

Parks, Trails and Open Space

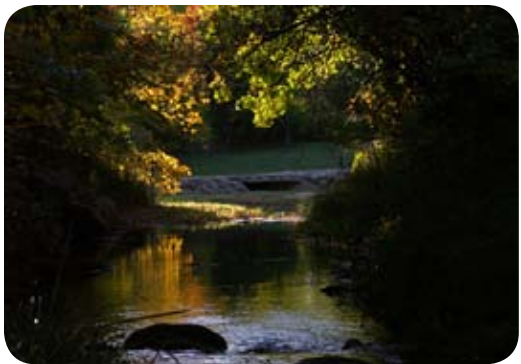
Introduction

This chapter of Tulsa’s Comprehensive Plan describes how *Our Vision for Tulsa* will bring “nature into the city” for current and future residents and visitors, through a robust and interconnected network of parks, trails and open space for the City of Tulsa. The goals and policies at the end of this chapter will guide the City in efforts to protect sensitive landscapes threatened by future development, and to best buffer and complement the relationships between the built and natural environments in regards to new construction, redevelopment, and land use changes. The goals and policies will also provide guidance for sound decisions related to open space, parks, and natural areas and support of natural systems within the city.

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Parks, Trails and Open Space **Part I:** The Value of Parks and Open Space



Travertine Creek, in the Chickasaw National Recreation Area, located in the foothills of the Arbuckles near Sulphur.

Beautiful, inspiring, and accessible parks and open space are essential to the health of a city. The American ideal of unrestricted public access to nature and natural areas represents democracy in action and a highly-valued aspect of American life. Starting in the late 1800s, the United States government designated certain areas with unprecedented natural beauty for public use, thus unavailable for industry and development, to ensure that all people — regardless of wealth or position in society — might enjoy them. This concept did not exist in Europe or elsewhere around the world, where areas of natural beauty were controlled as the private estates of aristocrats. The result of this uncommon, populist policy — called America’s best idea — was the establishment of a national parks system that continues to protect grand landscapes such as Yosemite, Yellowstone, the Grand Canyon, and in Oklahoma, the Chickasaw National Recreation Areas (originally known as Platt National Park).

Subsequently, the national parks movement spurred local communities to develop their own parks programs and to designate open spaces for the benefit of their citizens. Access to parks and open space generates direct and indirect benefits to communities including: access to natural beauty, improved public health, more opportunities for family interaction, civic pride and community cohesion, tourism spending, stormwater retention and pollution mitigation.

Economic Value

Natural areas, parks and green/open space can provide important benefits in ways that reduce local infrastructure costs and actually improve environmental health, including stormwater management, air pollution mitigation, and

urban cooling. Recent studies concur that parks have a positive impact on nearby residential property values. For example, the Trust for Public Land calculates that all dwellings within 500 feet of parks enjoy at least a five percent increase in assessed property value.¹ Superior parks and open space also draw employers who are in turn able to attract high caliber workers interested in quality of life amenities Tulsa can offer.

Health and Community Value

Parks provide respite from the built environment and the rigors of urban living. As places where people gather to celebrate important occasions, interact as a community, play sports and exercise, and even grow gardens, parks often allow urban dwellers to experience nature in their daily lives. Recent research suggests that access to parks encourages exercise and physical activity that leads to direct health benefits,² increasingly important as we learn more about health problems such as heart disease and diabetes, with direct links to lack of exercise and physical inactivity. Parks and open space also build social capital and the sense of community by providing places and activities for neighbors to gather and develop human relationships. Whether at sports fields and facilities, park benches or flower gardens, hiking trails or nature study classes/events, parks and open space encourage community interaction, communication, and cohesion.

Environmental Value

Parks and open space provide habitat for flora and fauna in an increasingly urban world. Parks and open space connected by a system of natural corridors provide

wildlife with the ability to migrate more successfully and therefore support regional ecosystems. The trees, shrubs, soils, and plants within our parks and open spaces filter environmental pollutants to cleanse our environment for the benefit of all living things.

As cities increase the amount of impervious surfaces — or “hardscape” — such as sidewalks, roads, buildings, and parking lots, they also increase the amount of water runoff. When rainfall hits pavement or other hard surfaces it isn’t able to soak into the soil. Instead, runoff funnels into storm drains that lead to our local streams and rivers such as the Arkansas River. Excess runoff can cause flash flooding and increase the filtration and treatment burden on water treatment facilities, which is both expensive and resource intensive. Parks and open space allow natural filtration through absorption by collecting precipitation and runoff in plantings, tree wells, and soil. Allowing rainwater to naturally recharge benefits groundwater supplies and capitalizes on the pollution filtration of plants and soil.

Air pollution in urban areas is a costly and significant concern because of its impact on young children and aging populations, overall community health, and the destruction of infrastructure. Smog, acid rain, greenhouse gases from oil combustion, and air pollutants are dangerous to the health and well being of any city. Trees, shrubs, and leaves of plants provide a critical filtration service by actively removing nitrogen dioxide, sulfur dioxide, carbon monoxide, ozone, and some particulates. Parks and urban trees also absorb pollutants including carbon dioxide, providing an important carbon sequestration sink and improving local air quality.

¹ Peter Harnik and Ben Welle, *Measuring the Economic Value of a City Park System*, The Trust for Public Land, 2009, p 1.

² Peter Harnik and Ben Welle, *Measuring the Economic Value of a City Park System*, The Trust for Public Land, 2009, p 7.



OPEN SPACE AND PARK BENEFITS FOR TULSA

Parks and open space provide:

Recreational opportunities like hiking, walking, swimming, sports, gardening

Community gathering places for picnics, barbeques, and parties

Shade and sunlight throughout the seasons

Stormwater retention and filtration

Air and water pollution filtration

Natural beauty, inspiring views and vistas

Reflection and communion with nature

Habitat for diverse flora and fauna

Improved home values

Transportation Value

By connecting parks and open space with recreational, multi-use, pedestrian and bicycle trails, people, families, workers, and wildlife can more easily reach important destinations. Surveys conducted in 2009 during the development of the master parks plan for Tulsa found, in particular, that residents want better bike and pedestrian connections and trails between work, school, and home. Safe routes to school should include bicycle trails and paths that provide quick and safe transfer between neighborhoods, and to and from school facilities. Improved pedestrian and bicycle connections to community facilities such as schools, libraries and city services, as well as work places encourage people to walk or bike, thus improving public health and air quality and requiring less reliance on automobiles.

Trails and bike and pedestrian paths also serve as low cost transportation alternatives that serve multiple purposes. Natural corridors between open space areas are important for migrating wildlife to reach food and link to critical habitat and can simultaneously incorporate multi-use paths to connect pedestrian and bicycle transportation across the city.

Tourism Value

Parks attract visitors and contribute to the character and personality of a place. Mohawk Park, Turkey Mountain and River Parks are popular destinations in Tulsa that help define the city and invite others to come experience what's special here. Through destination parks and open spaces that attract non-locals to plan holidays and overnight stays in Tulsa, and to patronize the city's restaurants, shops, and accommodations, parks and open space can play an important role in Tulsa's tourism economy. Visitors come to Oklahoma — one of the most biologically diverse areas in North America — to experience the state's diverse ecoregions, including the Cross Timbers region in which Tulsa is located, and the nearby Tallgrass Prairie Preserve. The city has an opportunity to leverage the potential of nature tourism and become another great city built upon a foundation of world class parks and open space.

Parks, Trails and Open Space

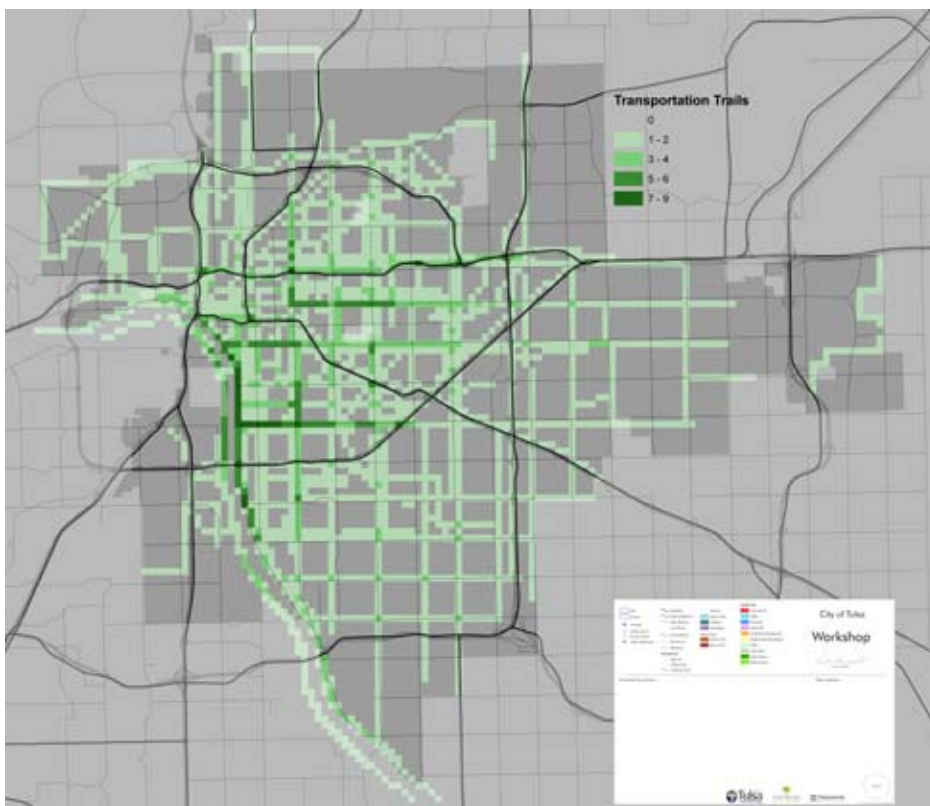
Part II: Public Input

PLANiTULSA Workshops

More than 1,500 participants attended a series of public events during the PLANiTULSA planning process including several city-wide workshops and seven small area workshops. Participants worked in groups to produce over 200 maps depicting their visions for Tulsa’s future. The resulting maps, showing how participants would accommodate future growth through land use and transportation changes, indicated a commonly held desire to increase the amount of

