

CITY OF SHAWNEE, OKLAHOMA

SEPTEMBER, 2023

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ACKNOWLEDGMENTS

CITY COMMISSION

Mayor Ed Bolt

Commissioner Daniel Matthews (Ward 1) Commissioner Cami Engels (Ward 2) Commissioner Travis Flood (Ward 3) Commissioner Darren Rutherford (Ward 4) Commissioner Mark Sehorn (Ward 5) Commissioner Lauren Richter (Ward 6)

PLANNING COMMISSION

Craig Walker Tom Rowell Mindy Mew-Palmer Monty Porter John Barrett Amanda Johnson Steve Reese

ADVISORY COMMITTEE

Cami Engles - *Commissoner Ward 2* Mark Sehorn - *Commissoner Ward 5* Amanda Johnson - *Planning Commission Member* Steve Reese - *Planning Commission Member* Chad Warmington - *Lake Resident* Rich Rudebock - *Lake Resident* Russ Adams - *Lake Resident*

CITY STAFF

Andrea Weckmuller-Behringer - City Manager Danny Vise, Jr. - Assistant City Manager Rian Harkins, AICP - Community Development Director Stacy Moore - Tourism Director Seth Barkhimer - Engineering Director Kerri Foster - Parks & Recreation Director

CONSULTANT TEAM

HALFF ASSOCIATES, INC.

Christian Lentz, AICP - Project Manager Kailey Saver, AICP - Deputy Project Manager Jordan Evans, CNU-A - Planning Support James Hazzard, PLA, CLARB, ASLA - Landscape Architect Aide Garcia - Recreation Area Support

URBAN3

Phillip Walters, AICP

DEAN RUNYAN ASSOCIATES

Jordan Bohlander

PREFACE

THE TWIN LAKE MASTER PLAN'S TECHNICAL REPORT PRESENTS THE FUTURE GROWTH AND DEVELOPMENT PLAN FOR THE TWIN LAKES STUDY AREA AND THE CORRESPONDING ANALYSIS OF THE DATA, OBSERVATIONS, AND PUBLIC FEEDBACK COMPILED TO PREPARE THE MASTER PLAN'S FINDINGS AND WORK PROGRAM.

The technical report is an extended version of the Master Plan's companion summary report and includes the Master Plan's vision and guiding principles, existing conditions, the visioning process, future development plan, and recommended policies and investments. It is designed to provide the reader with extensive information relating to the Twin Lakes Master Plan process. For quick access to key Master Plan policy and investment recommendations, please see the companion summary report.

Collectively, the Twin Lakes Master Plan reports present both a long-range vision and incremental work program to balance the development and conservation of the land and waters of the Twin Lakes study area.





PURPOSE AND VISION

TWIN LAKES MASTER PLAN (TECHNICAL REPORT)

INTRODUCTION

Located eight miles west of the City of Shawnee and some 30 miles east of downtown Oklahoma City, the Twin Lakes are an essential and much loved resource for Shawnee. The lakes supply the City's drinking water, provide recreational opportunities for residents, and attract visitors from all across the growing Central Oklahoma region. The existing development patterns around the Twin Lakes include a mixture of rural residences, civic facilities, and limited commercial uses.

The purpose of this Master Plan is to evaluate the development potential and appropriate land-use patterns for the Twin Lakes and their surrounding area within the City of Shawnee's municipal limits for the next 20 years. The Twin Lakes area's value to the City of Shawnee is not limited to its importance as a natural resource, but also as a tourismbased economic driver and future growth area. Improved access to recreation and higher levels of growth in targeted areas will provide the City with additional revenue to support investment in the Twin Lakes and ensure lasting water quality.

The plan used the community's vision to create a final growth and implementation plan. The recommendations found within the Master Plan provide the City with near-, mid-, and long-term actions to guide transformation in the Twin Lakes area. The Master Plan includes a detailed work program to identify public investments, evaluation of land uses, and alignment of policies to enhance quality of life and sense of place.

This Master Plan serves as an extension of the City's Comprehensive Plan. The place types and future development plan supersede the Comprehensive Plan's Future Land Use Map for the Twin Lakes study area, and should be used, and should be used to determine consistency with applications for rezones, land use amendments, and development proposals.

PLAN STRUCTURE

The Twin Lakes Master Plan serves as a decision-making guide for City staff and leaders to influence growth patterns in the study area, for example through policy directives, capital investments, and regulatory measures.

To make the plan easy to use by Shawnee policy makers and residents alike, the technical report includes the following chapters:

- **1. Plan Purpose & Vision:** An outline of the overall planning process, purpose, previous planning initiatives, and the Master Plan vision.
- 2. Twin Lakes Today: The overall context of the Twin Lakes study area and its relation to the City of Shawnee.
- 3. Plan Foundation: A summary of assessments related to existing conditions at the Twin Lakes. Four overarching assessments were conducted to determine needs for the study area based on resident preferences, study area resources, fiscal conditions, and market realities.
- 4. Growth Scenarios: Development and evaluation of three general growth scenarios for their potential fiscal implications to the City and their anticipated outcomes based on designated land uses and investments. A final development plan was derived based on benefits and trade-offs from the preliminary scenarios.
- 5. Future Development Plan: A work program consisting of investments, policies, and other actions for the City to implement the overall plan. The future development plan is organized by specific topics, and includes near-, mid-, and long-term projects. A phased approach will help the City identify timing and level of priority for the implementation actions.
- 6. Appendices: An attachment to the plan consisting of the supporting data related to the community survey, fiscal analysis, and market study.

