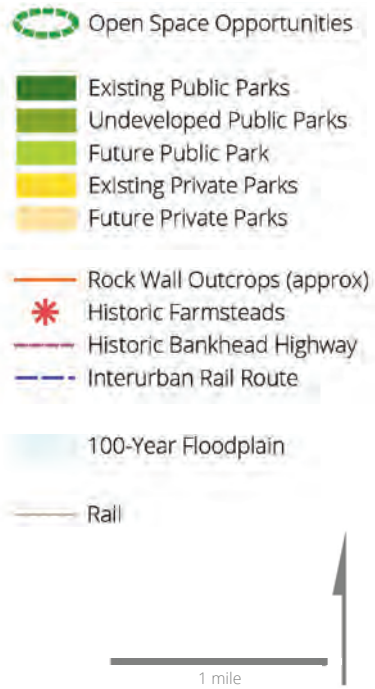


Figure 32. Open Space Opportunity D Map and Aerial Photo



## Opportunity E

### Royse City/Nature Preserve Area

#### Location / Connectivity



The large swath of land extending from the lower part of Royse City southward along the floodplain area provides the largest open space opportunity in the county. Access to the area is currently somewhat limited, but future road expansions are planned and the area could also be served in the future by a trail segment running along the existing north/south Oncor easement. Additionally, Sabine Creek Ranch, a privately-owned property (mostly within floodplain) that is used for camps and retreats, falls partially within the opportunity area and could form part of a link to Opportunity Area D.

#### Ecology / Environment



This is an essential corridor in terms of water quality, flood control and ecosystem value. The floodplain has significant tree canopy, serving as one of the most varied and robust habitats in the county. Efforts should be made to plan and protect this area before development pressure increases. This area is in the lower middle of NCTCOG's VEIL score brackets today, but can be expected to increase in priority as development begins to occur in the vicinity.

#### History / Culture



The site does not provide much in terms of history and culture, but it does offer scenic views and some of the best tree canopy, animals and other wildlife in the county.

#### Recreation



The site's topography and characteristics provide ample opportunities for all types of recreational activities and facilities. Trails and other recreational facilities in this area would benefit from the dense forest cover, which is a rarity across the county. Depending on the size of the open space, amenities included on this site could range from passive fields, nature trails and educational facilities to mountain bike trails and camping facilities. This could offer one of the more diverse visitor experiences in the region. A possible tie-in with Sabine Creek Ranch could provide additional recreational opportunities.

#### Ownership



This opportunity area is divided between multiple land owners, but many of the tracts are large. Land in this part of the county is less expensive than property in other parts of the county, especially the parcels that are primarily floodplain.

#### Development Pressure



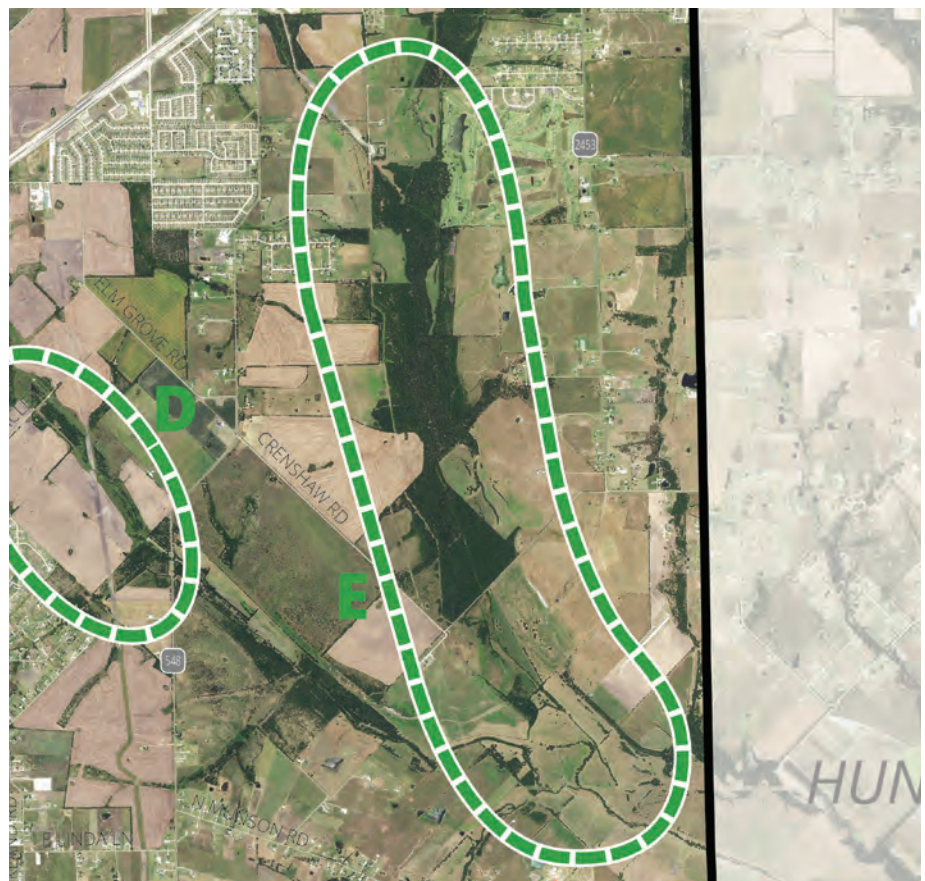
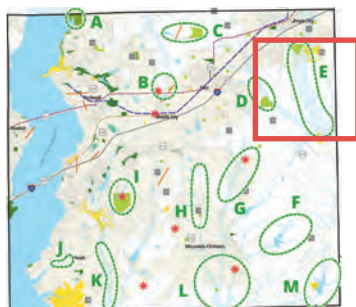
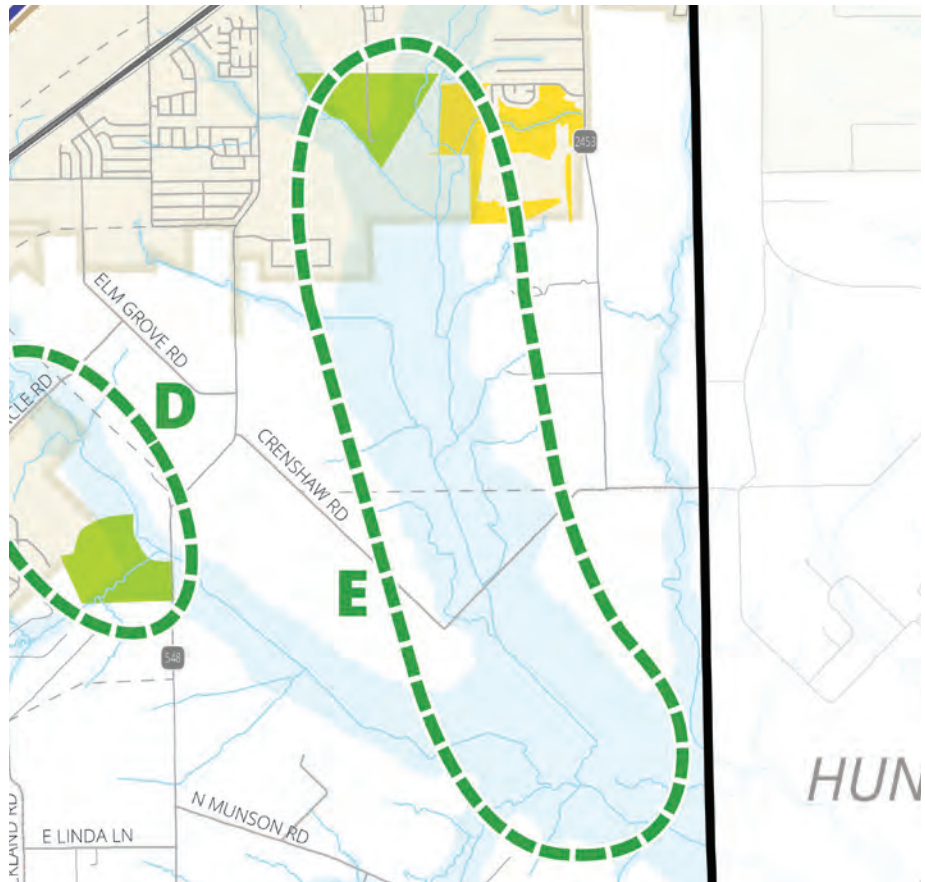
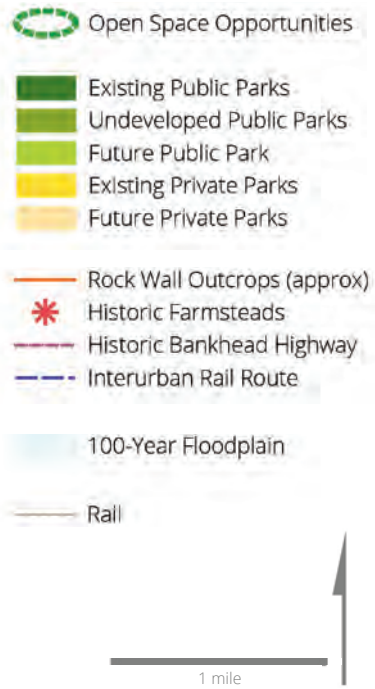
Development activity in this area is slow, as the growth in the county has not made it this far east. When development occurs, this area can serve as a buffer to mitigate impacts from surrounding development and preserve water quality and habitat.

#### Conservation Priority





Figure 34. Open Space Opportunity E Map and Aerial Photo



## Opportunity F

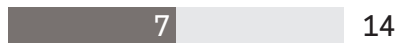
### NRCS Lake 13 Area

#### Location / Connectivity



This site is located in the general vicinity of NRCS Lake 13 northwest of FM548 in the southeastern portion of the county and eastern edge of McLendon-Chisholm's ETJ. This area could be a valuable link between two other open space opportunities—the Davenport property in McLendon-Chisholm and the large floodplain forest south of Royse City. The site is accessible via FM548, but could also be accessed via portions of the future countywide trail network (proposed trail segments 2 and 3)

#### Ecology / Environment



The portion of this site containing the NRCS lake provides strong environmental and ecology opportunities. This area is in the lower part of NCTCOG's VEIL score brackets today, but can be expected to increase in priority as development begins to occur in the vicinity.

#### History / Culture



The Tate family farm, one of the county's historic farmsteads and more prominent ranches is still operating and located in the western portion of this area.

#### Recreation



The area provides some nice views and an environment ideal for horseback riding. Citizen surveys and stakeholder discussions indicated there is interest in forming a more expansive network of equestrian trails through this part of the county.

#### Ownership



The Tate family owns parcels on the western edge of this opportunity area. There are two large tracts to the northeast of the Tate property that are owned by developers. Discussions with McLendon-Chisholm representatives indicated that development proposals have been discussed in the past, but nothing has materialized at this time.

#### Development Pressure



Land in this area has been secured by developers, but development activity and discussions with the city have been limited. This is an ideal time to approach the land owners and developers in this area and discuss the benefits and opportunities related to creating public open space and trails in this area.

#### Conservation Priority

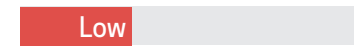
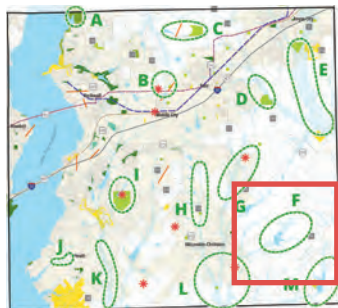
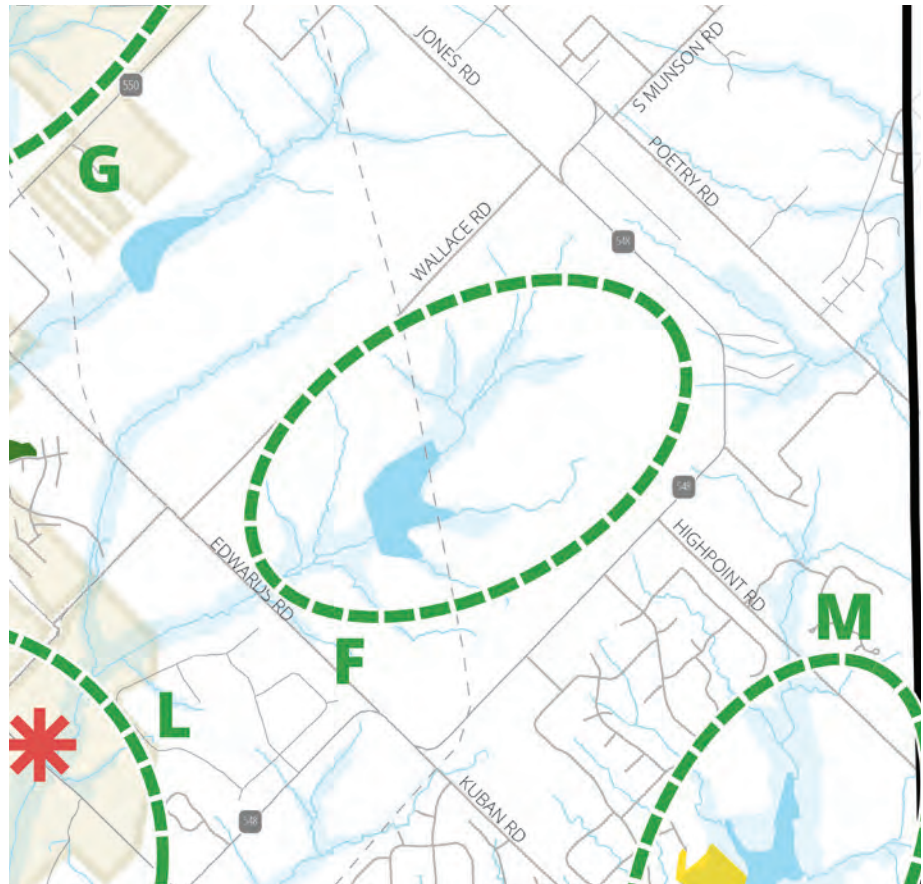
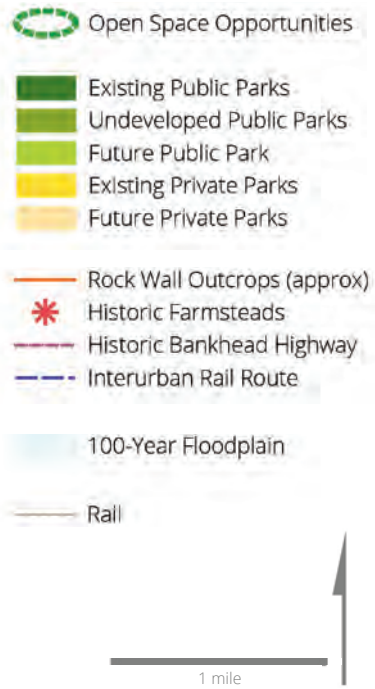




Figure 35. Open Space Opportunity F Map and Aerial Photo





## Opportunity G

### Zollner-Brooks Area

#### Location / Connectivity



The property is centrally located within the county, south of SH276 and just northwest of FM550. The area is adjacent to a north-south Oncor easement and contains a riparian corridor leading south to McLendon-Chisholm, which are ideal corridors for future trails. A community-size park in this location would be well-positioned to serve the eastern part of the Rockwall ETJ.

#### Conservation Priority



#### Ecology / Environment



Given its position at the headwaters of Hackberry Creek (on both the east and west sides) and the limited development and encroachment of the creek, it is a prime location for regional detention strategies that complement future development while also serving as a quality buffer zone and wildlife habitat. Regional detention areas are best located adjacent to the floodplain near the top of the watershed. This area is in the lower part of NCTCOG's VEIL score brackets today, but can be expected to increase in priority as development begins to occur in the vicinity.

#### History / Culture



A significant portion of this area is owned by the Zollner-Brooks family, and is one of the historic farmsteads in the county. The area offers some scenic views as well.

#### Recreation



The site's topography and characteristics provide opportunities for many types of recreational activities and facilities. This area could also become part of Trail Segment 3.

#### Ownership



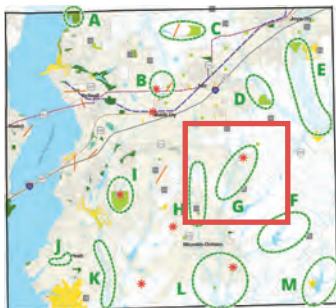
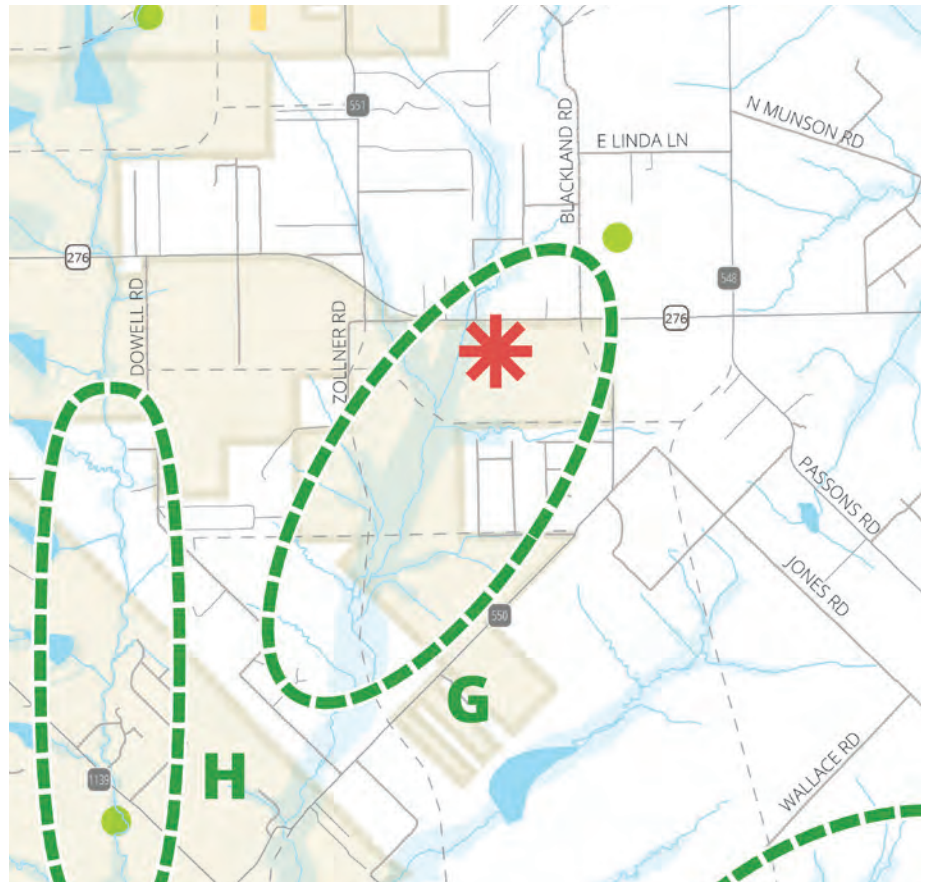
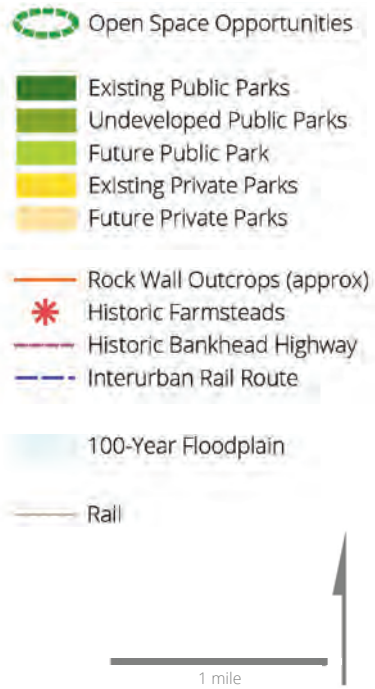
This area includes a limited number of land owners and is focused around a large tract owned by a single family with strong ties to the area and to Rockwall history (Zollner-Brooks).

#### Development Pressure



This area is experiencing a moderate amount of development pressure, and would require a significant alteration of floodplain, natural areas and wetlands to be developed.

Figure 36. Open Space Opportunity G Map and Aerial Photo



## Opportunity H

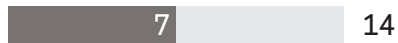
### NRCS Lakes Corridor

#### Location / Connectivity



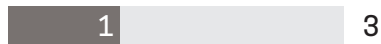
This opportunity area includes a series of NRCS lakes in the Big Brushy Creek watershed running south from SH 276 down through the center of the county to McLendon-Chisholm.

#### Ecology / Environment



Retrofits to these NRCS lakes offer opportunities to increase their ecological function, allowing them to better support native plant and wildlife. This area is in the lower part of NCTCOG's VEIL score brackets today, but can be expected to increase in priority as development begins to occur in the vicinity.

#### History/Culture



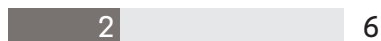
This area does not provide much in terms of historic or culture value, but does offer some scenic views and lake-oriented character.

#### Recreation



The string of NRCS lakes in close proximity to each other combined with the stream corridor provides a unique opportunity to connect multiple lake-oriented opportunities together with a riparian-focused trail.

#### Ownership



There are multiple land owners along this corridor that would need to be contacted and coordinated with.

#### Development Pressure



Development pressure along this corridor is fairly low, as most of the surrounding area has already been developed as large residential lots.

#### Conservation Priority

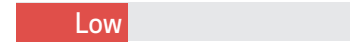
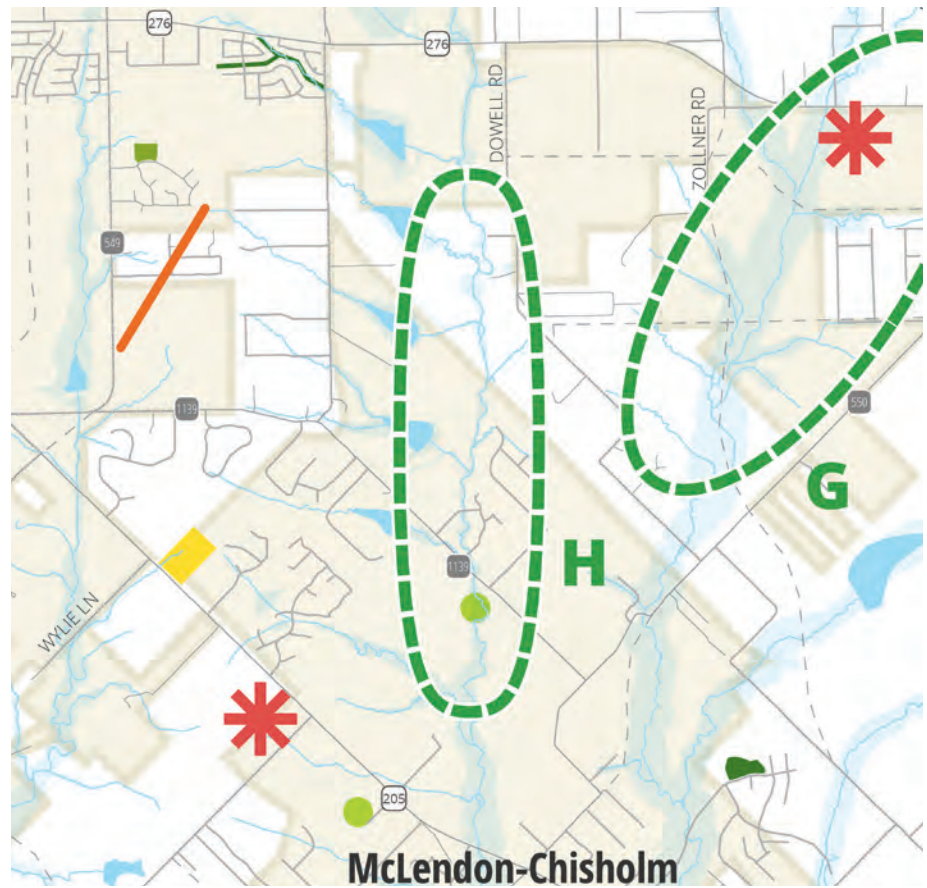
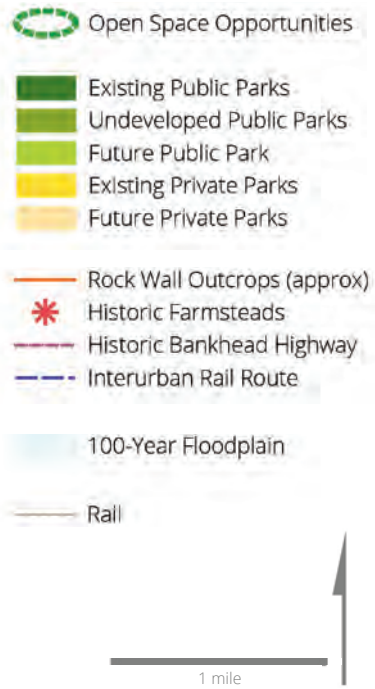




Figure 37. Open Space Opportunity H Map and Aerial Photo



## Opportunity I Wallace Preserve Area

### Location / Connectivity



This site is located in the southern portion of Rockwall south of FM1139, in the general vicinity of the Wallace Family Preserve and NRCS lake. The area is shown in Rockwall's 2010 Master Plan as a future community park, but land has not yet been acquired by the city. The area is accessible via several roadways and will be connected via future trail systems.

### Ecology / Environment



There is a small area of undisturbed Texas blackland prairie on the site, which is important habitat for a variety of native fauna. Retrofitting the NRCS lake can improve its habitat value and benefit surrounding land. The naturally vegetated floodplain running through this property is essential to the surrounding area's ecological health and water management. This area is in the lower middle part of NCTCOG's VEIL score brackets.

### History / Culture



The Wallace Preserve is the site of a historic farmstead, parts of which could be preserved as an educational and cultural amenity. The site also boasts some of the most scenic views in the county.

### Recreation



The NRCS lake and combination of flat areas with sloping topography provide opportunities for passive fields, trail systems and other recreational facilities. This site also provides some of the most scenic views of Lake Ray Hubbard to the west, which should be considered in future master planning and programming.

### Ownership



This area includes a limited number of land owners and is focused around a large tract owned by a single family with strong ties to the area and to Rockwall history (Wallace). The City has a 212 agreement with the owner for conservation purposes.

### Development Pressure



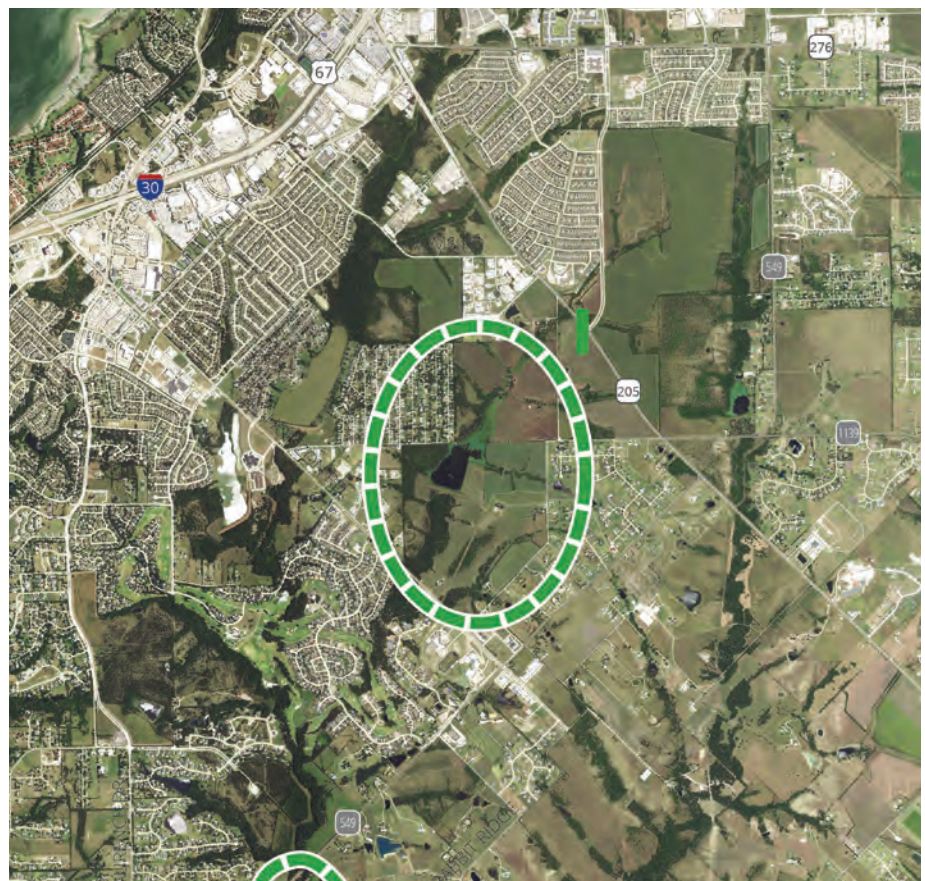
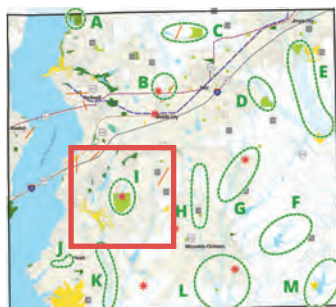
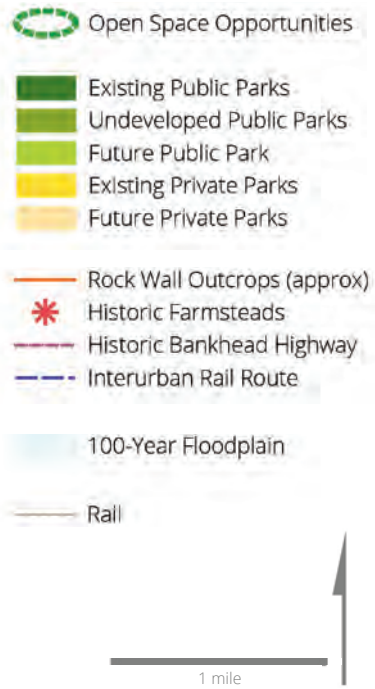
The majority of the area surrounding this property has been developed. Maintaining the property as open space in its natural state will help mitigate effects of the adjacent development over the long-term.

### Conservation Priority





Figure 38. Open Space Opportunity I Map and Aerial Photo





## Opportunity J

### Terry Lane Corridor

#### Location / Connectivity



This opportunity is generally located along Terry Lane from the eastern shore of Lake Ray Hubbard over to the site of Rockwall-Heath High School. The area is fairly well accessible via existing roads, but needs improved trail access and connections to Terry Park.

