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Fort Worth Open Space Strategy Report

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BUILDING COMMUNITY**

JULY 2022

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Preface

ACKNOWLEDGMENTS

More than 1,500 people gave their feedback to develop the *Fort Worth Open Space Strategy Report*, including residents, community leaders, nonprofits, government partners, and local businesses. These participants guided our mapping and community engagement as stakeholder group members and engaged community members. This was a collaborative effort from start to finish, and it would not have been possible without the outpouring of community support.

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SPECIAL THANKS

Texas Trees Foundation for providing high resolution tree cover and general land cover data, which was used throughout the report.

PROJECT PARTNERS

Trust for Public Land (TPL) is a national nonprofit organization dedicated to creating parks and protecting land for people, ensuring healthy, livable communities for generations to come. Since 1972, TPL has helped protect more than three million acres in all 50 states.

The **City of Fort Worth** serves more than 900,000 people across roughly 350 square miles. Fort Worth's vision is to be the most livable and best-managed city in the country.

The **North Central Texas Council of Governments** (NCTCOG) is a voluntary association of, by, and for local governments, established to assist in regional planning. NCTCOG's purpose is to strengthen both the individual and collective power of local governments and to help them recognize regional opportunities for improving the quality of life in North Central Texas, eliminate unnecessary duplication, and make joint decisions.

Streams & Valleys has been a passionate voice for the Trinity River since 1969. It is a nonprofit organization that helps to educate the Fort Worth community, raise money for vital projects, improve community access, and beautify the river and trails.

The **Tarrant Regional Water District** (TRWD) provides water to more than 70 customers across North Texas in an 11-county service area. TRWD is actively engaged in preserving the use of Fort Worth's water supply, promoting the health of lakes and rivers in the community, and even building and maintaining habitats for important native species.

The **Resource Connection of Tarrant County** is a 280-acre campus of health, education, employment, and human service agencies located in a one-stop environment formed to share resources and solve problems together. The campus, formerly the Fort Worth State School, located north of Interstate 20 off Campus Drive near the south campus of Tarrant County College, co-locates a wide variety of agencies and services in a campus environment and is accessible by public transportation.

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OPEN SPACE WORKING GROUP

While the Stormwater Management Division has guided the development of this report, the city has taken an interdepartmental, collaborative approach toward development of the Open Space Conservation Program. The findings and recommendations discussed in this report would not have been possible without the dedication of Open Space Working Group members from multiple city departments who met weekly over the last two years. These city staff and external partners worked toward a common vision to conserve high-quality natural areas as the city grows, which will provide environmental benefits and recreational opportunities that support economic development and enhance the livability and desirability of Fort Worth.

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MESSAGE FROM TRUST FOR PUBLIC LAND

Since 1972, Trust for Public Land (TPL) has worked with communities across the country to help protect their most important natural places. Through our nearly 50-year history we have seen how close-to-home access to parks, nature, and the outdoors improves health, builds equity, benefits the environment and climate, and connects communities—and Fort Worth is no exception. From Little Fossil Creek to the prairies around Benbrook Lake, Fort Worth is home to some of the most beautiful places in North Texas. These natural areas offer a place of beauty for residents to enjoy, as well as improve water quality in lakes and streams, provide habitat for birds and wildlife, clean the air we breathe, and even help promote economic development. As the second-fastest growing city in America, it has never been more important for Fort Worth to protect these special natural areas for the benefit of future generations.

For the past 18 months, it has been our pleasure to partner with the City of Fort Worth to develop the Open Space Conservation Program. This report represents not only the expertise of TPL, but the input of dozens of stakeholders and hundreds of residents who helped shape its findings and recommendations. Backed by GIS data, benchmark studies, and policy expertise, the report is a comprehensive road map for protecting and stewarding Fort Worth's most important open spaces.

With 96 percent of respondents to our survey indicating they support the conservation of natural areas, the future of open space conservation in Fort Worth is bright. Once adopted, the city will have the tools it needs to build a future where every resident can enjoy the benefits of close-to-home nature. TPL looks forward to the implementation of this report's recommendations, and we are ready to assist wherever we may be of service.

Robert Kent
Associate Vice President and Texas State Director
Trust for Public Land

MESSAGE FROM THE CITY OF FORT WORTH

The City of Fort Worth has recognized the importance of natural areas, trees, and water resources throughout its history. Fort Worth is the oldest and longest running Tree City USA in Texas, a designation the city first received in 1978 from the Arbor Day Foundation for its commitment to effective forest management. This dates back to 1873, when the city charter declared it illegal to hitch a horse to a tree. In 1914, the city purchased land around the newly built Lake Worth reservoir to protect the drinking water quality. Then, in 1964 the Park Board designated some of that land to create a wildlife sanctuary and nature preserve that became the Fort Worth Nature Center. Today, it is the largest city-owned nature center in the country.

Residents of Fort Worth have long cherished these natural amenities and ecosystems that are an integral part of our community and our heritage. One of the core values identified by the public during the 2000 Comprehensive Plan workshops was conservation of natural resources, and in developing the Comprehensive Plan, one of the five major themes that emerged was celebrating the Trinity River. Even the city's vision states that Fort Worth's environmental quality will be superior, meeting the highest national standards.

The Fort Worth Open Space Conservation Program is a natural continuation of this long tradition, and the *Fort Worth Open Space Strategy Report* serves as the guide for the growth and development the program. Both the City of Fort Worth and our residents have recognized the need to preserve some of our most beloved landscapes for future generations, just as previous generations have done. This document will help to ensure the continued support of the program mission: to conserve high-quality natural areas as the city grows to provide environmental benefits and recreational opportunities that support economic development and enhance the livability and desirability of Fort Worth.

Mayor Mattie Parker



THE WILDCAT BRANCH NEAR ITS MEETING
WITH LAKE ARLINGTON. © JASON FLOWERS

Executive Summary

Fort Worth is growing and developing at a rapid pace. It was a midsized city of 278,000 people in 1950, but today, with over 918,000 people, Fort Worth is the nation’s 12th-largest city. This growth is expected to continue, and the population is projected to reach 1.4 million people by 2040. Protecting waterways, forests, woodlands, and prairies will ensure that future generations are able to enjoy Fort Worth’s unique natural vistas, while promoting sustainable growth and development. Conserving and maintaining the city’s wealth of green space will require careful planning, collaboration, and action from the city and its partners.

The Fort Worth Open Space Conservation Program provides a natural solution to some of the environmental challenges of urbanization. This report serves as a guide for how the city can continue to roll out this new program, with details on high-priority conservation locations, community engagement feedback, strategies for funding the program, and an analysis of the policy recommendations that will help make this program a success.

REPORT PURPOSE

This report is intended as a guide for the Open Space Conservation Program. The recommendations listed are not a set plan but a menu of options to be evaluated as the program progresses. The strategies that the city chooses to pursue will be based on future conditions and resources. These recommendations are based on the benchmarking study performed by TPL. Benchmarking findings were discussed with stakeholders to identify recommendations tailored to the City of Fort Worth.

ONLINE SURVEY RESULTS

Over 1,400 community members provided their feedback about open space through a survey administered by TPL during this open space planning effort.

STRONG PUBLIC SUPPORT FOR OPEN SPACE CONSERVATION

- Nearly 96 percent of survey respondents defined conserving natural areas within Fort Worth as “very important” and almost 99 percent said that the City of Fort Worth should establish a permanent program to conserve natural areas for future generations.
- Eight-eight percent said they would strongly support the city dedicating public funding for land conservation to protect natural areas, water, and wildlife in Fort Worth, while another 10 percent said they would somewhat support it.
- Thirty-seven percent of respondents said they would be willing to volunteer in an open space program.

OPEN SPACE PRIORITIES

- To help understand in and community members’ priorities for open space conservation, survey participants were asked to rank the project’s Geographic Information Systems (GIS) mapping objectives. The leading response was ecosystem preservation, followed by stream, river, and lake health, and community health.

OPEN SPACE ACTIVITIES

- Participants were asked to select any of the activities they would like to have in conserved natural areas. Hiking/Walking was the most popular activity, with almost 97 percent of respondents selecting this option. Bird Watching/Wildlife Viewing and Educational Programming/Outdoor Education came in second and third place with 73 percent and 55 percent, respectively.

OPEN SPACE AMENITIES

- Residents were also asked to select the amenities they would like to have in open spaces, and 94 percent

of respondents selected Natural Paths/Trails. Picnic Areas, Educational Signage, and Bird Watching/Wildlife Viewing Shelters were all close runners-up, with 57–59 percent of all respondents choosing these amenities.

FUNDING AN OPEN SPACE PROGRAM

As part of this report, TPL has undertaken feasibility research to explore open space funding options for Fort Worth. Given the substantial investment of time and resources required for a conservation finance initiative, preliminary research is essential to determine the feasibility of such an effort. This funding study provides a fact-based reference document that can be used to evaluate financing mechanisms from an objective vantage point. In addition to local funding options, Section 3 provides information on potential state and federal funding sources that could be used for open space.

CHOOSING A LOCAL FUNDING STRATEGY

Enterprise and Special Revenue Funds

Environmental Protection, Stormwater Utility, and Water and Sewer fund revenues cannot currently support the Open Space Conservation Program; however, future fee increases could help fund the program.

Gas Endowment Funds

Gas endowment funds have the potential to provide ongoing funding for open space acquisition. Although there is no guarantee of funds, the city is hopeful that the gas lease performance will result in approximately \$1 million in additional annual funding for the Open Space Conservation Program.

General Fund

Fort Worth could fund the Open Space Conservation Program through the annual budget process. Alternatively, the city could establish an endowment fund specific to the program with a one-time appropriation, and the interest income could be used for acquisitions and maintenance.

General Obligation Bonds

General obligation bonds could be issued for open space acquisition. For instance, a \$50 million bond would add about \$3.68 million to the city's annual debt service and cost the typical homeowner in the city about \$11 per year in additional property taxes over the life of the bond.

Open Space Dedication

Fort Worth currently has a Park Dedication Policy that applies to residential developments. The city could add another fee specifically for open space acquisition, or create a fee that applies to commercial and industrial development. The Open Space Conservation Program could also partner with the Park & Recreation Department in cases where a proposed park has significant natural areas.

Partnerships

The Open Space Conservation Program could partner with other city departments and programs, such as the Park & Recreation Department or Stormwater Management Division on acquisitions that provide multiple benefits. Externally, Fort Worth could potentially enter into an agreement with surrounding cities, counties, and/or districts, such as the TRWD, to provide open space services, or with other jurisdictions that provide open space services to Fort Worth. Additionally, public-private partnerships between the city and the development community or nongovernmental organizations (NGOs) could help acquire or manage open space.

Public Improvement Districts

The City of Fort Worth currently has 12 public improvement districts (PIDs). The city could create a new PID, or multiple PIDs, to fund open space acquisition. Additionally, some existing PIDs may already have open space acquisition and/or maintenance as approved activities. In this case, the existing PID funds could be used to purchase and/or maintain open space.

Sales Tax Redistribution

Fort Worth could reduce its sales tax for general purposes and dedicate a percentage to open space. For example, dedicating 1/8th of 1 percent (0.125 percent) to open space would generate approximately \$14.5 million per year, without increasing taxes. If this was pursued, the

city would need to understand and consider the impact of sales tax redistribution on other city services.

PROGRAM RECOMMENDATIONS

Developing a successful open space program takes planning, dedication, and collaboration. There are numerous enabling conditions, policies, funding mechanisms, staffing choices, and other considerations that must be evaluated and then acted upon. The recommendations listed in this report are options to be evaluated in more detail over time, based on public support and feedback, as well as changing city needs, resources, and priorities.

The goal of the Program Recommendations section is to provide a road map to guide the City of Fort Worth in developing an inclusive and thriving open space program that delivers clear value to Fort Worth's diverse city and all its residents. To create this road map, TPL evaluated best practices and lessons learned from a variety of sources and then developed 35 short-, medium-, and long-term recommendations tailored to Fort Worth. Short-term recommendations should be implemented within two years and medium-term recommendations within three to five years. Long-term recommendations could take five or more years to implement. These recommendations provide a range of actionable steps the city can take to set up its open space program and put it on a path to success.

DEFINING OPEN SPACE

The definitions of open space vary by city and region. Generally, most of the eight comparison cities studied for this report refer to lands dedicated for open space as "natural areas" or "lands that are to be preserved or protected for future generations." Often, some form of public access is allowed on most but not necessarily all lands, and human use is typically limited to passive recreation through the creation and maintenance of trail systems for a combination of walkers/hikers, runners, bike riders, and equestrians, depending on the sites and locations. Apart from some trailhead amenities, including parking, signage, restrooms, and perhaps a small building

for a nature center, there are typically none of the active park amenities such as playing fields or swimming pools.

RECOMMENDATIONS FOR FORT WORTH

1. **Short-Term:** Develop a concise but relatively broad definition of open space. In addition, it is recommended that the open space definition generally aligns with the Texas Natural Resources Code Section 183.001 (A), which refers to conservation easements but is applicable for open space conservation more broadly. It states that conservation easements in Texas are designed to:
 - a. *retain or protect the natural, scenic, or open-space values of real property;*
 - b. *assure the availability of real property for agricultural forest, recreational, or open-space use;*
 - c. *protect natural resources;*
 - d. *maintain or enhance air or water quality; or*
 - e. *preserve the historical, architectural, archeological, or cultural aspects of real property.*
2. **Medium-Term:** Once the definition is finalized, embed it in master plans and eventually city code.

REASONS FOR PROTECTING OPEN SPACE

Natural spaces provide significant ecosystem services and can improve community health and quality of life for residents. Some of the most commonly cited reasons include protecting water supplies, reducing flooding, supporting endangered species recovery, improving habitat connectivity, climate resilience, preserving unique natural and historical features or areas, and fostering an appreciation of the outdoors.

RECOMMENDATIONS FOR FORT WORTH

1. **Short-Term:** Fort Worth's Open Space Conservation Program has identified seven overarching goal areas to guide the program (see Mapping Open Space Conservation Goal Areas). The city should embed these goal areas as objectives in relevant planning documents going forward.
2. **Long-Term:** Evaluate and refine the stated objectives over time and reprioritize them based on changing

conditions, feedback from residents, and guidance from elected officials.

MANAGING THE OPEN SPACE CONSERVATION PROGRAM WITHIN CITY DEPARTMENTS/STRUCTURES

The Fort Worth Open Space Conservation Program is currently managed within the Stormwater Management Division of the Transportation & Public Works Department, and property acquired through the program is maintained by the Park & Recreation Department. Fort Worth staff indicate that this arrangement has generally worked well and that there has been strong interdepartmental collaboration since the program's inception. Furthermore, the city's Stormwater Management Division has relatively stable funding sources and staffing levels to support the program as it is starting up.

RECOMMENDATIONS FOR FORT WORTH

1. **Short-Term:** The city should continue to manage the overall open space program out of the Stormwater Management Division within the Transportation & Public Works Department and use the Park & Recreation Department to implement maintenance and stewardship. With this setup, it is vital to have strong collaboration and communication across the two departments and to ensure that the maintenance of conserved open space receives adequate and timely attention.
2. **Short-Term:** Starting with the Open Space Working Group, develop a more structured open space management team with clearly defined roles to guide the daily operations and maintenance of open space.
3. **Short-Term:** Explore expanded collaboration with surrounding cities and counties to establish a regional open space system to secure clean drinking water, improve air quality, connect wildlife habitats, and more.
4. **Medium-Term:** Reevaluate placement of the Open Space Conservation Program within city department structures, considering citywide needs and priorities. This should take into account both the management and maintenance of open space. Establish an open

space team, based on current program needs. It is generally preferable to have at least two or three staff dedicated solely to open space, regardless of which department houses those staff.

5. **Long-Term:** As acquired lands and maintenance demands increase, Fort Worth should consider creating a stand-alone, dedicated open space division or office that brings program management and maintenance under one umbrella.

PUBLIC AND GOVERNMENTAL OVERSIGHT

Cities that are investing significant amounts of taxpayer dollars on open space acquisition and maintenance often create some type of public board to provide transparency and community guidance on the program. This board also serves as a link between city agencies, elected officials, and engaged residents. In addition, where open space properties are located both inside and outside city limits, members can be included from surrounding communities and/or counties. Nearly all open space programs in the benchmarking study have some mechanism for oversight by a body that is separate from both staff and elected officials.

RECOMMENDATIONS FOR FORT WORTH

1. **Short-Term:** Work with city communications liaison to encourage public engagement with the program and promote transparency. Ensure that residents of Fort Worth are well informed on the program prior to advancing the 2026 bond measure or a permanent funding mechanism to support open space acquisition and maintenance.
2. **Short-Term:** On an as-needed basis, evaluate whether a scientific advisory board or committee is warranted to provide additional input and guidance on acquisition, maintenance, and capital projects that may require specific expertise beyond that of city department staff.
3. **Short-Term:** Establish an advisory board or permanent stakeholder group to encourage community engagement and provide additional capacity for the Open Space Conservation Program as it grows. Ensure that members provide equitable resident representation

and are appointed through a process that avoids politicization of the group.

4. **Medium-Term:** Enshrine the purpose and/or decision-making authority of any advisory board or permanent stakeholder group in a legally binding policy.

CODIFYING OPEN SPACE POLICIES

City governments change over time—budgets fluctuate, staff turnover, and competing city priorities often emerge. It is vital to set in place policies and practices that can help maintain continuity in open space planning regardless of external circumstances. While it's important to allow for growth and evolution within open space planning, some basic guiding policies should be codified into official planning documents and/or ordinances, such as the structure of any oversight boards, acquisition goals, commitment to equity, mission statements, management regimes, allowed uses, and more. These policies, when made publicly available, also provide an additional layer of transparency. In the full Program Recommendations section, we provide a summary of existing and proposed city policies that can support and enhance open space conservation.

RECOMMENDATIONS FOR FORT WORTH

1. **Short-Term:** Review the policy and program recommendations in this report and determine which policies should be implemented via city ordinance and which policies should be added through master plans and other nonlegally binding mechanisms.
2. **Short-Term:** Review options for incentivizing and/or requiring the preservation of open space during the development process. Include input from city staff, stakeholders, and elected officials. Implement, as appropriate.

PUBLIC SUPPORT AND FUNDING

When local governments are creating and funding an open space program, it is vital that they maintain ongoing inclusive and equitable public advocacy and support from the community. In May 2018, Fort Worth voters approved an \$84 million bond for parks and

recreation with 74 percent support. This indicates a strong public interest in pursuing future open space bonds. As mentioned in Section 2, during the winter of 2020/2021, TPL conducted a public opinion survey regarding open space. Nearly 96 percent of survey respondents said conserving natural areas within Fort Worth was “very important” and almost 99 percent said that the City of Fort Worth should establish a permanent program to conserve natural areas for future generations. Additionally, 88 percent of respondents said they would strongly support the City of Fort Worth dedicating public funding for land conservation to protect natural areas, water, and wildlife, and another 10 percent of respondents said they would somewhat support it.

RECOMMENDATIONS FOR FORT WORTH

1. **Short-Term:** Recognizing that open space conservation bridges political and cultural divides and can garner widespread bipartisan support, the city should prioritize a highly visible marketing effort to elevate and broadcast local public support for open space.
2. **Short-Term:** Undertake a feasibility analysis of potential conservation funding mechanisms (several mechanisms are explored in Section 3 of this report) and a public opinion survey to gauge voter support for funding mechanisms and use of funds.
3. **Short-Term:** Determine funding source(s) for open space acquisition and maintenance in order to create a sustainable, permanent program.
4. **Medium-Term:** Determine the funding source(s) for any additional staff dedicated to open space.

LAND ACQUISITION AND CONSERVATION

Land acquisition is the heart and soul of an expanding open space program. To be set up for success, it’s important to set clear acquisition priorities and identify partners that can help the city meet its open space goals and objectives.

RECOMMENDATIONS FOR FORT WORTH

1. **Short-Term:** Building off the priority areas for acquisition identified through a GIS-based analysis

(highlighted in Section 5), work to identify individual priority parcels that are available for acquisition or conservation.

2. **Short-Term:** Develop a list of implementation partners (NGOs, land trusts, federal and state agencies) that can support acquisition. For each implementation partner, identify clear roles and responsibilities.
3. **Short-Term:** Work with local and national partners to determine the feasibility of developing a land trust (also called a land conservancy) in the Fort Worth area and broader Dallas-Fort Worth region.
4. **Short-Term:** Explore opportunities to acquire properties that are not entirely high-priority or high-quality open space by conserving the priority areas/trail connections and selling the other portion of the property specifically for sustainable development. It is important that this process is thoroughly vetted first and is overseen in a way that prioritizes conservation outcomes above development priorities. This can be accomplished by incorporating specific language in the acquisition documentation.

MAINTENANCE AND STEWARDSHIP

Land maintenance and stewardship are vital to running a successful open space program. Three primary questions need to be addressed to ensure successful management of open space:

1. How will maintenance and stewardship be funded?
2. Who is tasked with overseeing and executing maintenance practices?
3. What are the maintenance practices being deployed?

RECOMMENDATIONS FOR FORT WORTH

1. **Short-Term:** Ensure that annual city budget appropriations keep pace with increased operation and maintenance demands resulting from increased property acquisition.
2. **Short-Term:** Identify one or more persons to oversee equity and inclusivity in the Open Space Conservation Program, including management decisions. This could be a dedicated Open Space Working Group member or an advisory board/stakeholder group.

3. **Medium-Term:** Develop a training program specifically for the maintenance of open space.
4. **Medium-Term:** Explore how to tap into carbon offset markets to fund land protection and maintenance (see the example from King County, Washington).
5. **Medium-Term:** Develop land use/management objectives that align with the overall program and the types of land being acquired.
6. **Medium-Term:** Evaluate and then outline acceptable passive recreation activities that meet the diverse needs of our growing city, such as hiking, nature watching, birding, mountain biking, climbing, photography, and trail running. Special consideration should be given to access and design practices in line with regulations in the Americans with Disabilities Act (ADA) in order to maximize accessibility for all.
7. **Long-Term:** Develop land management plans for major parcels and critical natural resources on acquired open space, then track the impacts of management and stewardship practices implemented at the site scale and community scale, particularly for majority minority areas and super majority minority areas.
8. **Long-Term:** Employ dedicated rangers who oversee enforcement of rules at heavily visited open spaces.

VOLUNTEER ENGAGEMENT

Having a strong volunteer program that can support educational efforts and land maintenance, as well as provide eyes and ears on the ground, can prove invaluable. It is particularly important for a fledgling open space program that doesn't have as many full-time staff as recommended, based on the benchmarking study. A staff volunteer coordinator position and a recruitment campaign that includes volunteer recognition are highly recommended. Volunteer opportunities include trash/debris removal, invasive species removal/management, seed gathering, mowing, ecosystem restoration, and other activities. Work is usually done under supervision of city staff or specific NGO partners to ensure the safety of the volunteers and proper land management.

RECOMMENDATIONS FOR FORT WORTH

1. **Short-Term:** The City of Fort Worth has a volunteer coordinator that supports all volunteer programs across the city and ensures that they are in alignment and following the same rules. The Open Space Conservation Program should work with the volunteer coordinator to identify the best opportunities for inclusive resident engagement.
2. **Short-Term:** Identify partner opportunities for volunteer engagement, including other city volunteer programs such as Keep Fort Worth Beautiful and Park & Recreation, as well as NGOs and other agencies.
3. **Short-Term:** Develop a mix of volunteer opportunities and programs that can engage residents with different interests and physical abilities. Examples include litter cleanup, invasive species removal, and educational opportunities such as nature walks.
4. **Medium-Term:** Explore new and innovate opportunities to grow the volunteer base. An advisory board could be used to help augment city staff and develop a robust volunteer program.

AVOIDING COMMON PITFALLS

Through research, interviews, and the firsthand experience of TPL staff, we identified several common challenges that can adversely affect an open space program and hamper its ability to be successful:

- Insufficient funding
- Poorly defined goals and/or competing priorities
- Lack of planning
- Incompatible uses of open space

We address each of these in the Program Recommendations section and offer advice on navigating these common challenges.

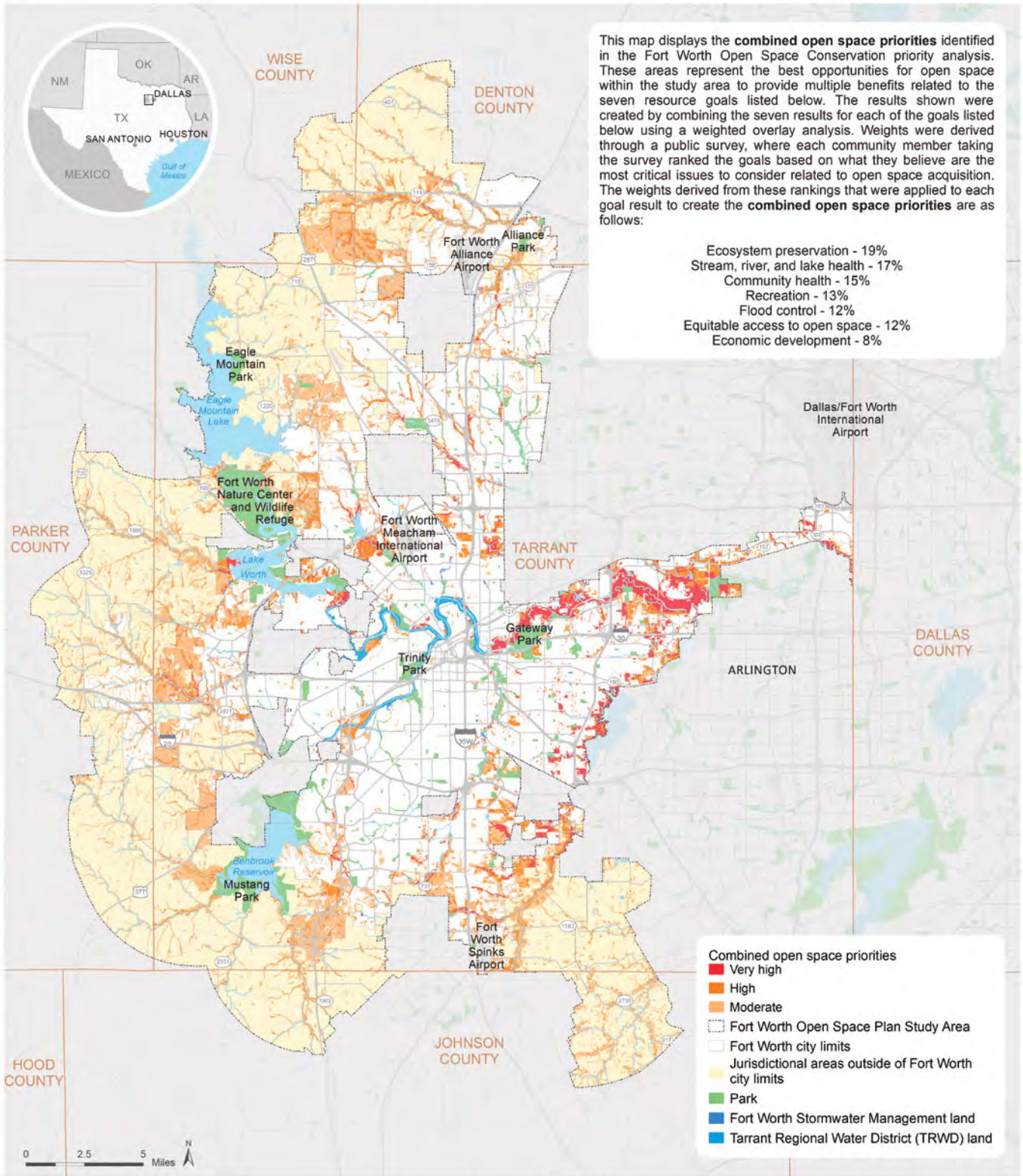
MAPPING OPEN SPACE CONSERVATION GOAL AREAS

To determine the highest-priority areas for open space conservation, the planning team employed GIS to map the most vital datasets for determining open space needs. The project's GIS analysis was organized into the following seven goal areas:

- **Ecosystem preservation:** Conserving important environments such as forests, woodlands, prairies, and wetlands, and protecting habitat for plants and wildlife.
- **Stream, river, and lake health:** Using natural areas to filter stormwater, reduce runoff and erosion, and protect water quality in the city's streams, lakes, and the Trinity River.
- **Community health:** Improving health by providing opportunities for exercise, cooling hot urban areas, and improving air quality.
- **Recreation:** Improving access to natural areas, protecting iconic landscapes, and creating new opportunities for passive recreation.
- **Flood control:** Protecting against flooding and property damage by conserving natural areas that absorb and temporarily store stormwater runoff.
- **Equitable access to open space:** Conserving natural areas that benefit low-income, underserved, and marginalized neighborhoods and communities.
- **Economic development:** Natural areas can improve nearby property values and create opportunities for businesses, jobs, development, and other economic activity.

COMBINED OPEN SPACE PRIORITIES

Each of the goal areas was mapped independently, resulting in topic-specific maps. These results were then stacked to create one combined open space priorities map. The combined open space priorities map identifies 11,084 acres as “very high” priority, and 78,882 acres of moderate or greater priority throughout the study area, which includes the City of Fort Worth and its extraterritorial jurisdiction (ETJ).



Combined open space priorities

FORT WORTH OPEN SPACE CONSERVATION PROGRAM, TEXAS

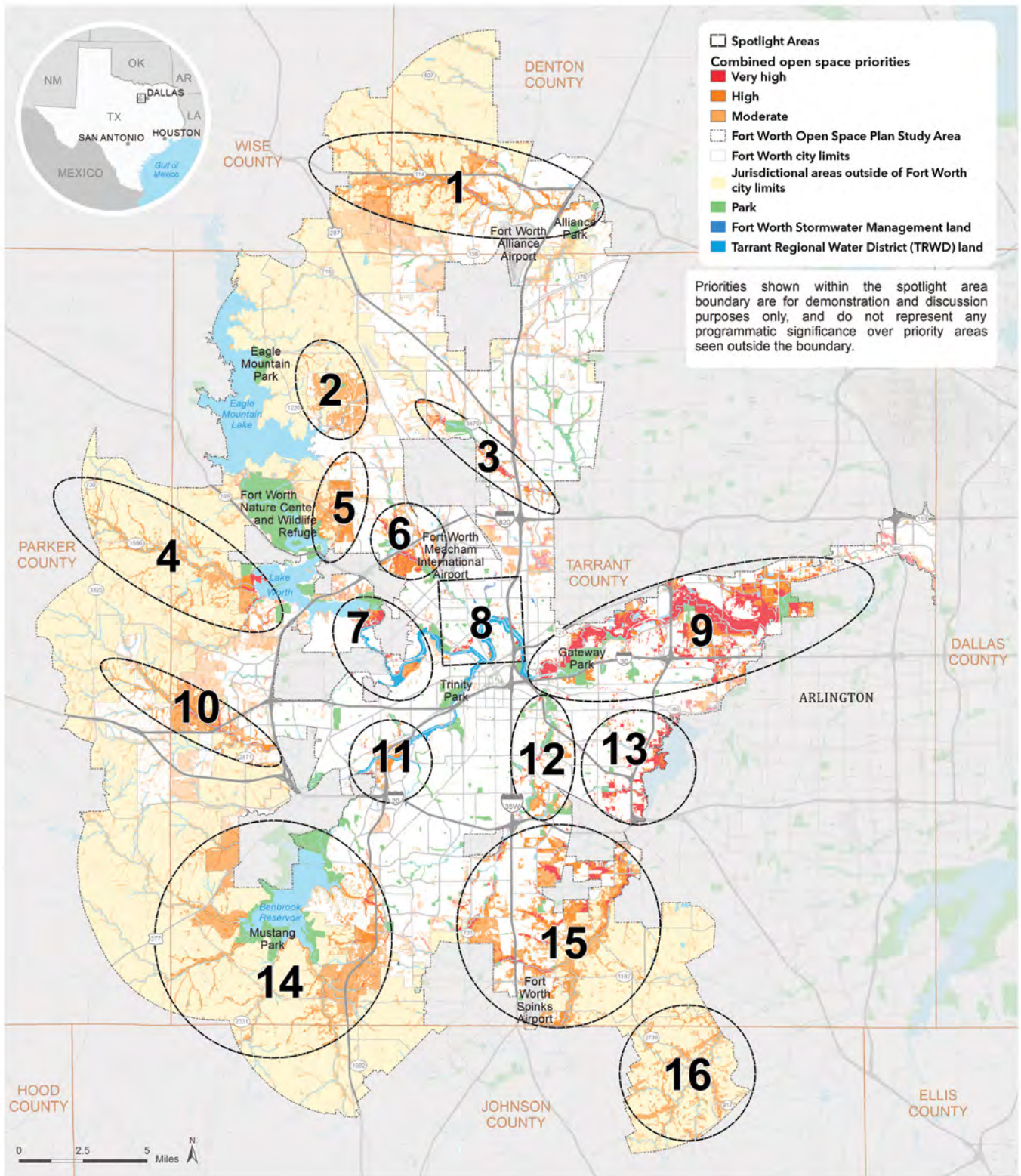
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SPOTLIGHT AREAS

To better understand how all the overlapping goal areas highlight different features and open space opportunities throughout the study area, several “spotlight areas” were examined in greater detail. It should be noted that these spotlight areas do not represent the only priority open spaces in the city, and not all land in each spotlight area is a priority. The spotlight areas simply serve as examples of how the overlapping goal areas highlight the different benefits of protecting open space. The sixteen spotlight areas are:

1. Denton Creek Watershed
2. Dosier Creek Watershed
3. Big Fossil Creek Watershed
4. Silver Creek Watershed
5. Lake Worth North Watershed
6. Marine Creek Lake Watershed
7. West Fork Trinity Watershed
8. City Center
9. Trinity River/Eastern Cross Timbers
10. Mary’s Creek/Fort Worth Prairie
11. Clear Fork Trinity Watershed
12. Sycamore Creek Watershed
13. Lake Arlington/Eastern Cross Timbers
14. Benbrook Lake/Fort Worth Prairie
15. Village Creek Watershed
16. Upper Walnut Creek Watershed



Spotlight Areas

FORT WORTH OPEN SPACE CONSERVATION PROGRAM, TEXAS

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FORT WORTH PRAIRIE NEAR BENBOOK
LAKE. © JASON FLOWERS

FOREWORD

Why an Open Space Program?

Fort Worth Open Space Program Mission Statement

Conserve high-quality natural areas as the city grows to provide environmental benefits and recreational opportunities that support economic development and enhance the livability and desirability of Fort Worth.

For generations, people have been attracted to the natural features of Fort Worth—from the Eastern Cross Timbers forests and the rolling grasslands of the Fort Worth Prairie, to the banks of the Trinity River and the creeks that feed it. However, the city is growing and developing at a rapid pace, putting these unique landscapes in jeopardy. Fort Worth was a midsized city of 278,000 people in 1950, but today, with over 918,000 people, it is the nation's 12th-largest city. This growth is expected to continue, with population projections reaching 1.4 million by 2040.¹

Protecting our waterways, forests, woodlands, and prairies will provide a connection to nature for future generations. Currently, Fort Worth loses roughly 50 acres of natural open space per week to development.² Acquiring and maintaining open space for public enjoyment will require careful planning, collaboration, and action from the city and its partners. The Open Space Conservation Program conserves land as one of the natural solutions to the environmental challenges of urbanization.

1. U.S. Census Bureau; North Central Texas Council of Governments.

2. Lauren Zakalik, "Fort Worth's Fast Growth Finds Its Way into the Mayor's 'State of the City' Address," February 28, 2020, <https://www.wfaa.com/article/news/fort-worths-fast-growth-finds-its-way-into-mayors-state-of-the-city-address/287-2d2ebfeb-9a71-477d-bd16-5b550f95ccae>.

Although it may sound like a new idea, the importance of conserving open space has been a recurring theme in the city's planning efforts. The 2015 Park, Recreation and Open Space Master Plan, The Trinity River Strategic Master Plan, The Lake Arlington Master Plan, and The Lake Worth Vision Plan, many of which have been adopted into the city's comprehensive plan, all recommend the conservation of open space.

The preservation of open space supports Fort Worth's vision of being the most livable city in the country, as well as the city council's strategic goals:

- Make Fort Worth the nation's safest major city.
- Improve mobility and air quality.
- Create and maintain a clean, attractive city.
- Strengthen the economic base, develop the future workforce, and create quality job opportunities.
- Promote orderly and sustainable development.

OPEN SPACE CAN HELP TO MAKE FORT WORTH THE NATION'S SAFEST CITY.

Conserved natural areas have been found to increase a city's safety in a number of ways. Open space reduces the frequency and intensity of flooding, as compared to impervious surfaces, by capturing stormwater.³ Cities with more green space also tend to have a lower risk of crime overall, with notable reductions in violent crime and burglaries.⁴

OPEN SPACE CAN IMPROVE MOBILITY AND AIR QUALITY.

Conserved open space supports active transportation by creating settings for new trails, which provide opportunities for both recreation and trail connectivity. Allowing residents to walk or bike instead of drive reduces the amount of air pollution produced by vehicles. An analysis of the value of Dallas's park system determined that of all the park types analyzed, trails generate the highest return on investment, generating over \$50 of new development per \$1 of trail capital invested. The same study found that the city's natural areas generate \$75 million in value annually. Conserving natural open space also creates a cleaner, healthier

environment, as trees remove harmful particulates from the air and help reduce urban heat islands.⁵

OPEN SPACE WILL HELP TO CREATE AND MAINTAIN A CLEAN AND ATTRACTIVE CITY.

Natural areas support wildlife by providing essential habitat and movement corridors, and can provide opportunities for outdoor education and recreation. Undeveloped areas, especially floodplains, help protect water quality nearby and downstream. Research on Fort Worth's park system found that more than 6.2 million visits took place each year, representing \$16.1 million in economic benefit to the community.⁶

OPEN SPACE WILL STRENGTHEN THE ECONOMIC BASE AND CREATE QUALITY JOB OPPORTUNITIES.