pedestrian and bicycle connections across the city, to make it easier to travel from neighborhoods to places of work, to schools, natural areas, and downtown. Figure 1 shows a composite workshop map where participants indicated a desire for new trails, bike boulevards, or other bike and pedestrian transportation infrastructure. In particular, participants in small area workshops noted how the parks and open space system could be improved in their respective communities.

Figure 1: PLANiTULSA Workshop Bike and Pedestrian Trails



In north Tulsa, participants said they want more trails to take advantage of natural areas and two new parks to serve existing neighborhoods with higher density development. Participants in east Tulsa said they want better access to parks and trails, to increase bike connections from neighborhoods, and to utilize the natural corridors within floodplain areas for trails and pedestrian links.

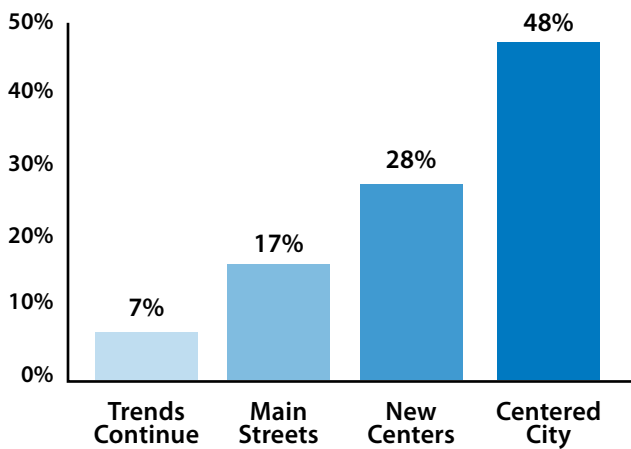
Source: Fregonese Associates

Parks, Trails and Open Space

PART II: PUBLIC INPUT

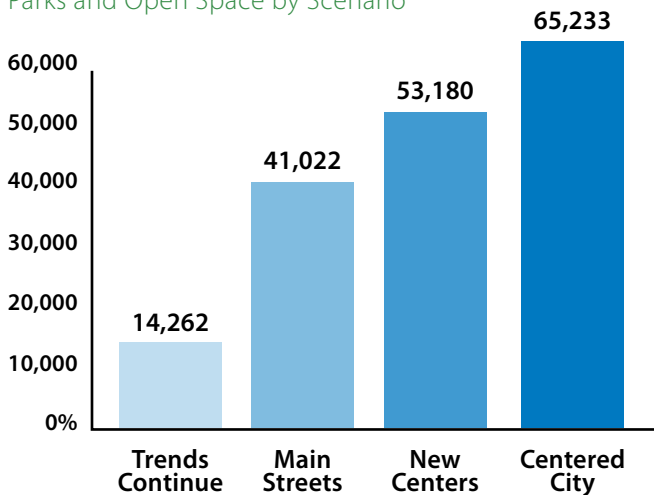
The only survey question that directly addressed the topic of parks and open space asked participants to identify the scenario that “makes it easy for me to access parks, the river, and open space.” Survey respondents chose Scenario D and C, respectively, as their first and second choice.

Chart 1: PLANiTULSA Survey Results — Scenario Preference for Access to Parks, the River and Open Space



Source: Fregonese Associates

Chart 2: Amount of New Residents Living Near Parks and Open Space by Scenario



Source: Fregonese Associates

PLANiTULSA Survey

During the PLANiTULSA planning process, the city conducted a survey designed to gauge the public’s preferences for the future of Tulsa. More than 5,500 people participated in the “Which Way, Tulsa?” survey, which was distributed at community events and meetings, and was available on the city’s web site. The survey presented a series of four growth scenarios — each telling a different story about Tulsa’s future — to test a range of growth impacts. Citywide and small area workshop inputs directly informed the development of these scenarios, which showed how different land use and transportation patterns could influence where people work, live, play, and how they get around town.

The PLANiTULSA survey results indicate that respondents want new households to locate close to existing parks and open space and/or be within walking distance of new parks and open space.

Tulsa Parks Master Plan Survey

During the development of the Tulsa Parks Master Plan, concurrent with the PLANiTULSA planning process, the City of Tulsa conducted a series of surveys through a random sampling of regional households and an open-link web survey, and a web survey distributed to agency representatives, stakeholders, and associations. In total, the city received 1,306 survey responses, which included many respondents particularly interested or associated with parks and open space. The surveys asked questions related to the type and frequency of use of parks and open space in Tulsa, the importance parks and open space have to the community, individual preferences regarding available services and facilities, and possible funding sources the city should consider in order to overcome budget shortfalls. The responses allowed the City to conduct rigorous analysis of public attitudes on parks and open space; a summary of survey results are available in the Tulsa Parks Master Plan Executive Summary.

Type and Frequency of Park Use

Among the facilities and amenities currently available in Tulsa, parks were used by the greatest proportion of respondents. Of survey respondents, nearly all had used a park at least once in the last 12 months, three-quarters had used city trails, and nearly 60 percent had visited a nature center or open space area. Close to half of respondents had used community centers and city sports fields at least once in the last 12 months. Recreation programs and outdoor swimming pools experienced the lowest utilization. According to respondents, city trails are the most frequently used facilities, with an average of 34.6 visits in the past 12 months. Parks are also frequently utilized, at 20.6 times a year. Other types of facilities were used substantially less often, each less than seven times per year.

Importance to the Community

It is clear that Tulsans highly value parks and open space in the city. All types of facilities were rated “very important” by a strong majority of respondents. Parks were top rated, with 94 percent of respondents “very important” rating. The other facilities in rank order included: city trails, city athletic/sports fields, community centers, recreations programs, and outdoor swimming pools.

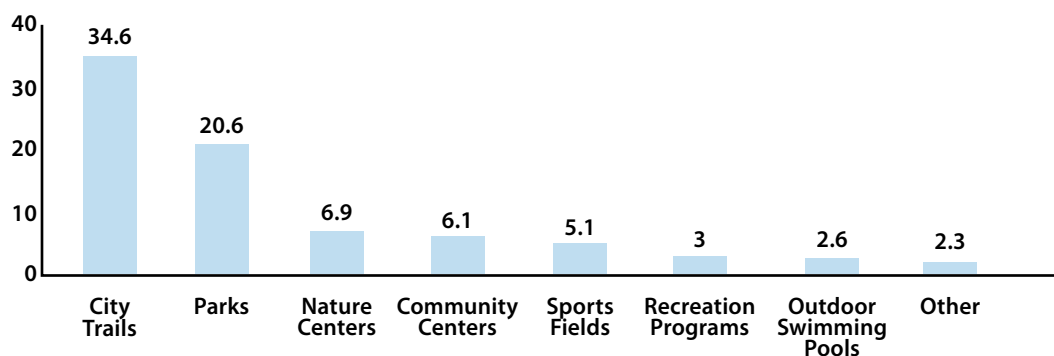
Satisfaction

Tulsans are also generally satisfied with existing park facilities. Respondents were asked how well parks, recreation facilities, and programs meet the needs of the community. Both parks and city trails received high positive satisfaction ratings, with over 75% of respondents very satisfied. Well over a majority of respondents also expressed satisfaction with the following facilities: city athletic/sports fields, community centers, nature centers or open space areas, and recreation programs. Outdoor swimming pools received the lowest satisfaction rating.

Areas of Improvement

Respondents were asked about the types of barriers that prevent them from using city facilities and possible areas for improvement. Safety and security were the top-cited concerns that prevented respondents from using facilities. Other major barriers to use included the need for more restroom facilities, and a lack of awareness of the facilities and amenities offered by city parks. The survey provided a list of outdoor facilities that could be added, expanded, or improved. The results show that additional trails, trail connections, playgrounds, and restrooms are most important facilities desired by Tulsans.

