



2016

# Tulsa Comprehensive Plan

## MONITORING PROGRAM



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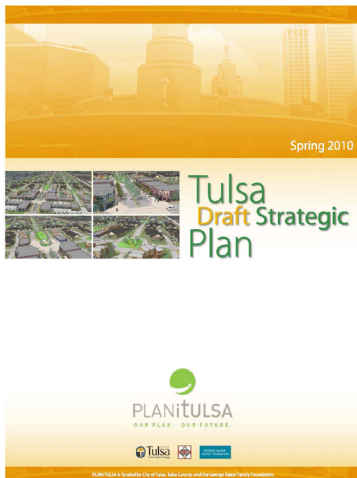
## Introduction

### Background

Thousands of Tulsa citizens participated in the PLANiTULSA process, creating an ambitious vision for 2030. Overall, Tulsans are looking for change — in the form of revitalization, expanded housing choices, a diverse and strong economy, and more choices in how to travel around town. Tulsans also desire stability in certain key areas, such as protecting and enhancing our existing neighborhoods. In addition, Tulsans want the City to be the kind of place where young people can get a great education, build a career, and raise a family.

To achieve *Our Vision for Tulsa*, Tulsa Metropolitan Area Planning Commission (TMAPC) adopted and City Council approved the *Tulsa Comprehensive Plan* in 2010. The Plan summarizes where the City was in 2005, how the City wants to look by 2030, and what the City needs to do to get there. In addition to the Comprehensive Plan, staff and the consultant developed the *Tulsa Strategic Plan* that provides an outline of short-term actions to meet goals and benchmarks established by the vision.

Regular evaluation and monitoring of the Comprehensive Plan is a key component of the implementation strategy. If the Plan is to remain useful and effective over time, the City must establish a method to measure the successes and challenges in achieving its vision, goals, and implementation strategies. Ongoing monitoring will inform the public, City Council, Planning Commission, City of Tulsa administration and departments, and partner organizations about the plan's effectiveness. It will identify those aspects of implementation that are working and those needing improvement and keep the Plan current as circumstances change and new information becomes available. The monitoring process provides a way to measure progress and obtain feedback from policy makers and the public to determine if the implementation program is working to achieve the PLANiTULSA vision.



## Monitoring Progress

The monitoring program was developed to evaluate our progress toward achieving the Vision and determine whether the implementation of the Comprehensive Plan is occurring. Currently, a system for monitoring the implementation of the *Tulsa Comprehensive Plan* goals has not been established. A system to monitor and measure the type and quality of growth in Tulsa on a continual basis is essential. This monitoring Program will:

1. Evaluate the achievements of the PLANiTULSA Comprehensive Plan.
2. Develop a methodology to measure progress through a set of indicators organized by the chapters of the Comprehensive Plan.
3. Test the methodology by collecting data.
4. Assess performance achievements and areas for improvement.
5. Evaluate best practices for refining and advancing citywide planning, data collection systems, and indicators.

The Comprehensive Plan was created using modeling and scenarios that provide meaningful benchmarks, *Tulsa 2030 Goals*, at a relatively fine scale, which are important for monitoring a complex city such as Tulsa. The *Tulsa 2030 Goals* are benchmarks that aspire to substantially outperform the growth patterns predicted by the baseline scenario captured during the planning process. In an effort to track these benchmarks, the monitoring program will follow a systematic process for evaluation using defined boundaries for comparison, a baseline number for evaluation, and 2030 benchmarks established by the Plan.

With the *Tulsa 2030 Goals* as the target, the monitoring program will allow Tulsans to regularly review quantifiable measures and track the City's progress toward achieving our shared goals. The monitoring program will use common indicators such as population and housing growth, transit ridership, and job growth

to provide a periodic snapshot of Tulsa's progress. While some impacts will be noticeable in the short-term, many will be subtle, and will have cumulative effects over time.

Changes will be tracked on an annual basis as defined in this monitoring program. A 5-year Progress Report is recommended. The report will include:

- Projects and policies (including capital improvements) implemented and the alignment of those projects and policies with the goals of the plan;
- An annotated matrix indicating the implementation status and benchmarks of each priority;
- A revised Strategic Plan for the next five years to implement the Comprehensive Plan; and
- Suggestions for updates to small area and comprehensive plans needed to respond to new issues and changing conditions, for consideration by the TMAPC and City Council.

## Developing Indicators

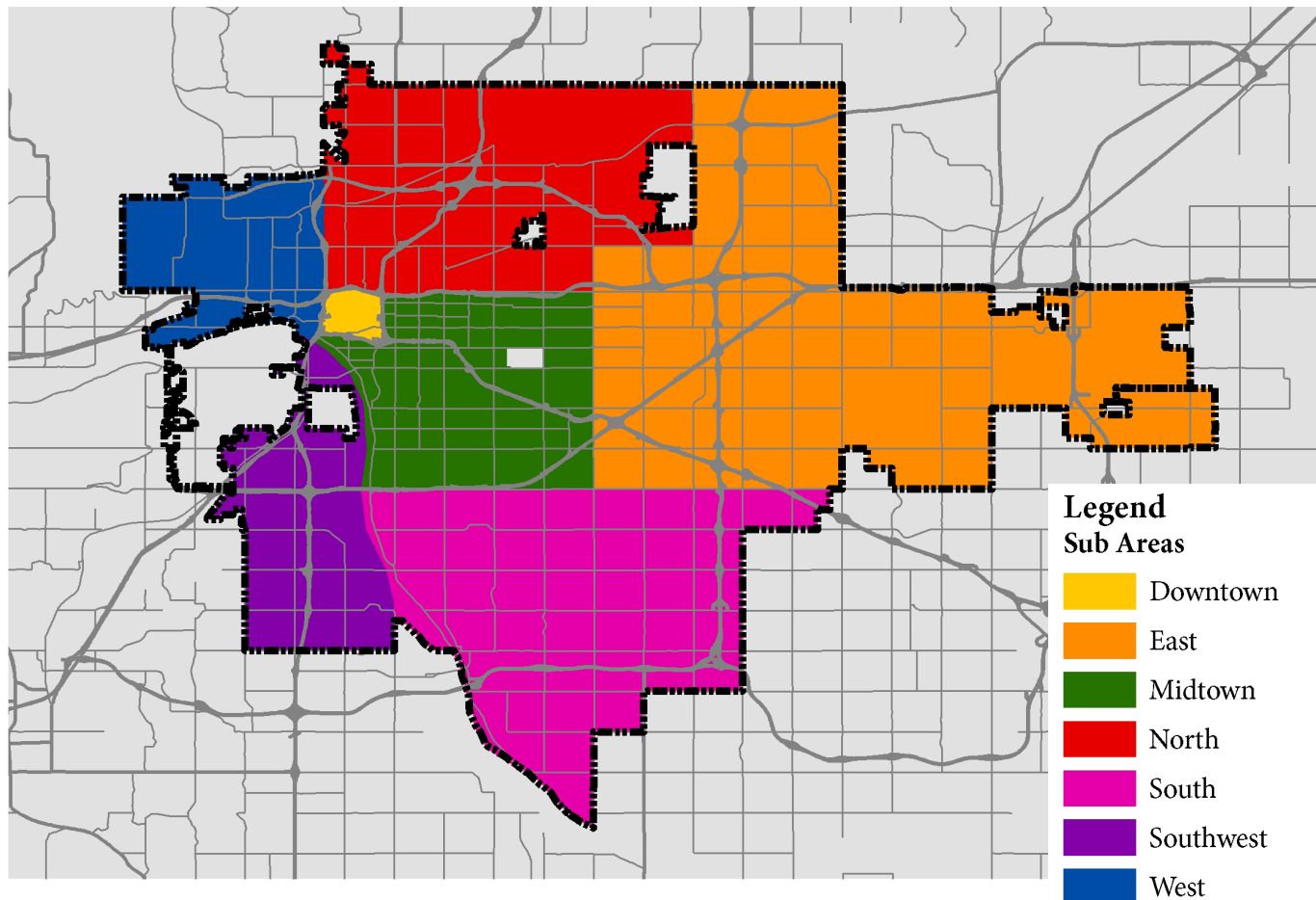
Planning staff identified a set of indicators based on the *Tulsa 2030 Goal* growth targets and the Comprehensive Plan goals and policies to monitor progress. Not all of the indicators identified have *Tulsa 2030 Goals* or benchmarks. Staff will measure change over time rather than progress towards a specific target for those indicators.

All of the indicators are based on data that is available and reliable at the time of this report. Over time as new technologies and data resources become available, the list of indicators or sources of data could be updated or replaced by more representative data or indicators that are more informative.

The indicators are intended to focus on the City as a whole or in some cases, subareas (see Figure 1) as identified in the Comprehensive Plan. While most data is available at a citywide level or smaller, some data is



Figure 1: Tulsa Sub-Areas



only available at the County or Metropolitan Area.

Table 1 lists the indicators to be monitored on an annual basis and reported every five years. The indicators are grouped by the Comprehensive Plan chapters:

- Land Use
- Transportation
- Economic Development
- Housing
- Parks, Trails, and Open Space.

## Establishing a Baseline

This report provides the baseline from which future performance will be measured. The report features:

- Discussion of the data collection methods and source;
- Goals associated with the indicator;
- Background and relevance of the indicator;
- Baseline of the data collected for each indicator; and
- Current observations.

Unless otherwise stated the baseline for comparison will be the conditions in 2005. With each update cycle, the monitoring program will evaluate current conditions in comparison to 2005 and 2030 benchmarks established

by the *Tulsa Comprehensive Plan*. As data becomes available, new baselines should be created in 5 year increments (2005, 2010, 2015, etc.).

For the purposes of this report, the U.S. Census data from the American Community Survey (ACS) five-year estimates is used. Five-year estimates are more reliable than one-year estimates, however the data is not as current. The 2010-2014 estimates became available December 2015.

Recognizing data accuracy and reliability for some indicators was not consistent and actions are underway to improve the data for future use. For example, although new jobs are an important indicator to measure progress, there currently is no reliable source for jobs data in the City of Tulsa.

**Table 1: Annual Indicators for Monitoring the Comprehensive Plan**

Land Use	<ol style="list-style-type: none"> <li>1. Population Growth in the City and Region</li> <li>2. New Homes and Commercial Space</li> <li>3. Building Permits and Plats</li> <li>4. Vacant and Underutilized Land</li> <li>5. Land Use Changes</li> </ol>
Transportation	<ol style="list-style-type: none"> <li>1. Vehicle Miles and Hours Traveled</li> <li>2. Access to Transit</li> <li>3. Transit Ridership</li> <li>4. Commute Mode Shares</li> <li>5. City/Regional Air Quality</li> </ol>
Economic Development	<ol style="list-style-type: none"> <li>1. Educational Attainment</li> <li>2. Labor Force</li> <li>3. Unemployment</li> <li>4. Income</li> <li>5. Property Value</li> <li>6. Sales Tax</li> </ol>
Housing	<ol style="list-style-type: none"> <li>1. Housing Cost Burden</li> <li>2. Housing Options</li> <li>3. Vacancy</li> <li>4. Home Values</li> </ol>
Parks, Trails, and Open Space	<ol style="list-style-type: none"> <li>1. New Parks, Trails, and Open Space</li> <li>2. Proximity to Parks and Open Space</li> <li>3. Conservation Areas</li> <li>4. Stormwater Quality</li> </ol>

## Land Use

### Overview

The implementation of *Our Vision for Tulsa* starts with land use, which influences all other chapters of the Comprehensive Plan. Land Use chapter provides guidance and priorities for how and where the City of Tulsa will grow by 2030. The goals and policies related to Land Use priorities recommend changes to the City's land use regulations, including the zoning and subdivision regulations. The Land Use chapter identifies areas of growth for future development, areas in need of stabilization, and the types of development that will meet the City's future housing and employment needs. To track the City's progress toward meeting these Land Use priorities, a set of indicators has been created.

Priorities identified in the Land Use chapter of the Comprehensive Plan:

*Priority 1: Make land use decisions that contribute to Tulsa's fiscal stability and move the city towards the citizen's vision.*

*Priority 2: Put procedures, processes, and tools in place to effectively and equitably implement PLANiTULSA.*

*Priority 3: Focus redevelopment, revitalization, and enhancement programs on areas that have been severely economically disadvantaged.*

*Priority 4: Maintain, stabilize, and strengthen existing neighborhoods, making them places where new residents are attracted to live.*

*Priority 5: Ensure that areas of growth benefit from high quality sustainable development.*

*Priority 6: Preserve and enhance environmental assets.*

The following indicators establish a baseline for tracking progress toward the Land Use Priorities:

1. Population Growth in the City and Region
2. New Homes and Commercial Space
3. Building Permits and Plats
4. Vacant and Underutilized Land
5. Land Use Changes



# Indicator 1: Population Growth in the City and Region

## Data Collection Methods

Annual estimates of the resident population for the City, Metropolitan Statistical Area (MSA), and counties within the MSA were collected from the U.S. Census Bureau, Population Division.

## Data Years

The MSA population estimates were collected from 2010-2014. The City of Tulsa population information was collected for 2000, 2005, 2010, 2013, and 2014. Annual data from the Population Estimates Program was utilized. Census data from 2000 formed the basis for PLANiTULSA's goal.

## Associated Goals

Land Use Goal 1: Tulsa captures a larger proportion of the of the region's future growth.

## Background and Relevance

Population change is a key indicator in determining the health of a city, and total population is a fundamental measurement used to establish the amount of land needed to sustain future development. The Comprehensive Plan proposes that Tulsa capture a large proportion of the region's future growth by placing a greater emphasis on the importance of having a vibrant and dynamic economy, attracting and retaining young people, protecting the environment with sustainable measures, providing effective transportation, and having a wide variety of housing choices. By following this vision for Tulsa, the Comprehensive Plan maintains

that the city has a better chance to capture the desired growth needed to maintain a greater standard of living for all Tulsans.

In 2010, the Oklahoma Department of Commerce forecast that the Tulsa MSA would experience population growth of 20% or 166,765 residents from 2000 to 2030. The *Tulsa 2030 Goal* assumes that the City of Tulsa would capture around 40% of the total growth or 102,458 new residents. In order to meet this goal, Tulsa will need to position itself as an attractive city for a broad range of people with more diverse housing types and transportation options.

## Observations

From 2010 to 2014, the total population for the Tulsa MSA grew 3.12% while the City of Tulsa only grew by only 1.85%. In order to achieve the *Tulsa 2030 Goal*, the population for the City will need to grow at a faster rate than the past 5 years. As of 2014, only 6% of the population goal has been achieved.

Tulsa lost over 20,000 residents from 2000-2005. Since then, the City has gained population with the biggest population growth in the last few years. Although the population growth has not been at the same rate as other areas, the City of Tulsa has maintained a 41% share of the total 2014 MSA population. Tulsa County's population, outside of the City of Tulsa, has grown over 8% since 2010, constituting almost 60% of the overall growth in the Tulsa Metropolitan Area.

