

Parks, Trails and Open Space Chapter

Introduction

This chapter of Tulsa’s Comprehensive Plan describes how *Our Vision for Tulsa* will bring “nature into the city” 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’s efforts to provide a vast network of parks, trails, and open space for current and future residents. This chapter will also provide guidance in the protection of sensitive landscapes threatened by future development, and how to best buffer and compliment the relationship between the built environment and the natural environment in regards to new construction, redevelopment, and land use changes. The goals and policies also provide guidance in how to make good decisions regarding open space, parks, and natural areas and how to best support natural systems.

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Part I: The Value of Parks and Open Space

Beautiful, inspiring, and accessible parks and open space are essential to the health of a city. The American ideal of unfettered, public access to nature and natural areas is the essence of democracy in action and one of the best tenets of American life. Early in our country's history our federal government did something rather radical and uncommon around the world—it created parks solely for public use and enjoyment. Where in Europe public land did not exist out right but instead aristocrats allowed occasional public access to their private estates, Americans wanted something more democratic. Starting in the late 1800s, the U.S. government made some areas, especially areas with valuable natural beauty, off limits to development to ensure their enjoyment by all people, regardless of wealth or position in society. This led to a national parks movement that protected grand landscapes like Yellowstone, Yosemite, the Grand Canyon, and locally the Chickasaw National Recreation Area. The protection of open space has been called America's best idea. The national parks movement spurred local governments to develop their own parks programs and set aside open space within local communities for the benefit of their citizens.

Access to parks and open space produces wide ranging value, including economic, health, community, environmental, and civic benefits. The direct value of parks and open space shows up in civic pride, improved public health, community cohesion, holistic family interaction, tourism spending, rainwater retention, natural beauty, and pollution mitigation.

Economic Value

Although the quantitative valuation of urban green spaces is an emerging science, natural areas, parks and open space can provide important services in ways that reduce infrastructure costs and actually improve environmental health. Stormwater management, air pollution mitigation, and urban cooling are just some of the functions that green spaces can provide. Recent studies concur that parks have a positive impact on nearby residential property values. The Trust for Public Land calculates that all dwellings within 500 feet of parks experience at least a five percent increase in assessed property value¹. Great parks and open space also contribute to how employers make decisions about where to locate and how to attract workers. Companies want to offer a high quality of life to their employees and executives, and high quality parks and open space are a distinct asset.

Health and Community Value

Parks provide respite from the built environment and the rigors of our busy lives. They are places people gather to celebrate important occasions, play sports, grow gardens, exercise, and interact as a community. Often parks are where urban dwellers get to experience nature in their daily lives. We know that lack of exercise and physical inactivity, common in our technology-rich and fast paced lives, can lead to health

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

problems such as heart disease and diabetes. Recent research suggests that access to parks encourages exercise and physical activity that leads to direct health benefits.² Parks and open space also helps build social capital by providing places and activities for the community to gather and develop webs of human relationships. Whether at sports fields, swimming pools, basketball courts, flower gardens, park benches, tennis courts, hiking trails, nature study classes, or bird watching events, parks and open space encourage community interaction, communication, and cohesion.

Environmental Value

Parks and open space provide habitat for animals, birds, and plants in an increasingly urban world. When parks and open space are connected by a system of trails and natural corridors, wildlife has the ability to migrate more successfully depending The trees, shrubs, soil, and plants within our parks and open space filter pollutants from the air, rain, stormwater runoff, and soil to clean our environment for the benefit of all plant, animal, and human communities. As cities increase the amount of hardscapes such as sidewalks, roads, buildings, and parking lots, so increases the amount of water runoff. Rainfall that hits pavement or other hard surfaces isn't able to soak into the soil and instead is funneled by stormdrains directly to our local streams and rivers such as the Arkansas River, causing flash flooding and increasing the filtration and treatment burden for 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. These areas allow rainwater to naturally recharge groundwater and capitalize on the pollution filtration ability of plants and soil. Air pollution in urban areas is a costly and significant concern because of its impact on young children, 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 a city's tree canopy also absorb gases such as carbon dioxide providing an important carbon sequestration sink.

Transportation Value

By connecting parks and open space with recreational, multi-use, pedestrian and bicycle trails, people, families, workers, and wildlife can reach important destinations. Surveys conducted during the development of a master parks plan for Tulsa found that in particular 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 to school facilities and back. Better pedestrian and bicycle connections to schools, community facilities such as libraries and city services, and work places encourage people to take more trips by foot or bike, improving public health and air quality and requiring less reliance on the car. Acquiring and securing natural corridors between open space areas are also important for migrating wildlife to reach food and link to critical habitat. These same corridors can

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

incorporate multi-use paths to connect pedestrian and bicycle transportation across the city. Trails and bike and pedestrian paths act as a low cost transportation alternative that serves multiple purposes.

Tourism Value

Parks attract visitors and develop the character and personality of a place. Whether you're a city like Washington DC with the National Mall, a site of great historical speeches and memorials that beckons visitors in droves, or you're Chicago with Millennium Park, a 2004 art, music, and architecture installation that has quickly become one of the most popular destinations in the city, great parks help define a city and invite others to witness. People travel from around the country to cities known for their great parks. Parks and open space can play an important role in Tulsa's tourism economy by encouraging visitation and overnight stays that lead to expenditures at the city's restaurants, shops, and accommodations. The state of Oklahoma happens to be one of the most biologically diverse areas in North America. Visitors come to the state to see and experience the state's diverse ecoregions, including the tallgrass prairie where Tulsa is located. The city has an opportunity to build off the potential that nature tourism offers and become another great city built upon a foundation of world class parks and open space.

Sidebar: 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*
- *Rainwater retention*
- *Air pollution filtration*
- *Natural beauty, inspiring views and vistas*
- *Reflection and communion with nature*
- *Habitat for a diversity of flora and fauna*
- *Added real estate value*