PREVIOUS PLANNING INITIATIVES

The foundation of this plan stems from previous planning initiatives over the past five years. Key findings and recommendations in those initiatives that relate to the Twin Lakes area and that remain valid are incorporated into the plans recommendations.

SHAWNEE NEXT HORIZONS COMPREHENSIVE PLAN (2019)

The Shawnee Next Horizons Comprehensive Plan is a city-wide longrange plan that guides growth and development. It evaluates land use, mobility, city services, economic development, and other elements related to future needs for a community. The plan identifies key issues, challenges, and opportunities for the City including in the Twin Lakes study area. The issues and recommendations from the Comprehensive Plan are summarized below.

TWIN LAKES ISSUES

- The Twin Lakes are a hidden gem. They're separated from the City, don't currently receive an abundance of visitors, and there can be an impression that they are not accessible to all residents.
- Awareness of the lakes is limited due to a lack of signage.
- There is a perception that the lakes are unsafe due to their location and limited use.
- There is little non-residential development in the study area to support the residents.
- Ownership at the lake varies, with owned lots, lot leases with the City, and City owned property.

PLAN RECOMMENDATIONS

- Evaluate land uses that are appropriate for the area to better serve residents and visitors.
- · Improve wayfinding and access to the lakes.
- Consider design guidelines for the commercial areas to create development that is consistent with the surrounding character of the community.

TWIN LAKES ADVISORY COMMITTEE PLAN (2021)

The City established the Twin Lakes Advisory Committee in August 2021 to review and determine lake uses and needs. This committee was comprised of land owners, leaseholders, and elected and appointed officials. They met five times between 2020 and 2021, and focused their efforts on four main topics: public safety and code enforcement, public facilities, commercial development, and a Twin Lakes Master Plan.

PUBLIC SAFETY AND CODE ENFORCEMENT

The committee identified three opportunities to improve safety at and around the lakes, including the addition of new full time police staff to monitor the lake, new response stations including a new police dock and a joint use facility for Police/Fire/EMS to improve response times for emergencies, and the installation of additional regulatory signage at parks.

PUBLIC FACILITIES

The committee identified roadways and culverts in need of repair and replacement to improve access to the study area. They also identified a series of facility improvements to existing recreational areas.

COMMERCIAL DEVELOPMENT

The committee proposed allowing "common sense commercial" uses, including temporary and small scale retail and service uses directly related to the lakes.

TWIN LAKES MASTER PLAN

The Twin Lakes Master Plan is a recommendation from the advisory committee to identify necessary investments and programs associated with future growth and development in the study area.

WHY DEVELOP A VISION

A master planning process must incorporate the feedback from community member preferences and data-based assessments. During the development of a master plan, the initial process of describing the desired future for an area is known as visioning. It occurs at the beginning, and uses feedback from community member preferences and data-based assessments.

COMPONENTS OF THE VISION

The Twin Lakes Master Plan combines two common products of the visioning process to define the desired future for the study area and the values that will be applied as the community strives to achieve that future. The two common products are a vision statement and guiding principles.

- The **Vision Statement** is the expression of the visioning process. Vision statements are typically lofty and long-range. They are supported by guiding principles and strategies to measure success.
- **Guiding Principles** are value statements regarding specific topics to support the overarching vision statement.

IMPLEMENTING A VISION

With the vision statement and guiding principles serving as a plan's foundation, goals, objectives and strategies are often developed by which to organize and implement a structured plan of action. In the case of the Twin Lakes Master Plan, the implementation strategy includes a policy and investment program related to specific topics identified throughout the planning process.

THE TWIN LAKES VISION

"The Twin Lakes area is an essential community resource and tranquil public amenity that serves the residents of Shawnee through the provision of a high-quality and protected supply of water, access to natural and rural landscapes, and the availability of diverse recreational amenities that support the passive enjoyment of the lakes and surrounding property."

TWIN LAKES GUIDING PRINCIPLES

EMBRACE THE STEWARDSHIP OF OUR NATURAL RESOURCES.

We will prioritize the protection of water quality and conservation of natural landscapes when considering growth and investment opportunities and public service initiatives.

PROMOTE FISCALLY RESPONSIBLE GROWTH PATTERNS.

We will prioritize the protection of water quality and conservation of natural landscapes when considering growth and investment opportunities and public service initiatives in the Twin Lakes area.

PROVIDE BELOVED AND BENEFICIAL RECREATIONAL AMENITIES.

We will maintain and improve existing recreational assets, and provide new recreational opportunities that promote healthy living, generate community pride and elevate the quality of life of our residents.

FACILITATE THE EFFICIENT DELIVERY OF PUBLIC SERVICES.

We will enhance the delivery of public services to Twin Lakes residents and visitors that are essential to supporting our community's growth and development vision.



The Twin Lakes provide residents with access to unparalleled beauty and serenity throughout the year.



Public infrastructure and general development patterns in the area indicative of rural lifestyles.



The Twin Lakes are not only a source of the City's drinking water, but they also serve as a means of passive and active recreation.



Commercial services are lower-intensity and scarce in the Twin Lakes Study area.