Chart 3: Current Usage of City of Tulsa Facilities and Programs – Average Frequency of Use in the Last 12 Months



Source: Tulsa Parks Master Plan Draft, 2009

Mohawk Park is a regional attraction for Tulsans of many ages.



Funding Sources and Future Direction

Respondents were asked how to best cover the funding gaps needed to pay for operations and maintenance costs of new parks and recreation facilities and programs in the future. The respondents favored the creation of a new dedicated funding source through a vote of the people: nearly two-thirds of respondents were “strongly in favor” of this option as opposed to 17 percent who were “strongly opposed.”

The survey asked respondents if they were willing to support a number of different funding mechanisms to pay for operations and maintenance costs of new parks and recreation facilities, trails, and programs in Tulsa. The reallocation of general sales tax funds and fees from unobtrusive oil drilling in large tracts of undeveloped park land received the strongest support with 53 percent saying they would “definitely” or “probably” support such option.

Parks, Trails and Open Space

Part III: Nature in the City

As outlined in the previous sections, parks and open space provide extensive value with multiple benefits. Parks and open space add economic value to properties and the city's tourist economy, improve the health and well being of the community, and provide important ecological function to maintain a clean environment. To fully capitalize on these benefits, the City of Tulsa wants to expand and enhance our current parks, trails, and open space areas into a more robust and interconnected regional parks and open space system.

Tulsans also recognize we need to protect and capitalize on the city's local natural assets, including Mohawk Park, the Arkansas River, Turkey Mountain Urban Wilderness Area, and more than 100 miles of existing regional trails. Tulsans want to maintain these assets for children in the community, future generations, and where possible, bring nature and parks into the city for everyone to enjoy.

Bring Nature into the City

Our Vision for Tulsa calls for integrating natural areas into the fabric of the city. Access to Tulsa's natural environments should not just be found in the suburbs but also throughout the city, in the form of pocket parks, street trees, large scale regional parks, nature parks, riverfront trails, community gardens, and undeveloped natural areas. Even small pocket parks can provide important ecological function such as filtering runoff by way of vegetated bioswales along parking lots, commercial buildings, and city streets. Natural parks with limited paving can absorb excess precipitation and provide habitat even within the

confines of a downtown block. And areas of small habitat such as butterfly gardens can benefit important pollinators and birds, as well as offer color and beauty to employees and visitors enjoying an outdoor urban space. Throughout the city, in small patches and larger swaths, nature should be a visible and therapeutic buffer to the noise and starkness of the built environment.

Because more and more people will likely move to cities in the future, it is critical to make cities beautiful, healthy and enjoyable places. Bringing nature into the city can be achieved through many means, including innovative stormwater management practices, connecting the city with bike and pedestrian paths, distributing parks and open space equitably and regionally, restoring ecological function through hybrid parks and other strategies, and strengthening our connections to the Arkansas River.

Lead in Stormwater Management

Already the City of Tulsa is a leader in floodplain and stormwater management and design, evidenced by Rooftop to River, the Tulsa program for urban watershed management, and innovative incentives that engage property owners in on-site stormwater management. Expected increases in region-wide development and urbanization, however, indicate that more can be done. New programs could include design competitions, education, and training for the creation of landscaping treatments on public as well as private land that absorbs stormwater while also providing some habitat such as rain and habitat gardens at schools, in backyards, and eco-roofs on municipal buildings.

Provide Quick and Safe Access to Parks and Open Space

Within existing neighborhoods and future areas of growth, the city needs to work with developers, park planners, the county, and others to ensure that all residents enjoy quick and safe access to parks and open space from their homes, schools, neighborhoods and work places. From these places, residents should have ready access to parks and open space, ideally within a five-minute walking or biking distance. Parks and open spaces serve our neighborhoods and communities as places where community members gather, interact, and learn from one another. Our parks need to be safe, functional, well-maintained, and distributed around the city and the region so that all neighborhoods enjoy equal right to public parks and open space facilities.

Safety and security are also very important considerations. Careful planning needs to occur to ensure city parks have “eyes on the park” throughout the day and evening to keep activities and people safe and protected. This may entail encouraging the development of mixed-use buildings near parks, where businesses and residents provide a steady stream of people watching over the park environment. Parks in residential areas need proper lighting, posted hours of operation, security when necessary, and removal of any hazards such as poisonous plants to ensure a family-friendly and safe environment.

Coordinate Distribution of New Parkland

It will be important for the city and its Parks Department to work with the Tulsa’s three independent school districts — Tulsa Public Schools, Union, and Jenks — to coordinate the distribution, maintenance, and location of area pools, parks, sports fields, and other amenities across school and public land to ensure a cost

effective and equitable system without overlap, waste, and missed opportunities. The city needs to identify and build new funding sources for the provision of parks system planning and maintenance to improve and update existing facilities and build new facilities such as fountains, plazas, water features, hybrid parks designed to enhance ecological functions and pocket parks that encourage positive family and community interaction and gathering. Additionally, the city must identify underserved areas and communities lacking significant or high quality parks, open space areas, and community facilities and develop a comprehensive plan to fill the gaps in order to ensure an equitable distribution of open space and park facilities across the city regardless of socioeconomic status. Many of the parks facilities need renovation and upgrades to adapt to the community’s changing needs and activity preferences.

Restoring Ecological Function

Starting with an inventory of native landscapes, wildlife corridors, pristine ecosystems, and natural areas, the City can focus growth away from such areas and work with other regional partners including the county, state, federal government, and nonprofit organizations to acquire and protect these important natural habitat areas. In addition the city should work with the parks department and other partners to restore ecological function and natural habitat within its network of regional open spaces including the Turkey Mountain Urban Wilderness Area, Mohawk Park, and sites along the Arkansas River. These regional parks include some untouched habitat that requires support and protection from further disruption. Restoring ecological function will include fighting non-native species which increasingly threaten and displace native plants and animals, conducting habitat restoration such as native plantings, and restoring riparian and wetland function and flow.

In tandem with the strategy of directing development away from sensitive and threatened wilderness and habitat areas, the City of Tulsa can protect and enhance the natural environment within the city. The City can design parks that help restore ecological function, provide local and migrating bird habitat, restore urban streams, reduce flash flooding by sustainably managing stormwater runoff, and renaturalize green spaces using native plants. These strategies lessen some park maintenance costs, where native grasses and plants require no mowing, lessen the need for fertilizers or herbicides, and help restore the connection Tulsans have to the beautiful and threatened natural environment of the tallgrass prairies. These “hybrid” parks within cities have an important role to play by providing fringe habitat for songbirds and pollinating insects that support regional agriculture and natural plant propagation, and by offering people opportunities to learn and connect with natural systems.

Strengthen Connections to the River

The Arkansas River runs a vital lifeline through the city of Tulsa, valuable not only for trade and recreation, but also as habitat for many types of wildlife. The river area supports industry, provides natural habitat, offers a place for recreation and exploration, and provides a venue for large outdoor events and entertainment. The river supports some of the last remaining habitat for the endangered Interior Least Tern, as well as winter habitat for bald eagles. These areas need to be protected and buffered from possible disturbance or future development.

Through the PLANiTULSA planning process, Tulsans indicated a desire for better connections to the river to help make the river part of every day life in Tulsa. The City envisions an interconnected system of riverfront bike and pedestrian trails across bridges and into the