**Table 2: Tulsa MSA Resident Population Profile 2010-2014**

Geography	Estimates of the Resident Population: April 1, 2010 to July 1, 2014							
	2010	2011	2012	2013	2014	Percent Growth 2010-2014	Percent 2014 MSA	Percent of 2010-2014 MSA Growth
Creek County	70,199	70,650	70,854	70,698	70,632	0.62%	7%	1.47%
Okmulgee County	40,102	39,795	39,587	39,451	39,095	-2.51%	4%	-3.43%
Osage County	47,436	48,332	48,010	47,924	47,981	1.15%	5%	1.86%
Pawnee County	16,612	16,806	16,483	16,527	16,401	-1.27%	2%	-0.72%
Rogers County	87,024	87,753	88,445	89,183	89,815	3.21%	9%	9.50%
Wagoner County	73,393	74,069	74,997	75,675	75,702	3.15%	8%	7.86%
Tulsa County	605,092	608,522	614,460	622,966	629,598	4.05%	65%	83.45%
Tulsa City <sup>1</sup>	392,422	392,751	394,510	398,404	399,682	1.85%	41%	24.72%
Tulsa County (except City of Tulsa) <sup>2</sup>	212,670	215,771	219,950	224,562	229,916	8.11%	24%	58.73%
Tulsa Metro Area <sup>3</sup>	939,858	945,927	952,836	962,424	969,224	3.12%	100%	100.00%

1 Tulsa City population estimates provided by Annual Estimates of the Resident Population for Incorporated Places of 50,000 or More.

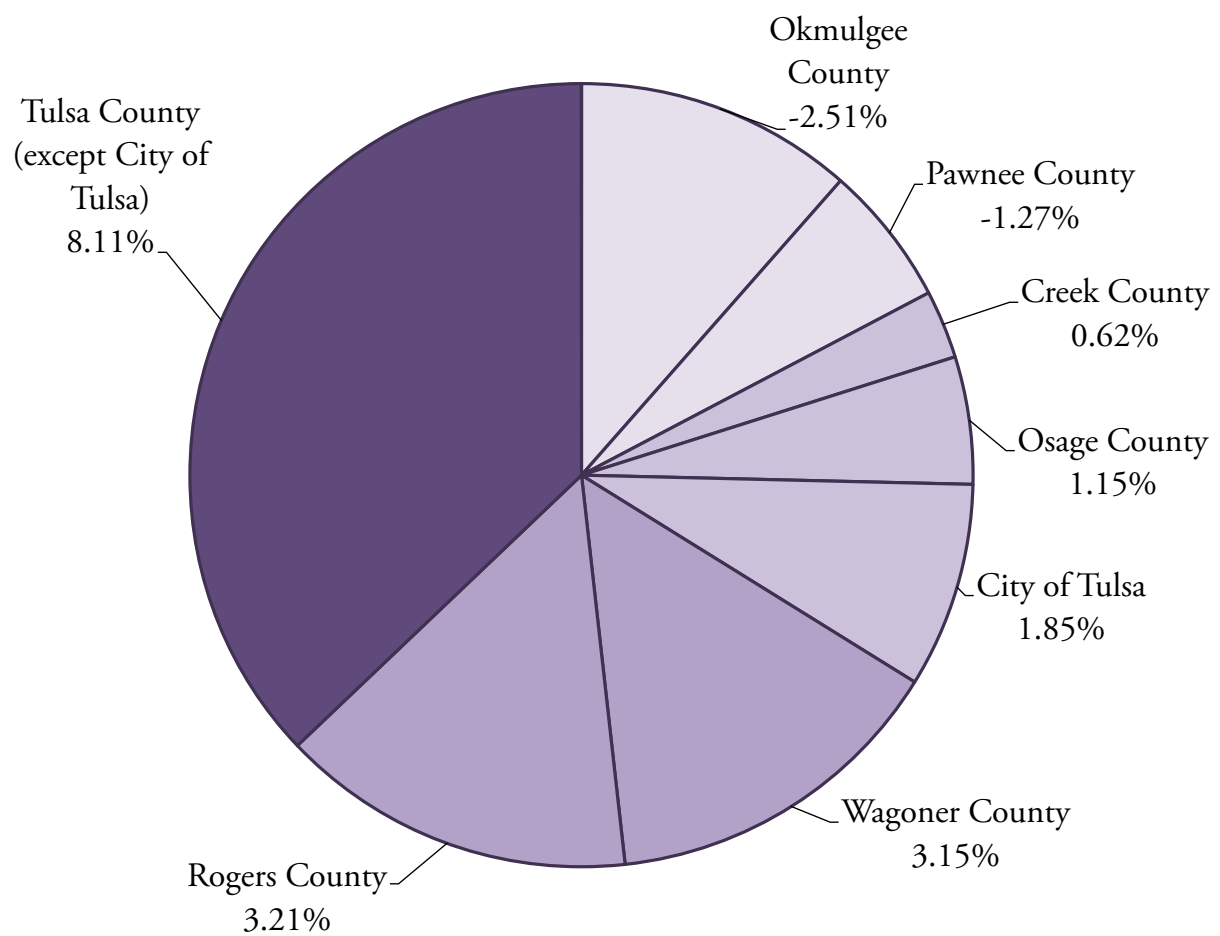
2 Tulsa County, except City of Tulsa, population estimates are Tulsa County less Tulsa City population.

3 Tulsa Metro Area Population estimates are based on the 2010 Census.

**Table 3: City of Tulsa Population Change and 2030 Goal**

	2000	2005	2010	2014	2000-2014 Growth	2030 Goal	Percent of Goal
Tulsa	393,049	370,447	392,422	399,682	6,633	102,458	6%

**Figure 2: Tulsa Metropolitan Area Percent Growth 2010-2014**



## Indicator 2: New Homes and Commercial Space

### Data Collection Methods

Assessor's Parcel Data for Osage, Wagoner, and Tulsa Counties included commercial square footage, number of housing units, and year built for development. Parcels with residential uses, including multifamily and mixed-use commercial properties, were separated from commercial/industrial properties and divided by subarea. The housing unit's field from the parcel database was verified or amended for each county.

Based on each building's "adjusted year built," totals for the following ranges of years built were tallied:

- constructed prior to 2005;
- constructed from 2006-2010; and
- constructed from 2011-2014.

The adjusted year built was used to determine the date of unit construction which accounts for buildings that have been rehabilitated in the last 10 years and put back into service.

The Comprehensive Plan determined areas of growth and infill. Parcels within each area were identified using Geographic Information Systems. Most of the infill areas fall within areas of growth.

At this time, building permit data related to number of units, square footage, and use is not consistent or reliable, thus not useful for this report. However, this information will likely be available with the implementation of a new permitting system in 2016-17.

### Data Years

The baseline was set at 2005. The Assessor's Data from January 2015 was used, but only represents developments that occurred prior to January 1, 2015.

### Associated Goals

Land Use Goal 2- Land use decisions are consistent with the Vision, Land Use, and Stability/Growth Maps.

Land Use Goal 5- Tulsa's regulatory programs support desired growth, economic development, housing, a variety of transportation modes and quality of life priorities.

Land Use Goal 8- Underutilized land in areas of growth is revitalized through targeted infill and reinvestment.

Land Use Goal 13- Existing neighborhoods are stable and infill development revitalizes, preserves and enhances these urban areas.

Land Use Goal 18- Development on impacted sites or areas is regulated to protect sensitive areas.

Economic Development Goal 5- New development supports vibrant, sustainable, transit-oriented communities.

Economic Development Goal 6- Downtown Tulsa is the core of the regional economy.

Housing Goal 1- A robust mix of housing types and sizes are developed and provided in all parts of the city.

Housing Goal 4- A healthy citywide balance between jobs and housing is maintained.

Housing Goal 5- Tulsa's existing housing inventory is revitalized, preserved, and maintained.

### Background and Relevance

The *Vision for Tulsa* includes population growth at three times the current level for an increase of 102,463 residents. To achieve this goal, the number of new housing units and jobs must also significantly increase to achieve the *Tulsa 2030 Goal*.

A source for employment statistics for the City of Tulsa has not been identified at this time. It is only available for the Metropolitan Statistical Area and is therefore not comparable to the *Tulsa 2030 Goals* provided in the Comprehensive Plan. Employment trends are provided in the Economic Development section of this document.

The Comprehensive Plan separates the city into subareas to identify where and how much change is envisioned across the City. The *Tulsa 2030 Goal* would result in a significant increase in new commercial and residential development in East Tulsa due to the supply of vacant land. Downtown will also see a large increase in commercial and residential development in relation to its size.

**Table 4: Share of 2030 Goal for all New Housing Units and Jobs by Subarea**

Subarea	% Tulsa 2030 Goal New Housing Units	% Tulsa 2030 Goal New Jobs
Downtown	4%	16%
East	32%	37%
Midtown	8%	10%
South	16%	10%
Southwest	15%	15%
North	19%	11%
West	5%	2%

### Growth and Stability

In order to create beneficial and balanced development patterns, the Comprehensive Plan identified areas of Growth and Stability throughout Tulsa. The Plan aims for new development that aligns housing choices with proximal employment so that growth outcomes are sustainable. These development patterns support the inclusion of more varied housing choices and efficient transportation options that reduce travel miles and time.

Areas of Growth are parts of the city where investment, targeted development, and select redevelopment will lead to increased economic activity, housing options, and access for current and future residents. These areas include a variety of development types, offer diverse housing and employment opportunities, and are connected to important road corridors. It is important for Tulsa to offer and create jobs and housing in strategic growth areas to ensure the future of the City.

### Infill

Infill development is an important technique to take advantage of vacant land in established areas within the City of Tulsa. Fiscally, infill development can take advantage of existing infrastructure and potentially result in a greater proportion of both sales tax and property tax revenue than greenfield development. Revenue can be gained from various types of infill developments including mixed use, single- and multi-family residential, and employment centers.

With the many types of infill opportunities available, it is important to consider the context in which development occurs. For instance, single-family stable neighborhoods would receive the most benefit from infill of single-family homes and, in some cases, transitional townhomes. In other areas like regional centers, downtown, and mixed-use corridors, the best practice might involve mixed-use and high-density infill development to provide both housing and employment opportunities.

It is important for the city to encourage the development of jobs in areas of housing growth. Balanced job and housing growth within targeted areas reduces costs to the City, creates a more accessible community, and reduces commute times.



## Observations

### Residential

Over 6,500 housing units were constructed or rehabilitated between 2005 and 2014 in the City. While the majority of all new units in the City of Tulsa have been built in the East and South subareas, Downtown and Southwest subareas have seen the greatest change in their total number of units. North, Midtown, and West Tulsa have seen the least change in total number of units. A *Tulsa 2030 Goal* for North Tulsa identified

19% of the total housing units would be built in that subarea, but as of the end of 2014 only 4% of the new housing units were built there.

Of the new and rehabilitated housing units since 2005, 50% were built in designated growth areas, while the other half occurred in areas of stability. PLANiTULSA set a goal of 19% of all new housing units (8,711 total units) would be infill developments. Of the new housing units, 38% are infill developments.

**Table 5: Change in Housing Units by Subarea**

	2014 Number of Units	2005-2014 Change	% Change	% of Total Change	Tulsa 2030 Goal	% Tulsa 2030 Goal	Percent of Goal Attained
Downtown	1,629	284	21%	4%	2,069	4%	14%
East	34,980	1,797	5%	27%	15,198	32%	12%
Midtown	36,360	699	2%	10%	3,883	8%	18%
South	43,503	2,408	6%	36%	7,446	16%	32%
Southwest	7,519	1,221	19%	18%	7,050	15%	17%
North	23,447	271	1%	4%	8,779	19%	3%
West	6,255	85	2%	1%	2,320	5%	4%
TOTAL	153,693	6,765	5%	100%	46,745	99%	14%

**Table 6: Change in Housing Units Within Strategic Growth and Infill Areas**

Housing	Total Units, 2005	Total Units, 2014	2005-2014 Change	% Change	Percent of Total New Units
Growth Areas	36,672	40,099	3,427	9.35%	50.66%
Infill	36,624	39,208	2,584	7.06%	38.2%
Total Housing Units	146,928	153,693	6,765	4.6%	

## Commercial

Since 2005, 12,552,545 square feet of commercial construction, including office, retail and industrial space, has occurred within Tulsa. The majority of new commercial square footage has been built in Midtown (20%) and South Tulsa (33%). Southwest Tulsa has seen the most change in total commercial square footage with a 43% increase. North (4%) and East (6%) Tulsa have seen the least commercial development.

Infill and growth areas each captured 96% of the 12,552,545 square feet of new commercial floor space recorded within Tulsa. Commercial space (measured in square feet) increased by 10.96% in growth areas. Almost 11% of the new commercial space is infill development. Total commercial square footage increased by 11.26% since 2005.

**Table 7: Change in Commercial Square Footage by Subarea**

	2005-2014 Change	% Change	% of Total Change	FAR
Downtown	1,808,853	14%	14%	1.30
East	2,122,622	6%	17%	0.10
Midtown	2,458,839	12%	20%	0.31
South	4,109,110	14%	33%	0.16
Southwest	1,471,579	43%	12%	0.09
North	468,664	4%	4%	0.11
West	112,878	13%	1%	0.15
TOTAL	12,552,545	11%	100%	0.15

**Table 8: Change in Commercial Square Footage Within Strategic Growth and Infill Areas**

Commercial	2005	2010	2014	2005-2014 Change	% Change	Percent of Total New SqFt
Growth Areas	110,523,745	118,331,108	122,636,174	12,112,429	10.96%	96.49%
Infill Development	110,524,200	118,320,578	122,628,413	12,104,213	10.95%	96.43%
TOTAL Square Footage	111,502,441	119,452,825	124,054,986	12,552,545	11.26%	100.00%

## Indicator 3: Building Permits and Plats

### Data Collection Methods

All data related to commercial and residential building permits for new construction and interior alterations were collected from the Development Services Permit Center. This data was organized by the year the permit was finalized. The year finalized was selected instead of the year issued since some projects are either never completed or take years to complete before obtaining an occupancy permit.

Plat Map data was collected for Tulsa County from the Tulsa County Assessor's website.

### Data Years

The data was collected for January 1, 2005 through December 31, 2015 and sorted annually.

### Associated Goals

Housing Goal 1- A robust mix of housing types and sizes are developed and provided in all parts of the city.

Housing Goal 4- A healthy citywide balance between jobs and housing is maintained.

Housing Goal 5- Tulsa's existing housing inventory is revitalized, preserved, and maintained.

### Background and Relevance

The Comprehensive Plan calls for increased development and redevelopment within Tulsa to enable the city to capture a larger portion of the region's population and economic activity. Commercial and Residential permit

information can aid in tracking the amount of new development and redevelopment. This allows the City to assess policy impacts, and whether residential and commercial land uses are growing in a balanced manner in accordance with PLANTiTULSA's vision for the city.

At this time, building permit data related to number of units, square footage, and use is not consistent, thus not useful for this report. However, this information will likely be available with the implementation of a new permitting system in the 2016-17 timeframe.

### Observations

From 2005 to 2008, the City of Tulsa experienced a 30% increase in the number of permits and 106% increase in the total actual valuation of the construction. Following 2008 and in direct correlation with the recession, the number of permits decreased 37% in two years to a low of 925 permits in 2010. The number of permits has since grown 11%, while the valuation of construction has only increased 7% in the last five years. As seen in Figure 4, the highest concentration of new building permits occurred Downtown and South Tulsa.

The decrease in the number of building permits is consistent with the decrease in the number of plats filed after 2008. The number of plats filed and lots platted continued to decrease until 2013. The number of lots platted in 2014 is the highest since before the recession. As seen in Figure 6, concentration of new plats are more spread out around the City.