EXISTING CONDITIONS

TWIN LAKES MASTER PLAN (TECHNICAL REPORT)

THE CITY OF SHAWNEE

The City of Shawnee is located approximately 30 miles east of the growing Oklahoma City metroplex, covers roughly 48.6 square miles, and is home to 31,361 residents¹. Shawnee is projected to grow by approximately 19 percent, to **37,198 residents**², by 2040. The City of Shawnee is shown in **Figure 2.1**, Shawnee and Twin Lakes. While much of the growth is anticipated within the City's proper limits (i.e., eastern Shawnee), a limited amount of growth is expected near the Twin Lakes.

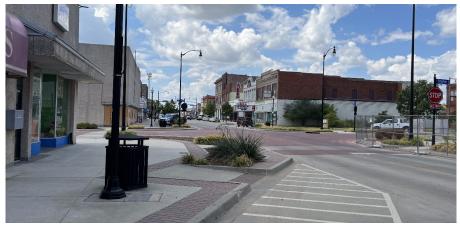
Shawnee's residents have access to a charming downtown, commercial services, and entertainment opportunities. They benefit from multiple parks and recreational opportunities on land and water, with parks distributed throughout the City, including the Twin Lakes.

City public services are readily available throughout Shawnee proper, and include access to utilities such as water and sewer and public safety services. These services are available in some but not all parts of the study area, and the distance from Shawnee itself can result in longer times responding to emergencies and addressing maintenance needs around the Twin Lakes.

As one of the City's main water sources, it will be critically important to protect the Twin Lakes water quality as the population continues to grow. As new residents move into the Twin Lakes study area, land uses, growth patterns, and lake shore protection need to be evaluated to ensure the preservation of this valuable natural resource.



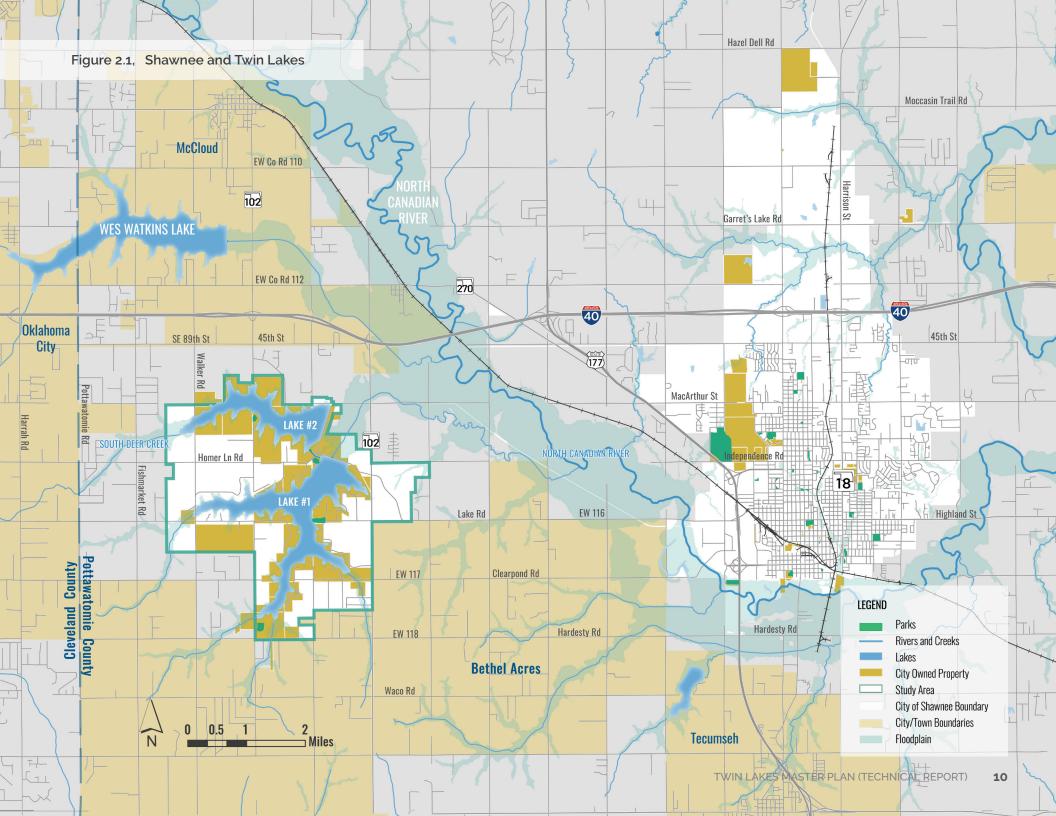
Shawnee's downtown includes a mixture of commercial, retail, entertainment, and employment opportunities.



Aesthetic enhancements and historic preservation help maintain the charm of Downtown Shawnee.

1. 2020 Decennial Census

2. Next Horizons Comprehensive Plan (2019)



THE TWIN LAKES

The Twin Lakes study area is located approximately eight miles west of Shawnee proper. The study area includes the land within municipal limits of Shawnee around the lakes, as shown in **Figure 2.3**. Twin Lakes Study Area. Its northern extent is approximately one mile south of I-40. The study area is surrounded by Bethel Acres and unincorporated Pottawatomie County; the Citizen Potawatomi Nation maintains tribal properties to the north.

The Twin Lakes study area encompasses roughly 12 square miles, or approximately 7,700 acres, of land including the two water bodies, commonly known as Lake 1 and Lake 2. Lake 1 was constructed in 1935 and Lake 2 in 1960 as a reservoir system and to contribute to the City's drinking water. The two lakes have different development patterns and opportunities. Lake 1 is developed with residential lots and parks. Lake 2 is primarily undeveloped and natural.