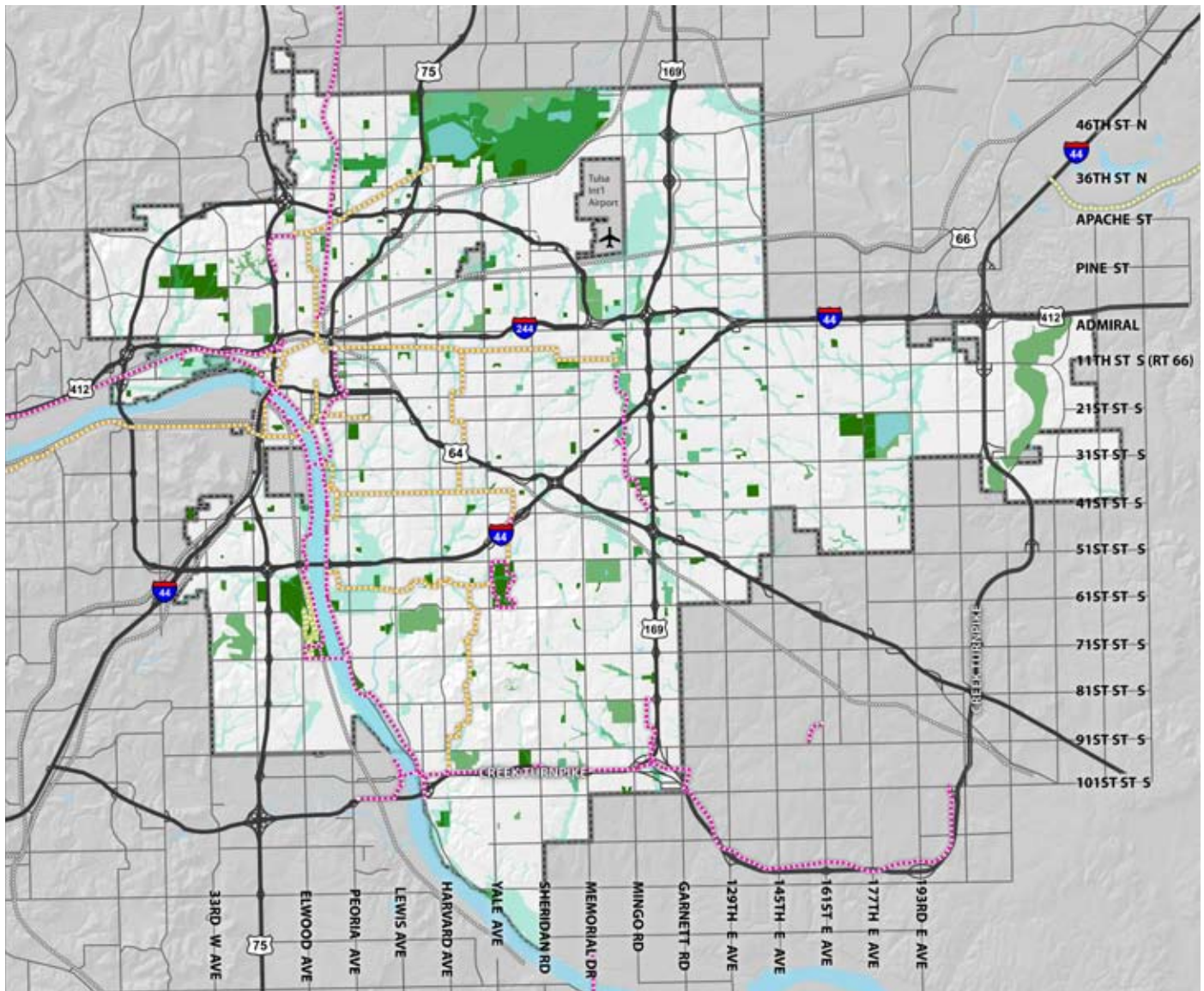
downtown to allow workers, students, and residents to reach the city center, midtown, and local as well as regional destinations. Riverfront paths that are separated from roads provide recreational opportunities and safer passage than bike lanes along roadways. Often the source of great civic pride and supported by river parks, these amenities invite artists, families, workers on lunch breaks, tourists, and others to relax and enjoy the surroundings. The riverfront can host festivals and events such as a summer concert series, rallies and speeches, music festivals, boating events and other cultural fairs. Continued investment in the river area is important to maintain and improve it for enjoyment of all Tulsans.

In riverfront areas that can support new development, urban design and construction should be oriented toward the river, include a mix of uses, and capitalize on the river’s recreational and scenic qualities by including patios, gardens, seating areas, and public spaces with river views, and river access via trails. The riverfront can become a vibrant center of around-the-clock activity that includes residences, offices, restaurants, retail, and specialty businesses catering to residents.







Parks, Trails and Open Space

PART III: NATURE IN THE CITY

Figure 2: Tulsa Parks, Trails and Open Space Map



Source: Fregonese Associates

-  Multi-Use Trail
-  Bicycle Trail
-  Hiking Trail
-  Parks
-  Open Space
-  Floodplain

Tulsa Goal 2030

Tulsa 2030 Goal, the growth and development concept that will serve as a benchmark for the Comprehensive Plan, was designed to improve supply and access to parks and open space in Tulsa.

The following tables presents a comparison of the Trends Continue scenario and the Tulsa 2030 Goal. In part, due to the larger amount of total development in the city under Tulsa 2030 Goal, a greater amount of new parkland would be created.

The number of new Tulsans with access to city and regional parks would also be much greater under Tulsa 2030 Goal. Over three times as many households and nearly four times as many jobs would be located within one-half mile of parks.

Tulsa 2030 Goal would result in greater support for park and open space resources by bringing more people within closer walking distance. Parks thrive when they can serve as the center of a community or neighborhood, and have many users throughout the day.

Table 1: Scenario Comparison of New Parkland

	Trends Continue	Tulsa 2030 Goal
New Parks (acres)	167	349

Source: Fregonese Associates

Table 2: Scenario Comparison Access to Parkland

	Trends Continue	Tulsa 2030 Goal
Added Housing Units within 1/2 mile of Parks	6,483	21,073
Jobs within 1/2 mile of Open Space	5,915	19,443

Source: Fregonese Associates

Parks, Trails and Open Space

Part IV: Tulsa's Green Infrastructure

In-town parks provide places to relax, walk the dog, and gather for picnics and sporting events.



Green infrastructure encompasses the entire network of environmental assets and interconnected system of floodplains, wetlands, riparian areas, tree canopy, parks, open space, and other undeveloped natural areas in a region. Cities depend upon green infrastructure for stormwater collection and filtration, natural cleansing of pollutants, flash flood mitigation, urban heat island moderation, wildlife habitat corridors, as well as for the public's recreational enjoyment. Green infrastructure provides important ecological functions including supporting healthy soils and clean water, and provides places for people to play, reflect, and enjoy the outdoors.

Tulsa's Natural Environment

The City of Tulsa is located in the crosstimbers and southern tallgrass prairie ecoregion of northeastern Oklahoma, a land of variable soils, prairie grasses, oak woodlands, hardwoods, and the historic home of buffalo and antelope. This ecoregion acts as a link in the chain of oak forests that extend from Canada to Central America, providing critical habitat to migratory birds. This habitat is now under threat of fire suppression, urbanization, and invasive species such as the eastern red cedar.³ The City of Tulsa can help protect the last remaining areas of this ecoregion within city boundaries by focusing new housing and business construction within existing areas of development and actively identifying and protecting remaining vestiges of this habitat at risk from future development.

³ *The Nature Conservancy, The Crosstimbers and Southern Tallgrass Prairie Ecoregion: Preserving the Last Remnants of the Fertile Blackland Prairie.*

Tulsa Parks and Open Space

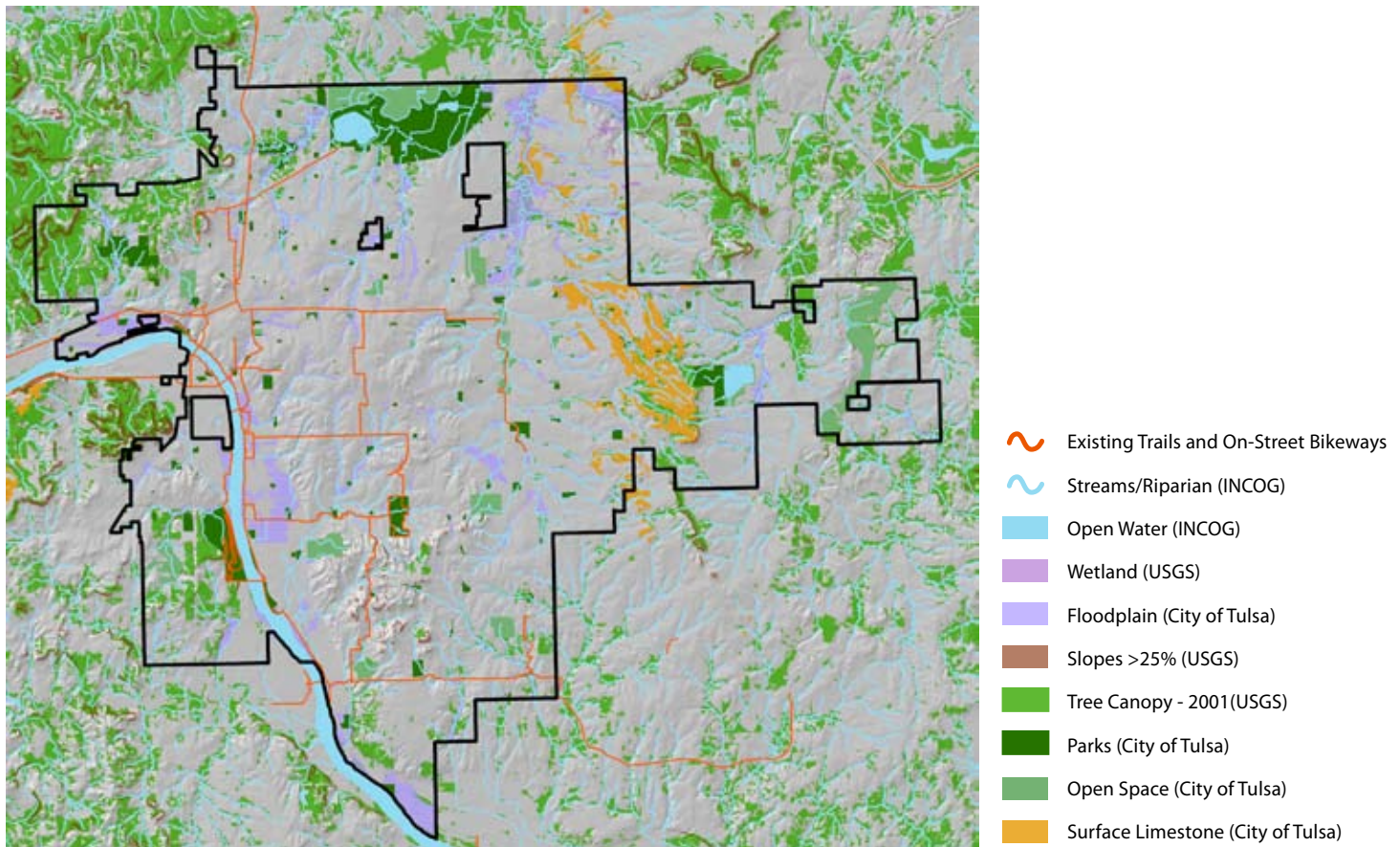
The City of Tulsa manages 130 parks covering roughly 6,000 acres and including nature centers, golf courses, the WaterWorks Art Studio, Clark Theatre and Heller Theatre at Henthorne, Tulsa Zoo & Living Museum, and the Tulsa Garden Center. The Tulsa parks system includes many swimming pools, sports fields, playgrounds, tennis courts, water playgrounds, The River SkatePark, picnic shelters, community centers, fitness facilities, gymnasiums, meeting rooms and facilities, trails and more. Based on the findings of the Tulsa Parks Master Plan, Tulsa has a well-distributed system of parks and recreation facilities that meets a wide range of needs. The City is now challenged to maintain its existing infrastructure of aging parks and to bring its parks and recreation system into a new century of needs, desires, and conditions.