Figure 3: Total Finaled Building Permits and Actual Valuation for All New Construction and Interior Alterations

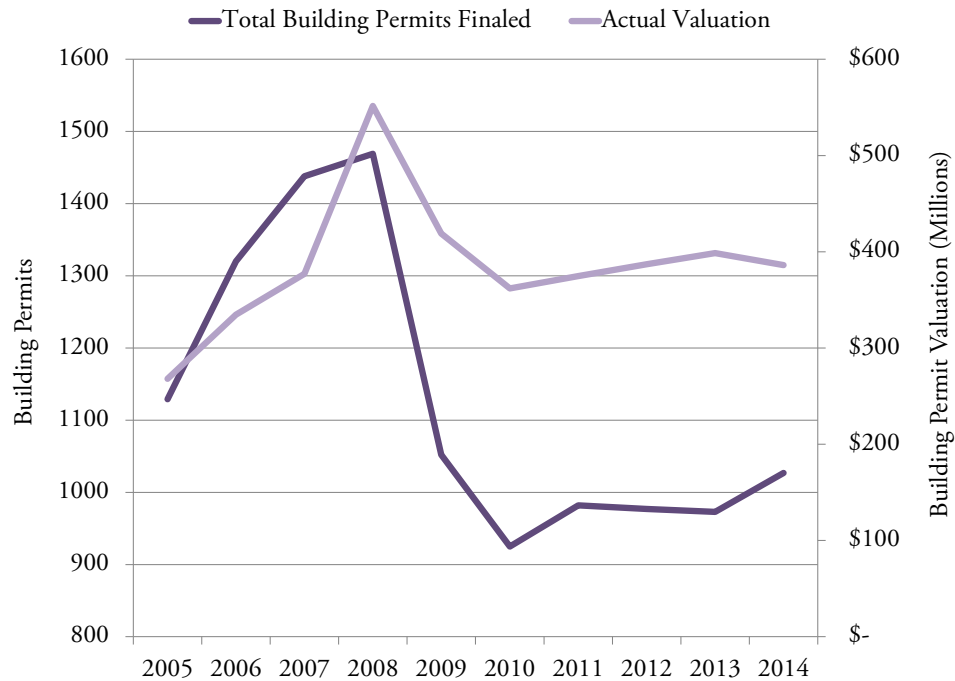


Figure 4: Heat Map of Tulsa Development Activity: Building Permits from 2010-2014

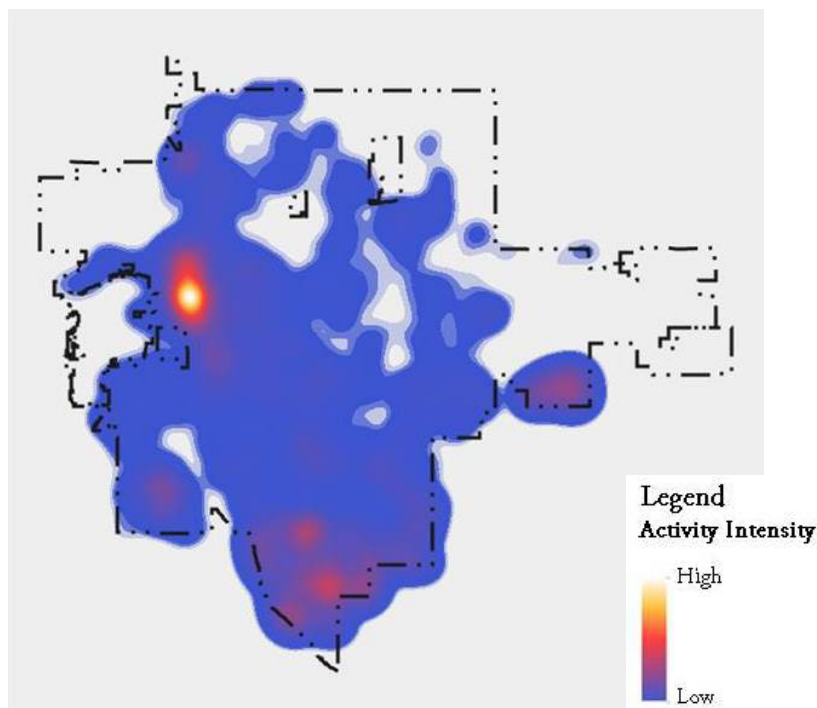
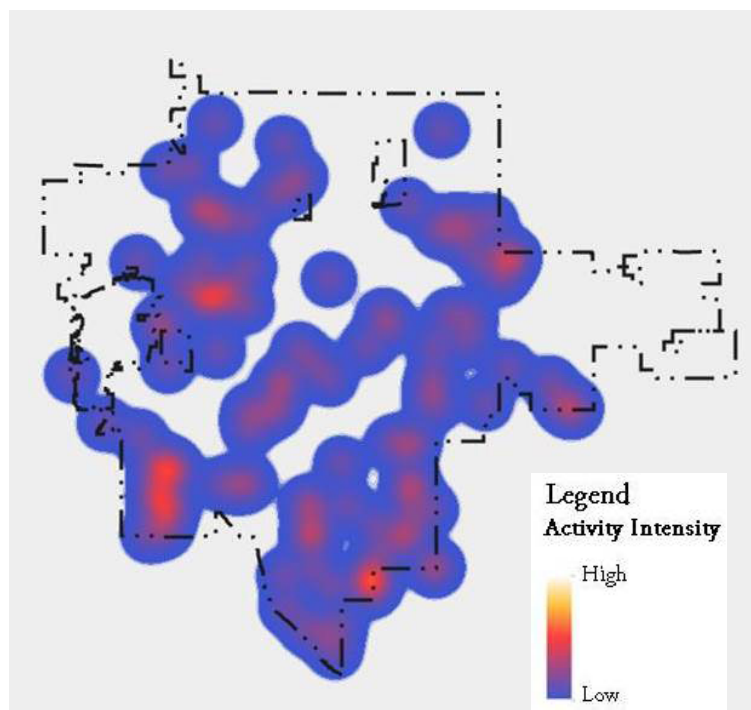


Figure 5: Total Number of Plats Filed with the Tulsa County Assessor



Figure 6: Heat Map of Tulsa Development Activity: Plats Filed from 2010-2014





## Indicator 4: Vacant and Underutilized Land

### Data Collection Methods

PLANiTULSA identified vacant and redevelopable, infill opportunity, land by comparing each of the properties assessed value (per acre) to the average value in Tulsa (\$246,000/acre). This analysis excluded single-family neighborhoods and environmentally sensitive areas. Redevelopable lands were defined as those lands with assessed value less than the average assessed value per acre. The GIS shapefile for vacant and redevelopable lands was applied to the assessor's data to determine if the property had been developed or redeveloped.

### Data Years

The baseline was set at 2005. The Assessor's Data from January 2015 was used, but only represents development that occurred prior to January 1, 2015.

### Associated Goals

Land Use Goal 2- Land use decisions are consistent with the Vision, Land Use, and Stability/Growth Maps.

Economic Development Goal 7- Ensure the region maintains an adequate supply of land to accommodate long-term demand for industrial development, in collaboration with privately funded economic development organizations.

Housing Goal 2- Tulsa maintains an adequate supply of

land with appropriate zoning designations to meet anticipated housing demand.

### Background and Relevance

PLANiTULSA identified numerous properties within the city as vacant or redevelopable. In Tulsa's urban environment, these properties present opportunities to increase the city's commercial and residential lands without sprawling into surrounding areas. Increased density will further support other plan goals related to transportation and economic development.

The City of Tulsa is slowly moving toward its redevelopment potential through the utilization of previously vacant and underutilized land. This is an important step towards creating a city that efficiently utilizes its land resources. Infill projects can increase density, support transit options, and provide increased property values without requiring extensive expansion of infrastructure and services.

### Observations

A total of 2,584 redevelopable and vacant land acres were developed from 2005 to 2014. This represents 5% of the land identified in 2005. Most of this development has occurred in Downtown and Southwest Tulsa subareas.

**Table 9: Vacant and Underutilized Land Development**

	Vacant Buildable Land	Redevelopable Land	Total Acres	Percent of Total Developed
Total Identified	26,109	30,134	56,243	
Developed 2005-2014	1,532	1,052	2,584	5%

## Indicator 5: Land Use Changes

### Data Collection Methods

The planning commission adopts resolutions to alter the Comprehensive Plan Land Use Map. All resolutions dealing with land use that were adopted after 2010 were compiled and sorted as Small Area Plan, Owner Initiated, and Corrections as the reasons for the land use change. The total acreage of land use change resulting from each of the three reasons was calculated.

### Data Years

All resolutions related to the Land Use Map from 2010 through December 31, 2014 were included.

### Associated Goals

Land Use Goal 1- Tulsa captures a larger proportion of the of the region's future growth.

Land Use Goal 3- New development is consistent with the PLANiTULSA building blocks.

Land Use Goal 4- The development environment allows Comprehensive Plan implementation to occur through market development.

Economic Development Goal 7- Ensure the region maintains an adequate supply of land to accommodate long-term demand for industrial development, in collaboration with privately funded economic development organizations.

Housing Goal 2- Tulsa maintains an adequate supply of land with appropriate zoning designations to meet anticipated housing demand.

### Background and Relevance

A city such as Tulsa experiences many dynamic and intermittent changes based on trends, infill, and redevelopment, and it is essential to track land use changes in order to move towards the transformation Tulsans expressed in Our Vision for Tulsa. In the City

of Tulsa, land use changes often correlate with updates or amendments initiated by Small Area Plans. Land use changes may also occur when staff makes corrections or when initiated by landowners.

### Observations

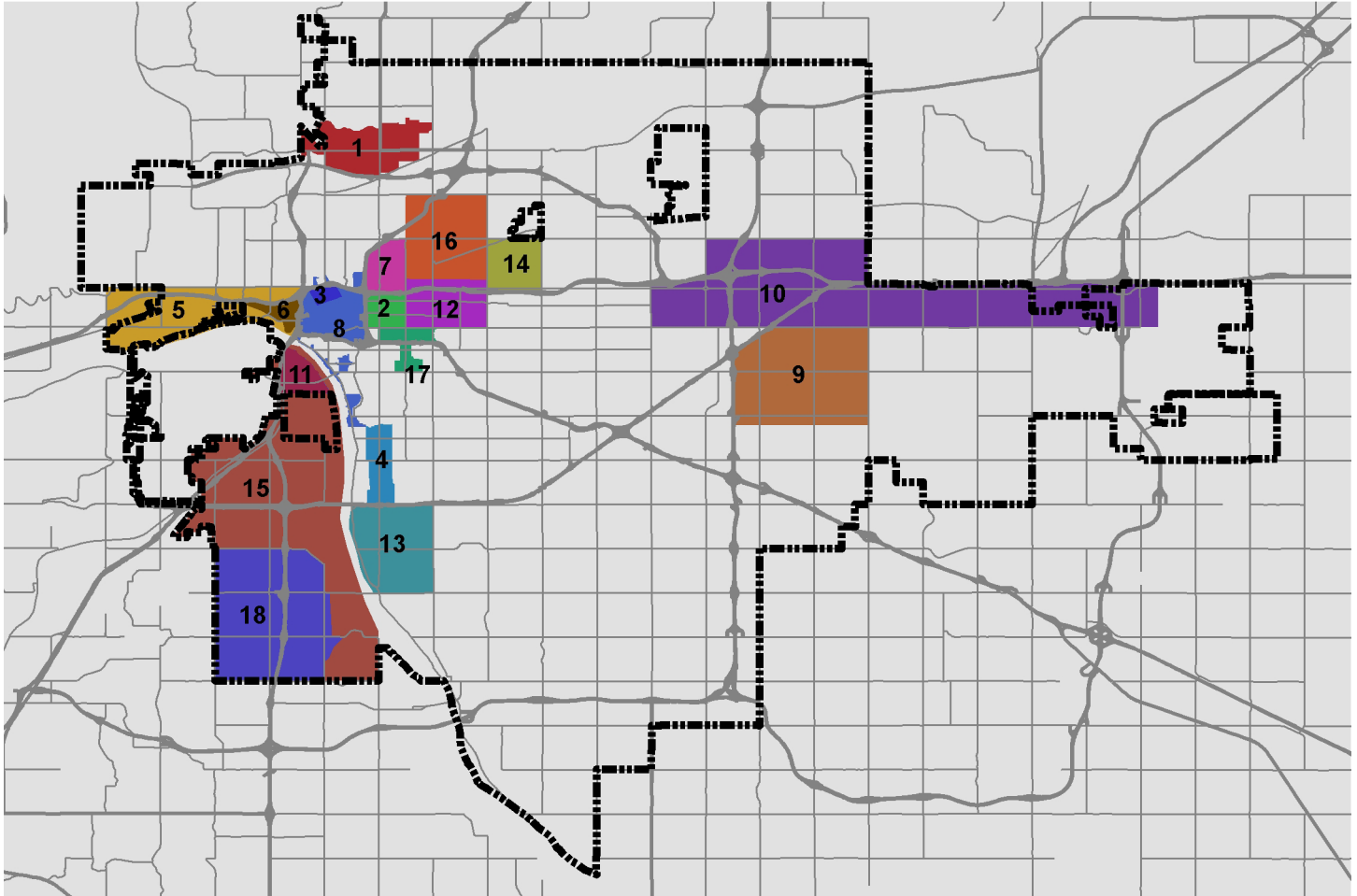
Between 2010 and 2014, land use designations have changed only 1% (1,579.89 acres) of land area within the City of Tulsa. A single resolution, 2680:925, resulted in a correction of 800 acres along the Arkansas River being designated as "Park and Open Space," which had no previous land use designation. Not including that correction, Small Area Plans account for the highest amount of land use changes from 2010 through 2014 with 335.82 acres. Since 2011, six Small Area Plans have been completed and adopted. Currently, the City of Tulsa Planning Division is working on the Crosbie Heights Small Area Plan to be completed in 2016.

Property owners, or their representatives, initiated land use changes on over 275 acres of land in Tulsa. Most of the land use designations that have been changed were originally "New Neighborhoods" with 330.21 acres. Other than the new designation of "Parks and Open Space" most of the land use designations that have been changed were changed to "Employment" accounting for 236 acres and "Town Center" accounting for 228 acres.

Table 10: Type and Are of Land Use Changes

Type	Number	Acres Changed
Small Area Plan	8	335.82
Owner Initiated	9	277.06
Corrections	10	967

Figure 7: Small Area Plans in Tulsa



## Legend Small Area Plans

<b>1</b>	36th Street North	<b>8</b>	Downtown Area Master Plan	<b>15</b>	SW Tulsa Neighborhood Plan *
<b>2</b>	6th Street Infill Plan *	<b>9</b>	East Tulsa Phase 1 Plan *	<b>16</b>	Springdale Development Area *
<b>3</b>	Brady Village	<b>10</b>	East Tulsa Phase 2 Plan *	<b>17</b>	Utica Midtown
<b>4</b>	Brookside Infill Plan *	<b>11</b>	Eugene Field	<b>18</b>	West Highlands Tulsa Hills
<b>5</b>	Charles Page Boulevard *	<b>12</b>	Kendall - Whittier Plan *		
<b>6</b>	Crosbie Heights	<b>13</b>	Riverwood Neighborhood Plan *		
<b>7</b>	Crutchfield Neighborhood Plan *	<b>14</b>	Sequoyah Neighborhood Plan *		

\* Adopted prior to 2010 Comprehensive Plan

## Transportation

### Overview

Tulsa's future transportation needs and opportunities are directly connected to the land use chapter of the Comprehensive Plan. The goals and policies related to the priorities of the transportation section identify the tools needed to implement *Our Vision for Tulsa* by 2030. The impact of these goals will provide more choices for people traveling to and from the places they live, work, and play but also have an impact on health and the environment. To track the City's progress toward meeting these Transportation goals and policies, a set of indicators was created.