Around 52 percent the land in the study area is owned by the City of Shawnee¹, including the lakes and many of the adjacent parcels, as illustrated in **Figure 2.2**, Study Area Property Ownership. While some municipal land is used for parks and open space, the City also operates a residential lake lot lease program.

The study area is primarily rural in nature, with a few small commercial services along OK-102. The residential uses around the lake include owned and leased lots of various sizes. Many of the homes constructed along the lake are located close to the shore with shorelines modified by clearing and/or hard structures. Most shoreline residences are served by private docks which exhibit highly variable levels of condition and usability.

Four municipally owned recreation areas flank the Twin Lakes. These parks collectively provide visitors with access to the water and associated land based amenities including boat ramps on Lake 1 and Lake 2. The two lakes are separated by a canal which can be closed during times when water levels are low.

Figure 2.2, Study Area Property Ownership

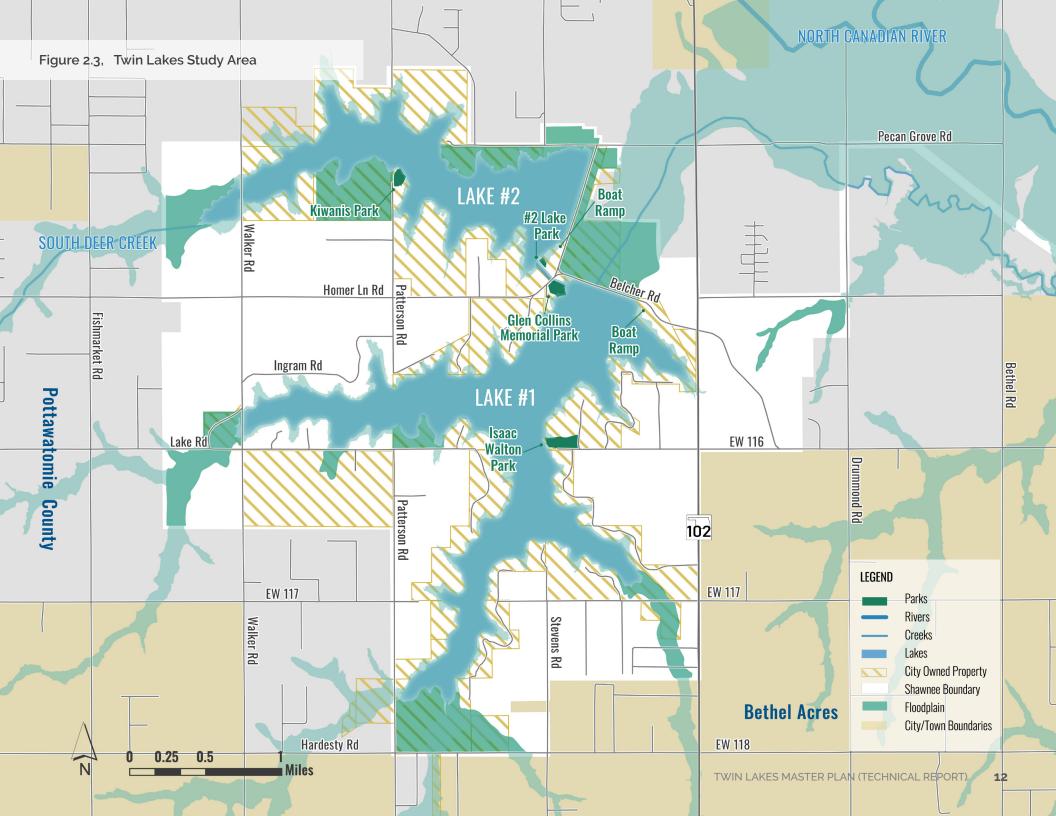
Ownership	Approx. Acres	Percentage
City - Land	1,865	24%
City - Water	2,166	28%
Private	3,688	48%
Totals	7,719	100%

Source: Potawatomi County Appraisal Data



Lakefront property development on Lake #1 directly impacts municipal water quality and influences the visitor experience.

1. Pottawatomie County Appraisal Data



COMMUNITY PROFILE

As a subarea of Shawnee, the demographic profile of individuals residing in the Twin Lakes study area differs from those of the City as a whole. This section provides a high-level assessment of the distinctions between these two geographies.

The study area accounts for approximately three percent of the City's overall population, as illustrated in **Figure 2.4**, Population. In the last decade there has been limited residential growth in both the City and study area. The 2027 forecast population suggests limited change in total population or the study area's population as a percentage of the whole.

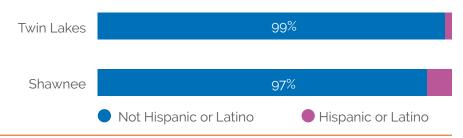
The study area is generally less diverse than the rest of the City, as shown in **Figures 2.5 - 2.7**. A majority of the population is White, American Indian or Alaska Native, or two or more races. There are few residents who identify as Hispanic or Latino.

Figure 2.4, Population ¹		
Population Year	Shawnee	Twin Lakes Sub Area
2010 Total Population	29,937	804
2020 Total Population	31,337	882
2022 Total Population	31,283	912
2027 Forecast Population	31,152	957

Figure 2.5, Shawnee Race² Figure 2.6, Twin Lakes Race² 0%-1% 0% -0% 1% 1% 7% 10% 83% White alone Black of African American alone American Indian and Alaska Native alone Asian alone Native Hawaiian and Other Pacific Islander alone

- Some other race alone
- Two or more races

Figure 2.7, Ethnicity²



1 Source: Esri forecasts for 2022 and 2027. U.S. Census Bureau 2000 and 2010 decennial Census data converted by Esri into 2020 geography.