In today's global marketplace, quality of life is a key factor in determining a city's ability to attract talent, and access to open space is a crucial part of this equation. In a 2017 poll, millennials identified their top priorities in housing as living near parks and open space, work, and transit.⁷ The benefits of parks and open space in promoting businesses have been observed across the country. In Plano, Texas, for example, a recent study found that 71 percent of area businesses rated parks as an important factor in their decision to locate there.⁸

Greater access to natural areas will also help Fort Worth promote tourism and the outdoor recreation industry, and a conservation program can help the city to preserve historic sites and iconic landmarks. In neighboring Dallas, tourism spending driven by park amenities adds an estimated \$220 million to the city's economy each year.⁹

Nearby parks and open space have also been found to improve property values.¹⁰ This "park premium" grows the tax base for local government. National research has shown that home values increase 2 percent to 12.5 percent up to a half mile from parks, and a 2016 study found that parks created an additional \$135 million in property value in Dallas.¹¹ The 2014 Lake Worth Watershed Greenprint found residential property values were \$260 million higher because of their proximity to

parks in the City of Fort Worth. The study also determined that the total annual value of additional property tax revenue due to parks was \$5.82 million.

OPEN SPACE PROMOTES ORDERLY AND SUSTAINABLE DEVELOPMENT.

One indicator of urban sustainable development is the quality and quantity of green spaces in a city. Public access to open space and green space connectivity supports economic, environmental, and social health. Increased access to public outdoor space encourages people to exercise more, reducing risk factors from conditions such as obesity, which affects more than 30 percent of Texans, and results in medical care cost savings. The average adult who regularly exercises in a park saves nearly \$1,200 per year in medical costs; for adults over age 65, the savings are doubled.¹² Research is now demonstrating a link between outdoor access and mental health benefits. Fort Worth's outdoor spaces can help residents increase physical activity, reduce medical care costs, and decrease levels of stress, anxiety, and depression. In 2013, the combined health savings from adult residents who utilized parks and public open space in Fort Worth, Lake Worth, and Lakeside totaled \$13.9 million.¹³ A similar study conducted in Plano determined that parks yield an annual medical cost savings of \$21.2 million.

THE STRATEGY REPORT AS A GUIDE

This report provides a guide for how the city can continue to roll out the Open Space Conservation Program, with recommendations for high-priority conservation locations, community input, strategies for funding the program, and an analysis of the policies that will help make this program a success. The study area includes land within the Fort Worth city limits, as well as the city's extraterritorial jurisdiction (ETJ). Inclusion of the ETJ in the city's open space planning is crucial, as this area holds most of the undeveloped land. Identification of high-quality open space within the ETJ could encourage the protection of those spaces through partnerships, as well as alert landowners and future developers of the opportunities to incorporate high-priority open space areas into their future plans, adding a valuable amenity and improving quality of life in these areas as they continue to grow.

The city is already putting the open space program into action. In partnership with Friends of Tandy Hill, Fort Worth purchased its first open space property, Broadcast Hill, in 2020. The site holds 50 acres of prairie and borders Tandy Hills Nature Area. The city is also planning for the future of open space conservation, having already appropriated \$11,085,000 to acquire new sites, and is proposing a category of funding for open space in the 2022 city bond program.

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3. Erik Zimmermann et al., "Urban Flood Risk Reduction by Increasing Green Areas for Adaptation to Climate Change," *Procedia Engineering* 161 (2016): 2241–46.
 4. Lincoln Larson and Scott Ogletree, "Can Parks Help Cities Fight Crime?," June 25, 2019, <https://theconversation.com/can-parks-help-cities-fight-crime-118322>.
 5. Robert McDonald et al., *Planting Healthy Air: A Global Analysis of the Role of Urban Trees in Addressing Particulate Matter Pollution and Extreme Heat* (Arlington, VA: The Nature Conservancy, 2016); Robert McDonald et al., *Funding Trees for Health: An Analysis of Finance and Policy Actions to Enable Tree Planting for Public Health*, (Arlington, VA: The Nature Conservancy, 2017); David J. Nowak, Daniel E. Crane, and Jack C. Stevens, "Air Pollution Removal by Urban Trees and Shrubs in the United States," *Urban Forestry & Urban Greening* 4 (2006): 115–23.
 6. North Central Texas Council of Governments and Trust for Public Land, *Lake Worth Watershed Greenprint*, 2015, <https://nctcog.org>.
 7. National Association of Realtors, *National Community and Transportation Preferences Survey*, 2017, <https://cdn.nar.realtor/sites/default/files/documents/2017%20Analysis%20and%20slides.pdf>.
 8. Trust for Public Land, *The Economic Benefits of Plano's Park and Recreation System* (San Francisco: Trust for Public Land, 2017).
 9. HR&A Advisors, *Economic Value and Benchmarking Study of the Dallas Park System*, February 2016, <https://www.hraadvisors.com/portfolio/dallas-parks>.
 10. George Mason University Center for Regional Analysis, *Promoting Parks and Recreation's Role in Economic Development* (prepared for National Recreation and Park Association, May 2018), <https://www.nrpa.org/siteassets/nrpa-economic-development-report.pdf>.
 11. HR&A Advisors, *Economic Value and Benchmarking Study of the Dallas Park System*.
 12. Trust for Public Land, *The Economic Benefits of Plano's Park and Recreation System*.
 13. North Central Texas Council of Governments and Trust for Public Land, *Lake Worth Watershed Greenprint*.



FORT WORTH PRAIRIE FROM
ABOVE. © JASON FLOWERS

SECTION 1

The Fort Worth Open Space Study Approach

The open space study incorporated scientific data, technical analysis, and community feedback to answer key questions about the demographics, natural environment, and built environment of the study area, which includes the City of Fort Worth and its extraterritorial jurisdiction (ETJ). All these elements helped to outline the goals of the Open Space Conservation Program, inform policy recommendations, identify funding sources, and develop a prioritized map open spaces for conservation.

MAPPING AND GIS

The mapping process was guided by the Open Space Working Group comprising city staff, TPL staff, and project partners. Through weekly meetings, this group guided the analysis by helping to (1) compile a list of relevant criteria to be mapped, (2) collect the best available data, (3) review results to ensure that they accurately reflect on-the-ground realities, and (4) prioritize relative criteria for Fort Worth.

Geographic Information Systems (GIS) analysis played an integral role identifying the priority open spaces within the study area that provide multiple, overlapping benefits. The study's GIS analysis was organized into the following seven goal areas, each of which is discussed in more detail in Section 5:

- **Ecosystem preservation:** Conserving important environments such as forests, woodlands, prairies, and wetlands, and protecting habitat for plants and wildlife.
- **Stream, river, and lake health:** Using natural areas to filter stormwater, reduce runoff and erosion, and protect water quality in the city's streams, lakes, and the Trinity River.

- **Community health:** Improving health by providing opportunities for exercise, cooling hot urban areas, and improving air quality.
- **Recreation:** Improving access to natural areas, protecting iconic landscapes, and creating new opportunities for passive recreation.
- **Flood control:** Protecting against flooding and property damage by conserving natural areas that absorb and temporarily store stormwater runoff.
- **Equitable access to open spaces:** Conserving natural areas that benefit low-income, underserved, and marginalized neighborhoods and communities.
- **Economic development:** Natural areas can improve nearby property values and create opportunities for businesses, jobs, development, and other economic activity.

Many data sets were collected for each goal area. These data sets were weighted based on Open Space Working Group input and public feedback and then combined to create a topic-specific map. These goal area maps were then weighted and “stacked” to create a combined open space priorities map (see Section 5) that highlights where open space conservation would provide the greatest overlapping benefits to the environment and the community. For a detailed list of the GIS data and analysis methods utilized, see Appendix 4.

The Decision Support Tool

In addition to the static PDF maps that are available in this report (see Section 5), all GIS data and the Open Space Decision Support Tool are publicly available online (see the link below). Users can locate potential natural areas for conservation based on their priorities, gather data for their own projects, and utilize the parcel report tool to print open space–related information on any property in the study area. Decision support tools have become a consistent feature in TPL’s planning projects, and the following are real-world examples of how these tools can be used:

- **Planning Projects:** In Los Angeles, the decision support tool is being used to inform the general plan and to examine socioeconomic vulnerability and its overlap with urban heat island impacts. In New Orleans, partners are using the decision support

tool to site campus projects and create a strong connection between health and equity.

- **Prioritizing Projects:** The decision support tool can help find high-priority lands for conservation work and protecting open space. In New Mexico, Bernalillo County has adopted a decision support tool as part of the planning process for acquiring lands for open space. Each proposed acquisition has to meet certain community-determined criteria to move forward.
- **Funding Projects:** In New Orleans, the Sewer Authority uses the decision support tool to create requirements for requests for proposals. In other cases, the tool can provide organizations seeking funding a quick way to gather the necessary information for compelling grant applications.
- **Democratizing Data:** The decision support tool helps democratize data—especially for small organizations that do not have in-house GIS capabilities. In Los Angeles, the small nonprofit From Lot to Spot uses a decision support tool to identify the best places to turn vacant lots into parks.

The Fort Worth Open Space Decision Support Tool and user guide can be accessed at <https://mapitwest.fortworthtexas.gov/OpenSpaceTool/>.

COMMUNITY AND STAKEHOLDER ENGAGEMENT

Community engagement was a key component of the Fort Worth open space study process. Only by hearing directly from community members could the planning team understand community priorities for natural area conservation. In order to hear from as many residents as possible, the project team employed a variety of remote engagement strategies.

Open Space Working Group

Thirty-seven local experts participated in the project’s Open Space Working Group. This group comprised city staff from multiple departments as well as partners from TRWD, NCTCOG, and Streams & Valleys. The working group also provided guidance on the project’s approach and recommendations. Working group meetings were

held monthly over the course of the project. Specific responsibilities included framing the project's overall approach, assisting with community input, helping to build public support, and developing implementation strategies. A full listing of working group members is provided in the preface.

Open Space Stakeholder Group

In addition to the Open Space Working Group, the project was guided by a group of more than 65 stakeholders. This group has met four times over the course of the project (on October 8, 2020, April 1, 2021, October 29, 2021, and February 25, 2022) to provide high-level feedback on the process and preliminary results. The draft report was provided for stakeholder review and comments to be considered before it was finalized. Select stakeholders volunteered to be on the Policy Small Group, which reviewed the policy and program recommendations from this report in detail to provide feedback and guidance. This group met three times (on February 22, 2021, April 7, 2021, and April 22, 2021).

Public Meetings

The project's public meetings were public events held virtually. Four community workshops were conducted (on October 22, 2020, April 8, 2021, October 28, 2021, and February 24, 2022). Each meeting included a presentation by the TPL summarizing recent progress and next steps, and provided community members an opportunity to provide feedback. These videos were translated and posted to the Open Space Conservation Program website. The draft report was provided to the public for review and comments to be considered before it was finalized.

Online Survey

The online survey asked residents to share their thoughts on open space acquisition and use. The survey was available in English and Spanish from October 2020 through February 2021. Topics in the survey included participants' level of support for public open space, recreational activities (e.g., hiking, biking, and bird watching), and interest in stewardship and volunteering, and how they would rank the goal areas in the mapping tool. It received 1,429 responses. Owing to the COVID-19 pandemic, outreach occurred largely over social media, as well as through working group members promoting

the survey through their networks. City staff also promoted the surveys with flyers at libraries and community centers in super majority minority areas to try to engage historically underrepresented demographics. Staff also conducted four short online presentations on the survey in English and Spanish to further encourage public participation.

POLICY RESEARCH

Developing a successful open space program takes planning, dedication, and collaboration. Numerous enabling conditions, policies, funding mechanisms, staffing choices, and other considerations that must be evaluated and then acted upon. TPL evaluated best practices and lessons learned from a variety of sources and then developed 35 short-, medium-, and long-term recommendations tailored to Fort Worth. These recommendations provide actionable steps the city can take to set up their open space program and put it on a path to success (see Section 4).

Conservation Finance Study

TPL has undertaken feasibility research to explore open space funding options for Fort Worth, Texas. Given the substantial investment of time and resources required for a conservation finance initiative, preliminary research is essential to determine the viability of such an effort (see Section 3). This funding study provides a fact-based reference document that can be used to evaluate financing mechanisms from an objective vantage point. The information is compiled from city documents, financial reports, budgets, communications with staff, Texas state code, and other online resources. The contents of this report are based on the best available information at the time of research and drafting, December 2020 through March 2021.



DEER CREEK IN SOUTHEAST FORT
WORTH. © JASON FLOWERS

SECTION 2

Online Survey Results

Community engagement was an essential part of creating the *Fort Worth Open Space Strategy Report*. The online survey allowed residents to share thoughts about where to focus future open space preservation and how it should be utilized. The survey was available in English and Spanish from October 2020 through February 2021. It received 1,429 responses. Owing to the COVID-19 pandemic, outreach occurred largely over social media, as well as working group members promoting the survey through their networks. Topics in the survey included participants' level of support for public open space, recreational activities (e.g., hiking, biking, bird watching), interest in volunteering, and weighting of the GIS goal areas. For the full online survey results, see Appendix 1.

As part of the survey, optional questions collected demographic data to compare survey participation to overall city demographics. The results found that a higher percentage of white and higher-income residents took the survey compared to the percentage of these individuals in the overall City of Fort Worth population. While this can be a common challenge with online surveys, many of the tactics that would be used to resolve the issue (e.g., bringing paper surveys to in-person events, meeting residents at locations in the community with iPads) were unavailable due to the COVID-19 pandemic. To test for demographic differences in the survey responses, TPL broke down the responses to each question by race/ethnicity and income levels. This allowed us to test for differences between the overall responses and the responses for people of color and those with lower incomes. The analysis found that there were no major differences in respondents' top priorities based on income or race/ethnicity. For example, when asked "Which of the following activities would you like to do in conserved natural areas?," the top five highest-ranked responses were the same regardless of respondent race/ethnicity or income. It was only in the low-ranked items that differences occurred. This was the case throughout the survey. Participants agreed on the top priorities regardless of race/ethnicity of income, while there were minor differences in the rankings of items that were not identified as top priorities.

PUBLIC SUPPORT FOR OPEN SPACE

Fort Worth has overwhelming public support for open space conservation. Nearly 96 percent of survey respondents defined conserving natural areas within Fort Worth as “very important” and almost 99 percent said that the City of Fort Worth should establish a permanent program to conserve natural areas for future generations. Additionally, 88 percent of respondents said they would strongly support the city dedicating public funding for land conservation to protect natural areas, water, and wildlife in Fort Worth, while another 10 percent said they would somewhat support it. Another 37 percent of respondents say they would be willing to volunteer in an open space program.

FIGURE 1. How important is the conservation of natural areas within Fort Worth to you?



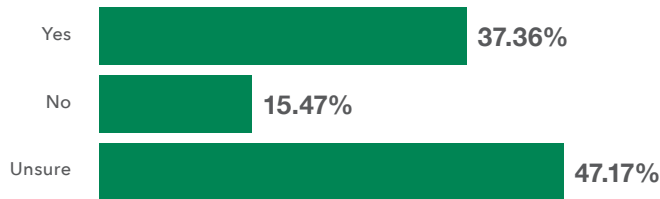
FIGURE 2. Do you think the City of Fort Worth should establish a permanent program to conserve natural areas for future generations?



FIGURE 3. In general, would you support or oppose the City of Fort Worth dedicating public funding for land conservation to protect natural areas, water, and wildlife in Fort Worth?



FIGURE 4. Would you be interested in volunteering with the Open Space Conservation Program in Fort Worth?

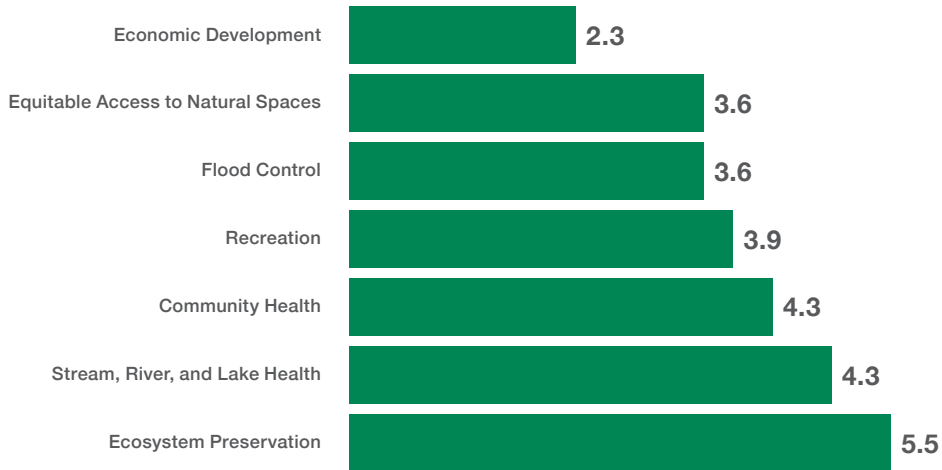


OPEN SPACE PRIORITIES

To help understand community members' priorities for open space conservation, survey participants were asked to rank the project's seven goal areas. These results were also used to weight the GIS objectives in creating a combined open space priorities map (see Section 5). Respondents ranked the goal areas as follows:

1. **Ecosystem preservation:** Conserving important environments such as forests, woodlands, prairies, and wetlands, and protecting habitat for plants and wildlife.
2. **Stream, river, and lake health:** Using natural areas to filter stormwater, reduce runoff and erosion, and protect water quality in the city's streams, lakes, and the Trinity River.
3. **Community health:** Improving health by providing opportunities for exercise, cooling hot urban areas, and improving air quality.
4. **Recreation:** Improving access to natural areas, protecting iconic landscapes, and creating new opportunities for recreation.
5. **(Tied with 5) Flood control:** Protecting against flooding and property damage by conserving natural areas that absorb runoff and provide natural areas for stormwater to collect.
6. **(Tied with 4) Equitable access to natural spaces:** Conserving natural areas that benefit low-income, underserved, and marginalized neighborhoods and communities.
7. **Economic development:** Natural areas can improve nearby property values and create opportunities for businesses, jobs, residential development, and other economic activity.

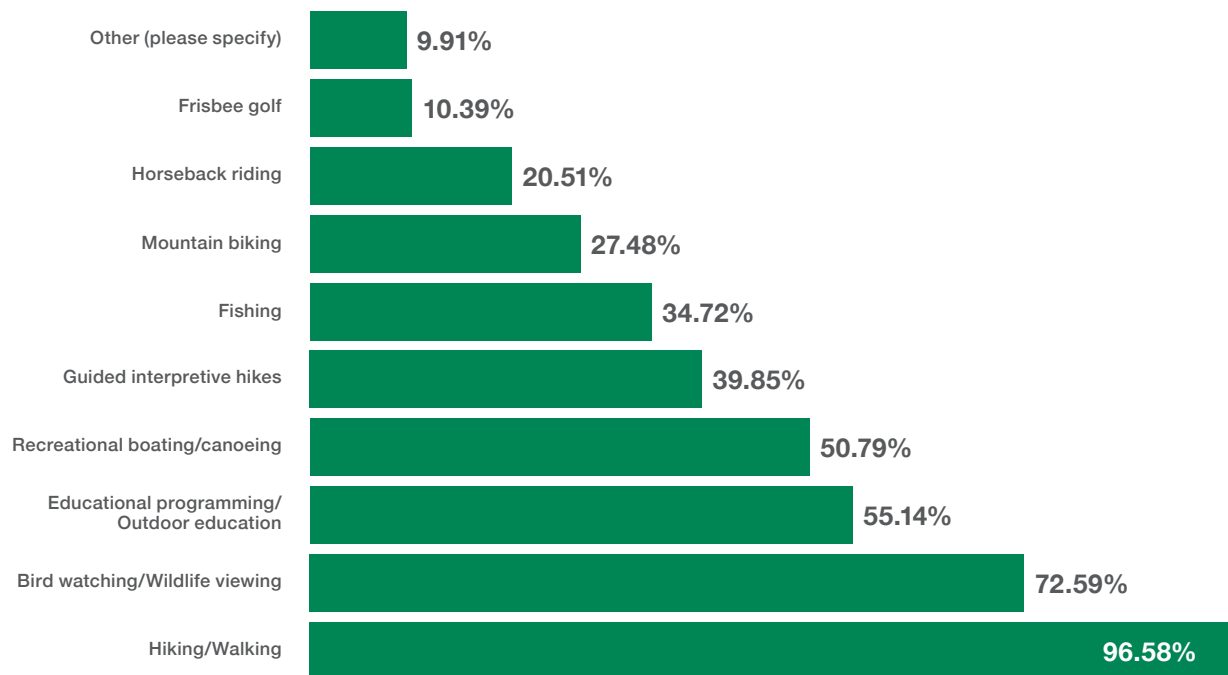
FIGURE 5. Conserving natural areas can benefit Fort Worth in a lot of different ways. Which of these do you think are most important? Rank your priorities.



OPEN SPACE ACTIVITIES

When participants were asked which activities they would like to have in conservational natural areas, Hiking/Walking was the clear front-runner with almost 97 percent of respondents selecting this activity. Bird watching/wildlife viewing and educational programming/outdoor education came in second and third place with 73 percent and 55 percent, respectively.

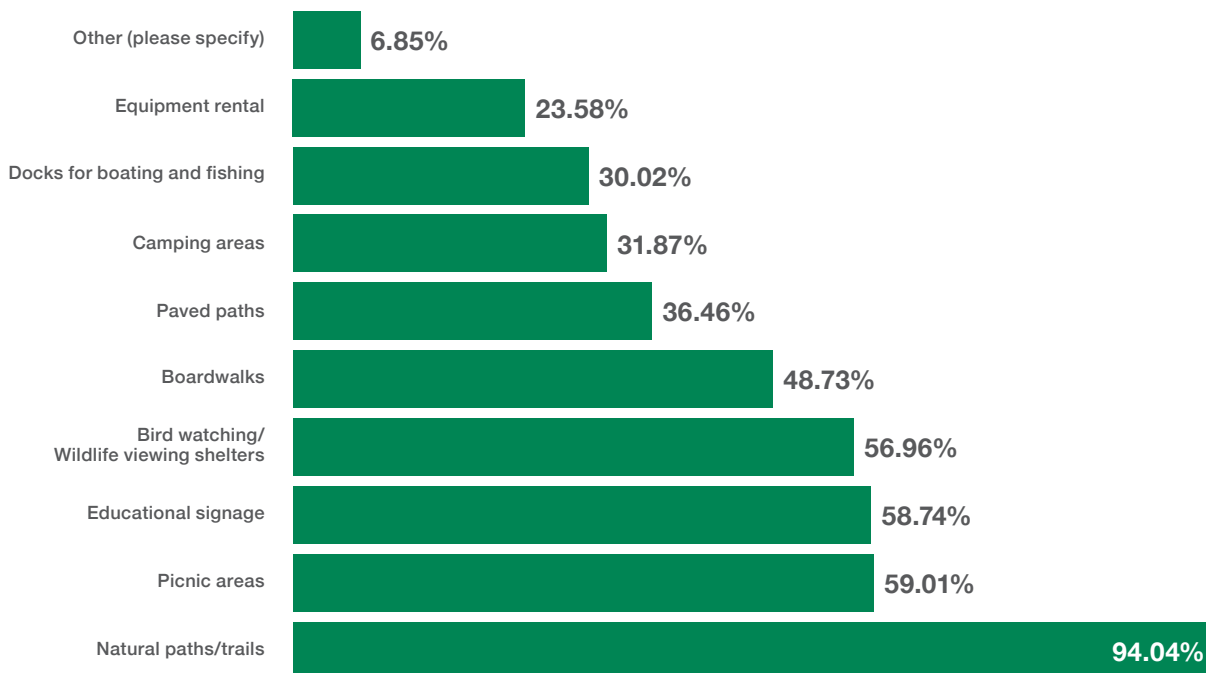
FIGURE 6. Which of the following activities would you like to do in conserved natural areas?



OPEN SPACE AMENITIES

Residents were also asked to select the amenities they would like to have in open spaces. Natural paths/trails were the most popular choice, with 94 percent of respondents selecting this option. This is unsurprising given the popularity of trails nationwide, as well as the responses to the previous question on open space activities. Picnic areas, educational signage, and bird watching/wildlife viewing shelters were all close runners-up, with 57–59 percent of all respondents choosing these amenities.

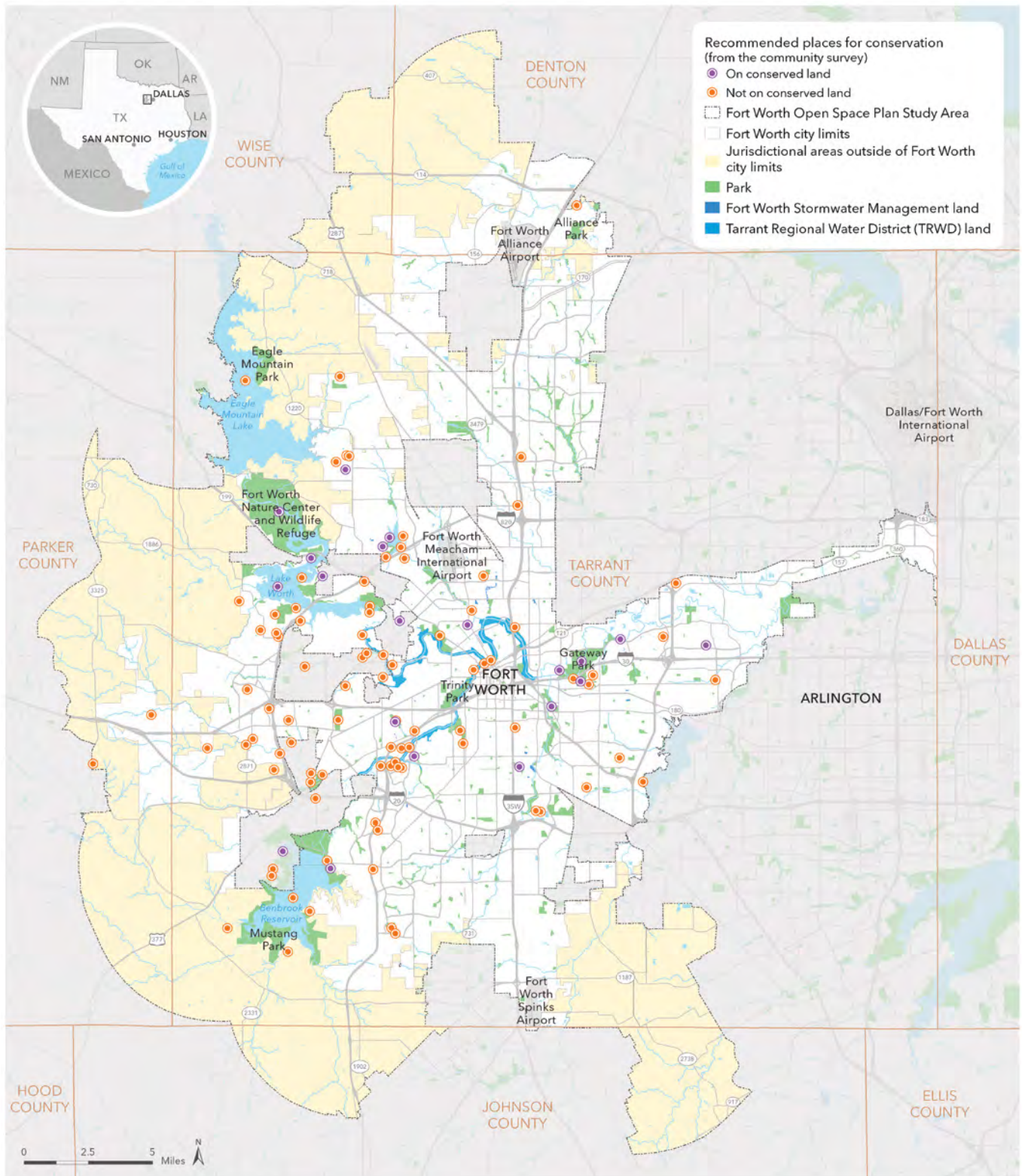
FIGURE 7. Which of the following amenities would you like to have in conserved natural areas?



SPECIFIC CONSERVATION RECOMMENDATIONS

The online survey also asked participants to identify specific places that they would like the city to conserve. We received 1,307 sites from 687 different respondents. Responses include everything from specific addresses to general areas and ecosystems (e.g., southern Fort Worth, prairies). Figure 8 maps these locations in Fort Worth.

FIGURE 8. Conservation recommendations from the online survey



Recommended places for conservation (from the community survey)



FORT WORTH OPEN SPACE CONSERVATION PROGRAM, TEXAS

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TEXAS BLUEBONNET (*LUPINUS TEXENSIS*) FILLS FORT WORTH'S PRAIRIES WITH COLOR EACH SPRING. © JASON FLOWERS



NORTH MAIN STREET BRIDGE NEAR DOWNTOWN
FORT WORTH. © JASON FLOWERS

SECTION 3

Funding an Open Space Program

TPL's Conservation Finance program helps state and local governments design, pass, and implement legislation and ballot measures that create new public funds for parks and land conservation. The team has helped pass more than 600 ballot measures—with an 83 percent success rate—creating more than \$83 billion in voter-approved funding for parks, land conservation, and restoration. In Texas, the team has helped pass 33 ballot measures, most recently, a bond in Hays County and a statewide sales tax dedication.

As part of this report, TPL has undertaken feasibility research to explore open space funding options for Fort Worth. Given the substantial investment of time and resources required for a conservation finance initiative, preliminary research is essential to determine the viability of such an effort. This funding study provides a fact-based reference document that can be used to evaluate financing mechanisms from an objective vantage point. The information is compiled from city documents, financial reports, budgets, communications with staff, Texas state code, and other online resources. The contents of this report are based on the best available information at the time of research and drafting, December 2020–March 2021.

CHOOSING A LOCAL FUNDING STRATEGY

The financing options utilized by a community will depend on a variety of factors such as tax capacity, budgetary resources, voter preferences, and political will. Although most local governments provide support for conservation programs through the budget process, these funds often fall short of what is needed to support long-term investment in conservation. As elected officials go through the process of making critical budgetary decisions, funding for conservation often lags behind other public purposes and well behind what voters would support.

In TPL's experience, local governments that create funding through voter-approved ballot measures create substantially more dedicated funds for conservation. Ballot measures provide a tangible, dedicated means to implement a local government's vision. With their own dedicated funding, local governments are better positioned to leverage grants from the state or federal government or private philanthropic partners, especially those that require matching funds. Having a predictable funding source empowers a city, county, or special district to establish long-term conservation priorities that meet important community goals and values.

In the survey of Fort Worth residents, 88 percent of respondents said they would support the city dedicating public funding for land conservation to protect natural areas, water, and wildlife. The funding sources identified in this section could be used to create hiking and walking trails, bird watching and wildlife viewing opportunities, and educational programming and outdoor education. The top three amenities respondents asked for in the public survey were natural paths and trails, picnic areas, and educational signage. The funding options in this section could be used to provide this infrastructure, in addition to funding open space acquisition and maintenance.

Nationwide, a range of public financing options have been utilized by local jurisdictions to fund conservation, including general obligation bonds, the local sales tax, and property taxes. Other mechanisms have included special assessment districts, real estate transfer taxes, impact fees, and income taxes. The ability of local governments to establish dedicated funding depends on state enabling authority and local laws. Table 1 below shows the funding sources for open space acquisition and maintenance that the benchmark cities use.

Local governments in Texas play a leading role in advancing parks and conservation in the state through the passage of local ballot measures. The property tax is the single largest revenue source for many local jurisdictions, and the proceeds may be expended for parks and open space. Generally, municipal property tax rates are adopted each year as part of the budget process, and there is no statutory provision for cities to dedicate a property tax. As such, the property tax is not included as a funding option in this section.

The only means by which local governments in Texas may dedicate public funds for land conservation are by creating enterprise or special revenue funds, by dedicating a portion of local sales tax, or by issuing general obligation bonds. Local sales tax increases, and/or changes in distribution, and issuance of general

TABLE 1: Benchmark Cities Funding Sources

| Jurisdiction | Funding for Acquisition | Funding for Management |
|------------------------|--|--------------------------------------|
| Albuquerque, NM | Bonds, open space impact fee, gross receipts tax, grants | Interest from permanent fund |
| Austin, TX | Bonds, parkland dedication, fees | General fund |
| Boulder, CO | Bonds, dedicated sales tax, state lottery funds | Dedicated sales tax |
| Dallas, TX | Bonds, parkland dedication | General fund, fees |
| Mecklenburg County, NC | Bonds, capital appropriations, grants, donations | General fund, earned revenue, grants |
| Minneapolis, MN | Parkland dedication | General fund |
| Oklahoma City, OK | Parkland dedication, dedicated sales tax for Metropolitan Area Projects (MAPS) | General fund |
| San Antonio, TX | Bonds, dedicated sales tax, parkland dedication, grants, general fund | General fund, fees |

obligation bonds may be authorized only after approval by a majority of the voters. Bonds also require approval by the public finance division of the Attorney General's Office.¹⁴ Fort Worth is at the maximum allowable sales tax of 8.25 percent (the city's portion of this tax is 1 percent).¹⁵ As such, there is no capacity to increase the sales tax. However, a portion of the city's 1 percent sales tax could be dedicated to open space.

This section provides an examination of options available to generate revenue for open space in Fort Worth. This research provides a fact-based reference document that can be used to evaluate financing mechanisms from an objective vantage point.¹⁶ The funding options included in this section are summarized in [Table 2](#).

CONSERVATION FINANCE IN TEXAS

Since 2000, voters across Texas have voiced their strong support for land conservation by approving more than \$1.8 billion for these purposes through local sales tax and bond referenda. As shown in [Table 3](#), the rate of approval for local conservation finance ballot measures in Texas is an impressive 92 percent. In May 2018, Fort Worth voters approved an \$84 million bond for parks and recreation with 74 percent support (this measure did not include funds for open space).

Since some funding options would require voter approval, Fort Worth should narrow the potential funding options to those that match the city's open space needs and timing identified in the city's planning processes. TPL recommends a professionally administered public opinion survey of Fort Worth voters that tests those options, including ballot language, tax tolerance, timing, and program priorities.

ENTERPRISE AND SPECIAL REVENUE FUNDS

Environmental Protection Fund

Formally established in 1995, the Environmental Protection Fund (EPF) is a Special Revenue Fund that assists the city in paying for regulated environmental quality programs, projects, and services that are designed to address air, land, and water pollution and generally improve public health, welfare, and safety. Environmental programs ensure that the city and community achieve compliance with local, state, and federal environmental rules and regulations. The budget for FY 2021 totals \$4.4 million.¹⁷

The EPF serves the city by offsetting qualified environmental expenses from the general fund. This is accomplished after staff from the Environmental Protection Division examine and verify the scope of each project request from other city departments. Examples of environmental services may include environmental site assessments, pollution remediation on city property, disposal of environmental wastes from city operations, etc. The division maintains due diligence studies and oversees a variety of environmental capital improvement projects (CIPs).¹⁸

This fund does not currently have capacity to support open space; however, future fee increases could fund open space. Open space can meet some of the criteria to receive funding from the Environmental Protection Special Revenue Fund.

Stormwater Utility Fund

The Stormwater Utility Fund is an Enterprise Fund that is responsible for providing stormwater management to approximately 244,000 residential and nonresidential customers in Fort Worth. The Stormwater Management Division is responsible for managing program resources to protect people and property from harmful stormwater runoff by effectively maintaining and rehabilitating

14. Texas Government Code §1201.065, Approval of New Public Security by Attorney General, https://texas.public.law/statutes/tex.gov%27t_code_section_1201.065.

15. 6.25% state sales tax, 1% City of Fort Worth, 0.5% for transit, and 0.5% for Crime Control and Prevention District.

16. This study is not a legal document and should not be relied on for legal purposes or a legal opinion. The contents of this report are based on the best available information at the time of research and drafting, December 2020–March 2021.

17. City of Fort Worth, Fort Worth FY 2021 Adopted Budget, <https://www.fortworthtexas.gov>.

18. City of Fort Worth, Fort Worth FY 2020 Adopted Budget, <https://www.fortworthtexas.gov>.

TABLE 2: Summary of Revenue Options

| Funding Mechanism | Description | Can be used for open space acquisition? | Can be used for open space maintenance? |
|--------------------------------------|--|---|---|
| Enterprise and Special Revenue Funds | Environmental Protection, Stormwater Utility, and Water and Sewer fund revenues cannot currently support open space; however, future fee increases could fund open space, if the open space meets criteria for funding. | Yes | Yes |
| Gas Endowment Funds | Fort Worth could consider using gas endowment funds for open space acquisition. Although there is no guarantee of funds, the city is hopeful that the gas lease performance will result in approximately \$1 million per year in additional funding for open space. | Yes | No |
| General Fund | Fort Worth could fund the acquisition and maintenance of open space through the annual budget process. Alternatively, the city could establish an endowment fund specifically for open space with a one-time appropriation, and the interest income could be used for open space. | Yes | Yes |
| General Obligation Bonds | Fort Worth could issue general obligation bonds for open space acquisition and capital projects. For instance, a \$50 million bond would add about \$3.68 million to the city’s annual debt service and cost the typical homeowner in the city about \$11 per year in additional property taxes over the life of the bond. | Yes | No |
| Open Space Dedication | Fort Worth currently has a Community Park Dedication Policy that applies to residential development, and could consider adding a fee specifically for open space acquisition or creating a fee that applies to commercial and industrial development. The open space program could also partner with the Park & Recreation Department in cases where a park has an open space component. | Yes | No |
| Partnerships | The Open Space Conservation Program could partner with other city departments and programs, such as the Park & Recreation Department or Stormwater Management Division on acquisitions that provide multiple benefits. Externally, Fort Worth could potentially enter into an agreement with surrounding cities, counties, and/or districts, such as TRWD, to provide open space services, or for the other jurisdictions to provide open space services to Fort Worth. Additionally, public-private partnerships between the city and the development community or nongovernmental organizations (NGOs) could help acquire and maintain open space. | Yes | Yes |

| | | | |
|------------------------------|---|-----|----------------------------|
| Public Improvement Districts | The City of Fort Worth currently has 12 PIDs. The city could create a new PID, or multiple PIDs, to fund open space acquisition. Additionally, some existing PIDs may already have open space acquisition and/or maintenance as approved activities. In this case, the existing PID funds could be used to purchase and/or maintain open space. | Yes | Yes |
| Sales Tax Redistribution | Fort Worth could reduce its sales tax for general purposes and dedicate that percentage to open space. For example, dedicating 1/8th of 1 percent (0.125 percent) to open space would generate approximately \$14.5 million per year, without increasing taxes. | Yes | Depends on ballot language |

TABLE 3: Texas Local Conservation Finance Measures, 2000–Present

| Finance Mechanism | Number of Measures | Number Passed | Percent Passed | Total Funds Approved | Conservation Funds Approved |
|-------------------|--------------------|---------------|----------------|----------------------|-----------------------------|
| Bond | 83 | 77 | 93% | \$6,439,985,684 | \$1,337,820,941 |
| Sales tax | 9 | 8 | 89% | \$520,000,000 | \$518,750,000 |
| Total | 92 | 85 | 92% | \$6,959,985,684 | \$1,856,570,941 |

Source: Trust for Public Land’s LandVote Database, March 2021, www.landvote.org.

the municipal drainage system, constructing projects to mitigate flood and erosion hazards, warning the community of flood and erosion hazards that cannot be mitigated in the short-term, and reviewing private development for compliance with city drainage standards. The FY 2021 budget includes revenues of \$45 million.¹⁹

Program operations are financed through utility fees for residents and commercial customers based on the measure of impervious surface area or equivalent. Half of the program budget is used for capital improvement projects and expenditures and half for operational expenditures such as maintaining the drainage system.