Priorities identified in the Transportation section of the Comprehensive Plan:

*Priority 1: Provide a wide range of reliable transportation options so every Tulsan can efficiently get where they want to go.*

*Priority 2: Maintain and enhance Tulsa's existing transportation system through strategic investments.*

*Priority 3: Ensure that transportation investments enhance the land uses they serve.*

*Priority 4: Provide Multiple Transportation choices to all Tulsans.*

The following indicators establish a baseline for tracking progress toward the Transportation Priorities:

1. Vehicle Miles and Hours Traveled
2. Access to Transit
3. Transit Ridership
4. Commute Mode Shares
5. City/Regional Air Quality

# Indicator 1: Vehicle Miles and Hours Traveled

## Data Collection Methods

The Federal Highway Administration measures the Vehicle Miles Traveled (VMT) for urbanized areas. The U.S. Census and the American Community Survey (ACS) provide additional estimates of mean travel time to work for the City of Tulsa.

## Data Years

2005 and 2010 and 2014 ACS Estimates

## Associated Goals

Transportation Goal 1- All Tulsans have a variety of transportation options for getting around the city.

Transportation Goal 2- Tulsa has a sustainable network of roadways, trails and transit infrastructure that is well maintained and not a burden on future generations to operate.

Transportation Goal 4- Tulsa has high performance operations for all modes of travel; this is achieved by preserving and optimizing the current transportation system using the latest technology and programs.

## Background and Relevance

Vehicle miles traveled (VMT) and vehicle hours traveled (VHT) are two fundamental transportation indicators. VMT measures the average daily mileage traveled by a vehicle in a region; while VHT measures the average time spent driving. Because high VMT and VHT indicate residents and workers are spending large amounts of time and resources commuting, it is

important for the City of Tulsa to strive to keep both VMT and VHT at low levels. A high VMT indicates that housing and employment opportunities are not located close to one another, while a high VHT can indicate traffic problems that could be related to road and transit capacities as associated with VMT.

To achieve those goals, the Comprehensive Plan proposes close proximity between homes and jobs, improved transit options, and the use of context sensitive solutions in future roadway designs. Implementing appropriate context sensitive solutions reduces traffic congestion, thereby reducing the amount of time spent traveling.

## Observations

Although the *Tulsa 2030 Goal* was to reduce the VMT by 25%, the commuter miles have decreased slightly from 2005 to 2010 within the Tulsa MSA. In the City of Tulsa, mean travel time to work continues to increase from 17.1 minutes in 2005 to 18.4 minutes in 2014.

Table 11: Tulsa Travel Indicators

	2005	2010	Percent Change	Percent Goal Change
VMT (miles in daily millions)	20.94	20.75	-.91%	-25%

Table 12: Mean Travel Time

	2005 Census	2010 Census	2014 Estimates
Mean Travel Time to Work (Minutes)	17.1	17.9	18.4



## Indicator 2: Access to Transit

### Data Collection Methods

INCOG provided shapefiles of transit lines from 2006 and 2014. Based on the County Assessor's data, the number of housing units within ½ mile of transit lines during each year was determined. Assessor's data was limited to units built in 2006 or before to determine the totals for that year.

### Data Years

2006 and 2014

### Associated Goals

Land Use Goal 12- Residents in established neighborhoods have access to multiple modes of transportation.

Transportation Goal 3- The city's transportation system is cost-effective and adequate to meet the need of the current and projected population.

Transportation Goal 12- Tulsans can rely on a variety of transit options to take them to jobs, shopping, and entertainment.

Housing Goal 8- The combined cost of housing and transportation to Tulsa's residents is reduced.

Housing Goal 10- Housing planning is coordinated with transportation planning to maximize the benefits of transportation investments.

### Background and Relevance

The City of Tulsa continually strives, through proximity and efficiency, to improve access to transit for all members of the community. Increased access to transit will influence change in mode splits anticipated in the Comprehensive Plan. Transit access will become even more important as the number of users increases. In order to develop a sustainable relationship between housing and transit, efficient and frequent routes should be evaluated and shift with travel demands. It is a goal of the Comprehensive Plan to reduce transportation expenditures, lower vehicle emissions, and increase housing choices near jobs and transit thereby making it easier for citizens to access transit. The first access barrier to transit is proximity to transit lines. By increasing the number of households within walking distance to lines, the City can increase the number of transit riders.

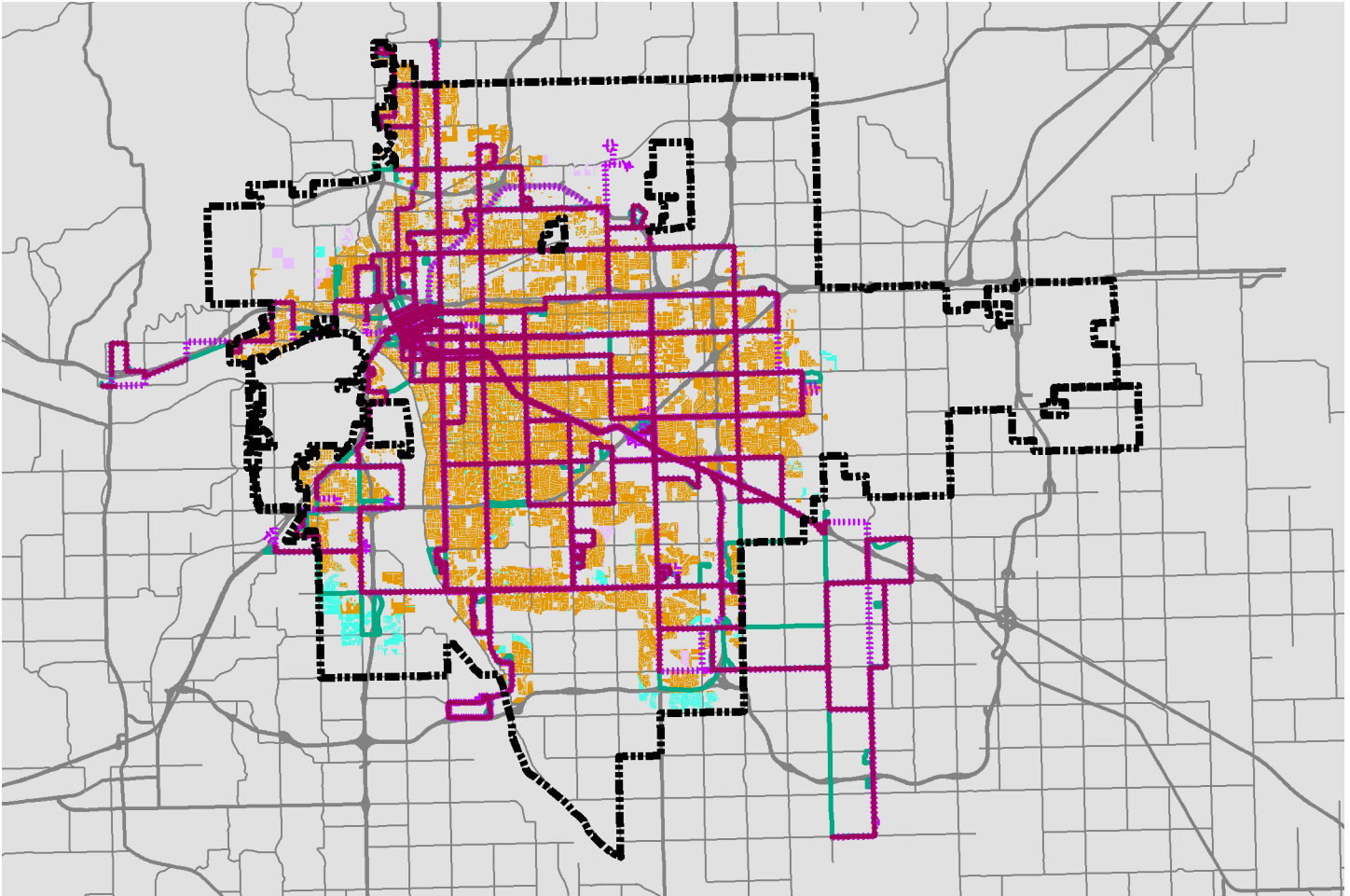
### Observations

The Metropolitan Tulsa Transit Authority (MTTA) continually monitors and improves transit routes and currently serves a wide range of travelers throughout the city. Since 2006, MTTA modified bus routes to meet the needs of its ridership and increase access. From 2006 to 2014, the MTTA added 194 of transit route or revenue miles. This 60% increase brought the total number of transit route lane miles to 521. With the additional 194 route lane miles since 2006, the number of households within a half mile of transit increased over 5,000 units, 20% of the Tulsa 2030 Goal of 26,567 housing units.

Table 13: Housing Units within a Half Mile of Transit

	2006	2014	Change	2030 Goal	Percent of 2030 Goal
Within 1/2 Mile	127,058	132,510	5,452	26,567	20%

Figure 8: Tulsa Households Within Half Mile of Transit Lines



## Legend

- Unchanged MTTA Routes
- ⋯ 2006 MTTA Routes Removed
- 2014 MTTA Routes Added
- Unchanged Parcels
- 2006 Parcels Removed (outside 1/2 mile)
- 2014 Parcels Added

## Indicator 3: Transit Ridership

### Data Collection Methods

The Metropolitan Tulsa Transit Authority (MTTA) records the number of passengers it serves every year, and INCOG reports that data.

### Data Years

2010-2013

### Associated Goals

Transportation Goal 8- Traffic safety and mobility are improved.

Transportation Goal 12- Tulsans can rely on a variety of transit options to take them to jobs, shopping, and entertainment.

### Background and Relevance

The Comprehensive Plan places an emphasis on transit and the role it will play as population increases in Tulsa. By monitoring transit ridership, the City of Tulsa can determine if current transit lines are optimally serving the population.

It is important to make sure that citizens who use public transit have reliable, safe, and affordable transportation. Residents tend to be attracted to transit options that are frequent, reliable, and attractive. If ridership numbers decrease, there could be a direct correlation to unsatisfactory service or underutilized transit lines. In order to sustainably grow transit ridership, the City must establish land uses congruent with transportation policies designed to expand the transit systems' effectiveness. For these reasons, it is important

to monitor ridership levels continually and maintain a high level of service. Transit ridership in Tulsa is rising and is estimated in the Comprehensive Plan to continue to increase them 2030.

### Observations

From 2010 through 2014, transit ridership continued to fluctuate, but overall, ridership along MTTA lines has increased by over 24% from 2.5 million riders in 2010 to over 3 million in 2014. The demand for public transit is increasing. According to the MTTA Financial Report for fiscal year 2013-14, MTTA has not experienced this amount of ridership since 2001 when their bus fleet was 20 percent larger.

Table 14: Tulsa Transit Annual Ridership

Year	Ridership*	Annual Change	% Change
2010	2,523,000	-	-
2011	2,476,000	-47,000	-1.86%
2012	2,797,000	321,000	12.96%
2013	2,995,000	198,000	7.08%
2014	3,132,000	137,000	4.57%
Total		609,000	24.14%

\*The number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination.

## Indicator 4: Mode Share

### Data Collection Methods

Commute mode shares by type is provided by the U.S. Census ACS reports. City of Tulsa staff (Engineering Services) provided information on lane miles. INCOG staff provided information for transit, bike, and trail miles in a shape file format. Numbers are rounded to the nearest mile. Segments without a “date opened” data point were assumed to be opened prior to 2005. Unfortunately, different metrics related to road and lane miles are measured in different years. Due to this, not all the metrics share the same baseline year or frequency of study.

### Data Years

Data sources do not use the same years or follow the same frequency in collection.

ACS Data- 2005-2009, 2010-2014

2014 shape file

### Associated Goals

Land Use Goal 5- Tulsa’s regulatory programs support desired growth, economic development, housing, a variety of transportation modes and quality of life priorities.

Transportation Goal 12- Tulsans can rely on a variety of transit options to take them to jobs, shopping, and entertainment.

Transportation Goal 13- Pedestrians have easy access to jobs, shopping, and recreation.

Transportation Goal 14- Tulsans safely and efficiently use bicycles to go to work, shop and recreation areas.

### Background and Relevance

It is important to monitor commute mode shares to determine the sustainability of Tulsa’s transportation

system. With a focus on commute mode shares, the city can establish a more efficient transportation system that supports multiple mode of travel. The Comprehensive Plan calls for growth in mode split that include transit, walking, and biking. This requires increasing the street quality for alternative methods of travel to enable a more efficient transportation system. Currently, City of Tulsa policies promote a vehicle based travel model. Automobiles will continue to play a critical part in the City’s transportation system and provide the majority of trips, but increased use of other modes will reduce traffic congestion.

The coordination between commute mode shares analysis and city streets development plays an important role in the growth of multimodal streets and corridors proposed in the Comprehensive Plan. Since adoption of the Comprehensive Plan the City, the Planning Division works with the development community, Development Services Division, and Engineering Services to ensure that development and roadway designs are being informed by the Comprehensive Plan. The expansion of multimodal streets can improve accessibility and safety for pedestrians and cyclists alongside other forms of transportation. This type of comprehensive growth advances the City’s goals of an overall more efficient transportation system, reduced vehicle emissions, and a commute mode shift that promotes greater roadway capacity for all types of travel.

Tulsa’s current quantity of lane miles has proven to be fiscally unsustainable. In 2007, Tulsa’s Complete Our Streets Advisory Council determined that approximately \$1.1 billion dollars were needed to repair and maintain the city’s streets over the next decade. Additional vehicle miles and road widening further

contribute to long-range fiscal instability, if only due to further repair obligations. The City of Tulsa must prioritize transportation expenditures in order to create a balanced financial approach. Increasing the share of transit and walk/bike mode splits would not only reduce the pressure to increase the number of vehicle lanes but could also reduce congestion over time.

In an effort to improve the livability of communities, Federal transportation funding priorities have shifted to a system that awards funding to enhance walking, biking, and transit facilities. This further supports the City's goals of shifting mode splits in order to increase its transportation system's sustainability.

## Observations

The 2030 goals set forth in the Comprehensive Plan call for an increase of mode split shares that would result in 7% transit use, 9% walking and biking, and a decrease of vehicle use to 84%. Based on current data trends collected from the U.S. Census, the City of Tulsa is not moving toward the goals set by the comprehensive plan. The change in commute mode shares since 2005 is nominal with no change in bicycling and use of public

transit and decreases in carpooling (-.6%) and walking (-.3%). The data shows a slight increase in people who drive alone.

In 2008, Tulsa had 3038 lane miles of non-arterial roads. This increased to 3069 in 2015, an increase of 31 lane miles. During the same time period, the number of arterial lanes decreased from 1,356 to 1,263 (93 lane miles). These numbers represent a 1% increase in nonarterial lane miles and a 6.9% decrease in arterial lane miles.

There were 52 identified miles of bike lanes and bikeways within the City of Tulsa. There are an additional 283 miles of identified bikeways and lanes planned within the City. While the number of bike routes has increased, much of the City's transportation grid is still without bike lanes or dedicated bikeways. This limits the attractiveness to cyclists using cars today. The GO Plan identifies 57.6 miles for bike lanes and 5.2 miles of buffered bike lanes within the City. (Multi-use trails are considered under the Parks and Trails section.)