2 Source: U.S. Census Bureau, 2016-2020 American Community Survey

Population Characteristic	Shawnee	Twin Lakes Sub Area
Median Age	36.2	44.5
Under 19	26%	30%
Over 65	17%	15%
Percent Male	47%	47%
Percent Female	53%	53%

Figure 2.8, Population Characteristics (2022)¹

Figure 2.9, Household Characteristics (2022)¹

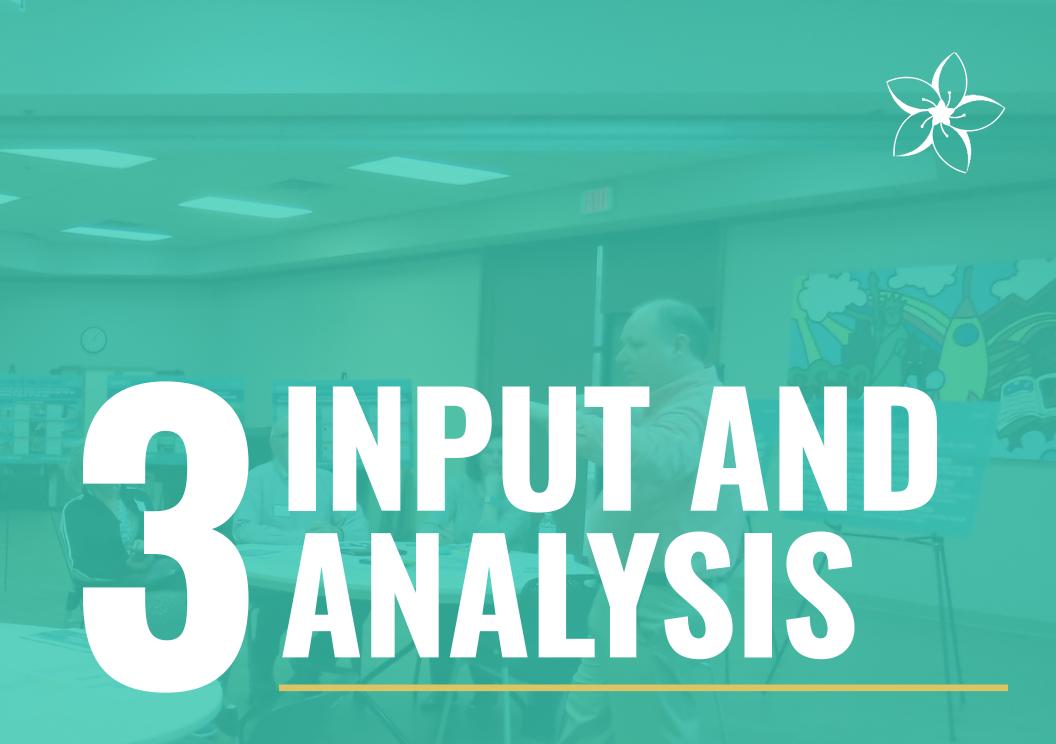
Population Year	Shawnee	Twin Lakes Sub Area
Average Household Size	2.45 Persons Per Household	2.58 Persons Per Household
Percent Family Households	64.0%	78.3%
Vacant Housing Units	12.4%	13.7%
Renter Occupied Households	36.7%	6.8%
Owner Occupied Household	50.9%	79.5%
Median Household Income	\$41,123	\$71,428

COMMUNITY PROFILE SUMMARY OF FINDINGS

While the Twin Lakes study area is within the municipal limits of Shawnee, there are some key differences in the study area demographics:

- The demographics indicate that, if no changes are made to the area, the population will continue to grow at a slow rate.
- Racial and ethnic diversity in the Twin Lakes study area is somewhat less than for Shawnee as a whole.
- The median age in the Twin Lakes area is slightly older than that of the rest of Shawnee.
- The median household income in the Twin Lakes area is over \$20,000 dollars higher than in Shawnee.
- There is a significantly higher percent of owner occupied houses in the Twin Lakes area.
- Housing and income characteristics indicate that some Twin Lakes residents use their property as a second home or a vacation home.

These factors may influence overall user preferences for the lakes today and for future generations.



TWIN LAKES MASTER PLAN (TECHNICAL REPORT)

CREATING THE PLAN FOUNDATION

The foundation of the Twin Lakes Master Plan, as discussed in this section, is built on a variety of assessments, including community preferences, city infrastructure (i.e. utilities, park amenities and facilities, etc.), fiscal conditions, and recreation market demand.

- **Preferences Assessment:** The results of community engagement, including input from the advisory committee, focus groups, City staff, and the community at large. The preferences assessment identified what elements are important today, what type of growth is appropriate, and which recreation and services are missing in the Twin Lakes study area today.
- **Development Assessment:** A review of existing conditions to determine how current growth patterns, public investments, and available resources have influenced the character of the Twin Lakes study area.
- **Fiscal Conditions Assessment:** The City's current revenues and expenditures illustrate the study area's contributions to the City's budget as well as fiscal demands.
- **Market Demand Assessment:** A review of the current market related to recreation and tourism for Oklahoma, and how area recreational offerings draw visitors to the Twin Lakes.