Stormwater utility fees can be spent to provide drainage benefits to the public such as through drainage system maintenance and capital project implementation to reduce flood risk.

Stormwater utility fees could be used to purchase open space when there is a drainage benefit; however, owing to citywide needs, the Stormwater Management Division prioritizes the use of stormwater funding focused on life safety and property protection. Conservation of open space can provide benefits for stormwater runoff infiltration; however, flood risk will not be significantly reduced through acquisition and conservation alone. A capital project constructed on open space, such as a stormwater detention basin, could have significant flood reduction benefits; however, construction could likely impact the natural habitat.

Regardless, partnership opportunities could be explored between the Stormwater Management Division and the Open Space Conservation Program, as funding could potentially be pooled to purchase property that could be used for both mitigation projects and conservation purposes, conserving the highest-quality habitat as open

19. City of Fort Worth, Fort Worth FY 2021 Adopted Budget.

space and using the other part of the site for stormwater capital improvements. For example, the City of Austin has used stormwater utility/drainage fees to fund:

- Restoration of the Shoal Creek Peninsula along Lady Bird Lake
- Boggy Creek Greenbelt Streambank Restoration
- Combating hydrilla on Lake Austin
- Buyouts of flood-prone properties²⁰

Water and Sewer Fund

The Water and Sewer Fund provides resources for three separate functions: drinking water, sewer, and reclaimed water. The water utility is responsible for:

- Providing safe, clean drinking water to Fort Worth residents and customer cities.
- Collecting, monitoring, and treating domestic and industrial waterborne waste from Fort Worth and other contracting communities.
- Providing highly treated effluent from Fort Worth's water reclamation facility. Reclaimed water is distributed through a separate system to wholesale and retail reclaimed water customers for non-potable uses such as irrigation and industrial water-cooling towers.

The Water and Sewer Fund is an Enterprise Fund responsible for providing water, wastewater, and reclaimed water services to residential, commercial, industrial, irrigation, and wholesale customers. The fund serves approximately 1.3 million people in Fort Worth and 36 surrounding communities. The budget for FY 2021 is \$479 million. Operations are financed through a rate structure based on the amount of service used, which is billed to customers on a monthly basis. Debt is issued for large capital projects.

As an issuer of debt, the Water and Sewer System must comply with its debt-financing Master Ordinance (Ordinance 10968, as amended), which sets out the system's obligations and covenants that are for the benefit of and enforceable by the holders of the system's debt. Under the rate covenant of the Master Ordinance, the system's rates, charges, and fees are to be based on operating expenses and debt service costs, with

operating expenses being limited to those that are "necessary" to render efficient water, sewer, and reclaimed water services. Including extraneous costs that do not directly benefit the system and are not necessary for efficient provision of services as part of the system's rate would run counter to the rate covenant. If a particular open space project is determined to provide a direct benefit to the system and to be necessary for system services, and if it is "in the judgment of the city, reasonably and fairly exercised," that project could conceivably be eligible for funding from the Water and Sewer Enterprise Fund. However, each open space project would need to be evaluated individually and weighed in comparison to all the other necessary system expenses being considered for inclusion in the system's budget at that time.²¹

GAS ENDOWMENT FUNDS²²

The city's budgeted revenue from Gas Endowment Funds for FY 2020 was \$1.1 million, 0.06 percent of the city's total revenue. This includes the Aviation Endowment Fund, General Endowment Funds, Park & Recreation Department (PARD) Council Restricted Gas Funds, and the Water & Sewer Endowment Fund. It should be noted that in accordance with the FY 2018 adopted budget, the first priority for the Park System Gas Endowment distribution is funding the annual operating costs for the Community Tree Planting Program, including staff salaries and benefits, general operating costs, maintenance, etc.

The Endowment Gas Lease funds were established for the purpose of housing specific gas well revenues intended to remain intact and allow for the investment of the funds in accordance with the city's Financial Management Policies. The revenue generated from the investment of the funds would be a long-term source of income, to be spent for specific purposes. The trustee (Wells Fargo), in close cooperation with the chief financial officer/director of finance, recommends to the City Council distribution procedures for the different funds of the trust consistent with the goal to preserve, as well as increase, the trust principal. The amount of income available to be distributed each year from a particular fund of the Trust is determined by the trustee and the chief financial officer/director of finance

consistent with the Trust agreement approved by the mayor and the City Council.

Expenditures/Expenses of revenues derived from lease bonuses and royalties, other gas-related revenue, and distributions from the Trust/Endowment Funds shall be appropriated for one-time program initiatives and capital projects that meet one or more of the criteria listed below (those applicable to open space are in **bold**):

- **Capital projects with a minimum ten-year useful life.**
- **To provide matching grant funds to leverage funds for capital projects.**
- Technology with a minimum five-year useful life.
- Acquisition of equipment and fleet assets including contributions to a revolving replacement fund.
- **To fund one-time community-wide economic and neighborhood development initiatives and projects.**
- To fund labor and materials associated with production, distribution, and establishment activities for trees on public property (including school and county property).
- To periodically transfer funds to the general fund to offset budgeted administrative costs associated with administering this and managing the city's gas leases and pipeline agreements, with the allocation of the cost being proportional among all gas revenue funds according to each fund's relative percentage of the total revenue collected in all funds (including the Trust/Endowment Funds and city-affiliated corporation funds) during that reporting period.
- To replenish the Unassigned Fund Balance (for the General Fund), Assigned Fund Balance (all other Governmental Funds except the General Fund), or Net Position (for Enterprise Funds), if necessary, in any designated city fund, to meet the minimum reserve requirements established for that fund.
- To make payments in support of arts organizations provided, however, such payments may only be made

using distributions from the General Endowment Gas Lease Fund and not from bonus, royalties, ad valorem tax revenues, or any other gas-related revenue.

Using Gas Endowment Funds for Open Space

The General Endowment Gas Lease Fund has no assigned or specific expenditures for the majority of revenues. This fund was established in FY 2008 for the purpose of aggregating specific gas well revenues that belong to the General Fund so that gas well-related revenue would remain intact and only investment generated revenue would be spent for specific purposes.²³ The City of Fort Worth could consider using some of the interest income from the General Endowment to purchase open space.

On March 3, 2020, Fort Worth appropriated \$620,000 for the acquisition of Broadcast Hill, and on June 2, 2020, appropriated \$335,000 for supporting open space planning needs including the contract with TPL.

The Gas Endowment Funds can be allocated during the annual budget development, but this normally occurs through subsequent mayor and council communications, and council approves the spending of the funds. The most current intended plan for the General Gas Lease Funds is to split royalties 50/50 to the Endowment Fund and Open Space Program. Although there is no guarantee of funds, the city is hopeful that the gas lease performance will result in approximately \$1 million annually in additional funding for open space.

On December 1, 2020, the mayor and city council approved \$11,085,000 for the acquisition of open space, sourced from general and water gas lease funds. Acquisitions have already been made with these funds, and the city will soon need additional funding. This funding is basically "set aside" with the intent to be used on the open space program, but it requires subsequent council approval for each specific land acquisition brought forth.²⁴

20. City of Austin, "Frequently Asked Questions," <https://www.austintexas.gov/content/1361/faq/32499>.

21. Information provided by City of Fort Worth staff.

22. City of Fort Worth, Fort Worth FY 2020 Adopted Budget; *Comprehensive Annual Financial Report for the Fiscal Year Ended September 30, 2019*, <https://www.fortworthtexas.gov>.

23. City of Fort Worth, *Comprehensive Annual Financial Report for the Fiscal Year Ended September 30, 2020*, <https://www.fortworthtexas.gov>.

24. Ashley Clement, financial reporting manager, City of Fort Worth, communication with author.

GENERAL FUND

The City of Fort Worth could include funding for open space acquisition and maintenance through the annual budgeting process, as part of the operating and/or capital budgets. Potentially, the city could set aside an amount from the general fund in a special revenue fund for open space; however, this is not a common practice (except for maintenance). There are many competing priorities for funding from the general fund, and the city could survey residents to determine where open space ranks compared to other priorities. In the city's 2019 Community Survey, only 4 percent of those surveyed were not supportive of efforts to increase the amount of open, undeveloped space in the city. Property taxes are the largest funding source for the general fund, followed by the local 1 percent city sales tax.

Currently, any new open space or park acquisition goes through a mayor and city council approval process. Part of this process includes estimating how much the maintenance for the property will cost, based on the size, intended use, and existing conditions. Therefore, there is a plan for maintenance for any approved acquisition, and the maintenance funding should go to the Park & Recreation Department from the general fund. However, those maintenance funds do not always materialize in the Park & Recreation Department budget, so the mayor and city council approval process is not a guarantee of funds.

Create a Stewardship Endowment

The Conservation Program Handbook states: "In the implementing legislation, if possible, establish a stewardship fund to pay for ongoing care of the acquired lands. Lack of foresight and financial planning for management costs is proving to be a serious problem in many communities. It would be ideal if the [funding] measure allowed these monies to be reserved from the newly dedicated source of revenue. General obligation bonds, however, are limited to capital expenditures. Therefore, if this type of bond is financing your program, other sources will be required for ongoing maintenance. In all events, the monies should be set aside annually as an endowment, if possible. The legislation should establish that this endowment will roll over from year to year and will be an inviolable savings account to steward conserved properties."²⁵

As an example, the San Juan County Land Bank in Washington State is primarily funded by a 1 percent real estate excise tax, or REET, paid by purchasers of property in San Juan County. Other sources of revenue include a local property tax dedicated to conservation, private donations, grants, and interest income. In order to protect its conservation purchases, the Land Bank established a stewardship endowment fund. The Land Bank Commission's goal is that all expenses needed to care for Land Bank properties in perpetuity will be paid out of interest from this account. The Land Bank owns about 4,800 acres, which includes 29 public preserves, 12 beaches, and 54 miles of trails, in addition to managing 50 conservation easements. At the end of 2019, the Land Bank's stewardship fund had a balance of approximately \$4.5 million.²⁶

A one-time general fund allocation could provide seed money for an open space stewardship endowment fund in Fort Worth. The city could then use the interest income to fund open space maintenance activities. This would ensure a steady source of funding, which could be increased with time and additional contributions from the city or donations. [Table 4](#) demonstrates examples of what an initial investment of \$500,000 or \$1 million could generate, depending on the rate of return.

GENERAL OBLIGATION BONDS

General obligation bonds are secured by a pledge of city property taxes, essentially obligating a city to levy a property tax each year sufficient to pay off the bond. Cities derive their authority to issue bonds from Article 11, Sections 5 and 7, of the Texas Constitution. While the constitutional provisions do not explicitly say that cities may issue bonded debt, they serve that purpose in a roundabout way by saying that debt is illegal without a particularized pledge of taxes and an interest and sinking (debt service) fund.

All general obligation bonds must be approved by qualified voters of the city at an election. All proposed bonds must also be submitted to, and approved by, the Texas attorney general.²⁷

TABLE 4: Fort Worth Stewardship Endowment Fund Estimates

| Initial Investment | Rate of Return | Balance after 5 years | Balance after 10 years | Balance after 20 years |
|--------------------|----------------|-----------------------|------------------------|------------------------|
| \$500,000 | 1% | \$525,505 | \$552,311 | \$610,095 |
| | 3% | \$579,637 | \$671,958 | \$903,056 |
| | 5% | \$638,141 | \$814,447 | \$1,326,649 |
| \$1,000,000 | 1% | \$1,051,010 | \$1,104,622 | \$1,220,190 |
| | 3% | \$1,159,274 | \$1,343,916 | \$1,806,111 |
| | 5% | \$1,276,282 | \$1,628,895 | \$2,653,298 |

Note: Interest compounded annually. Assumes no additional contributions or withdrawals.

In FY 2020, Moody’s Investors Service (Moody’s), S&P Global Ratings (S&P), Fitch Ratings (Fitch), and Kroll Bond Rating Agency (Kroll) assigned ratings to the City of Fort Worth’s outstanding debt. The city’s general obligation bonds are rated Aa3 by Moody’s, AA+ by Kroll, and AA by both S&P and Fitch.

Fort Worth issues general obligation bonds to help fund high-priority capital projects such as arterial improvements, police and fire stations, libraries, and park improvements. City staff perform a comprehensive needs assessment and significant public outreach to identify and prioritize proposed bond projects.

The city is permitted by Article 11, Section 5, of the Texas Constitution and the City Charter to levy taxes up to \$1.90 per \$100 of assessed valuation for general governmental services, including the payment of principal and interest on the general obligation long-term debt. For FY 2020, the city levied a total property tax rate of \$0.7475 per \$100 of assessed valuation, including a debt service levy of \$0.1525 per \$100 of assessed valuation.

The city’s last two general obligation bond programs were in 2014 and 2018 and were for \$292,121,000 and \$399,500,000, respectively. The city is currently planning for and proposing to issue more than \$500 million in bonds in 2022. As of August 2020, the largest portion of the proposed 2022 bond program (64 percent) is dedicated to streets and pedestrian mobility infrastructure, followed by parks and recreation improvements at 17 percent and community center facilities at 6 percent. Within the 2022 bond program, the city is currently proposing to include \$15 million (3 percent of the total program) for open space conservation, acquisition, and improvements of land citywide to conserve sensitive environmental features, provide environmental education opportunities, support economic development, and enhance the livability and desirability of Fort Worth.

Government Code Sec. 1331.051 limits cities with a population of 750,000 or more to incur a total bonded indebtedness by the issuance of tax-supported bonds in an amount not exceeding 10 percent of the total appraised value of property listed on the most recent appraisal roll of the city. Fort Worth has ample capacity to issue additional bonds for open space within the debt limit (see [Table 5](#)).²⁸

25. Sandra Tassel, *The Conservation Program Handbook: A Guide for Local Government Land Acquisition* (Washington, DC: Island Press, 2009), 35.

26. San Juan County Conservation Land Bank, <https://sjclandbank.org>.

27. Texas Municipal League, *Revenue Manual for Texas Cities*, 2019, <https://www.tml.org>.

28. City of Fort Worth, *Comprehensive Annual Financial Report for the Fiscal Year Ended September 30, 2019*.

TABLE 5: Fort Worth Legal Debt Margin as of September 30, 2020

| | |
|---|------------------|
| Total Assessed Valuation | \$76,994,000,000 |
| Overall Debt Limitation—10% of Assessed Valuation | \$7,699,000,000 |
| Net Debt Subject to Limitation | \$765,000,000 |
| Legal Debt Margin within 10% Limitation | \$6,934,000,000 |
| Legal Debt Margin as a Percent of the Debt Limit | 90% |

Source: Fort Worth Comprehensive Annual Financial Report FY 2020.

TABLE 6: Fort Worth Bond Financing Costs

| Bond Issue | Interest Rate | Maturity (years) | Annual Debt Service | Taxable Value* | Tax Required | Median Home Value** | Annual Cost for Median Home |
|---------------|---------------|------------------|---------------------|------------------|--------------|---------------------|-----------------------------|
| \$25,000,000 | 4% | 20 | \$1,839,544 | \$79,878,186,534 | \$0.0023 | \$230,000 | \$5 |
| \$50,000,000 | 4% | 20 | \$3,679,088 | \$79,878,186,534 | \$0.0046 | \$230,000 | \$11 |
| \$75,000,000 | 4% | 20 | \$5,518,631 | \$79,878,186,534 | \$0.0069 | \$230,000 | \$16 |
| \$100,000,000 | 4% | 20 | \$7,358,175 | \$79,878,186,534 | \$0.0092 | \$230,000 | \$21 |

* Fort Worth FY 2021 Budget.

** Fort Worth Community Dashboard.

The city's 2022 bond program goals are to:

- Maintain/improve existing infrastructure and address equity
- Provide mobility and city services in growth areas
- Enhance active transportation and recreational corridors
- Allow for flexibility and partnership opportunities
- Achieve balance and fiscal stewardship

Table 6 illustrates the annual debt service and estimated per household cost of various sizes of bonds that could potentially be issued for open space in Fort Worth. For instance, a \$50 million bond would add about \$3.68 million to the city's annual debt service and cost the typical homeowner in the city about \$11 per year in

additional property taxes over the life of the bond.

TPL's bond cost calculations provide a basic estimate of debt service, tax increase, and cost to the typical homeowner in the community of potential bond issuances. Assumptions include the following: the entire debt amount is issued in the first year and payments are equal until maturity; 20-year maturity; and 4 percent interest rate. The property tax estimates assume that the jurisdiction would raise property taxes to pay the debt service on bonds; however, other revenue streams may be used. The cost per household represents the maximum estimated annual impact of increased property taxes levied to pay the debt service. The estimates do not account for growth in the tax base due to new construction, annexation over the life of the bonds, or the possibility that the jurisdiction will sell bonds only

as needed for specific projects, rather than all at once. The annual debt service and cost per household are the maximum tax impacts that could occur if the entire debt amount is issued at once. The jurisdiction's officials, financial advisors, bond counsel, and underwriters would establish the actual terms of any bond.

In May 2018, Fort Worth voters approved an \$84,180,600 bond for parks and recreation improvements with 74 percent support. Bonds could create a significant funding source for open space, thus enabling the city to make important acquisitions now while land is available. However, the city must consider the many competing needs and priorities when determining the amount of bond funding available for open space conservation. Bond proceeds may not be used for maintenance and operations. Payments would be spread out over a long time horizon, borne by both current and future beneficiaries.

OPEN SPACE DEDICATION

Park dedication is a local government requirement imposed on subdivision developers or builders, mandating that they dedicate land for a park and/or pay a fee to be used by the government entity to acquire land and/or develop park facilities. These dedications are a means of providing facilities in newly developed areas of a jurisdiction without burdening existing city residents. The philosophy is that because new development generates a need for additional amenities, the people responsible for creating that need should bear the cost of providing the new amenities. Fort Worth currently has a Neighborhood and Community Park Dedication Policy on residential development and could consider implementing a similar policy specifically for open space acquisition.²⁹ The city could also consider implementing a dedication fee for open space on commercial and industrial development, which impacts open space and does not currently contribute under the dedication policy. For the Neighborhood and Community Park Dedication Policy, in one part of the city, a fee is required per unit; in the other part of the city, parkland dedication is required, or

a fee paid in lieu, depending on the population the new development generates.

In 2020, the city received approximately \$5.5 million in parkland dedication fees.³⁰ If, for example, the city adopted a separate open space dedication fee at the same level as the parkland dedication fee (effectively doubling the fee), Fort Worth could expect to receive an additional \$5.5 million that could be used for open space acquisition. Again, this does not account for commercial and industrial development, which currently does not contribute any dedication fees. However, in order to determine an appropriate fee level, the city would need to complete a rate study, similar to how the city determines the parkland dedication fee level, that quantifies the reasonable impacts of proposed development on existing open space and calculates a fee that would defray such impacts directly related to the proposed development. The open space dedication ordinance would also likely include a requirement for land dedication, with a fee-in-lieu option. The city should consider revisiting its fees and dedication requirements at least every five years in order to keep pace with growth and acquisition and construction costs, and indexing costs for inflation in between review years (as the city is doing for park dedication).

Additionally, there are cases when properties could serve both parks and open space purposes. The Park & Recreation Department and Open Space Conservation Program could pool funds and partner on such acquisitions. While a purely open space property could not be acquired with park dedication dollars (which can be spent only on neighborhood or community parks), some parks could have an open space component within the park.

PARTNERSHIPS

Within City of Fort Worth

As mentioned throughout the report, the Open Space Conservation Program could explore funding partnerships with other city departments and programs, such as the

29. The city's legal counsel would need to determine whether this is an option under state law and city charter.

30. Ashley Clement, communication with author.

Park & Recreation Department or Stormwater Management Division, on acquisitions that provide multiple benefits. For example, if open space will be acquired that also serves Parks & Recreation Department purposes, the Park & Recreation Department and Open Space Conservation Program could pool funds and partner on the acquisition and ongoing maintenance.

With External Partners (Interlocal Agreements)³¹

Interlocal agreements are contracts between units of local government, including cities, counties, or the state to perform services or acquire goods on mutually beneficial terms. Cities with “excess” capacity in a service department can benefit by selling that excess capacity to neighboring units of government.

Cities may enter interlocal contracts in the following areas: police protection and detention services; fire protection; streets, roads, and drainage; public health and welfare; parks and recreation; library and museum services; records center services; waste disposal; planning; engineering; administrative functions; public funds investment; comprehensive health care and hospital services; or other governmental functions in which the contracting parties are mutually interested.

Despite the broad catchall at the end of the list—“other governmental functions in which the contracting parties are mutually interested”—cities should not assume that all functions not listed are proper. Fort Worth should consult with its legal counsel prior to entering into any interlocal agreement that does not fit squarely into one of the authorized categories above. Further, state law requires that an interlocal contract must be for functions or services that each party to the contract is authorized to perform individually. For example, cities may engage in zoning, but counties generally cannot. Therefore, a city could not offer zoning services to a county under an interlocal agreement, because a county isn’t authorized to perform that function itself. On the other hand, both cities and counties have authority to engage in law enforcement. Therefore, a city could contract with a county for the city to provide police services to the county.

The amount payable under an interlocal contract must

fairly compensate the performing party for the services or functions performed under the contract. Fort Worth could potentially enter into an agreement with surrounding cities, counties, and/or districts, such as the TRWD, to provide open space services (if the city’s legal counsel determines open space is an approved function), or for the other jurisdictions to provide open space services to Fort Worth.

Additionally, the city could partner with developers or nongovernmental organizations (NGOs) to conserve open space via public-private partnerships. These are discussed in more detail in the Program Recommendations section.

PUBLIC IMPROVEMENT DISTRICTS

Chapter 372 of the Texas Local Government Code authorizes the creation of public improvement districts (PIDs) by cities. Assessments, also known as special assessments, are fees levied against property owners who will benefit from assessment-financed improvements within PIDs. Assessments are a method to charge the costs of certain city improvements, typically infrastructure, to the beneficiaries of the improvement, as opposed to the citizens at large. Generally speaking, assessments are initiated by the property owners wishing to benefit from the improvements and cannot be forced on the property owners by the city.

The statutes list a broad variety of projects that may be funded by assessments: landscaping; fountains; lighting; signs; street and road acquisition, construction, and repair; sidewalks; right-of-way acquisition; pedestrian malls; art; libraries; parking facilities; mass transportation facilities; water and wastewater facilities; drainage facilities; parks; other similar projects; and the “development, rehabilitation, or expansion of affordable housing.” The statutes also recognize the acquisition of real property in connection with an improvement, special supplemental services for improvement and promotion of the district, and the payment of expenses incurred in establishing and operating the district as authorized projects.³²

The City of Fort Worth currently has twelve PIDs.³³ The city could create a new PID, or multiple PIDs, to fund open space acquisition. Additionally, some existing PIDs may already have open space acquisition and/or maintenance as approved activities. In this case, the existing PID funds could be used to purchase and/or maintain open space.

SALES TAX REDISTRIBUTION

Currently, the sales tax rate in Fort Worth is 8.25 percent, including a 6.25 percent state sales tax, 1 percent City of Fort Worth sales tax, 0.5 percent for transit, and 0.5 percent for crime control. There is no express limitation on the number of local sales taxes a city may adopt, so long as all local sales taxes combined total no more than 2 percent at a given location. Thus, there is no capacity to increase the city's portion of the sales tax, which goes to the general fund. However, an election could be held to dedicate a portion of the existing 1 percent city sales tax to open space.

There is a precedent for Texas cities to dedicate a local sales tax to open space. The City of San Antonio had a dedicated sales tax for open space and parks for two decades. The Edwards Aquifer Protection Venue Project and the Parks Development and Expansion Venue Project (Linear Creekway Parks) were funded by a 1/8th cent dedicated sales tax. The tax was approved by voters in 2000, 2005, 2010, and 2015. The 2015 election reauthorized the sales tax to provide \$100 million for the continuation of Edwards Aquifer protection initiatives to protect and preserve the primary source of water for San Antonio residents. Of the \$100 million, \$90 million was used toward the purchase of conservation easements and land protection over the sensitive recharge and contributing zones of the aquifer, while \$10 million was dedicated for aquifer protection projects within urban-

ized areas exclusively in Bexar County. The sales tax also provided funding in the amount of \$80 million to preserve additional open space and continue the development of hike and bike trails along San Antonio's creekways and tributaries, and included, to the extent possible and practical, watershed and water quality protection efforts when developing parks improvements.³⁴ In the 2020 general election, San Antonio voters approved changing the 1/8th cent sales tax dedication to fund a workforce training and education program once it finished collecting the \$180 million approved by voters in 2015.³⁵

Fort Worth could reduce its sales tax for general purposes in an increment of 1/8th of 1 percent and dedicate that percentage to open space, with one ballot proposition. In 2015, legislation passed in the form of H.B. 157, which gives cities increased flexibility to reallocate the amounts of its general revenue and dedicated sales taxes within the 2 percent cap. Prior to the passage of H.B. 157, dedicated sales taxes were capped at certain amounts. House Bill 157 essentially removed the rate caps on the dedicated sales taxes and authorized a city to hold an election to increase or decrease these dedicated sales taxes in any increment of 1/8th of 1 percent. The fact that this can be accomplished by one combined ballot proposition protects the city's interest by eliminating the risk that one tax will be voted out by the citizens without the other tax being voted in.

A dedicated sales tax may be adopted only by a vote of the citizens at an election. An election to adopt a dedicated sales tax generally cannot be held earlier than one year after the date of any previous sales tax election in the city. State statutes require that the wording of the combined proposition contain substantially the same language required by law for each of the two taxes individually.³⁶

31. Texas Municipal League, *Revenue Manual for Texas Cities*.

32. Texas Municipal League, *Revenue Manual for Texas Cities*.

33. City of Fort Worth, Economic Development Department, "Public Improvement Districts (PIDs)," <https://www.fortworthtexas.gov/departments/ecodev/pid>.

34. City of San Antonio, *Guide to 2015 Sales Tax Propositions*, <https://www.sanantonio.gov>.

35. Rebecca Salinas, "What to Know about 3 Sales Tax Propositions on the Ballot in San Antonio," October 26, 2020, <https://www.ksat.com>.

36. Texas Municipal League, *Revenue Manual for Texas Cities*.

TABLE 7: Fort Worth Sales Tax Estimates

| Sales Tax Rate Dedication for Open Space | Annual Revenue for Open Space* | Remaining Revenue for General Fund |
|--|--------------------------------|------------------------------------|
| 0.125% | \$14,525,392 | \$101,677,745 |
| 0.25% | \$29,050,784 | \$87,152,353 |
| 0.375% | \$43,576,177 | \$72,626,961 |

* Based on taxable sales of \$11,620,313,738 in 2020 (Texas Comptroller).

In an election to adopt the sales tax, the ballot shall be printed to provide for voting for or against the applicable proposition: “A sales and use tax is adopted within the city at the rate of _____ percent” (insert appropriate rate) or “The adoption of an additional sales and use tax within the city at the rate of _____ percent to be used to reduce the property tax rate” (insert appropriate rate).

In an election to reduce or increase the sales tax, the ballot shall be printed to provide for voting for or against the proposition: “The adoption of a local sales and use tax in (name of municipality) at the rate of _____ (insert appropriate rate).”³⁷

Table 7 demonstrates what different levels of sales tax dedication could generate for open space. For example, dedicating 1/8th of 1 percent (0.125 percent) to open space would generate approximately \$14.5 million per year, without increasing taxes. The general fund would receive the remaining 0.875 percent sales tax, or approximately \$101.7 million.

STATE FUNDING OPPORTUNITIES

TEXAS WATER DEVELOPMENT BOARD (TWDB) FLOOD FINANCIAL ASSISTANCE PROGRAMS

Flood Infrastructure Fund (FIF)

Passed by the Legislature and approved by Texas voters through a constitutional amendment, the FIF program provides financial assistance in the form of loans and grants for flood control, flood mitigation, and drainage

projects. The Flood Intended Use Plan (Flood IUP) details the structure of each funding cycle.

In addition to its administration of the FIF, the TWDB is working collaboratively with the Texas General Land Office and Texas Division of Emergency Management to assist communities in determining which of the available funding sources for flood-related projects is the best fit for them. The Flood Information Clearinghouse Committee (FLICC) represents an ongoing multiagency effort to maximize the effective utilization of public funding resources and help communities identify the source they would like to pursue.

FIF rules allow for a wide range of flood projects, including structural and nonstructural projects as well as nature-based solutions. Examples include:

- Planning Phase Activities
 - Preliminary engineering
 - Project design
 - Feasibility assessments
 - Coordination and development of regional projects
 - Obtaining regulatory approvals
 - Hydraulic and hydrologic studies
- Construction/Rehabilitation Phase Activities
 - Drainage infrastructure (channels, ditches, ponds, pipes, etc.)
 - Flood control infrastructure
 - Flood mitigation infrastructure
 - Retention basins
 - Detention ponds
 - Sustainable infrastructure
 - Nonstructural flood mitigation

- Development of or amendments to flood-related codes
- Permeable pavement
- Erosion control
- Levees
- Pump stations
- Rehabilitation of existing infrastructure taking into consideration implementation of improved resiliency, not including costs associated with current or future operations and maintenance activities
- Property acquisitions determined to be the best solution for highest-risk properties
- Restoration of riparian corridors, floodplains, coastal areas, wetlands, etc.
- Natural erosion and runoff control
- Reasonable amount of improvements to ancillary systems directly related to the project as determined by the TWDB

Political subdivisions are eligible to apply for financial assistance for flood mitigation projects. This includes cities, counties, and any district or authority created under Article III, Section 52, or Article XVI, Section 59, of the Texas Constitution.

The FIF program provides opportunities for loans with an interest rate of 0 percent and grants, with the methodology for determining the eligible grant amount based on the category in which the project falls.³⁸

FEDERAL FUNDING OPPORTUNITIES

The U.S. federal government is an important partner for state and local governments, parks and conservation organizations, and community advocates. This discussion summarizes numerous relevant federal conservation funds for open space and urban areas. The programs discussed are administered by federal agencies but vary

in how funds are delivered for conservation projects. For example, some of these program funds are directed to the states, which in turn decide what projects to fund, while other program funds are granted by a federal agency through a competitive process.

Each program has different requirements and offers various partnership opportunities (for example, applying through the state or working with private landowners) that should be further evaluated to determine the most likely funding outcomes. The descriptions are meant to provide a broad overview of funding sources. TPL can provide additional information on program rules and accessibility.

STATE-DIRECTED FEDERAL GRANTS

Agricultural Conservation Easement Program (ACEP)³⁹

The Agricultural Conservation Easement Program (ACEP) helps landowners, land trusts, and other entities protect, restore, and enhance wetlands, grasslands, and working farms and ranches through conservation easements. Under the Agricultural Land Easements component, National Resources Conservation Service (NRCS) helps American Indian tribes, state and local governments, and non-governmental organizations protect working agricultural lands and limit nonagricultural uses of the land. Under the Wetlands Reserve Easements component, NRCS helps to restore, protect, and enhance enrolled wetlands.

Agricultural Land Easements protect the long-term viability of the nation's food supply by preventing conversion of productive working lands to nonagricultural uses. Land protected by agricultural land easements provides additional public benefits, including environmental quality, historic preservation, wildlife habitat, and protection of open space. Wetlands Reserve Easements provide habitat for fish and wildlife, including threatened and endangered species, improve water quality by filtering sediments and chemicals, reduce

37. Texas Tax Code Sec. 321.404, Ballot Wording, <https://statutes.capitol.texas.gov/>.

38. Texas Water Development Board, "Flood Infrastructure Fund (FIF)," <https://www.twdb.texas.gov/financial/programs/FIF/index.asp>.

39. U.S. Department of Agriculture, Natural Resources Conservation Service, "Agricultural Conservation Easement Program," <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/acep/>.

flooding, recharge groundwater, protect biological diversity, and provide opportunities for educational, scientific, and limited recreational activities.

Conservation Reserve Enhancement Program (CREP)⁴⁰

The Conservation Reserve Enhancement Program (CREP) is a part of the Conservation Reserve Program (CRP), the country's largest private-land conservation program. Administered by the Farm Service Agency (FSA), CREP targets specific state or nationally significant conservation concerns, and federal funds are supplemented with nonfederal funds to address those concerns. In exchange for removing environmentally sensitive land from production and establishing permanent resource conserving plant species, farmers and ranchers are paid an annual rental rate along with other federal and nonfederal incentives as applicable per each CREP agreement. Participation is voluntary, and the contract period is typically 10–15 years.

Land and Water Conservation Fund (LWCF)⁴¹

The Land and Water Conservation Fund (LWCF) has provided funding to help protect some of Texas's most special places and ensure recreational access for hunting, fishing, and other outdoor activities. Texas has received approximately \$610 million in LWCF funding over the past four decades, protecting places such as Big Thicket National Preserve, San Antonio Missions National Historic Park, Padre Islands National Seashore, and Balcones Canyonlands and Lower Rio Grande Valley national wildlife refuges. Forest Legacy Program (FLP) grants are also funded under LWCF. LWCF state assistance grants have further supported hundreds of projects across Texas's state and local parks. The state has received approximately \$200 million since 1965 in stateside grants from LWCF.

North American Wetlands Conservation Act (NAWCA)⁴²

The North American Wetlands Conservation Act was passed in 1989 to provide matching grants for the acquisition, restoration, and enhancement of wetland ecosystems for the benefit of waterfowl and other wetland-associated migratory species. Administered by the U.S. Fish and Wildlife Service, grants are available to nonprofit organizations, public agencies, and private individuals in the U.S., Canada, and Mexico. Two types of

grants are awarded: small grants and standard grants. There is a one-to-one non-federal match requirement for each grant.

An eligible proposal is a two-year plan of action (not including the two-year-old match window) supported by a NAWCA grant and partner funds to conserve wetlands and wetlands-dependent fish and wildlife through acquisition (including easements and land title donations), restoration, enhancement, and/or wetland establishment, and contains a grant request between \$1 and \$1 million. Proposals requesting \$100,000 or less will be considered as a NAWCA Small Grant. Proposals requesting between \$100,001 and \$1 million will be considered a NAWCA Standard Grant. The grant request may exceed \$1 million but must be accompanied by a justification of need. The North American Wetlands Conservation Council will evaluate the request and approve/disapprove based on factors such as opportunity, resource values involved, threat level, loss of match, and/or the amount of available funding. If a request in excess of \$1 million is submitted, the proposal must be structured so that the proposal will remain a viable project if the grant amount is reduced. An eligible proposal contains a match that is no more than two years old, is nonfederal in origin, and is equal to, or exceeds, the grant request (referred to as a 1:1 match).

In the past two decades, the North American Wetlands Conservation Act has funded over 3,000 projects totaling \$1.83 billion in grants. More than 6,350 partners have contributed another \$3.75 billion in matching funds to affect 30 million acres of habitat.

Readiness and Environmental Protection Integration (REPI) Program⁴³

Texas received \$50.8 billion in defense spending in Fiscal Year 2018, which provides direct funding for U.S. Department of Defense (DoD) personnel salaries, defense contracts, and construction of military facilities in the state. This spending by DoD personnel, contractors, and their families creates significant economic activity, attracts related industries and investment, and generates important state and local government tax revenues.

Total Acres Protected (through FY 2019): 19,432



FIGURE 9. REPI Sites in Texas

40. U.S. Department of Agriculture, Farm Service Agency, "Conservation Reserve Enhancement Program," <https://www.fsa.usda.gov/programs-and-services/conservation-programs/conservation-reserve-enhancement/index>.
41. Land and Water Conservation Fund, "LWCF Project Toolkit," <https://www.lwcfcoalition.com/toolkit>.
42. U.S. Fish and Wildlife Service, <https://www.fws.gov/service/north-american-wetlands-conservation-act-nawca-grants-us-standard>.
43. U.S. Department of Defense, Readiness and Environmental Protection Integration, "Texas Fact Sheet," <https://www.repi.mil/Resources/State-Fact-Sheets/>.

The Readiness and Environmental Protection Integration (REPI) Program is a key tool used by DoD and its partners to protect the military's ability to train, test, and operate in the state (see Figure 9). DoD created the REPI Program in response to the development of lands and loss of habitat in the vicinity of or affecting its installations, ranges, and airspace that can lead to restrictions or costly and inadequate training and testing alternatives. Through REPI, DoD works with state and local governments, conservation organizations, and willing private landowners to address these challenges to the military mission and the viability of DoD installations and ranges. Through FY 2019, DoD and its partners have spent over \$58 million on REPI projects at six installations in Texas.

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) FUNDING RESOURCES

SOURCE WATER PROTECTION FUNDING⁴⁴

Drinking Water State Revolving Fund (DWSRF)

Funding for the Drinking Water State Revolving Fund (DWSRF) is provided annually through the congressional appropriations process, and funds capitalize state loan banks to help maintain local drinking water infrastructure, like treatment plants and distribution systems. EPA then awards capitalization grants to each state for their DWSRF based on the results of the most recent Drinking Water Infrastructure Needs Survey and Assessment. The state provides a 20 percent match.