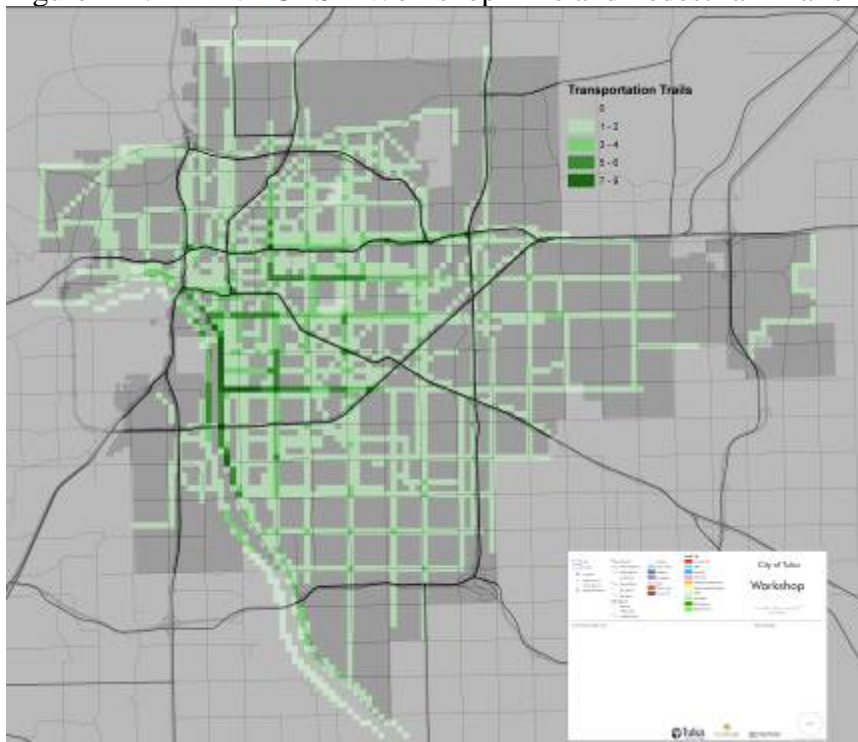
Part II: Public Input

PLANiTULSA Workshops

More than 1,500 participants attended a series of public events during the PLANiTULSA planning process including three citywide workshops and seven small area workshops. Participants worked in groups and produced over 200 maps showcasing their visions for the future of Tulsa. The maps showed how participants would accommodate future growth through land use and transportation changes. The workshop results indicated a commonly held desire to increase the amount of pedestrian and bicycle connections across the city, making it easier to travel from neighborhoods to places of work, to schools, natural areas, and downtown. **Figure X** shows a composite map where participants noted they wanted 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 community. 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.

Figure XX: PLANiTULSA Workshop Bike and Pedestrian Trails



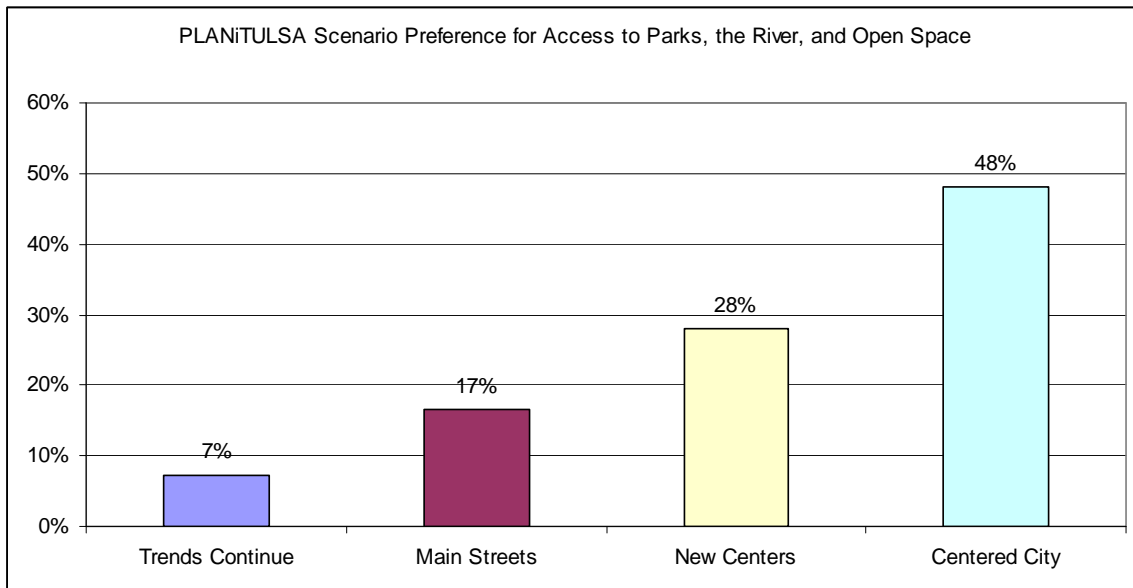
Source: Fregonese Associates

PLANiTULSA Survey

During the PLANiTULSA planning process, the city conducted a survey called, “Which Way, Tulsa?” More than **XX** people took the survey, which was distributed at community events and meetings, and available on the city’s Web site. A series of four growth scenarios were presented to test a range of growth impacts. Each scenario told a different story about the future of Tulsa. Citywide and small area workshop inputs directly informed the development of the scenarios. The scenarios showed how different land use and transportation patterns determine where people work, live, play, and how they get around town. The survey was designed to gauge the public’s preferences for the future of Tulsa.

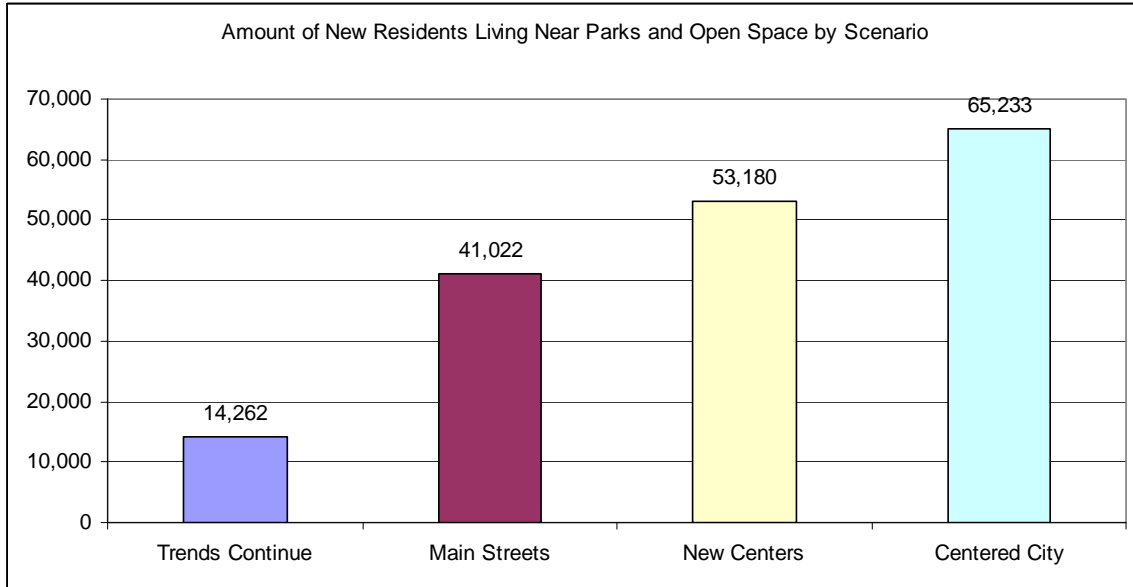
The survey asked participants to identify the scenario that “makes it easy for me to access parks, the river, and open space.” This was the only question that directly addressed the topic of parks and open space. Scenario D: Centered City was the most popular choice when considering easy access to natural places, capturing a near majority of survey respondents (48 percent). Scenario C: New Centers received 28 percent of the vote, while Scenario A: Trends Continue was the least popular at 7 percent. In the survey pamphlet, the Centered City scenario showed the highest amount of new residents (65,233) that would live near parks, the river, and open space. By comparison, Scenario A: Trends Continue had only 14,262 new residents living near parks and open space, Scenario B: Main Streets had 41,022 and Scenario C: New Centers, the next popular choice, had 53,180 new residents near open space. 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.