The assessments highlight the overall needs in various areas, including land use, mobility, utilities, recreation, public services, and resource conservation. They provide the basis for the implementation action plan.

PREFERENCES ASSESSMENT

The preferences assessment reviews public feedback related to the use of the Twin Lakes study area. It included an advisory committee, City staff, focus group discussions, public open houses, and a communitywide survey. These methods of engagement provided opportunities for Shawnee's residents and visitors to shape the future of the Twin Lakes study area.

ENGAGEMENT METHODS

The following section explains the engagement methods used during the planning process.

CITY STAFF

City staff was involved throughout the process to review assessments and analyses, provide direction, and assess the implementation action plan. City staff participated in regular meetings, the growth scenarios workshop, and focus group sessions.

ADVISORY COMMITTEE

An advisory committee comprised of elected and appointed officials and lake residents was appointed to act as a sounding board for the Master Plan. The advisory committee met seven times to provide insight for the planning elements, such as developing the vision and guiding principles, identifying growth potentials, and discussing an implementable work program.

FOCUS GROUPS

At the onset of the project, the planning team met with community members to discuss topic-based issues and opportunities for the Twin Lakes area. Meetings were held with City staff, lease holders, land owners, and commercial and recreation interest groups to provide a broad perspective of the study area.

PUBLIC OPEN HOUSES

Two public open houses were held during the planning process. They included one at the onset to create the vision for the plan, and the second towards the end to present the draft development plan and recreation area programming.

- **Public Open House #1 (September 27, 2022)** Organized to identify and define public preferences, this open house included the following activities:
 - Visual preference boards covering recreation, commercial uses, and housing preferences;
 - Visioning questions; and,
 - Public services preferences.
- **Public Open House #2 (March 28, 2023)** This meeting presented the draft development plan and recreation area programming opportunities. The open house allowed participants to review:
 - The plan's vision and guiding principles;
 - Draft Development Plan Map and associated place types; and,
 - Proposed programming for the Twin Lakes recreation areas.

ONLINE ENGAGEMENT

The City maintained a project website to inform the public about the status of the project and to serve as a repository of project information. The web page was updated regularly to advertise upcoming events and provide downloadable versions of the presentations and materials created throughout the planning process.

A community-wide survey was available for residents and visitors to respond to from the end of September through mid November, 2022, and received 255 responses. A link to the city-wide survey was available on the project web page. Pages 21 - 23 review key survey responses while Appendix A provides the full survey results.



Visioning questions at Public Open House #1 provided the opportunity for residents to share what they want for the Twin Lakes future.



Community members, City staff, and the Advisory Committee participated in the growth scenario workshop to identify future patterns for growth and development.

PUBLIC OPEN HOUSE #1

The first public open house provided the public with the opportunity to participate in a series of activities designed to identify their preferences for the Twin Lakes area. The results from the open house activities are described in this section.

WHAT DO YOU LIKE MOST ABOUT TWIN LAKES?

In describing what they liked most about the Twin Lakes, open house participants indicated that they liked the tranquil, natural setting and lake-based recreation opportunities the lakes provide.

WHAT IS THE TWIN LAKES AREA MISSING?

Participants reflected on the types of amenities and activities that were missing in the Twin Lakes study area. These included:

- **Recreation:** Respondents overwhelming responded that the Twin Lakes lack quality amenities and facilities. Existing parks offer space to picnic and grill, but not much else. There are no walking or biking trails.
- **Boating and Lake User Services:** If someone does not own a boat or kayak, there is no way for them to get out on the water, as there are not rental facilities. To purchase goods for lake days (bait, snacks, gas), a lake-goer has to travel elsewhere in the City.
- **City Services:** Emergency response and police presence could be improved to better serve the visitors and residents. Respondents indicated that the behavior of park-goers and lake users deter them from using the parks more frequently.
- **General Accessibility:** It was also noted that due to the location of the lakes and lack of signage, they feel secluded and private, so not all of Shawnee's residents feel welcome.

VISUAL PREFERENCE BOARDS

A series of visual preference boards allowed attendees to identify what kind of uses would be appropriate at each lake based on a series of example images. Based on the responses, the uses associated with each lake should be different.

- **Recreation Offerings:** Participants noted that acceptable uses for Lake 1 include boating, kayaking/canoing, swimming, and trails. Lake 2 preferences included camping, trails, and kayaking and canoing.
- **Residential Offerings:** Participants responded that single family housing consistent with what exists today was most desirable around Lake 1. Short-term overnight accommodations were more appropriate around Lake 2.
- **Commercial Offerings:** Lake 1 uses could include small scale commercial uses such as a restaurant, bait/tackle shop, or food truck court. Lake 2 potential commercial uses included an outdoor adventure park, food truck court, and non-motorized boat rentals.

PUBLIC SERVICES

A public services board asked respondents to identify what kind of public services they would be willing to pay for in the Twin Lakes area. Respondents noted that they were most willing to pay for public safety (fire and police), recreation areas, and code enforcement.

EXISTING RECREATION AREAS VISION

Members from the consultant team helped illustrate ideas for improvements to the existing lakeside parks: Glen Collins Park, Isaac Walton Park, the Lake 1 Boat Ramp, Kiwanis Park, and Lake 2 Boat and Kayak Launch areas. The ideas included primitive and RV campsites, looping trails, enhanced boat ramps, and new amenities to provide users with more things to do.



Attendees at the public open houses discussed the opportunities to improve the lakeside parks to make them accommodating for more users. At the first open house ideas were drafted, and at the second open house, programming ideas were presented.