States may use a portion of their capitalization grant from EPA as "set-asides" to help communities support water systems with non-infrastructure needs (such as building technical, managerial, and financial capacities of their water systems). States may use the set-asides to fund several types of source water protection activities, such as administering source water protection programs, providing technical assistance, and funding implementation activities. The American Water Infrastructure Act of 2018 expanded source water protection eligibilities under the DWSRF Program Local Assistance set-aside (often referred to as the 15 percent set-aside).

Examples of activities that can be supported by set-asides include:

- Development (or update) of source water assessments;
- Development and implementation of source water protection plans;
- Land acquisition and conservation easements;
- Well abandonment;
- Utilizing cover crops and other best management practices;
- Building fences to protect water sources;
- Septic system surveys and replacement;
- Outreach and education; and
- Development of local ordinances to protect source waters.

Clean Water State Revolving Fund (CWSRF)

Similar to the DWSRF, under the Clean Water State Revolving Fund (CWSRF) program, EPA awards grants to all 50 states plus Puerto Rico to support water infrastructure projects to fund a range of projects that address their highest-priority water quality needs to achieve protections under the Clean Water Act. The states contribute an additional 20 percent to match the federal grants.

The CWSRF is primarily used for wastewater treatment infrastructure. However, there are also eligibilities related to source water protection, such as:

- Nonpoint source pollution management;
- Stormwater projects;
- Decentralized wastewater treatment systems (i.e., septic systems);
- Water conservation, efficiency, and reuse; and
- Watershed projects.

The CWSRF program is an affordable source of funding for a wide range of projects that address water quality, including land conservation and restoration projects. The conservation of natural lands reduces contamination at the source, protecting water quality and lessening the need for wastewater treatment through traditional

methods. Additional benefits include habitat protection for plant and animal species, reforestation, wildfire prevention, groundwater protection, and a multitude of economic and social benefits that healthy watersheds and public access to green space can provide.

CWSRF programs in each state and Puerto Rico operate like banks. Federal and state contributions are used to capitalize the programs. These assets are used to make low-interest loans for important water quality projects. Funds are then repaid to the CWSRFs and are recycled to fund other water quality and public health projects. For land conservation projects, the CWSRF may provide assistance to any public, private, or nonprofit entity. CWSRF eligible land conservation projects include conservation easements, leasing of land, and fee simple purchase of land. Amenities that improve water quality on purchased land, such as water quality–related signage, pervious trails, and tree planting, are also eligible. Since the program is managed by the states, the funding of eligible projects may vary according to the priorities of each state.

State Wildlife Grants (SWG)⁴⁵

Created by Congress in 2001, the State Wildlife Grants (SWG) program is a matching grant program available to every state to support cost-effective, on-the-ground conservation efforts aimed at restoring or maintaining populations of native species before listing under the Endangered Species Act is required. In order to maximize the effectiveness of this program, Congress required each state to develop a comprehensive wildlife conservation strategy for the conservation of the state's full array of wildlife and the habitats they depend on. These plans identify species and habitats of greatest conservation need and outline the steps necessary to keep them from becoming endangered.

The SWG program provides matching funds that are to be used to implement the conservation recommendations outlined in these plans. Grant funds are disbursed to

states for approved grants at a maximum federal share of 75 percent for planning grants and 65 percent for implementation grants. Funds appropriated under the SWG program are allocated to every state according to a formula based on a state's size and population. Since its inception in 2001, the SWG program has played a vital role in the conservation of wildlife in all states. The FY 2020 apportionment for Texas was \$2.6 million.

44. U.S. Environmental Protection Agency, "Source Water Protection Funding," <https://www.epa.gov/sourcewaterprotection/source-water-protection-funding>.

45. U.S. Fish and Wildlife Service, "State Wildlife Grants," <https://www.fws.gov/program/state-wildlife-grants>.



A PRAIRIE RESTORATION PROJECT ON TARRANT COUNTY COLLEGE'S NORTHWEST CAMPUS. © MICHELLE VILLAFRANCA

SECTION 4

Program Recommendations

INTRODUCTION AND SUMMARY OF METHODS

Developing a successful open space program takes planning, dedication, and collaboration. Numerous enabling conditions, policies, funding mechanisms, staffing choices, and other considerations that must be evaluated and then acted upon. The goal of the Program Recommendations section is to provide a road map to guide the City of Fort Worth in developing an inclusive and thriving open space program that delivers clear value to our diverse city and all its residents. To create this road map, TPL evaluated best practices and lessons learned from a variety of sources and then developed 35 short-, medium-, and long-term recommendations tailored to Fort Worth. For the purposes of this report, short-term recommendations should be implemented within two years and medium-term recommendations within three to five years. Long-term recommendations could take five or more years to implement. These recommendations provide actionable steps the city can take to set up their open space program and put it on a path to success.

To develop these recommendations, TPL initiated a four-part process:

1. **Researched and synthesized best practices and lessons learned from eight cities.** Based on input from city staff, we chose five benchmark cities that were comparable to Fort Worth in acreage, population, existing park and open space systems, and/or climate:
 - Austin, Texas
 - Dallas, Texas
 - Mecklenburg County (Charlotte, North Carolina)
 - Oklahoma City, Oklahoma
 - San Antonio, Texas

Most of these cities were also previously used by the City of Fort Worth for benchmarking in other planning documents. We also included three “best-in-class cities” that serve as aspirational examples of large open space

systems that preserve and protect land and water for future generations:

- Albuquerque, New Mexico
- Boulder, Colorado
- Minneapolis, Minnesota

See [Table 8](#) for additional contextual information on how these eight geographies compare to Fort Worth, including population, park space, and existing open space acreage. For each city, we first conducted desktop research, reviewing master plans and other publicly available documents and reports. We then interviewed key open space personnel in each of the eight cities, compiling best practices and lessons learned. For a complete list of research questions that we attempted to answer for each city, see [Appendix 2](#).

2. **Evaluated best practices outlined in *The Conservation Program Handbook: A Guide for Local Government Land Acquisition*.** This formative book provides a wealth of information gleaned from dozens of interviews with open space staff around the country, countless hours of research by the author, and support from a core team of staff from TPL. In its own words, “*The Conservation Program Handbook* provides guidelines that governments can use to conserve iconic landscapes once the political decision to conserve land has been made ... [It provides] best practices and guidance for effective local government action.”⁴⁶
3. **Incorporated findings from GIS analysis and funding recommendations.** The GIS analysis was performed by TPL’s Research and Innovation team (presented in more detail in [Section 5](#)), and the funding recommendations were developed by TPL’s Conservation Finance team (which are discussed in more detail in [Section 3](#)).
4. **Evaluated existing Fort Worth open space objectives highlighted in various reports and planning documents.** We then met with Fort Worth staff regularly to review the set of recommendations and ensure that we tailored the road map to local conditions. For a summary of existing plans and reports that contain at least some mention of open space goals, policies, or recommendations, see [Appendix 3](#).

The recommendations and lessons learned are broken out into nine topic areas. For each topic, we provide contextual information and lessons learned from around the country followed by tailored recommendations for Fort Worth.

Topic areas:

1. Defining Open Space
2. Reasons for Protecting Open Space
3. Managing Open Space Within City Departments/ Structures
4. Public and Governmental Oversight
5. Codifying Open Space Policies
6. Public Support and Funding
7. Land Acquisition and Conservation
8. Maintenance and Stewardship
9. Volunteer Engagement

GENERAL BEST PRACTICES FOR OPEN SPACE SYSTEMS

DEFINING OPEN SPACE

The definitions of open space vary by city and region. Generally, most of the eight comparison cities studied for this report refer to lands dedicated for open space as “natural areas” or “lands that are to be preserved or protected for future generations.” Often, some form of public access is allowed on most but not necessarily all lands, and human use is typically limited to passive recreation through the creation and maintenance of trail systems for a combination of walkers/hikers, runners, bike riders, and equestrians, depending on the sites and locations. Apart from some trailhead amenities, including parking, signage, restrooms, and perhaps a small building for a nature center, there are typically none of the active park amenities such as playing fields or swimming pools.

The City of Boulder, which boasts one of the oldest open space systems in U.S. cities, refers to the practice of preserving open space as “the conservation of natural, cultural and scenic areas.” Land designated as open space has the same or additional protections as parkland,

TABLE 8: Benchmark Cities with Fort Worth Included for Comparison

| City | Acreage (per ParkScore.org)* | Population | Park Acreage | Percent Park | Open Space Acreage (city owned/managed unless otherwise noted) |
|--------------------------------|------------------------------|------------|--------------|--------------|--|
| Albuquerque | 120,147 | 573,160 | 27,018 | 23.3% | 30,000** |
| Austin | 186,902 | 971,752 | 17,694 | 9.5% | 1,200 (15,578)** |
| Boulder | 17,510 | 106,392 | | | 45,000, 155 miles of trails** |
| Dallas | 215,676 | 1,378,903 | 20,352 | 9.4% | 9,796** (includes county holdings) |
| Fort Worth | 214,065 | 918,915 | 12,323 | 5.8% | 74 (The city acquired Broadcast Hill in 2020, making it the first parcel protected by the city’s Open Space Conservation Program.) |
| Mecklenburg County (Charlotte) | 346,966 | 1,105,960 | 20,953 | 6.0% | 8,000 (20,704)** |
| Minneapolis | 33,958 | 421,339 | 6,000 | 14.9% | 2,800 |
| Oklahoma City | 382,600 | | 18,526 | 4.8% | 1,831 |
| San Antonio | 292,298 | 1,465,079 | 16,000 | 11.3% | 4,700 includes privately held conservation easements beyond city limits. |

* Adjusted acreage per ParkScore model (excludes all zero population acres, including airports, industrial areas, water/wastewater plants, etc.). Compiled from <https://www.tpl.org/2020-city-park-facts>.

** Acreage includes land located outside the boundaries of the city.

Note: Within Fort Worth, there is a significant amount of “private” open space that developers design and incorporate into neighborhoods. Private open space also provides the community with many of the benefits that parkland and natural open space properties provide.

and there are limits on how the lands are operated and maintained. Generally, there is a focus on maintaining or restoring a native landscape. Boulder has codified open space definition in its City Charter (Article XII, Sec 170), using a combination of how the land was purchased and who manages the land as the primary defining

characteristics of “open space”. “As used in this charter, ‘open space land’ shall mean any interest in real property purchased or leased with the sales and use tax pledged to the open space fund ..., any interest in real property dedicated to the city for open space purposes, and any interest in real property that is ever placed under the

46. Tassel, *The Conservation Program Handbook*, back cover.

direction, supervision, or control of the open space department, unless disposed of as expressly provided in section 177 below.⁴⁷

Open space land may be city owned and have additional restrictions placed on it or may be private land that has restrictions placed on it (through a public entity) in order to prevent development. These are generally called conservation easements or restrictions; in several of the Texas cities, they are referred to as “the purchase of development rights.”⁴⁸ It should be noted that land trusts are often best suited to facilitate and own conservation easements; this is discussed in more detail in the Acquisition topic area later in this section. In addition, there are often rules and regulations included in city codes regarding open space. This is covered in the Codifying Open Space Policies topic area of this section. It should also be noted that there are many private open spaces throughout the city, largely in residential communities. While these lands are protected, they are typically not open to the public.

Open space definitions are typically enshrined in master plans or ordinances that a given city uses to govern itself. This includes a definition of the lands, permitted uses, general operating procedures (for city departments), and how they may be funded or lose protection, if applicable.

Recommendations for Fort Worth

1. **Short-Term:** Develop a concise but relatively broad definition of open space that clearly differentiates between parkland and open space. This is particularly important in Fort Worth because the city may manage open space out of the Park & Recreation Department, but management and acquisition decision-making authority will reside with the Open Space Conservation Program. In addition, it is recommended that the open space definition generally aligns with the Texas Natural Resources Code Section 183.001 (A), which refers to conservation easements but is applicable for open space conservation more broadly. It states that conservation easements in Texas are designed to:
 - a. *retain or protect the natural, scenic, or open-space values of real property;*

- b. *assure the availability of real property for agricultural forest, recreational, or open-space use;*
- c. *protect natural resources;*
- d. *maintain or enhance air or water quality; or*
- e. *preserve the historical, architectural, archeological, or cultural aspects of real property.*

2. **Medium-Term:** Once the definition is finalized, embed it in master plans, a mission statement, and eventually city code.

REASONS FOR PROTECTING OPEN SPACE

There are many different reasons for protecting open space, but many have to do with the ecosystem services they provide, along with the contribution they make to quality of life for residents. Some of the most often cited reasons for protecting open space include protecting water supplies, reducing flooding, supporting endangered species recovery, improving habitat connectivity, climate resilience, preserving unique natural and historical features or areas, and fostering an appreciation of the outdoors.

Some cities codify their primary reasons for protecting open space in their mission statements or high-level planning documents. A few examples are highlighted below:

Boulder: *The mission of the Open Space and Mountain Parks Department (OSMP) is to preserve and protect the natural environment and land resources that characterize Boulder. We foster appreciation and uses that sustain the natural values of the land for current and future generations.*⁴⁹

The city charter goes on to say that open space land shall be acquired, maintained, preserved, retained, and used only for eight specific purposes:

- a) *Preservation or restoration of natural areas characterized by or including terrain, geologic formations, flora, or fauna that are unusual, spectacular, historically important, scientifically valuable, or unique, or that represent outstanding or rare examples of native species;*

- b) *Preservation of water resources in their natural or traditional state, scenic areas or vistas, wildlife habitats, or fragile ecosystems;*
- c) *Preservation of land for passive recreational use, such as hiking, photography or nature studies, and, if specifically designated, bicycling, horseback riding, or fishing;*
- d) *Preservation of agricultural uses and land suitable for agricultural production;*
- e) *Utilization of land for shaping the development of the city, limiting urban sprawl, and disciplining growth;*
- f) *Utilization of non urban land for spatial definition of urban areas;*
- g) *Utilization of land to prevent encroachment on floodplains; and*
- h) *Preservation of land for its aesthetic or passive recreational value and its contribution to the quality of life of the community.*⁵⁰

Albuquerque lists three primary purposes for protecting open space: education, urban design, and recreation:

- a) **Education:** *Open space areas serve as natural outdoor laboratories for education and research close to schools, universities, and other institutions. Guided group tours can be arranged to further enhance visitor’s understanding of the ecological, geological, and cultural aspects contained within and adjacent to Open Space lands.*
- b) **Urban Design:** *Setting aside Open Space can limit development in areas that are economically difficult for the city to serve. Open Space also provides visual relief to the urban setting by defining the edges of the city and preserving its outstanding natural landmarks. This practice encourages in-fill development while discouraging urban sprawl.*

- c) **Recreation:** *Albuquerque’s Major Public Open Space (MPOS) protects vital natural processes within the urban area. Open Space serves valuable watershed functions by promoting groundwater recharge and reducing siltation and runoff. These lands also provide habitat for native vegetation and wildlife, and a refuge from the pressures of development.*⁵¹

Before codifying open space goals, open space staff across the country highlighted how important it is to build grassroots and political support for these efforts. Cities often begin protecting open space at the request of citizens as well as elected officials when a city or other entity is seeing increased growth and development. In many cases, advocacy for preserving or protecting natural areas and lands from commercial or residential development is a catalyst for a campaign to target specific locations for protection, raise funds for purchase, or engage in a broader campaign for a citywide (or a region-wide initiative) for funds to acquire, protect, and maintain open spaces.

While “protecting against development” often serves as the impetus for open space conservation, it can be helpful to avoid an adversarial relationship with the development community. Educating developers and pursuing public-private partnerships can be an effective strategy for using open space as a catalyst for more sustainable development. Furthermore, natural areas near developments can serve as resilience hubs, reducing the extreme heat and flooding associated with impervious surfaces, and improving water and air quality.

Recommendations for Fort Worth

1. **Short-Term:** Fort Worth’s Open Space Conservation Program has identified seven overarching goal areas

47. City of Boulder, Colorado, “Boulder City Charter and Open Space,” Section 170, Creation of a Department of Open Space, <https://bouldercolorado.gov/projects/boulder-city-charter-and-open-space>.

48. Note that legally, “conservation easements” and “purchase of development rights” (PDRs) are distinct. PDRs are the purchase and extinguishment of development rights associated with a parcel of land, while conservation easements may be sold or donated and may have implications and provisions other than retirement of development rights. A conservation easement is a legal tool used to transfer rights from a private landowner to a public agency or private conservation organization; a PDR is simply the purchase and restriction of development rights—the rights are also sold, not donated.

49. <https://bouldercolorado.gov/government/departments/open-space-mountain-parks/about>.

50. <https://bouldercolorado.gov/projects/boulder-city-charter-and-open-space>.

51. City of Albuquerque, Parks & Recreation, “Open Space Functions and Management,” <https://www.cabq.gov/parksandrecreation/open-space/about-open-space/open-space-functions-and-management>.

to guide the program (see below). The city should embed these goal areas as objectives in relevant planning documents going forward.

- **Ecosystem preservation:** Conserving important environments such as forests, woodlands, prairies, and wetlands, and protecting habitat for plants and wildlife.
 - **Stream, river, and lake health:** Using natural areas to filter stormwater, reduce runoff and erosion, and protect water quality in the city's streams, lakes, and the Trinity River.
 - **Recreation:** Improving access to natural areas, protecting iconic landscapes, and creating opportunities for passive recreation.
 - **Flood control:** Protecting against flooding and property damage by conserving natural areas that absorb and temporarily store stormwater runoff.
 - **Equitable access to open space:** Conserving natural areas that benefit low-income, underserved, and marginalized neighborhoods and communities.
 - **Community health:** Improving health by providing opportunities for exercise, cooling hot urban areas, and improving air quality.
 - **Economic development:** Natural areas can improve nearby property values and create opportunities for businesses, jobs, development, and other economic activity.
2. **Long-Term:** Evaluate and refine the stated objectives over time and reprioritize them based on changing conditions, feedback from residents, and guidance from elected officials.

MANAGING THE OPEN SPACE CONSERVATION PROGRAM WITHIN CITY DEPARTMENTS/STRUCTURES

The Fort Worth Open Space Conservation Program is currently managed out of the Stormwater Management Division of Transportation & Public Works, with acquired property maintained by the Park & Recreation Department. City staff indicate this arrangement has generally worked well thanks to strong interdepartmental collaboration. Furthermore, the city's Stormwater Management Division has relatively stable funding sources that allow for program stability. While this

appears to be an adequate way to continue to manage open space in Fort Worth for the time being, it is a departure from typical best practices. According to respondents to a national survey of open space staff, open space programs are most often housed under parks departments (63 percent) and planning (30 percent) and are only occasionally placed in public works.⁵² Open space is housed within public works most often if the primary goal is protecting drinking water supplies and/or improving flood resilience. Some cities have also created stand-alone departments that are dedicated to open space management. Creating a stand-alone open space division or office is a key decision that should be thoroughly vetted by the City of Fort Worth, including an evaluation of how acquisition, maintenance, and daily operations will be funded and managed. The comparison cities for this project have dealt with this issue in different ways.

Albuquerque and Boulder have separate open space departments. Several more have divisions within the parks departments, namely San Antonio, Charlotte/Mecklenburg County, and Minneapolis. Dallas and Oklahoma City manage open space areas integrated within their parks departments. Austin takes a hybrid approach, with some open space managed out of its parks department and another 30,000 acres of natural area managed by the Wildland Conservation Division of the Water Department. In addition, there is a separate county open space system in Dallas County and Travis County (Austin), as well as a number of county/state parks in many of our comparison cities.

The open space systems in Boulder and Albuquerque are two of the oldest and well established in the United States, and have grown dramatically outside city limits. While Austin and San Antonio own or have conservation easements on property outside city limits, the lands are not always open to the public, particularly private properties with city-owned conservation easements. Both scenarios present unique challenges to ongoing operations and management, with specifics noted below.

San Antonio has a unique model combining natural areas, hike and bike trails, and its broader conservation easement acquisition program for ensuring water quality.

All three groups report to a single division manager of Natural Resources who handles operations and maintenance. Development of new and expanded trail systems is handled by the separate design and construction team in the Parks & Recreation Department. The acquisition of conservation easements on private lands for water quality, as well as ongoing compliance, is handled by Natural Resources.

Austin has a split system, with some natural areas (about 1,200 acres) open to the public maintained by a division of the Parks & Recreation Department, and lands that are managed for endangered species habitat and water quality managed by the Wildlands Conservation Division of Austin Water Utility. There are overlaps and sharing of plans, resources, and know-how between these departments. About 1,200 acres of natural spaces that serve as a habitat for endangered species are jointly managed, with the Parks & Recreation Department taking on the day-to-day responsibility for operations and maintenance.

Dallas's open space lands include several thousand acres managed by nonprofit organizations, including the Dallas Audubon Society, which also provide educational programming to the public and receive partial funding from the city. The remaining open space lands are managed by Dallas Park & Recreation operations teams, which also manage traditional recreation sites and parks. As we mentioned earlier, Dallas County owns and operates 3,519 acres inside the county limits, but most lands are outside Dallas city limits.

Boulder created the Open Space and Mountain Parks Department that manages 45,000 acres of land with 155 miles of maintained trails. This stand-alone department was created in 1973 after "Resident activists successfully called for the creation of a separate Open Space Department focused on acquiring and maintaining natural land."⁵³

Recommendations for Fort Worth

1. **Short-Term:** The city should continue to manage the overall open space program out of the Stormwater Management Division within Transportation & Public Works and use the Park & Recreation Department to implement maintenance and stewardship. With this setup, it is vital to have strong collaboration and communication across the two departments and to ensure that the maintenance of conserved open space receives adequate and timely attention.
2. **Short-Term:** Starting with the Open Space Working Group, develop a more structured open space management team with clearly defined roles to guide the daily operations and maintenance of open space.
3. **Short-Term:** Explore expanded collaboration with surrounding cities and counties to establish a regional open space system to secure clean drinking water, improve air quality, connect wildlife habitats, and more.
4. **Medium-Term:** Reevaluate placement of the Open Space Conservation Program within city department structures, considering citywide needs and priorities. This should take into account both the management and maintenance of open space. Establish an open space team based on current program needs. It is generally preferable to have at least two or three staff dedicated solely to open space, regardless of which department houses those staff.
5. **Long-Term:** As acquired lands and maintenance demands increase, Fort Worth should consider creating a stand-alone, dedicated open space division or office that brings program management and maintenance under one umbrella.

PUBLIC AND GOVERNMENTAL OVERSIGHT

Cities that are investing significant amounts of taxpayer dollars on open space acquisition and maintenance often create some type of public board to provide transparency and community guidance on the program. This board also serves as a link between city agencies, elected officials, and engaged residents. In addition, where open

52. Tassel, *The Conservation Program Handbook*, 72.

53. <https://bouldercolorado.gov/projects/boulder-city-charter-and-open-space>.

space properties are located both inside and outside city limits, members can be included from surrounding communities and/or counties. Nearly all open space programs in the benchmarking study have some mechanism for oversight by a body that is separate from both staff and elected officials. For the purpose of this report, these groups are referred to as a “board”; however, the City of Fort Worth will need to determine whether this group will serve as a board, committee, or group, which have differing legal definitions and authority.

Public boards serve a very important role in open space programs across the country, as addressed in *The Conservation Program Handbook*: “TPL’s Conservation Finance experts have learned from their experience with more than 400 measures that land acquisition measures are more successful at the ballot box when they promise that a committee will be involved in the design, implementation, and oversight of the program.” And “nearly all [open space] programs have some mechanism for oversight by a body that is separate from both staff and elected officials.”⁵⁴ As outlined in the handbook, the overall goal of these boards is generally to “facilitate the success of the conservation program,” though there are distinct responsibilities that often make up the backbone and purpose of successful boards (adapted and simplified from *The Conservation Program Handbook*):

- Advise program staff and elected officials on the creation of policies and procedures
- Develop the criteria that will shape the open space program
- Select high-priority areas for conservation
- Provide opportunities for public engagement
- Engage in oversight of acquisition projects as well as general program implementation, ensuring equitable outcomes.
- Serve as prominent ambassadors for the program within the community and with city staff and elected officials

Not all boards are created equal or with the same purpose or authority. Our research found examples of three primary types of boards: coordinating board/

advisory board, scientific advisory board, and citizens’ advisory board. However, they ultimately each serve in an advisory capacity to public agency staff, as well as the governing body of the local government authority. For a list of best practices to ensure board success, see pages 41–57 in *The Conservation Program Handbook*.

Coordinating Board/Advisory Board

A coordinating board/advisory board has broad, legal oversight of a department in which the open space is managed. It is important that members have the expertise to help ensure the success of the open space program. The city should also endeavor to avoid the politicization of this group and the process by which members are appointed, as well as ensure inclusive, equitable representation. If possible, it is best to “delegate the appointments”⁵⁶ so that members are nominated or chosen by nonelected officials (see Chapter 3 in *The Conservation Handbook* for more examples and details on how other cities have removed politics from committees). In addition, it is helpful to select board members who can support regional collaboration; this can be accomplished by including members from multiple boards and commissions throughout the region that have an interest in public spaces.

Scientific Advisory Board

A scientific advisory board is made up of subject matter experts in specific topics such as water quality, soils and geology, ecology, etc. Members of these boards provide professional guidance on the overall open space program and/or specific projects. This can be a standing board or a group that is brought in to help augment city staff, when needed.

Citizens’ Advisory Board

The purpose of a citizens’ advisory board is to provide input and feedback on open space access and utilization. This could be a subset of a department governing board (such as Park & Recreation) or a combination of members from several public agency boards. It could also include residents and community leaders selected and appointed to provide input and guidance on all natural spaces or specific areas in the city. This could be a standing board or one that is brought in for a specific period of time or to review current policies and procedures. The City of Fort

Worth may consider extending the service of the existing stakeholder group to serve in this capacity. Every opportunity should be made to ensure that those serving on the board are representative of the diverse Fort Worth community. Including members from the region (but not the city) makes it easier to share lessons learned and collaborate across jurisdictions. As with the above boards, it's also important to recruit members who have expertise that can help the open space program thrive. This expertise could include fundraising experience, volunteer coordination, and other activities that help augment city staff efforts.

Recommendations for Fort Worth

1. **Short-Term:** Work with city communications liaison to encourage public engagement with the program and promote transparency. Ensure that residents of Fort Worth are well informed on the program prior to advancing the 2026 bond measure or a permanent funding mechanism to support open space acquisition and maintenance.
2. **Short-Term:** On an as-needed basis, evaluate whether a scientific advisory board or committee is warranted to provide additional input and guidance on acquisition, maintenance, and capital projects that may require specific expertise beyond that of city department staff.
3. **Short-Term:** Establish an advisory board or permanent stakeholder group to encourage community engagement and provide additional capacity for the Open Space Conservation Program as it grows. Ensure that members provide equitable resident representation and are appointed through a process that avoids politicization of the group.
4. **Medium-Term:** Enshrine the purpose and/or decision-making authority of any advisory board or permanent stakeholder group in a legally binding policy.

CODIFYING OPEN SPACE POLICIES

City governments change over time, staff turnover occurs, budgets rise and fall, and competing city priorities often emerge. That is why it is vital to set in place policies and practices that can help maintain some continuity in open space planning regardless of external circumstances. While it's important to allow for growth and evolution within open space planning, some basic guiding policies should be codified, such as the structure and purpose of any boards mentioned above, acquisition goals, commitment to equity, mission statements, maintenance regimes, allowed uses, and more. These policies, when made publicly available, also provide an additional layer of transparency. Our research identified a variety of policies in the benchmark cities, ranging from general guidelines to legally binding mandates.

City Code/Ordinances

The most important policies are often outlined and adopted in city codes. For example, in Albuquerque the Open Space Advisory Board was created through a city ordinance that gave it authority and outlined the roles and responsibilities of the advisory board.⁵⁷ In Minneapolis, the Park and Recreation board (which oversees parks and open space) was also codified through city ordinance. Funding sources can also be codified through city ordinances, such as Oklahoma City's parks development fee.⁵⁸

Master Plans

General goals and guidance are typically outlined in master plans that can serve as the framework for future decision making. Mission statements, acquisition goals, program policies, and management objectives are all often found in master plans. Master plans can also provide transparency on how the city is spending public funds for acquisition, restoration, and ongoing management, usually drawn from existing budget and spending rules and regulations for the local public

54. Tassel, *The Conservation Program Handbook*, 37.

55. Tassel, *The Conservation Program Handbook*, 39.

56. Tassel, *The Conservation Program Handbook*, 49.

57. City of Albuquerque, Twenty-First Council, Amending the Appointment Method, Membership Requirements, and the Duties of the Open Space Advisory Board, <https://www.cabq.gov/parksandrecreation/documents/duties-of-the-open-space-board.pdf>.

58. Oklahoma City, Code of Ordinances, Chapter 38, Parks, Recreation, Cultural Affairs, Etc., https://library.municode.com/ok/oklahoma_city/codes/code_of_ordinances?nodeId=OKMUCO2020_CH38PARECUAFET_ARTIINGE_S38-1PADEFE.

agency. It should be noted that in the state of Texas, master plans and other planning documents are not enforceable, and ordinances are required for legally binding policies.

Additional Plans

Many cities also create more detailed plans around habitat and property management, visitor outreach, equity, and volunteer engagement. These plans delve into more detail and can provide very specific and actionable recommendations and best practices on everything from integrated pest management to property-specific maintenance, volunteer opportunities, and more.

In addition to these three primary ways to adopt specific policies, some cities adopted or are working toward zoning practices to help ensure increased protection of open space. For example, Albuquerque zoning rules limit certain development within 330 feet of conserved open space, and Oklahoma City is working to use zoning regulations to expand open space within, or in proximity to, new residential development. Fort Worth should consider these policies carefully, as open space can be used as a buffer between incompatible development types, such as residential and industrial land use. There is also a significant amount of private green space in residential development, and the city does not currently have the resources to take over management of all residential open space. Even with the requisite resources, this could still be inappropriate, as these spaces are often accessible only by residents of particular neighborhoods and communities.

Existing and Proposed Policies

The City of Fort Worth already has some policies in place regarding open space, and others are being considered. Below is a brief discussion of these policies and how they may intersect with open space conservation. The city should also consider codifying or amending several policies that bridge urban planning and open space conservation. These are summarized below. Each strategy should be evaluated further and opened up for community feedback. If the city decides to pursue these strategies further, it is important to seek advice from legal counsel to ensure compliance with local, state, and federal law.

Tree Ordinance

The city also has an existing tree ordinance (ordinance NO. 18615-05-2009) that lays out a goal of achieving and maintaining a citywide canopy coverage of 30 percent.⁵⁹ However, through the existing permitting process, developers can apply to remove trees by simply paying a fee. There is an opportunity to coordinate this permit application process with the Open Space Conservation Program to review if there are opportunities to preserve significant natural areas on parcels that are planned for development, particularly in majority minority areas and super majority minority areas. This could be a complementary approach that augments the tree ordinance, potentially using funding to incentivize developers to protect priority natural areas with high tree canopy. The city could also consider a more stringent approach by requiring that certain trees and canopy in certain areas be protected.

Tree Fund

Currently, mitigation and penalty fees associated with tree removal as part of development are deposited into the city's Tree Fund. Before 2019, allowable use of funding from the Tree Fund was limited to the city's Rolling Hills Tree Farm and the planting of trees on public property. However, in 2019, the City Council authorized utilization of these funds on "land or conservation easement acquisition to preserve native tree stands, especially where native trees are not feasible for replanting with an acceptable survival rate." The city can and should tap into these funds to support open space conservation on properties with significant tree canopy and where tree preservation is one of the primary factors for acquisition. Utilizing this funding source would require partnership with the Park & Recreation Department, which is the beneficiary of the fund, and is likely to be part of a larger and more comprehensive funding strategy.

Floodplain Stream Buffers

Current regulations and policies in Fort Worth are widely seen as inadequate because development in the floodplain is allowed after the developer conducts an appropriate study. Several cities in Texas, including Austin, have developed floodplain and river buffer policies that could be replicable in Fort Worth and

address existing inadequacies. Some of these policies include detailed criteria that delineate open space zones based on the size of the river (e.g., larger rivers have bigger buffers). These policies could include both incentives that encourage developers to leave floodplains and floodways in a natural state and requirements that these areas remain natural. This could be particularly important along impaired waterways, as well as those that feed drinking water reservoirs.

Incorporating Trail Connections

Trails can be a wonderful way to provide to access open space and connect protected natural areas with residents and visitors. Expansive and well-connected trail systems help to promote city and regional connectivity, and are key quality-of-life assets to help attract talented workforce and new development. They can also have significant economic benefits, especially for businesses located along the trail systems. The city is interested in exploring incentives to encourage developers to incorporate new and existing trails as part of development planning, especially those that align with the Active Transportation Plan.

Development and Open Space

As development increases throughout Fort Worth, the city should explore incentive-based opportunities to encourage the preservation of open space within new developments, especially those identified as high priority for conservation. The city should also consider sustainable development practices, such as zoning higher-density development and mixed-use development around open space to provide access to a greater number of residents, while ensuring that the development doesn't adversely affect the area's critical natural resources. A mix of incentives and education can be used to engage developers early on in the planning process and identify win-win solutions to the challenges of preserving natural areas.

Preserve Endangered and Threatened Natural Ecosystems

Fort Worth is home to several rare and sensitive ecosystems. Ideally, properties within these ecosystems

would be targets for acquisition or conservation easements by the city and NGO partners. However, when that isn't feasible, the next best option is to work with landowners/developers to educate them on the priority open spaces on their property. The city could also incentivize the protection of high-quality and rare ecosystems when a property is being developed that allows them to continue to thrive.

Recommendations for Fort Worth

1. **Short-Term:** Review the policy and program recommendations in this report and determine which policies should be implemented via city ordinance and which policies should be added through master plans and other nonlegally binding mechanisms.
2. **Short-Term:** Review options for incentivizing and/or requiring the preservation of open space during the development process. Include input from city staff, stakeholders, and elected officials. Implement, as appropriate.

PUBLIC SUPPORT AND FUNDING

As evidenced by the first open space efforts launched in Boulder and Albuquerque more than 50 years ago, equitable public inclusion and ongoing advocacy are vital elements for local governments hoping to create and fund an open space system. Boulder was the first city in the country to sustainably fund an open space program by enacting a dedicated sales tax and was followed by Albuquerque, along with a number of cities and counties in California.

The opportunity for open space preservation found a key voice in William Whyte with the publication of *The Last Landscape* in 1968.⁶⁰ In the book, Whyte covered a number of emerging themes, including the protection of natural spaces in growing communities, as well as creating links between those preserved green spaces. Together, with work by many volunteers and advocates, states have passed enabling legislation for municipalities (and nonprofit land trusts) to acquire and protect land.

59. City of Fort Worth, "Tree Removal Permit," <http://www.treeremovalpermit.com/texas/fort-worth-ordinance-permit-application-city-arborist/>.

60. William H. Whyte, *The Last Landscape* (Philadelphia: University of Pennsylvania Press, 1968), <https://www.upenn.edu/pennpress/book/13565.html>.

These efforts continue today through national organizations, such as the Land Trust Alliance, The Nature Conservancy, and TPL, along with thousands of local nonprofit land trusts, often staffed by one or two people and governed by a volunteer board of directors. These groups, working together with public agency staff, have pushed the need for open space conservation into the limelight and have forged effective partnerships to preserve and protect lands across the country.

Most of the benchmark cities studied have experienced circumstances, often challenges associated with high-population growth, that led to public finance elections resulting in funding for land acquisition and park development. Open space is typically part of a comprehensive funding program (Austin 2006, 2018, Dallas 2017), although they can sometimes be more focused. When seeking this type of funding, cities mounted sustained campaigns articulating the need for resources and reasons for support. Follow-up after a successful election campaign is also important. In all cities, a combination of elected officials, local nonprofits, community leaders, business leaders, and others should work together to raise funds, develop messaging for the

campaign, poll prospective voters, and organize get-out-the-vote campaigns. Public agency employees cannot work on ballot measure campaigns while on the job, but other partners can fill this role. In Austin, a combination of parks and open space nonprofits and advocates worked together to form a political committee to tackle the tasks mentioned above. Dallas led a similar effort in 2017. In both cases, TPL served as a member and supporter of the campaign.

Cities can capitalize on the energy surrounding successful public finance elections and engagement campaigns. A combination of economic growth and an expanding population has proved to be a catalyst for voter support for parks and open space bonds for several decades in Austin. Specifically, successful bond elections have focused on the iconic Barton Springs area and expanding the parks system, as well as larger needs for preserving endangered species habitat and water quality, as shown in Table 9.

In Dallas, the Park & Recreation Department worked with a variety of advocates and nonprofits, including TPL, to build up information and data in strategic plans

TABLE 9: Open Space/Water Quality Bond Elections in Austin, Texas, 1998–2018

| Date | Detail | Amount | Margin of Victory |
|-------------|--|-----------------|-------------------|
| May 2, 1998 | Proposition 2: Water quality protection lands | \$65 million | 53% yes |
| Nov 3, 1998 | Proposition 2: Parks, including natural areas, trails | \$75.9 million | 59% yes |
| Nov 3, 1998 | Proposition 8: Water Quality improvements, lands | \$19.8 million | 57% yes |
| Nov 7, 2000 | Proposition 2: Open Space | \$13.4 million | 65% yes |
| Nov 7, 2006 | Proposition 2: Water, water quality lands | \$145 million | 68% yes |
| Nov 7, 2006 | Proposition 3: Parks, including natural areas | \$84.7 million | 72% yes |
| Nov 6, 2012 | Proposition 13: Open space, water quality | \$30 million | 55.95% yes |
| Nov 6, 2012 | Proposition 14: Parks, including trails | \$77.68 million | 59.25% yes |
| Nov 6, 2018 | Proposition C: Parks | \$149 million | 80.73% yes |
| Nov 6, 2018 | Proposition D: Flood mitigation, open space, water quality | \$184 million | 82.77% yes |

and reports, establishing a needs list for underserved communities drawn from info/data collected through TPL's ParkScore. That coupled with collaborations and successes with local parks organizations such as Parks for Downtown Dallas Foundation, the Circuit Trail Conservancy, the Woodall Rodgers Parks Foundation, and others resulted in a plan that was proposed as a part of a large bond package by the City of Dallas in 2017. Out of more than \$1 billion, \$261.81 million went to Proposition B (73 percent voter support) for Park & Recreation, funding over 191 projects. Another \$50 million (64.48 percent voter support) went to Fair Park as part of an effort to fund improvements, leveraged through a public/private partnership chartered by the City of Dallas.