**Table 15: Commute Mode Shares**

	2005 - 2009		2010-2014		Numeric Change	Percent of Population Change
	Estimate	Percent of population	Estimate	Percent of Population		
Car, Truck, or Van	165,746	91.5%	168,358	91.90%	2,612	0.4%
Drove Alone	145,130	80.2%	148,573	81.10%	3,443	0.9%
Carpooled	20,616	11.4%	19,785	10.80%	-831	-0.6%
Public Transit	1,970	1.1%	2,015	1.10%	45	0.0%
Bicycle	465	0.3%	549	0.30%	85	0.0%
Walk	3,910	2.2%	3,481	1.90%	-429	-0.3%
Other	2,033	1.1%	2,198	1.20%	165	0.1%



**Table 16: Bike Lanes and Bikeways**

Region	Prior to 2005 Miles	New Miles Since 2005	Funded Miles	Planned Miles	Total Miles of Existing and Planned
North	7	0	2	49	58
South	10	0	0	42	51
Southwest	3	0	0	29	32
Midtown	22	0	0	43	64
East	2	0	0	73	76
West	1	0	0	29	30
Downtown	7	0	1	18	26
Totals	52	0	3	283	338

## Indicator 5: City/Regional Air Quality

### Data Collection Methods

The U. S. Environmental Protection (EPA) provides an Air Quality Index (AQI) and annual measurements in tons for greenhouse gas emissions for Tulsa County and Metropolitan area.

The data used to generate air quality goals in PLANiTULSA is no longer available. Instead, data from the National Emissions Inventory (NEI) was used to determine the level and change in pollution emissions in the Tulsa MSA. The EPA manages the NEI, which is available online.

### Data Years

AQI Data- 2005-2014

Greenhouse Gas Emissions- 2008, 2011 (most recent available)

CO2 for Large Industry- 2010-2013

### Associated Goals

Transportation Goal 5- The allocation of transportation funds is modernized to align with vision.

Parks and Open Space 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.

### Background and Relevance

The City of Tulsa strives to improve the city and region's air quality. The goal of the Comprehensive Plan is to decrease the negative impact of emissions and their effect on Tulsa's air quality. The Environmental Protection Agency (EPA) provides Air Quality Index (AQI) scores based on available pollutant level information. AQI scores are classified as Good, Moderate, Unhealthy for Sensitive Groups (USG), Unhealthy, or Very Unhealthy.

The City's goal is to attain all of the National Ambient Air Quality Standards; however based on projections in the Comprehensive Plan, Tulsa is not on track to meet Air Quality Standards and could be determined a nonattainment area ( defined by EPA as an area of the country where air pollution levels persistently exceed the national ambient air quality). Once nonattainment designations take effect, the state and local governments have three years to develop implementation plans outlining how areas will attain and maintain the standards by reducing air pollutant emissions contributing to concentrations.

While the City has seen a reduction in the number of unhealthy air quality days, emission levels continue to rise. The city's rising emissions may cause negative effects in surrounding region as well. For this reason, it is important to monitor air quality as an indicator of city health. The compounds measured in the Air Quality Index can have negative impacts on people in good health and harmful effects on individuals, like those with asthma, who are sensitive to air conditions.

The Tulsa 2030 Goal to diversify transportation options will contribute to reducing the harmful impacts of transportation emissions on regional air quality. Air pollutants related to transportation- Noxious Oxides (NoX), Carbon Dioxide (CO2), and Volatile Organic Compounds (VOC) are measured by Department of Environmental Quality (DEQ) at five locations within the Tulsa Metropolitan area. Based on meeting the goal of increased transportation options and decreased travel times, the 2030 Goal for these air pollutants would result in a 16% decrease within the region.

Since 2012, DEQ in collaboration with INCOG has participated in EPA's Ozone Advance program. The program requires a plan that includes voluntary and mandatory measures to reduce ground level ozone (O<sub>3</sub>) reduction. The Tulsa MSA is designated as an attainment area and all ozone monitoring sites in the Tulsa MSA met the ozone standards in 2014.

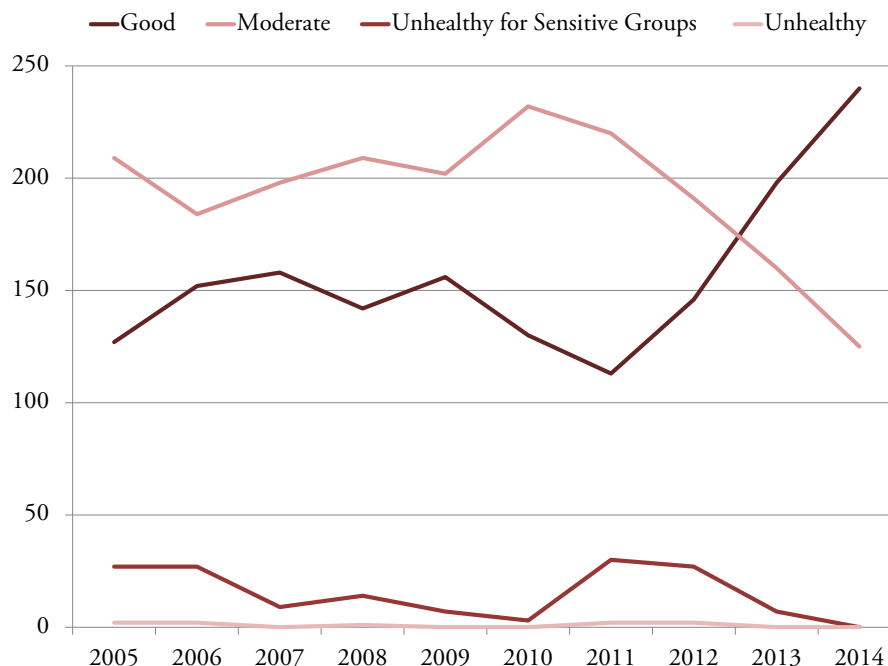
## Observations

From 2005 to 2012, the number of good days fluctuated from 113 to 158, moderate days 184 to 220, unhealthy for sensitive groups 3 to 30, and unhealthy 0 to 2. The number of good days continues to increase from 113 good days in 2011 to 240 days in 2014. In response, the number of moderate days fell to 220

**Table 17: Air Quality Index Day Totals for Tulsa**

	2005-2009	2010-2014	Numeric Change	Percent Change
Good	735	827	92	12.5%
Moderate	1,002	928	-74	-7.4%
Unhealthy for sensitive Groups	84	67	-17	-20.2%
Unhealthy	5	4	-1	-20%
Source: EPA Air Quality Index Report				

**Figure 9: Air Quality Index Days for Tulsa**



and 125 respectively. Thirty “unhealthy for sensitive groups” days were reported in 2011 and none in 2014. The much higher than normal ozone concentrations are attributed to two exceptionally hot and dry summers in 2011 and 2012. The data reveals that the number of unhealthy days spikes periodically, and the City could experience a natural period of better air quality.

The Plan calls for a 16% reduction of emissions by the year 2030 for the Tulsa metropolitan area, but from 2008 to 2011, Tulsa added to the total emissions. More recent data is not currently available.

Based on the Inventory and U.S. Greenhouse Gas Emissions and Sinks study done from 1990 to 2012, industry and electricity production account for an estimated 52% of greenhouse gas emissions. In Tulsa County for 2010 to 2013, greenhouse gases produced by large facilities average 5.3 million metric tons compared to an Oklahoma average of 63.2 million metric tons.

**Table 18: National Emissions Inventory Tulsa MSA**

	2008	2011	# Change	% Change	2030 # Goal	2030 % Goal
NOX (tons)	76,938	87,659	10,721	12.2%	-15,390	-16%
CO2 (tons)	9,337,787	11,981,013	2,643,226	22.1%	-3,723,000	-16%
VOC (tons)	145,814	892,524	746,710	3.7%	-18,468	-16%
Source: EPA						

**Table 19: Green House Gas Emissions**

Tulsa County	Emissions in metric tons CO2e			
	2010	2011	2012	2013
Power Plants (5)	3,556,651	3,529,154	4,228,598	3,104,993
Petroleum and natural Gas Systems (1)	N/A	N/A	51,269	36,108
Refineries (2)	1,275,697	1,303,639	1,351,735	1,319,570
Other (1)	53,834	45,318	42,155	41,972
Waste (2)	198,250	256,906	278,148	239,637
Minerals (1)	32,328	10,590	10,0650	N/A
Pulp and Paper (1)	77,736	79,499	93,518	96,250
Totals	5,196,506	5,227,117	6,048,500	4,840,543
Source: EPA Greenhouse Gas Emissions from Large Facilities				

# Economic Development

## Overview

To realize the Vision for Tulsa, economic development must be integrated with the land use, transportation, housing, and other chapters of the Comprehensive Plan. A strategic approach to economic development is needed to create and retain jobs and foster businesses that thrive. To track the City's progress toward meeting the Economic Development goals and policies, a set of indicators was created.

Priorities identified in the Economic Development section of the Comprehensive Plan:

*Priority 1: Spur and Support Entrepreneurial Ventures and Small Businesses.*

*Priority 2: Connect education and training institutions and private and public sectors.*

*Priority 3: Retain industry clusters that are strong now, cultivate new clusters.*

*Priority 4: Support Aggregation of Employers downtown, neighborhood and regional center, and existing industrial areas.*

The following indicators establish a baseline for tracking progress toward the Economic Development Priorities:

1. Sector Job Growth
2. Educational Attainment
3. Unemployment
4. Income
5. Property Value
6. Sales Tax

## Indicator 1: Sector Job Growth

### Data Collection Methods

Data was collected from the Workforce Analysis and Education Alignment Strategy published in August 2014 by the Tulsa Regional Chamber for the Tulsa MSA for 2008-13.

### Data Years

2008, 2013

### Associated Goals

Economic Development Goal 2- Entrepreneurs have thriving businesses and contribute to the local economy.

Economic Development Goal 3- The City, local chambers of commerce, and other privately funded economic development organizations work closely with institutions of higher education to collaborate on economic development policies and implementation.

Economic Development Goal 4- Investment strategies support existing and emerging industry clusters.

Economic Development Goal 9- The City's labor force has the education and skills to support industrial firms.

### Background and Relevance

To sustain balanced job growth, the Tulsa Comprehensive Plan identified key industries with the greatest job and prosperity-creation potential. Tulsa aspires to and foster growth in these industries by creating a more sustainable city that provides efficient transportation, produces qualified job candidates, supports expansion, cultivates entrepreneurship, and creates a competitive advantage. By nurturing these qualities, the City of Tulsa has the

potential to become an engine for economic growth and build a strong future for the region. Focusing development policies around these key qualities can lead to balanced job growth. The definitive goal for Tulsa should be to break down any barrier that could stand in the way job growth in new and emerging employment sectors.

Focusing economic development policies around these key industry clusters can lead to a more efficient use of resources. These industries should grow quickly, diversify the regional portfolio, contribute to a brand, and promote the presence of business opportunities and services that attract the creative class of workers and entrepreneurs.

### Observations

From 2008 to 2013, several key industries experienced growth. The highest growth from 2008 to 2013 was in Healthcare, which grew 11%, creating nearly 5,651 jobs, followed by Advanced Manufacturing with 1,576 jobs, and Energy with 301 jobs. The largest loss occurred in Professional Services with 5,728 jobs and Transportation and Logistics with 2,956 jobs.

Location Quotient (LQ) measures how local concentrations of specific industries or clusters compare to the nation or state as a whole. Industries that have both high LQ and relatively high total job numbers typically form a region's economic base. The City's most concentrated industry is Aviation and Aerospace indicating that Tulsa has an advantage as compared to the country as a whole. The Energy sector also has a high concentration and gained new jobs.

Table 20: Tulsa Industries' Location Quotient

	Jobs 2013	LQ 2013	2008-2013 Growth
Advanced Manufacturing	37,420	2.1	4.4%
Aviation and Aerospace	12,799	3.6	-0.9%
Energy	20,312	3.1	1.5%
Healthcare	56,234	1	11.2%
Professional Services	57,778	1.02	-9.0%
Transportation Distribution and Logistics	10,834	1.4	-21.4%



## Indicator 2: Educational Attainment

### Data Collection Methods

U.S. Census, ACS data, 5-year summary data was used for highest education attainment for individuals aged 25 or older.

### Data Years

ACS Data 2005-2009, 2010-2014

### Associated Goals

Economic Development Goal 2- Entrepreneurs have thriving businesses and contribute to the local economy.

Economic Development Goal 9- The City's labor force has the education and skills to support industrial firms.

### Background and Relevance

An educated labor force is critical to the development of a successful labor market by creating opportunities and benefits that affect all members of the community. The City of Tulsa strives for equitable growth in education attainment levels by expanding education

opportunities and collaboration among institutions. Fortunately, Tulsa is home to many technical schools, junior colleges, and universities that prepare individuals with the skills needed to succeed in the labor market.

The City of Tulsa also seeks to enable non-profits who provide continuing education assistance to members of the work force. Emerging companies and entrepreneurs also need educational growth in order to maintain thriving businesses that contribute to the local economy.

### Observations

Education attainment levels have generally remained constant from 2005 to 2014. The percentage of the population reporting a high school diploma (or equivalence) as their highest level of education attainment has decreased by 1.4%. This is matched by an increase in 1.5% of individuals who received one or more years of college education without a degree. While the overall number with an Associate's degree or better has increased by 16%, the increase as a percentage of the total population is only marginal at almost 1%.

**Table 21: Educational Attainment for Population 25 Years and Over**

City of Tulsa	2005-2009 ACS		2010-2014 ACS		Change Estimates	Change in Share
	Estimate	%	Estimate	%		
Total population 25 year and over	249,241		257,507		8,266	
No schooling completed	1,830	0.70%	2,978	1.16%	1,148	0.46%
No High School	12,186	4.89%	9,768	3.79%	-2,418	-1.10%
Some High School	20,537	8.24%	21,157	8.22%	620	-0.02%
High School (includes equivalency)	66,820	26.80%	65,441	25.41%	-1,379	-1.39%
Some College, No Degree	55,314	22.19%	60,991	23.69%	5,677	1.49%
Associate's degree	19,230	7.70%	19,546	7.59%	316	-0.11%
Bachelor's degree	49,471	19.80%	51,085	19.84%	1,614	0.04%
Master's degree or greater	23,853	10%	26,541	10.31%	2,688	0.74%

## Indicator 3: Unemployment

### Data Collection Methods

Unemployment and labor force statistics was collected from the Bureau of Labor Statistics (BLS) for the City of Tulsa, Tulsa MSA, State of Oklahoma, and United States.

### Data Years

December numbers from 2005- 2014

### Associated Goals

Economic Development Goal 2- Entrepreneurs have thriving businesses and contribute to the local economy.

Economic Development Goal 3- The city, local chambers of commerce, and other privately funded economic development organizations work closely with institutions of higher education to collaborate on economic development policies and implementation.

Economic Development Goal 4- Investment strategies support existing and emerging industry clusters.

Economic Development Goal 9- The City's labor force has the education and skills to support industrial firms.

### Background and Relevance

Monitoring the unemployment rate provides important information about the health of the economy. Tulsa's unemployment rate is generally below the national average; however, it spikes during recessions and other economic downturns. Higher unemployment rates tend

to correspond with lower levels of sales tax revenue. This can influence the level of city operations and delay scheduled capital improvement projects. Recessions can lead to large layoffs in several industries, as in 2001 when the energy, aviation, and telecommunications sectors laid off large numbers of employees. This can result in decreased population levels as citizens emigrate to seek new jobs. Individually, unemployment can be financially devastating and lead to loss of personal property, homes, and even result in bankruptcy.

The unemployment rate is an important economic indicator for a community. It is low during good economic times and high during recessions. In an economic downturn, the rate tends to underestimate the number of unemployed because some people become discouraged and stop looking for work.