A series of visual preference boards allowed respondents to envision the scale and type of different elements for the Twin Lakes area.

PUBLIC OPEN HOUSE #2

The second open house presented the vision and guiding principles, draft future development plan, place types, and park area programming to attendees. The purpose of the open house was to allow interested community members to respond to the plan direction.

- Vision and Guiding Principles: While the vision and guiding principles were available on the project web page, this meeting offered a chance for the public to respond to the core values of the plan. The public agreed with the direction for the vision and the importance of the guiding principles for the Twin Lakes study area.
- **Draft Development Plan:** Participants reviewed the draft development plan which identifies where different place types should be located in order to support the desired character of growth in the study area. The development plan and associated place types are discussed further on pages 71-82.
- **Recreation Programming:** A series of maps illustrating proposed programming at Glen Collins and Lake 2 area, Lake 1 Boat Launch, and Kiwanis Park. Attendees liked the addition of trails, RV and additional camping areas, as well as better recreational amenities such as improved play structures, swimming areas, restrooms, etc. There were concerns regarding the ability to access the parks with RVs and trailers due to current roadway conditions.

COMMUNITY SURVEY RESULTS

The visioning public open house held in the fall of 2022 was augmented by an online community survey distributed by the City of Shawnee. As with the open house, the 13 question survey was designed to determine needs and preferences for the Twin Lakes study area.

A total of 255 individuals participated in the survey during the six week period during which it was available. Roughly 31 percent of respondents were residents of the Twin Lakes study area, and 51 percent were residents of Shawnee. The remaining 18 percent either did not live in Shawnee or preferred not to answer.

Additionally, respondents indicated that they most often use the lakes for swimming, boating, fishing, and general relaxation. Respondents are deterred from using the lakes because they lack recreational amenities and entertainment opportunities. The availability of parking, behaviors of park-goers, and general business of the parks further deter people from using the Twin Lakes.

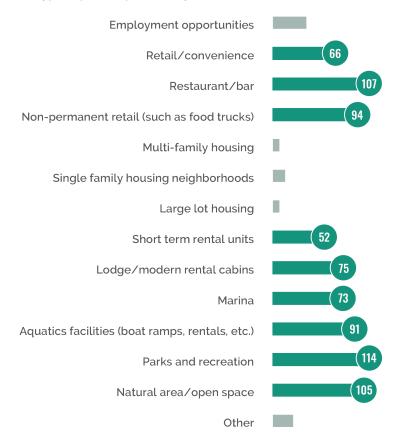
When asked what kind of amenities respondents wished there was more of at the lakes, trails received the highest number of responses, followed by recreational amenities (such as playground equipment, shade pavilions, docks/overlooks, golf, disc golf, etc.). Respondents also indicated that aquatic rentals, kayak and canoe launches, and dining/ entertainment options should be available at the lakes.

As one of the final products of the planning process is the creation of a final development plan for the Twin Lakes study area, it was important to ask what kind of development is appropriate for the area. **Figure 3.1** highlights the type of development that survey respondents felt would enhance the Twin Lakes area. Those that are shown in teal had the highest number of responses.

The survey questions related to development types and recreation needs were augmented with the visual preference boards at the public open house. Based on the responses, parks and recreation facilities, open space, and conservation are important around Twin Lakes. Small scale commercial and retail, along with overnight accommodations were also appropriate uses around Twin Lakes.

Figure 3.1, Development Preferences

What types of development do you think would enhance the Twin Lakes area?



IMPORTANCE VERSUS PERFORMANCE RATING ASSESSMENT

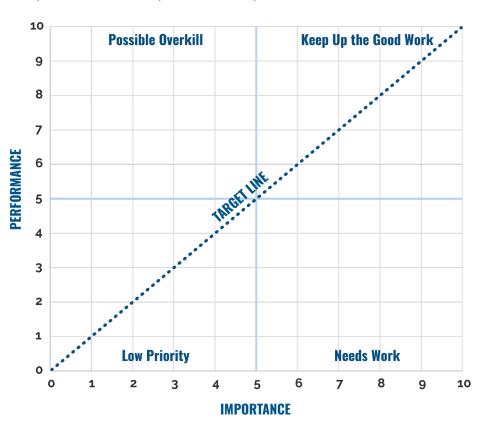
Public survey efforts included three related questions about the importance of public services, versus the perceived ability for the City to provide the public services. The survey then asked how willing respondents were to pay for the public services. The **Importance versus Performance Assessment (page 23)**, combines the results of the questions to show the respondents opinion on how well the City is performing in providing the preferred public services to the Twin Lakes community.

The importance versus performance example (right) demonstrates how to interpret the results of the assessment, depending on where a data point is located in relation to four quadrants:

- Keep Up the Good Work: Identifies public services where the City's ability to provide the service closely matches a strong community desire.
- **Needs Work:** Shows where the City is under-performing in providing public services.
- **Possible Overkill:** Identifies the public services that significantly exceed the community's desire for them.
- Low Priority: Shows where the City's provision of public services is low, but matches community demand.

All survey responses are plotted in relation to a diagonal target line that serves as a gauge for consistency between community demand for a public service, and community satisfaction with provision of the public service. Survey results that are closer to the target line suggest a more satisfactory level of service in relation to facility demand.