In May 2018, Fort Worth voters approved an \$84 million bond for Park & Recreation with 74 percent voter support. This indicates a strong foundation for pursuing future open space bonds. As mentioned in Section 2, TPL conducted a public opinion survey regarding open space. Nearly 96 percent of survey respondents defined conserving natural areas within Fort Worth as "very important" and almost 99 percent say that the City of Fort Worth should establish a permanent program to conserve natural areas for future generations. Additionally, 88 percent of respondents said they would strongly support the city dedicating public funding for land conservation to protect natural areas, water, and wildlife in Fort Worth, while another 10 percent said they would somewhat support it. These numbers show an increase in resident support since the 2019 City of Fort Worth Community Survey that asked whether residents would support increasing the amount of open and undeveloped space in the city, with 46 percent of respondents very supportive, 35 percent supportive, and 15 percent neutral.

Recommendations for Fort Worth

1. **Short-Term:** Recognizing that open space conservation bridges political and cultural divides and can garner widespread bipartisan support, the city should prioritize a highly visible marketing effort to elevate and broadcast local public support for open space.
2. **Short-Term:** Undertake a feasibility analysis of potential conservation funding mechanisms (several

mechanisms are explored in Section 3 of this report) and a public opinion survey to gauge voter support for funding mechanisms and use of funds.

3. **Short-Term:** Determine funding source(s) for open space acquisition and maintenance if the city chooses to create a sustainable, permanent program.
4. **Medium-Term:** Determine the funding source(s) for any additional staff dedicated to open space.

LAND ACQUISITION AND CONSERVATION

Land acquisition is the heart and soul of an expanding open space program. To be set up for success, it's important to set clear acquisition priorities and identify partners that can help the city meet its open space goals.

Acquisition Priorities

Identifying land acquisition priorities is an important first step for any open space program. To be transparent and to ensure that the open space program delivers on its mission, the rationale for any land acquisition should be strategic and clearly articulated. The cities we interviewed noted that whether land is donated or purchased, it is important to assess the property and determine whether it will help meet the goals of the open space program. Technical staff including biologists, planners, and real estate specialists can help inform this decision, along with feedback from an advisory board. Maintenance considerations (discussed in more detail below) should also be part of the decision-making process and evaluated prior to parcels being acquired. Simply because someone is offering to donate land does not mean the property should be accepted and incorporated into the city's open space program. Every acquisition will come with associated maintenance costs, and those costs are justified only if the property meets program goals and acquisition criteria. It is also of utmost importance that due diligence and all appropriate inquiry are performed whether a property is donated or purchased. Environmental impacts can have a significant impact on maintenance and land management costs, as well as public use of a property. Environmental site assessments should be performed, when appropriate, to ensure that potential site impacts are identified before acquisition or donation.

Acquisition and Conservation Partners

Our research has found a wide variety of partners that can help with land acquisition. TPL has a rich history of working with cities and counties in metropolitan areas across the state in this capacity. It has helped acquire over 9,500 acres for dozens of parks and natural areas in Texas. Large, established open space programs like that in Boulder primarily manage land acquisition internally, using in-house real estate experts to execute transactions. Other cities like Austin have worked with a variety of public partners including Travis County and the State, as well as nonprofits such as The Nature Conservancy and the Hill Country Conservancy. In Mecklenburg County, the open space program collaborates with land trusts and other partners to acquire large parcels. These NGO partners will sometimes deed the property to the county but maintain the conservation easement, and they have requirements the county must follow. For example, the county may develop a land management plan, and if there are any significant management changes (such as allowing logging), the county has to seek the land trust's approval. A memorandum of understanding (MOU) contract can help clarify additional details not contained in the conservation easement, including maintenance authority and requirements. Albuquerque works closely with many federal partners including the U.S. Fish & Wildlife Service, U.S. Forest Service, to support acquisitions. Interestingly, their Rio Grande Valley State Park is managed by the city; however, the land itself is owned through a stand-alone conservancy district.

Conservation Easements

Conservation easements can help achieve open space program goals, while allowing the land to remain in private ownership by restricting the development and use of a property. These easements are typically held by NGOs or public agencies and may have federal income tax and estate tax benefits to the private property owner. A conservation easement donation can qualify as a charitable contribution under IRS regulations if it is granted in perpetuity to a qualified nonprofit or governmental agency. It must also achieve one of the IRS's approved conservation purposes. Landowners may deduct the full value of the conservation easement donation from their adjusted gross income (AGI), up to 50 percent of the landowner's total income for the year

of the gift. For qualified farmers and ranchers, the deduction may be up to 100 percent of AGI. Conservation easements can also provide estate tax relief by lowering the taxable value of the estate, thereby reducing estate tax liability.

Land Trusts/Land Conservancies

In addition to holding conservation easements, land trusts (also sometimes called conservancies) can take full ownership of a property and oversee all aspects of maintenance and long-term stewardship. As such, local, state, and national land trusts can play a significant role in helping cities achieve their open space goals. Land trusts can supplement the capacity of a city's open space program, acquiring and managing properties, advancing conservation easements, and helping build relationships with the broader conservation community.

Economic Development Partnerships

The City of Fort Worth is interested in exploring opportunities to purchase parcels where only part of the property is a priority for open space conservation. The rest of the parcel could be sold under the condition that it is developed in a sustainable manner, which could include green stormwater infrastructure, LEED building certification, higher-density development, etc. This could serve as a means to encourage sustainable development and design in the city, as well as showcase the benefits of open space for residents and businesses.

Recommendations for Fort Worth

1. **Short-Term:** Building off the priority areas for acquisition identified through a GIS-based analysis (highlighted in Section 5), work to identify individual priority parcels that are available for acquisition or conservation.
2. **Short-Term:** Develop a list of implementation partners (NGOs, land trusts, federal and state agencies) that can support acquisition. For each implementation partner, identify clear roles and responsibilities.
3. **Short-Term:** Work with local and national partners to determine the feasibility of developing a land trust (also called a land conservancy) in the Fort Worth area and broader Dallas-Fort Worth region.

4. **Short-Term:** Explore opportunities to acquire properties that are not entirely high-priority or high-quality open space by conserving the priority areas/trail connections and selling the other portion of the property specifically for sustainable development. It is important that this process is thoroughly vetted first and is overseen in a way that prioritizes conservation outcomes above development priorities. This can be accomplished by incorporating specific language in the acquisition documentation.

MAINTENANCE AND STEWARDSHIP

While not as flashy and dramatic as land acquisition, land maintenance and stewardship are vital to running a successful open space program. Three primary questions need to be addressed to ensure successful management:

1. How will maintenance and stewardship be funded?
2. Who is tasked with overseeing and executing maintenance practices?
3. What are the maintenance practices being deployed?

Maintenance Funding

Generally, it is more difficult to secure steady funding for maintenance than for acquisition of open space. As *The Conservation Program Handbook* notes, “It is difficult to pay for ongoing care of public land through fundraising or annual appropriations, because management does not have the drama of the purchase. Therefore, we recommend that any new funding proposal for acquisition dedicate a portion of its revenue to management.”⁶¹ It is important to note, however, that bond proceeds and gas endowment funds may not be used for maintenance and operations. The City of Fort Worth needs to identify a separate, sustainable funding source for maintenance. Currently, the general fund is identified as the source of maintenance funding, with language incorporated into acquisition documentation for the Park & Recreation Department to receive additional annual revenue to cover maintenance costs. It should be noted that this funding is not guaranteed and must still be appropriated through the annual budget process.

Of the cities we researched, annual budget appropriations were the primary source of funding for maintenance activities. In San Antonio, the city established a mandate for its annual parks budget requiring that one full-time equivalent (FTE) staff member be added per three miles of trail added. Some cities don’t have dedicated budgets or teams for maintaining open space and instead rely on existing staff and resources for maintenance. In these instances, communication and relationship building were vital to facilitating collaboration across departments, though challenges did arise when competing department priorities inhibited successful maintenance.

Innovative Funding Approaches

Some cities are exploring new and innovative approaches for funding maintenance, such as tapping into forest carbon offset markets. In 2019, King County, Washington, became the first local government to create a certified carbon credit program. It is part of their Land Conservation Initiative and the goal is to “protect existing tree canopy and natural areas, and provide more public parks, biking and walking trails, and open spaces.”⁶² In the first five years, this program is projected to store approximately 100,000 metric tons of carbon that would have otherwise been emitted into the atmosphere. City Forest Credits, a nonprofit carbon registry, helped set up this program. Its latest estimates show that urban forest credits are marketable at approximately \$20–\$25 per ton. Even at the low end, this could generate up to \$2 million in funding to support land protection and management for the county. This model is replicable and should be evaluated in Fort Worth.

Overseeing Maintenance Practices

Cities have taken a wide variety of approaches to overseeing land management. In Oklahoma City, Public Works maintains open space drainage areas in subdivisions while the Parks & Recreation Department manages and maintains city-owned open space. Albuquerque has a 40-person division that provides law enforcement services, visitor engagement, and maintenance for open space. It is accompanied by a dedicated forestry section

61. Tassel, *The Conservation Program Handbook*, 187.

62. Dow Constantine, “King County Is the Nation’s First Local Government to Offer Certified Carbon Credits That Protect Local Forests,” May 9, 2019, <https://kingcounty.gov/elected/executive/constantine/news/release/2019/May/09-forest-carbon-program.aspx>.

that manages restoration work. Major management decisions are made in consultation with the superintendent and assistant superintendents. Minneapolis divides maintenance into three distinct categories: Forestry, Maintenance (asset management), and an Environmental Group that oversees education and water resources components. All these divisions are supported by a central volunteer coordinator. San Antonio has integrated multiple program components into a Natural Resources Division that includes maintenance operations of natural areas, ongoing trail maintenance,⁶³ urban forestry for the entire city, and Edwards Aquifer protected lands acquisition and compliance to support water quality. Based on the City of San Antonio's strategic planning efforts completed a few years ago, the Parks & Recreation Department decided to combine a number of groups that already shared expertise, resources, and common needs.

Land Restoration and Ongoing Land Management

Restoration and land management should be governed by detailed land management plans, developed by technical experts who can survey the properties in question and create short- and long-term strategies for ongoing maintenance practices and monitoring efforts.⁶⁴ General land management plans often identify restoration goals and best practices, along with impacts and guidelines for visitor use and passive recreation. It should be noted that these restoration practices do not refer to previously developed or environmentally impacted properties, known as brownfields, which require significant resources to return to a natural state. Generally, lands acquired for open space in Texas have been used for agricultural purposes for up to 150 years and often show significant signs of degradation. These lands need to be restored, which may include taking the following steps:

- Removal of invasive plant and trees species, including grasses introduced for livestock such as King Ranch Bluestem
- Replanting of natives (trees, grasses, wildflowers, etc.)
- Restoration of stream channels and other water flows/retentions
- Removal of unneeded fence lines, entry/exit points
- Ongoing management beyond restoration (invasive species removal, seed collection, native planting, etc.)

Partnerships can support such restoration efforts and can help augment staff expertise and time with volunteers. Many NGOs specialize in restoring and managing particular ecosystems, including prairies, riparian environments, and forests. The City of Fort Worth should consider developing MOUs with these organizations to help restore and maintain natural areas, especially very large properties.

Public Use of Open Space

Many of the benchmark cities established land management guidelines that specify the types of public uses allowed on open space. Public uses are often property-specific and based on their compatibility with particular land management goals. Several types of passive recreation are typically allowed, however, in areas with sensitive natural resources; passive recreation tends to be more limited than in areas with more common, less fragile ecosystems. Passive recreation ranges from less intrusive (nature watching) to more intrusive (mountain biking and off-leash dogs). Cities surveyed in the benchmarking study highlight the importance of enforcing rules and preventing harmful activities from occurring. Park rangers are ideal for enforcement duties, though some cities tapped local police departments if they were unable to hire dedicated rangers. However, when relying on local police departments, several cities highlighted that enforcement was often a low priority for police. It should also be noted that the presence of enforcement personnel, such as rangers or police, may negatively impact the equity in accessing open space for some residents. Black and brown Americans tend to experience disproportionately high rates of negative encounters with police and may be less likely to utilize these spaces if they are heavily policed. Thus, every attempt should be made to ensure that all feel welcome on publicly accessible open space, regardless of race.

Recommendations for Fort Worth

1. **Short-Term:** Ensure that annual city budget appropriations keep pace with increased operation and maintenance demands resulting from increased property acquisition.

2. **Short-Term:** Identify one or more persons to oversee equity and inclusivity in the Open Space Conservation Program, including management decisions. This could be a dedicated Open Space Working Group member or an advisory board/stakeholder group.
3. **Medium-Term:** Develop a training program specifically for the maintenance of open space.
4. **Medium-Term:** Explore how to tap into carbon offset markets to fund land protection and maintenance (see the example from King County, Washington).
5. **Medium-Term:** Develop land use/management objectives that align with the overall program and the types of land being acquired.
6. **Medium-Term:** Evaluate and then outline acceptable passive recreation activities that meet the diverse needs of our growing city, such as hiking, nature watching, birding, mountain biking, climbing, photography, and trail running. Special consideration should be given to access and design practices in line with regulations in the Americans with Disabilities Act (ADA) in order to maximize accessibility for all.
7. **Long-Term:** Develop land management plans for major parcels and critical natural resources on acquired open space, then track the impacts of management and stewardship practices implemented at the site scale and community scale, particularly for majority minority areas and super majority minority areas.
8. **Long-Term:** Employ dedicated rangers who oversee enforcement of rules at heavily visited open spaces.

VOLUNTEER ENGAGEMENT

Having a strong volunteer program that can support educational efforts and land maintenance, as well as provide eyes and ears on the ground, can prove invaluable. It is particularly important for a fledgling open space

program that doesn't have as many full-time staff as recommended, based on the benchmarking study. A staff volunteer coordinator position and recruitment campaign that includes volunteer recognition is highly recommended. Volunteer opportunities include trash/debris removal, invasive species removal/management, seed gathering, mowing, ecosystem restoration, and other activities. Work is usually done under supervision of city staff or specific NGO partners to ensure the safety of the volunteers and proper land management.

In San Antonio, the Friends of San Antonio Natural Areas works with the Natural Resources Division to provide public advocacy, fundraising, and volunteer work.⁶⁵ In Austin, volunteers working through the Adopt-a-Park program, jointly managed by the Parks & Recreation Department as well as the nonprofit Austin Parks Foundation, help maintain some natural areas.⁶⁶ At the same time, the Wildlands Conservation Division in the Austin Water Utility coordinate volunteer efforts, including guided tours, invasive species removal, wild seed collection, and other activities.⁶⁷

Boulder established a Community Connections and Partnerships work group that “engages community members around the mission and vision of [Open Space and Mountain Parks].” This work group coordinates public-facing community efforts in planning, education, and outreach and ranger services, including:

- Coordination of the OSMP Master Plan, Trail Study Area, and other system plans;
- Volunteer projects and services, as well as the Junior Ranger Program; and
- Visitor engagement, emergency response, and law enforcement.⁶⁸

In Albuquerque, volunteers are coordinated, in part, through the Open Space Alliance, a nonprofit group

63. City of San Antonio, “Parks & Facilities,” <https://www.sanantonio.gov/ParksAndRec/Parks-Facilities/Trails/Greenway-Trails>.

64. Kevin Thuesen, *Restoring Land and Managing Karst to Protect Water Quality and Quantity at Barton Springs, Austin, Texas*, <https://core.ac.uk/download/pdf/71938285.pdf>.

65. Friends of San Antonio Natural Areas, <https://fosana.org>.

66. Austin Parks Foundation, “Adopt-A-Park Program,” <https://austinparks.org/adopt-a-park/>.

67. City of Austin, Austin Water, “Wildland Conservation,” <https://www.austintexas.gov/department/wildland-conservation-division>.

68. <https://bouldercolorado.gov/government/departments/open-space-mountain-parks/about>.

of volunteers that supports the open space division through:

- Increasing awareness of Open Space Lands
- Building and strengthening partnerships with groups who share Open Space values
- Promoting conservation, acquisition, and stewardship of Open Space lands
- Strengthening volunteerism and community outreach programs
- Providing financial support⁶⁹

In Dallas, one of the most successful volunteer programs is run by Groundwork Dallas whose mission “is to collaboratively develop national park quality recreation areas in the Trinity River Corridor while empowering and preparing youth to become future stewards of the environment.”⁷⁰ Groundwork Dallas provides a wealth of opportunities that blend learning and education with community service projects such as trash cleanups, tree plantings, trail building, and more. Its work also emphasizes racial equity, and its board and staff have committed to being “intentional about seeing, respecting, seeking out, and engaging with underserved members of our community, in all that we do.”

Recommendations for Fort Worth

1. **Short-Term:** The City of Fort Worth has a volunteer coordinator that supports all volunteer programs across the city and ensures that they are in alignment and following the same rules. The Open Space Conservation Program should work with the volunteer coordinator to identify the best opportunities for inclusive resident engagement.
2. **Short-Term:** Identify partner opportunities for volunteer engagement, including other city volunteer programs such as Keep Fort Worth Beautiful and Park & Recreation, as well as NGOs and other agencies.
3. **Short-Term:** Develop a mix of volunteer opportunities and programs that can engage residents with different interests and physical abilities. Examples include litter cleanup, invasive species removal, and educational opportunities such as nature walks.

4. **Medium-Term:** Explore new and innovate opportunities to grow the volunteer base. An advisory board could be used to help augment city staff and develop a robust volunteer program.

AVOIDING COMMON PITFALLS

Through research, interviews, and firsthand experiences from staff at TPL, we identified several common challenges that can affect an open space program and hamper its ability to be successful. We address each of these briefly and offer advice on navigating these common challenges. These are:

- Insufficient funding
- Poorly defined goals and/or competing priorities
- Lack of planning
- Incompatible uses of open space

Insufficient Funding

Section 3 of this report summarizes a variety of public and private funding sources that can support acquisition, maintenance, daily operations, and special projects. We heard from cities that fees associated with development, while useful, often are not enough to cover the costs of acquisition and ongoing maintenance. Instead, a variety of funding sources should be pursued, with special attention paid to funding sources that can be used for maintenance, which is often a forgotten and neglected component of open space programs. National and state grant programs, along with private philanthropy stewarded by NGO partners, can help support special projects, such as ecosystem restoration. Pursuing these special showcase projects can help demonstrate the value of the program and serve as a rallying point for securing additional support.

Poorly Defined Goals and/or Competing Priorities

Without clear goals, open space acquisition and maintenance can become haphazard and lack a clear narrative that helps to develop and maintain inclusive public support. Codifying clear goals in planning documents and/or city ordinances serves as a reminder and guidepost to staff working on open space, helping ensure that each action taken helps deliver an intended

result. It is especially important to have clear goals when open space is managed and/or maintained within an existing city department, since an existing city department will likely have other goals and priorities that can at times take precedence. Developing strong working relationships across city departments can help mitigate these competing priorities, but only if staff can refer back to clear goals and intended outcomes of acquiring and maintaining open space.

Lack of Planning

Planning can be a thankless and, at times, tedious endeavor. It can be tempting to act quickly and bypass traditional planning processes in favor of more action and less talk. While it is true that over-planning can cause program paralysis, basic planning is vital to ensure the success of an open space program. For example, acquiring land without maintenance funding or opening properties to public use without clear passive recreation guidelines could prove costly to the city, harm the resources that you are entrusted to protect, and lead to diminished support from public and elected officials. Setting clear acquisition priorities, studying and recognizing historical ownership and cultural ties to the land, developing site-specific management and stewardship plans, and effectively communicating visitor guidelines are all important, and necessary resources should be dedicated to approaching each of these topics thoughtfully.

Incompatible Uses of Open Space

Staff from benchmark cities cited off-leash dogs, illegal hunting and fishing, off-road vehicles, illegal dumping, litter, and homeless encampments as some of the primary challenges they've worked to address. Cities address these challenges through a variety of strategies, including increased enforcement and education, many of which are outlined in dedicated land management plans. Homeless encampments, in particular, can be a symptom of a broader community issue that cannot and should not be resolved solely through the open space program. In Charlotte, the city conducted trainings for park rangers

to understand how and why people become homeless, helping to humanize those experiencing homelessness and improve their interactions with park rangers. Additional partnerships with NGOs can help support those who are homeless, providing them with alternative housing opportunities and other resources. Oklahoma City also experienced high rates of homeless encampments on open space property. Instead of increasing law enforcement presence, the city worked to pass a major funding initiative to increase support networks for mental health and homelessness, helping address root causes rather than symptoms. This community-wide approach is proving more effective than individual enforcement actions.

CONCLUSION

This report lays out 35 actionable recommendations for the City of Fort Worth. These recommendations span nine topics that together make up the framework of a successful open space program. In addition, we highlight common pitfalls and missteps that can derail an open space program and hamper its ability to deliver the intended value to the city and its residents. While more detailed planning is required to act on some of the recommendations in this report, others are immediately actionable and will quickly deliver demonstrable benefits.

Fort Worth has a wealth of natural resources that provide ecosystem services and improve the quality of life for residents and visitors alike. With broad public support, dedicated staff, motivated elected officials, and a clear road map for funding and policies, the city is well positioned to preserve open space for current and future generations alike.

69. City of Albuquerque, Parks & Recreation, "Open Space Alliance," <https://www.cabq.gov/parksandrecreation/open-space/about-open-space/open-space-alliance-group>.

70. Groundwork Dallas, "What We Do," <https://groundworkdallas.org/what-we-do>.



MOSQUE POINT PARK ON THE BANKS OF LAKE WORTH. © MICHELLE VILLAFRANCA

SECTION 5

Mapping Open Space Conservation Goal Areas

INTRODUCTION

The open space conservation analysis translates community values into objective metrics. It reflects Fort Worth's unique resources and offers a blend of science and community perspectives. Creating the open space conservation priority maps involved translating the goals into mappable criteria and looking for “stacked priorities”—areas where multiple goals or criteria overlap (see Appendix 4 for the full GIS Criteria Matrix).

Because the City of Fort Worth is interested in identifying existing natural lands to conserve for open space, the final map focuses on conservation of relatively intact land rather than on restoration of impaired land. While restoring land can also have significant community benefits, the program is working to conserve priority natural areas before they are developed since restoration activities typically take a significant amount of time and resources to successfully re-create the natural areas that once were. The city also already has a Brownfields Program focused on redeveloping sites with environmental impacts. GIS analysis used in the production of the priorities shown in the goal maps utilized the best available spatial data to represent the priorities for each open space goal. The open space conservation analysis is designed to leverage the work and data created in other regional planning efforts.

In accordance with the City Council strategic goals to make Fort Worth the nation's safest major city, to improve mobility and air quality, and to maintain a clean and attractive city while building the economic base that is attractive to companies and their workforces, the following open space conservation priority goal areas were developed:

1. Ecosystem preservation;
2. Stream, river, and lake health;
3. Community health;
4. Recreation;
5. Flood control;
6. Equitable access to open space;
7. Economic development

These goal areas reflect the main issues in which open space can provide the community with the benefits outlined by the City Council's strategic goals. In order to leverage the work done in previous planning efforts, TPL undertook a comprehensive literature review of previous plans related to sustainable growth to identify potential criteria themes and data sources for use in the current planning effort (see Appendix 3). This past planning work provided a foundation of information that informed how open space can benefit the community and the list of goals to include in the analysis for open space priorities. Once the high-level goals were established, these conclusions listed within these plans were then used to create the initial list of criteria to be modeled within each goal, and the recommendations for priority areas for green spaces within each plan were included as data sources in the priority modeling conducted as part of this analysis.

TPL also worked with the Open Space Working Group to then create maps for each of the seven goal areas and a combined open space priorities map, where all the individual goal areas are combined to identify open space that can serve multiple benefits. Members of the working group come from a variety of city departments and regional planning partners (see the preface for full list of members). They provided their expertise in the further development of the list of criteria to be modeled within each goal area. They also identified the best available data sources to use in the priority modeling process, ensuring that the modeling assumptions were based on defensible science and that input data and model results were accurate.

This mapping process was iterative, with regular review from the working group, followed by revisions based on its input. Each criterion and goal model produced results on a 1–5 scale with areas scoring a 3, 4, or 5 representing areas of priority where open space conservation can be expected to benefit that resource. These rankings are characterized as moderate (3), high (4), or very high (5) priority for open space conservation. Detailed metadata with descriptions of how criteria were characterized as moderate, high, or very high are available through the Fort Worth Open Space Conservation web portal and in Appendix 4.

Once each goal result was approved, the working group assigned weights to each criteria result, so that a

combined goal result could be created that was reflective of priorities of all the criteria within each goal. The weights were created by allowing working group members to input their own weights based on their knowledge of the relative importance of each criteria theme to the others, as well as the quality of the source data and overall accuracy of the results. Once all weights were provided, the average weight associated with each criterion was used to create a weighted priority result for each goal. The weights were then reviewed after receiving public and stakeholder feedback and slightly refined considering the feedback received.

The priority area maps created through this process are included below. The full criteria matrix that lists each of the criteria modeled within each goal and the detailed methodology used to create the results are shown in Appendix 4.

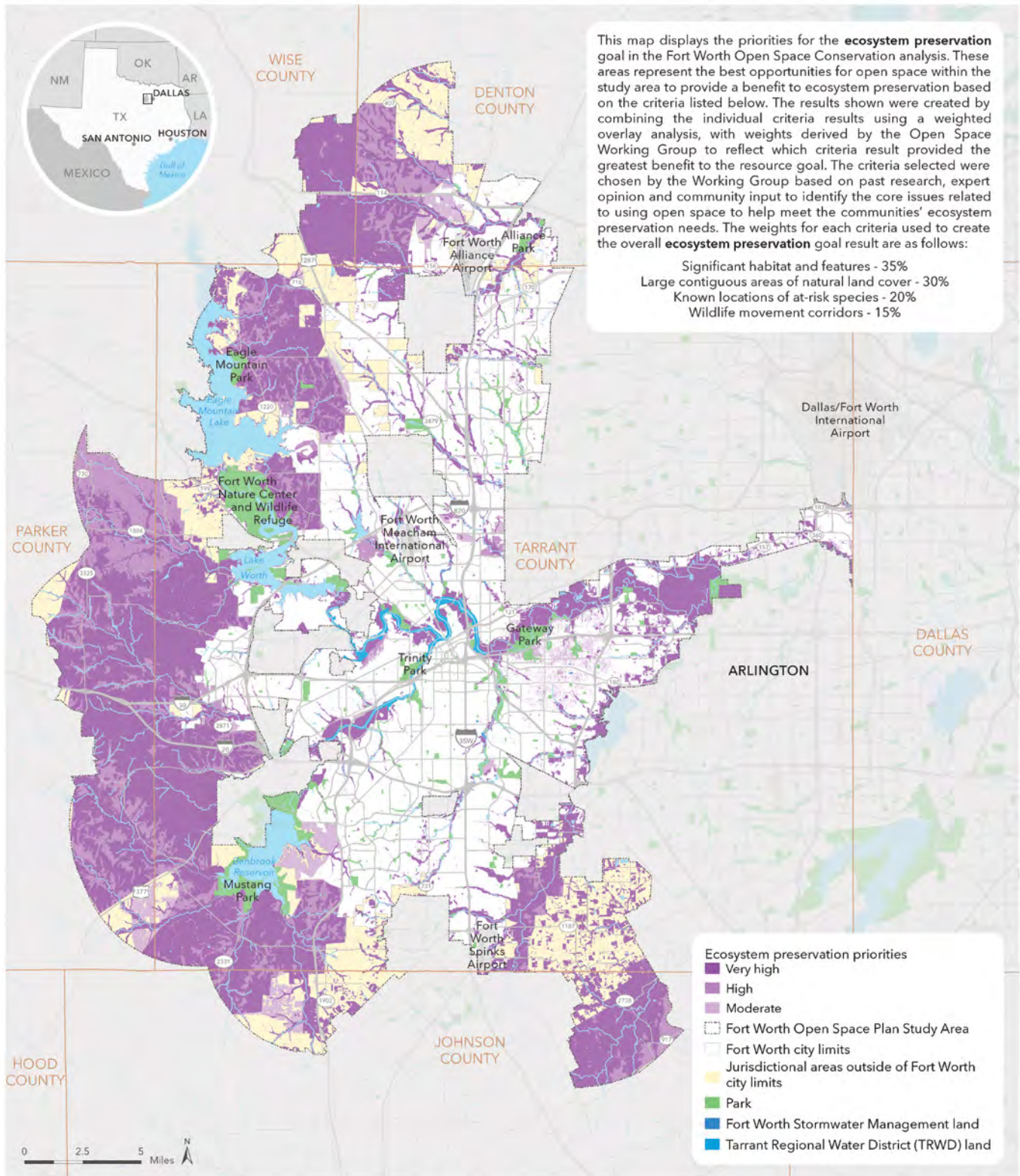
ECOSYSTEM PRESERVATION GOAL AREA

Across the open fields of prairie or within the tree canopy of the riparian corridor, Fort Worth is home to a number of important ecosystems that provide critical habitat for a variety of species, of which several are listed as threatened or endangered. The study area also provides for the movement of wildlife and large tracts of undeveloped habitat that can be protected by conserving these areas as open space. The criteria incorporated into this goal area include:

- Significant habitat and features (35 percent)
- Large contiguous areas of natural land cover (30 percent)
- Known locations of at-risk species (20 percent)
- Wildlife movement corridors (15 percent)

Conservation of these areas as open space in the priority areas shown in Figure 10 will provide protection to these critical habitats and ensure that they do not become developed. The conservation of these habitats, such as the prairie lands and the Cross Timbers forests that help define the character of the city, will ensure that these areas are enjoyed by future generations and the many species that call them home.

FIGURE 10. Ecosystem preservation map



Ecosystem preservation

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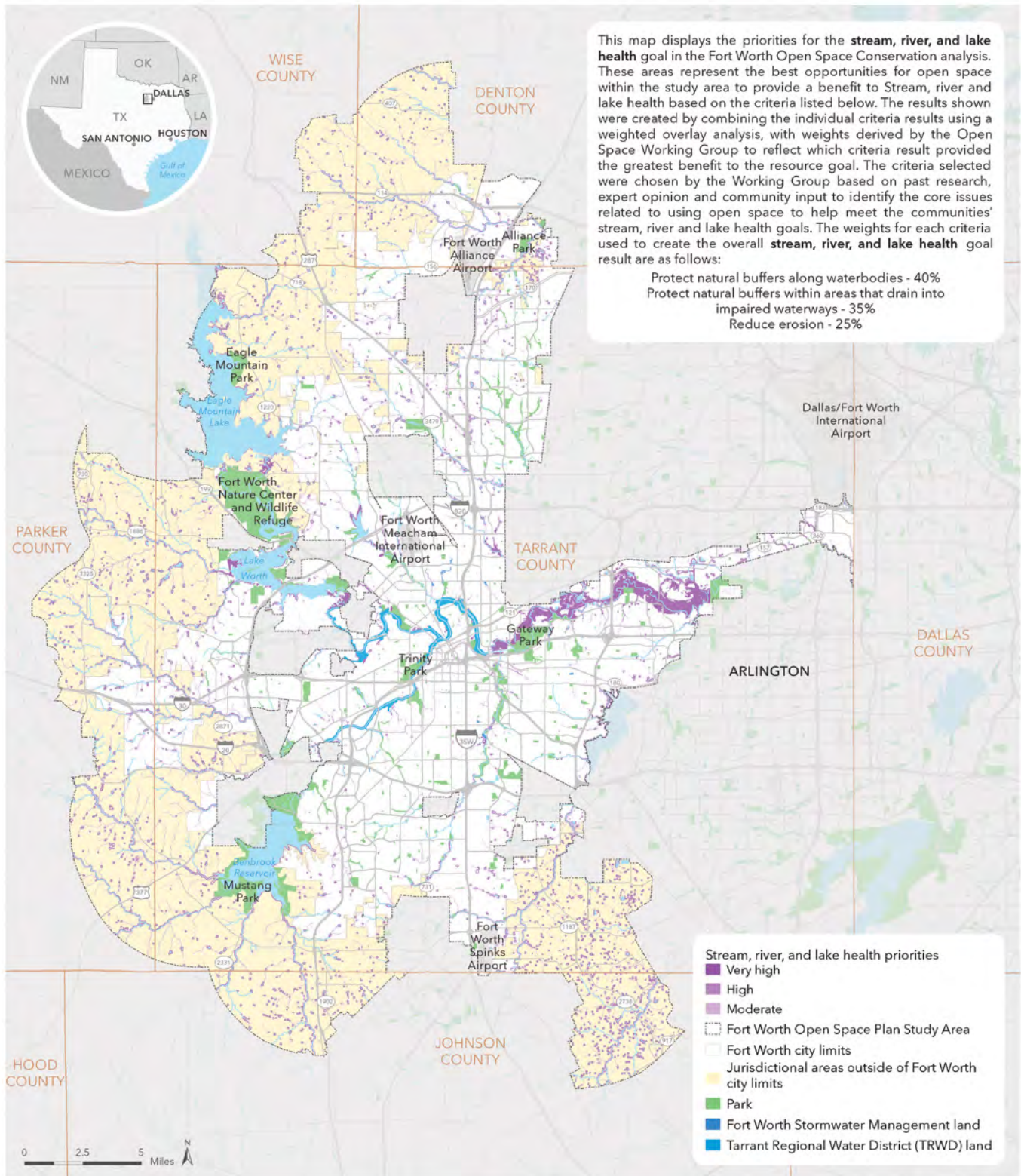
STREAM, RIVER, AND LAKE HEALTH GOAL AREA

Preserving open space along rivers and lake shores allows the natural lands to provide the natural water filtering service that is vital to maintaining high-quality water resources. Figure 11 shows the results of the stream, river, and lake health goal mapping. Criteria incorporated into the stream, river, and lake health goal area map and their associated weights are as follows:

- Protect natural buffers along waterbodies (40 percent)
- Protect natural buffers within areas that drain into impaired waterways (35 percent)
- Reduce erosion (25 percent)

By minimizing erosion and filtering contaminants, open space can be part of the tool kit to ensure that the waterways and lakes continue to provide a safe and valuable resource to the community.

FIGURE 11. Stream, river, and lake health map



Stream, river, and lake health

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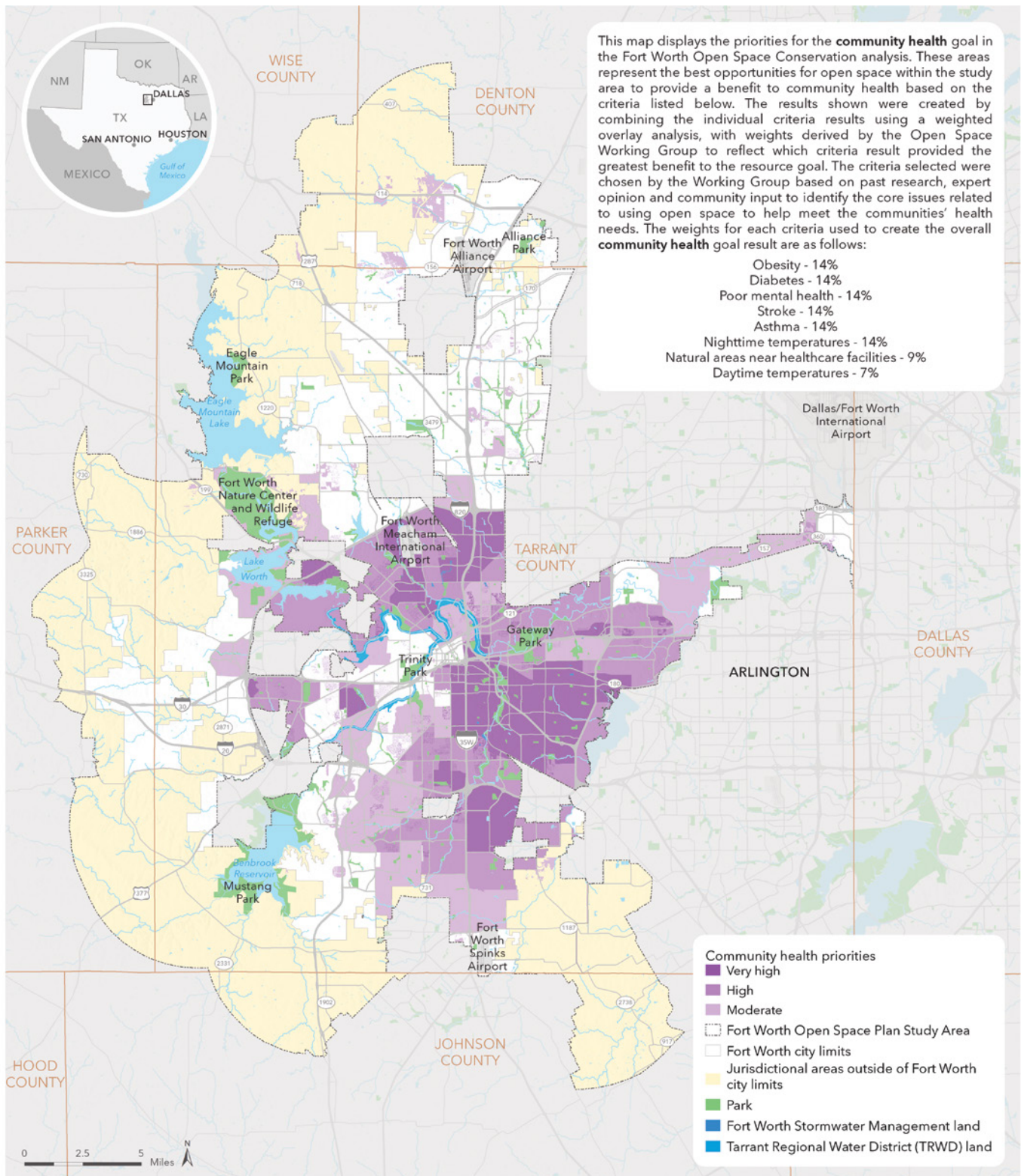
COMMUNITY HEALTH GOAL AREA

The capacity for open space to provide health benefits is a fundamental service to the community. Time spent in natural settings can have a positive impact on community health outcomes by providing opportunities for exercise, reducing heat island effect, and improving air quality. These benefits are expected to help alleviate the symptoms of many health-related conditions such as stroke, asthma, diabetes, and mental health. The criteria associated with this community health goal area map shown in Figure 12 include:

- Obesity (14 percent)
- Diabetes (14 percent)
- Poor mental health (14 percent)
- Stroke (14 percent)
- Asthma (14 percent)
- Nighttime temperatures (14 percent)
- Natural areas near health care facilities (9 percent)
- Daytime temperatures (7 percent)

Creating open space in the priority areas shown in this goal map can play a role in promoting community health through access to natural and restorative experiences.