Table 3: Tulsa's Green Infrastructure

Land Characteristic	Acres
Total Land within City Limits	128,397
Water (rivers, streams)	2,486
Riparian Habitat	4,719
Wetlands (including buffers)	193
Floodplain	16,316
Steep Slopes (25%+)	366
Constraints Subtotal	24,080

Source: Fregonese Associates

Figure 3: Tulsa's Green Infrastructure



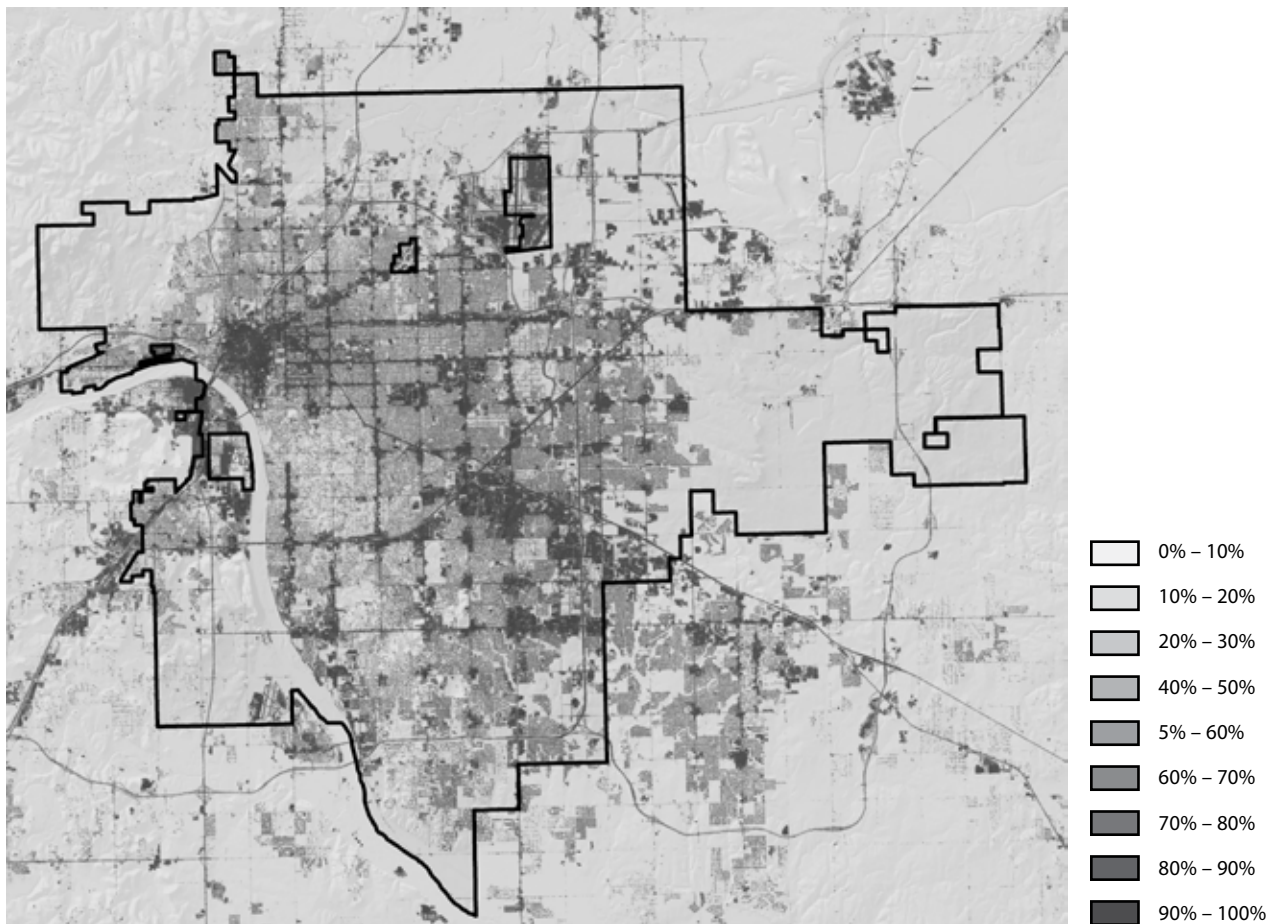
Source: Fregonese Associates

River Parks

Tulsans enjoy access to over 800 acres of riverfront land stretching 42 miles along the Arkansas River through a public trust created by the City of Tulsa and Tulsa County called the River Parks Authority. The River Parks Authority strives to maintain, enhance and develop the Arkansas River and land adjacent to the river for the economic and cultural benefit of the community and to promote public use of all River Parks land and facilities. River Parks includes an extensive trail system that weaves together public art, family picnic areas, open lawns, a wilderness refuge at Turkey Mountain,

and community facilities such as an amphitheater and a floating stage. River Parks offers many popular recreational areas including Zink Dam and Lake, the Turkey Mountain Urban Wilderness Area, and areas for fishing and rowing. The area includes a total of 26 miles of asphalt-surfaced recreational trails that incorporate picnic areas, playgrounds, fountains, bronze wildlife sculptures, sweeping city views, and rugged hiking and equestrian trails. Through River Parks, the River Parks Authority demonstrates how public and private partnerships can successfully provide valued public services and amenities.

Figure 4: Tulsa's Impervious Surface



Source: Fregonese Associates

Turkey Mountain Urban Wilderness Area

The Turkey Mountain Urban Wilderness Area which is managed by the River Parks Authority, includes hundreds of acres of undeveloped property along west bank of the Arkansas River. At an elevation far above the river, this area offers spectacular views of the city as well as access to the river, oak forests, two large ponds, migratory bird viewing, and hiking, mountain biking, and horseback riding trails. The area supports many migratory birds including warblers, tanager, grosbeak, flycatcher, and other residents such as screech owls and woodpeckers. Turkey Mountain is a treasured escape from city life into wilderness.

Pedestrian and Bicycle Trails

The Tulsa area residents enjoy an interconnected system of bicycle and pedestrian trails maintained by several different entities including the City of Tulsa's Parks Department, Public Works Department, River Parks Authority, Broken Arrow Parks, Tulsa County Parks, Jenks Parks Department, the Town of Skiatook, and the City of Sand Springs. The city offers many north-south bike routes. The key trail corridors include the Riverparks Trails from 11th Street to 101st Street (east bank) and from Southwest Boulevard to Turkey Mountain (west bank area); the Mingo Trail, the Osage trail and the Creek Turnpike Trail. The Tulsa Trails are part of a 283-mile planned trail system envisioned in the Regional Trails Master Plan. The current system of trails provides a solid foundation from which to expand and connect to underserved parts of the city and create a larger and more interconnected system to support bicycle and pedestrian travel and recreation throughout the region and the inner city. In particular, the east and northeast parts of the city have limited bike and pedestrian trails and should be the focus of future trail development, acquisition, and expansion.

River Parks and bike and pedestrian trails provide recreational and transportation options for many Tulsans.



Parks, Trails and Open Space

Part V: Tulsa Parks, Trails, and Open Space Plans

Arkansas River Corridor Master Plan

The Indian Nations Council of Governments (INCOG) completed the Arkansas River Master Plan in 2005 to develop a “multi-purpose, conceptual, comprehensive Arkansas River Corridor Plan that addresses flood damage reduction, ecosystem restoration and economic development opportunities consistent with the communities overall vision for growth and development.”⁴ The plan identifies ways to create a meaningful connection between the riverfront and surrounding communities. The plan examined economic, physical, environmental, ecological, and legal constraints and identified opportunities to achieve the “highest and best” use of the river land through projects like low water dams, an expanded trail system, ecosystem restoration, bridge construction, and the selection of development opportunity areas. The Army Corps of Engineers will use the plan as a framework to work with public agencies and other groups to implement projects. In general, the Arkansas River Corridor Vision and Master Plan reflect the same underlying values identified during the PLANiTULSA process: connecting people with nature and expanding opportunities for living, working, and recreation.