#### Ecology / Environment



This is a significant riparian corridor that presents opportunities for green infrastructure to reduce the amount of sediment and debris filtering into Lake Ray Hubbard. The proximity to the high school provides good opportunities for pilot projects and educational projects. This area is in the upper middle part of NCTCOG's VEIL score brackets.

#### History / Culture



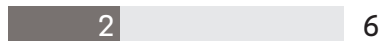
The riparian zone is a potentially rich area for education and pilot projects. The existing house on the 44-acre tract on the north side of Terry Lane could be turned into a museum or research facility.

#### Recreation



The site's topography and characteristics provide opportunities for certain types of recreational activities and facilities, especially those with a nature observation component.

#### Ownership



The City of Heath/EDC owns the land behind Rockwall-Heath High School. The 44-acre tract on the north side of Terry Lane has been for sale for some time; the land is expensive, especially when compared to eastern parts of the county.

#### Development Pressure



The majority of the area surrounding this property has been developed. Maintaining the property as open space in its natural state will help mitigate effects of the adjacent development over the long-term.

#### Conservation Priority

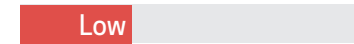
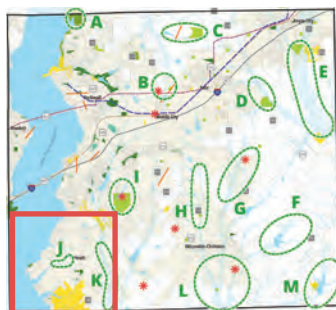
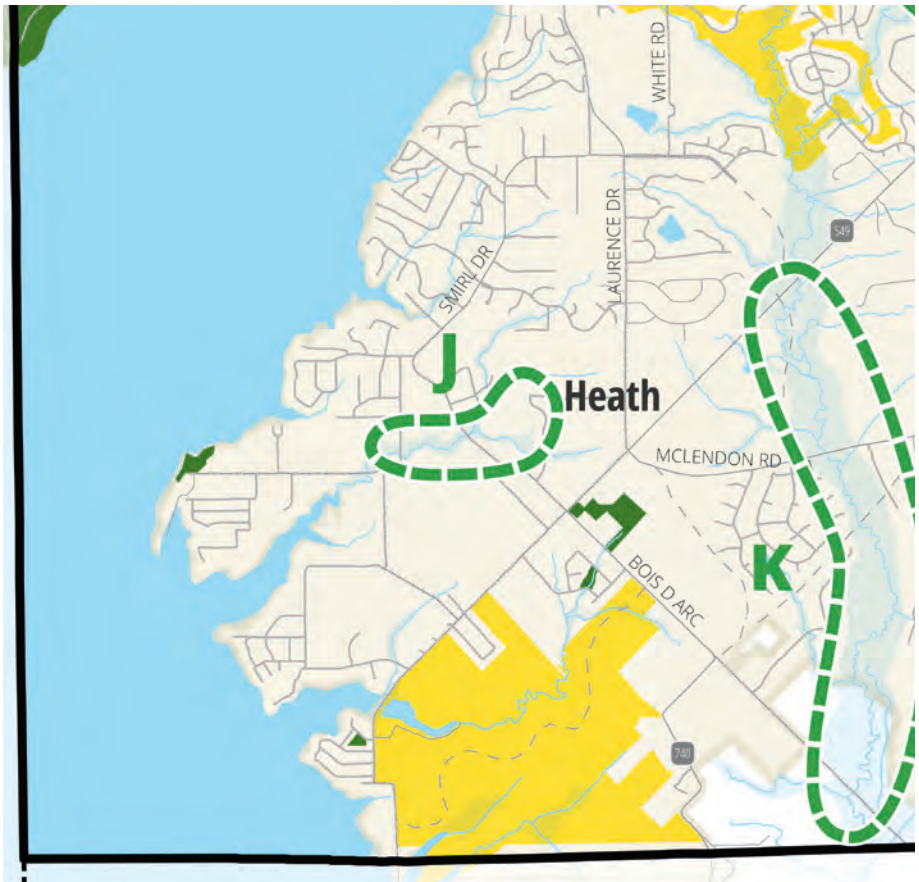
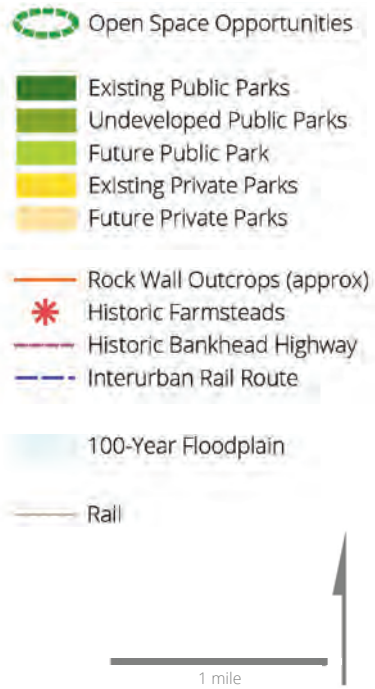


Figure 39. Open Space Opportunity J Map and Aerial Photo



Opportunity K  
Buffalo Creek Floodplain Corridor

Location / Connectivity



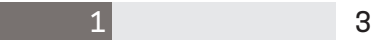
This area is in the city of Heath and generally includes the area containing the Buffalo Creek floodplain flowing from north to south toward the southern border of the county. The area is accessible via existing subdivisions on both sides of the corridor, and has a few existing trails already in place. An existing Oncor utility easement also runs through a portion of this site.

Ecology / Environment



The downstream portion of Buffalo Creek (as well as Little Buffalo Creek and Brockway Branch, which feed into Buffalo Creek) has not yet been encroached upon. This is a key area for floodplain preservation. Maintaining a healthy, vegetated riparian buffer will benefit stream ecology as well as provide space for useful connectivity to future developments via greenway trails. This area is in the upper middle part of NCTCOG’s VEIL score brackets.

History / Culture



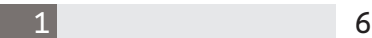
This area does not provide much in terms of historic or culture value, but does offer some scenic views and natural character that can complement the nearby residential development.

Recreation



Recreational opportunities in this area are limited to trails, picnic tables and nature-focused opportunities.

Ownership



This area has multiple landowners, but the majority of the land is floodplain. There should be opportunities to work with the city, Oncor and adjacent landowners to incorporate trails and green infrastructure buffers along this corridor with minimal conflict.

Development Pressure



The majority of the area surrounding this property has been developed. Adding trails and green infrastructure retrofits will add amenities for nearby residents and will help mitigate effects of the adjacent development over the long-term.

Conservation Priority

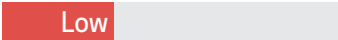
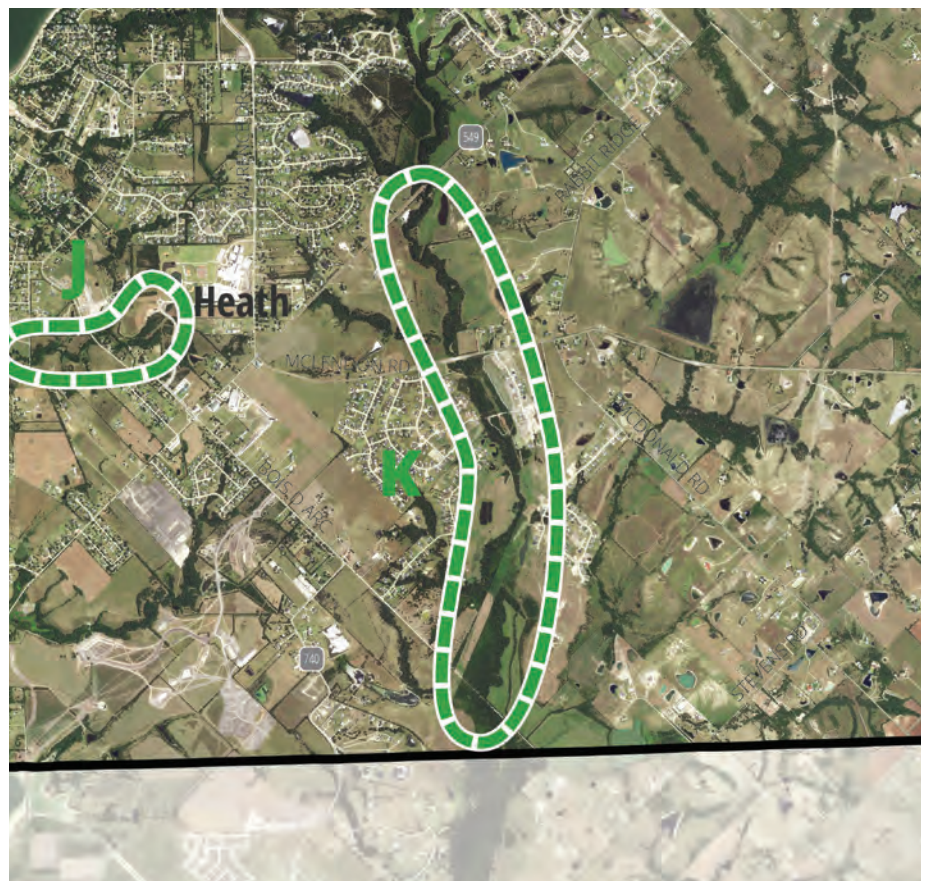
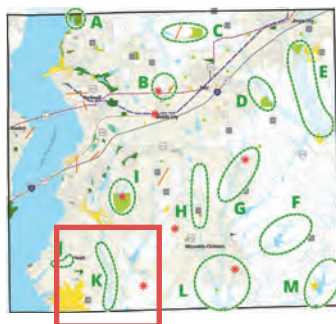
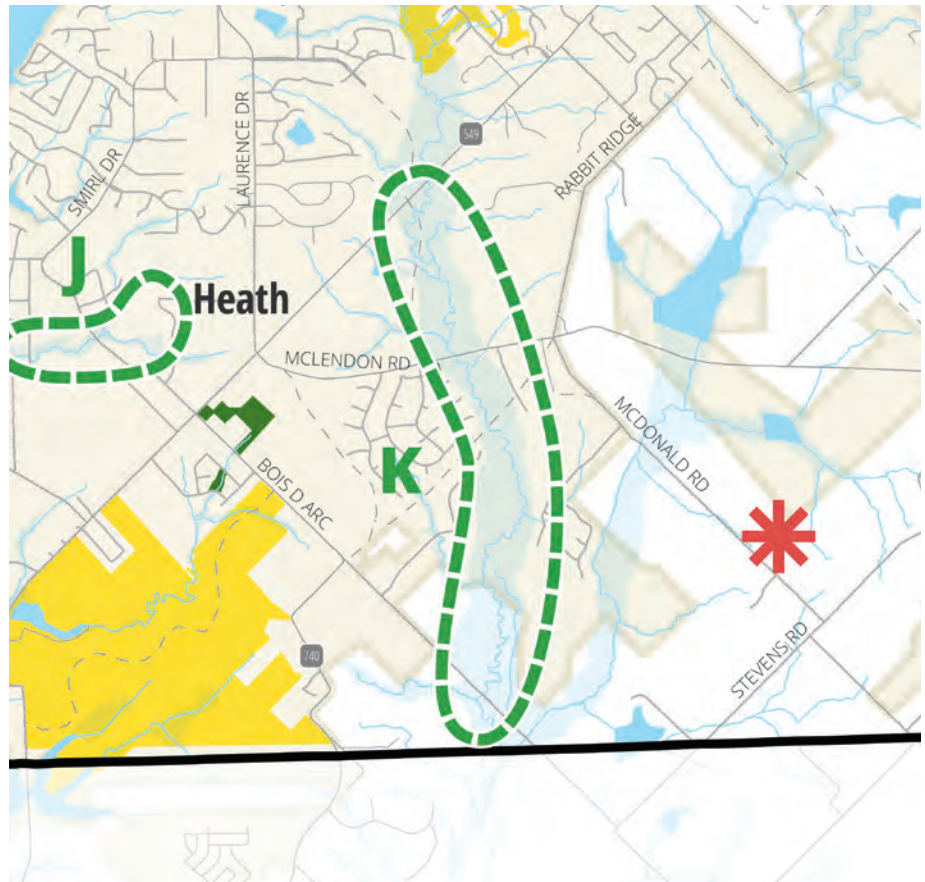
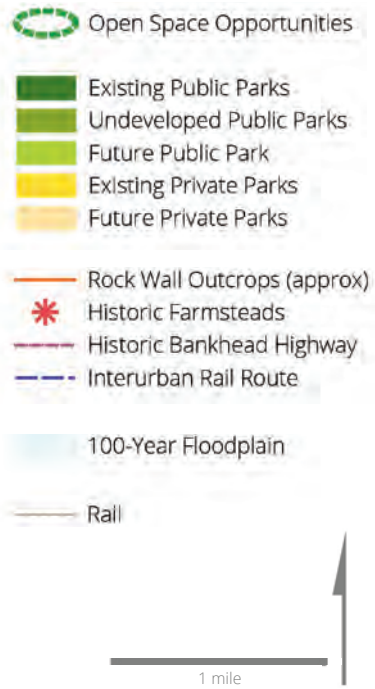




Figure 40. Open Space Opportunity K Map and Aerial Photo



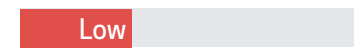
## Opportunity L Davenport Area

### Location / Connectivity

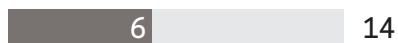


The property is situated at the southern edge of Rockwall County in McLendon-Chisholm. The primary property owner in this area is the Davenport family. Access and infrastructure in the area is somewhat limited today, but will improve as development begins to increase. There may be opportunities to connect with an equestrian trail to the northeast and riparian trails to the north. This area also provides an opportunity to make a regional trail connection with Kaufman County to the south.

### Conservation Priority

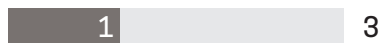


### Ecology / Environment



This is an especially important riparian zone where three major creeks meet. The majority of the site is floodplain, and preserving the integrity of this floodplain environment is essential to the ecology and hydrology of the surrounding area. This area is in the lower part of NCTCOG's VEIL score brackets today, but may increase in priority in the future if more dense development starts to occur in the vicinity.

### History / Culture



The peninsula above the floodplain provides ideal elevation and a panoramic view corridor. It is a useful site for a nature preserve with recreational and equestrian trails.

### Recreation



The site provides some unique recreation opportunities for nature-oriented activities. Depending on the area considered, there could be opportunities for fields and other recreational facilities as well.

### Ownership



This area includes a limited number of land owners and is focused around a large tract owned by a single family (Davenport). McLendon-Chisholm staff have indicated that some conversations have happened regarding sale of the land for development, but nothing has been finalized.

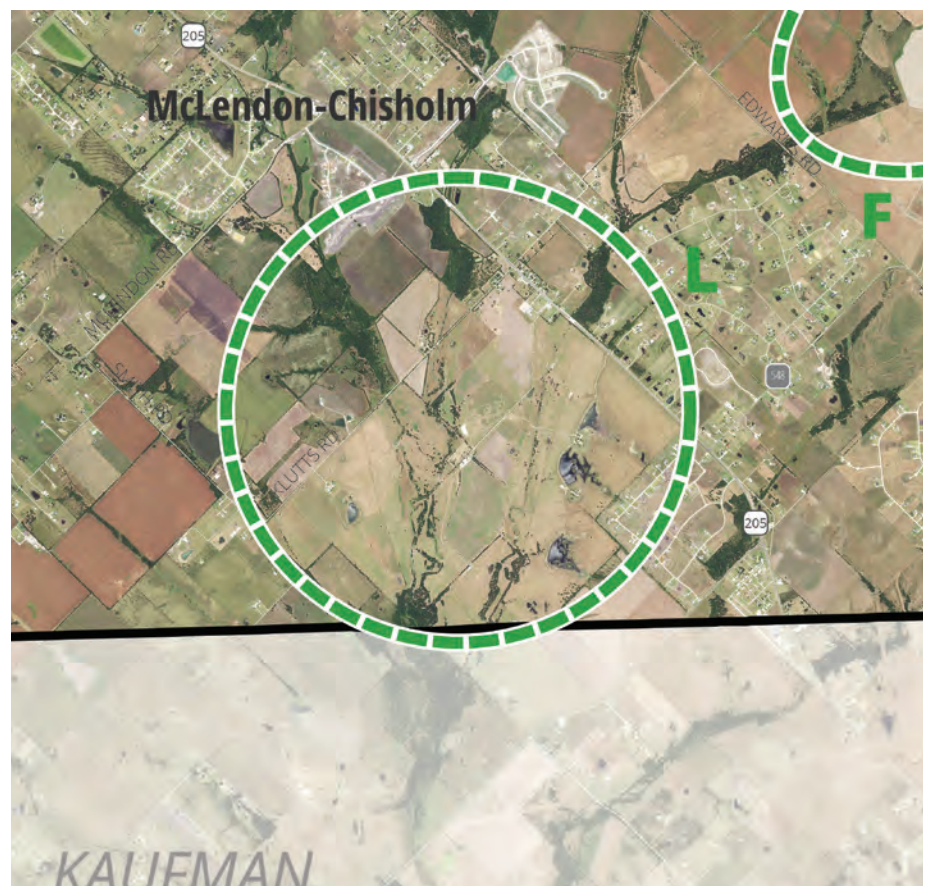
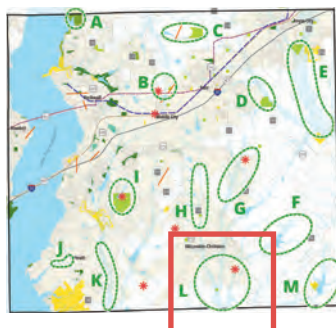
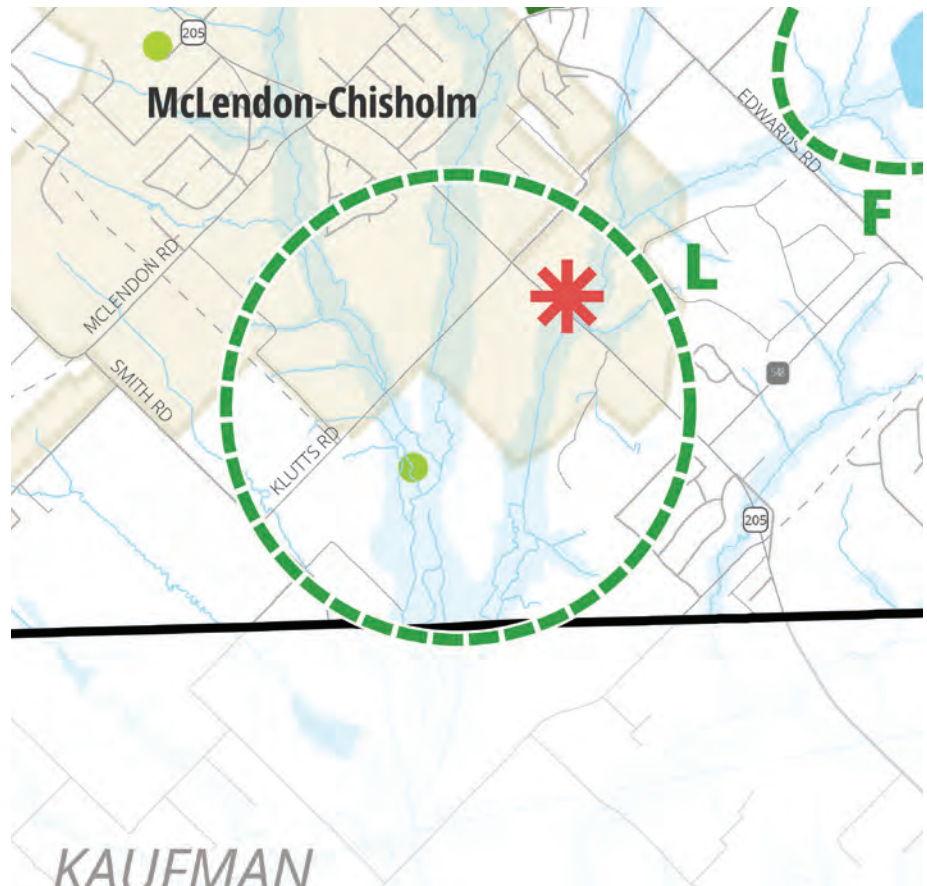
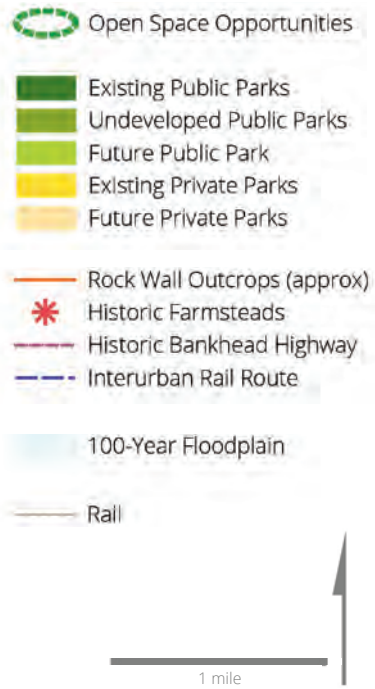
### Development Pressure



This area is relatively undeveloped due to its location in the southern limits of McLendon-Chisholm and the county, as well as the amount of floodplain on the site. While the pressure to develop is likely low, this is a site that is ideal for open space preservation and should be investigated for a potential conservation easements before development pressure increases.



Figure 41. Open Space Opportunity L Map and Aerial Photo





## Opportunity M

### High Point Ranch Area

#### Location / Connectivity

1

4

Located in the unincorporated southeast corner of Rockwall County, the High Point Prairie Preserve is a 558-acre nature preserve with a residential development subdivision. A conservation easement ensures that 70 percent of land in the subdivision is protected. The area includes an NRCS lake and a creek with undisturbed surroundings. There may be opportunities for a conservation park or other conservation-focused development. This development could be part of a larger system that includes the adjacent counties, making it a candidate to potentially qualify for funding through the NCTCOG.

#### Ecology / Environment

8

14

The combination of forested floodplain, stream corridors, preserved prairie land and an NRCS lake makes for a diverse and rich habitat, the likes of which is rare in North Texas. These same areas also serve important stormwater management and climate mitigation functions.

#### History / Culture

2

3

The property includes the historic Zollner Ranch, settled in 1876 by a German emigrant family. Later generations established a farm, which came to be known as Hobo Farm. From the 1920s through the 1940s, the family employed and housed hundreds of men every year who came from all parts of the country seeking work and a place to stay.

#### Recreation

13

16

The subdivision includes a small park for residents. It is possible that the area could include trails connecting two other nearby opportunity areas. The site is also an excellent location for bird-watching.

#### Ownership

4

6

An existing conservation development and several adjacent tracts in this area are fairly large in size. Land in this part of the county is less expensive than property in other parts of the county, especially the parcels that are primarily in the floodplain.

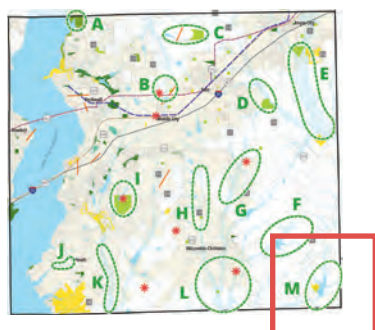
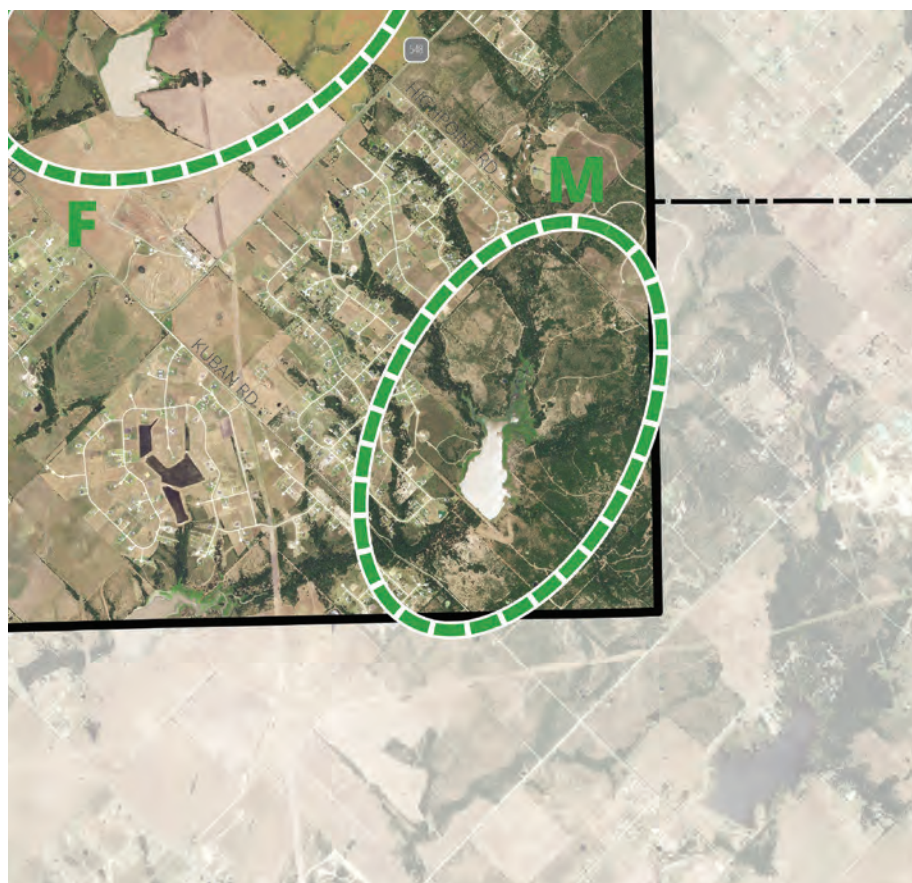
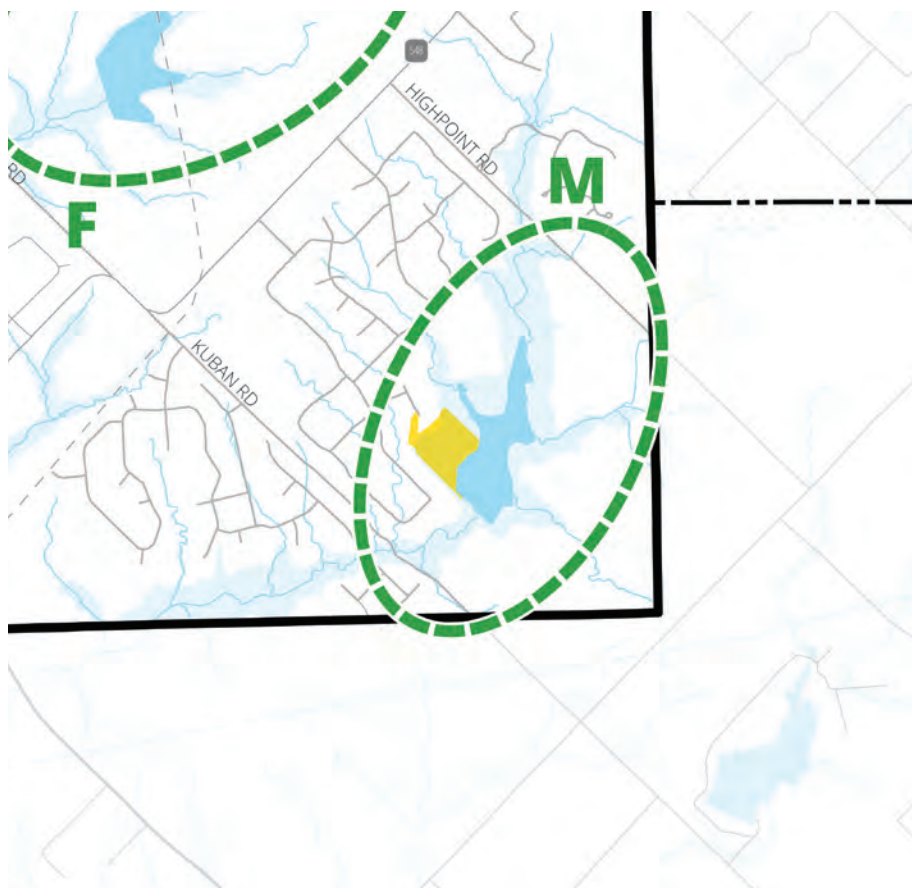
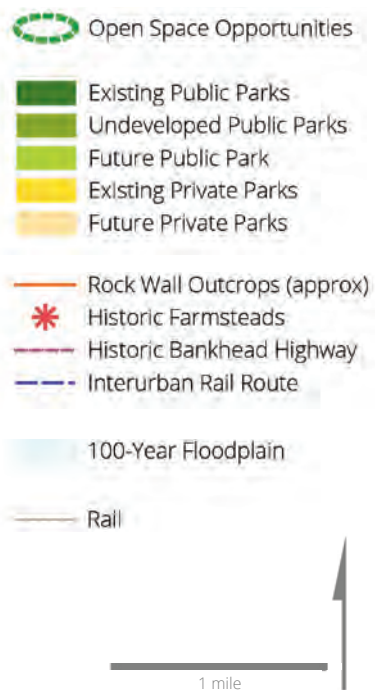
#### Development Pressure

2

5

High Point Prairie includes the only conservation easement in Rockwall County, managed by the Texas Land Conservancy. No land can be developed within the bounds of the conservation easement. The development around the floodplain and stream corridors is planned so that sensitive areas are not encroached upon. Other than the residential development, the area is relatively remote.

Figure 42. Open Space Opportunity M Map and Aerial Photo



## Open Space Amenity Recommendations

All of the identified opportunity areas are considered to be priorities for further consideration. The timing and scope for development of each area will depend in large part on the land owners' willingness to participate in open space conservation or park development, and the willingness and ability of the local municipality and/or the County to fund subsequent planning and construction efforts. Based on the technical assessment and evaluation work completed with this plan, the opportunity areas that graded out the best are:

- B – Stodghill-Fowler Area
- A – Lakeside Park Area
- I – Wallace Preserve Area
- G – Zollner-Brooks Area
- C – Cameron Area
- E – Royse City/Nature Preserve Area

The County should begin by holding site-specific discussions with cities and property owners in the identified opportunity areas to explore interest. With this knowledge, the geographic limits and potential scope for each area can be refined further and opportunities throughout the county can be re-prioritized using that information. The next steps would include development of master plans for the area or areas that appear to have the highest potential for success. Various funding sources can be pursued for completion of subsequent studies, master plans and construction based on the desired vision and functional goals for each particular site.