FIGURE 12. Community health map



Community health

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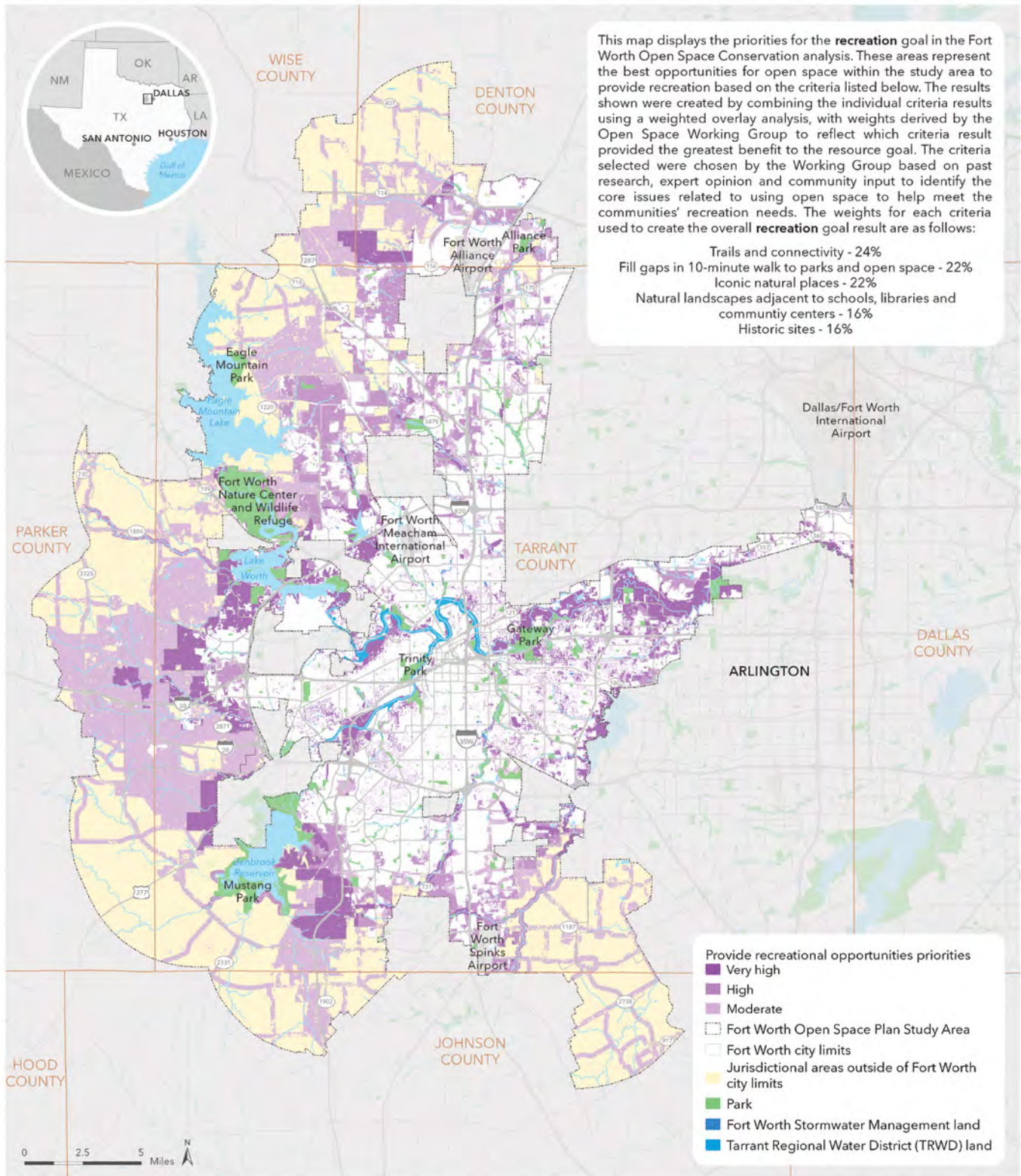
RECREATION GOAL AREA

Increasing access to healthy outdoor recreation is a vital service that open space can provide to the community. Fort Worth has a number of iconic places that help define many citizens' sense of place such as Trinity Bluff's and the shores of Lake Arlington, Lake Worth, and Benbrook Lake. Criteria incorporated into the recreation goal area map shown in Figure 13, along with their associated weighting, are:

- Trails and connectivity (24 percent)
- Fill gaps in 10-minute walk to parks and open spaces (22 percent)
- Iconic natural places (22 percent)
- Historic sites (16 percent)
- Natural landscapes adjacent to schools, libraries, and community centers (16 percent)

These criteria represent the issues where voluntary land conservation and public land management strategies can play a role in providing the community with greater recreational access to natural spaces.

FIGURE 13. Recreation map



Recreation

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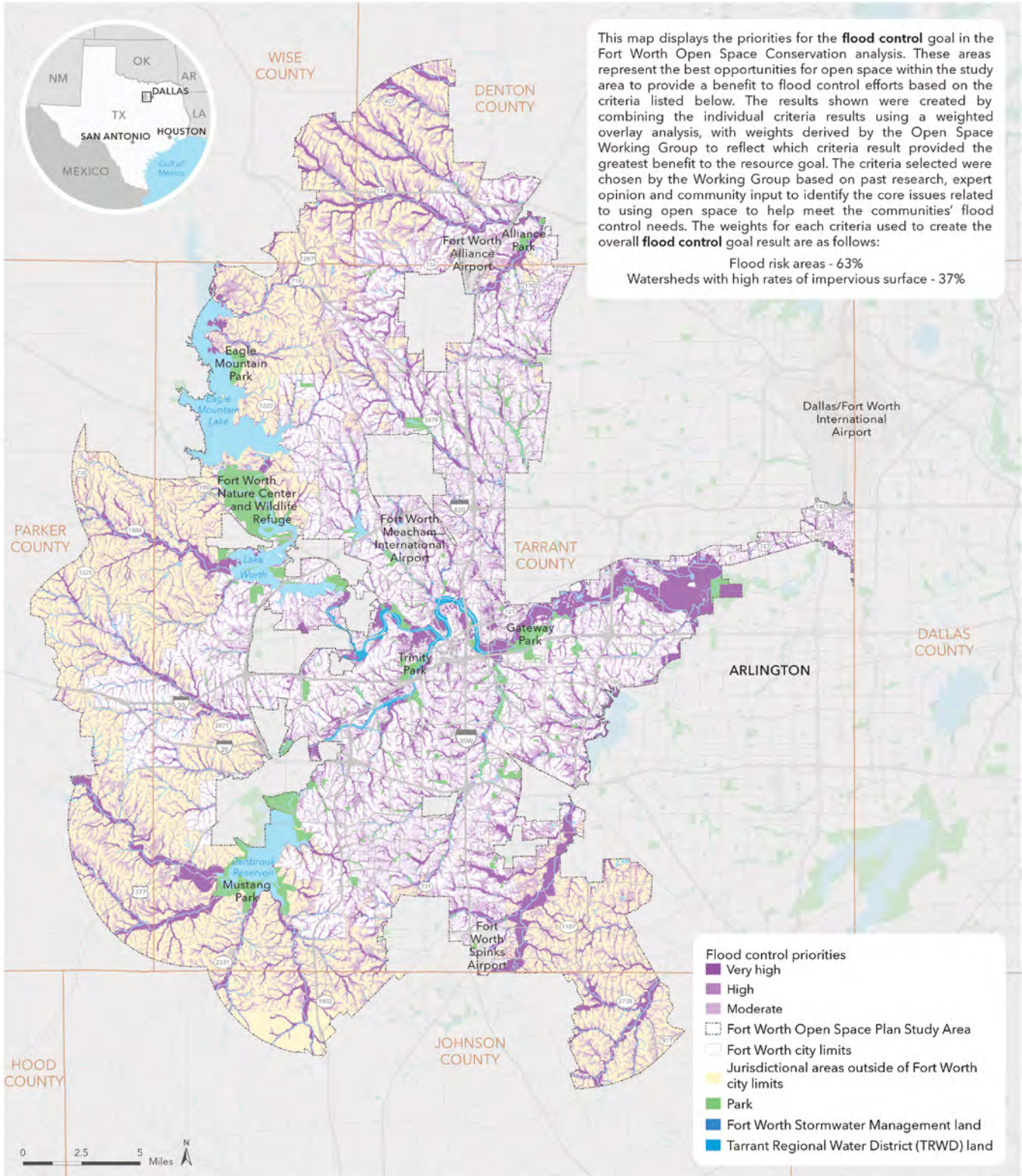
FLOOD CONTROL GOAL AREA

Open space can provide a number of ecosystem services for the community, including flood control. Increased stormwater runoff can lead to stream channel erosion and high levels of sediment entering the city's streams and rivers, which raise flooding risk and put more stress on the city's drainage infrastructure. This can lead to property damage and puts the lives and health of community members at risk. The flood control priority map shown in Figure 14 highlights areas that may be vulnerable to flooding from storm events. It was created by combining the following mapping criteria:

- Flood risk areas (63 percent)
- Watersheds with high rates of impervious surface (37 percent)

Open space conservation in the priority areas shown in the flood control map will allow these undeveloped lands to continue to perform the essential service of collecting and absorbing flood waters.

FIGURE 14. Flood control map



Flood control

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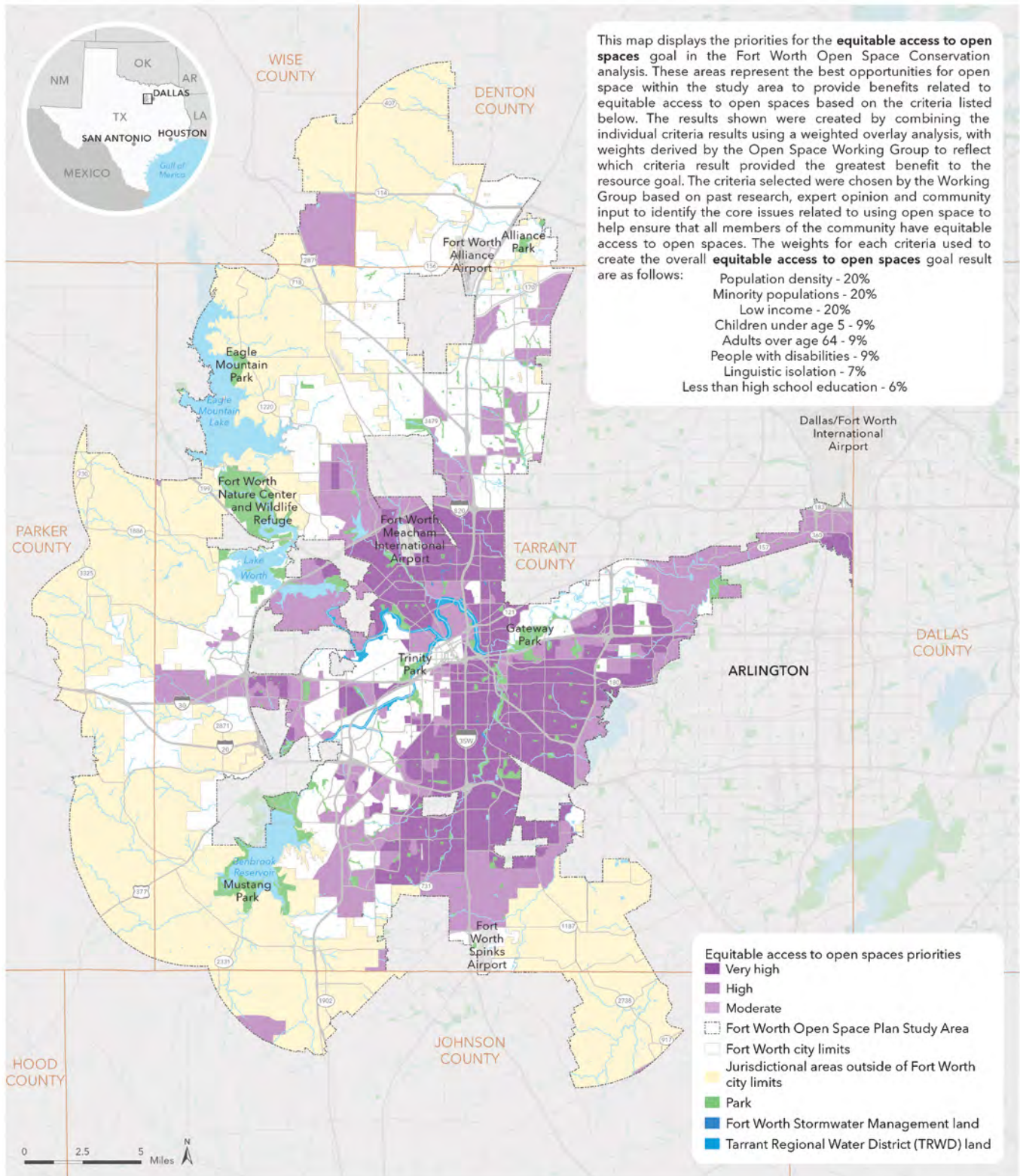
EQUITABLE ACCESS TO OPEN SPACE GOAL AREA

Equity is a crucial consideration in open space planning. Communities of color, communities of poverty, and communities with historic marginalization may have the greatest need for services provided by open space. They may also have the most limited ability to travel long distances to access these services or to pay to use private recreational facilities. Likewise, disadvantaged and underserved communities are often hurt first and worst by the impacts of climate change. Delivering multi-benefit green spaces in underserved communities can help redress these inequities. The equitable access to open space priority map (Figure 15) highlights areas with a higher density of minority and low-income communities throughout the study area. The criteria associated with this goal map are:

- Population density (20 percent)
- Minority populations (20 percent)
- Low income (20 percent)
- Children under age 5 (9 percent)
- Adults over age 64 (9 percent)
- People with disabilities (9 percent)
- Linguistic Isolation (7 percent)
- Less than a high school education (6 percent)

Conservation of open space in the priority areas shown in Figure 15 will help deliver the benefits of public spaces to the most disadvantaged members of the community.

FIGURE 15. Equitable access to open space map



Equitable access to open spaces

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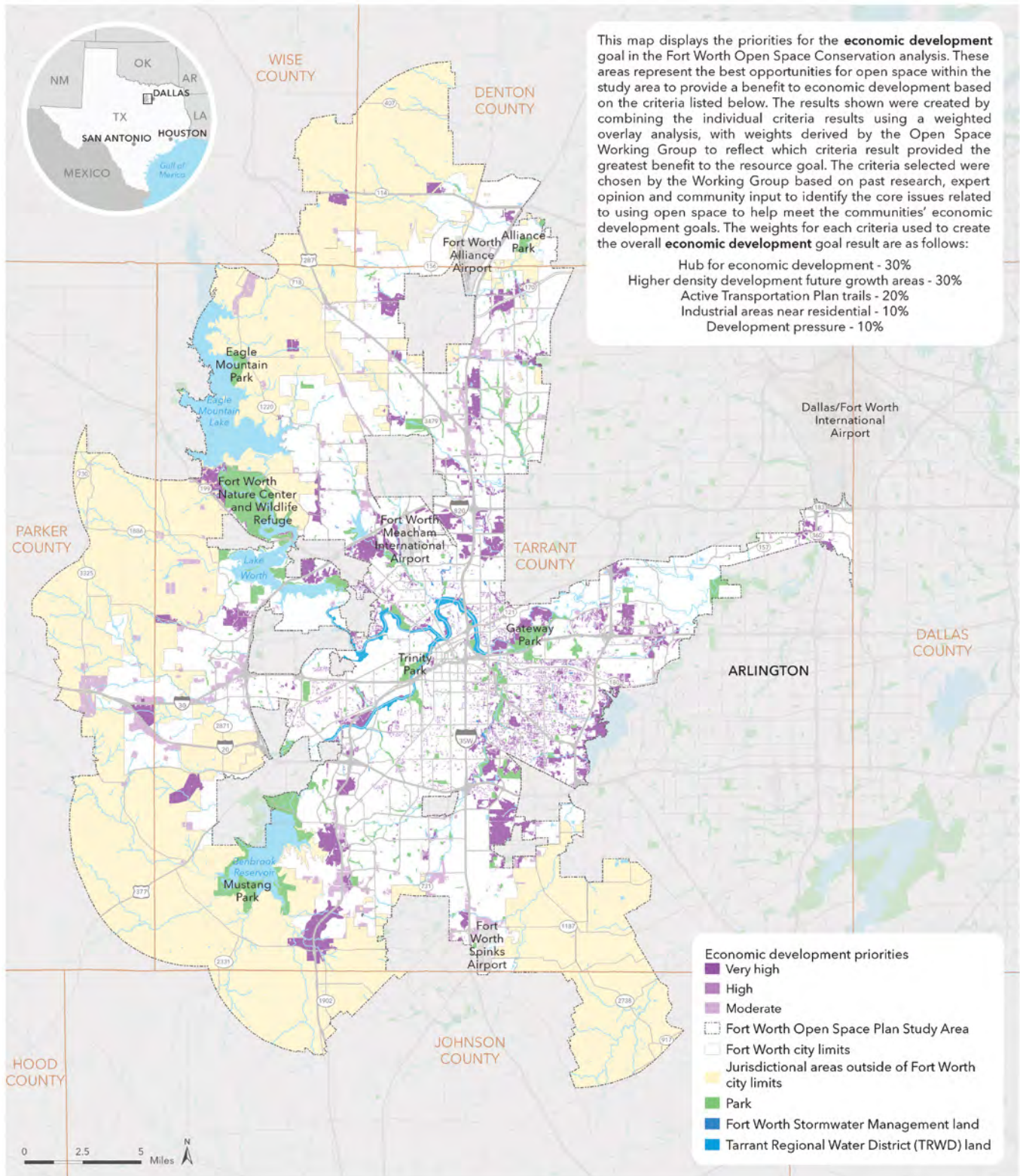
ECONOMIC DEVELOPMENT GOAL AREA

Well-maintained and programmed open spaces and natural areas improve nearby property values and create opportunities for jobs and other economic activity. When located in high-density areas, they can provide critical green spaces that serve as the “front yard” for those living in high-density residential areas. Promoting growth in these areas that allow for the ability to live near parks, open space, work, and public transit is attractive to companies and their workforces and is a key component of the City of Fort Worth Economic Development Strategic Plan. The criteria associated with this goal map include:

- Hub for existing economic development (30 percent)
- Higher-density development in future growth areas (30 percent)
- Active transportation plan trails (20 percent)
- Industrial areas near residential (10 percent)
- Development pressure (10 percent)

Conservation of open space in the priority areas shown in Figure 16 will spur economic development by offering natural spaces for community meeting spots in areas in need of redevelopment, or for experiencing and enjoying green space in more urbanized parts of the city. These areas also can help link existing trails, creating a rewarding way to travel through the city, connecting people to their homes and work spaces, and providing access to recreational and commercial opportunities.

FIGURE 16. Economic development map



Economic development

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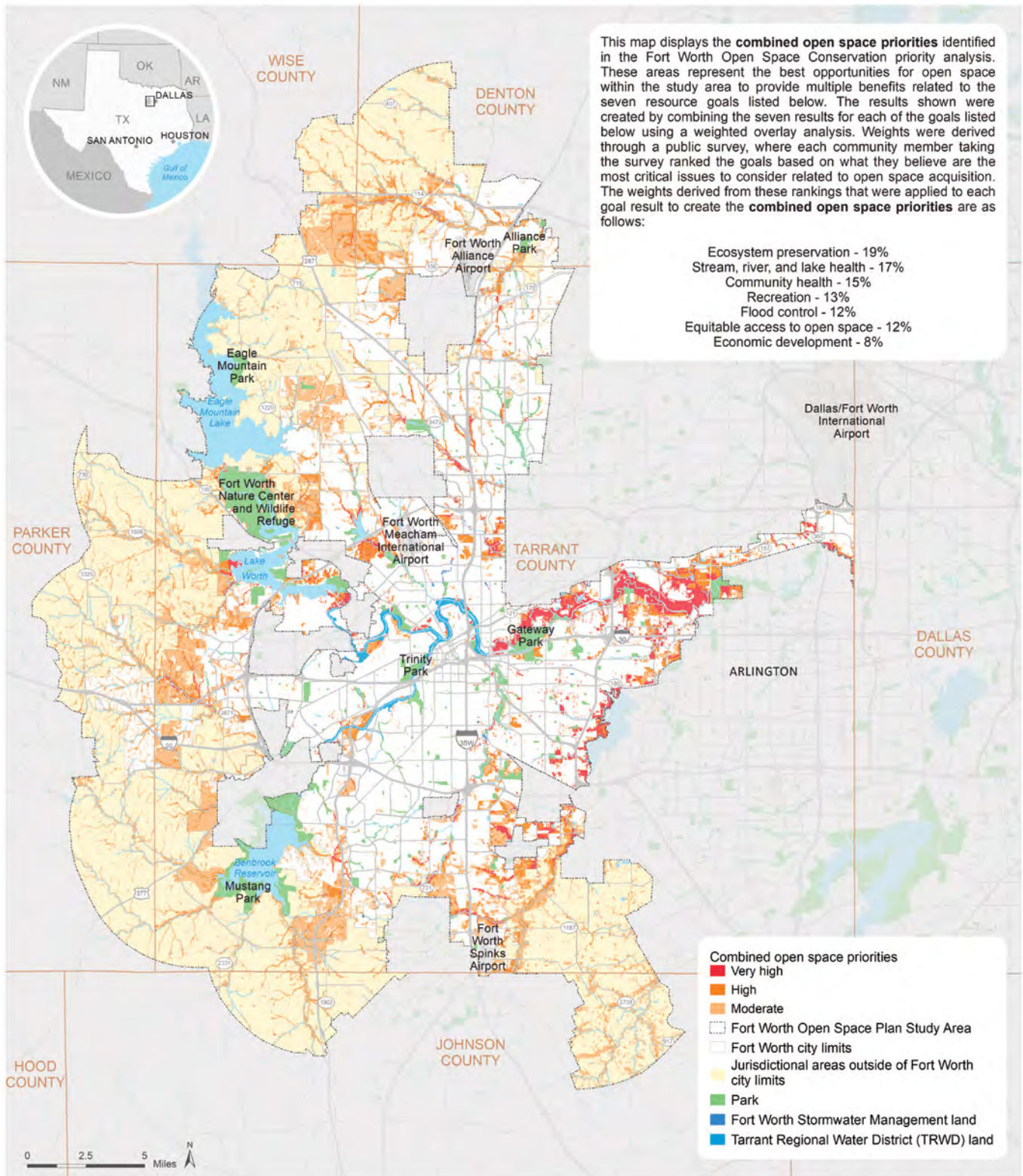
COMBINED OPEN SPACE PRIORITIES

For the combined open space priorities map shown in Figure 17, each goal area was weighted using responses provided through a public survey, as well as staff and stakeholder feedback. More than 1,400 respondents ranked each of the goal areas according to which ones were most important to them. Weights derived from those ranks were applied to each goal area, then “stacked” to create the combined open space priorities map that highlights where open space conservation would provide the greatest overlapping benefits to the environment and the community. Each goal area received the following weights in the creation of the combined open space priorities results:

- Ecosystem preservation (20 percent)
- Stream, river, and lake health (17 percent)
- Community health (15 percent)
- Recreation (14 percent)
- Flood control (13 percent)
- Equitable access to open space (13 percent)
- Economic development (8 percent)

The combined open space priorities map identifies 11,084 acres as very high priority, and 78,882 acres of moderate or greater priority throughout the study area (see Table 10).

FIGURE 17. Combined open space priorities map



Combined open space priorities

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TABLE 10: Combined Open Space Priorities

| Priority | Acres |
|-----------|--------|
| Very High | 11,084 |
| High | 22,923 |
| Moderate | 44,875 |
| Total | 78,882 |

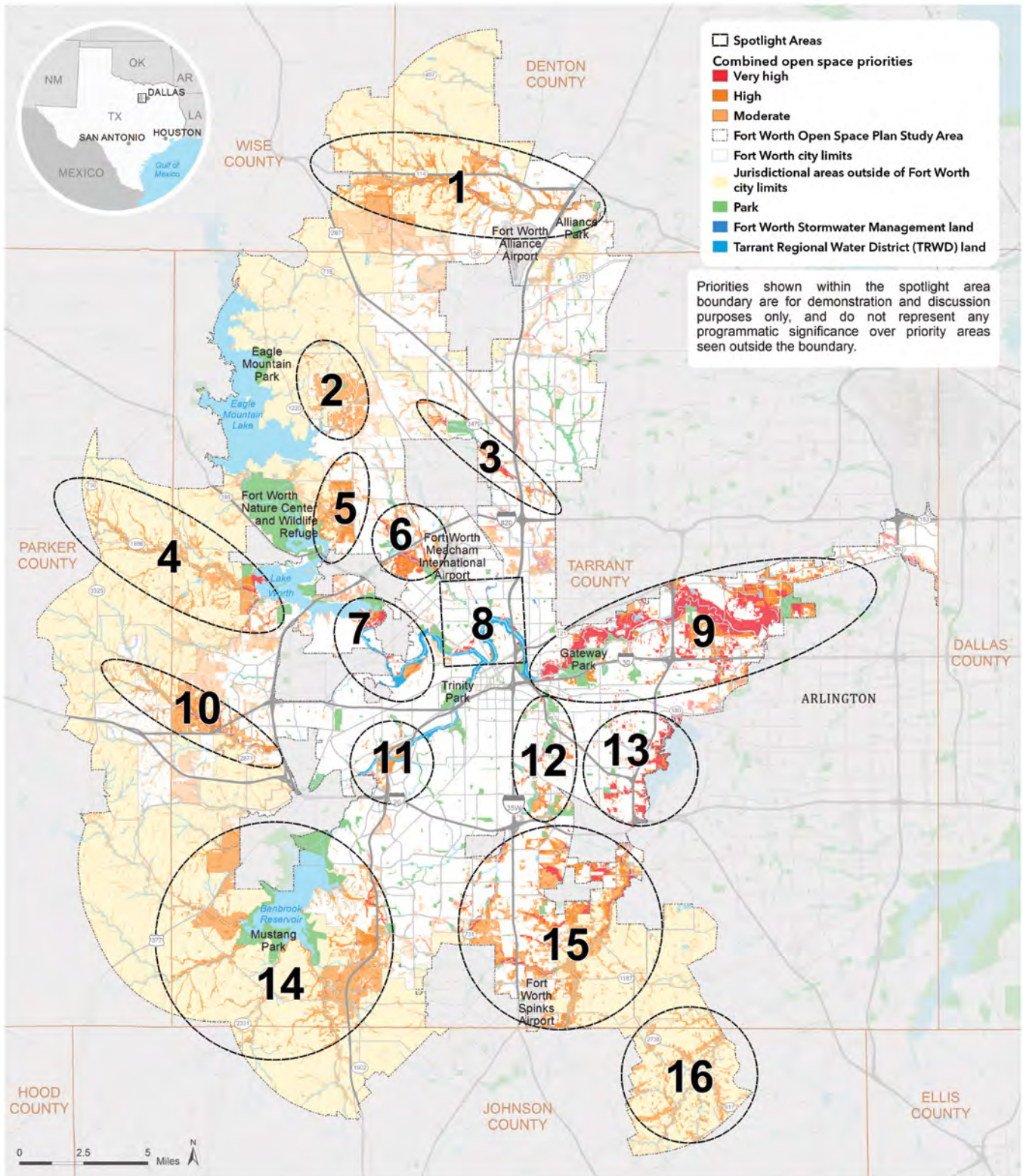
The priority results for each of the criteria, goal area, and the combined open space priorities result can be viewed on the project web portal: <https://mapitwest.fortworthtexas.gov/OpenSpaceTool/>. The portal hosts the project’s Decision Support Tool, which allows users to view the project’s GIS analysis results in an interactive setting, review potential projects, run queries, generate parcel reports, and measure a property’s conservation benefits toward meeting the seven open space goal areas.

SPOTLIGHT AREAS

The areas shown in the combined open space priorities map are the result of stacking the seven individual goal area results to find where the priorities for multiple goal areas overlap. To better understand how all the overlapping goal areas highlight different features and open space opportunities throughout the study area, several “spotlight areas” were examined in greater detail (see Figure 18). For each spotlight area, overlapping benefits are identified and a description of the open space opportunities within that area is provided. Please note, these spotlight areas do not represent the only priority open spaces in the city, and not all land in each spotlight area is a priority. The spotlight areas simply serve as examples of how the overlapping goal areas highlight the different benefits of protecting open space. The sixteen spotlight areas are:

1. Denton Creek Watershed
2. Dosier Creek Watershed
3. Big Fossil Creek Watershed
4. Silver Creek Watershed
5. Lake Worth North Watershed
6. Marine Creek Lake Watershed
7. West Fork Trinity Watershed
8. City Center
9. Trinity River/Eastern Cross Timbers
10. Mary’s Creek/Fort Worth Prairie
11. Clear Fork Trinity Watershed
12. Sycamore Creek Watershed
13. Lake Arlington/Eastern Cross Timbers
14. Benbrook Lake/Fort Worth Prairie
15. Village Creek Watershed
16. Upper Walnut Creek Watershed

FIGURE 18. Spotlight areas map with combined open space priorities



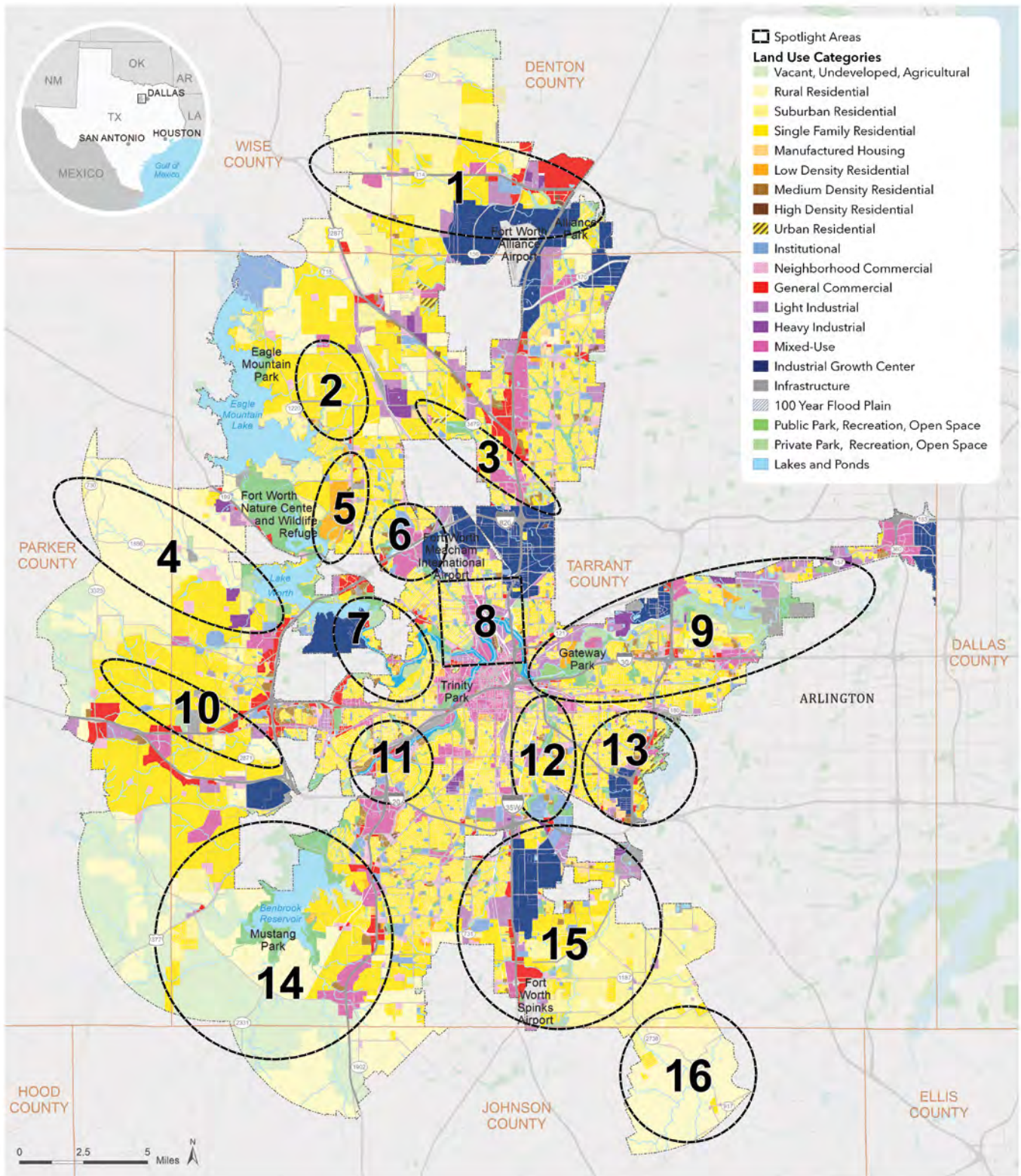
Spotlight Areas

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FIGURE 19. Spotlight areas map with land use



Spotlight Area – Land Use

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CANOERS PADDLE ALONG THE WEST FORK OF THE TRINITY RIVER AT FORT WORTH NATURE CENTER. © KEVIN BROWN

SPOTLIGHT AREA
DENTON CREEK WATERSHED



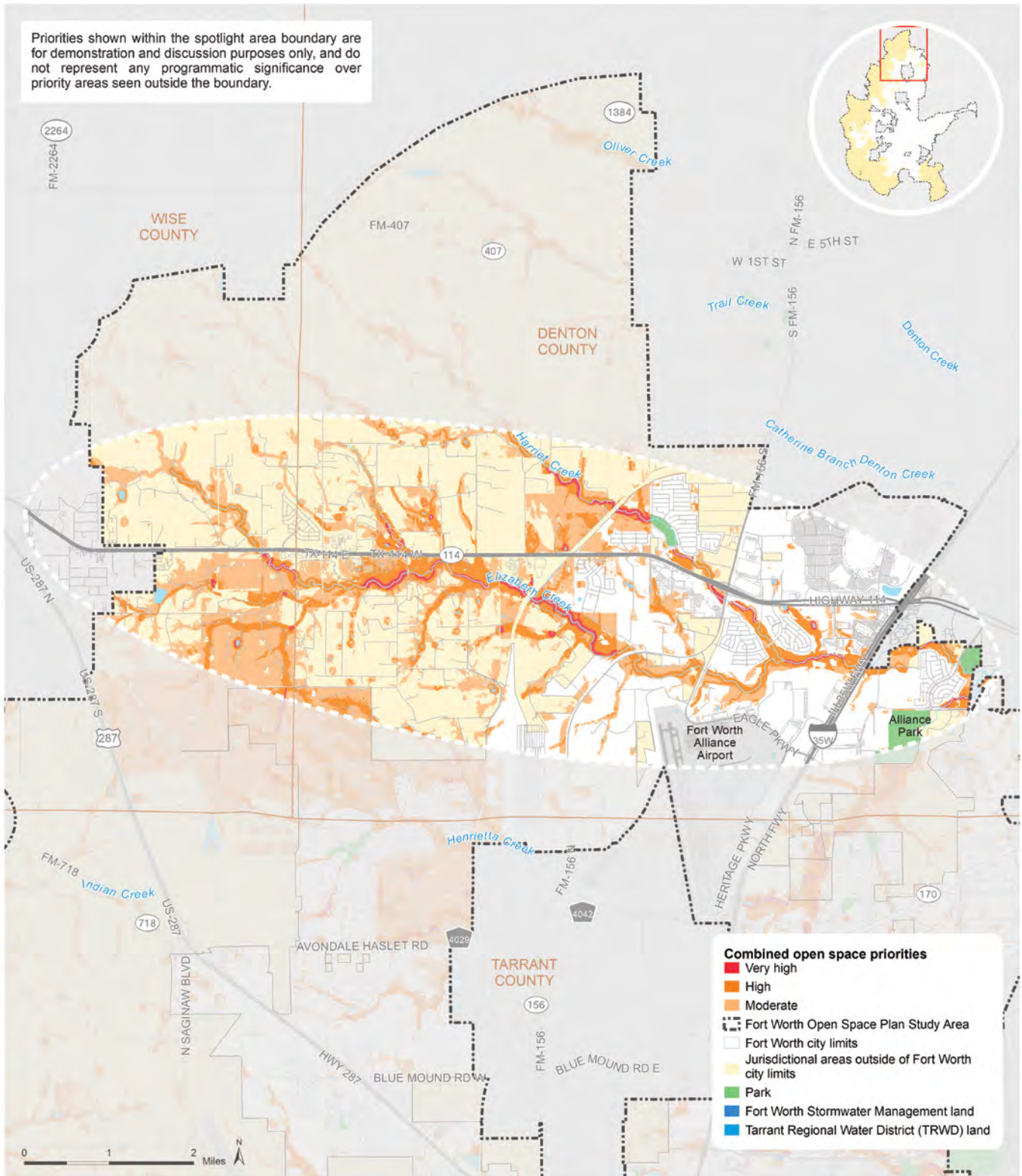
Elizabeth Creek, a tributary of Denton Creek. © Jason Flowers

The Denton Creek Watershed Spotlight Area is characterized by industrial land use in the east, residential development in the center, and rural land uses in the west, with Denton Creek running through the middle as it drains toward the east. Oil and gas extraction pad sites can be found throughout the rural areas.