Figure XX: PLANiTULSA Survey Results: Access to Green Spaces



Source: Fregonese Associates

Figure XX: New Residents Living Near Parks and Open Space by Scenario



Source: Fregonese Associates

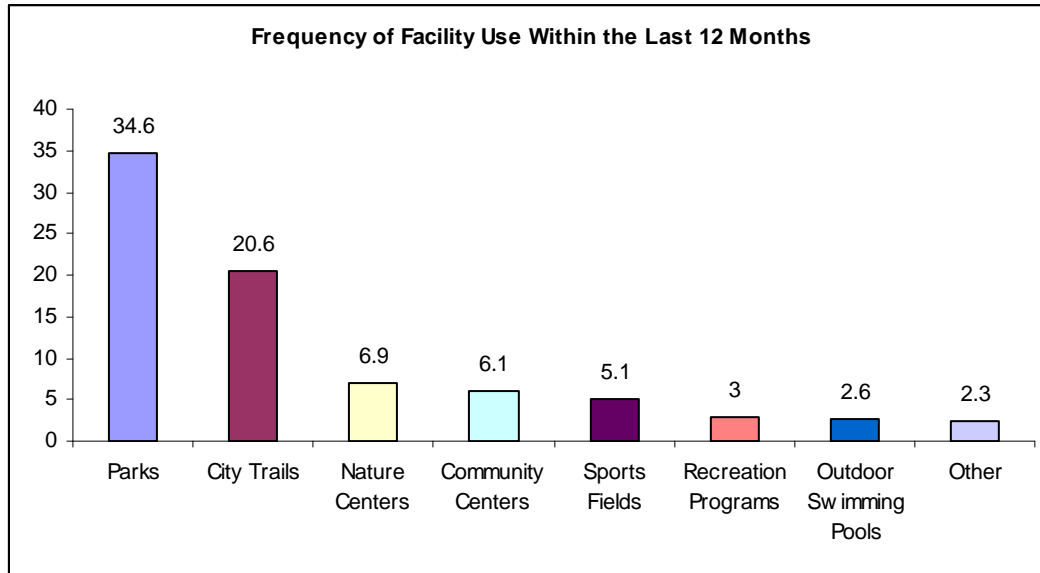
Tulsa Parks Master Plan Survey

During the development of the Tulsa Parks Master Plan, 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 responses allowed the City to conduct rigorous analysis of public attitudes on parks and open spaces. 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. Detailed survey results are available in the Tulsa Parks Master Plan draft.

Type and Frequency of Park Use

Among the facilities and amenities currently available in Tulsa, parks were used by the greatest proportion of respondents. Nearly all respondents had used a park at least once in the last 12 months, three-quarters had used city trails, and nearly 60 percent 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.

Figure XX: 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

According to respondents, city trails are the most frequently used facilities, with an average of 35 visits in the past 12 months. Parks are also frequently utilized, at 21 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, recreation 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 the 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 type of barriers that prevent them from using city facilities and possible areas for improvement. Safety and security was the top-cited concern that prevented respondents from using facilities. Other major barriers to use included the need for more bathrooms, 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.

Funding Sources and Future Direction

Respondents were asked how to best cover the funding gaps needed to improve the parks department facilities and programs. The respondents favored the creation of a new dedicated funding source through 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.

Part III: Nature in the City

As outlined by the previous sections, parks and open space provide extensive economic, health and community, environmental, transportation, and tourism value and benefit. To fully capitalize on these benefits the City of Tulsa envisions creating a renowned, robust, and interconnected parks and open space system. Tulsans want a city that is committed to and leads in sustainability measures including great walking, biking, and transit access as alternatives to driving, high-efficiency building practices, and the smart use of land. These elements make for a great city.

Tulsans also recognize we need to protect and capitalize on our great natural assets, including Mohawk Park, the Arkansas River, Turkey Mountain Urban Wilderness Area, and more than 280 miles of regional trails. We want to preserve these assets for our children, and where possible, bring nature and parks into the city for everyone to enjoy.

Nature in 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 hinterlands but also throughout our 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. Wetland-like parks 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 enjoying an outdoor space. Throughout the city, in small patches and larger swaths, nature should be a visible and medicinal buffer to the noise and starkness of the built environment.

Because more and more people will move to cities, it is critical we make cities beautiful, healthy and enjoyable places to be. Bringing nature into the city will be achieved through many vehicles, including leading in 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 river.

Lead in Stormwater Management

Already the City of Tulsa is a leader in floodplain and stormwater management, evidenced by **XX and XX**. As innovative as we are in stormwater management design, the expected increases in development and urbanization region-wide means there is more we can do. New programs could include design competitions, education, and training for the creation of rain and habitat gardens at schools, on home sites, and in public buildings, and promoting landscaping in general that doubles as a facility to treat stormwater runoff.

Provide Quick and Safe Access to Parks and Open Space from Neighborhoods, Schools, and Work Places

Within existing communities and future areas of growth, the city needs to work with developers, the parks department, the county, and others to ensure that all households, schools, and communities enjoy quick and safe access to parks and open space. In time it should be the city's goal that all neighborhoods, schools, and work places are within a five-minute walking or biking distance of a high quality park or open space area that provides recreation, reflection, and respite. The parks and open space within our neighborhoods and communities is where our community gathers, interacts, and learns from each other. 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. 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 adjacent or near parks, where businesses and residents provide a steady stream of activity and watch 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 for children environment.

Coordinate Distribution of New Parkland

It will be important that the city work with the school district and the parks department 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 opportunity. 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 that provide ecological functions and pocket parks that encourage positive family and community interaction and gathering. The city needs to 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 to ensure an equitable distribution of open space and park facilities across the city regardless of socioeconomic status. Many of the parks facilities need modernization and updating to adapt to our community's changing needs and activity preferences.

For example, the downtown area may not have much land available for park designation, whereas development of new centers will allow for coordinated planning for allocation of new parks and the preservation of valuable open spaces.

Restoring Ecological Function

Starting with an inventory of native landscapes, wildlife corridors, pristine ecosystems, and natural areas, the City can focus growth away from these 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 our 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 needs to be supported and protected from further disruption. Restoring ecological function will include fighting

nonnative species which are increasingly threatening and displacing native plants and animals, conducting habitat restoration such as native plantings, 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 so-called “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 offering people the opportunity to learn and connect with natural systems.