Wallace Ranch in Western  
Rockwall County





## Implementation: Key Steps for Securing Regional Open Space Amenity Areas

Goal	Key Steps
Complete Park Development Scenarios	<ol style="list-style-type: none"> <li>1. Open discussions with property owners in open space opportunity areas.</li> <li>2. Prepare cost/benefit analyses for park development pursuits deemed feasible.</li> <li>3. Select one or more opportunity areas to progress to more detailed planning and design.</li> </ol>
Establish Park Programming and Concepts	<ol style="list-style-type: none"> <li>1. Organize park planning work sessions with community stakeholders to establish preferred programming elements for selected opportunities.</li> <li>2. Develop detailed master plans and financing strategies for selected opportunities.</li> </ol>







## 6. Trails and Connectivity

The third aim of this plan is to identify corridors that are essential for countywide open space connectivity for non-motorized mobility modes. The ultimate goal is to establish an interconnected countywide trail system with a combination of on- and off-street trails—one that links the cities and key destinations within Rockwall County to one another and ties into the broader North Texas trail network known as the Regional Veloweb. In particular, this means filling in the gaps that persist between each city’s trail system (both existing and planned) and prioritizing connections to population centers and open space amenities.

In its current configuration, Rockwall County is highly car-dependent, meaning use of public open space often requires access to a vehicle. This not only places an undue burden on the segments of the population without such means—including children, the elderly and those who cannot afford to own a car; it also tends to mean that even people who can do so are less likely to make such spaces part of their daily lives. While navigating the county by automobile is easy and straightforward, the same sort of network does not exist for getting around in a non-motorized fashion.

Today, trails are one of the most desired amenities for communities of all sizes nationwide. Investing in a strong network of trails yields returns in a variety of ways. In particular, a successful trail network:

- can increase residents’ time spent outdoors, which can foster environmental awareness and demonstrate to residents the value of preserving open space.
- can improve stress recovery and reduce mental fatigue, by connecting users to nature. In communities where most of the working population commutes to other cities, a trail network linking residential areas with nearby open space can be an important restorative resource.
- creates healthy recreation opportunities by providing people of all ages with attractive, safe, accessible and low- or no-cost places to bird-watch, cycle, walk, hike, jog or skate. Increase in physical activity tends to result in lower overall risk of health problems.
- can have significant economic impact, increasing value and desirability of nearby properties and creating attractive business locations.
- can help reduce vehicle-miles-traveled, resulting in a decrease in air pollution, traffic accidents and traffic congestion.
- can provide safe, alternative routes to school for students who live within walking or biking distance.
- provides opportunities for more social interaction.

Woodland canopy over nature trail near Berry Creek on Tate Farm (facing page)



For the county's trails to be useful in all of these respects, they must be a part of a network that connects people with the places they want to go. This means that plans for parks and other public open spaces—as well as neighborhoods, commercial areas and schools—ought to include trail connections, since a network that links public spaces and trails benefits the users of both. On a countywide level, it also means cities must collaborate to ensure that their trail systems are linked to one another.

## Trail Goals and Priorities

As a part of this planning process, Rockwall County residents and stakeholders were asked for their input on the current state of trail opportunities in the county and their interest in new trail amenities. They were also asked to identify priority trail uses and review possible connections. The takeaways from public forums, surveys, and stakeholder meetings were:

- Trails are the most important open space need for the county.
- The most desired trail types are off-street walking and bicycle trails and nature trails; there is also some interest in equestrian trails.
- Trails are among the top amenities that residents cannot find in Rockwall County.
- Many residents (nearly a third of survey respondents) say they leave the county to use recreational trails such as the White Rock Lake Trail and the Katy Trail in Dallas.
- Input from cyclists and runners emphasized the importance of looped trails.

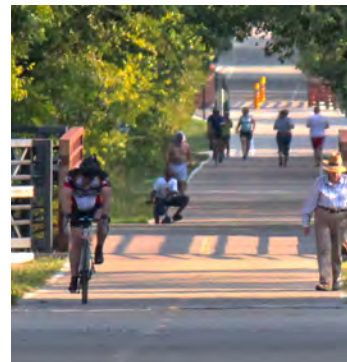
## Goals

- Link together the county's open spaces
- Provide connections between the cities
- Create a safe, comfortable, and useful pedestrian/bicycle network
- Expand opportunities for recreation and enjoyment of nature
- Foster economic growth near trail development

## Priorities

- Establish routes through Rockwall County compatible with the Regional Veloweb framework
- Identify gaps between each city's trail facilities and prioritize bridging those gaps
- Provide convenient connections to schools, parks, libraries, community centers, commercial corridors and neighborhoods

Sopac Trail, Dallas



## Case Study

### Plano Trail System

#### Plano, TX

The city of Plano now boasts more than 70 miles of trails, and continues to expand as demand grows. The city has had success in implementing a trail system in large part because community leaders anticipated growth from Dallas and attempted to establish a useful foundation, by acquiring easements along electric transmission lines, utilizing natural creek corridors, and outlining opportunities for an eventual network of trails.

In 2007, Plano created a trail system planner position to continue the work begun in the 1970s, and to implement an on-street network of trails to make existing off-road trails and green space more accessible. Plano's trails also fit into a larger regional network, following the 2001 Six Cities Trail Plan intended to link trails, open spaces, and population centers, coordinate between each city's trails plan, and establish key trail building guidelines.

- Develop trails in a variety of settings and for a variety of uses.
  - Preserve rights-of-way (ROW) for bike/pedestrian trails along roadways
  - Create trails—including hiking/nature trails—through parks, nature preserves, and along stream corridors
  - Use utility easements where possible for efficient trail connections
  - Locate areas that can accommodate equestrian trails
- Ensure that all trails are planned and designed to minimize conflict points with automobiles, and that adequate signage is provided for both bicyclists and motorists
- In dense population centers, consider implementing separated bike lanes to accommodate bicyclists of all skill levels
- Aim for a fully low-stress bicycle and pedestrian network; any links in the network that are uncomfortable for users damage the usefulness of the network as a whole

## Locations for Trails

A first step in establishing a network of trails for non-motorized use is finding corridors where they already exist. These generally include street and road rights-of-way, rail and utility easement corridors, and riparian zones.

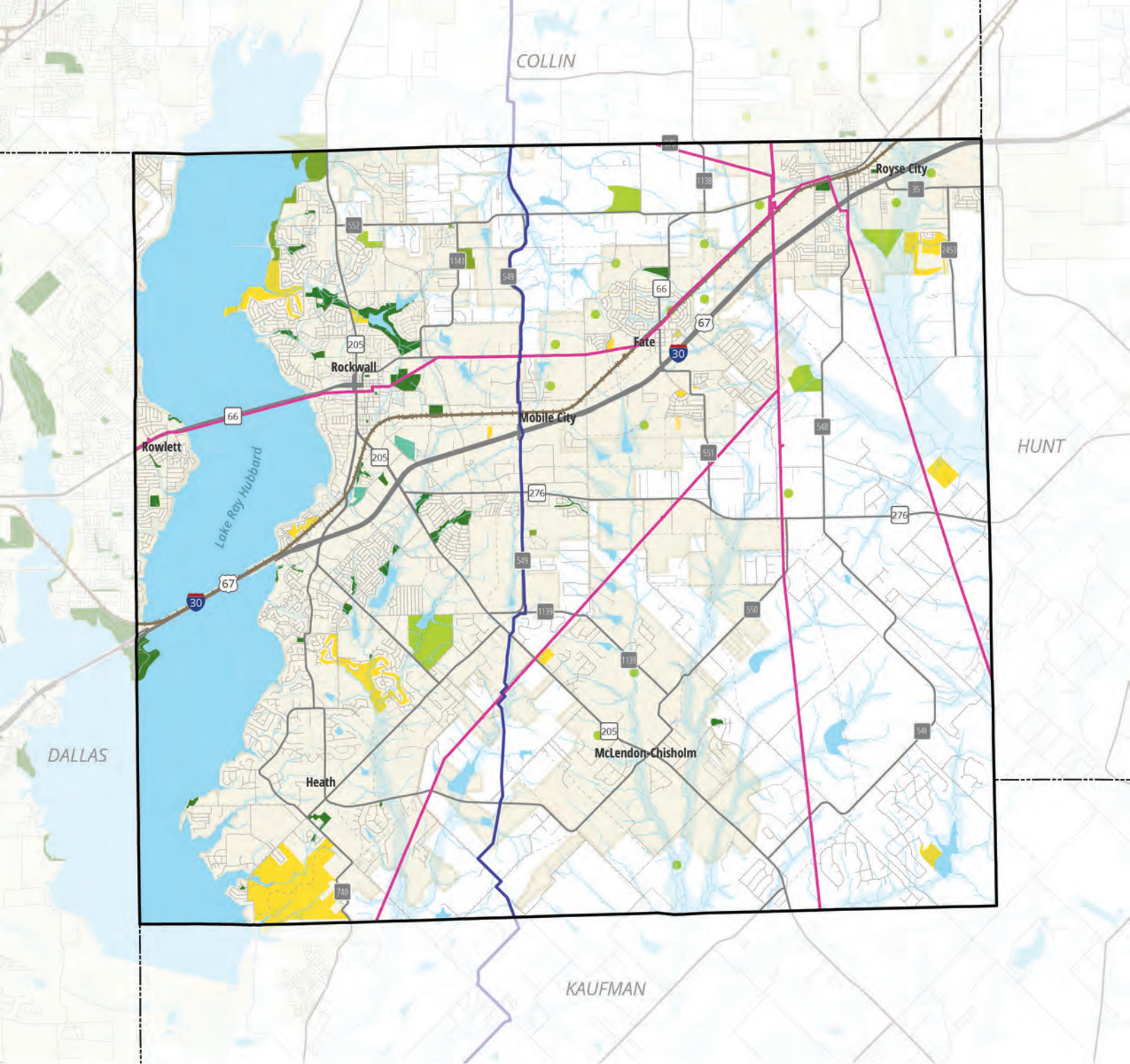
## Streets and Roads

The most visible corridors crisscrossing Rockwall County are its streets and roads. Incorporating pedestrian and bicycle facilities into street/road rights-of-way allows these corridors to serve a broader set of users. Depending on the amount of ROW available, and the makeup of the surroundings, it may be appropriate to add a shared-use path or a separated bike lane.

A shared-use path requires more space, as it is totally separate from the roadway and accommodates both pedestrians and bicyclists. These paths may be included in the Regional Veloweb, provided they meet the connectivity requirements. Separated bike lanes provide additional security and comfort for bicyclists when compared with traditional bike lanes, and they should be incorporated into roadways wherever possible. However, this plan focuses on opportunities for off-street pedestrian/bicycle trails that can complement the on-street bicycle facilities recommended by the 2013 Bicycle Master Plan.

Bike Lane and Sidewalk,  
Richardson





## Corridors

- |   |  |
|---|--|
|  100-Year Floodplain     |  Existing Public Parks    |
|  Electrical Transmission |  Undeveloped Public Parks |
|  NTMWD Utility Easement  |  Future Public Park       |
|  TxDOT Roadways          |  Existing Private Parks   |
|  Rail                    |  Future Private Parks     |



Figure 43. Corridors (facing page)

## Rail Corridors

While many defunct rail lines have been converted to popular “rail trails” in recent years, it is also possible (and increasingly common) to incorporate trails into rail corridors that are still in use. The otherwise unused space along one side of the tracks is converted to a safe and convenient trail route for bicyclists and pedestrians. The design of these rail-with-trail amenities varies, depending on their proximity to trains, the frequency and speed of rail service and a number of other factors. The Rails-to-Trails Conservancy provides planning and design recommendations, as well as extensive studies of these trails nationwide.

### Case Study

#### Katy Trail

Dallas, TX

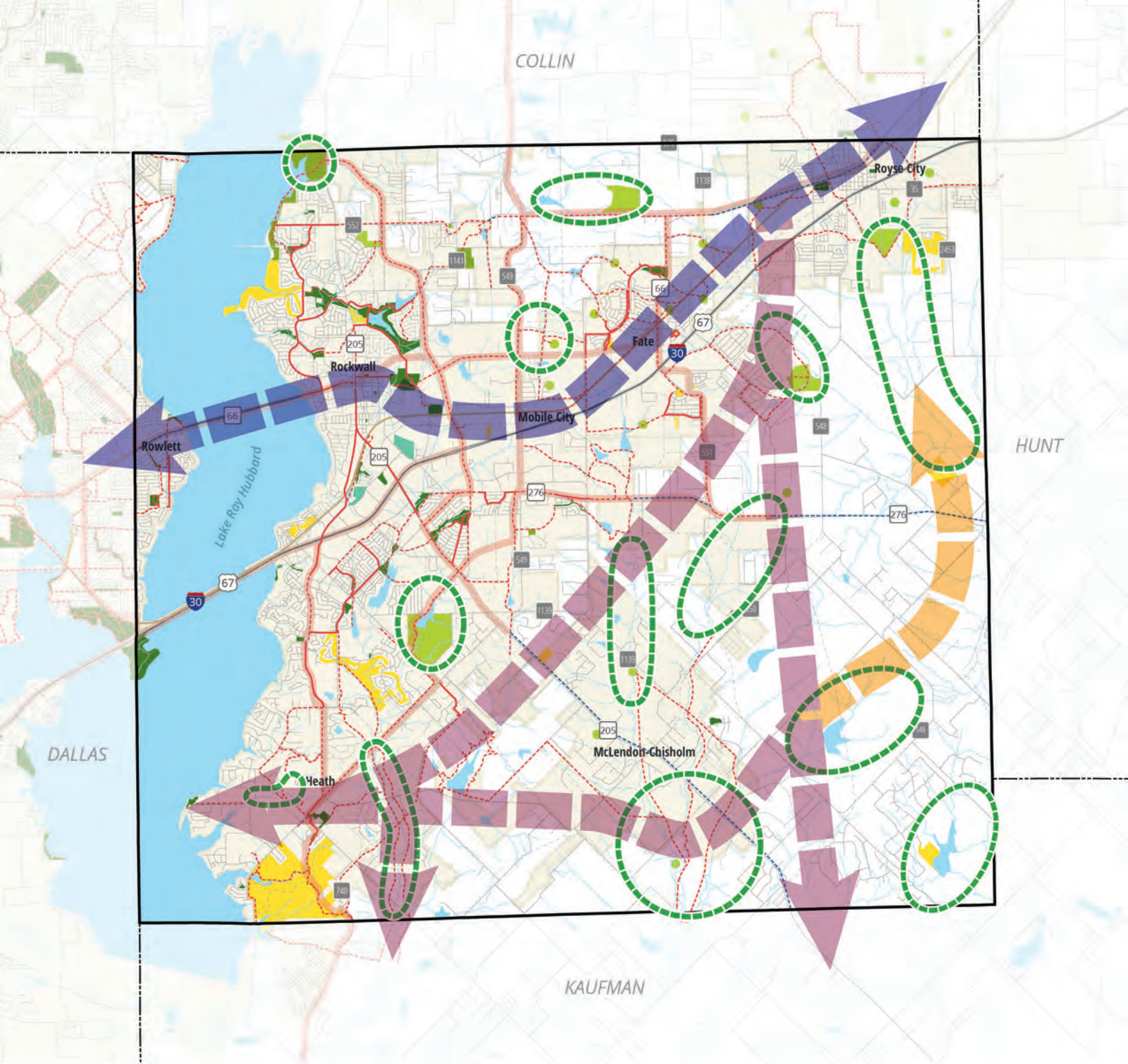
Perhaps the most popular linear park in Dallas County, the Katy Trail is a multi-use path that extends 3.5 miles along what was once the Missouri-Kansas-Texas Railroad, connecting the business district to parks and shopping residential areas. The Katy Trail (billed as a “Central Expressway for bikers and walkers”) features a 12-foot wide concrete path for bicyclists and inline skaters and a parallel 8-foot wide soft surface track for pedestrian use, native vegetation, benches, lighting, and drinking fountains, and plazas.

The trail is the result of a collaboration between members of the community, business people, and city and county leaders, who proposed the concept after the Union Pacific Railroad donated the abandoned rail line to the city in 1993. The Friends of the Katy Trail nonprofit organization formed in 1997 to organize and advocate community support for the trail, to raise private funds, and to assist in the trail’s planning, construction, and maintenance. The organization has since raised a combined \$23 million from government and private sources and land donations. (Funding has come from Dallas County, the City of Dallas, TxDOT, private businesses and individuals.)

The project broke ground in 2000, following a master plan by the SWA Group, and The Friends of the Katy Trail continues to oversee the trail’s development and maintenance. Given its centrality and popularity, the Katy Trail has had a direct positive impact on nearby property values and businesses. The trail currently connects several Dallas districts and will eventually link to surrounding parks, trails, and DART stations. Its success in the past decade demonstrates the value of collaboration between governments, interested residents, and local business.

#### Katy Trail Takes Advantage of an Old Rail Corridor, Dallas





## Trail Opportunities

Open Space Opportunity

Existing Public Parks

Undeveloped Public Parks

Future Public Park

Existing Private Parks

Future Private Parks

High Priority Trail Opportunity

Medium Priority Trail Opportunity

Low Priority Trail Opportunity

Existing Off-Street Trail

Planned Off-Street Trail

Existing On-Street Trail

Planned On-Street Trail

Veloweb

Sources: Rockwall County, TNRI, NCTCOG





Figure 44. Trail Opportunities  
(facing page)



Plano-Murphy-Richardson Trail  
Takes Advantage of Utility  
Easement

## Utility Easements

Utility easements, such as those for electrical transmission lines or water pipelines, may also present opportunities for trail corridors. Oncor, in particular, is generally a willing partner for communities looking to expand their trail systems, and it has published guidelines for planning and designing trails within its utility easements. Because these easements form direct routes across the county, and are already-maintained, mostly single-use corridors, their inclusion as a part of the regional trail network is encouraged. In many cases, there are fewer barriers to constructing trails in utility easements, both in terms of the difficulty of construction and the property ownership situation. It should be noted, however, that many Oncor easements cross private property, and any trails using these easement corridors would also require approval of property owners. Additionally, there are a number of restrictions on adding to the landscape within Oncor easements, meaning that shade from tree canopy—a particularly valuable trail feature in Texas—along such a trail is unlikely.

Overall, the Oncor lines through Rockwall County present some of the best opportunities for inter-community trail connections. For Veloweb inclusion, NCTCOG prioritizes efficient off-street connections, and the county's Oncor lines offer direct routes through the center and eastern portions of the county.

Oncor allows concrete trails up to twelve feet in width, and requires that trail construction minimize changes to the existing grade, elevation, and contours within the ROW. The NCTCOG website has the full text of the Oncor trail guidelines.

As with electrical transmission lines, pipeline easements can potentially provide corridors for trails. The North Texas Municipal Water District has a water pipeline that runs north/south through Rockwall County (and into both Collin and Kaufman Counties). The pipeline corridor, which bisects the county, may be an option for trail planners, though there are no current examples of trails along water pipelines North Texas.

## Riparian Corridors



Squabble Creek Trail within  
Squabble Creek Riparian  
Corridor, Rockwall

Riparian zones are critical ecological resources due to the habitat, flood mitigation and water quality services they provide. Because they are naturally occurring corridors that are also unsuited to development (due to both the frequency of inundation and their ecological importance), these areas often make excellent corridors for trails. Of course, floodplain trails will be of limited use during periods of inundation. As outlined in the green infrastructure chapter of this plan, preserving the integrity of Rockwall County's streams and floodplains should be a top priority. If these areas are effectively preserved, they should continue to be options for trail corridors in the short or long term, depending on funding, demand, establishment of new open space amenities and questions of property ownership.



Any trails placed along riparian corridors should be designed to have minimal impact on the riparian system. Shared-use paths should not be constructed in the inner zone of the floodplain or inside the stream buffer area. Outside of these most sensitive areas, trails can take advantage of surrounding vegetation, which may provide scenery and shade to trail-goers, as well as opportunities for bird-watching and other nature appreciation.

General recommendations for riparian trails:

- Do not construct trails within the inner stream buffer zone; in general, maintain a 50-foot setback from the stream's edge. Unpaved footpath spurs may be appropriate within the stream buffer.
- Make reforestation a goal where riparian trails are implemented. Trees should not be planted ten feet of the trail's edge, to allow root growth that will not damage the trail surface.
- Plant a mix of native grasses and shrubs along the trail that are well suited to floodplain conditions. This aids in drainage and filtration, and helps create valuable edge habitat.
- The trail should be designed and graded to maintain natural drainage patterns. Poorly designed trails may themselves become water channels, causing erosion, surface saturation, frequent inundation and a general decrease in trail usefulness.
- Keep stream crossings to a minimum.

## Off-Street Trail Corridor Opportunities

Below is a prioritization of potential off-street trail corridors to serve the residents of the county and the region. They are roughly broken down by zone within the county, with the area north of Interstate 30 constituting the top priority. The area south of Interstate 30 (described as southwest and center) is considered medium priority, while the less developed southeastern portion of the county is the lowest priority for trails. The identified corridors should be understood as broad recommendations for off-road trail connections within the county, rather than specifically proposed trail alignments. Each general corridor presents a number of variables, meaning there may be options for making these connections.

## Evaluation Criteria

Each trail area identified was evaluated on the following criteria:

- Connects to population centers and gathering places
- Fills in gaps between city trails
- Can make use of preexisting corridors
- Helps complete a countywide trail loop
- Has potential for economic development
- Faces near-term development pressure

## Case Study Ellis County Regional Trail Ellis County, TX

The cities of Waxahachie and Midlothian are already connected via Highway US 287, and are soon to be linked by a parallel trail corridor. A recent plan prepared by UT-Arlington (funded and commissioned by NCTCOG, in collaboration with officials from the county and both cities) outlines alternatives for a multi-use trail that would offer Ellis County residents a new means of travel and recreation.

When completed, the trail will highlight existing natural and built features, using land adjacent to either Waxahachie Creek or the Union Pacific Railroad, and will help link parks, schools, neighborhoods and local trails, in addition to expanding the Metrolinx's Regional Veloweb (a regional trail network linking over 100 North Texas cities).

The plan's recommended trail alignment stretches 9.6 miles, with an initial budget forecast of \$1.5 million per mile (which includes a number of bridges, trailheads and railroad crossings), and construction will likely occur in phases based on a number of factors, such as easement/ROW acquisitions and nearby developments. It weaves together residential development plans with proposed trail alignments.

The plan also identifies key parcels, outlines initial steps and basic design criteria and summarizes funding strategies (from the local to the federal level). Given the location of these two growing cities at the outer edge of the D-FW metropolitan area, the presence of highway and rail corridors and the general growing demand for more pedestrian-oriented connections, the ongoing Ellis County Trail process may offer a useful example to similar efforts in Rockwall County.

## Highest Priority: North of Interstate 30

Much of the growth occurring in Rockwall County is taking place in the communities along Interstate 30. This should be the primary focal area for creating a regional trail.

### 1. Rowlett to Royse City

Due to increasing development pressure and heavy population growth, the most important near-term trail option for the county to pursue is one that runs from Rowlett to Royse City and connects each of the city's downtown districts. A significant portion of this route may follow the rail corridor that passes through Rockwall, Fate and Royse City. A direct, easily accessible trail connecting the centers of these cities can help drive economic development, provide a safe environment for cyclists and long-distance runners, and allow residents of the region to experience these places in new ways. Establishing this corridor as a primary bicycle route across the northern part of the county will position it for further connections with neighboring counties. Much of this route was part of the historic Interurban Rail route, which could provide cultural and historic value and branding opportunities for the trail as well.

In the short term, the connection from downtown Royse City to downtown Fate encounters the fewest barriers to implementation, as the corridor is less densely developed. From Fate to Rockwall, as development is more prevalent and the area along the rail ROW is more constrained, finding the space for a trail may

Example of Proposed Trail by Lofland Park, Rockwall



be more complicated. In particular, the connection with downtown Rockwall is essential for promoting regional connectivity and economic development along the corridor. Though further study is needed to determine trail alignment, initial feedback has favored a trail on the south side of the railroad—anchoring an economic development corridor between the railroad and Interstate 30.

Note: NCTCOG identified State Highway 66 between Royse City and Rockwall as a potential Veloweb trail corridor. Although there is an existing walkway along State Highway 66, the County has indicated there will not be space within the ROW to incorporate a shared-use trail. A route following the rail corridor can complete this same important Veloweb connection.

## Medium Priority: Southwest and Center

Not an immediate priority for establishing countywide trails, the populated areas south of Interstate 30 should be the next zone to be studied for trail routes that eventually connect all of the cities in Rockwall County. Any of the following corridors may take precedent, depending on demand, corridor availability, resources and open space planning.

### 2. Heath to Fate

Following the essential Rowlett-to-Royse City corridor and the completion of a continuous, bikeable trail connecting Heath and Rockwall, a diagonal route across the county from Heath to Fate and Royse City completes a triangular loop that serves most of the county's current population centers. The Oncor utility easement that runs from Heath to Fate appears to be the most efficient option for establishing this trail corridor. There may be segments along that route that require diversions from the utility line, as the easement does cross through some private properties. In these cases, road ROWs and riparian corridors may be appropriate for short segments. Should any of the open space opportunities along this route be pursued, this corridor would provide even greater utility.

### 3. Royse City/Fate to McLendon-Chisholm

Running north/south in the county's eastern half is an Oncor utility corridor, which could serve as a trail route connecting the northern cities to McLendon-Chisholm as it grows, as well as extending south into Kaufman County. As with other routes based on utility corridors, detours to segments along roads or streams or between properties may be necessary. In addition to connecting these cities, this route could connect to any of three potential open space sites nearby.

### 4. Heath to McLendon-Chisholm

McLendon Road (Farm to Market Road 550) is the most likely corridor for a trail connecting the communities of Heath and McLendon-Chisholm. This route has not yet been studied for trail accommodation within the ROW.



## Low Priority: Southeast

The southeast and eastern portion of the county is currently the least developed, and is considered the lowest priority for trail corridors. This may be a good location to invest in a series of equestrian and nature trails.

### 5. McLendon-Chisholm to Royse City

Riparian and utility corridors may be available to use in this portion of the county, should a connection be deemed useful. For now, this is an area best used for nature trails and equestrian trails.

Trail Riding Tours, McLendon-Chisholm



## Trail Recommendations

While this plan identifies and prioritizes general corridors and uses that should be considered for development of a countywide trail network, further study is necessary to determine specific alignments within each of these areas. The county should strive toward completing the countywide network over time, working in collaboration with cities, developers and other entities. As with the open space amenity areas, the timing and scope for development of trail segments will depend on the land owners' willingness to participate in trail development, and the willingness and ability of the local municipality and/or the County to fund subsequent planning and construction efforts.

The County should begin by holding site-specific discussions with cities and property owners in the identified corridors to explore interest. With this knowledge, the potential alignment for each trail connection can be refined further. The next step would include development of formal alignment studies and construction plans for segments that appear to have the highest level of interest. Various funding sources can be pursued for completion of subsequent studies and construction based on the desired vision and functional goals for each particular trail.

In the short term, higher priority should be placed on securing easements and constructing trail routes where development and destinations already exist, and then expanding the system as new developments, parks and public open spaces materialize. The planning team also recommends that the County move forward with an alignment study for a Veloweb (off-street) trail connecting Rowlett to Royse City and organize efforts to pursue funding for design and construction through NCTCOG's TAP program. Immediate planning and coordination would aid in encouraging developers and land owners along the route to donate land and/or participate in the construction of the trail.

## Case Study

### Ellis County Regional Trail Ellis County, TX

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The plan also identifies key parcels, outlines initial steps and basic design criteria and summarizes funding strategies (from the local to the federal level). Given the location of these two growing cities at the outer edge of the D-FW metropolitan area, the presence of highway and rail corridors and the general growing demand for more pedestrian-oriented connections, the ongoing Ellis County Trail process may offer a useful example to similar efforts in Rockwall County.

## Implementation: Key Steps for Establishing Countywide Trail Corridors

Goal	Key Steps
<b>Complete Trail Development Scenarios</b>	<ol style="list-style-type: none"> <li>1. Open discussions with property owners in trail corridor opportunity areas.</li> <li>2. Finalize acquisition and easement requirements.</li> <li>3. Prepare cost/benefit analyses for trail development pursuits deemed feasible.</li> <li>4. Select opportunity areas to progress to more detailed planning and design.</li> </ol>
<b>Develop Trail Master Plans</b>	<ol style="list-style-type: none"> <li>1. Organize trail planning work sessions with community stakeholders.</li> <li>2. Prepare conceptual alignments and review with cities, NCTCOG and other relevant agencies.</li> <li>3. Prepare cost estimates and financing strategies.</li> <li>4. Create flexible program schedule to facilitate progress tracking.</li> </ol>





## 7. Land Conservation, Acquisition and Funding Strategies

### Conservation, Preservation and Land Acquisition

There are various ways land may be set apart for protection from development:

**Conservation** is the management of natural areas and cultural sites aimed at preserving important portions of a parcel while allowing for development or improvement of other portions. Development is not necessarily excluded from conservation areas, but is pursued using best management practices to maintain the important environmental and/or cultural features onsite. Conservation easements—usually facilitated by land trusts—are the most common form of achieving conservation.

**Preservation** is generally used to maintain a land area in an undisturbed state so that it can continue to serve an important environmental function—necessarily restricting any development of the site. Land dedicated to the city or county is the most common form of achieving preservation, though it may also come about through donations from individuals or developers. Preservation strategies are also used to buy and hold land to be converted into parks and other public open space type uses.

**Land acquisition** refers to a proactive purchase of a land that has environmental or historical significance, for the protection of public resources that may be destroyed by development. Acquisitions are generally pursued when conservation easements or dedications cannot be secured. Purchasing land tends to involve a substantial amount of public funds, and is generally used for those lands of highest priority not obtainable otherwise.

### Conservation Easements

A conservation easement is a legal agreement conveyed by a landowner—sold or donated to either a private land trust or a government agency—to place a restriction on a piece of property to protect its resources. The easement is established in perpetuity, meaning it applies both to present and future landowners. Under a conservation easement, the land may remain in private ownership, but the landowner agrees to give up certain rights, such as subdividing or developing the property. The land trust or government agency has the right to enforce the easement's restrictions, regardless of changes in ownership.