Opportunities for conservation of high-priority and very high priority open space can be found all along the forested stream banks of Denton Creek and its tributaries. These stream channels are highlighted as preservation priorities for several goal areas: flood control; stream, river, and lake health; and ecosystem preservation. The large swaths of moderate-priority land in the southwest show up under the ecosystem preservation goal area for prairie habitat, along with the equitable access to open space goal area, as open space conservation in this area can be expected to benefit surrounding at-risk communities.

The areas of overall moderate priority found in the north-central part of the Denton Creek Watershed Spotlight Area show up as high-priority areas for the community health and economic development goal areas. Conservation of open space in this area would provide recreational opportunities to a population that suffers from high rates of obesity, diabetes, asthma, and stroke. These areas can also provide a desirable environment to attract businesses to spur economic development.

FIGURE 20. Spotlight Area Map: Denton Creek Watershed



**Spotlight Area
Denton Creek watershed**



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SPOTLIGHT AREA

DOSIER CREEK WATERSHED

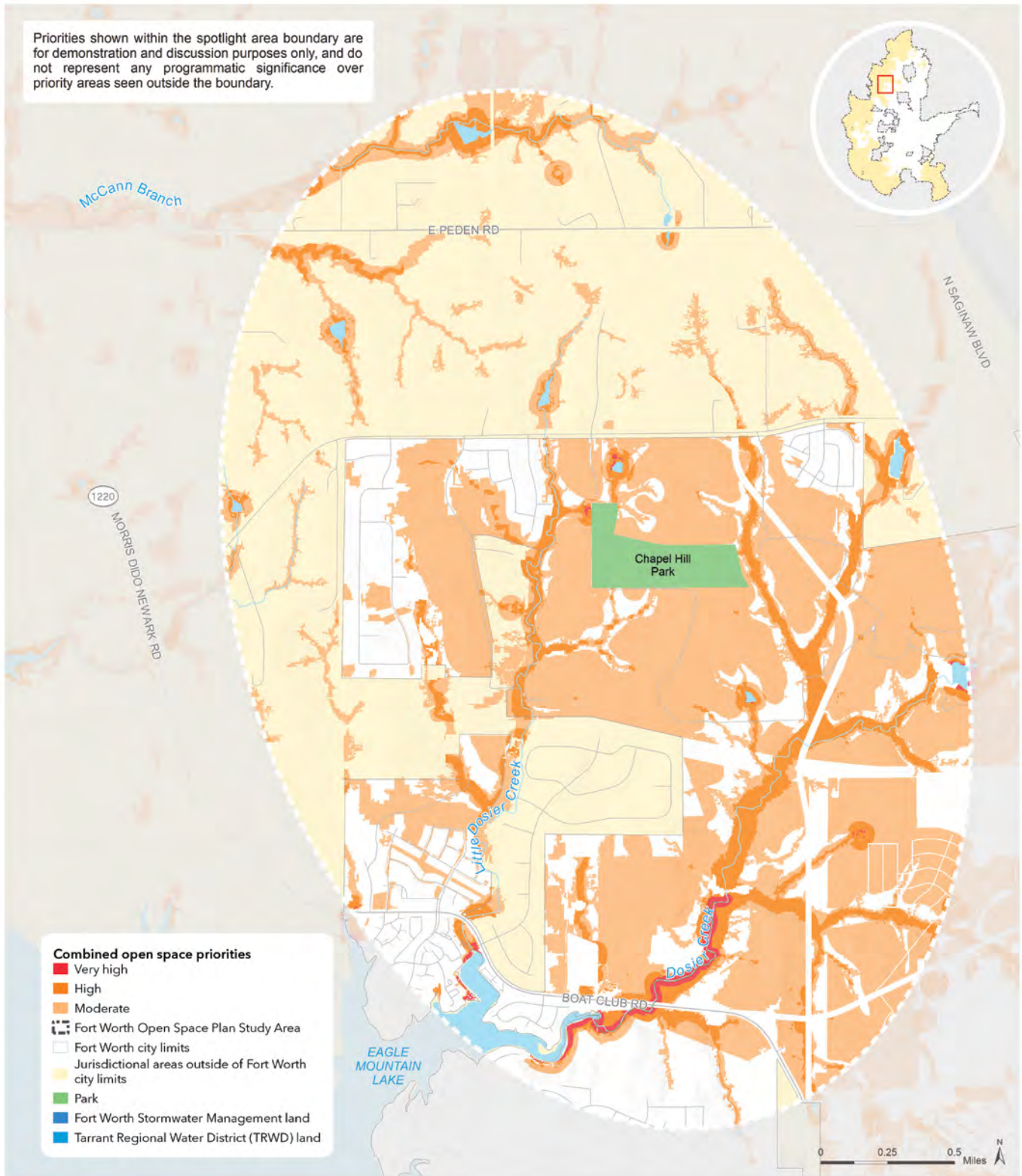


Dosier Creek. © Jason Flowers

The Dosier Creek Watershed Spotlight Area is characterized mostly by single-family residential land use zoning. Much of the area remains undeveloped, aside from some oil and gas wells. Dosier Creek flows southward through the center of the area and drains into Eagle Mountain Lake. In the north, McCann Branch Creek flows to the west draining into a northern area of Eagle Mountain Lake.

Most of the high-priority and very high priority lands for open space conservation in this spotlight area are found along the creek channels, which rank as priorities for the flood control and stream, river, and lake health goal areas. The areas of moderate priority are primarily highlighted for ecosystem preservation because of the large, contiguous prairie lands found here. The prairies also provide an opportunity for recreation and outdoor educational activities that allow the community to interact with these iconic environments.

FIGURE 21. Spotlight Area Map: Dosier Creek Watershed



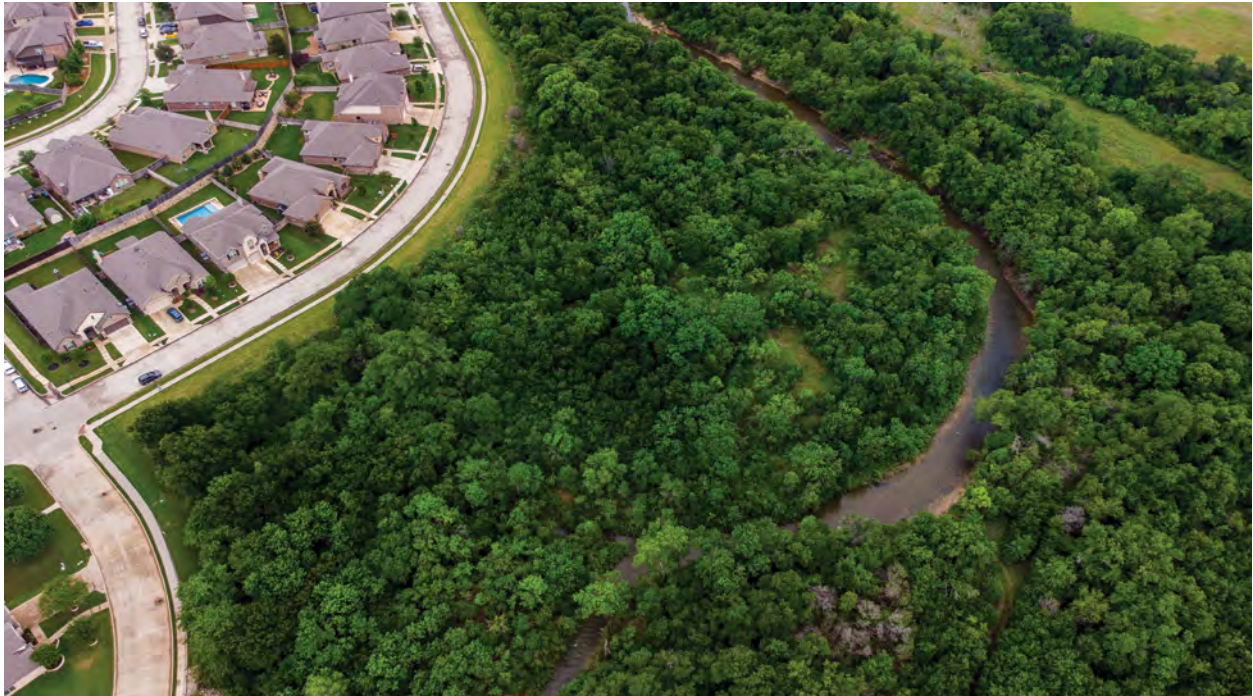
Spotlight Area Dosier Creek watershed



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SPOTLIGHT AREA
BIG FOSSIL CREEK WATERSHED



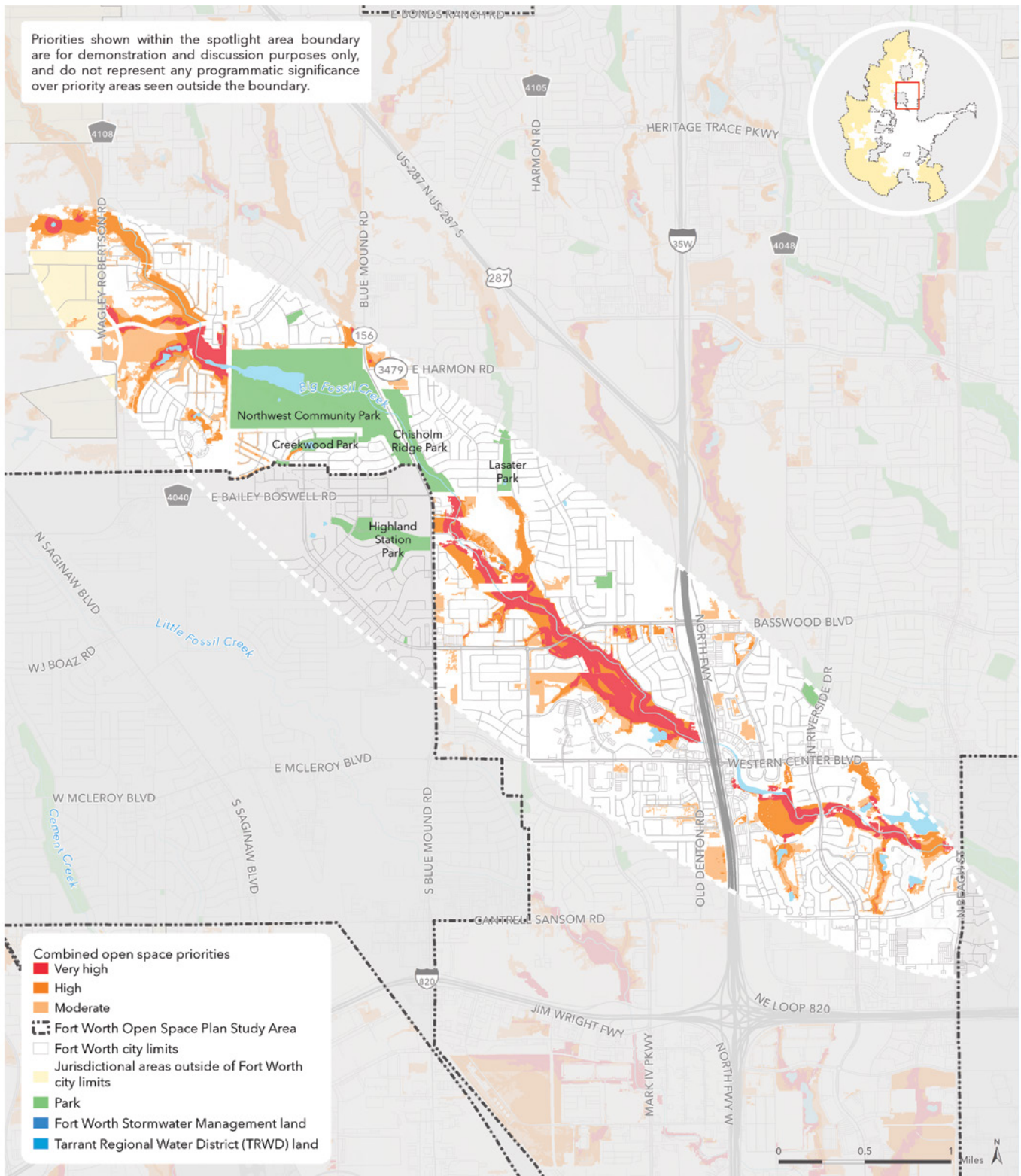
Big Fossil Creek, passing close to a suburban development. © Jason Flowers

Land use in the Big Fossil Creek Watershed Spotlight Area is largely characterized as single-family residential, with a large area of mixed-use zoning in the southeastern vicinity.

High-priority and very high priority open spaces are identified along the forested stream banks of Big Fossil Creek for the stream, river, and lake health; flood control; and ecosystem preservation goal areas. The creek also runs through Northwest Community Park, Creekwood Park, and Chisholm Ridge Park. Very high priority open spaces are identified adjacent to all these parks, as preserving these spaces would create a connected system of green spaces, parks, and trails.

The large area identified as moderate priority for open space in the western vicinity of the spotlight area is experiencing rapid growth and development. Conservation of open space in this area would provide access to recreational amenities and create a desirable environment to attract businesses for future economic development

FIGURE 22. Spotlight Area Map: Big Fossil Creek Watershed



Spotlight Area
Big Fossil Creek watershed



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SPOTLIGHT AREA

SILVER CREEK WATERSHED



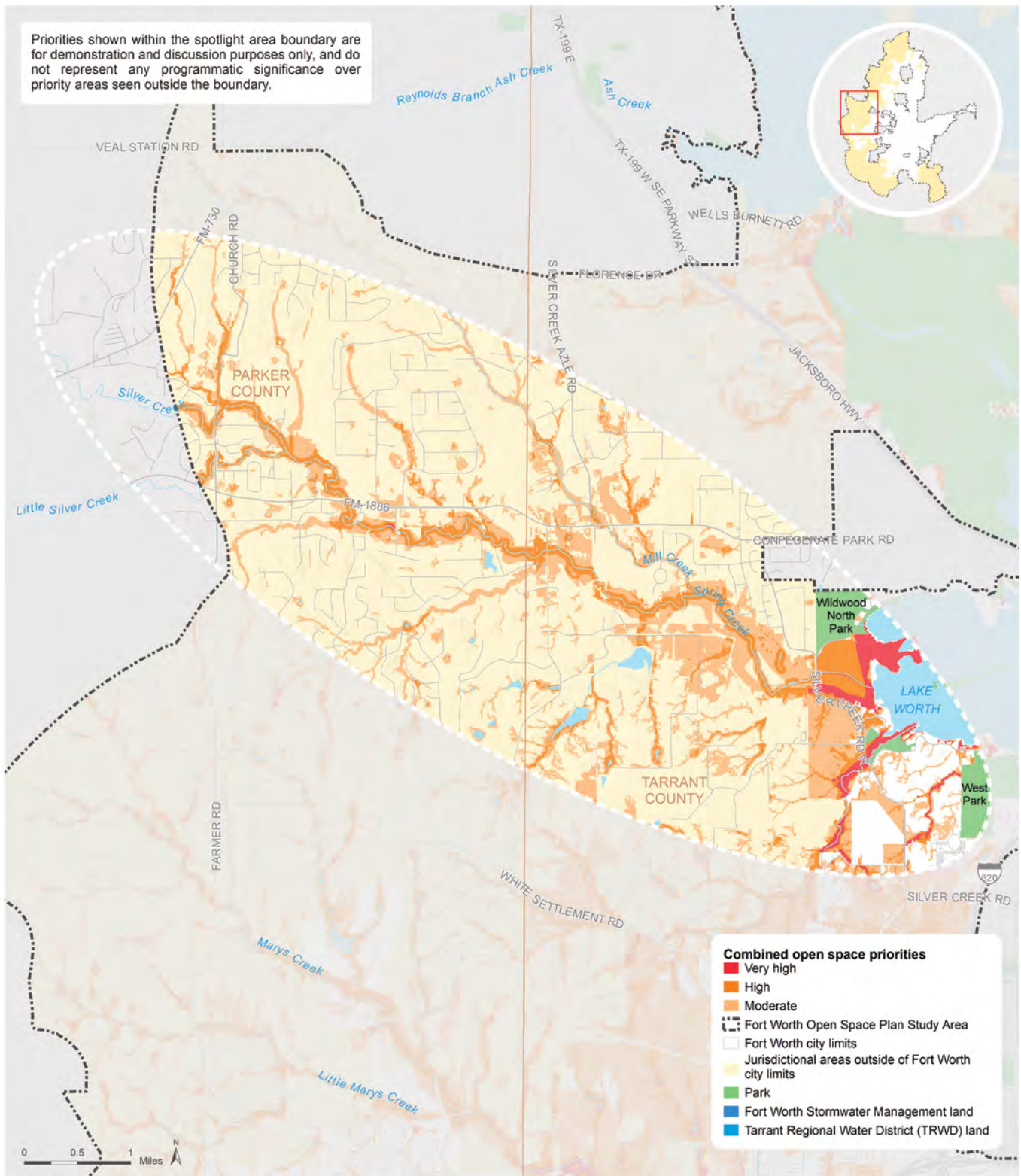
Silver Creek. © Jason Flowers

The Silver Creek Watershed Spotlight Area is dominated by low-density residential land use types including rural residential and single-family residential.

Moderate- and high-priority areas for open space conservation can be found along Silver Creek and its tributaries, which are highlighted for the ecosystem preservation, recreation, flood control, and stream, river, and lake health goal areas. The stream channels could also provide future trail connections heading out west from Lake Worth.

Near Lake Worth, which is owned by the City of Fort Worth, open space conservation along stream channels would help protect water quality, as development along waterways typically increases sediment and pollutant loads. Since Lake Worth is a drinking water source for the city, conservation in this area is of particular importance. The large areas of prairie habitat and tree canopy around the lake also show up as high priority and very high priority, although it should be noted that the city already owns some of this land.

FIGURE 23. Spotlight Area Map: Silver Creek Watershed



Spotlight Area Silver Creek watershed



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SPOTLIGHT AREA

LAKE WORTH NORTH WATERSHED



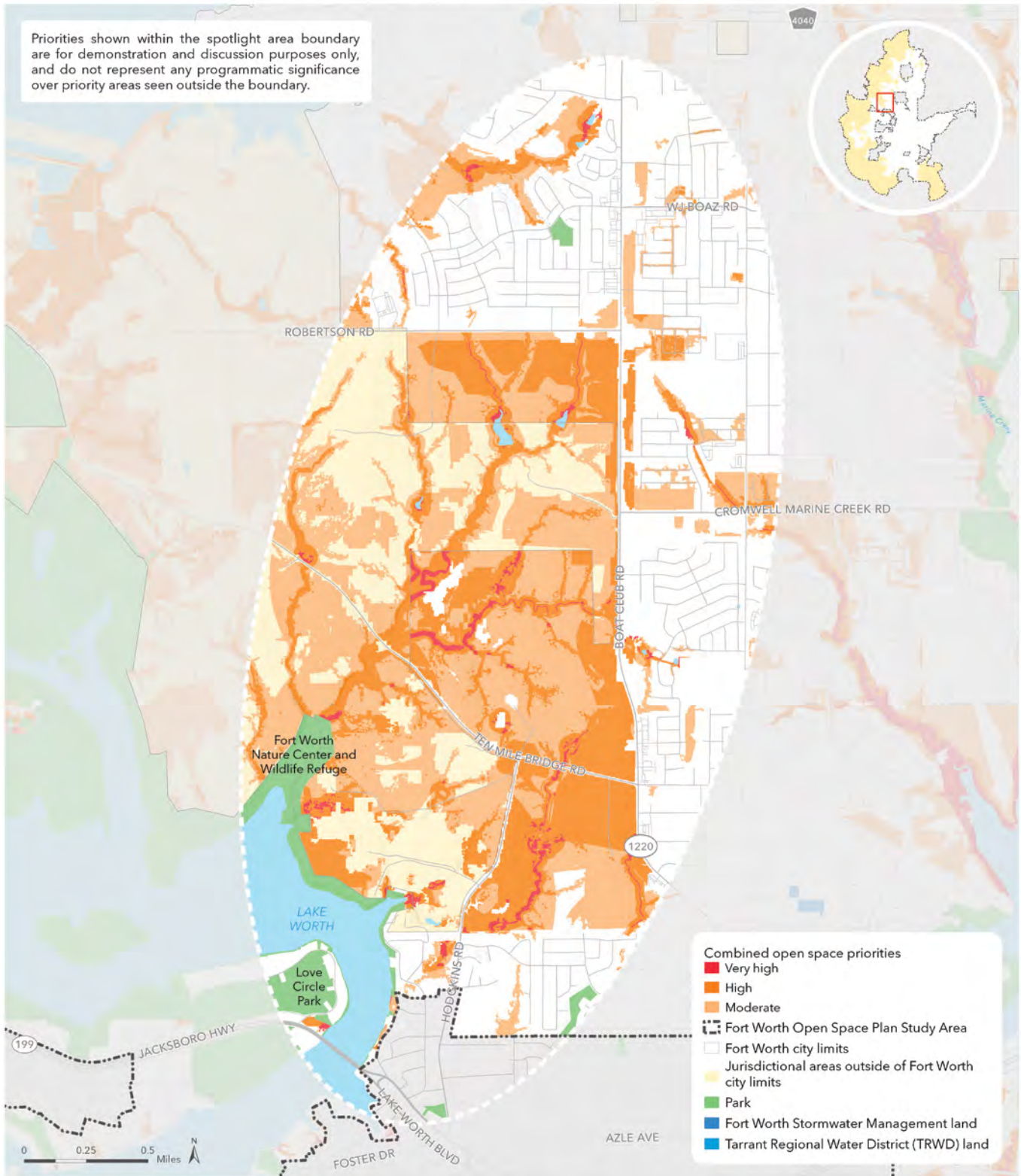
The view of Lake Fort Worth above Hodgkins Road. © Jason Flowers

Most of the Lake Worth North Watershed Spotlight Area consists of single-family and low-density residential land use, and there is a large undeveloped area south of Robertson Road and west of Boat Club Road.

In general, this spotlight area ranks high for the ecosystem preservation and recreation goal areas. The undeveloped area also encompasses many streams and creeks that flow into Lake Worth, one of Fort Worth's drinking water sources. These riparian corridors are ranked as high or very high priority for the flood control and stream, river, and lake health goal areas.

In the northern vicinity of this spotlight area, a few stream channels flow into Eagle Mountain Lake. Just immediately west of Boat Club Road is a large swath of land prioritized for economic development. Open space conservation in this area would improve access for the communities located to the east of Boat Club Road that are ranked high or very high priority for equitable access to open spaces.

FIGURE 24. Spotlight Area Map: Lake Worth North Watershed



**Spotlight Area
Lake Worth north watershed**



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SPOTLIGHT AREA

MARINE CREEK LAKE WATERSHED



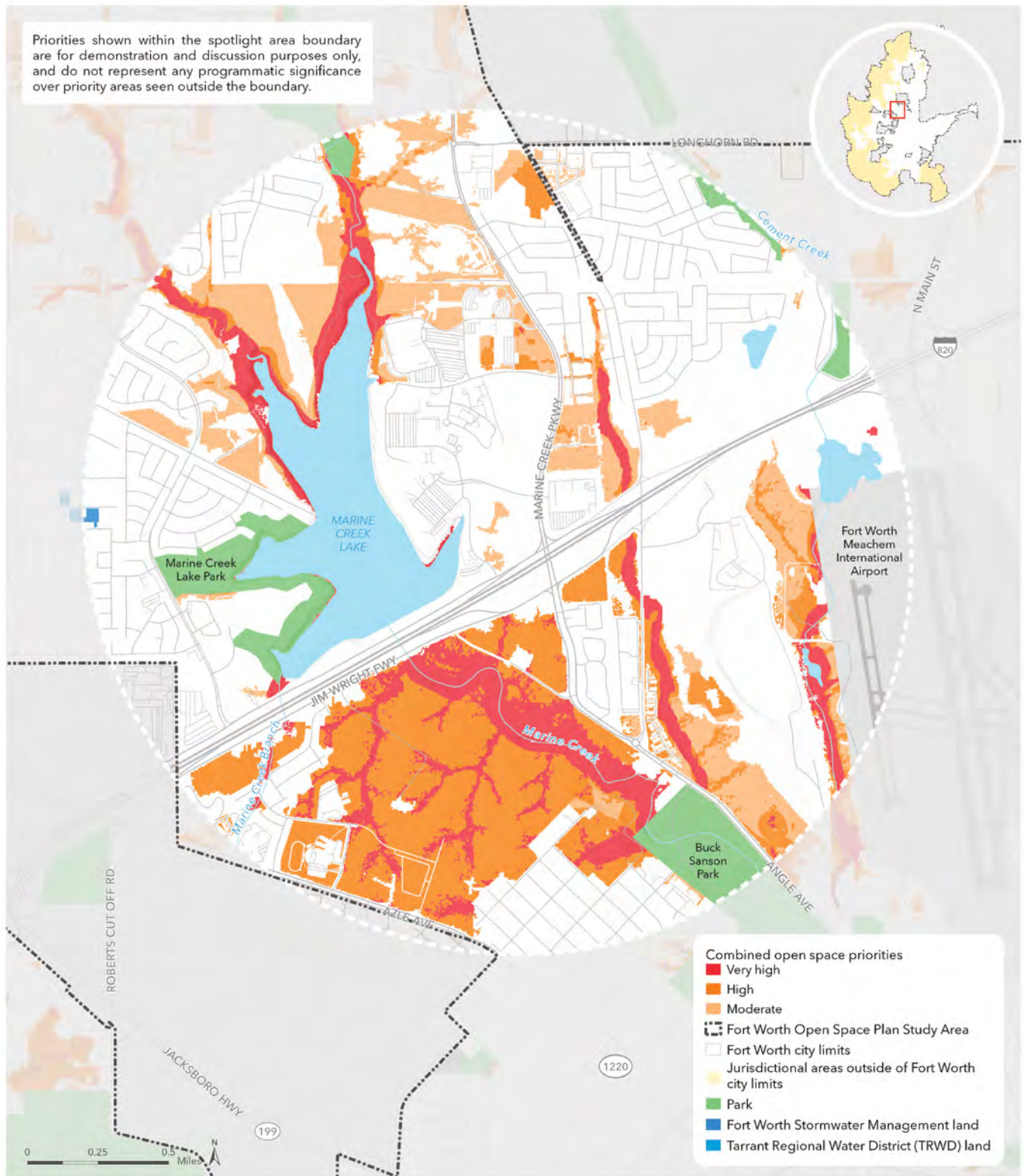
Marine Creek. © Jason Flowers

The Marine Creek Lake Watershed Spotlight Area offers an excellent opportunity to preserve open space in an area surrounded by numerous single-family residential neighborhoods.

The northern stream channels and shoreline of Marine Creek Lake rank very high for the flood control, ecosystem preservation, and stream, river, and lake health goal areas. Preserving these stream channels would also conserve a significant amount of tree canopy.

The large green space south of the reservoir and Interstate 820 along Marine Creek and its tributaries ranks very high for the flood control, ecosystem preservation, and stream, river, and lake health goal areas. It is also a priority for the economic development, recreation, and equitable access to green space goal areas. It could provide access to green space for nearby disadvantaged communities, and it is adjacent to Buck Sansom Park, so there is an opportunity to create a larger and more contiguous complex of public lands.

FIGURE 25. Spotlight Area Map: Marine Creek Lake Watershed



Spotlight Area
Marine Creek Lake watershed



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SPOTLIGHT AREA

WEST FORK TRINITY WATERSHED



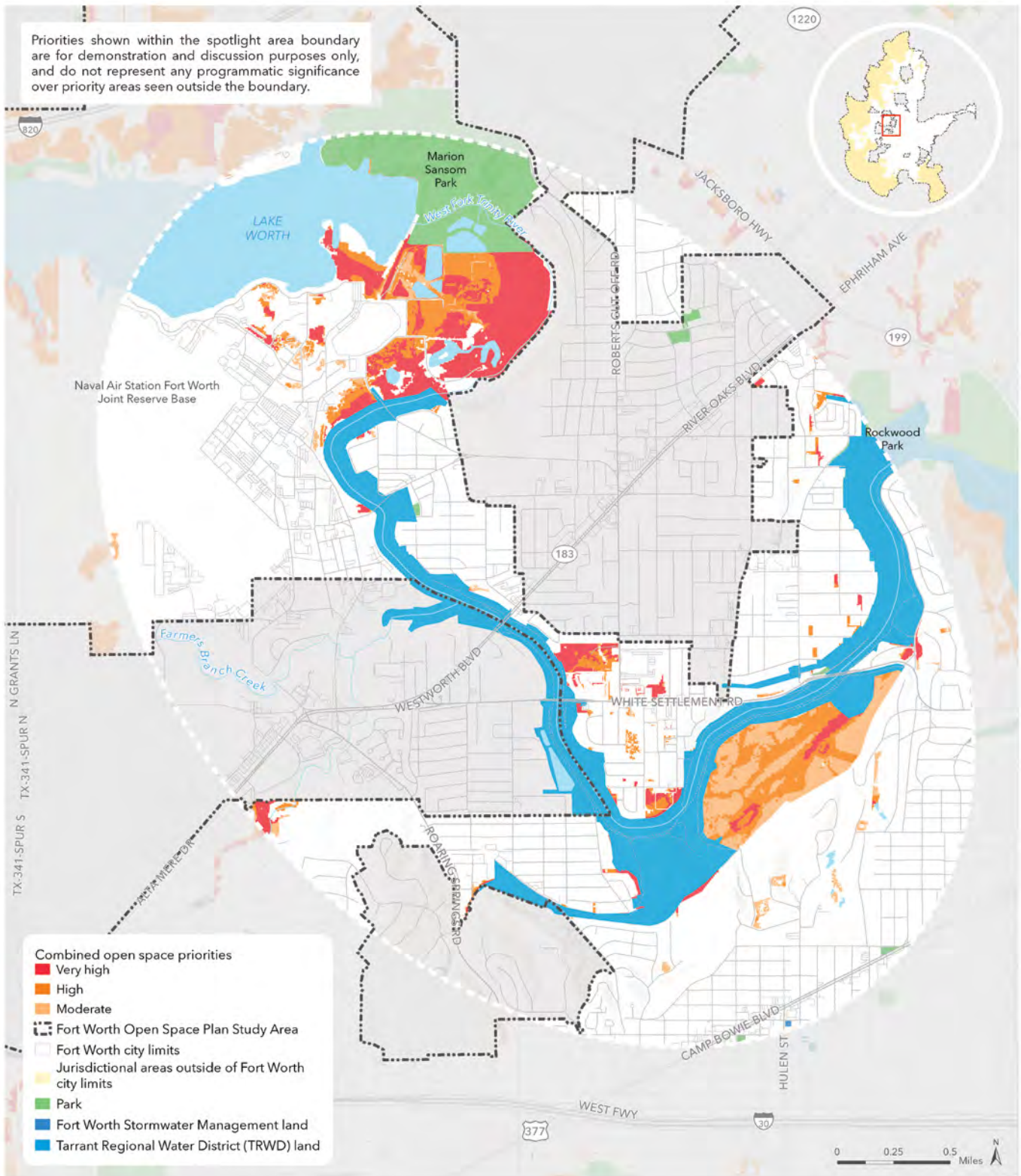
West Fork Trinity River. © Jason Flowers

The West Fork Trinity Watershed Spotlight Area consists mostly of single-family residential neighborhoods, along with the industrial growth center anchored by the Naval Air Station Fort Worth Joint Reserve Base to the west.

Just to the east of the base along the shore of Lake Worth is a large contiguous area of private green space, which offers an opportunity to create a public open space. This area is ranked as high or very high priority for both the equitable access to open space and community health goal areas, and would impact disadvantaged communities in nearby neighborhoods. As this area sits just south of Marion Sansom Park, conservation of this area as public open space would create a large contiguous patch of green space that is a priority for ecosystem preservation, flood control, and stream, river, and lake health.

Similarly, just west of Rockwood Park on the southern shore of the West Fork Trinity is an area of private natural lands that could provide access to open space. In addition to these larger areas, there are opportunities for the preservation of smaller open spaces near higher-density urban residential areas north of White Settlement Road and Roberts Cutoff Road. This area is a priority for all seven open space goal areas.

FIGURE 26. Spotlight Area Map: West Fork Trinity River Watershed



Spotlight Area West Fork Trinity River watershed



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SPOTLIGHT AREA CITY CENTER



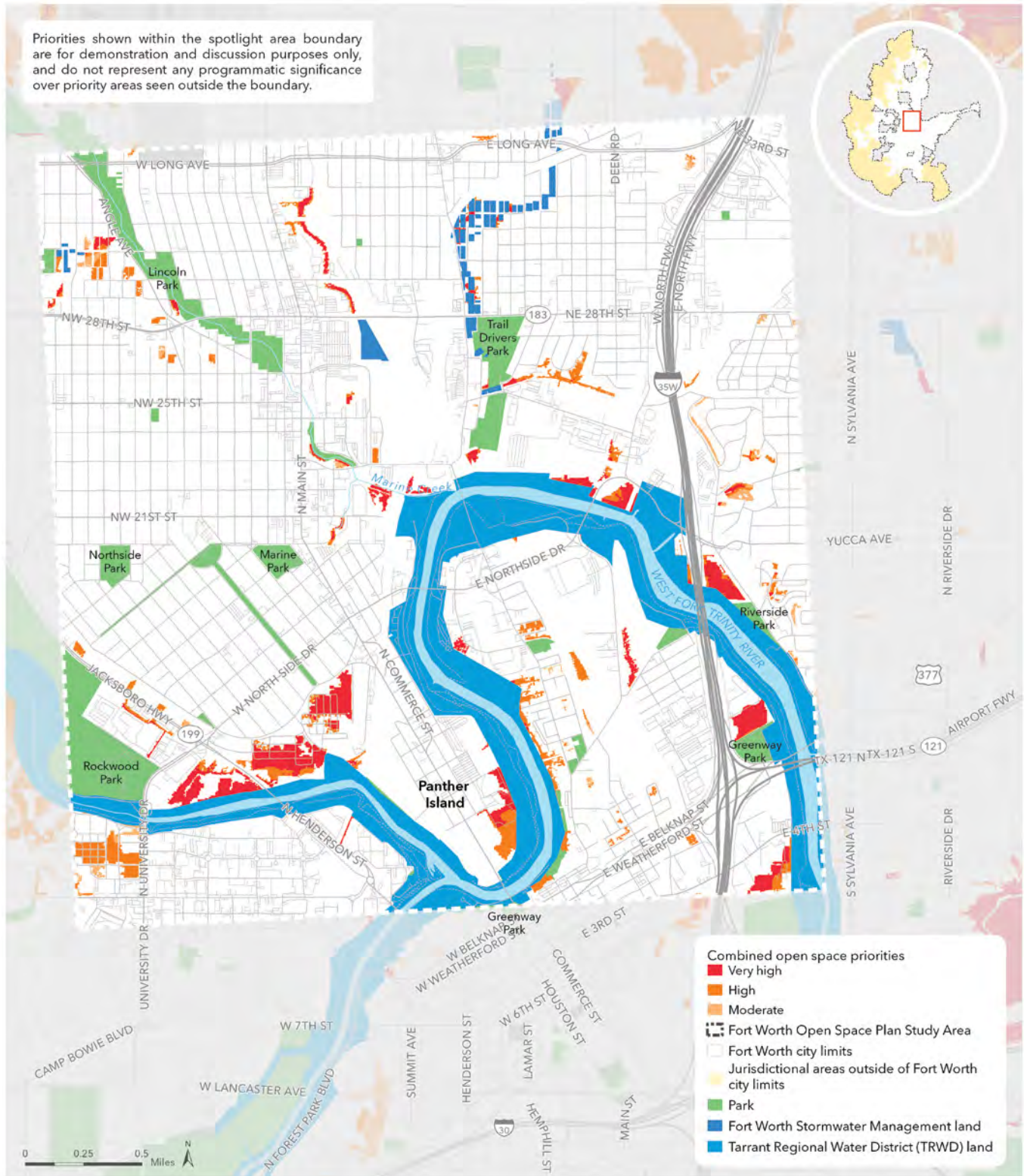
The Trinity River passing through the City Center. © Jason Flowers

The City Center Spotlight Area is one of the most densely populated and densely developed places in the study area, with zones of low-, medium-, and high-density residential land use types throughout. Much of the area is developed, leaving only small patches of green space that can be conserved for the people living and working in this part of the city.

The larger areas of high and very high priority are found along the Trinity River where it bends to create Panther Island and the bluffs that overlook the river. Green spaces found on the north side of the river just west of Interstate 35W could be connected to Riverside Park to create a larger area of contiguous public land along the river. These very high priority opportunities can provide benefits across all seven of the open space goal areas.

In addition to these relatively large priority areas, smaller priority parcels and linear features can be found in some of the few remaining green spaces around Lincoln Park. These small wooded tracts represent some of the last remaining opportunities to preserve natural space in this densely populated area.