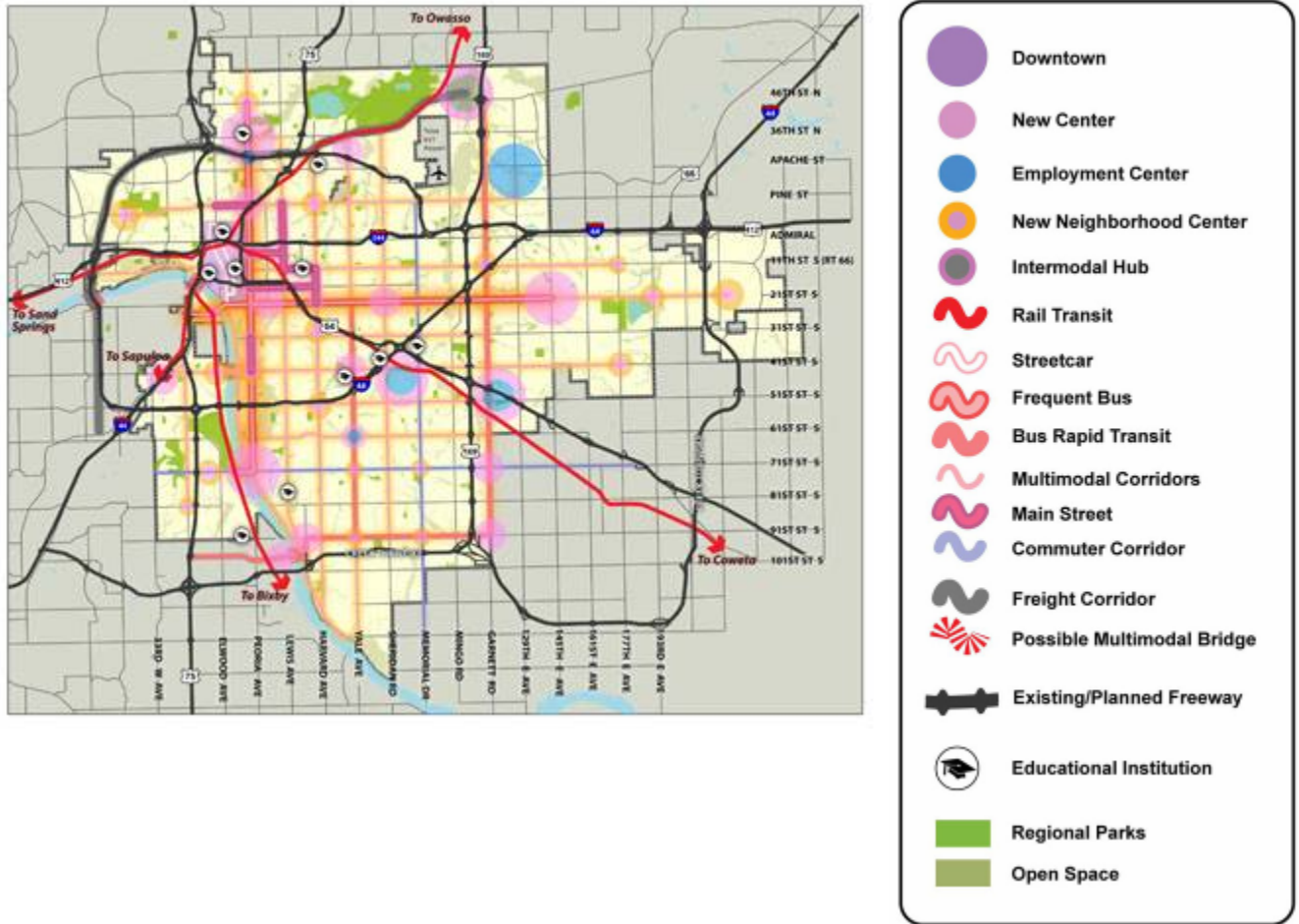
Strengthening Connections to the River

The Arkansas River runs a vital life line through the city of Tulsa. Industry, boaters, birds, families, and visitors enjoy the access, opportunity, and beauty provided by the river. The river area transports commerce, provides habitat, offers recreation and exploration, and supports large entertainment events such as concerts. The river supports some of the last remaining habitat for the endangered Interior Least Tern, which also provide home for bald eagle in the winter. These areas need to be protected and buffered from possible disturbance or future development.

Tulsans want better connections to the river. The City needs to improve access to riverfront parks, develop new bike and pedestrian trails, and 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. River front paths that are separated from roads offer tremendous excellent recreational opportunity and provide safer passage than bike lanes along roadways. They are often the source of great civic pride and supported by river parks these areas invite artists, families, workers on their lunch breaks, tourists, and others to relax and savor the scenery. A renaissance of the river area could also lead to new festivals and events such as a summer concert series, rallies and speeches, music festivals, boating events such as dragon boat races and other cultural fairs.

In riverfront areas that can support new development, the urban design and construction should orient towards the river, include a mix of uses, and capitalize on the recreational and scenic qualities of the river by including patios, gardens, seating areas, and public spaces with river views and river access by way of greenway trails. The riverfront can become a vibrant center of around-the-clock activity that includes residences, offices, restaurants, and lifestyle business, and retail.

Figure XX: Vision Map



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 the supply and access to parks and open space in Tulsa.

The following table shows the results of 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.

Table XX: Scenario Comparison of New Parkland

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

Source: Fregonese Associates

The number of new Tulsans with access to the city’s 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.

Table XX: 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

Tulsa 2030 Goal would result in greater support for the city's and region's park and open space resources by bringing more people within a close walk. Parks thrive when they can serve as a center of a community, and have many users throughout the day.

Part IV: Tulsa's Green Infrastructure

Green infrastructure is a relatively new term that defines an area's environmental assets and interconnected system of floodplains, wetlands, riparian areas, tree canopy, parks, open space, and other undeveloped natural areas. Cities depend upon green infrastructure for stormwater collection and filtration, natural cleansing of pollutants, flash flood mitigation, urban heat island moderation, as well as for the public's recreational enjoyment. Green infrastructure provides important life support functions including supporting healthy soils and clean water, as well as providing places for people to play, reflect, and be. Compared to other more traditional forms of infrastructure, such as sewer systems and roads, green infrastructure is less expensive to maintain and support.

Tulsa's Natural Environment

The City of Tulsa is located in the crosstimbbers and southern tallgrass prairie ecoregion, a land of variable soils, prairie grasses, oak woodlands, hardwoods, and the place where buffalo and antelope used to roam. This ecoregion acts as a chain link of oak forests that extend from Canada to Central America, providing critical habitat to migratory birds including the cerulean warbler, veery and gray-cheeked thrush and the XX, currently listed on the endangered species list. 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 of future development.