Conservation easements are targeted to restrict property rights only where they affect the specific conservation objectives, while allowing the landowner to use the property in ways consistent with the objectives. Conservation objectives may include protecting and enhancing water quality, maintaining wildlife habitat, preserving healthy forestland, or allowing for sustainable agricultural use. The aims vary depending on site conditions and the goals of the agency or land trust. The easement may be donated by the property owner to the land trust in order to secure income tax deductions or credits, estate tax reductions and exclusions, property tax incentives or a combination thereof. Conservation easements are recorded in local land records and becomes part of the chain of title for the subject property.

The lone existing conservation easement in Rockwall County is the High Point Prairie Preserve, which was created along with a residential subdivision to protect large undisturbed natural areas. About 70 percent of the land purchased by the developers was permanently set aside as a nature preserve.

## Land Trusts

A land trust, or land conservancy, is a nonprofit organization whose mission it is to permanently protect land for public benefit. Land trusts are typically community-based, nonprofit organizations, but there are also some that operate nationally, such as the Trust for Public Land. They may acquire and hold title to land obtained through donation or purchase, or they may acquire conservation easements that allow property owners to maintain ownership of the land while limiting development and other use of the easement. Often, land trusts are more nimble than governments at negotiating and executing land deals.

In addition to serving as receivers and stewards of land, land trusts can actively solicit donations (of money, land and easements), fundraise, provide educational opportunities and assist in land planning where land dedication or an easement is part of the site program. Land trusts may also strategically hold developable land to sell or swap for desirable open space.

## Transfer of Development Rights Programs

Transfer of Development Rights programs (TDR) should be considered as a viable option to preserve environmentally sensitive places, farmland, historic landmarks and open spaces within Rockwall County. TDR programs are zoning techniques used to permanently protect farmlands, sensitive environmental areas and cultural areas. The programs enable landowners of these areas to be financially compensated for not developing on the properties. These programs allow for increased development in areas where more growth is desired and restricts growth in areas where conservation is a priority. Areas within the county that have been prioritized for conservation would be known as sending areas in a TDR program. The areas where more growth is desired are referred to as receiving areas. Receiving areas are typically located where sufficient



infrastructure and public services are available to support more productive growth. Sending areas in Rockwall County would include those conservation and open space areas identified in this plan while the receiving areas would likely exist within the city limits of the multiple municipalities located in the county.

The open space and conservation areas identified in this plan are located within both city and county jurisdictions. Development of a TDR program would require collaboration between the cities and the county to establish sending areas located within county jurisdiction and to agree upon receiving areas distributed equitably within the jurisdiction of participating cities. The State of Texas does not have formal TDR enabling legislation but the county and cities do have the ability to adopt a TDR program. Adoption of a TDR program requires modification of land use plans and accommodating development ordinances.

Multiple TDR programs have been established in Texas. Austin established a program to protect groundwater recharge areas. San Marcos developed a TDR program focused on preserving environmentally-sensitive areas along the San Marcos and Blanco Rivers. El Paso maintains a similar program within their development ordinance. San Antonio included a TDR mechanism within a form based zoning code and Dallas has a program to preserve historic buildings.

## Sustainable Agriculture Programs

The demand for locally grown and sourced organic food is growing rapidly in North Texas. There are several developing business models for sustainable agriculture management that have proven successful across the country. The models generally revolve around the acquisition of existing farmland by businesses that specialize in organic farming techniques. The primary goal of the program is the conversion of conventional farmland to organic, sustainable farmland that provides investors with substantial return on investment. Combining these programs with complimentary development plans offers new opportunities to preserve farmland, create quality public open spaces and generate new and unique residential and commercial opportunities that support and benefit from the agricultural ventures.

## Finance and Revenue Generation

There are a number of avenues for financing the open space opportunities outlined in this plan. Included among these are citizen-approved bond measures; local, state and federal grants; state financing programs; and the involvement of nonprofit organizations.

## Open Space Bonds

The State of Texas authorizes and enables public bodies, including counties and flood control districts, to acquire land and interests in land for conservation, parks and recreational purposes. In Texas, the most common funding measure has

been to issue general obligation bonds, which are subject to public referendum. In the decade leading up to 2013, almost 90 percent of the 49 conservation bonds voted on in the state were passed.

Rockwall County could issue new debt for parks and recreation purposes upon receiving voter approval. Typically, bond proceeds are limited to capital projects and may not be used for operations and maintenance purposes. The acquisition or development of conservation lands could result in the future need for additional funds for maintenance and operations. For more detailed information regarding the use of bonds and other similar funding measures, see the Current Conditions Report and Conservation Finance Feasibility Study, produced by Trust for Public Land (referenced in Appendix \_).

## Grants

There are a variety of grants available from local, state, regional, and federal sources, as well as nonprofit organizations. Grants—which may focus on the environment, education, recreation, wildlife habitat, connectivity, or other specific areas—are a common tool for implementing quality-of-life improvements such as parks and trails. Examples of some of the more relevant grant programs are included in Appendix E.

## State Financing Programs

The State of Texas offers financing programs aimed at helping communities protect water quality, habitat, open space areas and other natural resources. These may include loans at low interest rates and cost-sharing programs. Examples programs are summarized in Appendix E.

## Nonprofit Organizations

A number of nonprofit organizations—operating at the local, state and national level—exist to help in various stages of the process of protecting natural resources and creating recreational areas. It is also recommended that a local nonprofit group be formed to focus specifically on Rockwall County open space projects. This would provide a way to collect contributions from citizens in the area that are passionate about open space that are separate from bond elections.

## Case Study

### Land Dedication City of Rockwall

The City of Rockwall has divided the city into roughly 29 neighborhood park districts, with the goal of having an 11-acre neighborhood park in each district. The districts are bordered by major thoroughfares so a person would not be expected to cross a major roadway to access their neighborhood park. Based on zoning, the City determines the maximum number of dwelling units per park district and how much land must be dedicated per residential unit being developed. An annual appraisal of suitable residential land with utilities and public road access is used to determine a cash in lieu of land fee.

Secondly, the City desires to collect 50% of park development costs from the park district developers, currently \$100,000 per acre. The total cost of the park is divided by the maximum number of dwelling units within the district to determine the pro-rata share. The Texas Recreation and Parks Foundation has been used to hold land until it can be used for a grant application.

*<http://rockwall.com/documents/Parks/Dedication%20Ordinance%20rev%207-01.pdf>*



Tate Farms  
Break for Coffee and Relaxation





## 8. Implementation and Next Steps

The purpose of this plan is to bridge the gap between regional and countywide needs and the efforts of the various municipalities within the county so that quality of life for residents throughout the county can be maintained and improved as the area develops. This chapter discusses key strategies and next steps that should be taken to continue progress toward achieving the County's goals and priorities. It is important to note that while the County has taken the lead in development of this plan, the primary responsibility for deciding if, how and when to fund and implement these recommendations remains with the individual cities and land owners.

Obtaining funding, securing land, and managing the design, construction and maintenance of public open space projects will require a significant amount of collaboration and partnerships. This section provides information on some of the anticipated partners and their roles, as well as recommended strategies for coordinating technical, funding and communication efforts going forward.

Finally, the Implementation Summary matrix provides a summary of recommended strategies, organized according to objective and priority, with corresponding information regarding a time frame for action and the party or parties that will be responsible. Time frames are included to establish general priorities since not all strategies can be implemented simultaneously, or because the actions need to occur in a certain order to achieve efficiency and success. Recommendations have been categorized over a ten year period as immediate (0–1 year), short-term (1–2 years), mid-term (3–5 years) and long-term (5+ years).

### Partnerships and Role Recommendations

Numerous partnering opportunities are available to fund and implement open space and trail projects due to the broad impact they have on property values, the environment, recreation and quality of life of residents. The most significant partners are identified below.

#### Rockwall County

The County must continue to serve in a leadership role as the open space initiative moves from planning into implementation. The majority of the cities are still small and do not have the financial resources to implement large-scale projects



on their own. At the same time, the county is relatively small, so coordinating open space efforts and sharing costs strategically among the communities can improve the pool and probability of grant opportunities and enhance the quality of life for all county residents. County leadership should take two forms:

- Program Management and Coordination - Open space initiatives within the county should be addressed in a manner similar to how transportation and emergency services are managed. Discussions about projects that have countywide significance and coordination of grant applications for regional open space projects should be held as part of the monthly County Planning Consortium meetings.
- Financial Support – The County should establish an Open Space Funding Program that is available to provide financial support for projects proposed within the county that align with the goals and recommendations in this plan. Collin County’s program has been extremely successful and provides a solid model for Rockwall County to emulate. Should the county decide not to pursue its own funding program, it should work with local community activists to establish an open-space focused non-profit entity that can fill a similar role.

## Cities

The most important partnership is that between the County and its constituent cities. Each of the cities should familiarize themselves with this plan, and look for opportunities to integrate recommendations into their efforts. Cities should also be encouraged to continue participation in monthly Planning Consortium meetings and use them as the forum to discuss and coordinate efforts related to implementation of open space recommendations.

## Federal, State and Regional Agencies

Federal, state and regional agencies offer significant technical and financial resources to assist with implementing projects with regional impacts like those discussed in this plan. Several of these agencies reached out to the planning team during the process to express their support for this countywide planning initiative and interest in helping projects get implemented. The County should continue to communicate its open space goals and aggressively pursue funding and partnership opportunities with agencies including, but not limited to:

- North Central Texas Council of Governments (NCTCOG)
- Natural Resource Conservation Service (NRCS)
- Texas Parks and Wildlife
- Texas Water Development Board
- Trust for Public Land
- U.S. Department of Agriculture
- Utility Districts
- Regional Transportation Council
- Texas Economic Development and Tourism Office



## Local Agencies, Community Members and Philanthropic Organizations

Local agencies, community activists and philanthropic organizations play a vital role in improving quality of life of communities. These groups include the school districts, Chambers of Commerce, Economic and Community Development entities, non-profit groups, churches, and other local community organizations. The County should seek to tap into philanthropic organizations and interested local businesses and citizens for support.

## Rockwall County Open Space Alliance Executive Committee

This group of citizen volunteers has served an invaluable role in building momentum for countywide open space initiatives since the 2008 study was completed by the Trust for Public Land. Upon completion of this plan, the Executive Committee may want to consider forming a 501c3 nonprofit organization that could continue outreach and fundraising throughout the community specifically for implementation of open space related projects.

## Land Owners

Conversations held during the planning process indicate that certain land owners may be interested in discussing partnership opportunities that support their personal commitment to preservation of open space and the cultural identity of Rockwall County, improve the value of their land, or both. Private discussions with land owners in the vicinity of recommended opportunities should be held by County and City officials to explore interest further so that the boundaries and scope of future improvements can be refined.

## Consultants

Some of the implementation recommendations will require assistance from consultants. These services could include assistance with management and coordination of the program, completion of studies and conceptual design required to facilitate land acquisition and submittal of grant applications, and assistance with review of related development plans, design and technical deliverables prepared by the cities, developers and their consultants.

## Implementation Strategies

Specific strategies for each of the three primary objectives were discussed in each of the respective chapters. These strategies, along with more general strategies that correspond to implementation of the broader open space effort, fall into the following categories.

### Program Management and Coordination

It is important for the County to remain in a leadership role to drive implementation forward. Additional meetings will be required between County and City leadership to discuss the recommendations in this plan and determine what projects, if any, can be funded out of FY2016 budgets and what efforts should be completed to coordinate and pursue funding for implementation projects in future years. This can be completed by County leadership, County staff, a Court appointed committee, and/or a consultant working on behalf of the County.

### Education and Outreach

Continuous education in the community about the importance and value of open space should be a high priority. A coordinated communication campaign should be developed that the County, cities and Open Space Alliance can work together to execute via their various newsletters, websites and social media channels.

### Master Plan Updates

The majority of the opportunities discussed involve proactive planning and land dedication or acquisition by the County and/or municipalities. Each of the cities and the County are encouraged to review the information provided in this document and incorporate recommendations into future updates to master plans where possible. These may include comprehensive plans, park and trail plans, drainage and stormwater master plans, transportation plans or other planning documents.

### Development Controls and Regulations

Similar to master plan updates, the County and cities are encouraged to review subdivision ordinances, development regulations and design standards as they pertain to open space dedication, floodplain buffers, stormwater management and trails. Examples of industry-leading best practices have been included as case studies in earlier chapters.

### Incentive Programs

The County and cities should develop or enhance incentive programs for land owners and developers who bring forth projects that align with the objectives of this plan.

Blackland



## Studies and Design

This plan recommends and prioritizes areas and corridors for open space and trail projects, as well as suggested strategies for improving stormwater management and water quality in particular watersheds. Additional studies will be required to determine right-of-way and easement needs and provide sufficient project details to pursue grant opportunities for detailed design and construction.

## Land Acquisition

Additional discussions should be conducted between the county, cities, developers and land owners to further evaluate recommended opportunities and determine the areas where land acquisition is important for implementation of the long-term plan. Once these locations are identified, plans should be developed to acquire the land outright, secure easements, or plan for developer donation when future development occurs.





## Implementation Summary

Recommendations are organized into five objectives. The first two are continuations of objectives identified in the 2008 Trust for Public Land Study. The other three are the primary objectives of this OSMP.

### 1. Enhance Countywide Open Space Planning Efforts

#### *Program Management and Coordination*

- A **Modify Planning Consortium meeting structure to incorporate open space into monthly meetings. Meetings should be the forum used to discuss and coordinate next steps required for implementation of the OSMP recommendations.**

Category	Timing	Champion	Partners	Notes
Program Management	Immediate	County	Planning Consortium, Agencies, Consultant	Invite key partners such as NCTCOG, NTMWD, TPL, TP&W, USACE to participate similar to how agencies are included in transportation discussions.

- B **Set up County Open Space Fund program using Collin County program as model. Steps include establishing Advisory Board, setting annual budget, conducting bond election, and establishing evaluation process and criteria**

Category	Timing	Champion	Partners	Notes
Incentive Programs	Short	County	Program Advisory Board	Program should be focused on funding projects that support recommendations in the OSMP and have countywide benefits and maximize return on taxpayer investment.

- C **Identify and pursue grants that could help fund catalyst projects for watershed studies, open space amenity planning and development, and trail design and construction.**

Category	Timing	Champion	Partners	Notes
Program Management	Immediate	County	Cities, Consultant	Grant programs such as NCTCOG's TAP and various Texas Water Development Board grants can help fund implementation projects. Applications for 2017 funds are generally being accepted through the spring of 2016.

## 2. Educate the Public about the Benefits of Open Space Protection

### *Education and Outreach*

	Category	Timing	Champion	Partners	Notes
A	<b>Print and distribute copies of OSMP Executive Summary to city officials and community leaders</b>				
	Category	Timing	Champion	Partners	Notes
	Education & Outreach	Immediate	County	Consultant, Open Space Alliance	
B	<b>Present OSMP findings to city councils, P&amp;Z commissions, Chambers, Rotary and other community organizations</b>				
	Category	Timing	Champion	Partners	Notes
	Education & Outreach	Immediate	County	Consultant, Open Space Alliance	
C	<b>Partner with ISDs to distribute information via school newsletters and integrate concepts into education programs</b>				
	Category	Timing	Champion	Partners	Notes
	Education & Outreach	Immediate/ Short	County	Consultant, Open Space Alliance	
D	<b>Continue using Open Space Alliance website and social media channels to distribute information and updates</b>				
	Category	Timing	Champion	Partners	Notes
	Education & Outreach	Ongoing	Open Space Alliance		
E	<b>Complete small demonstration projects such as planting milkweed and constructing Monarch butterfly gardens, installing signage and benches at existing park and trail locations.</b>				
	Category	Timing	Champion	Partners	Notes
	Education & Outreach	Immediate/ Short	Open Space Alliance	Community Organizations, Citizen Volunteers	

### 3. Preserve Quality Stormwater Corridors

#### *Stormwater Management and Green Infrastructure*

Category	Timing	Champion	Partners	Notes
A <b>CATALYST/PILOT PROJECT: Complete study for Camp Creek watershed to determine floodplain buffer limits, LID strategies and coordinate improvements with Open Space Ops B and C. A variety of grant funds are available to fund this study.</b>				
Category	Timing	Champion	Partners	Notes
Studies & Design	Immediate/Short	Rockwall	County, Fate, Consultant	This area combines fast pace of development, top-rated open space opportunity (Op B), and areas with above-average ecological importance. Great opportunity for stacked function benefits of open space, green infrastructure strategies, trail connectivity and developer participation if area is studied soon. Sabine Creek, Big Brushy Creek and Buffalo Creek watersheds should also be considered for study, especially if an open space opportunity in one of these watersheds is selected for additional study (instead of Op B).
B <b>Review ordinances and design standards related to open space, trails and stormwater/floodplain management and consider incorporating stronger controls in line with best practices.</b>				
Category	Timing	Champion	Partners	Notes
Development Controls & Regulations	Short	County and Cities		Until ordinances can be updated, County and city staff should find ways to partner with developers to integrate green infrastructure strategies for each watershed into development as it goes in.
C <b>Review master plans and consider incorporating OSMP recommendations in future updates.</b>				
Category	Timing	Champion	Partners	Notes
Master Plan Updates	Short	Cities		Until master plans can be updated, County and city staff should find ways to partner with developers to integrate green infrastructure strategies for each watershed into development as it goes in.



## 4. Identify Opportunities for a Major Open Space/Public Amenity

### Open Space

	Category	Timing	Champion	Partners	Notes
A	<b>CATALYST/PILOT PROJECT: Complete study and conceptual plan for development of Open Space Opportunity B (Stodghill/Fowler Area). Study would include meetings with land owners and representatives from Rockwall and Fate to refine the limits and scope of improvements to develop a publicly accessible open space amenity. Study results would be used to pursue grant funding for subsequent next steps.</b>				
	Category	Timing	Champion	Partners	
	Studies & Design	Immediate/Short	County	Fate, Rockwall, Consultant	Opportunity B (Stodghill/Fowler Area) was the top-rated open space opportunity. It is centrally located in the middle of the county and presents an opportunity for Rockwall, Fate and the County to partner to develop a public amenity that would benefit residents throughout the entire county. Opportunity Areas C, E and G could also be candidates for this initial study and pilot project.
B	<b>Visit with land owners in the vicinity of all recommended opportunity areas to determine level of interest in collaborating to preserve open space and/or develop as public open space amenity in the future.</b>				
	Category	Timing	Champion	Partners	
	Land Acquisition	Short	County	Cities	Recommendations in this plan are based on data and technical analysis and input from community surveys. Discussions with property owners will help to refine opportunities to specific properties and inform future master plan updates.
C	<b>Review master plans and consider incorporating OSMP recommendations in future updates</b>				
	Category	Timing	Champion	Partners	
	Master Plan Updates	Short	Cities		In the interim until master plans and can be updated, County and city staff should find ways to partner with land owners and developers looking to develop in the vicinity of recommended open space opportunity areas.
D	<b>Land acquisition for conservation easements and future open space development</b>				
	Category	Timing	Champion	Partners	
	Land Acquisition	Mid	Cities	County, Non-Profits	Where there is interest from property owners, County and cities should work together (and with other non-profit entities, where possible) to secure easements or property outright.
E	<b>Construction of open space amenity</b>				
	Category	Timing	Champion	Partners	
		Long			

## 5. Identify Corridors to Ensure Countywide Connectivity and Non-Motorized Mobility Options

### *Trails and Connectivity*

Category	Timing	Champion	Partners	Notes
<b>A CATALYST/PILOT PROJECT: Complete alignment study and conceptual plan for trail from Rowlett to Royse City. Study would include meetings with land owners and representatives from each of the cities to refine the limits and scope of improvements. Study results would be used to pursue grant funding from TAP and other sources for subsequent next steps.</b>				
Category	Timing	Champion	Partners	
Studies & Design	Immediate/ Short	County	Rowlett, Rockwall, Fate, Royse City, Consultant	A multi-purpose off-street trail connecting communities north of I-30 together was one of the most popular projects discussed during the planning process.
<b>B Visit with land owners in the vicinity of all recommended trail corridors to determine level of interest in collaborating to develop off-street multi-purpose trails in the future.</b>				
Category	Timing	Champion	Partners	
Land Acquisition	Short	County	Cities	Recommendations in this plan are based on data and technical analysis and input from community surveys. Discussions with property owners will help to refine trail corridors and inform future master plan updates.
<b>C Review master plans and consider incorporating OSMP recommendations in future updates</b>				
Category	Timing	Champion	Partners	
Master Plan Updates	Short	Cities		In the interim until master plans and can be updated, County and city staff should find ways to partner with land owners and developers looking to develop in the vicinity of recommended trail corridors.
<b>D Land acquisition for conservation easements and future open space development</b>				
Category	Timing	Champion	Partners	
Land Acquisition	Mid	Cities	County, Non-Profits	Where there is interest from property owners, County and cities should work together (and with other non-profit entities, where possible) to secure easements for future trail construction.
<b>E Construction of multi-purpose off-street trail network</b>				
Category	Timing	Champion	Partners	
	Mid/Long	Varies	County, Cities, Developers, Non-Profits	Trail segments will likely be constructed by a combination of developers, non-profits, cities and county.







# Appendix A

## City Plans and Maps

Rockwall County Thoroughfare Plan

Rockwall County Bike Master Plan

Fate Future Parks and Trails Map

Heath Transportation Plan Map

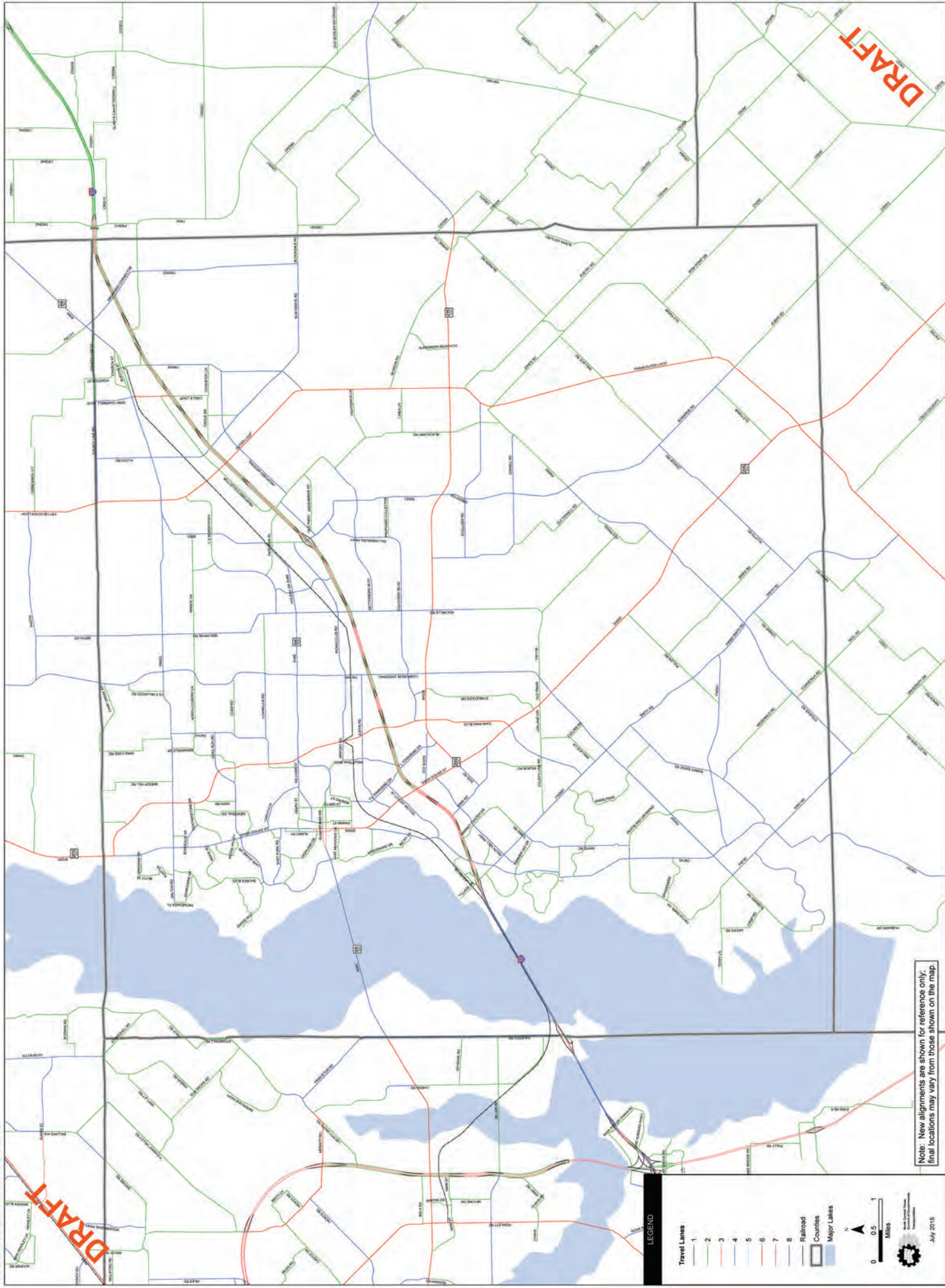
McLendon-Chisholm Future Land Use Map

Rockwall Trails Map

Rockwall Existing Parks & Open Space Map

Rowlett Hike/Bike Trail System Map

Royse City Future Land Use Map

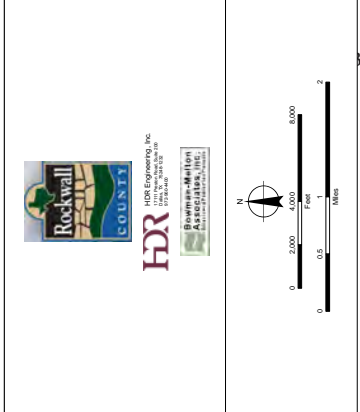


Note: New alignments are shown for reference only;  
final locations may vary from those shown on the map.