### Observations

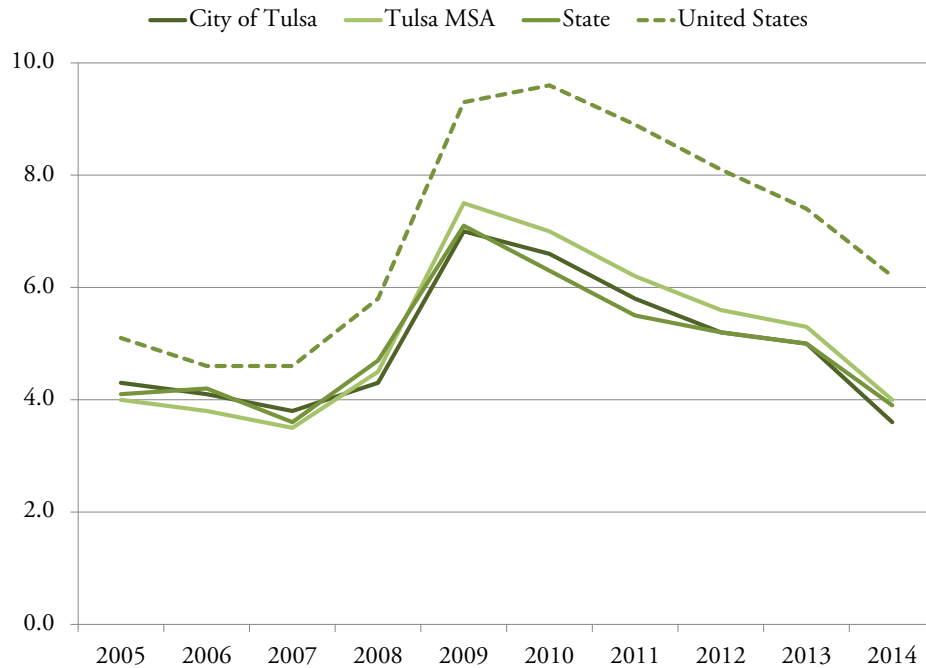
A sharp increase in the unemployment rate occurred in the labor market in 2009. In 2014, the unemployment rate returned to below 2005 levels. The lowest unemployment rate (3.6) for the City of Tulsa was in December of 2014.

While the unemployment rate has fallen back to pre-recession levels, the overall size of the labor force within the City of Tulsa has continued to decrease steadily over the last ten years from 204,783 in 2005 to 185,488 in 2014. In addition, the City of Tulsa's share of region wide employment has fallen from 46% in 2005 to 42% in 2014.

Table 22: City of Tulsa and Tulsa MSA Employment.

		Labor Force	Employment	Unemployment	Unemployment Rate
2005 (Dec)	City of Tulsa	204,783	196,059	8,724	4.3
	Tulsa MSA	445,517	427,825	17,692	4.0
2010 (Dec)	City of Tulsa	186,140	173,815	12,325	6.6
	Tulsa MSA	437,892	407,288	30,604	7.0
2014 (Dec)	City of Tulsa	185,488	178,759	6,729	3.6
	Tulsa MSA	440,915	423,236	17,679	4.0

Figure 10: Unemployment Rate from 2005-2014



## Indicator 4: Income

### Data Collection Methods

U.S. Census ACS 5-year summary data for median household income.

### Data Years

2005-2009, 2010-2014

### Associated Goals

N/A

### Background and Relevance

Median household income measures the combined revenue of all earners within a household. Comparing median household incomes between city, state, and national averages demonstrates how income levels within the city are keeping pace with inflation rates. This comparison also indicates the relative health of the City and its growth potential.

Median household income can also predict housing consumer demand when compared with the cost of living. When median household income is in line with inflation rates, it is conceivable that housing demands will remain steady. It is also important to note that when median household income increases, consumer confidence likewise will spike, and could result in increased sales for retail businesses. When citizens make more purchases, there is a direct effect on sales tax based city revenue. With higher revenues, a city can invest more funds in capital improvement projects.

### Observations

From 2005 to 2014, the median household income for Tulsa has decreased by \$733 in 2014 dollars. The relative change in Tulsa's median household income is slightly less of a decrease with that of the Metropolitan Area; however, it is still almost \$8,000 below the Tulsa Metropolitan Area.

**Table 23: Median Household Income**

Geography	2005-2009 ACS	2005-2009 ACS	2010-2014 ACS	
	Estimate	CPI Inflation 2014 Adjusted Dollars Estimate	Estimate	% Change in 2014 Adjusted Dollars
City of Tulsa	\$38,687	\$42,690.10	\$41,957	-1.89%
Tulsa MSA	\$45,701	\$50,429.86	\$49,255	-2.57%
Oklahoma	\$41,861	\$46,192.52	\$46,235	0.10%
United States	\$51,425	\$56,756.15	\$53,482	-6.37%

## Indicator 5: Property Value

### Data Collection Methods

The Tulsa County Assessor data provides a snapshot of residential property values by area and of net property values by parcel type (residential, commercial, industrial). Historic data was not available and the existing data could not be parsed to show commercial/industrial by neighborhood.

The County Assessor's data provides assessment information for the City of Tulsa.

### Data Years

Property Value- 2014

Net Assessment- 2005 to 2014

### Associated Goals

Economic Development Goal 4- Investment strategies support existing and emerging industry clusters.

### Background and Relevance

Net property value indicates the fiscal health of a community and its ability to generate property tax. Property taxes are based on the assessed property value. The City uses property tax revenue to pay for the

principal and interest on bond indebtedness and any court judgments against the City. The Comprehensive Plan provides guidance for neighborhood improvements that will increase property values throughout the City. As the City, residents, and businesses continue to invest in infrastructure and properties, the overall property values within the city should increase. The Tulsa 2030 Goal for new construction value is \$15.2 Billion.

### Observations

Average market values for residential homes vary widely across the city. Though different housing price points are important for a healthy market, the disparity suggests that North and West Tulsa's housing markets are not equal to other markets within Tulsa.

The net assessed property value in the City of Tulsa rose from 2005 to 2014. The recession starting in 2008-2009 clearly slowed the growth of Tulsa's property values. The increase since 2005 is only \$622 million.

In 2014, the majority of assessment values in Tulsa County came from commercial properties, followed by industrial properties.

Table 24: Estimated Residential Values (2014)

Tulsa Sub-Area	Average Market Value	Average Taxable Value
North	\$42,557.52	\$40,850.40
South	\$223,558.07	\$221,675.88
Downtown	\$134,612.22	\$124,914.23
Midtown	\$184,103.50	\$179,203.13
Southwest	\$108,951.09	\$106,189.60
West	\$44,195.67	\$42,506.30
East	\$107,103.67	\$105,560.74

Figure 11: Total Net Assessment for Tulsa County from 2005-2014

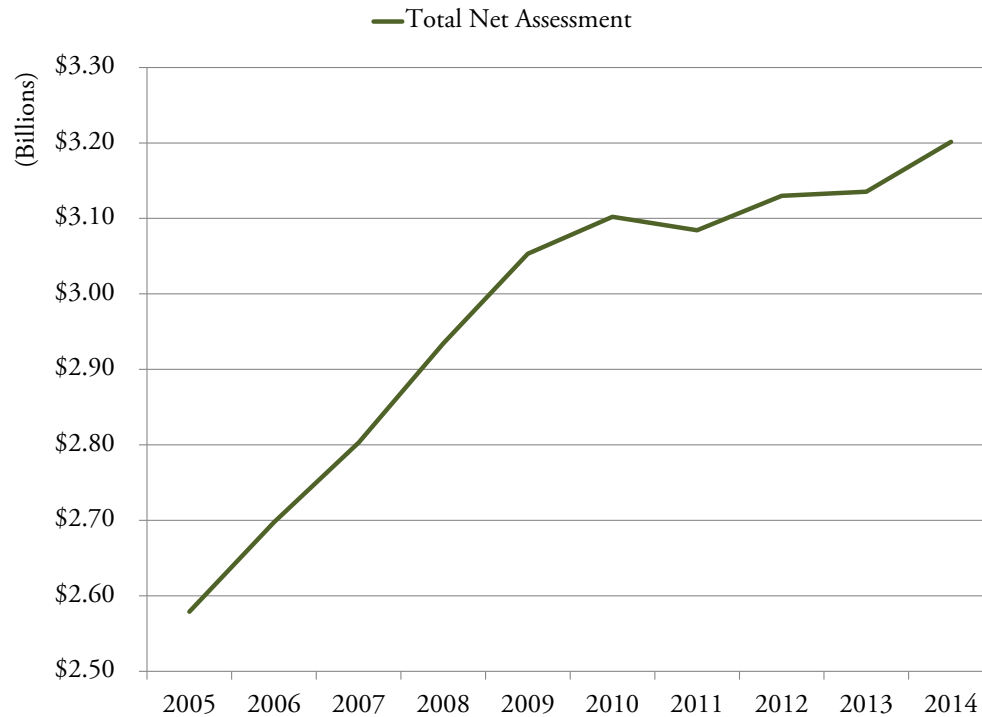


Table 25: Estimated Property Values for Tulsa County 2014

	Avg. Market Value	Avg. Assessed Value	Total Market Value	Total Assessed Value
Commercial	\$387,019	\$376,311	\$2,110,429,607	\$2,017,403,442
Residential	\$129,693	\$2,010	\$16,402,108,983	\$237,708,770
Industrial	\$446,520	\$444,309	\$1,829,273,685	\$1,744,801,606

## Indicator 6: Sales Tax

### Data Collection Methods

Sales Tax Data was collected from the City of Tulsa Finance Department. The U.S. Census, Population Division, provided population.

### Data Years

2005, 2010, 2014

### Associated Goals

N/A

### Background and Relevance

Sales tax revenue represents an important portion of Tulsa's operational funds and reflects the economic health of the city. Sales tax is especially important for funding capital improvements and other community projects. In addition, sales tax is the only source for City of Tulsa non-capital general fund expenditures, primarily City wages, salaries, and benefits. The greater the amount of tax revenue generated, the more opportunity the city has to undertake improvement projects. Infrastructure improvements can provide the base services businesses need to thrive. If the City attracts more people and businesses, it should see an increase in sales tax revenues.

Tulsa can attract new businesses and people by

increasing its competitiveness with other cities. The City can attract new businesses by streamlining permitting processes, advertising development and redevelopment opportunities, and marketing a well-educated and trained workforce.

Beautification and recreation projects increase the attractiveness of Tulsa, and when combined with a good education system, can retain young professionals as they advance their careers and raise families. Sales tax helps pay for these projects and programs and can also increase sales tax income when they are successfully completed since these will enhance areas for business.

Currently the City of Tulsa allocates 2% of its 3.1% of the sales tax to the General Fund and 1.1% to Capital Fund. The capital fund amount is the City's "Third Penny" tax to fund a variety of projects throughout the City.

### Observations

Between 2005 and 2010, the United States entered into a recession that is evident in the \$38 decrease in 2014 dollars in sales tax revenue per capita. Since 2010, both total sales tax revenue and per capita sales tax revenues have increased.

Table 26: Sales Tax

	2005	2010	2014	Change 2005-2014
2 Cent Sales Tax Revenue (2014 Dollars)	\$149,254,000	\$141,419,000	\$145,998,000	-\$3,256,000
Population	370,447	392,422	399,682	29,235
Per Capita	\$403	\$360	\$365	-\$38



# Housing

## Overview

The availability and affordability of diverse and balanced housing options for a variety of households is needed to attract and retain residents and jobs in Tulsa. The Vision for Tulsa outlines future housing needs based on future demographic trends. To track the City's progress in realizing the housing goals and policies in Tulsa, a set of indicators were created.

Priorities identified in the Housing section of the Comprehensive Plan:

*Priority 1: Promote balanced housing across Tulsa.*

*Priority 2: Ensure Housing Affordability for all residents.*

*Priority 3: Encourage energy-efficient housing across Tulsa.*

The following indicators establish a baseline for tracking progress toward the Housing Priorities:

1. Housing Cost Burden
2. Housing Options
3. Vacancy
4. Home Values

## Indicator 1: Housing Cost Burden

### Data Collection Methods

U.S. Census 5-year summary ACS data was utilized to track the percentage of households living with housing cost burden.

The 5-year ACS provided data on median income and housing costs. Median household income and the median monthly cost for all housing units, ownership, and rental units were compared. Household income was adjusted to reflect the monthly budget for affordable housing  $((\text{Median income}/12)*0.3)$ . This analysis relies on PLANiTULSA's definition of affordability, 30% of household gross income.

### Data Years

2005-2009, 2010-2014

### Associated Goals

Housing Goal 4- A healthy citywide balance between jobs and housing is maintained.

Housing Goal 7- Low-income and workforce affordable housing is available in neighborhoods across the city.

Housing Goal 8- The combined cost of housing and transportation to Tulsa's residents is reduced.

### Background and Relevance

PLANiTULSA's housing recommendations are built on the premise that every household deserves high quality housing that costs less than 30% of its gross income. Affordable housing ensures that households have a safe and secure home as well as funds to purchase food, healthcare, and other necessities. PLANiTULSA's guideline applies to all households, regardless of household income.

A household is considered burdened when housing costs are more than 30% of the occupants' gross income. Households burdened by the price of housing are more at risk of eviction or foreclosure due to emergencies. High mortgage or rent payments could also force households to spend less on goods and services, including healthcare and groceries. A large percentage of households living in unaffordable homes could indicate an unstable housing market that could be exacerbated by economic downturns. It can also indicate an unmet demand for housing at certain price points.

The availability of affordable housing plays an important role in the retention of residents. This in turn influences the city's ability to recruit and retain businesses. The affordability ratio measures the ability of the median household income to afford the median monthly housing costs. As the ratio exceeds one, it suggests that the median income can afford more than the median housing cost. A ratio less than one, suggests that the median housing cost is unaffordable for the median income household.

### Observations

Based on the available census information, the percentages of households living with a housing cost burden have not changed from the periods 2005-2009 to 2010-2014. In both time periods, the percentage of households renting above their affordable income level was double that of people owning housing above their income levels. This could be explained by banking practices that refuse to grant mortgages when the payments would be greater than 30% of the family's gross income. Additionally, low- and moderate-income households may be less likely to attempt to buy a house

and to have funds necessary for a down payments and closing costs.

From the periods 2005-2009 to 2010-2014, both median household income and median housing

cost increased in Tulsa. However, while homeowner median household income can afford more than the median housing cost, rental costs are increasing to an unaffordable level for the renter median household income.

**Table 27: Tulsa Housing Affordability Based on Ownership**

	Renters				Owners			
	2005-09 Estimates		2010-14 Estimates		2005-09 Estimates		2010-14 Estimates	
Total	69,914		71,755		88,714		85,915	
Less than 30%	36,298	52%	36,954	52%	67,926	77%	65,851	77%
More than 30%	33,616	48%	34,801	48%	20,788	23%	20,064	23%
More than 50%	16,434	24%	17,364	24%	7,850	9%	7,755	9%

**Table 28: Tulsa Household Income and Housing Cost**

<b>Total Occupied Housing</b>	<b>2005-2009</b>	<b>2010-2014</b>
Total Median Income	\$38,687	\$41,957
Median Monthly Housing Costs	\$736	\$799
(Affordable Income)/Cost	1.31	1.31
<b>Owner-occupied housing units</b>	<b>2005-2009</b>	<b>2010-2014</b>
Median Income	\$55,768	\$59,919
Median Monthly Housing Costs	\$879	\$912
(Affordable Income)/Cost	1.59	1.64
<b>Renter-occupied housing units</b>	<b>2005-2009</b>	<b>2010-2014</b>
Median Income	\$26,138	\$29,100
Median Monthly Housing Costs	\$659	\$738
(Monthly Affordable Income)/Cost	0.99	0.98

## Indicator 2: Housing Options

### Data Collection Methods

County Assessor's parcel data was sorted according to the GIS attribute table field entries under the PROPTYPE, BLTASOCCDE, BLDG1\_OCC, and UNITS attributes for each feature. (The citywide parcel data was subdivided into smaller areas to be more manageable.) The number of housing units belonging to each of the following categories was then computed.