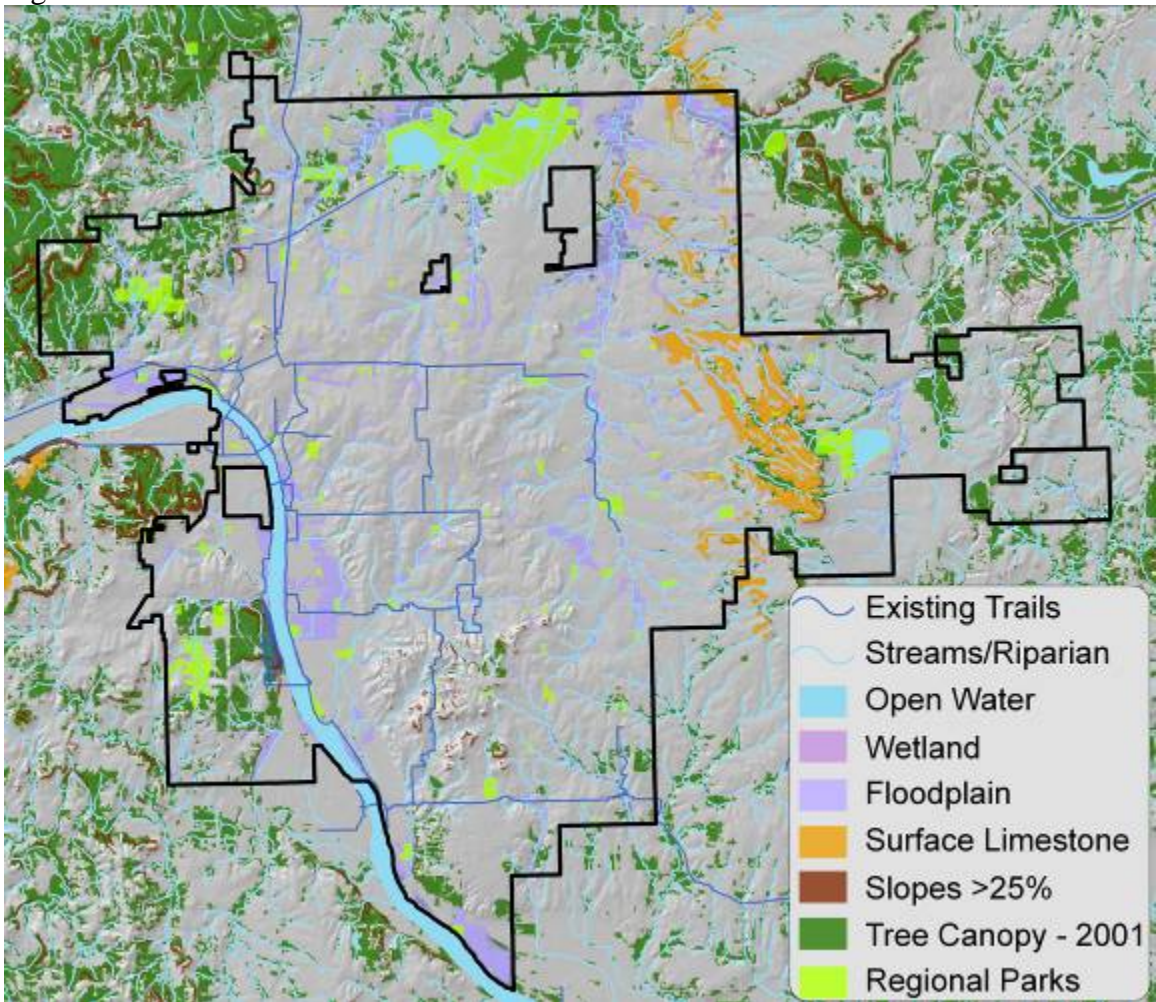
Table XX: Tulsa's Green Infrastructure

Land Characteristic	Acres
Total land within city limits	128,420
Water (rivers, streams)	2,486
Riparian Habitat	4,719
Wetlands (including buffers)	193
Floodplain	16,316
Steep Slopes (25%+)	366
 Vacant Subtotal	 24,080

Source: Fregonese Associates

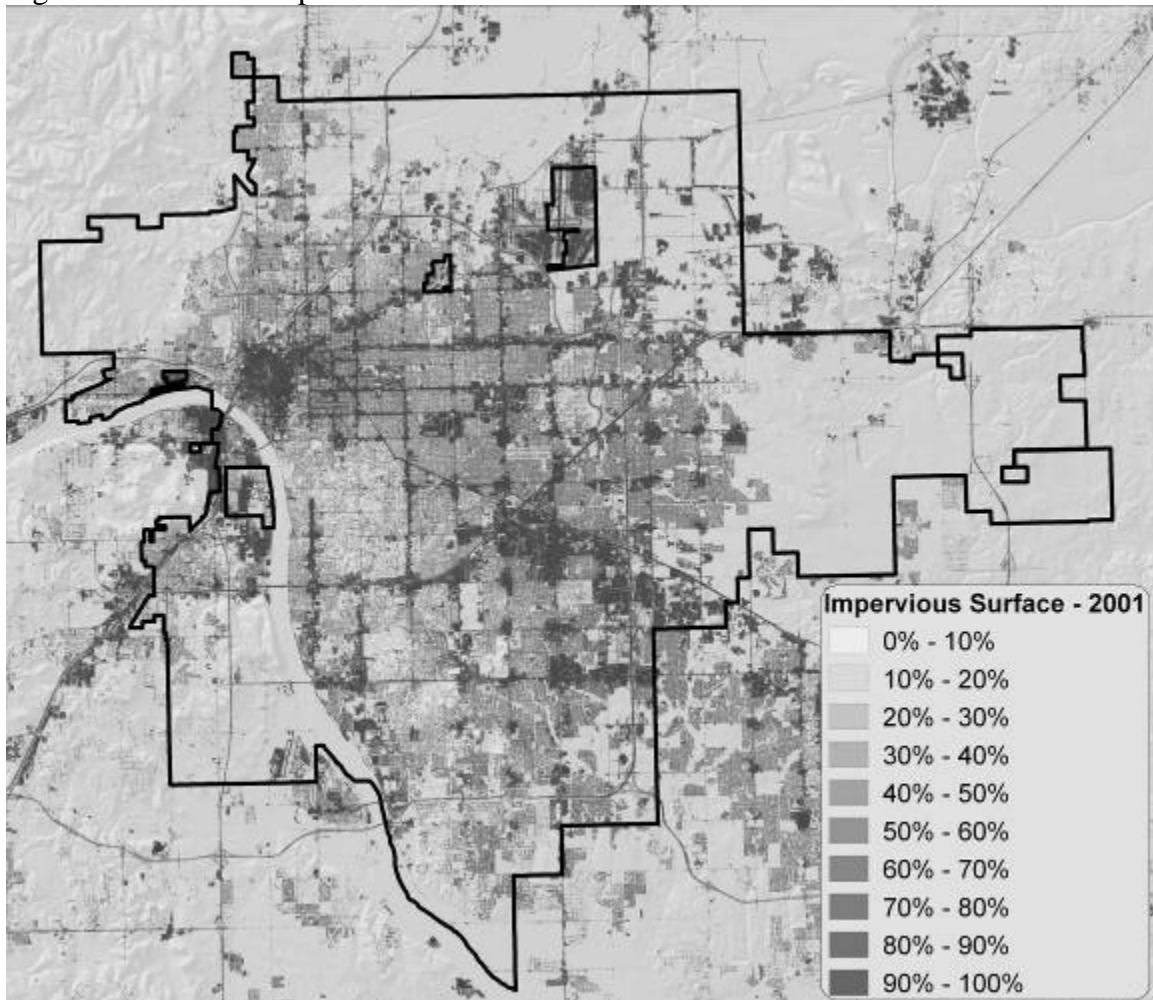
³ The Nature Conservancy, *The Crosstimbbers and Southern Tallgrass Praire Ecoregion: Preserving the Last Remnants of the Fertile Blackland Praire*.

Figure XX: Tulsa's Green Infrastructure



Source: Fregonese Associates

Figure XX: Tulsa's Impervious Surface



Source: Fregonese Associates

Tulsa Parks and Open Space

The City of Tulsa manages 130 parks covering roughly 6,000 acres 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 a Tulsa Parks Master Plan, published in fall 2009, 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 parks as they age in the face of tough economic times, and to bring its parks and recreation system into a new century of needs, desires, and conditions.

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, preserve 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 amphitheatre 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 boating, 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. The River Parks Authority shows how public and private partnerships can successfully provide valued public services and amenities.

Turkey Mountain Urban Wilderness Area

The Turkey Mountain Urban Wilderness Area includes hundreds of acres of undeveloped property along west bank of the Arkansas River, which is managed by River Parks. Situated far above the river, the area offers spectacular views of the city. The area also offers 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

Tulsa enjoys an interconnected system of bicycle and pedestrian trails maintained by several different entities including the City of Tulsa Parks Dept, Tulsa Public Works Dept., River Parks Authority, Broken Arrow Parks, Tulsa County Parks, Jenks Parks Dept., the City of Skiatook, and the City of Sand Springs. The city offers many north-south bike routes along the river and parallel to Highway 169, including a nearly complete loop along Highway 169 from downtown to Mohawk Park along the Highway 75 corridor. The loop offers links to the north, west, and southeast. The current system of trails provides a great 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 **XX** and **XX** have limited bike and pedestrian trails and should be the focus of future trail development, acquisition, and expansion.