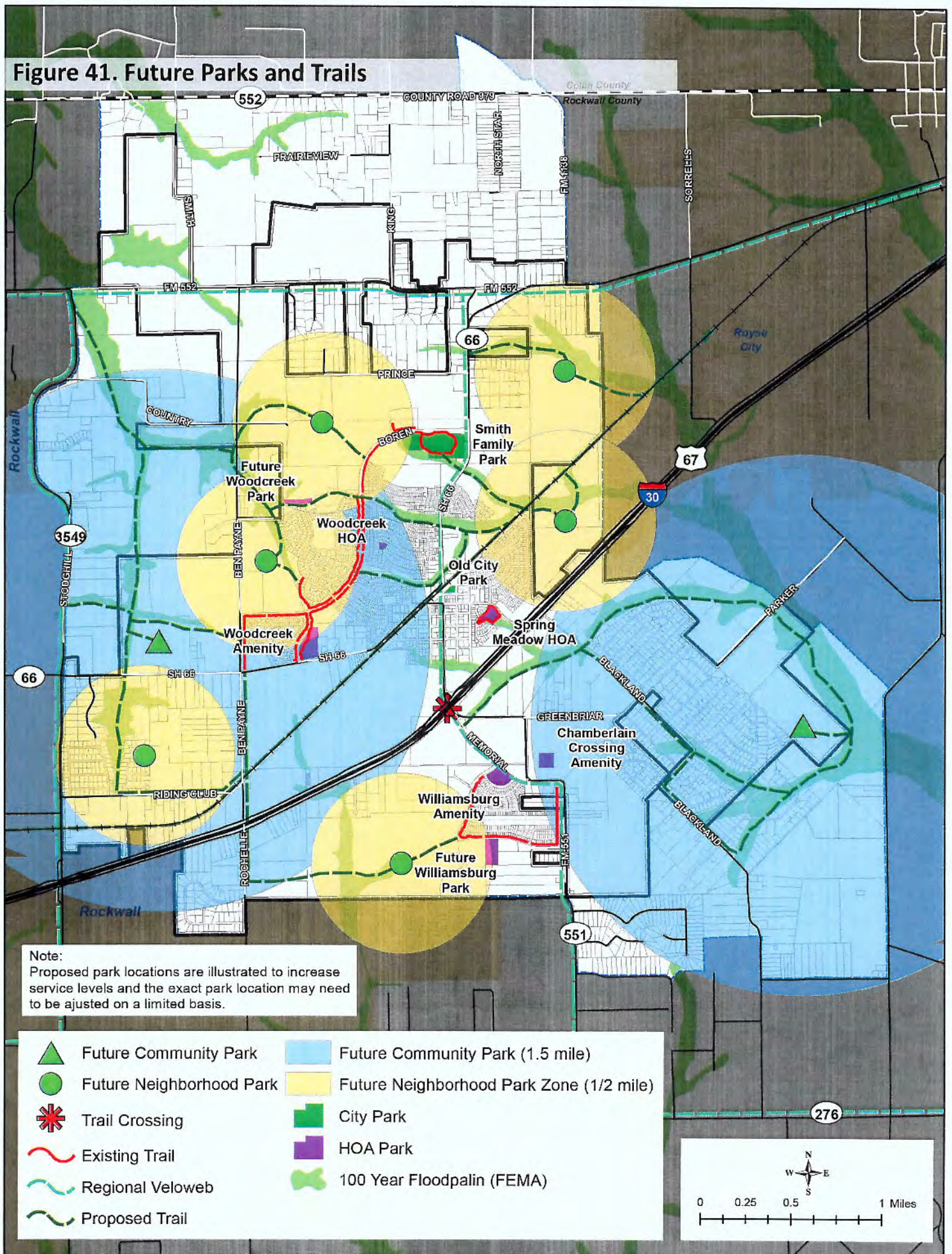
The map displays proposed transportation projects in Harris County, Texas, with various colored lines indicating different project types and segments. Key features include:

- Red Lines:** Represent major proposed projects, including the "PROPOSED OUTER LOOP FROM KAUFMAN CO. LINE TO COLLIN CO. LINE" and "FM 551 FROM SH 66 TO SH 281".
- Yellow Lines:** Indicate other proposed projects, such as "FM 551 FROM SH 66 TO SH 281" and "FM 551 FROM SH 66 TO SH 281".
- Green Lines:** Show projects like "SH 205 BYPASS (JUNIOR KING BOULEVARD) FROM SH 205 TO FM 549" and "SH 205 FROM FM 549 TO THE COLLIN CO. LINE".
- Blue Lines:** Highlight specific segments, such as "FM 551 FROM SH 66 TO SH 281" and "FM 551 FROM SH 66 TO SH 281".
- Labels and Markers:** The map includes labels for major roads (I-10, I-69, I-25, FM 551, SH 66, SH 281, SH 205, FM 549, FM 541, FM 540, FM 539, FM 538, FM 537, FM 536, FM 535, FM 534, FM 533, FM 532, FM 531, FM 530, FM 529, FM 528, FM 527, FM 526, FM 525, FM 524, FM 523, FM 522, FM 521, FM 520, FM 519, FM 518, FM 517, FM 516, FM 515, FM 514, FM 513, FM 512, FM 511, FM 510, FM 509, FM 508, FM 507, FM 506, FM 505, FM 504, FM 503, FM 502, FM 501, FM 500, FM 499, FM 498, FM 497, FM 496, FM 495, FM 494, FM 493, FM 492, FM 491, FM 490, FM 489, FM 488, FM 487, FM 486, FM 485, FM 484, FM 483, FM 482, FM 481, FM 480, FM 479, FM 478, FM 477, FM 476, FM 475, FM 474, FM 473, FM 472, FM 471, FM 470, FM 469, FM 468, FM 467, FM 466, FM 465, FM 464, FM 463, FM 462, FM 461, FM 460, FM 459, FM 458, FM 457, FM 456, FM 455, FM 454, FM 453, FM 452, FM 451, FM 450, FM 449, FM 448, FM 447, FM 446, FM 445, FM 444, FM 443, FM 442, FM 441, FM 440, FM 439, FM 438, FM 437, FM 436, FM 435, FM 434, FM 433, FM 432, FM 431, FM 430, FM 429, FM 428, FM 427, FM 426, FM 425, FM 424, FM 423, FM 422, FM 421, FM 420, FM 419, FM 418, FM 417, FM 416, FM 415, FM 414, FM 413, FM 412, FM 411, FM 410, FM 409, FM 408, FM 407, FM 406, FM 405, FM 404, FM 403, FM 402, FM 401, FM 400, FM 399, FM 398, FM 397, FM 396, FM 395, FM 394, FM 393, FM 392, FM 391, FM 390, FM 389, FM 388, FM 387, FM 386, FM 385, FM 384, FM 383, FM 382, FM 381, FM 380, FM 379, FM 378, FM 377, FM 376, FM 375, FM 374, FM 373, FM 372, FM 371, FM 370, FM 369, FM 368, FM 367, FM 366, FM 365, FM 364, FM 363, FM 362, FM 361, FM 360, FM 359, FM 358, FM 357, FM 356, FM 355, FM 354, FM 353, FM 352, FM 351, FM 350, FM 349, FM 348, FM 347, FM 346, FM 345, FM 344, FM 343, FM 342, FM 341, FM 340, FM 339, FM 338, FM 337, FM 336, FM 335, FM 334, FM 333, FM 332, FM 331, FM 330, FM 329, FM 328, FM 327, FM 326, FM 325, FM 324, FM 323, FM 322, FM 321, FM 320, FM 319, FM 318, FM 317, FM 316, FM 315, FM 314, FM 313, FM 312, FM 311, FM 310, FM 309, FM 308, FM 307, FM 306, FM 305, FM 304, FM 303, FM 302, FM 301, FM 300, FM 299, FM 298, FM 297, FM 296, FM 295, FM 294, FM 293, FM 292, FM 291, FM 290, FM 289, FM 288, FM 287, FM 286, FM 285, FM 284, FM 283, FM 282, FM 281, FM 280, FM 279, FM 278, FM 277, FM 276, FM 275, FM 274, FM 273, FM 272, FM 271, FM 270, FM 269, FM 268, FM 267, FM 266, FM 265, FM 264, FM 263, FM 262, FM 261, FM 260, FM 259, FM 258, FM 257, FM 256, FM 255, FM 254, FM 253, FM 252, FM 251, FM 250, FM 249, FM 248, FM 247, FM 246, FM 245, FM 244, FM 243, FM 242, FM 241, FM 240, FM 239, FM 238, FM 237, FM 236, FM 235, FM 234, FM 233, FM 232, FM 231, FM 230, FM 229, FM 228, FM 227, FM 226, FM 225, FM 224, FM 223, FM 222, FM 221, FM 220, FM 219, FM 218, FM 217, FM 216, FM 215, FM 214, FM 213, FM 212, FM 211, FM 210, FM 209, FM 208, FM 207, FM 206, FM 205, FM 204, FM 203, FM 202, FM 201, FM 200, FM 199, FM 198, FM 197, FM 196, FM 195, FM 194, FM 193, FM 192, FM 191, FM 190, FM 189, FM 188, FM 187, FM 186, FM 185, FM 184, FM 183, FM 182, FM 181, FM 180, FM 179, FM 178, FM 177, FM 176, FM 175, FM 174, FM 173, FM 172, FM 171, FM 170, FM 169, FM 168, FM 167, FM 166, FM 165, FM 164, FM 163, FM 162, FM 161, FM 160, FM 159, FM 158, FM 157, FM 156, FM 155, FM 154, FM 153, FM 152, FM 151, FM 150, FM 149, FM 148, FM 147, FM 146, FM 145, FM 144, FM 143, FM 142, FM 141, FM 140, FM 139, FM 138, FM 137, FM 136, FM 135, FM 134, FM 133, FM 132, FM 131, FM 130, FM 129, FM 128, FM 127, FM 126, FM 125, FM 124, FM 123, FM 122, FM 121, FM 120, FM 119, FM 118, FM 117, FM 116, FM 115, FM 114, FM 113, FM 112, FM 111, FM 110, FM 109, FM 108, FM 107, FM 106, FM 105, FM 104, FM 103, FM 102, FM 101, FM 100, FM 99, FM 98, FM 97, FM 96, FM 95, FM 94, FM 93, FM 92, FM 91, FM 90, FM 89, FM 88, FM 87, FM 86, FM 85, FM 84, FM 83, FM 82, FM 81, FM 80, FM 79, FM 78, FM 77, FM 76, FM 75, FM 74, FM 73, FM 72, FM 71, FM 70, FM 69, FM 68, FM 67, FM 66, FM 65, FM 64, FM 63, FM 62, FM 61, FM 60, FM 59, FM 58, FM 57, FM 56, FM 55, FM 54, FM 53, FM 52, FM 51, FM 50, FM 49, FM 48, FM 47, FM 46, FM 45, FM 44, FM 43, FM 42, FM 41, FM 40, FM 39, FM 38, FM 37, FM 36, FM 35, FM 34, FM 33, FM 32, FM 31, FM 30, FM 29, FM 28, FM 27, FM 26, FM 25, FM 24, FM 23, FM 22, FM 21, FM 20, FM 19, FM 18, FM 17, FM 16, FM 15, FM 14, FM 13, FM 12, FM 11, FM 10, FM 9, FM 8, FM 7, FM 6, FM 5, FM 4, FM 3, FM 2, FM 1, FM 0).
- Geographic Features:** The map shows the Gulf of Mexico to the south, with labels for "Gulf of Mexico" and "Houston Bay". Major cities and areas labeled include "Houston", "The Woodlands", "Spring", "Rowlett", "Garfield", "McLendon-Chaloin", and "Heath".
- Infrastructure:** The map includes labels for major roads (I-10, I-69, I-25, FM 551, SH 66, SH 281, SH 205, FM 549, FM 541, FM 540, FM 539, FM 538, FM 537, FM 536, FM 535, FM 534, FM 533, FM 532, FM 531, FM 530, FM 529, FM 528, FM 527, FM 526, FM 525, FM 524, FM 523, FM 522, FM 521, FM 520, FM 519, FM 518, FM 517, FM 516, FM 515, FM 514, FM 513, FM 512, FM 511, FM 510, FM 509, FM 508, FM 507, FM 506, FM 505, FM 504, FM 503, FM 502, FM 501, FM 500, FM 499, FM 498, FM 497, FM 496, FM 495, FM 494, FM 493, FM 492, FM 491, FM 490, FM 489, FM 488, FM 487, FM 486, FM 485, FM 484, FM 483, FM

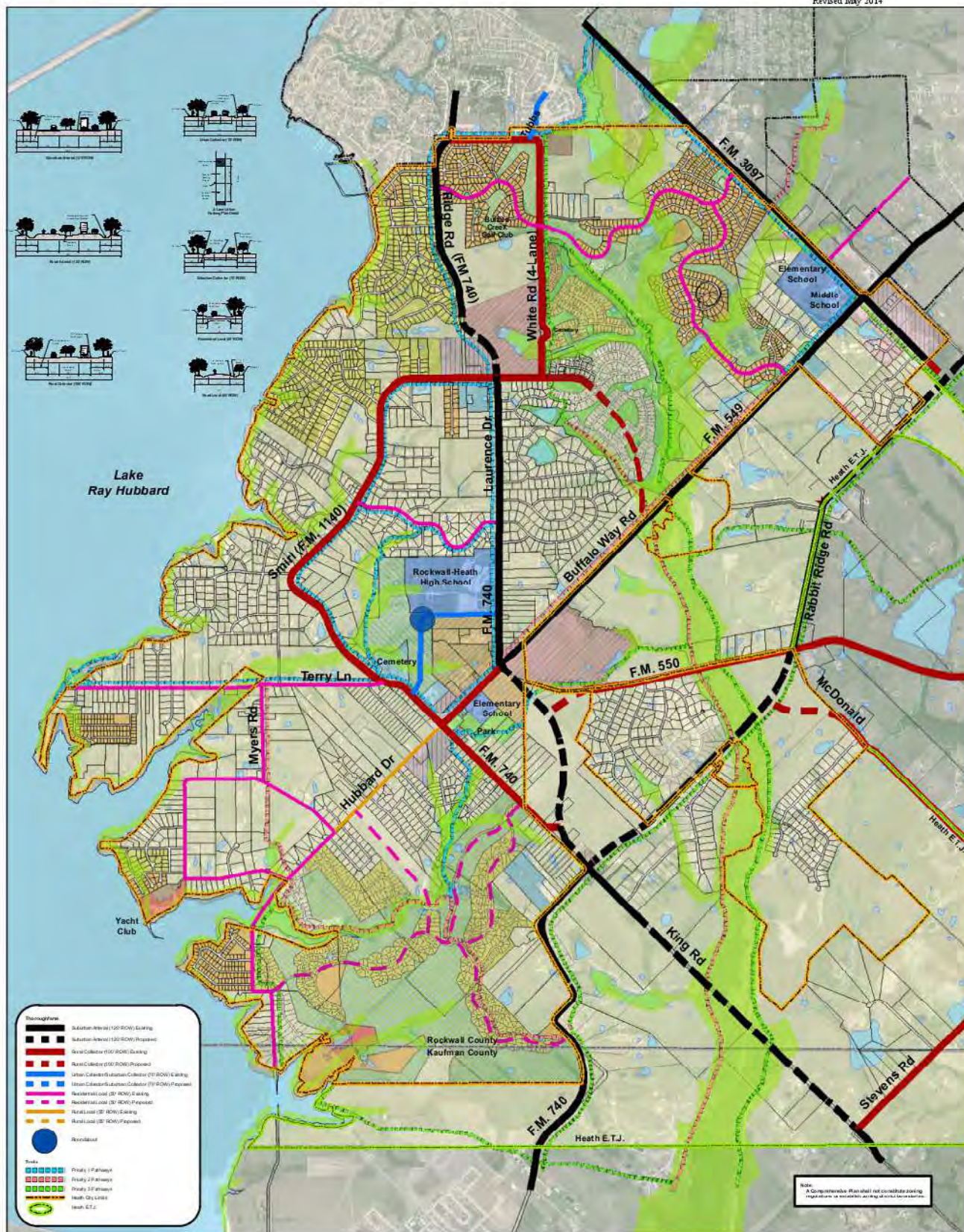




**Figure 41. Future Parks and Trails**







City of Heath, Texas  
Transportation Plan

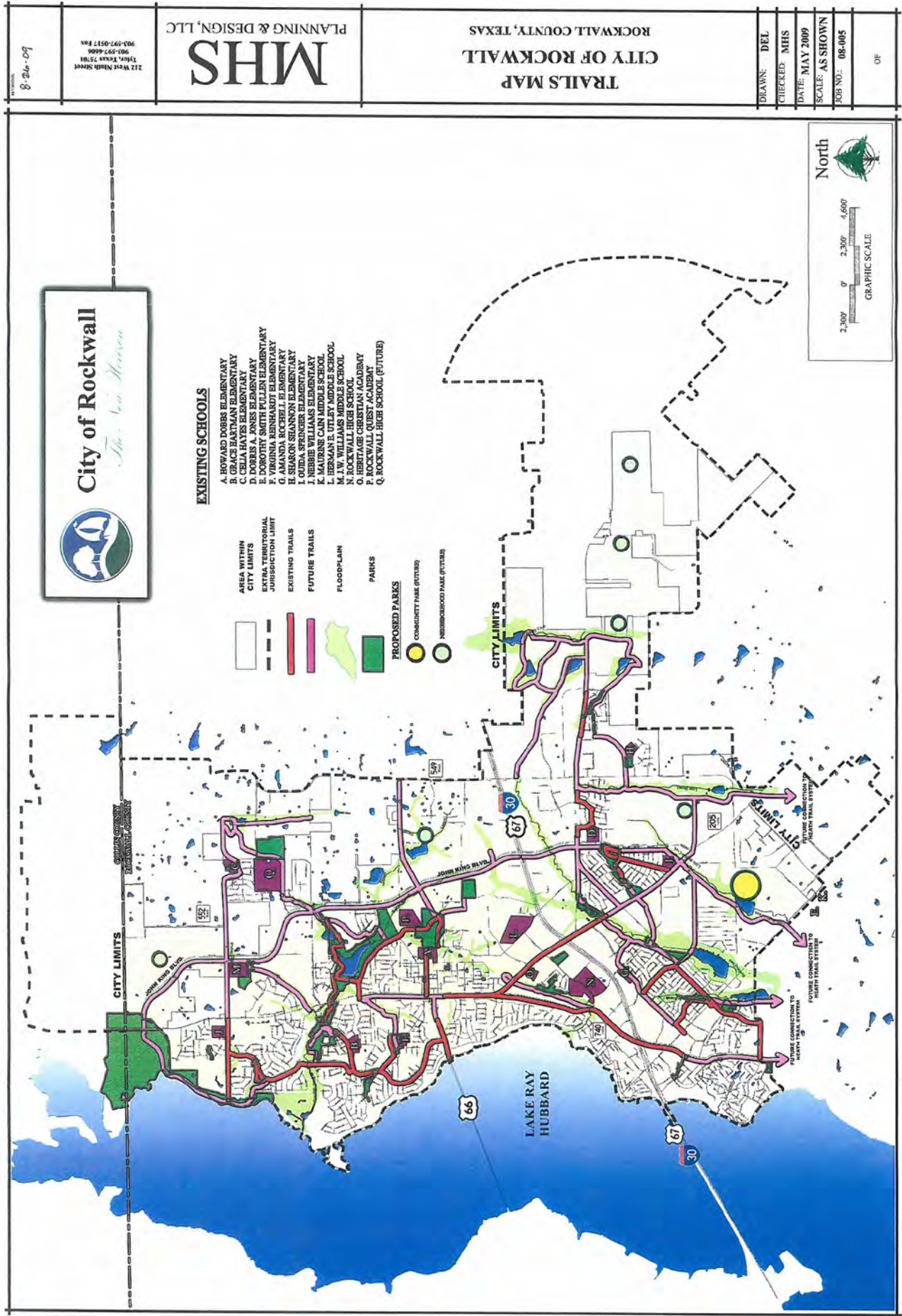


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North

2,300' 0' 2,300' 4,600'

GRAPHIC SCALE



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Tulsa, Texas 75701  
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903-597-8517 Fax

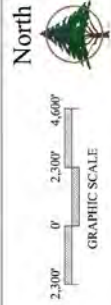
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PLANNING & DESIGN, LLC

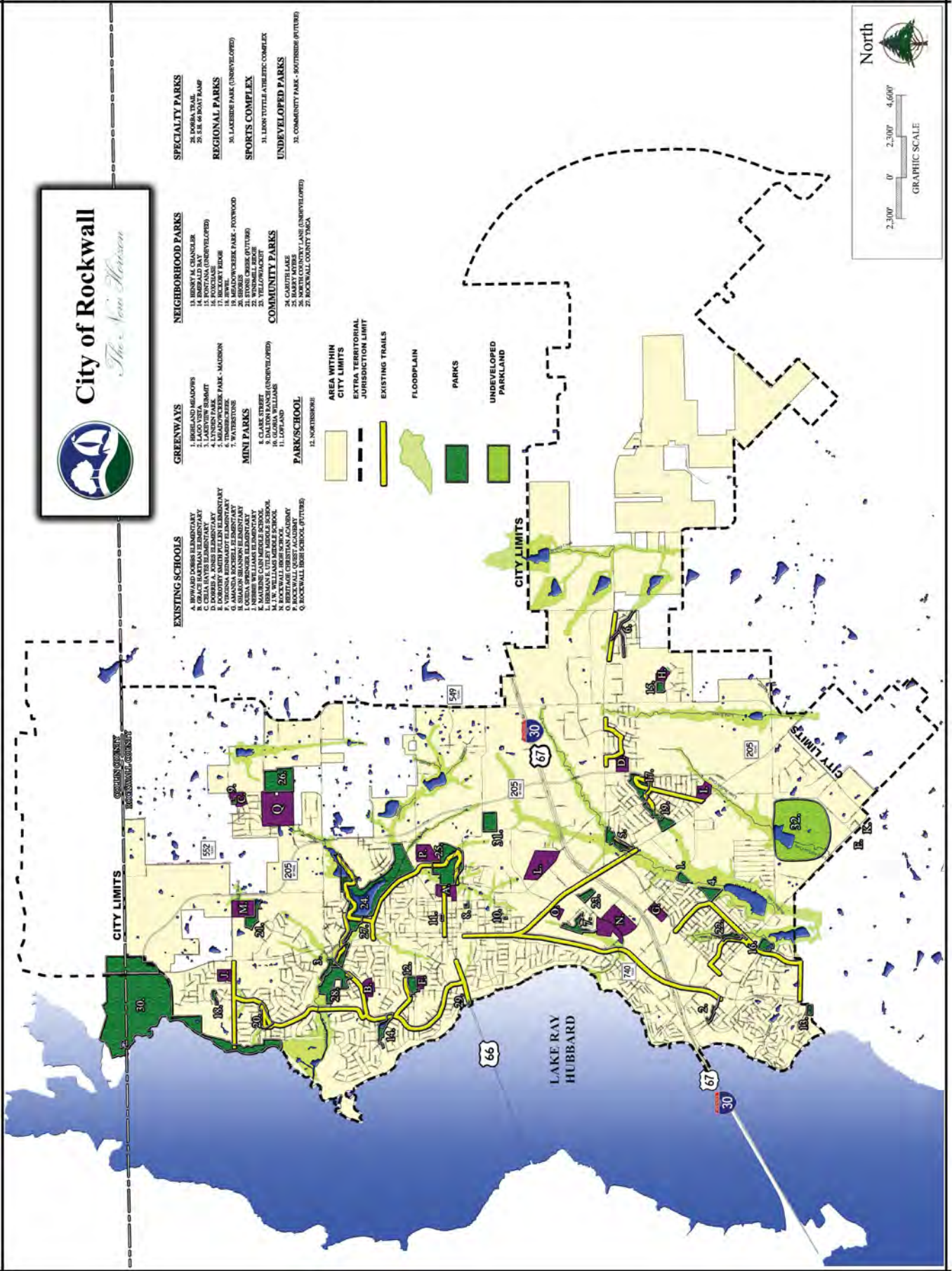
## EXISTING PARKS & OPEN SPACE CITY OF ROCKWALL ROCKWALL COUNTY, TEXAS

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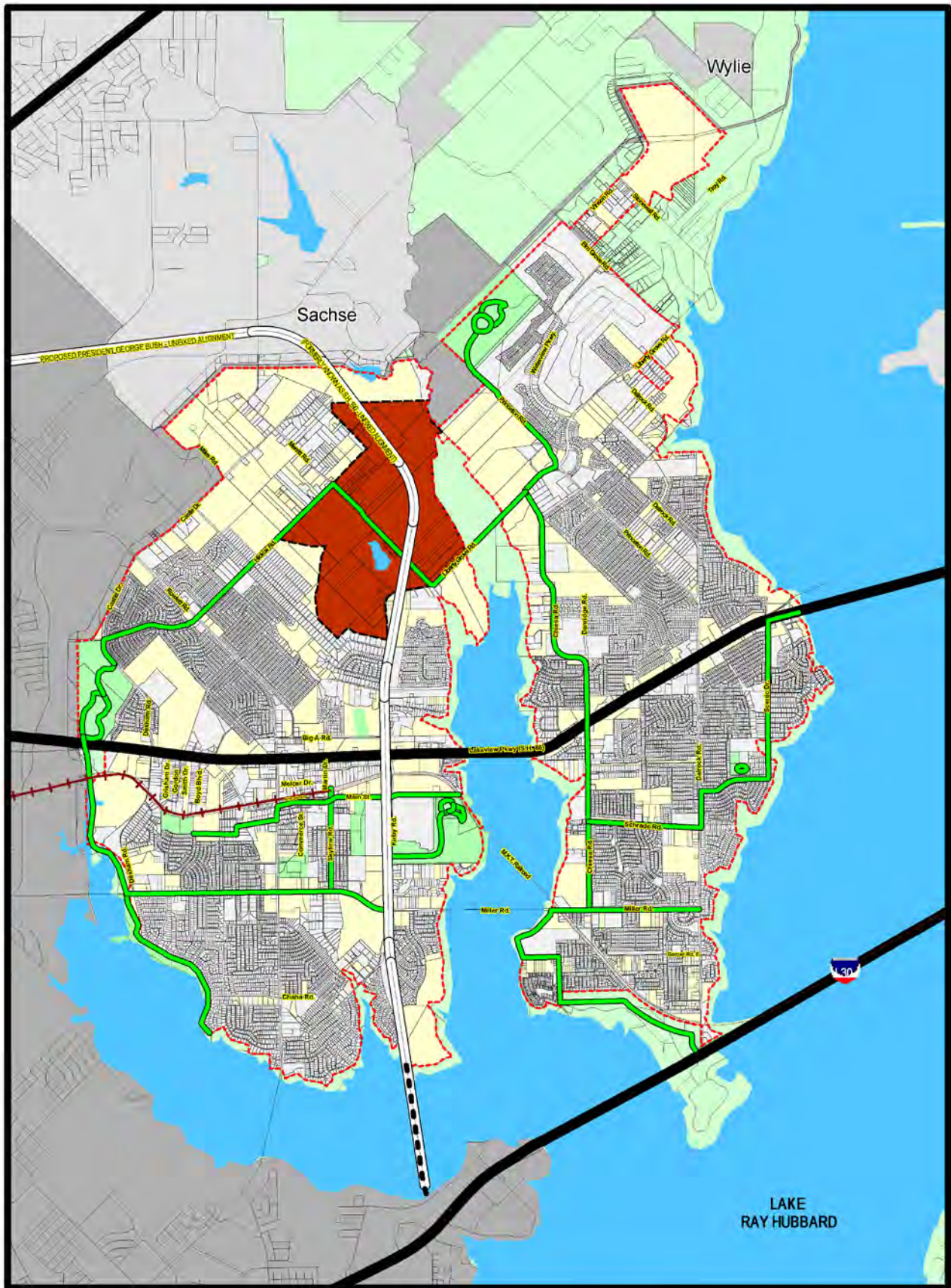
OF




- EXISTING SCHOOLS**
- A. SPURDICK ELEMENTARY
  - B. GRACE BARTMAN ELEMENTARY
  - C. ROCKWALL ELEMENTARY
  - D. DORRIS A. JONES ELEMENTARY
  - E. DOROTHY SMITH PULLER ELEMENTARY
  - F. ROCKWALL J. J. HARRIS ELEMENTARY
  - G. AMANDA ROCKWELL ELEMENTARY
  - H. LORNA SHINDLER ELEMENTARY
  - I. VIRGINIA WILLIAMS ELEMENTARY
  - J. ROCKWALL J. J. HARRIS ELEMENTARY
  - K. ROCKWALL J. J. HARRIS ELEMENTARY
  - L. ROCKWALL J. J. HARRIS ELEMENTARY
  - M. ROCKWALL J. J. HARRIS ELEMENTARY
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  - O. ROCKWALL J. J. HARRIS ELEMENTARY
  - P. ROCKWALL J. J. HARRIS ELEMENTARY
  - Q. ROCKWALL J. J. HARRIS ELEMENTARY
- GREENWAYS**
- 1. HIGLEY & WILSON
  - 2. LAGO VISTA
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- MINI PARKS**
- 1. CLARK STREET
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- NEIGHBORHOOD PARKS**
- 1. HIGLEY & WILSON
  - 2. LAGO VISTA
  - 3. LAGO VISTA
  - 4. LAGO VISTA
  - 5. LAGO VISTA
  - 6. LAGO VISTA
  - 7. WATERWAYS
- REGIONAL PARKS**
- 1. HIGLEY & WILSON
  - 2. LAGO VISTA
  - 3. LAGO VISTA
  - 4. LAGO VISTA
  - 5. LAGO VISTA
  - 6. LAGO VISTA
  - 7. WATERWAYS
- SPECIALTY PARKS**
- 1. HIGLEY & WILSON
  - 2. LAGO VISTA
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  - 4. LAGO VISTA
  - 5. LAGO VISTA
  - 6. LAGO VISTA
  - 7. WATERWAYS
- SPORTS COMPLEX**
- 1. HIGLEY & WILSON
  - 2. LAGO VISTA
  - 3. LAGO VISTA
  - 4. LAGO VISTA
  - 5. LAGO VISTA
  - 6. LAGO VISTA
  - 7. WATERWAYS
- UNDEVELOPED PARKS**
- 1. HIGLEY & WILSON
  - 2. LAGO VISTA
  - 3. LAGO VISTA
  - 4. LAGO VISTA
  - 5. LAGO VISTA
  - 6. LAGO VISTA
  - 7. WATERWAYS









**ADOPTED APRIL 17, 2001**  
(REVISED DECEMBER 04, 2001)

DATA SOURCE: DALLAS CENTRAL APPRAISAL DISTRICT, NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, CITY OF ROWLETT GIS DIVISION, NORTH TEXAS TURNPIKE AUTHORITY, CARTER AND BURGESS