Townhome – duplex, triplex, townhouse  
Single family – single family, mobile home  
Multi-family – multi-family, apartment, clubhouse (typically apartment complexes), condominium

### Data Years

2014

### Associated Goals

Housing Goal 1- A robust mix of housing types and sizes are developed and provided in all parts of the city.

Housing Goal 2- Tulsa maintains an adequate supply of land with appropriate zoning designations to meet anticipated housing demand.

Housing Goal 3- Downtown Tulsa offers expanded opportunities in which to live.

Housing Goal 7- Low-income and workforce affordable housing is available in neighborhoods across the city.

Housing Goal 8- The combined cost of housing and transportation to Tulsa's residents is reduced.

### Background and Relevance

The Comprehensive Plan aims to increase housing choices and opportunities within the City of Tulsa. This includes the physical form of housing (single family

detached, apartment, town home, etc.) and affordability range. To reach these goals, the Comprehensive Plan identifies housing diversity needs and locations. This may include transitions areas between neighborhoods with different densities and land uses.

By encouraging a mix of housing types, Tulsa will increase the options available to current and new residents. Certain housing types, appropriate for infill development would increase density and further encourage transit- and pedestrian-oriented urban design.

### Observations

The table below shows the number and percent of each housing type in Tulsa. Single-family detached homes continue to make up a larger portion of Tulsa's housing than envisioned. Both townhomes and multi-family homes are below the percentages envisioned by PLANiTULSA.

Table 29: Tulsa Housing Options

Type	2014	Current Housing Mix	2030 Goal Planned Housing Mix
Single-Family	116,751	76%	64%
Townhome	4,660	3%	8%
Multi-Family	32,282	21%	28%
Total	153,693	100%	100%

## Indicator 3: Vacancy

### Data Collection Methods

Vacancy rates for the City of Tulsa are from the U.S. Census ACS 5-year summary data.

### Data Years

2005-2009, 2010-2014

### Associated Goals

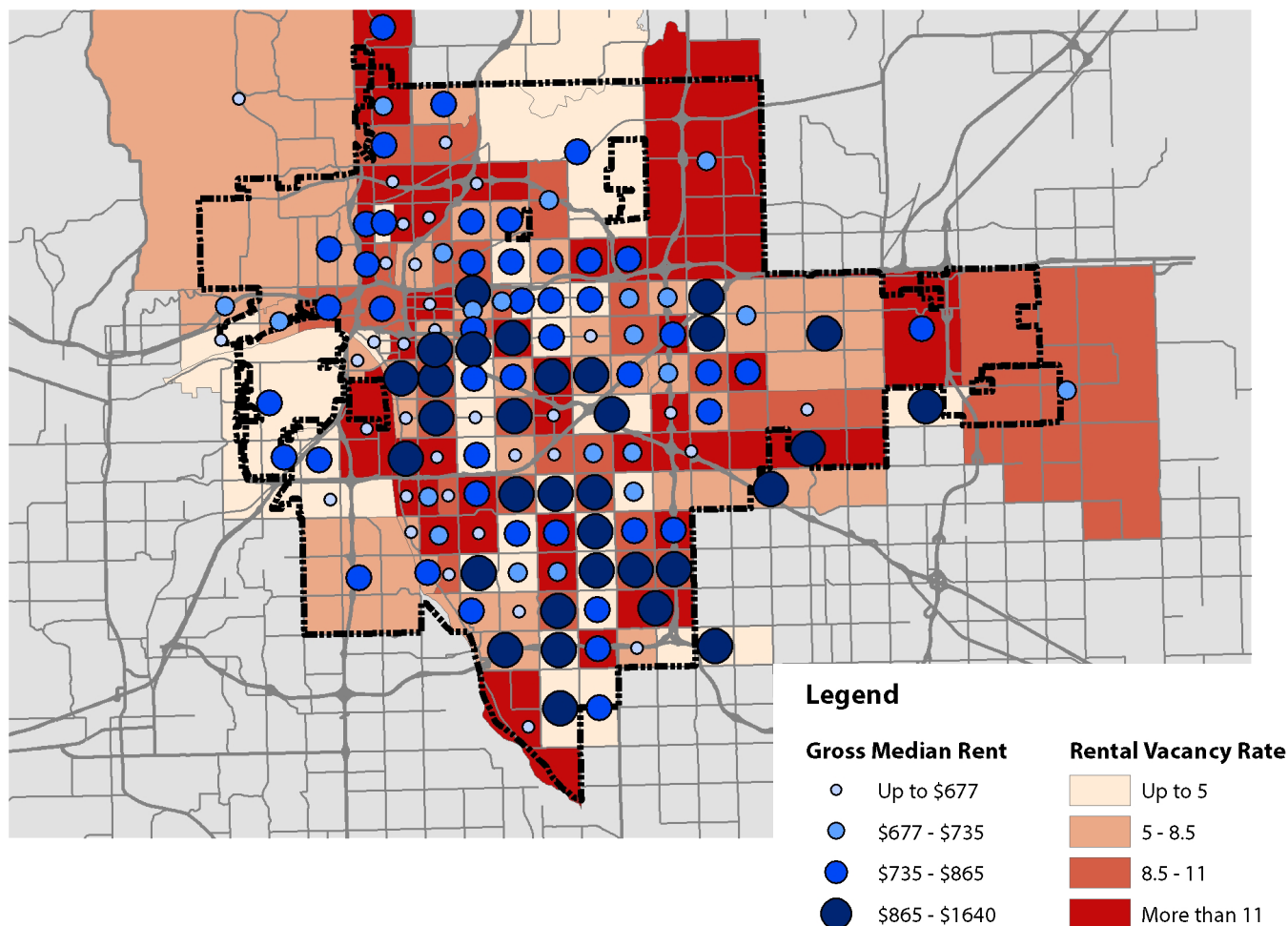
Housing Goal 3- Downtown Tulsa offers expanded opportunities in which to live.

Housing Goal 4- A healthy citywide balance between jobs and housing is maintained.

### Background and Relevance

Vacancy rates demonstrate the percentage of all housing units that are unoccupied. This measure can be used to predict the health of the housing market and the overall economy. Decreasing vacancy rates may indicate housing scarcity or a decrease in housing costs. This may lead to increased levels of unaffordable housing or

Figure 12: Tulsa Rental Vacancies and Median Gross Rent by Census Tract



indicate a recent, sudden change in the overall economic environment. Increasing vacancy rates can indicate higher property costs and decreased economic activity. If the economic activity has increased, high vacancy rate could be related to a spike in home construction. Many variables can affect vacancy rates and should be monitored on a case-by-case basis. The Census attempts to breakdown vacancies into various categories. Changes in each category can indicate different impacts influencing the city's housing market.

## Observations

Since 2005, vacancy rates in the City of Tulsa have had

only slight fluctuations, indicating a secure market. While the housing market grew by over 2,500 units between the 2005-2009 and 2010-2014, the overall vacant housing units increased by 2,899 units. The greatest change in vacant properties was seen in the number of units for seasonal, recreational, or occasional use, which increased by 1,132 units. Unfortunately, over one-third of vacant units fall under the "other vacant" category which is typically used for units that are unoccupied and unavailable (at the owner's discretion) to rent or buy. Typically, these units are used for storage, held for estate settlements, under repair, or undergoing foreclosure proceedings.

**Table 30: Tulsa Occupied and Vacant Housing**

City of Tulsa	2005-2009 ACS			2010-2014 ACS	
	Estimate	%		Estimate	%
Total Housing Units	184,185			186,726	
Occupied Housing Units	163,877	88.97%		163,519	87.57%
Owner Occupied	89,205	54.43%	% of Occupied HU	86,555	52.93%
Renter Occupied	74,672	45.57%		76,964	47.07%
Vacant Housing Units	20,308	12.39%		23,207	14.19%
For rent	7,951	39.15%	% of Vacant Housing Units	8,354	36.00%
Rented, not occupied	1,433	7.06%		1,046	4.51%
For sale only	2,065	10.17%		2,503	10.79%
Sold, not occupied	989	4.87%		714	3.08%
For seasonal, recreational or occasional use	909	4.48%		2,041	8.79%
For migrant workers	16	0.08%		52	0.22%
Other vacant	6,945	34.20%		8,497	36.61%

## Indicator 4: Home Values

### Data Collection Methods

The Greater Tulsa Association of Realtors (GTAR) provided yearly home sale numbers and median sale price.

### Data Years

2005-2014

### Associated Goals

N/A

### Background and Relevance

Home sales and median home sale price follow the health of the local housing market. In Tulsa, increasing home sales also indicates an increase in economic activity and resident recruitment. Sharp or rapid changes usually correspond with some type of economic shift. Even rapid, positive changes could result in prices spiking

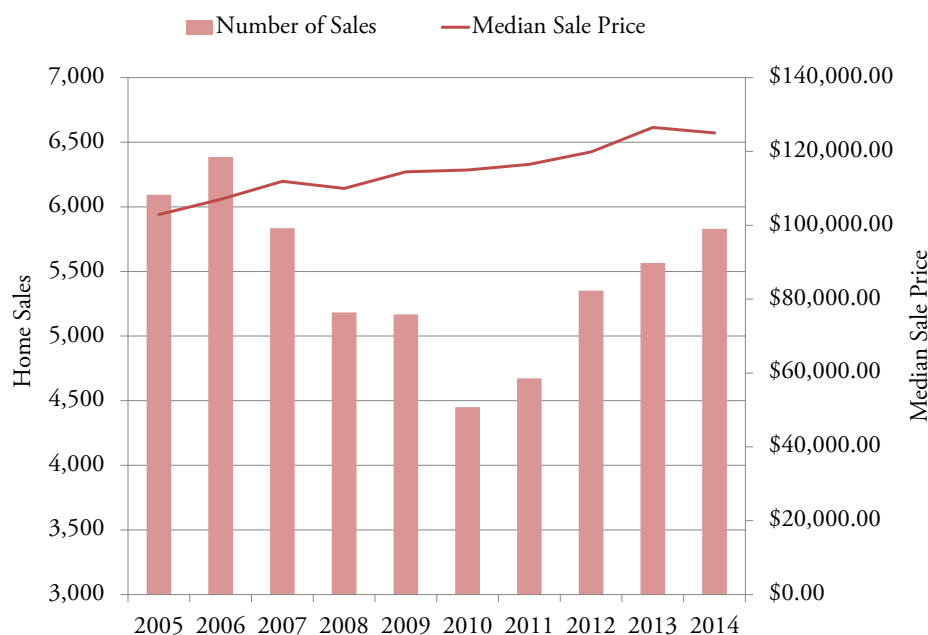
above affordable levels or actual values and lead to a future economic downturn.

### Observations

In the years following 2006, Tulsa's housing market experienced a downturn in the number of home sales. This trend continued until 2010 when home sales started to rise again; however, the number of home sales in 2014 had not reached the 2005 level. The median sale price has consistently climbed, with small downturns in 2008 and 2014.

When the impacts of the nationwide recession are taken into account, home sales in Tulsa have remained steady and the median home price has consistently risen over the last decade, with a jump in 2013 and a slight fall in 2014.

Figure 13: Residential Home Sales and Median Price by Year





## Parks, Trails, and Open Space

### Overview

Parks, trails, and open space add environmental, economic and health value to the City of Tulsa. The Vision for Tulsa recognizes this value and proposes goals and policies that enhance existing assets and increase access to these resources. Indicators were developed to track the City's progress towards reaching these goals and policies.

Priorities identified in the Parks, Trails, and Open Space section of the Comprehensive Plan:

*Priority 1: Ensure a clean and healthy Arkansas River.*

*Priority 2: Strengthen connections to the Arkansas River.*

*Priority 3: Increase Tulsa's tree canopy.*

*Priority 4: Restore ecological function in Tulsa's Natural Areas.*

*Priority 5: Improve access and quality of parks and open space.*

*Priority 6: Improve Parks and Open Space Management.*

The following indicators establish a baseline for tracking progress toward the Parks, Trails, and Open Space Priorities:

1. New Parks, Trails, and Open Space
2. Proximity to Parks and Open Space
3. Conservation Areas
4. Stormwater Quality

## Indicator 1: New Parks, Trails, and Open Space

### Data Collection Methods

The available GIS layer for parks in the City of Tulsa contains location and size attributes, but does not contain a “date built” attribute. The City of Tulsa’s Parks Department maintains data for each park and park site acreage, date, and facility types that they maintain. Park and open space areas include all parks within the city owned by the City of Tulsa, River Parks, or Tulsa County.

A data set provided by INCOG included information on funded and planned trails. When available, the date of a trail opening was used to determine if trails were opened after 2005 (starting in 2006). Data from the set of “multi-use” and “sidewalks” was combined for this indicator; aerial inspection of “sidewalks” revealed they were multi-lane paths adjacent to roadways. “Bike lanes” and “bikeways” were included under transportation section. Figures used in the Comprehensive Plan do not match current baselines. The two datasets produced different values for the total number of trails so this was used for consistency.

### Data Years

2014

### Associated Goals

Land Use Goal 10- The life expectancy levels in Tulsa North are consistent with the regional averages.

Land Use Goal 11- Residents in established neighborhoods have access to local commercial areas, schools, libraries, parks and open space areas within walking distance of their homes.

Parks, Trails, and Open Space Goal 3- Maintain a strong connection between the City and the Arkansas River.

Parks, Trails, and Open Space Goal 5- Improve

recreational opportunities along the Arkansas River. Parks, Trails, and Open Space Goal 12- Neighborhoods have adequate access to parks and open space areas. Parks, Trails, and Open Space Goal 15- Planning and development of parks and trails is coordinated with the Comprehensive Plan and Parks Master Plan.

### Background and Relevance

Parks, trails, and open spaces provide numerous benefits to the health of a city and its residents. The Comprehensive Plan aspires to increase Tulsa’s accessibility to parks, open spaces, and trail systems that reach surrounding communities.

Parks and open space can complement and enhance the natural and built environment of Tulsa. In addition, they provide individuals with passive and active recreation opportunities. New park infrastructure and green spaces improve storm water management, heat island moderation, air filtration, wildlife habitat, and general quality of life. Parks can also improve property value and improve community relationships. The *Tulsa 2030 Goal* aims to increase park acreage by 349 acres and add 21,073 housing units within a half mile of parks. By increasing park access, the Plan hopes to encourage physical and social activities and interactions that will build healthier communities.

Trails are long, linear public open spaces that can connect parks, residential, commercial, and public land uses in ways that provide safe and comfortable means of pedestrian transit. Tulsa has an extensive trail system and is committed to the enhancement and development of trails throughout the City. To maintain and expand an interconnected trail system requires cooperation between city departments and private

# Parks, Trails, and Open Space

entities. By expanding trails, which support pedestrians and bicycles in underserved areas, Tulsa will be able to create a lasting and valuable impact on the economic, cultural, and community health of citizens by creating a more accessible city. Key areas targeted for future trail development, acquisition, and expansion by the Comprehensive Plan include East and Northeast Tulsa.