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

Arkansas River Corridor Master Plan

The Indian Nations Council of Governments (INCOG) developed an Arkansas River Master Plan in 2007 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 to explore **XX**. 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 Master Plan and Vision 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 to 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 Section X 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. The city took inventory of park land and found that there are 22 acres per 1000 persons (8,321 acres of total park area). The city determined this ratio does not require any major adjustments as it provides an adequate amount of park land for a mid-sized city with a low population density. The City recognizes there are 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

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.

⁵ City of Tulsa Parks Department, Parks Master Plan

community facilities, whether swimming pools or playgrounds, are run down, underutilized, aging, and in need of repair. Many of Tulsa parks were built or dedicated around the same time and have reached a point in their life cycle where replacement, refurbishment, or repurposing is necessary.⁶ In addition, the needs, desires, lifestyles, and activities of the region's population continue to evolve. Our parks system needs to adapt and adjust to these changing conditions and not remain stuck in an era of forty or fifty years ago. New activities such as rock climbing, yoga, and skateboarding are popular, and many seniors want facilities that cater to their needs. Currently, our community centers and parks do not do enough to address such needs and interests. The city needs to conduct an organized inventory and evaluation of existing park facilities to determine which are timeless and which are no longer relevant. From this comprehensive survey, the City can then establish a priority-based system for repairs and replacements.

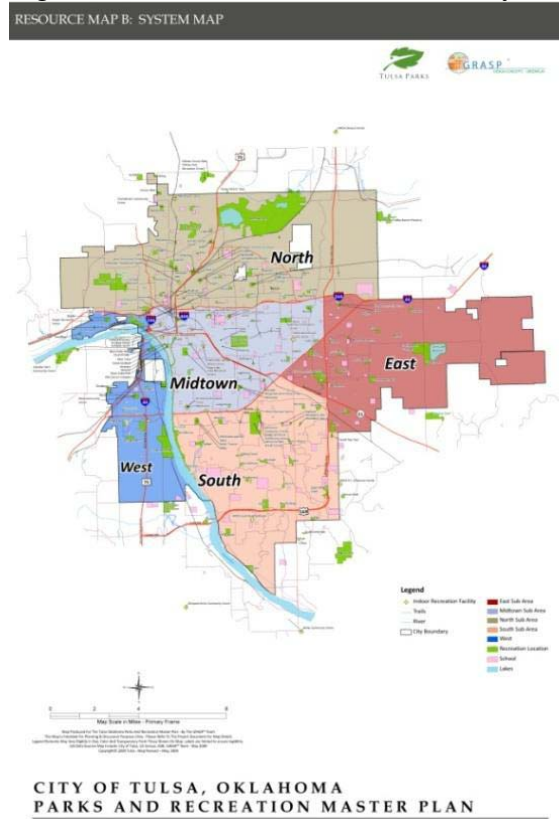
The City will conduct a process to inventory park land and facilities and prioritize the following:

Repair: Perform actions needed to maintain the component in a functional condition or return it to such condition. An example would be to repair a damaged piece of equipment, apply a fresh coat of paint to a shelter, etc. This should be done when the component serves a desired function and is capable of continuing to do so for the next five to ten years if repairs are made.

Replacement: Put in something new that serves the intended function of the original. An example would be to replace an outdated playground with new equipment. This should be done when the function is still important, but the component is inadequate for that function.

⁶ Ibid.

Figure XX: Tulsa Parks Master Plan System Map

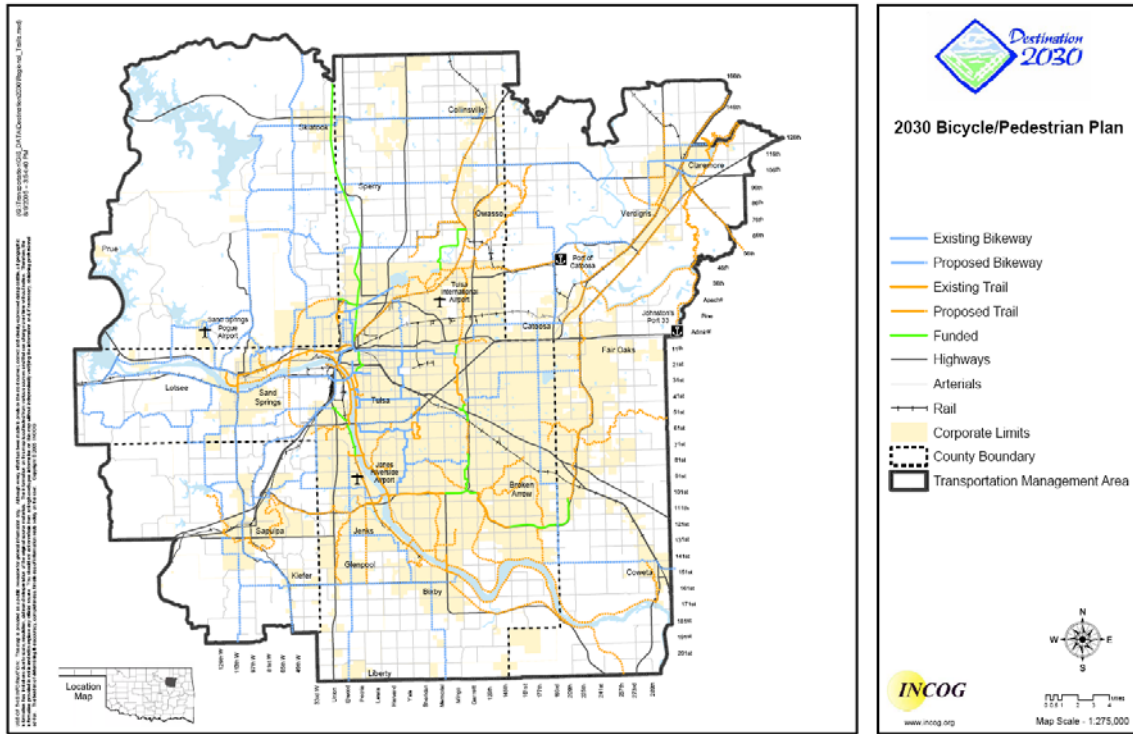


Source: City of Tulsa

Destination 2030 Bicycle/Pedestrian Plan

The Indian Nations Council of Governments (INCOG) developed the Destination 2030 Long Range Transportation Plan (LRTP), which looks 25 years into the future to anticipate transportation needs. The plan 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 by the city, county, and INCOG working together.

Figure XX: INCOG 2030 Bicycle/Pedestrian Plan Map



Source: INCOG

Part VI: Priorities, Goals and 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.
- The 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.

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. [to be provided in next round]

Parks, Trails, and Open Space Priorities

Parks, trails, and open space related land use decisions should be focused on ensuring Tulsans live near a quality neighborhood park within walking or biking distance 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. This section includes detailed priorities, goals and polices that build on the parks, trails, and open space priorities described in the Vision.