**COLOR CODE**

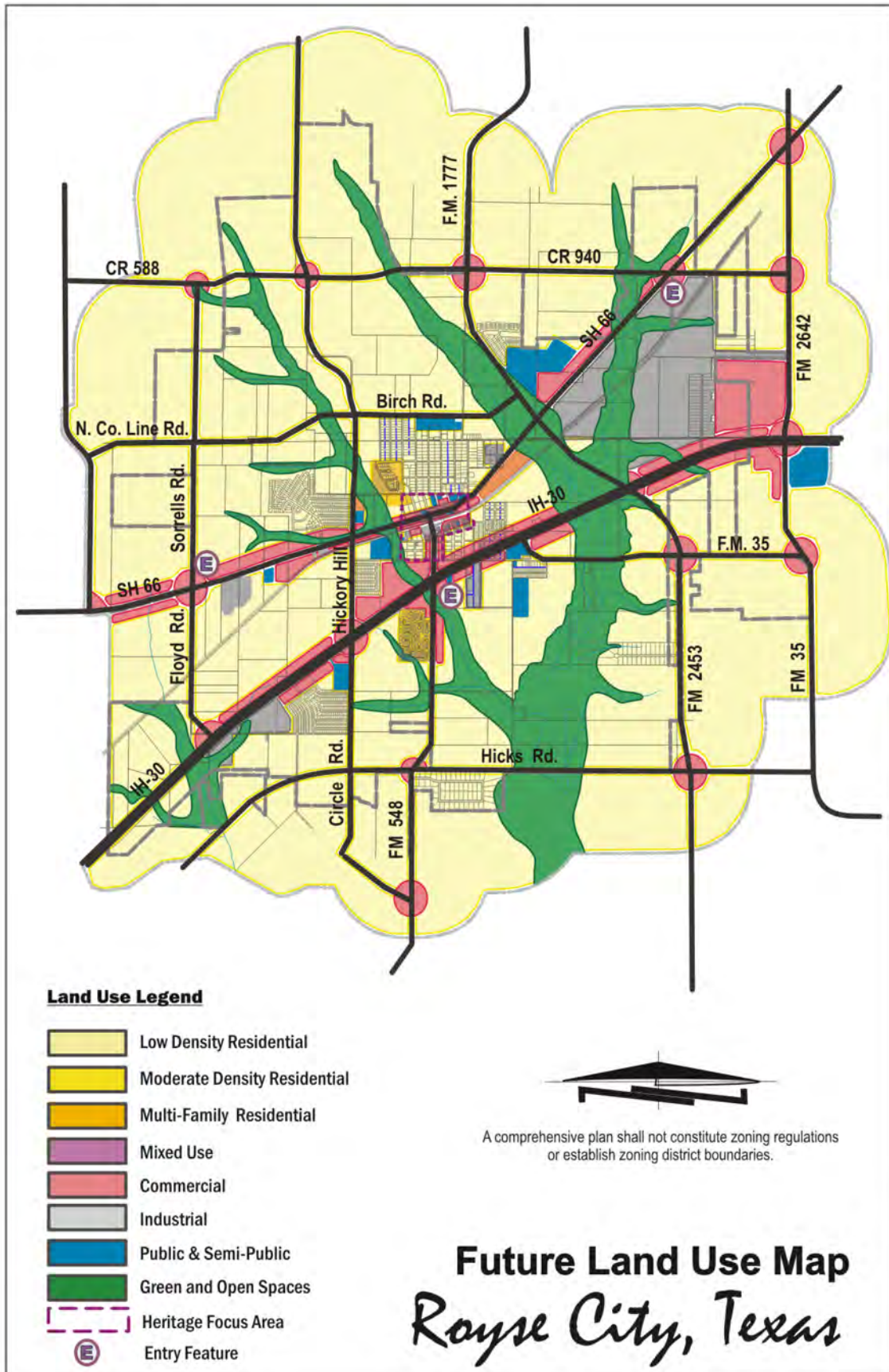
HIKE/BIKE TRAIL

**FUNCTION**

HIKE/BIKE TRAIL

## HIKE / BIKE TRAIL SYSTEM





# Appendix B

## Background Maps

City Limits and ETJs

Demographics

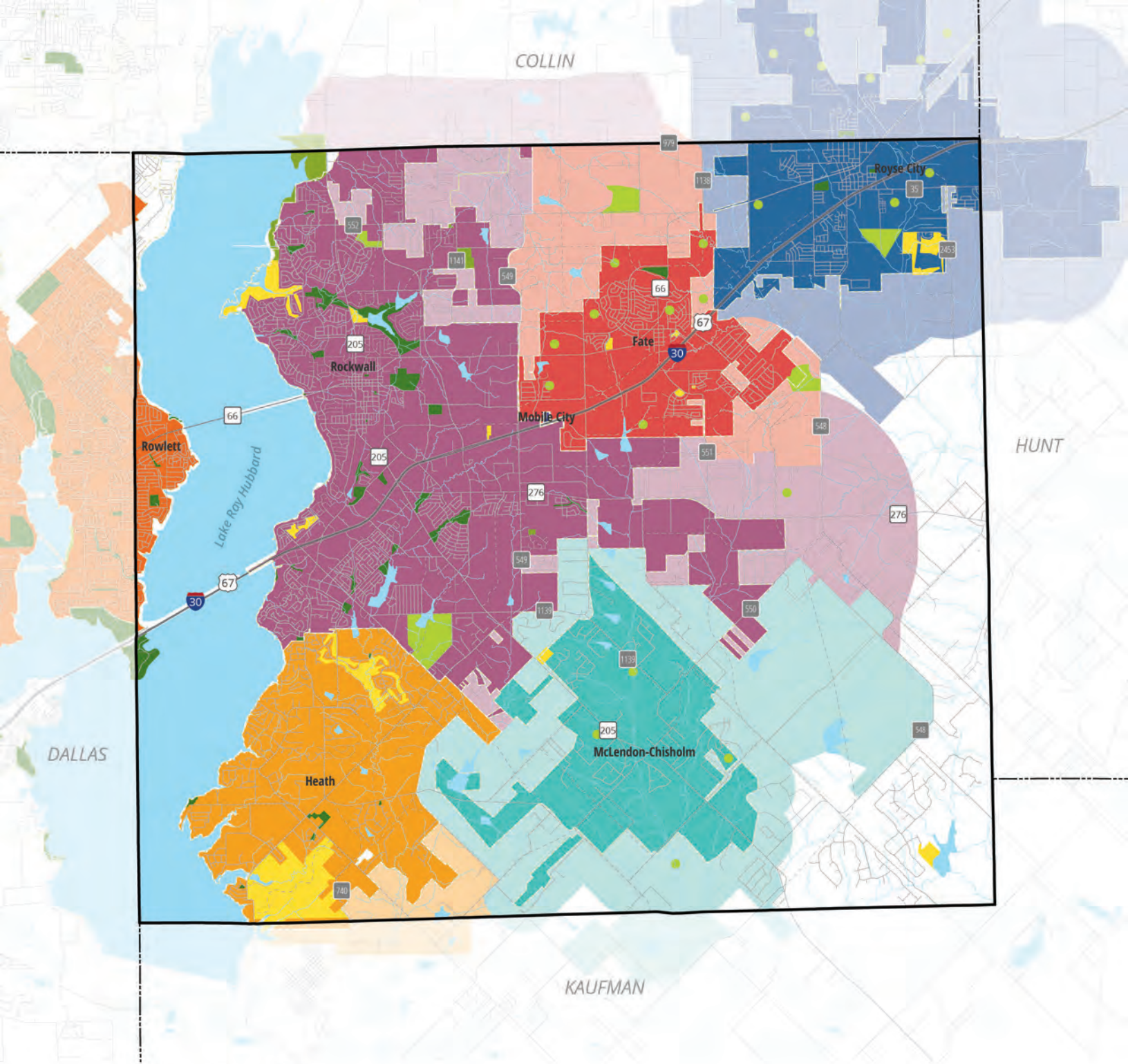
Ownership

Park and Trail Access

Education

Elevation





## City Limits and ETJs

- City Limits
- ETJ Limits

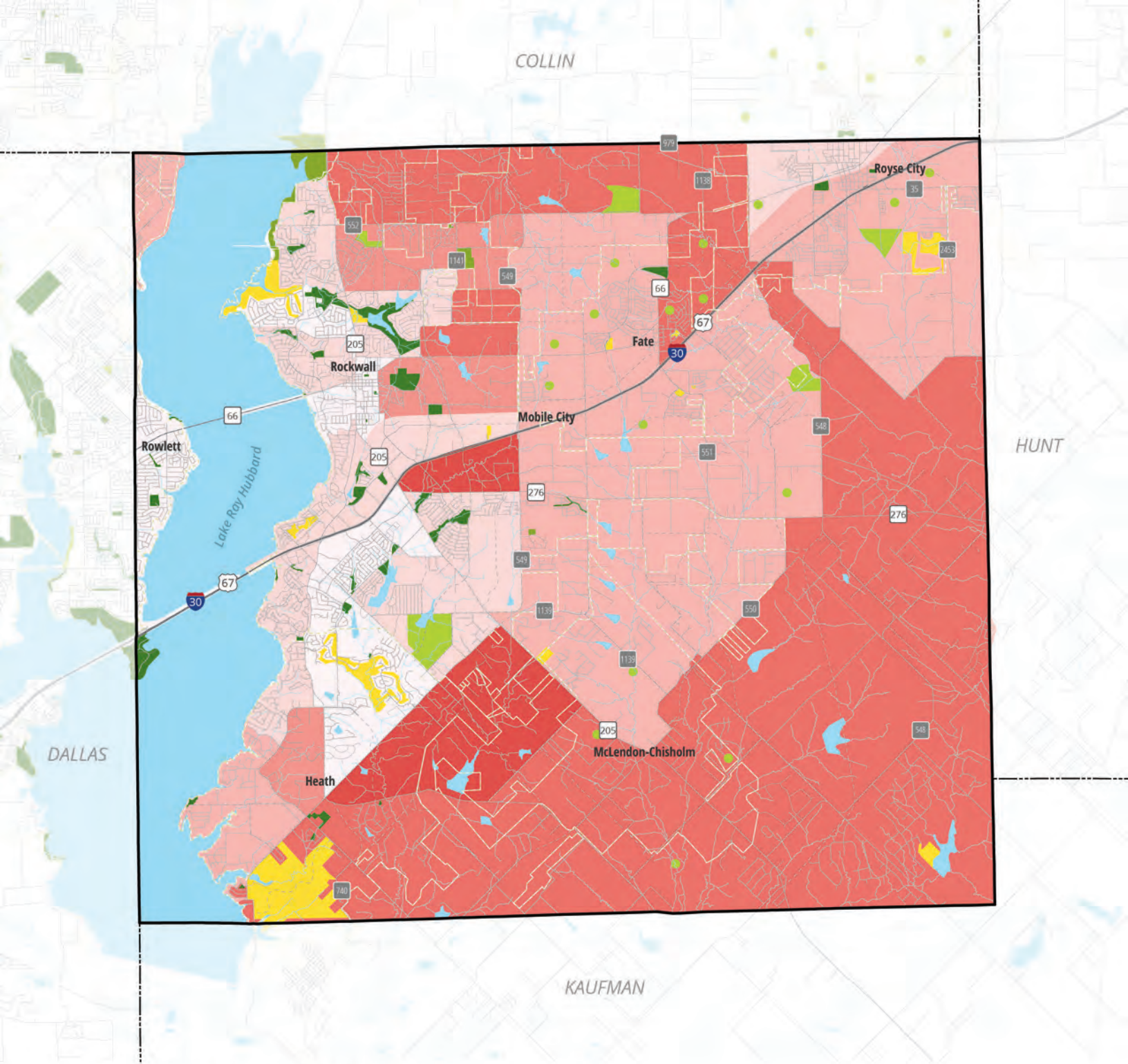
- Existing Public Parks
- Undeveloped Public Parks
- Existing Private Parks

- Rockwall County Boundary
- County Boundary
- City Boundary

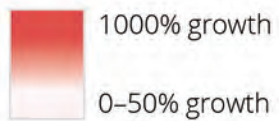
Sources: Rockwall County, City of Rockwall, City of Fate, Royse City, City of Heath, City of McLendon-Chisholm, TNIRIS







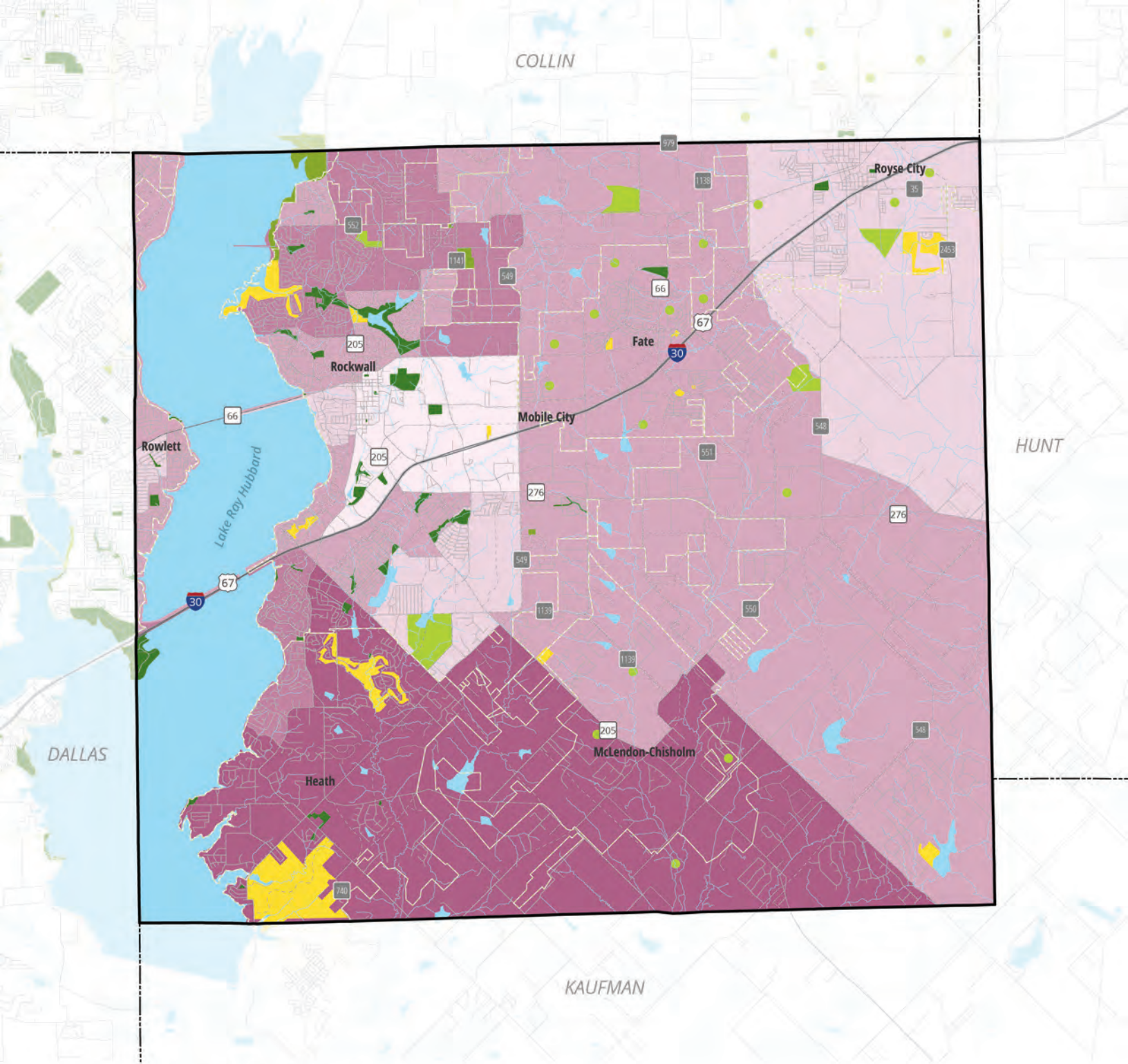
### 2010–2040 Population Change



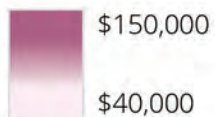
Sources: Rockwall County, TNRIS, US Census, NCTCOG







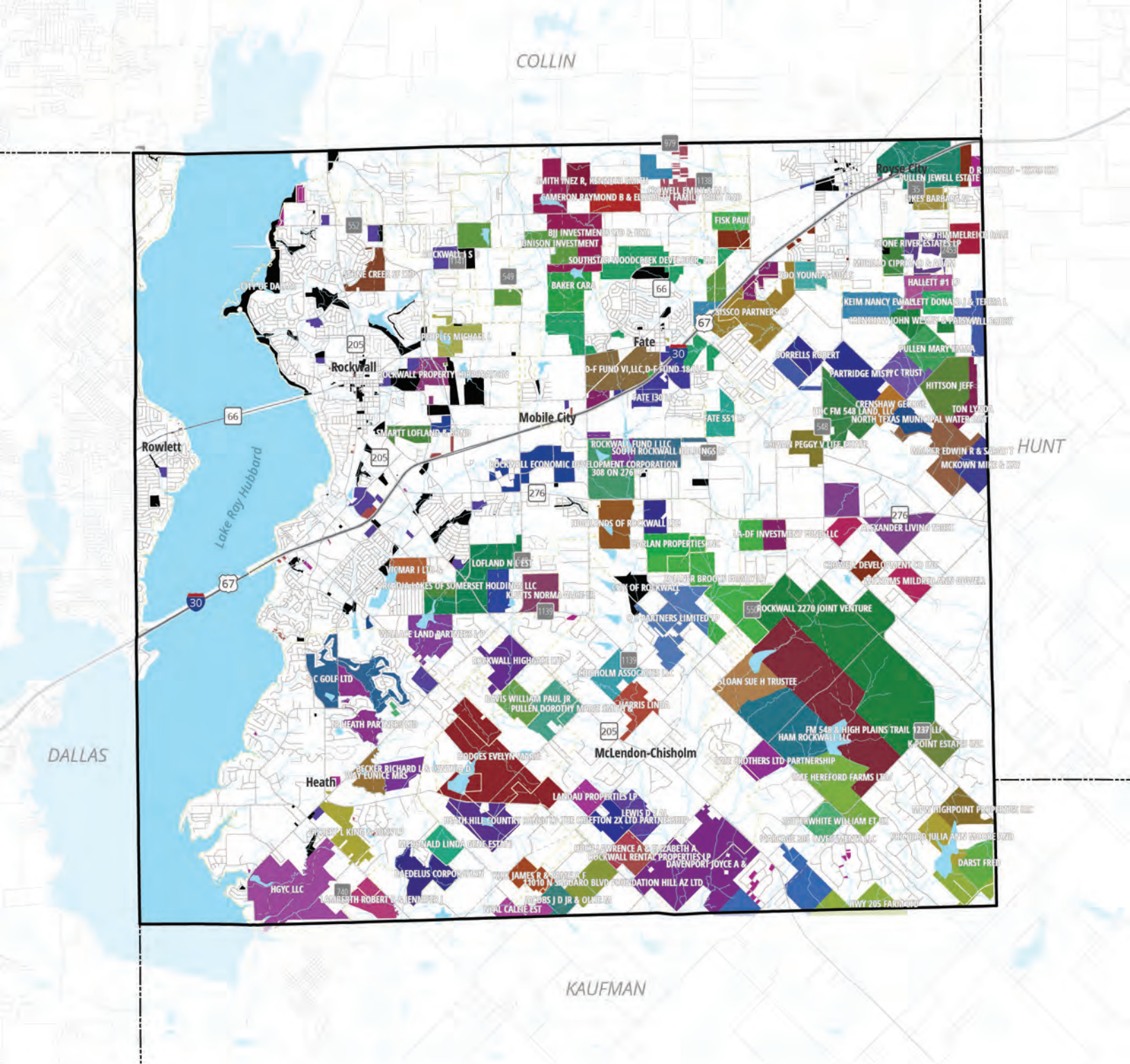
### Median Household Income



Sources: Rockwall County, TNRIS, American Community Survey (2013 5-Year)





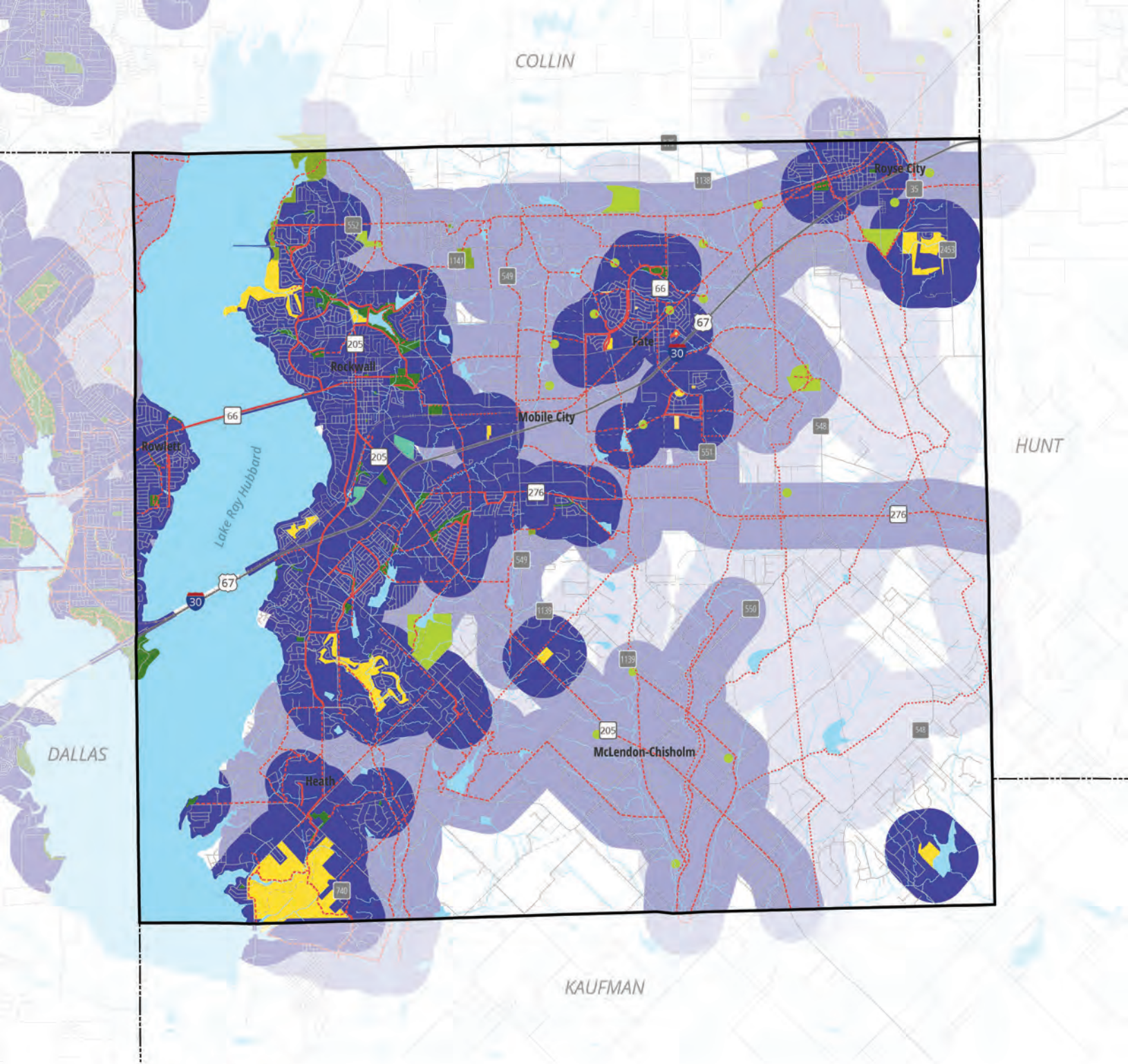


## Ownership

Owners with 100 Acres of Land or More

Publicly-Owned Land













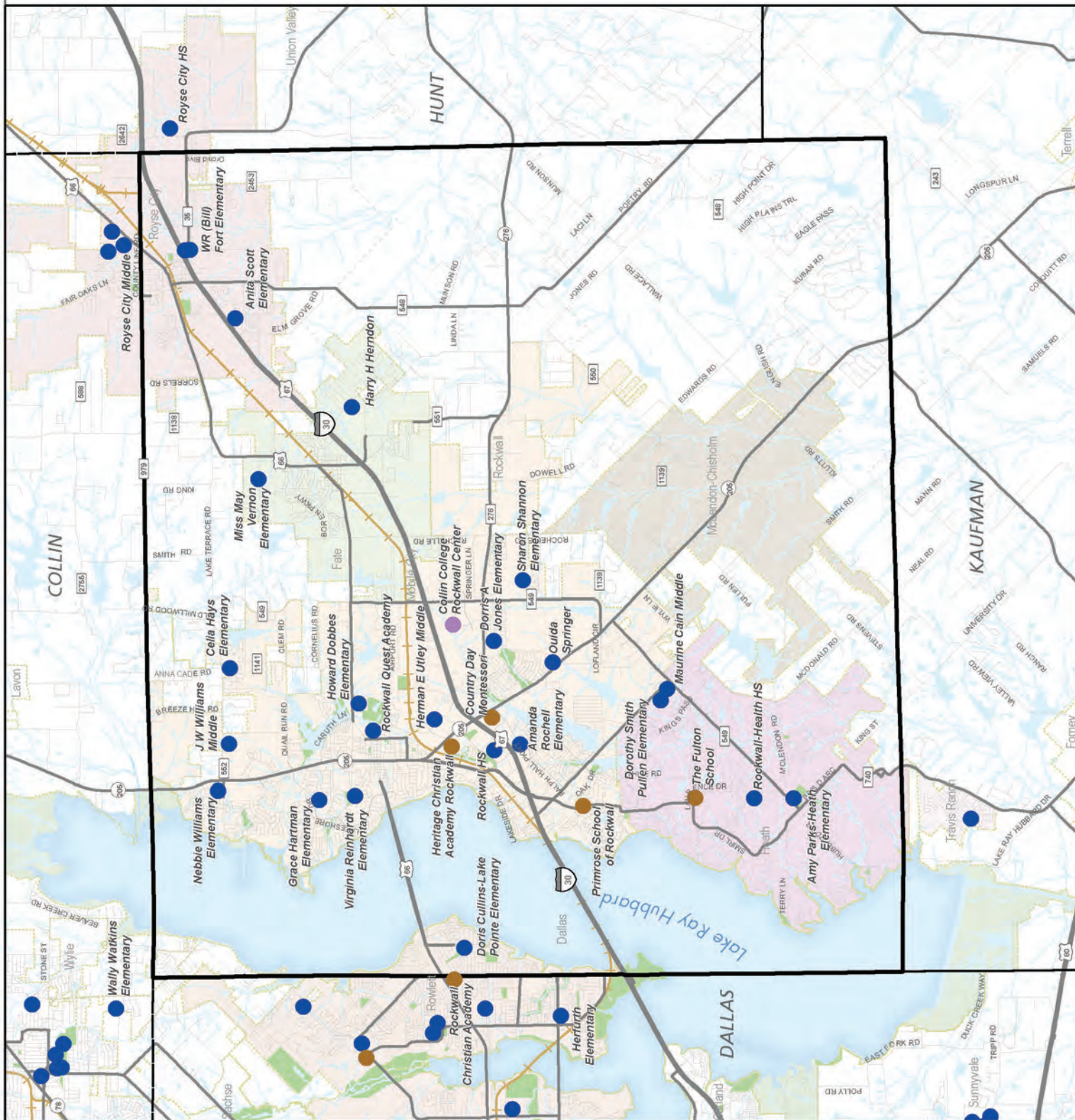


# Rockwall County Open Space Plan

## Education

-  Rockwall County
-  County Boundary
-  City Boundary
-  River / Lake
-  Open Space
- Schools**
  -  Public
  -  Private
  -  Higher

Source: Rockwall County, TNIRIS





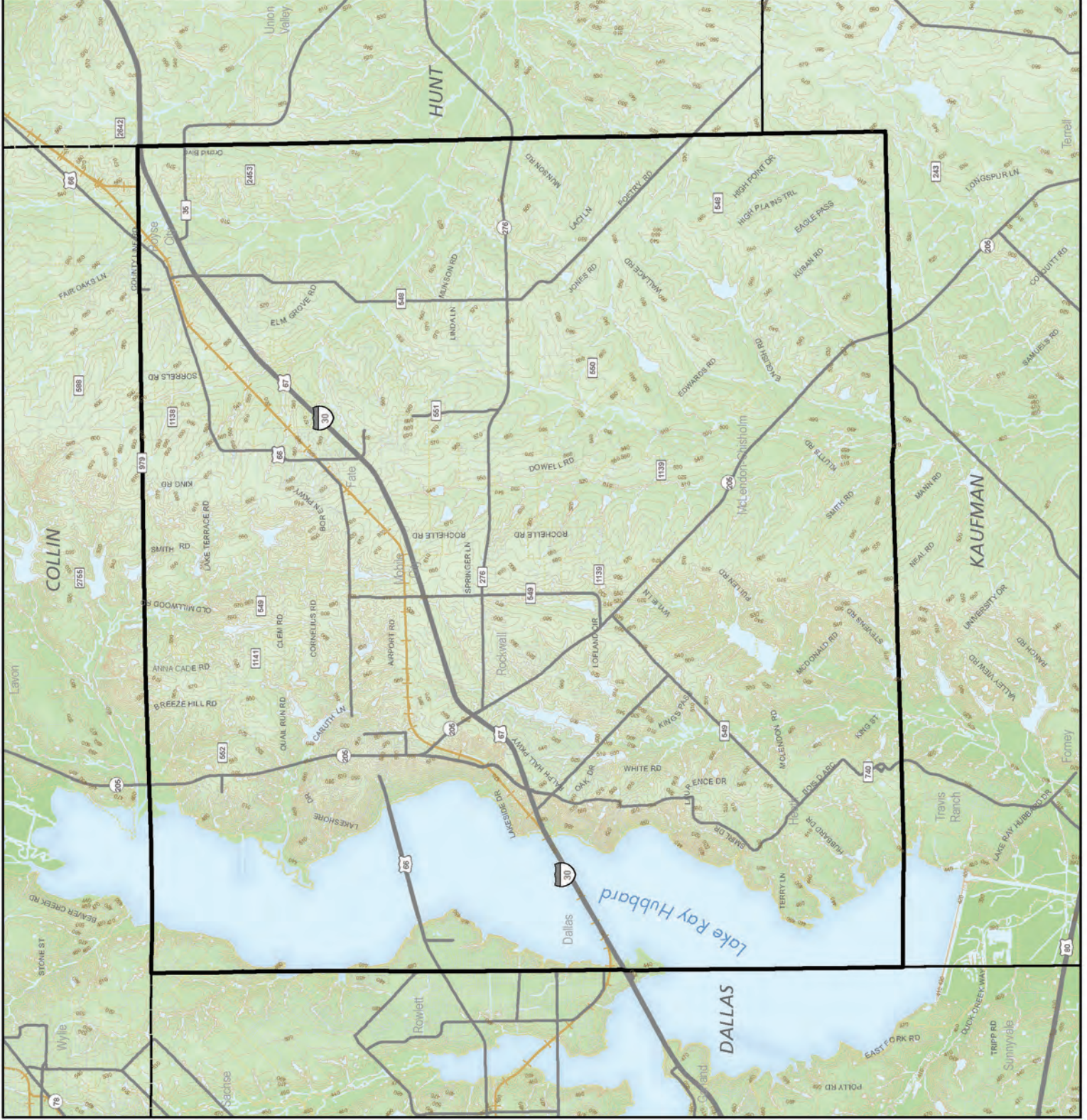
# Rockwall County Open Space Plan

## Elevation

- Rockwall County Boundary
- County Boundary
- City Boundary
- River / Lake
- 10 Foot Contour

Source: Rockwall County, TNRIS, USGS

0 0.9 1.8 2.7 Miles





# Appendix C

## Conservancy and Land Trust Examples

### Definition of a Land Trust

A land trust, or land conservancy, is a nonprofit organization whose mission it is to permanently protect land for public benefit. Land trusts are typically community-based, nonprofit organizations. They may acquire and hold title to land obtained through donation or purchase, or they may acquire conservation easements that allow property owners to maintain ownership of the land while limiting development and other use of the easement. Often, land trusts are more nimble than governments at negotiating and executing land deals.

In addition to serving as receivers and stewards of land, land trusts can actively solicit donations (of money, land, and easements), fundraise, provide educational opportunities, and assist in land planning where land dedication or an easement is part of the site program. Land trusts may also strategically hold developable land to sell or swap for desirable open space.

Land trusts also operate at the national level. The Trust for Public Land, a national organization, could participate in protecting open space in Rockwall County.

### Texas Land Conservancy

The Texas Land Conservancy (TLC) works with ranchers, farmers, and other landowners to protect their family lands from future development and conserve the physical and ecological integrity of their wildlife habitat, native plant communities, and scenic landscapes. TLC assumes the responsibility of conserving the land while allowing landowners to retain ownership. It employs three main strategies: conservation easement donations, fee simple donations, and purchases.

Conservation easements are the most common method of land conservation for TLC. Although they may be purchased in rare cases, these easements are usually donated, which often qualifies the landowner for substantial tax benefits. A fee simple donation is the transfer of a property by deeding it directly to a charitable organization, such as TLC, for conservation or other purposes. These donations are typically tax-deductible. Some fee simple properties have been purchased, but this is not a common conservation approach given the high costs of land from increased development pressure. TLC only purchases places of unusual significance for water features, wildlife, or native plants.

## Texas Parks & Recreation Foundation

Headquartered in Richardson, the Texas Parks & Recreation Foundation acts as a holding agent for property intended as public parks and open space. Landowners are able to divest of land and receive tax benefits, and the Foundation holds it until a municipal or county government can dedicate it for park or preservation purposes.

## Connemara Conservancy

The Connemara Conservancy, based in Allen, is one of the oldest land trusts in Texas, focused on protecting and conserving open space and critical habitats and on educating current and future generations on the important role of open space to the quality of life in North Texas.

## Upper Trinity Conservation Trust

The Lewisville-based Upper Trinity Conservation Trust (UTCT) is a land trust dedicated to protecting water quality and riparian habitat in particular by preserving lakes, streams and watersheds. UTCT uses conservation easements to ensure that areas of importance to the watershed are maintained for the benefit of future generations. The UTCT has also developed a long term Greenbelt Plan for Denton County, aimed at preserving and enhancing those areas bordering streams, wetlands and other waterbodies.