Tulsa’s Comprehensive Plan has been designed to reflect the vision and goals of the Arkansas River Corridor Master Plan. Plan categories and zoning designations along the riverfront should be applied in a manner that supports the concepts detailed in the Master Plan.

City of Tulsa Parks Master Plan

Concurrent with the update of the Tulsa Comprehensive Plan, the City of Tulsa developed a new Parks Master Plan in 2009. The Tulsa Parks Master Plan provides a clear direction for the park system and establishes goals and strategies to pursue in the future. The Tulsa Parks Master Plan has been directly integrated into the goals, strategies, and actions outlined in Part VI of this chapter.

During the parks master planning process, the City of Tulsa learned it has a well-distributed system of parks and recreation facilities that serve a wide range of needs. Although the parks service area is vast and spread out, most communities have good access to parks. An inventory of park land determined that,

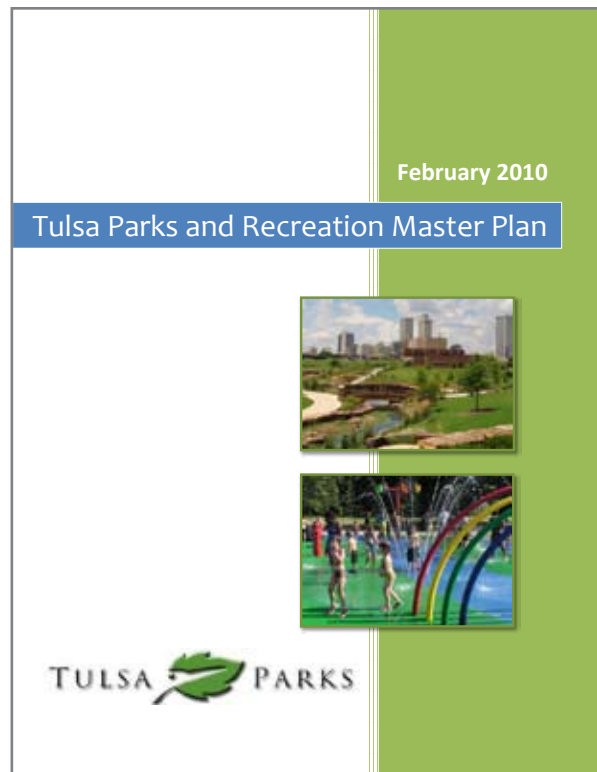
⁴ The Guernsey Team, *Final Arkansas River Corridor Phase II Master Plan and Pre-Reconnaissance Study*, presented to the Army Corps of Engineers, October 2005.

with 22 acres of park land per 1000 persons (8,321 acres of total park area), the city determined that it provides an adequate amount of park land for a mid-sized city with a low population density. The City recognizes gaps on a small scale where additional park land could augment the quality of life in certain areas, but all developed areas of the city do have access to some type of park land.⁵

Instead, the city will focus on the quality and spatial distribution of services and amenities that park lands provide to patrons in areas throughout the city. Many community facilities such as swimming pools or playgrounds, are aging, and in need of repair. Similarly, the condition of many Tulsa parks, which were either built or dedicated during the same time period — many in the 1960's — warrants replacement, refurbishment, or repurposing.⁶

Tulsa's parks system recognizes the need to adapt and respond to the changing needs, lifestyles, and desired activities of the region's population. Parks patrons in various age groups have expressed interest in new activities such as rock climbing, skateboarding, and yoga, and expanded activities for seniors, if such programs were available through community centers and parks. The city should conduct an organized inventory and evaluation of existing park facilities to determine which facilities could use maintenance, repair, and upgrading, and which warrant replacement. From this comprehensive survey, the City can then establish a priority-based system for repairs and replacements.

Figure 5: Tulsa Parks Master Plan



Source: City of Tulsa

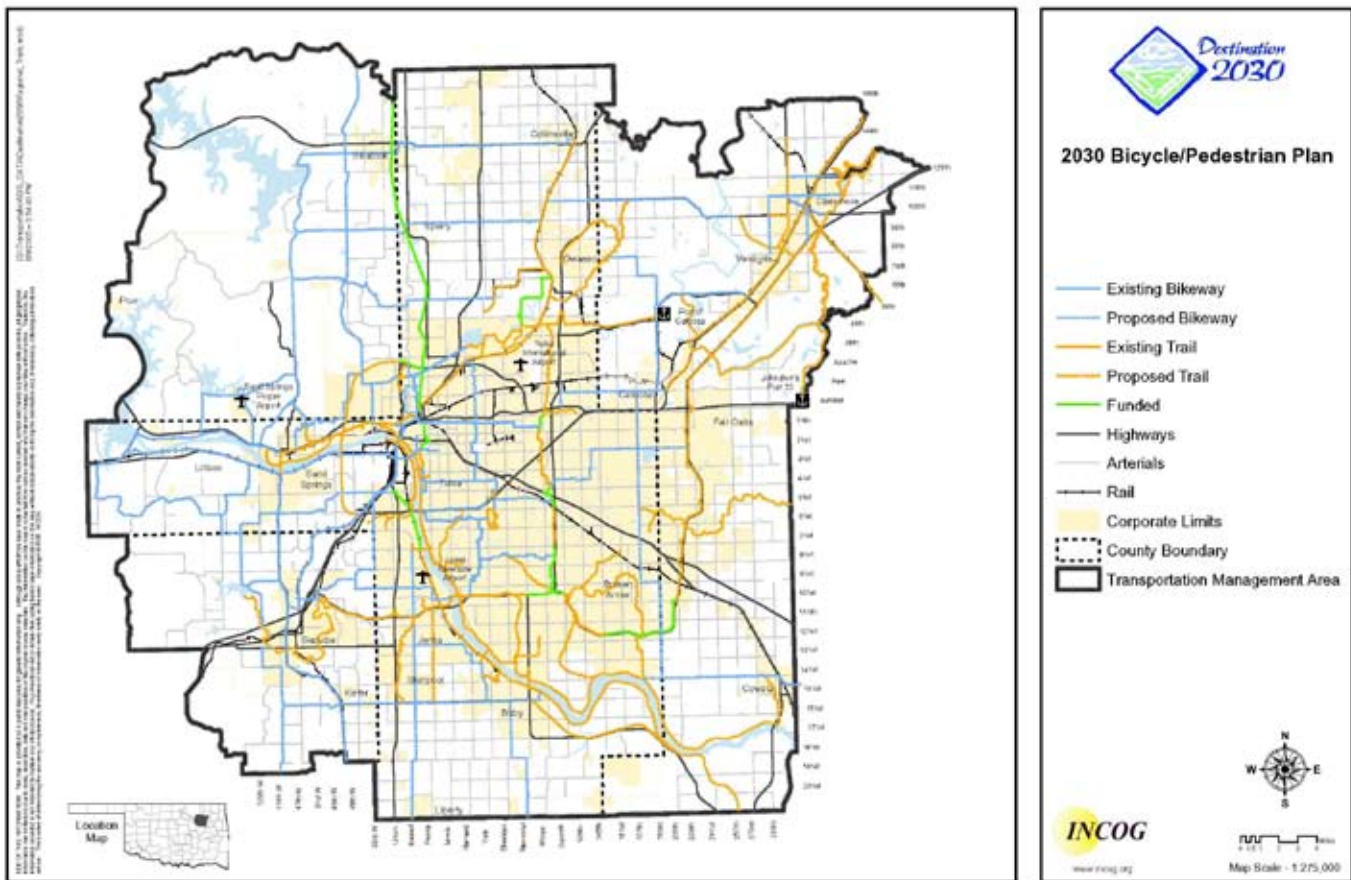
⁵ City of Tulsa Parks Department, *Parks Master Plan*

⁶ *Ibid.*

Destination 2030 Bicycle/Pedestrian Plan

INCOG developed the Destination 2030 Long Range Transportation Plan (LRTP), which anticipates transportation needs for 25 years into the future. The plan's geographic extent includes the 1,200 square miles of the Tulsa Transportation Management Area comprising Tulsa County, portions of Creek, Osage, Rogers, and Wagoner counties and cities within the region, including Tulsa. The LRTP includes a series of planned bikeways and trails for 2030 that will be pursued cooperatively by the city, county, and INCOG.

Figure 6: INCOG 2030 Bicycle/Pedestrian Plan Map



Source: INCOG

Guiding Principles for Parks, Trails and Open Space

Capturing these hopes, dreams and aspirations for Tulsa's future is essential as we move forward in making our future vision a reality. The Citizens' Team, a diverse group of volunteers, developed the following guiding principles. These principles serve as the foundation for future planning efforts, and will ensure that the comprehensive plan remains consistent with the vision.