Priority 1: Ensure a Clean and Healthy Arkansas River

Goal X: Capture and clean stormwater through landscape design, downspout disconnection, and other techniques.

Policies to support this goal include:

- 1.1. Partner with businesses, city departments, and others to implement innovative stormwater treatment on site as demonstration projects. The sites can demonstrate creative approaches to stormwater management at highly constrained sites or opportunities to showcase creative design and provide much needed additional capacity for the City's sewer system.
- 1.2. Implement a green streets program that targets streets that contribute the most runoff volume and pollutants to the stormwater system.
- 1.3. Begin construction of recreation and watershed improvements at select parks using the Water Resources Development Act (WRDA). WRDA provides a 50 percent cost share for planning and a 65 percent cost share for construction.
- 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. Evaluate areas important for groundwater recharge and limit the types of uses and activities there as well as require better treatment of stormwater on these sites.
 - 1.6. Continue to work closely with the Indian Nations Council of Government (INCOG) to implement new standards for Integrated Stormwater Quality Management (ISWM).
 - 1.7. Provide leadership to other governments within the region in 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 possible different conditions in new development, as well as denser more urban redevelopment areas.
 - 1.11. Promote alternative stormwater management techniques such as grassy swales, biofilters, eco-roofs, green streets, pervious pavement and other more natural methods.
 - 1.12. Consider shared parking and other parking reduction strategies to minimize unnecessary 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.
 - 1.15. Address pollution at its source through innovative waste reduction and source control measures.

Goal X: Reduce non-point pollution through low impact development principles, smart site design, and creative building practices.

Policies to support this goal include:

- 1.16. Recognize the relationship between upland watershed conditions and river and stream health when planning and designing development.
- 1.17. Transform redevelopment and infrastructure projects into opportunities to improve watershed conditions through creative building and site design and use of innovative materials and techniques.
- 1.18. Promote low impact development principles that emulate natural water flow, minimize land disturbance, and incorporate natural landscape features into the built environment through education, incentives, and regulation.

- 1.19. Promote the use of alternative landscaping that is native or climate tolerant and erosion resistant.
- 1.20. 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.
- 1.21. Limit the use of pesticides and harmful herbicides in natural areas and open space managed or maintained by the City of Tulsa.

Priority 1: Strengthen Connections to the Arkansas River

Goal X: Connect the city to the Arkansas River.

Policies to support this goal include:

- 1.22. Support master plan implementation (need more detail) to establish better connections with the riverfront area.
- 1.23. Expand, preserve, and enhance an interconnected system of parks, trails, and open spaces along the Arkansas River and nearby watersheds.
- 1.24. Provide ample, safe connections for pedestrians and bicyclists between neighborhoods and the water's edge.
- 1.25. Using a variety of tools, develop a continuous trail over time along both sides of the Arkansas River that complements the existing and planned riverfront uses and recognizes the vital contribution that river proximate industrial uses make to Tulsa's economy.
- 1.26. Convene a group of stakeholders to help develop a long-term concept for the location and design of the trail system within the Arkansas River corridor. Integrate the results of this discussion into a river plan and a greenway code.
- 1.27. 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.
- 1.28. Expand public awareness of river-related issues through education and outreach, stewardship activities, and community celebrations.
- 1.29. Seek funds from other public agencies, foundations, and business sponsors to support river projects and programs.

Goal X: Make the Arkansas River a Centerpiece of Life in Tulsa.

- 1.30. Orient new development within riverfront areas towards the river.
- 1.31. 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.
- 1.32. Consider the history and special qualities of the Arkansas River when designing buildings, landscaping, streets, parks, and public art in waterfront districts.
- 1.33. Create and enhance community gathering places near the Arkansas River such as parks, residential districts, or retail districts.

- 1.34. Ensure that any future reconfiguration of major transportation thoroughfares through the downtown enable improved access between neighborhoods and the river and addresses the needs of freight, rail, and automobile traffic to and through the downtown.
- 1.35. Develop a comprehensive plan package that includes, but is not limited to, plans for riverfront communities, a river greenway plan, design guidelines, and recommendations for natural resource restoration.

Goal X: Improve Recreational Opportunities along the Arkansas River.

- 1.36. Enhance non-motorized transportation connections to the riverfront.
- 1.37. Create a variety of settings to accommodate a diverse range of river-related recreational opportunities.
- 1.38. Expand opportunities for boating, fishing, swimming, and other in-water recreational activities.
- 1.39. Incorporate public art, viewpoints, and educational displays about Tulsa's history, natural environment, and harbor economy into the design of the trail and open space system.
- 1.40. Conduct a study of Arkansas River water-based recreation needs and river facilities. Conduct assessments to address the multisensory experience of river users, including noise. The recreational study will assess the current conditions and future needs for boat launches, marinas, docks, and boating supply facilities for both motorized and nonmotorized watercraft on the Arkansas.
- 1.41. The study will consider the possibility of establishing speed limits on portions of the Arkansas River.
- 1.42. Sponsor annual riverfront festivals and cultural events such as dragon boat races, music festivals, holiday celebrations to encourage community interaction and civic pride in the waterfront.

Priority 1: Increase Tulsa's Tree Canopy

Goal X: Protect and restore a healthy and diverse tree canopy in Tulsa to enhance neighborhood livability, provide habitat for wildlife, and improve air and water quality.

Policies to support this goal include:

- 1.43. Develop an Urban Forestry Master Plan to guide overall management and preservation of 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 will include:

- Preparing a methodology to implement the Street Tree Master Plan.

- Identifying and recommending standards for public streets, planting strip width and design, etc.
 - Identifying potential funding including utility bill surcharges for planting, initial maintenance, sidewalk repair and replacement by City crews.
 - Identifying potential funding needed to replace damaged, dying or removed trees.
 - Evaluating compliance with the Street Tree Master Plan.
 - Defining the level of development or redevelopment that would trigger compliance with the plan.
- 1.44. Determine Tulsa’s baseline tree canopy coverage and establish a monitoring program to be updated regularly.
- 1.45. Set annual targets for increasing the tree canopy coverage in concert with population and development density increases.
- 1.46. 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 storm water runoff and pollution, absorb air pollutants, provide wildlife habitat, absorb carbon dioxide, provide shade, stabilize soil, and increase property values.
- 1.47. Develop additional regulatory tools to preserve tree canopy based on an analysis of the existing tree canopy and identification of priority areas.
- 1.48. Implement tree planting requirements for new developments, including parking lots and building setback areas.
- 1.49. Develop program to facilitate greening of streets/sidewalks by property owners in collaboration with organizations such as Up With Trees, the Tulsa School District, and other entities.

Priority 1: Restore Ecological Function in Tulsa’s Natural Areas

Goal X: Protect and enhance Tulsa watersheds.

Policies to support this goal include:

- 1.50. 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.
- 1.51. Establish ecologically viable corridors for fish and birds and other wildlife through habitat protection and restoration.
- 1.52. Avoid development in floodplains and wetlands areas.
- 1.53. Utilize best management practices to restore ecological function of Tulsa natural areas such as native plant restoration, natural discharge and onsite filtration, and other innovative, dynamic solutions.