FIGURE 27. Spotlight Area Map: City Center



Spotlight Area City center

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SPOTLIGHT AREA
TRINITY RIVER/EASTERN CROSS TIMBERS

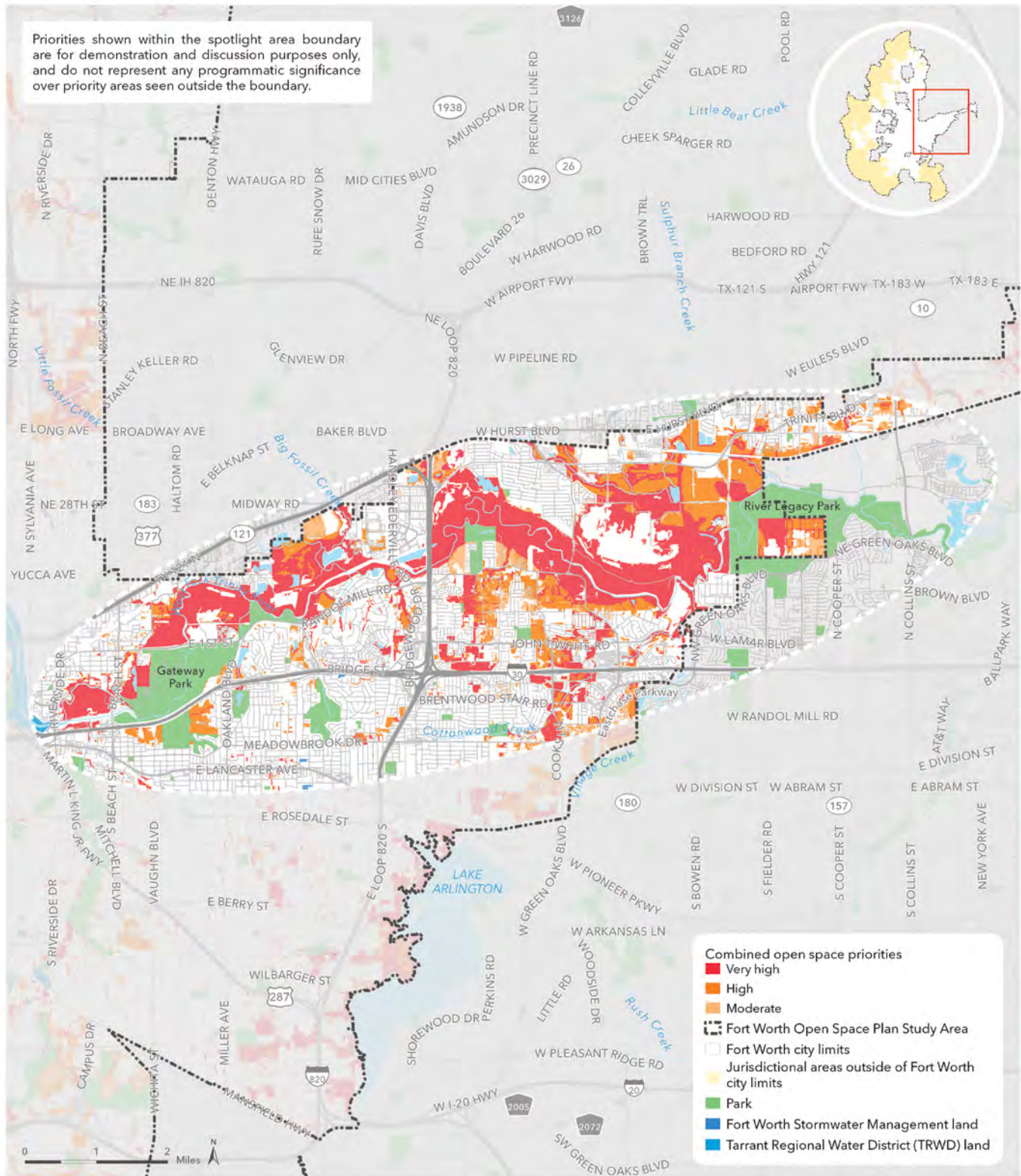


West Fork Trinity River. © Jason Flowers

The Trinity River/Eastern Cross Timbers Spotlight Area was identified by the public as an iconic place in Fort Worth and is held dear by many Fort Worth residents, as is clear from the number of survey takers who listed this area as a place worth protecting. This spotlight area has the greatest number of very high priority areas found in the study area, and much of this lies in between Gateway and River Legacy Parks. This area is a very high priority due to the importance of the Trinity River system to ecosystem preservation, flood control and stream, river, and lake health. This area has a large variety of land use types that allow for denser groupings of residences in medium-density residential areas north of Interstate 30. Providing access to green spaces to these areas with higher-population density allows for a significant opportunity to provide recreation and equitable access to open spaces for a large number of people. This area is also a priority for community health as the residents of this area experience high rates of health conditions in comparison to other parts of the study area.

Along the Eastchase Parkway are a number of very high priority areas that can serve to protect the Eastern Cross Timbers habitat that are found in smaller patches within the suburban residential and mixed-use areas in that part of the city. Conservation of open space in this region can be expected to provide a number of benefits across all seven open space goals.

FIGURE 28. Spotlight Area Map: Trinity River/Eastern Cross Timbers



Spotlight Area Trinity River/Eastern Cross Timbers



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SPOTLIGHT AREA

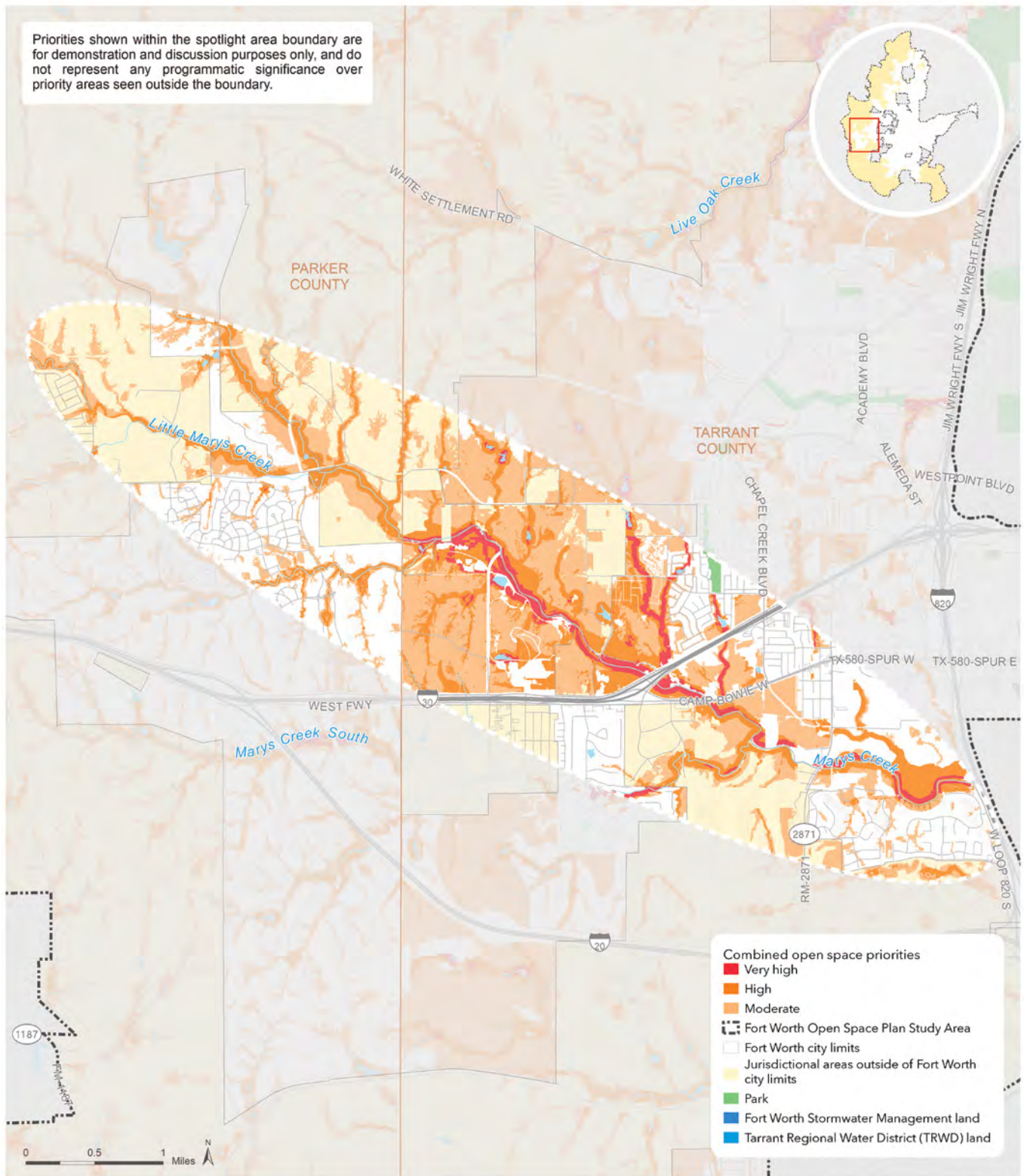
MARY'S CREEK/FORT WORTH PRAIRIE



Mary's Creek. © Jason Flowers

The Mary's Creek/Fort Worth Prairie Spotlight Area offers an abundance of opportunities for the conservation of open space in this largely undeveloped region of the study area. The area is dominated by low-density rural residential and single-family residential land use. The priority areas seen in this spotlight area follow Mary's Creek and its tributaries, providing the opportunity to conserve these lands for flood control, ecosystem preservation and stream, river, and lake health. In the area's center there is a large block of priority land that offers opportunities to conserve large contiguous tracts of prairie for ecosystem preservation and recreational access for the nearby socially vulnerable communities that are a high priority for equitable access to open spaces.

FIGURE 29. Spotlight Area Map: Mary's Creek/Fort Worth Prairie



Spotlight Area
Mary's Creek/Fort Worth Prairie



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SPOTLIGHT AREA
CLEAR FORK TRINITY WATERSHED

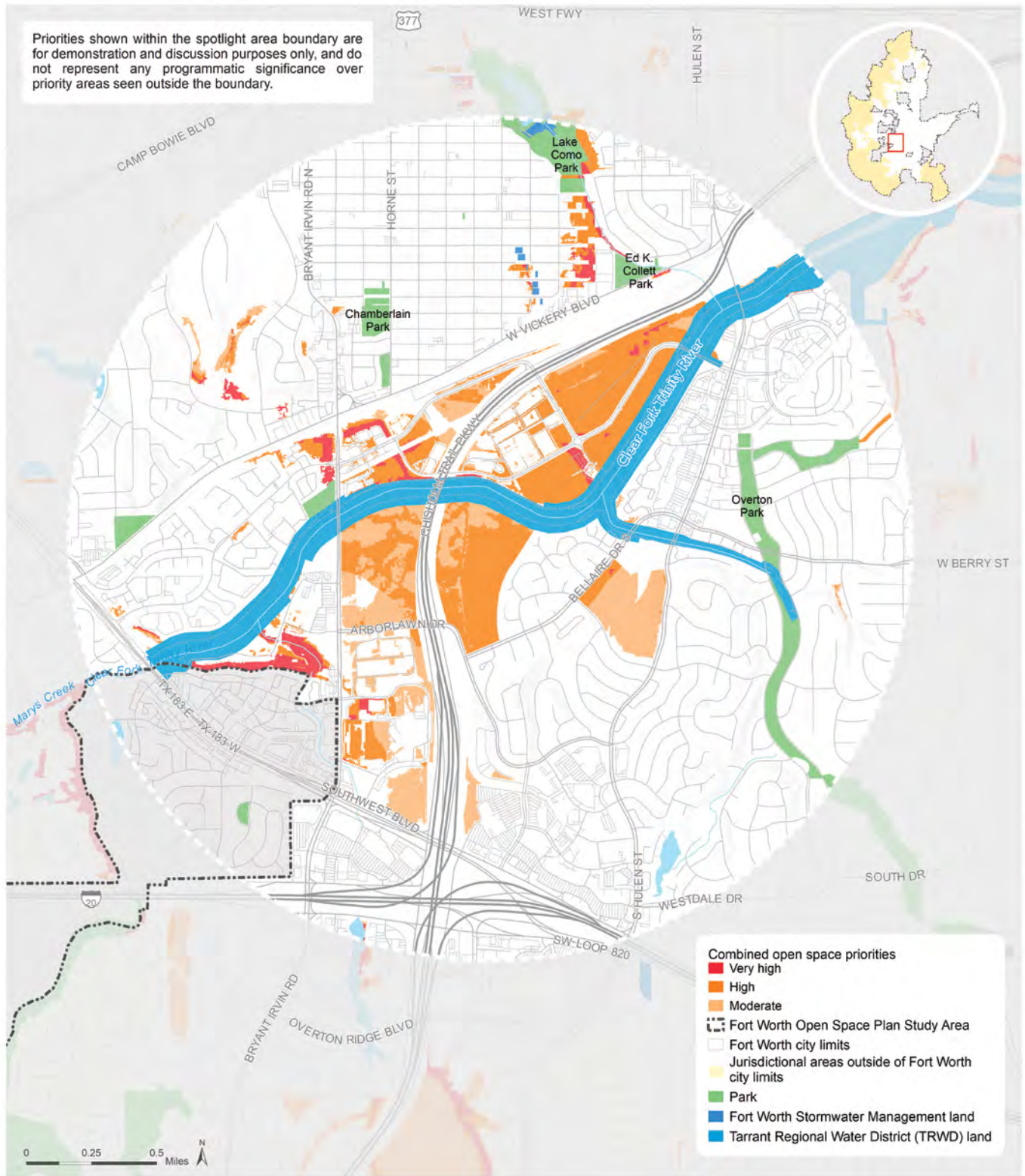


Chisholm Trail. © Jason Flowers

The Clear Fork Trinity Watershed Spotlight Area is largely made up of single-family residential neighborhoods and mixed-use land use types. Open space opportunities in this area mostly center on the Chisholm Trail Parkway, south of the railroad tracks. Large areas of potential open space exist here. The Clear Fork Trinity River flows east to west through these green spaces that are a priority for economic development, ecosystem preservation, recreation and community health. Along the river itself are priority areas for flood control, stream, river, and lake health, and an existing trail network where open space can be used to create connecting trails into the neighborhoods to the north and south of the river.

On the north side of the railroad tracks, between Lake Como Park and Ed K. Collett Neighborhood Park, is an area of green space that can be conserved as open space to create a large contiguous complex of green spaces for the nearby dense single-family residential neighborhoods. Trail development within this area will provide an opportunity to connect new trails from these residential neighborhoods with the existing trail network along the Trinity River in a manner that allows users of the trails to safely travel away from vehicular traffic. This area is a very high priority for Economic development as well as community health and equitable access to open spaces.

FIGURE 30. Spotlight Area Map: Clear Fork Trinity Watershed



Spotlight Area Clear Fork Trinity watershed



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SPOTLIGHT AREA

SYCAMORE CREEK WATERSHED



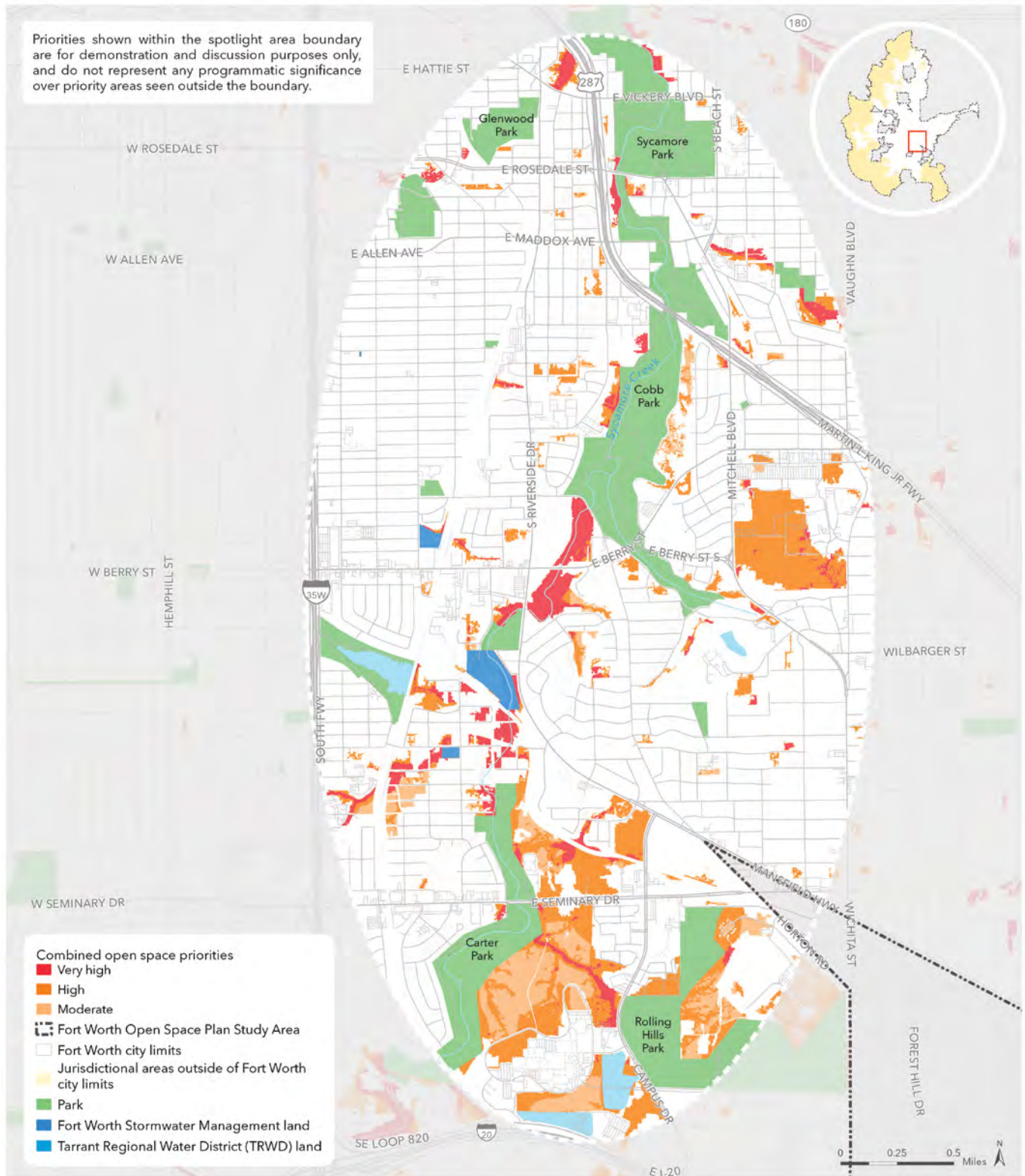
Sycamore Creek. © Jason Flowers

The Sycamore Creek Watershed Spotlight Area lies near the center of town, east of Interstate 35W with a large proportion of dense single-family residential neighborhoods and industrial areas. Very high priority areas can be found along Sycamore Creek and its tributaries, providing benefits for flood control, ecosystem preservation and stream, river, and lake health. A large corridor of very high priority land lies between Cobb and Carter Parks, providing open space to connect these public spaces and creating a long contiguous area of public land along a large portion of Sycamore Creek. The creek has become associated with water quality issues and is currently on the impaired waterway list.

Just east of Cobb Park is a large green space sitting just south of a commercial area. Conservation of this green space will provide a natural buffer between the commercial area and the single-family residential areas to the south.

This whole area is also a high-priority or very high priority for community health, equitable access to open spaces, and economic development, providing an abundance of opportunities to use open space to provide a benefit to these open space goals.

FIGURE 31. Spotlight Area Map: Sycamore Creek Watershed



**Spotlight Area
Sycamore Creek**



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SPOTLIGHT AREA

LAKE ARLINGTON/EASTERN CROSS TIMBERS

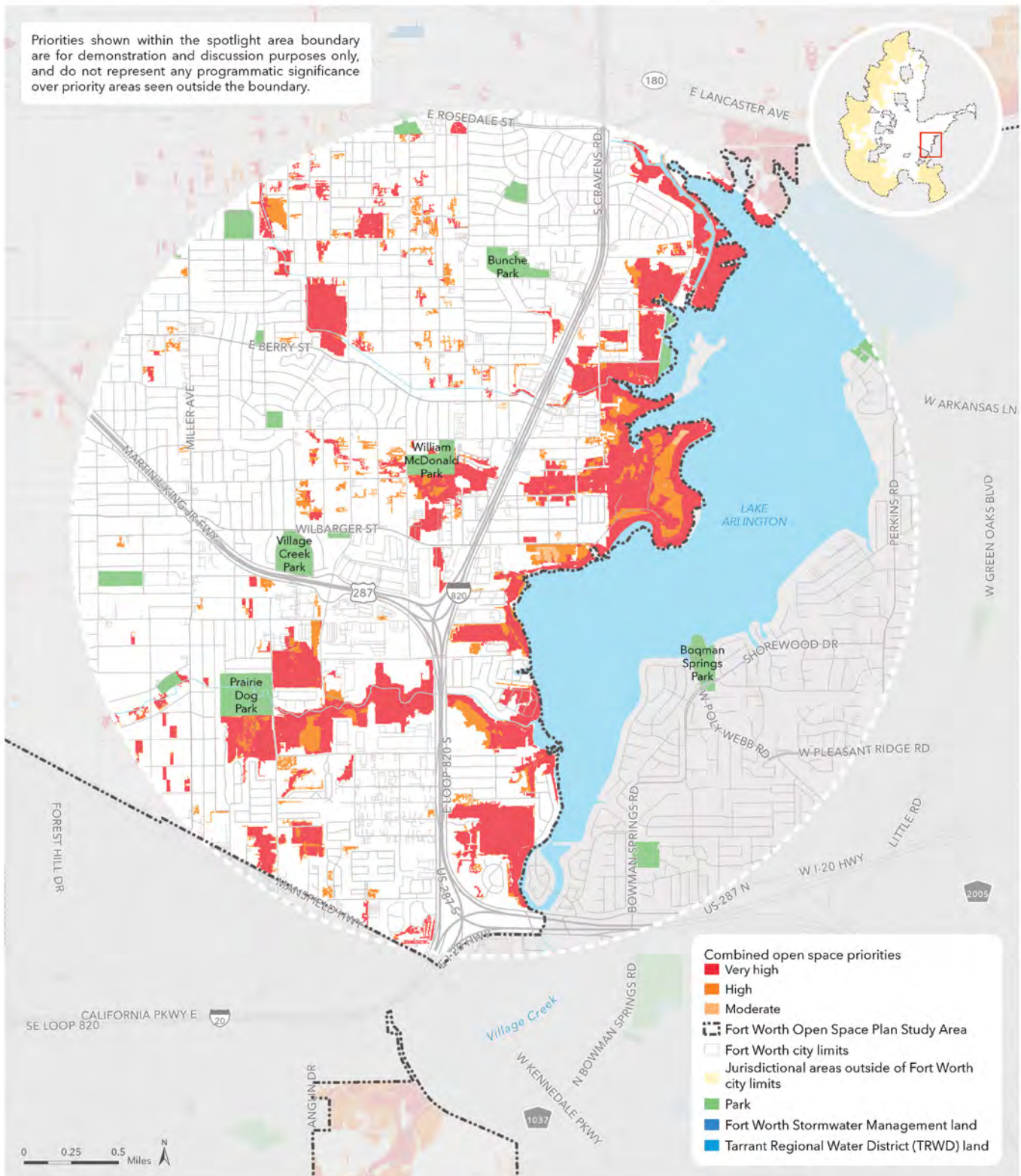


Wildcat Branch above Lake Arlington. © Jason Flowers

The Lake Arlington/Eastern Cross Timbers Spotlight Area is largely made up of dense single-family and urban residential land use areas. Many of the priority areas for open space conservation lie along the western shore of Lake Arlington. These forested green spaces between the lake and Interstate 820 provide benefits for all seven open space goal areas with very high priorities for ecosystem preservation, flood control, and stream, river, and lake health. The area also ranks as a very high priority for economic development, community health, equitable access to open spaces, and recreation.

To the west of Interstate 820 are a number of smaller patches of opportunities that can serve to protect cross timbers habitat in an area where that resource is being depleted by development. Conservation of these smaller patches as open space will allow for the surrounding neighborhoods to continue to enjoy this natural resource that is iconic to the community. South of the Martin Luther King Jr. Freeway there are several large patches of green spaces that sit between a large industrial area and the residential areas to the west. Open space conservation in these areas will provide a natural buffer for residents of these neighborhoods while providing flood control around the intermittent creek that flows through it. These areas also sit adjacent to Prairie Dog Park, allowing for an opportunity to create a large contiguous complex of public lands that is largely made up of riparian forest.

FIGURE 32. Spotlight Area Map: Lake Arlington/Eastern Cross Timbers



Spotlight Area Lake Arlington/Eastern Cross Timbers



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SPOTLIGHT AREA

BENBROOK LAKE/FORT WORTH PRAIRIE

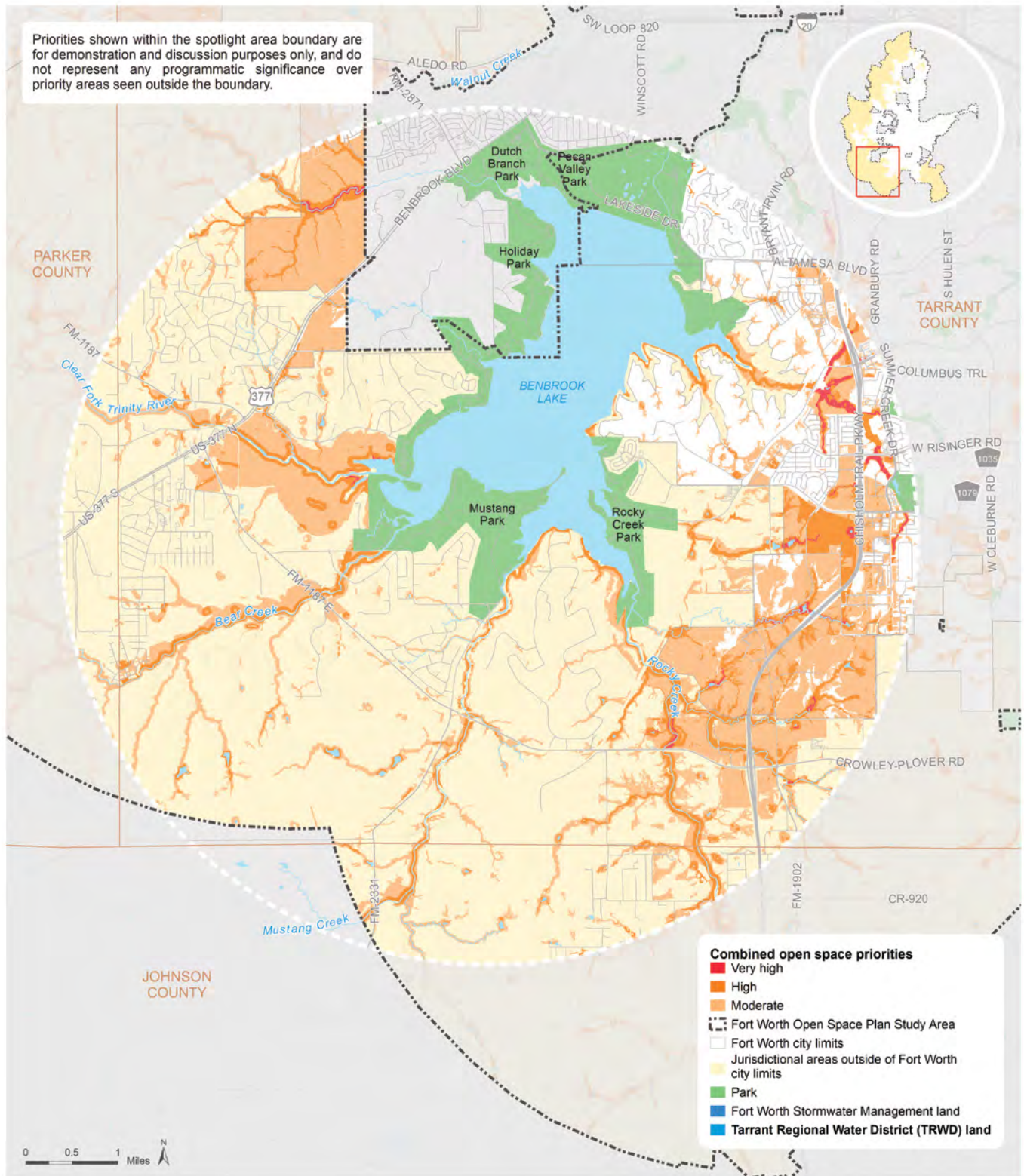


The view of Fort Worth Prairie from Brewer Boulevard. © Jason Flowers

The Benbrook Lake/Fort Worth Prairie Spotlight Area falls primarily within the extraterritorial jurisdiction (ETJ), although the area to the west of Benbrook Lake along the Chisholm Trail Parkway is in the City of Fort Worth. Fort Worth prairie habitat can be found in the large areas of contiguous, undeveloped land.

The streams and their tributaries that flow through this area into the lake are highlighted as open space priorities along their shorelines for flood control; stream, river, and lake health; and ecosystem preservation. Most of the area is low-density rural residential, with smaller denser neighborhoods south of Highway 377 on the western side and along the Chisholm Trail Parkway on the eastern side of the spotlight area. The undeveloped lands that dominate this area provide opportunities to conserve large contiguous blocks of prairie habitat that can provide recreational access to these iconic habitat types. In addition, the large blocks of priority along Chisholm Trail Parkway are a very high priority for economic development, as these areas can provide a natural and desirable setting for businesses to develop around.

FIGURE 33. Spotlight Area Map: Benbrook Lake/Fort Worth Prairie



**Spotlight Area
Benbrook Lake/Fort Worth Prairie**



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SPOTLIGHT AREA

VILLAGE CREEK WATERSHED



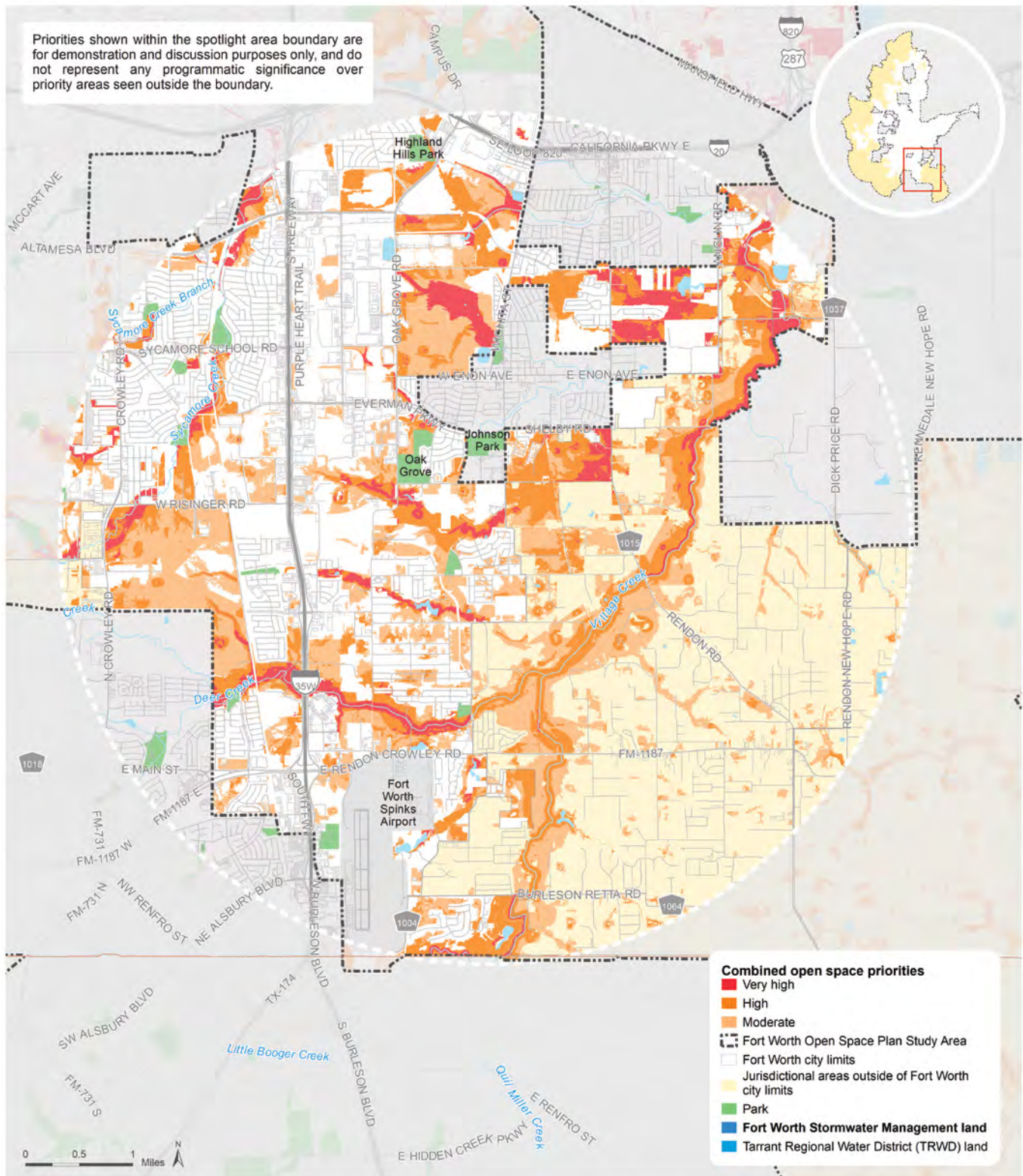
Deer Creek. © Jason Flowers

development priorities exist throughout this area, especially along the Purple Heart Trail. Conservation of open space near these areas will allow this growing part of the city to maintain its connection to the iconic prairies and riparian corridors and provide an enjoyable environment to attract businesses and a skilled workforce.

The Village Creek Watershed Spotlight Area includes a variety of different open space opportunities as the area contains a number of different land use types.

The southeast section is dominated by low-density rural residential land use, while the western section is made up mostly of denser single-family residential neighborhoods. The center of the spotlight area is made up largely of industrial-related land use types. The riparian corridors of Village Creek, Deer Creek, Sycamore Creek, and their tributaries provide high-priority and very high priority for open space as they offer benefits for flood control, ecosystem preservation, and stream, river, and lake health. East of the industrial areas are a number of green spaces and open fields near dense single-family residential neighborhoods that can be conserved to provide a buffer between these communities and the industrial areas west of them. These areas are a very high priority for both community health and equitable access to open spaces. West of the Purple Heart Trail and alongside both sides of West Risinger Road sits a large area of green space that provides an opportunity to conserve prairie habitat in an area surrounded by single-family residential neighborhoods. Economic

FIGURE 34. Spotlight Area Map: Village Creek Watershed



**Spotlight Area
Village Creek watershed**

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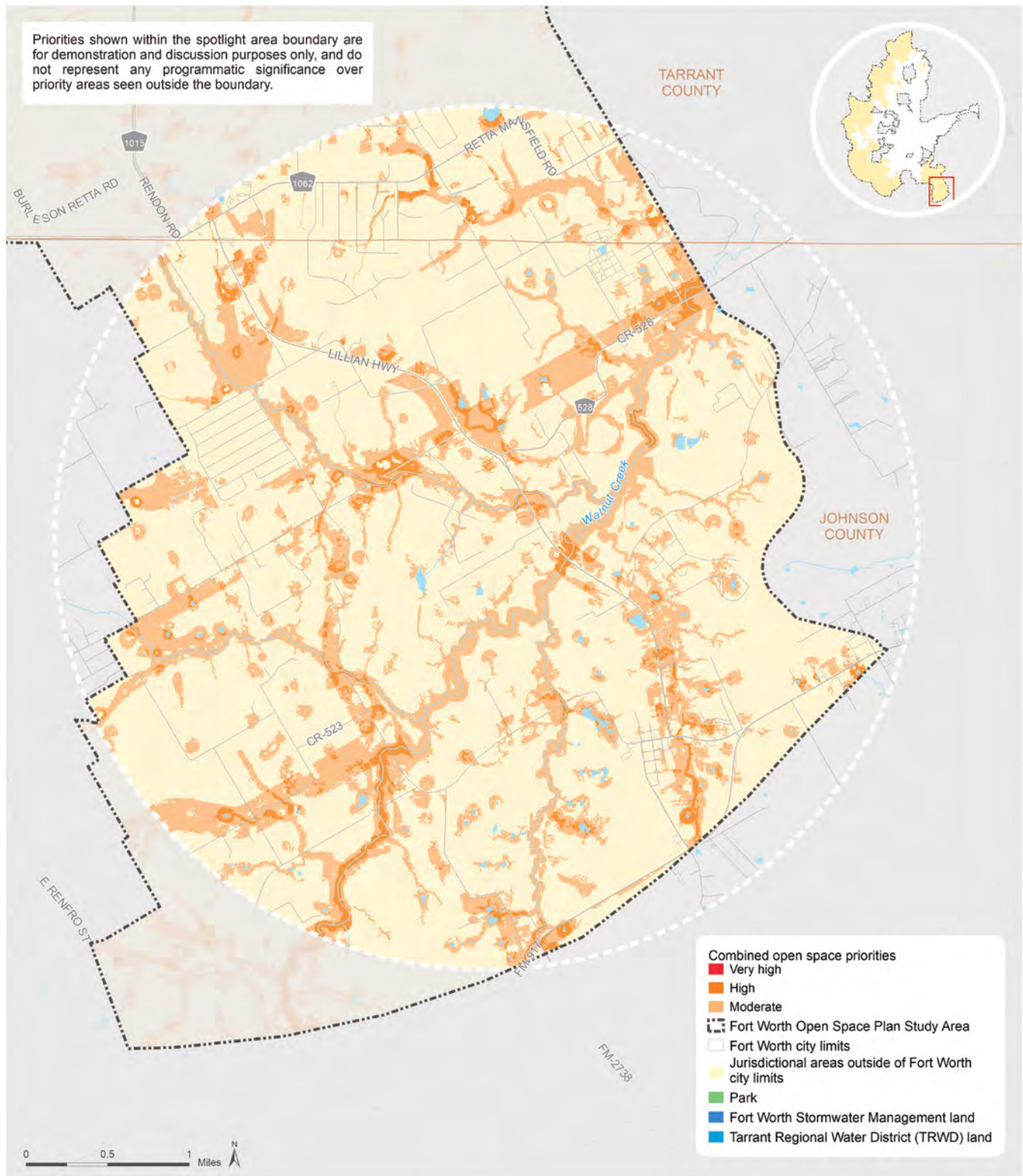
SPOTLIGHT AREA
UPPER WALNUT CREEK WATERSHED



Upper Walnut Creek. © Jason Flowers

The Upper Walnut Creek Watershed Spotlight Area sits on the southeast corner of the study area and is made up primarily of low-density rural and suburban residential land use. Priorities for open space can be found alongside Walnut Creek and its tributaries. These priority areas overlap the flood control, ecosystem preservation and stream, river, and lake health priority areas. Recreation priorities for trail connectivity can also be found along the creeks found throughout this area and along County Road 528 and County Road 523.

FIGURE 35. Spotlight Area Map: Upper Walnut Creek Watershed



Spotlight Area Upper Walnut Creek watershed



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THE MARSH BOARDWALK AT FORT WORTH
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