- Residents have easy access to parks and natural areas.
- City parks provide open space, available to each neighborhood, with access to fields, natural areas and greenways for outdoor relaxation and recreation.
- Schools are safe, easy to walk to, and part of a world-class education system.
- Once adopted, city-wide and neighborhood plans are funded, implemented and monitored for performance.
- Tulsa is a cohesive city where we have the ability to create safe, healthy lives for ourselves and our families.
- The arts as well as cultural and historic resources are celebrated.
- The disparity in life expectancy between areas of the city should be eliminated by addressing access to services and public health issues.

Parks, Trails and Open Space

Part VI: Priorities, Goals & Policies

This section is organized into priorities, goals and policies that if followed will move Tulsa towards the community's vision.

Priorities are the big idea topical areas that address the guiding principles. They capture big picture changes that must occur to implement the plan.

Goals establish specific, measurable, attainable and realistic objectives that guide plan implementation by ensuring that the community and stakeholders have a clear awareness of what must happen to move Tulsa toward the Vision.

Policies delineate the steps needed to achieve the goals.

IMPLEMENTATION & ACTION PLAN:

*In addition to **priorities, goals and policies**, the Plan recommends the **Strategic Actions** that should be taken in the first 3 to 5 years following plan adoption. These strategic actions are found in the Implementation and Action plan.*

Parks, Trails and Open Space Priorities

Parks, trails, and open space-related land use decisions should focus on ensuring that Tulsans live within walking or biking distance of a quality neighborhood park and that Tulsa's natural environment be integrated into the fabric of the city. *Our Vision for Tulsa* provides an overview of the top environmental priorities, and this section includes detailed priorities, goals and policies that strengthen the Vision's parks, trails, and open space objectives.

PRIORITY 1

Ensure a Clean and Healthy Arkansas River

Goal 1—

Stormwater is captured and cleaned through landscape design, downspout disconnection, and other environmentally-friendly techniques. Policies to support this goal include:

- 1.1 Partner with businesses, city departments, and property owners to implement innovative stormwater solutions as demonstration projects. These projects can demonstrate creative approaches to stormwater management at highly constrained sites, showcase creative design, and provide much needed additional capacity for the City's sewer system.
- 1.2 Address pollution at its source through innovative waste reduction and source control measures.
- 1.3 Implement a program to implement green infrastructure improvements, starting with problematic streets that contribute the most runoff volume and pollutants to the stormwater system.
- 1.4 Conduct an evaluation of upland sources of contamination to the City stormwater conveyance system. The evaluation should lead to identification of parties responsible for contamination. The City should work with these parties to prevent future recontamination.
- 1.5 Identify areas critical for regional groundwater recharge and consider the use of overlay zoning to limit the types of uses and activities, as well as require better treatment of stormwater in these areas.
- 1.6 Continue to work closely with the Indian Nations Council of Government (INCOG) to implement new standards for Integrated Storm Water Quality Management (ISWM).
- 1.7 Provide leadership to other governments within the region by adopting new stormwater standards that adequately mitigate the potential impact of new development on existing development, the stormwater system and on the natural environment.

- 1.8 Develop regulations and stormwater management standards for alternative methods of development that retain natural site drainage and reduce impervious (pavement) coverage. Standards will address stormwater quality treatment and stormwater conveyance/detention.
- 1.9 Develop landscaping standards to appropriately manage run-off created by impervious surfaces.
- 1.10 Establish standards to limit the amount of impervious surface that can result from development activity, as part of a comprehensive stormwater management strategy. Such standards should consider the range of conditions that might be relevant in denser, redevelopment areas as well new development areas.
- 1.11 Promote low impact development strategies and designs as a way to manage stormwater runoff, including techniques such as vegetated swales, biofilters, eco-roofs, green streets, pervious pavement and other methods that mimic natural processes.
- 1.12 Consider shared parking and other parking reduction strategies to more effectively minimize paved areas.
- 1.13 Develop alternative street designs and standards which allow for narrower streets and associated infrastructure, resulting in less pavement.
- 1.14 Develop alternative street designs and standards that allow for greater filtration and more appropriate stormwater conveyance.

Goal 2—

Non-point pollution is reduced through low impact development principles, creative building practices, and smart site design that can retain and treat stormwater generated on-site. Policies to support this goal include:

- 2.1 Recognize the relationship between upland watershed conditions and river and stream health when planning and designing development.
- 2.2 Transform redevelopment and infrastructure projects into opportunities to improve watershed conditions through creative building and site design and use of innovative materials and techniques.
- 2.3 Through education, incentives, and regulation, promote low impact development principles that emulate natural water flow, minimize land disturbance, and incorporate natural landscape features into the built environment.
- 2.4 Promote the use of alternative landscaping that is native or climate tolerant and erosion resistant.
- 2.5 Through education and outreach, promote the use of and where feasible require non-phosphorus fertilizer and other environmentally safe lawn products in buffer areas, along riparian corridors and in floodplains.
- 2.6 Limit the use of pesticides and harmful herbicides in natural areas and open space managed or maintained by the City of Tulsa.

PRIORITY 2

Strengthen Connections to the Arkansas River

Goal 3—

Maintain a strong connection between the city and the Arkansas River. Policies to support this goal include:

- 3.1 Support implementation of the Arkansas River Corridor Master Plan to establish better connections with the riverfront area.
- 3.2 Expand, maintain, and enhance an interconnected system of parks, trails, and open spaces along the Arkansas River and nearby watersheds.
- 3.3 Provide ample, safe connections for pedestrians and bicyclists between neighborhoods and the water's edge.
- 3.4 Using a variety of tools over time, develop a continuous trail along both sides of the Arkansas River that complements the existing and planned riverfront uses and recognizes the vital contribution to Tulsa's economy made by industries located along the river.
- 3.5 Integrate the results of INCOG's Arkansas River Corridor Master Plan discussion into a river plan and corresponding greenway ordinances to protect public access, recreational uses and provide a natural buffer between development and the riverfront.

3.6 Foster partnerships among the City, public agencies, schools, community organizations, and businesses to enhance coordination of river-related efforts and maximize the impact of investments.

3.7 Expand public awareness of river-related issues through education and outreach, stewardship activities, and community celebrations.

3.8 Seek funds from other public agencies, foundations, and business sponsors to support river projects and programs.

Goal 4—

Promote the Arkansas River as a centerpiece of life in Tulsa. Policies to support this goal include:

4.1 Orient new development within riverfront areas towards the river.

4.2 Act to enhance the Arkansas River as Tulsa's centerpiece by shaping the city's urban form, industrial development, environmental health, public spaces, river communities, and neighborhoods towards the river.

4.3 Consider the history and special qualities of the Arkansas River when designing buildings, landscaping, streets, parks, and public art in waterfront districts.

4.4 Create and enhance community gathering places such as parks, residential districts, or retail districts near the Arkansas River.

- 4.5 Ensure that any future reconfiguration of major transportation thoroughfares through downtown will enable improved access between neighborhoods and the river and address the needs of freight, rail, and automobile traffic to and through downtown.
- 4.6 Develop a comprehensive plan package that includes plans for riverfront communities, a river greenway plan, design guidelines, and recommendations for natural resource restoration.

Goal 5—

Improve recreational opportunities along the Arkansas River. Policies to support this goal include:

- 5.1 Enhance non-motorized transportation connections to the riverfront.
- 5.2 Create a variety of settings to accommodate a diverse range of river-related recreational opportunities.
- 5.3 Expand opportunities for boating, fishing, and other recreational activities.
- 5.4 Incorporate public art, viewpoints, and educational displays about Tulsa's history, and natural environment into the design of the trail and open space system.
- 5.5 Conduct a study of Arkansas River water-based recreation needs and river facilities.
- 5.6 Continue to expand and support annual riverfront festivals and cultural events, music festivals, and holiday celebrations to encourage community interaction and civic pride in the waterfront.

PRIORITY 3

Increase Tulsa's Tree Canopy

Goal 6—

A healthy and diverse tree canopy is protected and restored to enhance neighborhood livability, provide habitat for wildlife, and improve air and water quality.

Policies to support this goal include:

- 6.1 Develop an Urban Forestry Master Plan to guide overall management and preservation of the tree canopy throughout the city. This plan will include a Street Tree Master Plan to guide planting trees during development and redevelopment and to designate appropriate trees for plantings along major roads and corridors.

THE STREET TREE MASTER PLAN SHOULD INCLUDE:

- A methodology to implement the Street Tree Master Plan.
- Standards for public streets, planting strip width and design.
- Potential funding sources including utility bill surcharges for planting, initial maintenance, sidewalk repair and replacement by City crews.
- Potential funding sources needed to replace damaged, dying or removed trees.
- Evaluation compliance with the Street Tree Master Plan.
- Standards for the level of development or redevelopment that would trigger compliance with the plan.