Goal X: Identify and Prioritize Ecologically Sensitive Areas

Policies to support this goal include:

- 1.54. Update and/or create maps to clearly delineate the boundaries of sensitive areas and floodplains. Identify and map areas of citywide and potential citywide significance to minimize conflicts with development.
- 1.55. Establish a system of designating specific areas as ecologically sensitive areas worthy of protection.
- 1.56. Particularly in riparian areas, establish standardized buffer widths based on resource type and adjacent topography.
- 1.57. For riparian areas, buffer widths will be based 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. Also identify key public landmarks and scenic views.
- 1.58. Evaluate connectivity between open spaces and natural areas.
- 1.59. Require environmental review of projects occurring within ecologically sensitive areas, with a priority on floodplains, riparian areas and areas with slopes exceeding 12 percent.
- 1.60. Through a confidential “willing-seller” program, assess properties that are vacant or otherwise available for public acquisition or purchase to be established as public open space, particularly those 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, the responsibility of managing newly acquired lands, the potential for restoration of these lands, and potential and need for public access will be evaluated. The multiple values of open space for wildlife habitat, recreation and trails, stormwater conveyance, and protection of scenic views will be evaluated comprehensively.

Goal X: Protect and Conserve Tulsa’s Natural and Sensitive Areas.
Policies to support this goal include:

- 1.61. Establish sensitive area criteria/establish areas of conservation
 - Obtain comprehensive information in order to prioritize programs that would protect key resources.
 - Establish a system of designating specific areas as ecologically sensitive areas worthy of protection.
 - Particularly in riparian areas, establish standardized buffer widths based on resource type and adjacent topography. For riparian areas, buffer widths will be based 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.
 - Also identify key public landmarks and scenic views.

- 1.62. Establish buffer zones and protection areas around key ecologically sensitive areas to prevent future development within those boundaries except for recreational facilities.

Goal X: Regulate Development on Impacted Sites to Protect Sensitive Areas.

Policies to support this goal include:

- 1.63. In areas of change expected to develop, continue to conduct watershed-wide master drainage planning in coordination with small area planning process.
- 1.64. Preserve undeveloped floodplain areas for stormwater conveyance.
- 1.65. Investigate compensation programs or zoning measures to allow transfer of development rights from environmentally constrained areas to unconstrained areas.
- 1.66. Continue to devise and use best management practices for development within or near floodplain and watershed areas.

GOAL X: Protect Open Space.

Policies to support this goal include:

- 1.67. Develop a comprehensive strategy for open space protection, administered by the Tulsa Parks and Recreation Department, to include such as tools as greenbelts, open space zoning, conservation easements and density transfers to restrict urban development in environmentally sensitive areas.
- 1.68. Evaluate the potential effectiveness of methods to regulate development in environmentally sensitive areas to prevent incompatible development and to preserve the ecology.
- 1.69. Land adjacent to riparian corridors and floodplains will get special attention.
- 1.70. 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 X: Improve Access and Quality of Parks and Open Space

GOAL X: Improve Access to Parks and Open Space Areas.

Policies to support this goal include:

- 1.71. Work with other government agencies and community partners to improve walk able access to parks and recreation opportunities throughout Tulsa
- 1.72. Make parks desirable destinations for walking by providing comfort and convenience facilities, especially restrooms and drinking fountains, wherever possible and feasible
- 1.73. Partner with schools, libraries and other public places to provide amenities close to homes
- 1.74. Look for opportunities for trails in areas that have little or none currently and connect to existing trails

- 1.75. Provide trails and loop walks within existing parks
- 1.76. Develop partnerships with utility companies for trail corridors
- 1.77. Work with other City Departments and community groups to ensure safe pedestrian corridors
- 1.78. Create walking and bicycle maps
- 1.79. Provide trail links to specific destinations like schools
- 1.80. Add and improve sidewalks in designated areas
- 1.81. Increase access to natural areas and open space
- 1.82. Connect existing undeveloped areas in parks into developed parts of parks
- 1.83. Convert parts of exiting parks to more natural conditions
- 1.84. Create a series of Local Destination Parks throughout Tulsa
- 1.85. Achieve appropriate levels of service for all parts of Tulsa
- 1.86. Maintain what you have where facilities are good and at appropriate levels
- 1.87. Provide additional components in areas with relatively low levels of service
- 1.88. Provide new parks and components where population growth and changing demographics warrant.

Goal X: Increase partnerships and collaborative efforts in the management and provision of parks and open space.

Policies to support this goal include:

- 1.89. Strategically increase partnerships and collaborative efforts
- 1.90. Investigate partnerships with medical and health organizations
- 1.91. Create new and formalize existing partnerships with equity agreements
- 1.92. Strengthen intergovernmental agreements with schools
- 1.93. Consider an adopt-a-park program
- 1.94. Explore neighborhood work days
- 1.95. Explore murals of historic significance on park facilities
- 1.96. Explore implementation of a “workreation” program with children
- 1.97. Create park ambassador program
- 1.98. Maximize and manage potential partnerships and alliances with public and private schools, neighborhood organizations, foundations, and volunteers.

Goal X: Update Parks and Recreational Facilities.

Policies to support this goal include:

- 1.99. Update parks and facilities to address changing needs and desires
- 1.100. Add comfort and convenience features to parks
- 1.101. Inventory and identify park components that need to be updated or replaced and develop a schedule, budget and methodology to complete improvements
- 1.102. Evaluate existing pools for which are functional, need repairs or should be decommissioned and removed and formulate plan to take appropriate action at each pool

- 1.103. Identify one park per sub area for upgrade and develop an action plan to accomplish upgrades
- 1.104. Use design charrettes to develop concepts for parks, with each being unique and reflect the character and context of its surroundings
- 1.105. Design local destination parks to reflect history of community and diversity of the community and involve the community in their creation
- 1.106. Coordinate Parks and Recreation Dept. Capital Improvement Program (CIP) existing and future projects with City's Finance and Public Works Departments
- 1.107. Work to ensure inclusion of parks projects within the City's CIP at appropriate levels

Priority X: Improve Parks and Open Space Management

Goal X: Coordinate planning and development of parks and trails with comprehensive plan and parks master plan.

Policies to support this goal include:

- 1.108. Consider combining the existing City Parks and Recreation Department with the River Parks Authority and the Tulsa County Parks Department
- 1.109. Appoint a Task Force to fully explore the programmatic advantages, financial benefits and resource savings associated with combining the Park entities
- 1.110. Evaluate and manage existing partnerships to insure benefit is appropriate to the City and Parks and Recreation Dept.
- 1.111. Analyze existing partnerships based upon value to the Department
- 1.112. Maximize recreation program management
- 1.113. Establish service objectives to determine that a program or activity is needed and is measured to determine effectiveness
- 1.114. Conduct standard and consistent evaluations for recreational programs or activity
- 1.115. Consider an incentive for return of evaluation
- 1.116. Conduct program life cycle analysis
- 1.117. Develop new programs after examining need/trends and budget requirements
- 1.118. Consider new programs or expansions in top priority areas
- 1.119. Develop procedures and policies to track program participation
- 1.120. Create and implement cost recovery policy
- 1.121. Enhance financial strategies
- 1.122. Create Task Force for strategic planning, finance and development
- 1.123. Pursue alternative funding to implement Plan