## Observations

City of Tulsa has created five new parks and converted one park into a new dog park since 2005, for a total increase of 387.5 acres. No parks have been constructed since John Hope Franklin in 2010.

There are 134 parks and 9 additional park sites within the City's limits, which make up 8,035 acres. This means there are approximately 20 acres for every 1,000 residents. The River Parks Authority maintains an additional 1,066 acres and Tulsa County Parks maintains an additional 230 acres within the city limits.

**Table 32: Tulsa Parks**

City	Park Units	Parkland (acres)	Population	Park Units per 10,000 Residents	Acres per 1,000 Residents
Tulsa	143	8,035.7	399,682	3.5	20.11

**Table 33: Multi-Use Trails and Sidewalks (Miles)**

Region	Prior to 2005	New Since 2005	Funded	Planned	Total Miles of Existing and Planned
North	9	6	0	28	43
South	28	0	3	21	51
Southwest	16	2	1	7	26
Midtown	15	2	1	3	20
East	6	0	2	35	43
West	7	0	1	12	19
Downtown	5	0	1	0	6
Total	86	10	8	105	208

Since 2005, the City of Tulsa has added 10 miles of multi-use trails. Plans exist that would more than double the inventory of multi-use trails within the City of Tulsa. While both North and East Tulsa have a large number of planned trails, they have few existing or funded trails. Continued expansion of multi-use trails will improve greenspace access and connectivity throughout the city.

**Table 31: New or Repurposed Tulsa Parks**

New Park Names	Year Built	Acres
Chapman Green	2007	2
Mohawk Sports Complex	2007	320
Route 66 Plaza	2007	.5
Joe Station Bark Park (Park Conversion)	2008	(4)
Skatenorth	2008	62
John Hope Franklin	2010	3
Total Acres		387.5

## Indicator 2: Proximity to Parks and Open Space

### Data Collection Methods

County Assessor's parcel data was used to identify residential properties (and "year built") surrounding parks. Park locations were based on INCOG's park shapefile, which includes all parks and open space. Only park and open spaces within the City of Tulsa were used. The 2005 totals based on assessor's adjusted year built include housing units built before and during 2005. This analysis does not distinguish between new parks near existing housing or new housing built within a half mile of existing parks.

### Data Years

The baseline was set at 2005. The Assessor's Data from January 2015 was used, but only represent development that occurred prior to January 1, 2015.

### Associated Goals

Land Use Goal 10- The life expectancy levels in Tulsa North are consistent with the regional averages.

Land Use Goal 11- Residents in established neighborhoods have access to local commercial areas, schools, libraries, parks and open space areas within walking distance of their homes.

Parks, Trails, and Open Space Goal 3- Maintain a strong connection between the City and the Arkansas River.

Parks, Trails, and Open Space Goal 5- Improve recreational opportunities along the Arkansas River.

Parks, Trails, and Open Space Goal 12- Neighborhoods have adequate access to parks and open space areas.

Parks, Trails, and Open Space Goal 15- Planning and development of parks and trails is coordinated with the Comprehensive Plan and Parks Master Plan.

### Background and Relevance

Parks provide numerous benefits to surrounding properties, including recreational and social activities that use park space and facilities. The Comprehensive Plan proposes to increase both the supply and access of parks and open space throughout Tulsa. The Tulsa 2030 Goal aims to increase parkland by 349 acres and add 21,073 additional housing units within a half mile of parks. By increasing park access, the Plan hopes to encourage physical and social activities and interactions that will build healthier communities.

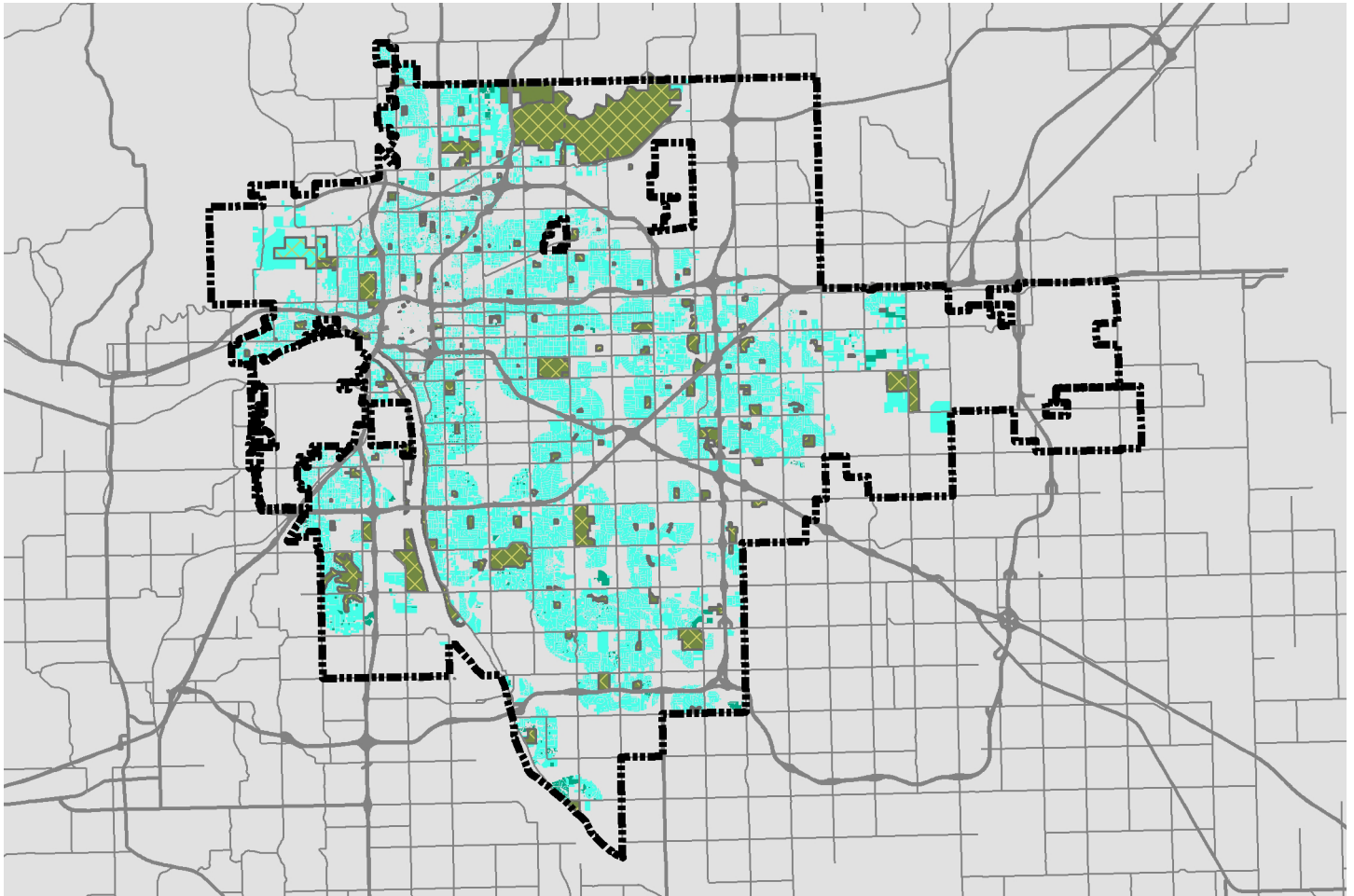
### Observations

Tulsa's homes are generally well served by parks, though map analysis reveals that there are residential neighborhoods that do not have any parks or open space within a half mile. Large segments of these underserved neighborhoods are in the central and southern portions of the City. Since 2005, over 4,000 new housing units have been added within a half mile of a park or open space or a park has been created in their vicinity. This represents 19% of the total Tulsa 2030 Goal of 21,073 housing units within half mile of a park.

Table 34: Housing Units within 1/2 Mile of Parks

	2005	2014	Change	2030 Goal
Within 1/2 mile	124,671	128,726	4,055	21,073

Figure 14: Tulsa Homes within 1/2 Mile of Parks



## Legend

- 2005 Parcels
- 2014 Added Parcels
- 2005 Parks
- 2014 Parks

## Indicator 3: Conservation Areas

### Data Collection Methods

Data from the National Conservation Easement Database (NCED <http://conservationeasement.us/>) provided total acreage of conservation easements within Tulsa's city limits. The total land with conservation easements was then determined using ArcGIS. Acreage for preserves and River Park East was determined from available INCOG and City of Tulsa data.

### Data Years

2015

### Associated Goals

Land Use Goal 17- Tulsa's natural and sensitive areas are protected and conserved.

Parks, Trails, and Open Space Goal 7- Watersheds are protected and enhanced.

Parks, Trails, and Open Space Goal 9- Natural and sensitive areas are protected and preserved.

Parks, Trails, and Open Space Goal 10- Sensitive areas are protected by regulating development on affected sites.

Parks, Trails, and Open Space Goal 15- Planning and development of parks and trails is coordinated with the Comprehensive Plan and Parks Master Plan.

### Background and Relevance

As the City expands and densifies, it will become even more important to protect greenspaces that contribute to Tulsa's natural beauty. Many Tulsans are vested in the City's environmental assets, which are important

tourism and recruitment amenities. Protected land can increase property values of the surrounding neighborhood, provide stormwater management and filtration, improve air quality, provide natural habitat, and provide mental and physical health benefits to citizens throughout Tulsa. To preserve and enhance its environmental assets, the City needs to develop a comprehensive strategy for open space protection that restricts development in environmentally sensitive areas. By balancing new and infill development with greenspace preservation goals, residents and tourists can continue to enjoy natural places within a short distance from their home or office.

Conservation easements provide a permanent guarantee that a tract of land will remain mostly undeveloped. Easements placed on agricultural land may allow for continued farming and future farm structures. These easements are voluntarily attached to privately owned lands. Though generally not open to the public, these protected lands still provide benefits to the surrounding properties and to the region as a whole.

### Observations

Currently there are 235 acres of conservation easements within the City of Tulsa. This is .2% of all land within the City limits. The City also has identified three nature preserves that encompass 1,891 acres. Due to the multiple data sources used, the below table cannot provide a total for protected land, as areas within preserves could have conservation easements on them.

**Table 35: Tulsa Conservation Easements and Nature Preserves**

Easements	Nature Preserves		
Conservation Easements	Turkey Mt	Oxley Nature	Redbud Valley Nature
235 acres	520 acres	1,162 acres	209 acres



## Indicator 4: Stormwater Quality

### Data Collection Methods

The City of Tulsa's stormwater management group provides information on outfall pollution and Low Impact Development (LID) projects. While this data, demonstrates a decrease in the number of outfalls (defined below) requiring follow-ups, it does not account for changes in standards or detection procedures. In addition, no data is given to support the success of the specific LID projects that decrease stormwater contamination.

### Data Years

2000-2013

### Associated Goals

Parks, Trails, and Open Space Goal 1- Stormwater is captured and cleaned through Landscape design, downspout disconnection, and other environmentally friendly techniques.

Parks, Trails, and Open Space 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.

Parks, Trails, and Open Space Goal 7- Watersheds are protected and enhanced.

Parks, Trails, and Open Space Goal 10- Sensitive areas are protected by regulating development on affected sites.

### Background and Relevance

Urbanization not only increases the quantity of runoff, but can also decrease stormwater quality. Urban stormwater can carry contaminants from yards, roadways, industrial sites, and soil. Tulsa's stormwater system conveys runoff directly into a variety of creeks

and the Arkansas River. Contaminants reduce the ability to use water for recreational, drinking, or irrigation purposes and can negatively affect the natural environment.

There are two components of any stormwater quality program: enforcement and monitoring. Due to the non-point nature of stormwater pollution, water quality checks usually occur at outfalls (where a specific water feature discharges into a larger body of water). When pollution levels exceed a given standard, an investigation attempts to identify the pollution source or sources. The City then works with identified property owners to reduce contamination.

Stormwater treatment attempts to reduce contamination levels by increasing opportunities for infiltration or bio remediation. Low Impact Development (LID) provides a series of onsite solutions to increase stormwater quality and reduce runoff.

### Observations

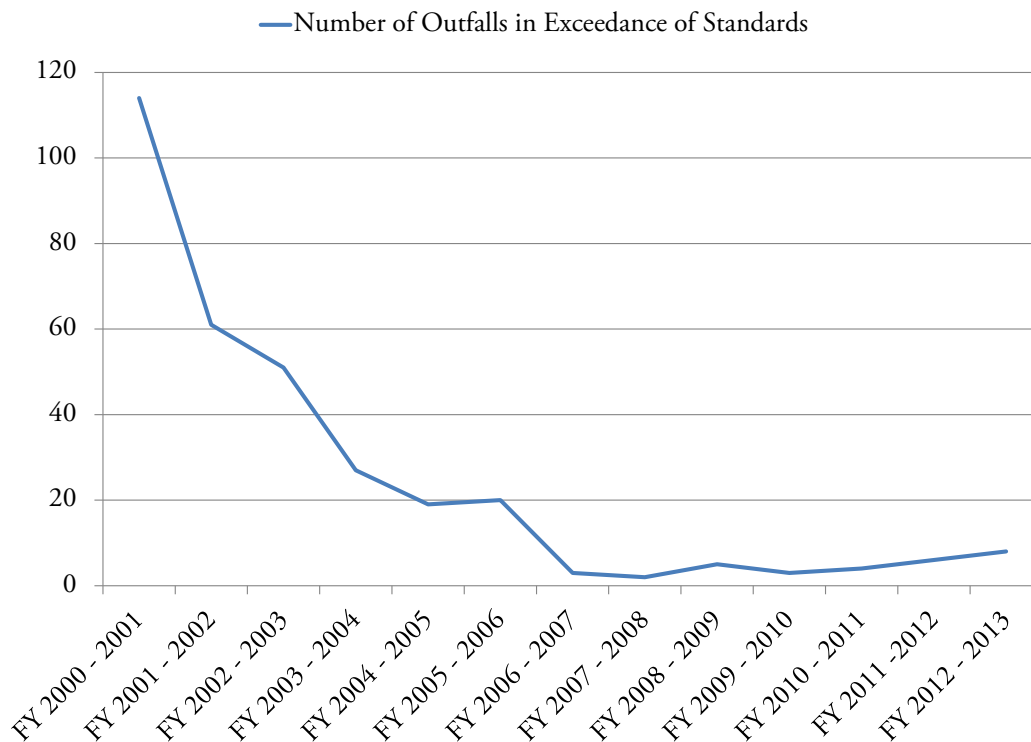
The Dry Weather Field Screening Program has shown a long-term decrease in the number of storm drain outfalls with pollutants in excess of standards. The program divides the City into four quadrants, each with approximately 100-150 storm drain outfalls. Each outfall in one quadrant of the City is tested for common pollutants each year. This program has been instrumental in locating and eliminating upland sources of contamination as well as educating Tulsans on pollution.

Tulsa's two LID demonstration projects are at the Fire Training Academy and the West Maintenance Yard. Each of these locations have pervious pavement. To

further the reach of these demonstration projects and other LID in Tulsa, the stormwater management group has implemented a LID recognition program as part of Tulsa's Partners for a Clean Environment (PACE). This program is in its beginning stages but already has 20 companies/individuals signed up for this innovative effort that demonstrates creative approaches to stormwater design through LID. Further education efforts in Tulsa in 2014 have included 227 events,

which included collaborating with other businesses, organizations, and City Departments to highlight innovative approaches to stormwater solutions. By encouraging LID Best Management Practices, the City can simultaneously improve water quality and recognize those citizens and businesses that go above and beyond for Tulsa's natural resources.

Figure 15: Tulsa Stormwater Outfall Water Quality





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