- 6.2 Determine Tulsa's baseline tree canopy coverage and establish a monitoring program to be updated regularly.
- 6.3 Set annual targets for increasing the tree canopy coverage in concert with population and development density increases.
- 6.4 Work to achieve a sustainable urban forest that contains a diverse mix of tree species and ages in order to use the forest's abilities to reduce stormwater runoff and pollution, absorb air pollutants, provide wildlife habitat, absorb carbon dioxide, provide shade, stabilize soil, and increase property values. Develop a list of preferred species to guide private property owners in choosing locally appropriate trees.
- 6.5 Develop additional regulatory tools to preserve tree canopy based on an analysis of the existing tree canopy and identification of priority areas.
- 6.6 Implement tree planting requirements for new developments, including parking lots and building setback areas.
- 6.7 Develop a program to facilitate greening of streets and sidewalks by property owners in collaboration with organizations such as "Up With Trees," the local public and private school systems and private entities.

PRIORITY 4

Restore Ecological Function in Tulsa's Natural Areas

Goal 7—

Watersheds are protected and enhanced.

Policies to support this goal include:

- 7.1 Update and improve City programs to protect, conserve and restore significant natural resources and habitats as part of a comprehensive watershed management strategy including education, incentives, regulation, and technical assistance.
- 7.2 Establish ecologically viable corridors for fish and birds and other wildlife through habitat protection and restoration.
- 7.3 Avoid development in floodplains and wetlands areas.
- 7.4 Utilize best management practices such as native plant restoration, natural discharge and onsite filtration, and other innovative, dynamic solutions to restore ecological function of Tulsa's natural areas.

Goal 8—

Ecologically sensitive areas are identified and prioritized. Policies to support this goal include:

- 8.1 Update and/or create maps to clearly delineate the boundaries of sensitive areas and floodplains. Identify and map areas of potential citywide significance to minimize conflicts with development.
- 8.2 Establish a system for designating ecologically sensitive areas worthy of protection.

- 8.3 Particularly in riparian areas, establish standardized buffer widths based on resource type and adjacent topography.
- 8.4 For riparian areas, base buffer widths on water quality function and wildlife habitat needs. Establishing standardized buffers may require that precise boundaries be delineated prior to environmental review for new development, particularly in riparian areas.
- 8.5 Identify key natural landmarks and scenic views.
- 8.6 Evaluate connectivity between open spaces and natural areas.
- 8.7 Require environmental review of projects occurring within ecologically sensitive areas, with a priority of reviewing impacts on floodplains, riparian areas and areas with slopes exceeding 12 percent.
- 8.8 To minimize land condemnation, target willing sellers of properties that are vacant or otherwise available for public acquisition to increase public open space, particularly those properties within the designated buffer zone, riparian areas and floodplain. Special attention and priority will be given to those areas with low economic value unsuitable for development. In addition, evaluate the responsibility of managing newly acquired lands, the potential for restoration of these lands, and potential and need for public access. Comprehensively evaluate the multiple values of open space for wildlife habitat, recreation and trails, stormwater conveyance, and protection of scenic views.

Goal 9—

Natural and sensitive areas are protected and preserved. Policies to support this goal include:

- 9.1 Establish sensitive area criteria; use criteria to establish areas of conservation.
- 9.2 Prioritize programs to protect key resources by obtaining and maintaining a comprehensive data base.
- 9.3 Establish a system to designate specific areas as ecologically sensitive and worthy of protection.
- 9.4 Establish buffer zones and protection areas around key ecologically sensitive areas to prevent future development within those boundaries except for recreational facilities.
- 9.5 Particularly in riparian areas, establish minimum buffer widths based on resource type and adjacent topography. For riparian areas, buffer widths should be based on water quality function and wildlife habitat needs.

Goal 10—

Sensitive areas are protected by regulating development on affected sites. Policies to support this goal include:

- 10.1 In areas of growth, continue to conduct watershed-wide master drainage planning consistent with the citywide drainage master plan and in coordination with the small area planning process.
- 10.2 Preserve undeveloped floodplain areas for stormwater conveyance.
- 10.3 Investigate compensation programs or zoning measures to allow transfer of development rights from environmentally constrained areas to unconstrained areas.

10.4 Continue to update and use best management practices for development within or near floodplain and watershed areas.

GOAL 11—

Open space is protected.

Policies to support this goal include:

- 11.1 Develop a comprehensive strategy for open space protection to include such as tools as greenbelts, open space zoning, conservation easements and density transfers to restrict urban development in environmentally sensitive areas.
- 11.2 Evaluate the potential effectiveness of methods to regulate development in environmentally sensitive areas to protect the ecology and to prevent incompatible development.
- 11.3 Restrict development within the floodplain. Where alternatives are not feasible, require balanced cut and fill to prevent loss of flood storage capacity and appropriate mitigation to prevent loss of ecological values.

PRIORITY 5

Improve Access and Quality of Parks and Open Space

GOAL 12—

Neighborhoods have adequate access to parks and open space areas. Policies to support this goal include:

- 12.1 Work with other government agencies and community partners to improve walkable access to parks and recreation opportunities throughout Tulsa.
- 12.2 Make parks desirable destinations for walking by providing comfort and convenience facilities, especially restrooms and drinking fountains, wherever possible and feasible.
- 12.3 Partner with schools, libraries and other public places to provide amenities close to homes.
- 12.4 Look for opportunities for trails in areas that currently have few or none and connect these areas to existing trails.
- 12.5 Provide trails and loop walks within existing parks.
- 12.6 Develop partnerships with utility companies for trail corridors.
- 12.7 Work with public agencies and community groups to ensure safe pedestrian corridors.
- 12.8 Provide trail links to specific destinations like schools.
- 12.9 Add and improve sidewalks through a sidewalk improvement program; prioritize areas based on adjacency to schools and community centers.
- 12.10 Connect existing undeveloped areas in parks with developed park areas.
- 12.11 Convert parts of exiting parks to more natural conditions, where feasible.
- 12.12 Create a series of Local Destination Parks throughout Tulsa.

- 12.13 Achieve appropriate levels of parks services for all parts of Tulsa.
- 12.14 Maintain existing facilities as appropriate.
- 12.15 Provide additional components in areas with relatively low levels of service.
- 12.16 Provide new parks and components as warranted by population growth and changing demographics.

Goal 13—

Partnerships and collaborative efforts support the management and provision of parks and open space. Policies to support this goal include:

- 13.1 Strategically increase partnerships and collaborative efforts.
- 13.2 Investigate partnerships with medical and health organizations.
- 13.3 Create new and formalize existing partnerships with equity agreements.
- 13.4 Strengthen intergovernmental agreements with schools.
- 13.5 Consider an “adopt-a-park” program by civic organizations and school groups to help with park maintenance, beautification and civic pride.
- 13.6 Explore neighborhood work days to promote community caretaking of city parks.
- 13.7 Explore murals of historic significance on park facilities.

- 13.8 Explore implementation of a “workcreation” program for children to participate in the maintenance of park facilities by completing simple tasks in place of paying admission fees.
- 13.9 Create a “Park Ambassador” program where residents living adjacent to parks are trained to perform regular inspections in exchange for a small stipend or free park admission, contributing to park oversight and cultivating neighborhood investment.
- 13.10 Maximize and manage potential partnerships and alliances with public and private schools, neighborhood organizations, foundations, and volunteers.

Goal 14—

Parks and recreational facilities are updated to address changing needs and desires. Policies to support this goal include:

- 14.1 Add comfort and convenience features to parks.
- 14.2 Identify park components that need to be updated or replaced and develop a schedule, budget and methodology to complete improvements.
- 14.3 Evaluate existing pools to determine those that are functional, need repairs or should be decommissioned and removed. Formulate plan to take appropriate action for each pool.
- 14.4 Identify parks throughout the City for upgrade and develop an action plan to accomplish upgrades.

- 14.5 Use design charrettes to develop concepts for each park, reflecting the character and context of each facility's unique surroundings.
- 14.6 Involve the community in the creation and design of local destination parks to reflect the community's history and diversity.
- 14.7 Coordinate Parks and Recreation Department's existing and future Capital Improvement Program (CIP) projects with City's Finance and Public Works Departments programs.
- 14.8 Work to ensure inclusion of parks projects within the City's CIP at appropriate levels.
- 15.3 Evaluate and manage existing partnerships to ensure benefit is appropriate to the city's expenditures.
- 15.4 Analyze existing partnerships based upon value to the city.
- 15.5 Maximize recreation program management.
- 15.6 Establish service objectives and a system to measure the needs and effectiveness of programs and activities. Use this system to:
 - Conduct standard and consistent evaluations for recreational programs or activities.
 - Conduct program life cycle analyses.
 - Develop new programs after examining need/trends and budget requirements.
 - Consider new programs or expansions in top priority areas.
 - Develop procedures and policies to track program participation.
- 15.7 Create and implement cost recovery policies.
- 15.8 Create Task Force for strategic planning, finance and development.
- 15.9 Pursue alternative funding sources to implement the plan.

PRIORITY 6

Improve Parks and Open Space Management

Goal 15—

Planning and development of parks and trails is coordinated with the Comprehensive Plan and Parks Master Plan. Policies to support this goal include:

- 15.1 Consider combining the existing City Parks and Recreation Department with the River Parks Authority and the Tulsa County Parks Department.
- 15.2 Appoint a task force to fully explore the programmatic advantages, financial benefits and resource savings associated with combining the Park entities.