## Hill Country Conservancy

The Hill Country Conservancy (HCC) is a land trust based in Austin that uses conservation easements to preserve wildlife habitat, water quality, outdoor recreation opportunities, quality of life and Texas' regional heritage. HCC has been responsible for the land acquisition and planning of the Violet Crown Trail, the first regional trail system in Central Texas.

## Texas Land Trust Council

The Texas Land Trust Council is a support organization for the more than 30 land trusts operating in Texas, helping pair landowners with land trusts that have similar conservation objectives. It hosts a directory of conservation professionals and land trusts operating in each county, as well as information for landowners regarding conservation easements.



# Appendix D

## Funding Programs

### Grants

#### The Regional Conservation Partnership Program (RCPP)

The RCPP was created to promote coordination between the National Resources Conservation Service (NRCS) and its partners to make conservation assistance available to farm operators and landowners, in an effort to increase the restoration and sustainable use of soil, water, wildlife and related natural resources on regional or watershed scales.

Partners can include agricultural or silvicultural producer associations, farmer cooperatives or other groups of producers, state or local governments, American Indian tribes, municipal water treatment entities, water and irrigation districts, conservation-driven nongovernmental organizations and institutions of higher education. Under the RCPP, eligible farm operators and landowners of agricultural land and non-industrial private forestland can become participants for a period of up to 5 years.

Projects that have recently received funding include initiatives to restore and protect headwater stream and wetland systems on agricultural land near the Texas Gulf Coast, to reduce nutrient and sediment loading in water bodies in the Rio Grande Valley and to address water quality concerns surrounding Elk City Lake in Oklahoma.

Funding is allocated in three different categories: critical conservation areas (Rockwall County falls within one of these), national and state. Announcement of FY 2017 program funding is expected in the spring of 2016, and the timeline will likely follow a similar timeline to that of FY 2016 timeline:

- National Announcement of Program Funding – May 4, 2015
- Project Pre-proposal Due to NRCS – July 8, 2015
- Announcement by NRCS of Pre-proposal Selection – September 4, 2015
- Full Proposals Due to NRCS – November 10, 2015
- Announcement of Selected Full Proposals - January 2016

## Transportation Alternatives Program (TAP)

An initiative of the Texas Department of Transportation, the TAP provides funding for alternative transportation projects that include on- and off road pedestrian and bicycle facilities, infrastructure for non-driver access to public transportation, projects that enhance mobility and Safe Routes to School infrastructure projects. Dates for 2016 have yet to be announced; the Call for Projects will likely come in early 2016, with a deadline for submission likely in May of that year. Any proposed Rockwall County project would require a letter of support from the North Central Texas Council of Governments (NCTCOG).

## Conservation Reserve Program (CRP)

The Conservation Reserve Program, administered by the Farm Service Agency, pays a yearly rental payment in exchange for farmers removing environmentally sensitive land from agricultural production and planting species that will improve environmental quality. This program covers land suitable for wetlands/riparian/wildlife buffers, wetland restoration, grass waterways, filter strips, shelter belts and shallow water areas for wildlife. Land must be cropland or pastureland that can be used as a riparian buffer or other similar water quality purpose. The next CRP General Signup period will be held from December 1, 2015, through February 26, 2016; continuous sign-up is also available and ongoing.

## Texas Parks & Wildlife Grants

The Texas Parks & Wildlife Department operates a number of grant programs geared toward recreation, wildlife protection, and education. The Local Parks Grants program provides 50 percent matching grants for land dedicated as parkland. Community Outdoor Outreach Program (CO-OP) grants are available to local governments and nonprofits for environmental/conservation programming that reaches under-served populations. The Recreational Trails Fund gives grants to various kinds of trail projects. Section 6 grants are geared toward protecting the habitat of endangered species.

## State Financing Programs

### State Water Implementation Fund for Texas (SWIFT)

SWIFT offers financing of projects in the state water plan. Projects are prioritized based on legislative direction and are required to be recommended strategies in the state water plan. Projects include water conservation and reuse, desalting groundwater, developing reservoirs and well fields, among others.

## Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF)

CWSRF and DWSRF provide loans for water projects at lower rates than those offered by commercial markets. Projects include stormwater and nonpoint source pollution control, estuary management, and source water management. The programs also offer subsidies for incorporating green infrastructure.

Project information forms must be submitted by March 3, 2016 in order to have a project considered for funding in FY 2017. Details are available at [www.twdb.texas.gov](http://www.twdb.texas.gov).

## Watershed Rehabilitation

The NRCS is currently investing millions in rehabilitating old dams that have exceeded their 50 year life span. In 2015, approximately \$9 million in funding was allocated for dam rehabilitation in Texas, including repairs to a dam in Collin County. The federal government provides 65 percent of the funding for the projects, while local and county governments and other agencies pay for the remaining 35 percent. No timeline has yet been released regarding requests for FY 2016 projects.





# Appendix E

## Open Space

## Opportunity Evaluations

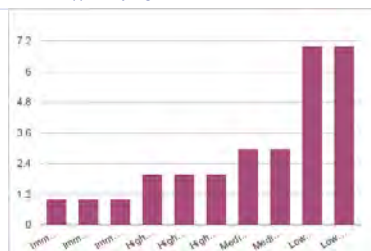
### OPEN SPACE OPPORTUNITY SCORES OVERVIEW

#### GRADING SYSTEM

% Range	Grade	# of opportunities
97 - 100	Immediate Priority	1
93 - 96	Immediate Priority	1
90 - 92	Immediate Priority	1
87 - 89	High Priority	2
83 - 86	High Priority	2
80 - 82	High Priority	2
77 - 79	Medium Priority	3
70 - 76	Medium Priority	3
60 - 69	Low Priority	7
0 - 59	Low Priority	7
0		

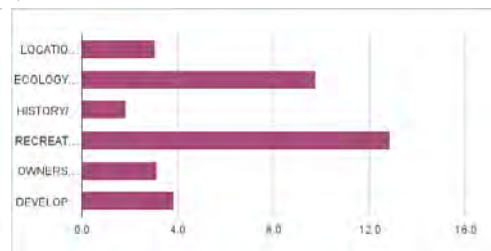
#### GRADE DISTRIBUTION

based on opportunity avg.



#### AVERAGE SCORES

per metric



ROCKWALL COUNTY OPEN SPACE OPPORTUNITIES				LOCATION/CONNECTIVITY	ECOLOGY/ENVIRONMENT	HISTORY/CULTURE	RECREATION	OWNERSHIP	DEVELOPEMENT PRESSURE
				4	14	3	16	6	5
ID	OPPORTUNITY AVERAGE	Medium Priority	72%	3.1	9.8	1.8	12.8	3.2	3.8
A	Lakeside Park	High Priority	85%	4	12	1	15	6	3
B	Stodghill-Fowler Area	Immediate Priority	92%	4	13	3	16	3	5
C	Cameron Area	Medium Priority	77%	3	10	3	16	3	2
D	Fate Community Park	Low Priority	69%	4	8	1	12	3	5
E	Regional Park/Preserve	Medium Priority	75%	2	11	2	13	3	5
F	NRCS Lake 13	Low Priority	67%	2	7	2	15	3	3
G	Zollner-Brooks Area	Medium Priority	77%	3	10	2	13	4	5
H	NRCS Lakes Corridor	Low Priority	56%	3	7	1	10	2	4
I	Wallace Preserve	High Priority	85%	4	11	3	15	3	5
J	Terry Lane Corridor	Low Priority	69%	4	13	2	9	2	3
K	Buffalo Creek Corridor	Low Priority	65%	4	11	1	9	1	5
L	Davenport Area	Low Priority	56%	2	6	1	11	4	3
M	High Point Area	Low Priority	63%	1	8	2	13	4	2

## Opportunity A Lakeside Park Area

### Location/Connectivity

Connects to Existing Trails, Parks, Public Open Space, Schools, and/or Neighborhoods	1
Incorporated into planned local or regional trails	1
it is near existing or future infrastructure and utilities	1
it is in an area that is not currently served by existing permanently protected open spaces	1
<b>Total (4 max)</b>	<b>4</b>

### Ecology/Environment

it contains significant waterways with relatively undisturbed riparian zone and floodplain	1
it contains streams and/or other water resources that can be rehabilitated to enrich ecosystem value and watershed health, prevent erosion and runoff and better mitigate stormwater and flooding	1
it serves as useful plant and wildlife habitat, with sufficient size, connectivity, and edge length to accommodate a diverse mix of species	1
it can be used to foster awareness, appreciation and stewardship of natural systems	1
could provide for acquisition and preservation of significant wetland area	1
could provide for acquisition and preservation of natural open space land or water for human use and enjoyment that is relatively free of man-made structures	1
could provide significant opportunities to employ LID/GI strategies complementary of storm water management plan goals	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	0
provides opportunity to preserve native tree canopy	1
NCTCOG VEIL Score (14-18 = 1, 19-21=2, 22-25=3, 26-30=4, 31-37=5)	4
<b>Total (14 max)</b>	<b>12</b>

### History/Culture/Scenic

it contains or offers scenic views	1
it houses significant historic or archaeological features	0
it is associated with architecture, events, or persons that contributed to the history or culture of Rockwall County	0
<b>Total (3 max)</b>	<b>1</b>

### Recreation

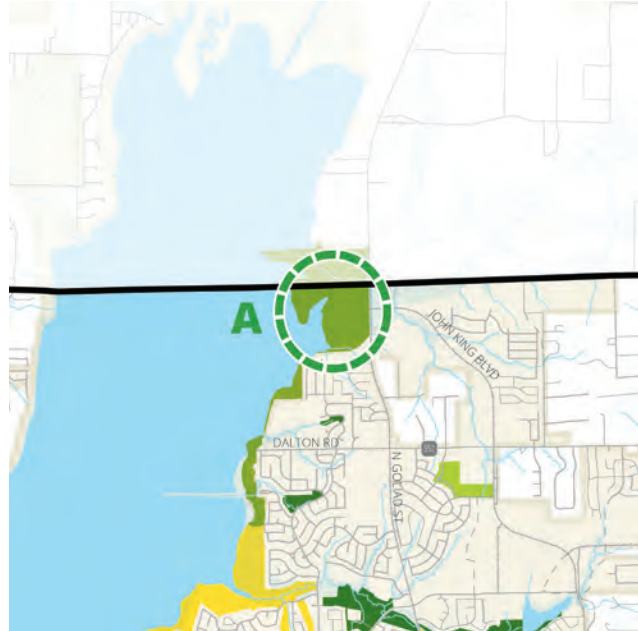
could serve multiple age segments	1
could promote community health and well being	1
develop new parks and recreational opportunities around water resources	1
could provide campground area	1
could provide sports fields/courts	0
could provide playgrounds	1
could provide picnic areas	1
could provide trails	1
could provide passive recreation	1
could provide amphitheater	1
could provide natural area	1
could provide fishing facilities	1
could provide stream based recreation opportunities	1
could provide pond based recreation opportunities	1
could provide wetland based recreation opportunities	1
could provide significantly new and different recreation opportunities	1
<b>Total (16 max)</b>	<b>15</b>

### Ownership

it is publicly owned	1
it has a single owner	1
it has less than 4 owners	1
Affordability (3 pt scale, 3 most affordable)	3
<b>Total (6 max)</b>	<b>6</b>

### Development Pressure

property has near term development pressure	0
property could provide mitigation for surrounding development	1



property would require significant alteration of floodplain, natural areas and wetlands to allow development	1
opportunity could substantially enhance value of adjacent development	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	0
<b>Total (5 max)</b>	<b>3</b>

<b>TOTAL POINTS</b>	<b>41</b>
<b>PERCENTAGE SCORE</b>	<b>85.41</b>



## Opportunity B Stodgill/Fowler Area

### Location/Connectivity

Connects to Existing Trails, Parks, Public Open Space, Schools, and/or Neighborhoods	1
Incorporated into planned local or regional trails	1
it is near existing or future infrastructure and utilities	1
it is in an area that is not currently served by existing permanently protected open spaces	1
<b>Total (4 max)</b>	<b>4</b>

### Ecology/Environment

it contains significant waterways with relatively undisturbed riparian zone and floodplain	1
it contains streams and/or other water resources that can be rehabilitated to enrich ecosystem value and watershed health, prevent erosion and runoff and better mitigate stormwater and flooding	1
it serves as useful plant and wildlife habitat, with sufficient size, connectivity, and edge length to accommodate a diverse mix of species	1
it can be used to foster awareness, appreciation and stewardship of natural systems	1
could provide for acquisition and preservation of significant wetland area	1
could provide for acquisition and preservation of natural open space land or water for human use and enjoyment that is relatively free of man-made structures	1
could provide significant opportunities to employ LID/GI strategies complementary of storm water management plan goals	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
provides opportunity to preserve native tree canopy	1
NCTCOG VEIL Score (14-18 = 1, 19-21=2, 22-25=3, 26-30=4, 31-37=5)	4
<b>Total (14 max)</b>	<b>13</b>

### History/Culture

it contains or offers scenic views	1
it houses significant historic or archaeological features	1
it is associated with architecture, events, or persons that contributed to the history or culture of Rockwall County	1
<b>Total (3 max)</b>	<b>3</b>

### Recreation

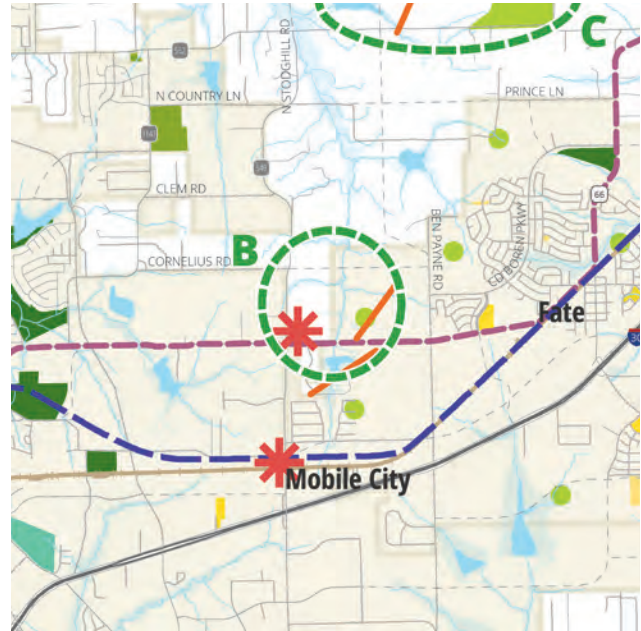
could serve multiple age segments	1
could promote community health and well being	1
develop new parks and recreational opportunities around water resources	1
could provide campground area	1
could provide sports fields/courts	1
could provide playgrounds	1
could provide picnic areas	1
could provide trails	1
could provide passive recreation	1
could provide amphitheater	1
could provide natural area	1
could provide fishing facilities	1
could provide stream based recreation opportunities	1
could provide pond based recreation opportunities	1
could provide wetland based recreation opportunities	1
could provide significantly new and different recreation opportunities	1
<b>Total (16 max)</b>	<b>16</b>

### Ownership

it is publicly owned	0
it has a single owner	0
it has less than 4 owners	1
Affordability (3 pt scale, 3 most affordable)	2
<b>Total (6 max)</b>	<b>3</b>

### Development Pressure

property has near term development pressure	1
property could provide mitigation for surrounding development	1
property would require significant alteration of floodplain, natural areas and wetlands to allow development	1



opportunity could substantially enhance value of adjacent development	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
<b>Total (5 max)</b>	<b>5</b>

<b>TOTAL POINTS</b>	<b>44</b>
<b>PERCENTAGE SCORE</b>	<b>91.66</b>

## Opportunity C Cameron Area

### Location/Connectivity

Connects to Existing Trails, Parks, Public Open Space, Schools, and/or Neighborhoods	0
Incorporated into planned local or regional trails	1
it is near existing or future infrastructure and utilities	1
it is in an area that is not currently served by existing permanently protected open spaces	1
<b>Total (4 max)</b>	<b>3</b>

### Ecology/Environment

it contains significant waterways with relatively undisturbed riparian zone and floodplain	1
it contains streams and/or other water resources that can be rehabilitated to enrich ecosystem value and watershed health, prevent erosion and runoff and better mitigate stormwater and flooding	1
it serves as useful plant and wildlife habitat, with sufficient size, connectivity, and edge length to accommodate a diverse mix of species	1
it can be used to foster awareness, appreciation and stewardship of natural systems	1
could provide for acquisition and preservation of significant wetland area	1
could provide for acquisition and preservation of natural open space land or water for human use and enjoyment that is relatively free of man-made structures	1
could provide significant opportunities to employ LID/GI strategies complementary of storm water management plan goals	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	0
provides opportunity to preserve native tree canopy	0
NCTCOG VEIL Score (14-18 = 1, 19-21=2, 22-25=3, 26-30=4, 31-37=5)	3
<b>Total (14 max)</b>	<b>10</b>

### History/Culture

it contains or offers scenic views	1
it houses significant historic or archaeological features	1
it is associated with architecture, events, or persons that contributed to the history or culture of Rockwall County	1
<b>Total (3 max)</b>	<b>3</b>

### Recreation

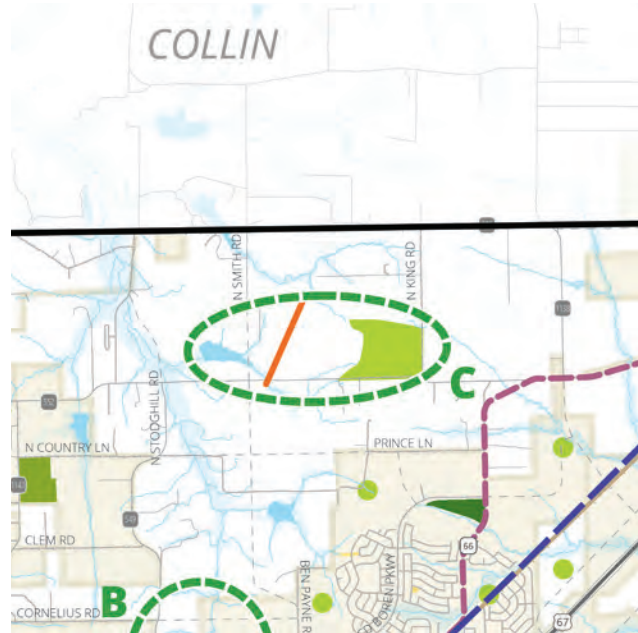
could serve multiple age segments	1
could promote community health and well being	1
develop new parks and recreational opportunities around water resources	1
could provide campground area	1
could provide sports fields/courts	1
could provide playgrounds	1
could provide picnic areas	1
could provide trails	1
could provide passive recreation	1
could provide amphitheater	1
could provide natural area	1
could provide fishing facilities	1
could provide stream based recreation opportunities	1
could provide pond based recreation opportunities	1
could provide wetland based recreation opportunities	1
could provide significantly new and different recreation opportunities	1
<b>Total (16 max)</b>	<b>16</b>

### Ownership

it is publicly owned	0
it has a single owner	0
it has less than 4 owners	1
Affordability (3 pt scale, 3 most affordable)	2
<b>Total (6 max)</b>	<b>3</b>

### Development Pressure

property has near term development pressure	0
property could provide mitigation for surrounding development	1



property would require significant alteration of floodplain, natural areas and wetlands to allow development	0
opportunity could substantially enhance value of adjacent development	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	0
<b>Total (5 max)</b>	<b>2</b>

<b>TOTAL POINTS</b>	<b>37</b>
<b>PERCENTAGE SCORE</b>	<b>77.08</b>

## Opportunity D

### Fate Community Park Area

#### Location/Connectivity

Connects to Existing Trails, Parks, Public Open Space, Schools, and/or Neighborhoods	1
Incorporated into planned local or regional trails	1
it is near existing or future infrastructure and utilities	1
it is in an area that is not currently served by existing permanently protected open spaces	1
<b>Total (4 max)</b>	<b>4</b>

#### Ecology/Environment

it contains significant waterways with relatively undisturbed riparian zone and floodplain	1
it contains streams and/or other water resources that can be rehabilitated to enrich ecosystem value and watershed health, prevent erosion and runoff and better mitigate stormwater and flooding	1
it serves as useful plant and wildlife habitat, with sufficient size, connectivity, and edge length to accommodate a diverse mix of species	1
it can be used to foster awareness, appreciation and stewardship of natural systems	0
could provide for acquisition and preservation of significant wetland area	0
could provide for acquisition and preservation of natural open space land or water for human use and enjoyment that is relatively free of man-made structures	1
could provide significant opportunities to employ LID/GI strategies complementary of storm water management plan goals	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
provides opportunity to preserve native tree canopy	0
NCTCOG VEIL Score (14-18 = 1, 19-21=2, 22-25=3, 26-30=4, 31-37=5)	2
<b>Total (14 max)</b>	<b>8</b>

#### History/Culture

it contains or offers scenic views	1
it houses significant historic or archaeological features	0
it is associated with architecture, events, or persons that contributed to the history or culture of Rockwall County	0
<b>Total (3 max)</b>	<b>1</b>

#### Recreation

could serve multiple age segments	1
could promote community health and well being	1
develop new parks and recreational opportunities around water resources	1
could provide campground area	1
could provide sports fields/courts	1
could provide playgrounds	1
could provide picnic areas	1
could provide trails	1
could provide passive recreation	1
could provide amphitheater	0
could provide natural area	1
could provide fishing facilities	0
could provide stream based recreation opportunities	1
could provide pond based recreation opportunities	0
could provide wetland based recreation opportunities	0
could provide significantly new and different recreation opportunities	1
<b>Total (16 max)</b>	<b>12</b>

#### Ownership

it is publicly owned	0
it has a single owner	0
it has less than 4 owners	1
Affordability (3 pt scale, 3 most affordable)	2
<b>Total (6 max)</b>	<b>3</b>

#### Development Pressure

property has near term development pressure	1
property could provide mitigation for surrounding development	1



property would require significant alteration of floodplain, natural areas and wetlands to allow development	1
opportunity could substantially enhance value of adjacent development	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
<b>Total (5 max)</b>	<b>5</b>

<b>TOTAL POINTS</b>	<b>33</b>
<b>PERCENTAGE SCORE</b>	<b>68.75</b>



## Opportunity E Royse City/Nature Preserve Area

### Location/Connectivity

Connects to Existing Trails, Parks, Public Open Space, Schools, and/or Neighborhoods	0
Incorporated into planned local or regional trails	1
it is near existing or future infrastructure and utilities	0
it is in an area that is not currently served by existing permanently protected open spaces	1
<b>Total (4 max)</b>	<b>2</b>

### Ecology/Environment

it contains significant waterways with relatively undisturbed riparian zone and floodplain	1
it contains streams and/or other water resources that can be rehabilitated to enrich ecosystem value and watershed health, prevent erosion and runoff and better mitigate stormwater and flooding	1
it serves as useful plant and wildlife habitat, with sufficient size, connectivity, and edge length to accommodate a diverse mix of species	1
it can be used to foster awareness, appreciation and stewardship of natural systems	1
could provide for acquisition and preservation of significant wetland area	1
could provide for acquisition and preservation of natural open space land or water for human use and enjoyment that is relatively free of man-made structures	1
could provide significant opportunities to employ LID/GI strategies complementary of storm water management plan goals	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
provides opportunity to preserve native tree canopy	1
NCTCOG VEIL Score (14-18 = 1, 19-21=2, 22-25=3, 26-30=4, 31-37=5)	2
<b>Total (14 max)</b>	<b>11</b>

### History/Culture

it contains or offers scenic views	1
it houses significant historic or archaeological features	1
it is associated with architecture, events, or persons that contributed to the history or culture of Rockwall County	0
<b>Total (3 max)</b>	<b>2</b>

### Recreation

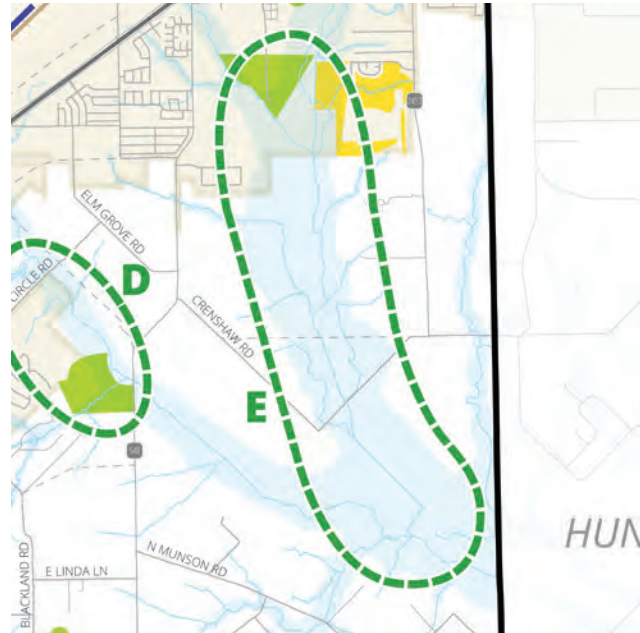
could serve multiple age segments	1
could promote community health and well being	1
develop new parks and recreational opportunities around water resources	1
could provide campground area	1
could provide sports fields/courts	0
could provide playgrounds	1
could provide picnic areas	1
could provide trails	1
could provide passive recreation	1
could provide amphitheater	1
could provide natural area	1
could provide fishing facilities	0
could provide stream based recreation opportunities	1
could provide pond based recreation opportunities	0
could provide wetland based recreation opportunities	1
could provide significantly new and different recreation opportunities	1
<b>Total (16 max)</b>	<b>13</b>

### Ownership

it is publicly owned	0
it has a single owner	0
it has less than 4 owners	0
Affordability (3 pt scale, 3 most affordable)	3
<b>Total (6 max)</b>	<b>3</b>

### Development Pressure

property has near term development pressure	1
property could provide mitigation for surrounding development	1



property would require significant alteration of floodplain, natural areas and wetlands to allow development	1
opportunity could substantially enhance value of adjacent development	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
<b>Total (5 max)</b>	<b>5</b>

<b>TOTAL POINTS</b>	<b>36</b>
<b>PERCENTAGE SCORE</b>	<b>75</b>

## Opportunity F NRCS Lake 13 Area

### Location/Connectivity

Connects to Existing Trails, Parks, Public Open Space, Schools, and/or Neighborhoods	0
Incorporated into planned local or regional trails	1
it is near existing or future infrastructure and utilities	0
it is in an area that is not currently served by existing permanently protected open spaces	1
<b>Total (4 max)</b>	<b>2</b>

### Ecology/Environment

it contains significant waterways with relatively undisturbed riparian zone and floodplain	1
it contains streams and/or other water resources that can be rehabilitated to enrich ecosystem value and watershed health, prevent erosion and runoff and better mitigate stormwater and flooding	1
it serves as useful plant and wildlife habitat, with sufficient size, connectivity, and edge length to accommodate a diverse mix of species	1
it can be used to foster awareness, appreciation and stewardship of natural systems	1
could provide for acquisition and preservation of significant wetland area	0
could provide for acquisition and preservation of natural open space land or water for human use and enjoyment that is relatively free of man-made structures	1
could provide significant opportunities to employ LID/GI strategies complementary of storm water management plan goals	0
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
provides opportunity to preserve native tree canopy	0
NCTCOG VEIL Score (14-18 = 1, 19-21=2, 22-25=3, 26-30=4, 31-37=5)	1
<b>Total (14 max)</b>	<b>7</b>

### History/Culture

it contains or offers scenic views	1
it houses significant historic or archaeological features	0
it is associated with architecture, events, or persons that contributed to the history or culture of Rockwall County	1
<b>Total (3 max)</b>	<b>2</b>

### Recreation

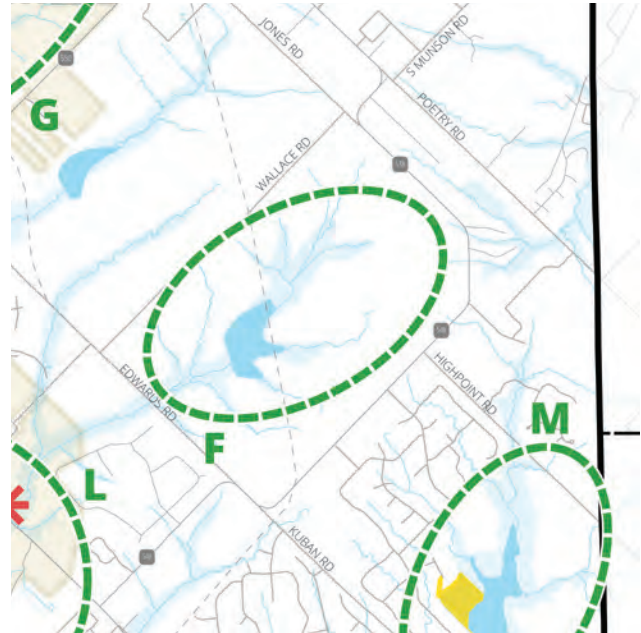
could serve multiple age segments	1
could promote community health and well being	1
develop new parks and recreational opportunities around water resources	1
could provide campground area	1
could provide sports fields/courts	1
could provide playgrounds	1
could provide picnic areas	1
could provide trails	1
could provide passive recreation	1
could provide amphitheater	1
could provide natural area	1
could provide fishing facilities	1
could provide stream based recreation opportunities	1
could provide pond based recreation opportunities	1
could provide wetland based recreation opportunities	0
could provide significantly new and different recreation opportunities	1
<b>Total (16 max)</b>	<b>15</b>

### Ownership

it is publicly owned	0
it has a single owner	0
it has less than 4 owners	1
Affordability (3 pt scale, 3 most affordable)	2
<b>Total (6 max)</b>	<b>3</b>

### Development Pressure

property has near term development pressure	1
property could provide mitigation for surrounding development	1



property would require significant alteration of floodplain, natural areas and wetlands to allow development	0
opportunity could substantially enhance value of adjacent development	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	0
<b>Total (5 max)</b>	<b>3</b>

<b>TOTAL POINTS</b>	<b>32</b>
<b>PERCENTAGE SCORE</b>	<b>66.66</b>

## Opportunity G Zollner-Brooks Area

### Location/Connectivity

Connects to Existing Trails, Parks, Public Open Space, Schools, and/or Neighborhoods	0
Incorporated into planned local or regional trails	1
it is near existing or future infrastructure and utilities	1
it is in an area that is not currently served by existing permanently protected open spaces	1
<b>Total (4 max)</b>	<b>3</b>

### Ecology/Environment

it contains significant waterways with relatively undisturbed riparian zone and floodplain	1
it contains streams and/or other water resources that can be rehabilitated to enrich ecosystem value and watershed health, prevent erosion and runoff and better mitigate stormwater and flooding	1
it serves as useful plant and wildlife habitat, with sufficient size, connectivity, and edge length to accommodate a diverse mix of species	1
it can be used to foster awareness, appreciation and stewardship of natural systems	1
could provide for acquisition and preservation of significant wetland area	1
could provide for acquisition and preservation of natural open space land or water for human use and enjoyment that is relatively free of man-made structures	1
could provide significant opportunities to employ LID/GI strategies complementary of storm water management plan goals	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
provides opportunity to preserve native tree canopy	1
NCTCOG VEIL Score (14-18 = 1, 19-21=2, 22-25=3, 26-30=4, 31-37=5)	1
<b>Total (14 max)</b>	<b>10</b>

### History/Culture

it contains or offers scenic views	1
it houses significant historic or archaeological features	0
it is associated with architecture, events, or persons that contributed to the history or culture of Rockwall County	1
<b>Total (3 max)</b>	<b>2</b>

### Recreation

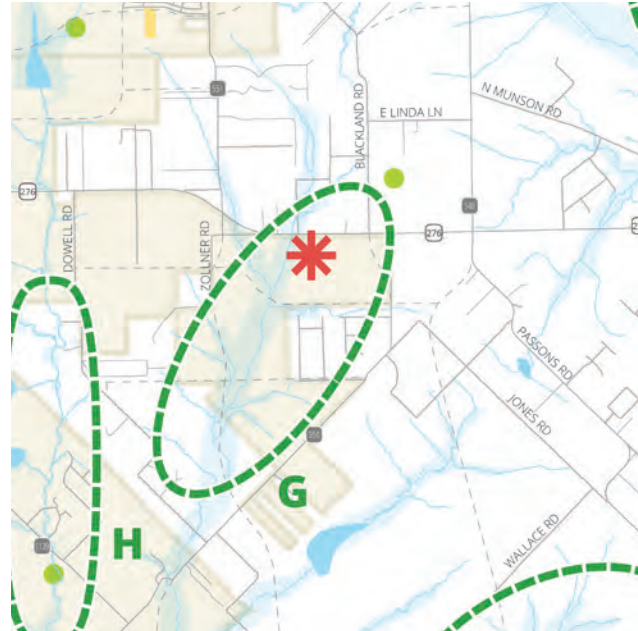
could serve multiple age segments	1
could promote community health and well being	1
develop new parks and recreational opportunities around water resources	1
could provide campground area	1
could provide sports fields/courts	1
could provide playgrounds	1
could provide picnic areas	1
could provide trails	1
could provide passive recreation	1
could provide amphitheater	0
could provide natural area	1
could provide fishing facilities	0
could provide stream based recreation opportunities	1
could provide pond based recreation opportunities	0
could provide wetland based recreation opportunities	1
could provide significantly new and different recreation opportunities	1
<b>Total (16 max)</b>	<b>13</b>

### Ownership

it is publicly owned	0
it has a single owner	1
it has less than 4 owners	1
Affordability (3 pt scale, 3 most affordable)	2
<b>Total (6 max)</b>	<b>4</b>

### Development Pressure

property has near term development pressure	1
property could provide mitigation for surrounding development	1



property would require significant alteration of floodplain, natural areas and wetlands to allow development	1
opportunity could substantially enhance value of adjacent development	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
<b>Total (5 max)</b>	<b>5</b>

<b>TOTAL POINTS</b>	<b>37</b>
<b>PERCENTAGE SCORE</b>	<b>77.08</b>



## Opportunity H NRCS Lakes Corridor

### Location/Connectivity

Connects to Existing Trails, Parks, Public Open Space, Schools, and/or Neighborhoods	0
Incorporated into planned local or regional trails	1
it is near existing or future infrastructure and utilities	1
it is in an area that is not currently served by existing permanently protected open spaces	1
<b>Total (4 max)</b>	<b>3</b>

### Ecology/Environment

it contains significant waterways with relatively undisturbed riparian zone and floodplain	1
it contains streams and/or other water resources that can be rehabilitated to enrich ecosystem value and watershed health, prevent erosion and runoff and better mitigate stormwater and flooding	1
it serves as useful plant and wildlife habitat, with sufficient size, connectivity, and edge length to accommodate a diverse mix of species	1
it can be used to foster awareness, appreciation and stewardship of natural systems	1
could provide for acquisition and preservation of significant wetland area	0
could provide for acquisition and preservation of natural open space land or water for human use and enjoyment that is relatively free of man-made structures	0
could provide significant opportunities to employ LID/GI strategies complementary of storm water management plan goals	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
provides opportunity to preserve native tree canopy	0
NCTCOG VEIL Score (14-18 = 1, 19-21=2, 22-25=3, 26-30=4, 31-37=5)	1
<b>Total (14 max)</b>	<b>7</b>

### History/Culture

it contains or offers scenic views	1
it houses significant historic or archaeological features	0
it is associated with architecture, events, or persons that contributed to the history or culture of Rockwall County	0
<b>Total (3 max)</b>	<b>1</b>

### Recreation

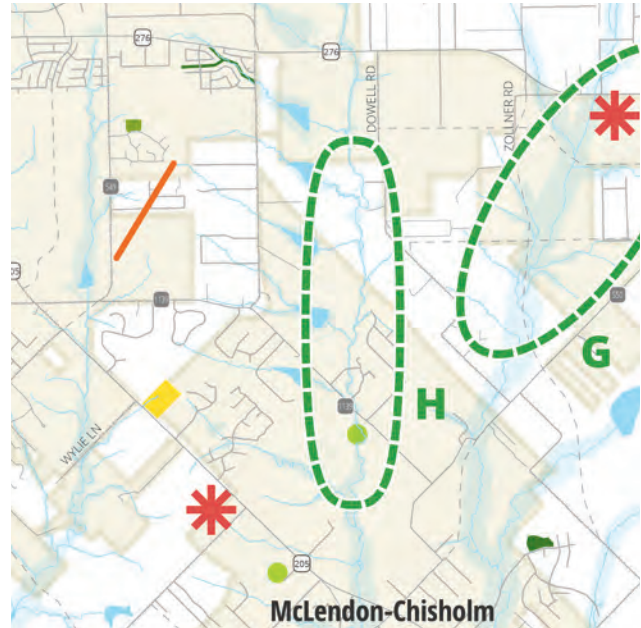
could serve multiple age segments	1
could promote community health and well being	1
develop new parks and recreational opportunities around water resources	1
could provide campground area	0
could provide sports fields/courts	0
could provide playgrounds	0
could provide picnic areas	1
could provide trails	1
could provide passive recreation	1
could provide amphitheater	0
could provide natural area	0
could provide fishing facilities	1
could provide stream based recreation opportunities	1
could provide pond based recreation opportunities	1
could provide wetland based recreation opportunities	0
could provide significantly new and different recreation opportunities	1
<b>Total (16 max)</b>	<b>10</b>

### Ownership

it is publicly owned	0
it has a single owner	0
it has less than 4 owners	0
Affordability (3 pt scale, 3 most affordable)	2
<b>Total (6 max)</b>	<b>2</b>

### Development Pressure

property has near term development pressure	1
property could provide mitigation for surrounding development	1
property would require significant alteration of floodplain, natural areas and wetlands to allow development	0



opportunity could substantially enhance value of adjacent development	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
<b>Total (5 max)</b>	<b>4</b>

<b>TOTAL POINTS</b>	<b>27</b>
<b>PERCENTAGE SCORE</b>	<b>56.25</b>

## Opportunity I Wallace Preserve Area

### Location/Connectivity

Connects to Existing Trails, Parks, Public Open Space, Schools, and/or Neighborhoods	1
Incorporated into planned local or regional trails	1
it is near existing or future infrastructure and utilities	1
it is in an area that is not currently served by existing permanently protected open spaces	1
<b>Total (4 max)</b>	<b>4</b>

### Ecology/Environment

it contains significant waterways with relatively undisturbed riparian zone and floodplain	1
it contains streams and/or other water resources that can be rehabilitated to enrich ecosystem value and watershed health, prevent erosion and runoff and better mitigate stormwater and flooding	1
it serves as useful plant and wildlife habitat, with sufficient size, connectivity, and edge length to accommodate a diverse mix of species	1
it can be used to foster awareness, appreciation and stewardship of natural systems	1
could provide for acquisition and preservation of significant wetland area	1
could provide for acquisition and preservation of natural open space land or water for human use and enjoyment that is relatively free of man-made structures	1
could provide significant opportunities to employ LID/GI strategies complementary of storm water management plan goals	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
provides opportunity to preserve native tree canopy	1
NCTCOG VEIL Score (14-18 = 1, 19-21=2, 22-25=3, 26-30=4, 31-37=5)	2
<b>Total (14 max)</b>	<b>11</b>

### History/Culture

it contains or offers scenic views	1
it houses significant historic or archaeological features	1
it is associated with architecture, events, or persons that contributed to the history or culture of Rockwall County	1
<b>Total (3 max)</b>	<b>3</b>

### Recreation

could serve multiple age segments	1
could promote community health and well being	1
develop new parks and recreational opportunities around water resources	1
could provide campground area	1
could provide sports fields/courts	0
could provide playgrounds	1
could provide picnic areas	1
could provide trails	1
could provide passive recreation	1
could provide amphitheater	1
could provide natural area	1
could provide fishing facilities	1
could provide stream based recreation opportunities	1
could provide pond based recreation opportunities	1
could provide wetland based recreation opportunities	1
could provide significantly new and different recreation opportunities	1
<b>Total (16 max)</b>	<b>15</b>

### Ownership

it is publicly owned	0
it has a single owner	1
it has less than 4 owners	1
Affordability (3 pt scale, 3 most affordable)	1
<b>Total (6 max)</b>	<b>3</b>

### Development Pressure

property has near term development pressure	1
property could provide mitigation for surrounding development	1
property would require significant alteration of floodplain, natural areas and wetlands to allow development	1



opportunity could substantially enhance value of adjacent development	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
<b>Total (5 max)</b>	<b>5</b>

<b>TOTAL POINTS</b>	<b>41</b>
<b>PERCENTAGE SCORE</b>	<b>85.41</b>

## Opportunity J

### Terry Lane Corridor

#### Location/Connectivity

Connects to Existing Trails, Parks, Public Open Space, Schools, and/or Neighborhoods	1
Incorporated into planned local or regional trails	1
it is near existing or future infrastructure and utilities	1
it is in an area that is not currently served by existing permanently protected open spaces	1
<b>Total (4 max)</b>	<b>4</b>

#### Ecology/Environment

it contains significant waterways with relatively undisturbed riparian zone and floodplain	1
it contains streams and/or other water resources that can be rehabilitated to enrich ecosystem value and watershed health, prevent erosion and runoff and better mitigate stormwater and flooding	1
it serves as useful plant and wildlife habitat, with sufficient size, connectivity, and edge length to accommodate a diverse mix of species	1
it can be used to foster awareness, appreciation and stewardship of natural systems	1
could provide for acquisition and preservation of significant wetland area	1
could provide for acquisition and preservation of natural open space land or water for human use and enjoyment that is relatively free of man-made structures	1
could provide significant opportunities to employ LID/GI strategies complementary of storm water management plan goals	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
provides opportunity to preserve native tree canopy	1
NCTCOG VEIL Score (14-18 = 1, 19-21=2, 22-25=3, 26-30=4, 31-37=5)	4
<b>Total (14 max)</b>	<b>13</b>

#### History/Culture

it contains or offers scenic views	1
it houses significant historic or archaeological features	1
it is associated with architecture, events, or persons that contributed to the history or culture of Rockwall County	0
<b>Total (3 max)</b>	<b>2</b>

#### Recreation

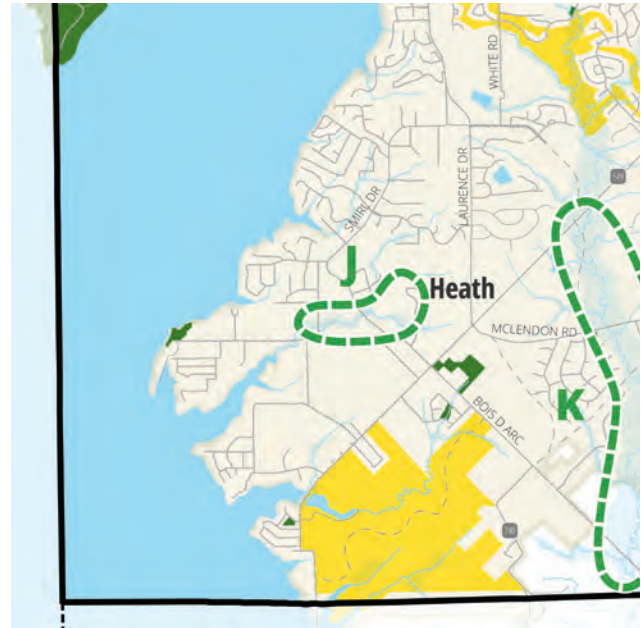
could serve multiple age segments	1
could promote community health and well being	1
develop new parks and recreational opportunities around water resources	1
could provide campground area	0
could provide sports fields/courts	0
could provide playgrounds	0
could provide picnic areas	1
could provide trails	1
could provide passive recreation	1
could provide amphitheater	0
could provide natural area	1
could provide fishing facilities	0
could provide stream based recreation opportunities	1
could provide pond based recreation opportunities	0
could provide wetland based recreation opportunities	1
could provide significantly new and different recreation opportunities	0
<b>Total (16 max)</b>	<b>9</b>

#### Ownership

it is publicly owned	0
it has a single owner	0
it has less than 4 owners	1
Affordability (3 pt scale, 3 most affordable)	1
<b>Total (6 max)</b>	<b>2</b>

#### Development Pressure

property has near term development pressure	0
property could provide mitigation for surrounding development	1



property would require significant alteration of floodplain, natural areas and wetlands to allow development	1
opportunity could substantially enhance value of adjacent development	0
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
<b>Total (5 max)</b>	<b>3</b>

<b>TOTAL POINTS</b>	<b>33</b>
<b>PERCENTAGE SCORE</b>	<b>68.75</b>



## Opportunity K Buffalo Creek Floodplain Corridor

### Location/Connectivity

Connects to Existing Trails, Parks, Public Open Space, Schools, and/or Neighborhoods	1
Incorporated into planned local or regional trails	1
it is near existing or future infrastructure and utilities	1
it is in an area that is not currently served by existing permanently protected open spaces	1
<b>Total (4 max)</b>	<b>4</b>

### Ecology/Environment

it contains significant waterways with relatively undisturbed riparian zone and floodplain	1
it contains streams and/or other water resources that can be rehabilitated to enrich ecosystem value and watershed health, prevent erosion and runoff and better mitigate stormwater and flooding	1
it serves as useful plant and wildlife habitat, with sufficient size, connectivity, and edge length to accommodate a diverse mix of species	1
it can be used to foster awareness, appreciation and stewardship of natural systems	1
could provide for acquisition and preservation of significant wetland area	1
could provide for acquisition and preservation of natural open space land or water for human use and enjoyment that is relatively free of man-made structures	1
could provide significant opportunities to employ LID/GI strategies complementary of storm water management plan goals	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
provides opportunity to preserve native tree canopy	1
NCTCOG VEIL Score (14-18 = 1, 19-21=2, 22-25=3, 26-30=4, 31-37=5)	2
<b>Total (14 max)</b>	<b>11</b>

### History/Culture

it contains or offers scenic views	1
it houses significant historic or archaeological features	0
it is associated with architecture, events, or persons that contributed to the history or culture of Rockwall County	0
<b>Total (3 max)</b>	<b>1</b>

### Recreation

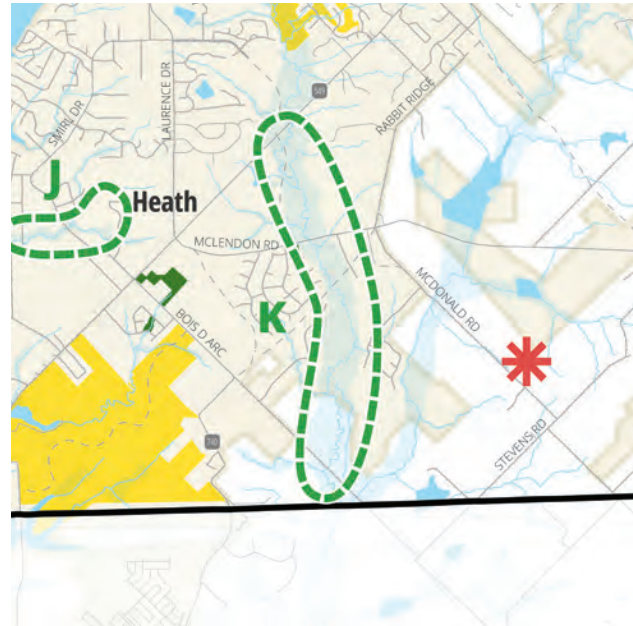
could serve multiple age segments	1
could promote community health and well being	1
develop new parks and recreational opportunities around water resources	1
could provide campground area	0
could provide sports fields/courts	0
could provide playgrounds	0
could provide picnic areas	1
could provide trails	1
could provide passive recreation	1
could provide amphitheater	0
could provide natural area	1
could provide fishing facilities	0
could provide stream based recreation opportunities	1
could provide pond based recreation opportunities	0
could provide wetland based recreation opportunities	1
could provide significantly new and different recreation opportunities	0
<b>Total (16 max)</b>	<b>9</b>

### Ownership

it is publicly owned	0
it has a single owner	0
it has less than 4 owners	0
Affordability (3 pt scale, 3 most affordable)	1
<b>Total (6 max)</b>	<b>1</b>

### Development Pressure

property has near term development pressure	1
property could provide mitigation for surrounding development	1



property would require significant alteration of floodplain, natural areas and wetlands to allow development	1
opportunity could substantially enhance value of adjacent development	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	1
<b>Total (5 max)</b>	<b>5</b>

<b>TOTAL POINTS</b>	<b>31</b>
<b>PERCENTAGE SCORE</b>	<b>64.58</b>

## Opportunity L Davenport Area

### Location/Connectivity

Connects to Existing Trails, Parks, Public Open Space, Schools, and/or Neighborhoods	0
Incorporated into planned local or regional trails	1
it is near existing or future infrastructure and utilities	0
it is in an area that is not currently served by existing permanently protected open spaces	1
<b>Total (4 max)</b>	<b>2</b>

### Ecology/Environment

it contains significant waterways with relatively undisturbed riparian zone and floodplain	1
it contains streams and/or other water resources that can be rehabilitated to enrich ecosystem value and watershed health, prevent erosion and runoff and better mitigate stormwater and flooding	0
it serves as useful plant and wildlife habitat, with sufficient size, connectivity, and edge length to accommodate a diverse mix of species	1
it can be used to foster awareness, appreciation and stewardship of natural systems	1
could provide for acquisition and preservation of significant wetland area	0
could provide for acquisition and preservation of natural open space land or water for human use and enjoyment that is relatively free of man-made structures	1
could provide significant opportunities to employ LID/GI strategies complementary of storm water management plan goals	0
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	0
provides opportunity to preserve native tree canopy	0
NCTCOG VEIL Score (14-18 = 1, 19-21=2, 22-25=3, 26-30=4, 31-37=5)	2
<b>Total (14 max)</b>	<b>6</b>

### History/Culture

it contains or offers scenic views	1
it houses significant historic or archaeological features	0
it is associated with architecture, events, or persons that contributed to the history or culture of Rockwall County	0
<b>Total (3 max)</b>	<b>1</b>

### Recreation

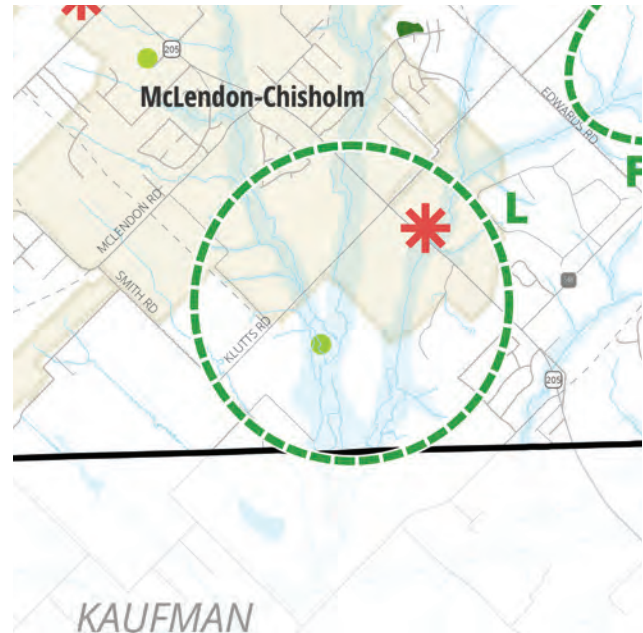
could serve multiple age segments	1
could promote community health and well being	1
develop new parks and recreational opportunities around water resources	1
could provide campground area	1
could provide sports fields/courts	0
could provide playgrounds	0
could provide picnic areas	1
could provide trails	1
could provide passive recreation	1
could provide amphitheater	1
could provide natural area	1
could provide fishing facilities	0
could provide stream based recreation opportunities	1
could provide pond based recreation opportunities	0
could provide wetland based recreation opportunities	0
could provide significantly new and different recreation opportunities	1
<b>Total (16 max)</b>	<b>11</b>

### Ownership

it is publicly owned	0
it has a single owner	1
it has less than 4 owners	1
Affordability (3 pt scale, 3 most affordable)	2
<b>Total (6 max)</b>	<b>4</b>

### Development Pressure

property has near term development pressure	1
property could provide mitigation for surrounding development	0
property would require significant alteration of floodplain, natural areas and wetlands to allow development	1



opportunity could substantially enhance value of adjacent development	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	0
<b>Total (5 max)</b>	<b>3</b>

<b>TOTAL POINTS</b>	<b>27</b>
<b>PERCENTAGE SCORE</b>	<b>56.25</b>

## Opportunity M High Point Ranch Area

### Location/Connectivity

Connects to Existing Trails, Parks, Public Open Space, Schools, and/or Neighborhoods	1
Incorporated into planned local or regional trails	0
it is near existing or future infrastructure and utilities	0
it is in an area that is not currently served by existing permanently protected open spaces	0
<b>Total (4 max)</b>	<b>1</b>

### Ecology/Environment

it contains significant waterways with relatively undisturbed riparian zone and floodplain	1
it contains streams and/or other water resources that can be rehabilitated to enrich ecosystem value and watershed health, prevent erosion and runoff and better mitigate stormwater and flooding	0
it serves as useful plant and wildlife habitat, with sufficient size, connectivity, and edge length to accommodate a diverse mix of species	1
it can be used to foster awareness, appreciation and stewardship of natural systems	1
could provide for acquisition and preservation of significant wetland area	1
could provide for acquisition and preservation of natural open space land or water for human use and enjoyment that is relatively free of man-made structures	1
could provide significant opportunities to employ LID/GI strategies complementary of storm water management plan goals	0
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	0
provides opportunity to preserve native tree canopy	0
NCTCOG VEIL Score (14-18 = 1, 19-21=2, 22-25=3, 26-30=4, 31-37=5)	3
<b>Total (14 max)</b>	<b>8</b>

### History/Culture

it contains or offers scenic views	1
it houses significant historic or archaeological features	0
it is associated with architecture, events, or persons that contributed to the history or culture of Rockwall County	1
<b>Total (3 max)</b>	<b>2</b>

### Recreation

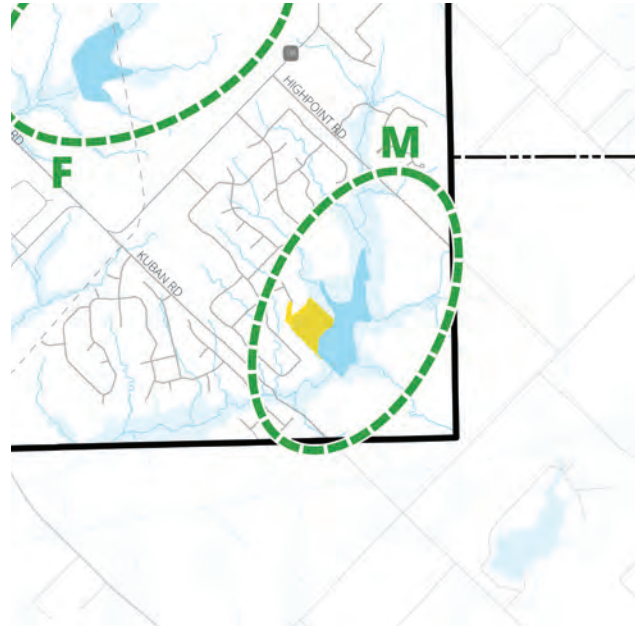
could serve multiple age segments	1
could promote community health and well being	1
develop new parks and recreational opportunities around water resources	1
could provide campground area	1
could provide sports fields/courts	0
could provide playgrounds	0
could provide picnic areas	1
could provide trails	1
could provide passive recreation	1
could provide amphitheater	0
could provide natural area	1
could provide fishing facilities	1
could provide stream based recreation opportunities	1
could provide pond based recreation opportunities	1
could provide wetland based recreation opportunities	1
could provide significantly new and different recreation opportunities	1
<b>Total (16 max)</b>	<b>13</b>

### Ownership

it is publicly owned	0
it has a single owner	0
it has less than 4 owners	1
Affordability (3 pt scale, 3 most affordable)	3
<b>Total (6 max)</b>	<b>4</b>

### Development Pressure

property has near term development pressure	0
property could provide mitigation for surrounding development	0



property would require significant alteration of floodplain, natural areas and wetlands to allow development	1
opportunity could substantially enhance value of adjacent development	1
provides opportunity to mitigate environmental impacts from existing development and surface infrastructure	0
<b>Total (5 max)</b>	<b>2</b>

<b>TOTAL POINTS</b>	<b>30</b>
<b>PERCENTAGE SCORE</b>	<b>62.5</b>



# Appendix F

## Green and Complete Streets

Green streets and complete streets are two separate but complementary strategies for getting the most public benefit out of valuable rights-of-way. Green streets are streets that manage stormwater using green stormwater infrastructure—which is infrastructure that collects stormwater runoff from roads and adjacent development where it originates and infiltrates or stores it before it reaches the sewer system. Green stormwater infrastructure includes a variety of elements, including trees, plants, pervious pavement, rain gardens, tree trenches, swales and complementary technologies.

As infrastructure, green streets provide value as a utility that manages stormwater, filters pollutants, mitigates the impacts of impervious surfaces, recharges ground and surface water and reduces the burden on sewer systems. Yet, as with green stormwater infrastructure implemented elsewhere and in contrast to investment in traditional infrastructure, which is often out of sight, investment in green streets has visible, tangible effects. Green streets improve the visual appearance of streetscapes, increase adjacent property values, provide shade and help lower energy usage.

Complete streets are streets that seek to accommodate not just automobile drivers, but users of all modes of travel. Pedestrians, bicyclists, transit riders, motorists, commercial vehicles, service vehicles and emergency response vehicles can all be accommodated within the right-of-way of a complete street. The design of a complete street should reflect the specific needs of its community context. Complete streets can incorporate a variety of design elements, including bike lanes, designated bus lanes, improved sidewalk conditions, accessible transit stops, pedestrian crossings, narrowed travel lanes and curb extensions.

As part of an integrated transportation network, complete streets increase community connectedness—providing multi-modal linkages within and between communities while creating a sense of place that fosters social engagement, recreation and commerce. The benefits of complete streets include safer travel conditions for all modes of transportation, more efficient land use, sound fiscal management, reduced air and water pollution, social equity and improved quality of life. They encourage walking and bicycling while creating a sense of place and encouraging social interaction. As former US Secretary of Transportation Ray LaHood said, “A complete streets approach offers the perfect intersection of my twin guideposts: safety and livable communities.”

## Examples of Best Practices

- Austin Complete Streets Policy
- City of Houston Complete Streets Policy
- San Antonio Complete Streets Policy

## Regulatory Needs

Implementation of green and complete streets is only truly effective if applied at a system scale. Individual street projects that incorporate green and complete street elements do provide limited benefits, but the true benefits accrue in a fully functional network.

Implementing green streets and complete streets at a system scale requires a deliberate and concerted effort. Such an effort is typically codified through adoption of local policies, which direct local planning, transportation, public works and other departments to routinely consider green street and complete street concepts in the design of all road projects—taking into account the needs of all transportation users and the potential for stormwater management.

The US Environmental Protection Agency provides policy guidance on the implementation of green infrastructure. EPA’s Municipal Handbook on managing wet weather with green infrastructure offers direction on funding strategies, incentive mechanisms and policies incorporating green infrastructure into rights of way.

The US Department of Transportation adopted a policy statement in 2010 that specifically addresses transportation agencies’ responsibility to accommodate bicycles and pedestrians and affirms that projects that receive federal money should take these users into consideration. The policy states that “Because of the numerous individual and community benefits that walking and bicycling provide — including health, safety, environmental, transportation and quality of life — transportation agencies are encouraged to go beyond minimum standards to provide safe and convenient facilities for these modes.”

In 2011, the Texas Department of Transportation (TxDOT) issued “Guidelines Emphasizing Bicycle and Pedestrian Accommodations” that support consideration of and investment in these modes of transportation. At the regional level, the North Central Texas Council of Governments has been working to adopt a complete Streets Policy Statement to solidify regional support for the planning and creation of complete streets.

A local green streets or complete streets policy should:

- provide a rationale for adopting the policy
- describe a vision for the future
- offer specifics about the considerations for each project (e.g., the travel modes that should be considered, the types of green infrastructure that can be used)

- apply to the entire transportation network and throughout all phases of design, planning, maintenance and operations
- encourage connectivity and context-sensitive solutions
- set clear and specific performance standards or expectations
- include implementation steps

## Planning and Design Resources for Trails and Other Bicycle Facilities

- Separated Bike Lane Planning & Design Guide, FHWA
- American Trails
- Urban Street Design Guide, National Association of City Transportation Officials
- Rails-to-Trails Conservancy
- Safe Routes to School
- “Low-Stress Bicycling and Network Connectivity,” Mineta Transportation Institute