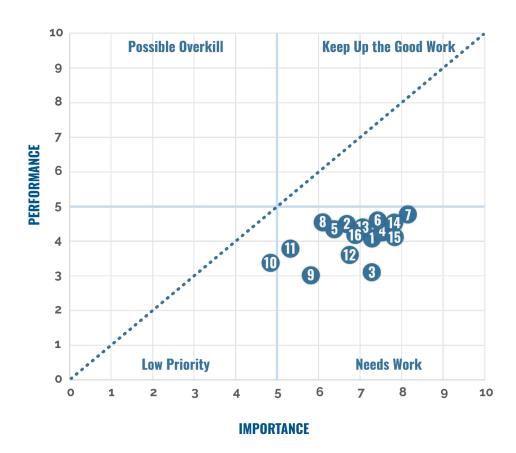
The importance versus performance assessment graphically displays respondents willingness to pay for the public service based on the culmination of the importance rating and the performance rating. This assessment is used as one tool to define what type of public services should be prioritized in the planning process. Importance Versus Performance Example



IMPORTANCE VERSUS PERFORMANCE RATING

To determine the importance versus performance rating, a standard deviation was used to determine if the community is very willing (teal), somewhat willing (yellow), or not willing (pink) to pay for each public service are shown in Figure 3.2, below. The responses indicate that the study area has insufficient public services, as all of the responses fall under the diagonal target line and are generally located within the "Needs Work" quadrant. The highest priorities include protection of the natural environment and resources and improving public safety services. As illustrated below, respondents are most willing to pay for the services that relate to various types of protection, including conserving the natural environment, ensuring there are no undesirable uses and activities going on in the study area, and enhanced public safety services related to police, fire, and emergency responses. Respondents are also willing to pay for enhancements to recreational amenities for all users, including trails, improved access for all needs, and general park upgrades.

Figure 3.2, Importance versus Performance



ID	Category	Willingness to pay for service
1	Park upgrades	
2	Boat and kayak ramps	
3	Trails (natural and paved)	
4	Roadway maintenance	
5	Water and sewer expansion	
6	Public safety (fire, police, EMS)	
7	Water quality protection	
8	Wayfinding and directional signage	
9	Retail, restaurants, entertainment	
10	Arts and culture amenities	
11	Event spaces	
12	Increased access for those with special needs	
13	Floodplain/stormwater management	
14	Land/habitat conservation	
15	Erosion control	
16	Code enforcement/regulation	

DEVELOPMENT ASSESSMENT

The development assessment reviewed how current growth patterns and public investments have influenced the character and impression of the community. The development assessment reviews the following topics:

- **Growth Patterns** reviews the current development characteristics, zoning, and land uses in the Twin Lakes study area.
- **Public Infrastructure** includes mobility and access to the study area, water and waste water utilities, and recreational facilities.
- **Public Services** analyzes emergency services provided to the Twin Lakes study area, as well as other city services, such as Code Enforcement.
- **Natural Features** illustrates the importance of floodplain and water protection to ensure the long term quality of water.

GROWTH PATTERNS

Development patterns in the Twin Lakes study area reflect a rural character with large residential lots serviced by well and septic systems. Roadways within the study area include paved and unpaved segments with an open swale drainage system.

Residential properties in the study area that do not abut the lakes are characterized by acreage lots associated with small scale agriculture and farming. Development patterns on properties abutting the lakes differs, with Lake 1 having a mixture of residences and recreation areas, and Lake 2 remaining primarily undeveloped.

LAKE 1 DEVELOPMENT PATTERNS

Lake 1 is developed with owned residences, lots leased from the City, and municipal recreation areas along the lake shore. This mixture of uses provides a relatively active atmosphere, with boating and recreation usage higher during the summer months.

Residents who own homes along the lake shore purchased their property from the Commissioners of the Land Office, who manage school land trust in Oklahoma. Other lakefront homes are on properties leased from the City of Shawnee. The City of Shawnee operates a land lease program with 144 leases along Lake 1. Lease holders pay a \$750 dollar per year lease to the City for the right to reside and make improvements to the property in return for municipal services. The lease-holder fees do not cover the cost of providing municipal services in the area. The lease program was established nearly 50 years ago, and has not created new leases in recent years. The leases are not based on lot size or lake frontage. The lease programs allows the City to maintain control over the critical water resource and shoreline.

There are limited short-term rental options, those that do exist are typically in the form of a detached guest house. The properties are kept in different conditions, including storage of equipment, quality and usability of docks, and shoreline protection measures. The City uses the standard accessory structure permit for docks, sea walls, and other lake specific uses.

Three of the City's four shoreline recreational areas are located on Lake 1, including Glen Collins Park, Isaac Walton Park, and the Boat Ramp. These facilities are described in more detail on pages 33-34.

LAKE 2 DEVELOPMENT PATTERNS

Most property around Lake 2 is undeveloped and is owned by the City of Shawnee. Unlike property along Lake 1, no leases have been granted for residential or other development along the shore of Lake 2. Residential development exists outside of the city-owned property. The northern edge of Lake 2 is approximately one mile south of I-40, where there is small-scale existing commercial development and a Casino operated by the Citizen Potawatomi Nation outside of the City of Shawnee limits.

Purpose-built recreation space along Lake 2 is also more limited than on Lake 1. Kiwanis Park is an undeveloped park space that has been used in the past for middle school students to participate in outdoor activities. Along the levee, there is a kayak launch and boat ramp providing vessel access to Lake 2.

REPRESENTATIVE IMAGERY



Residential lots include a range of accessory features, including docks, garages, and seawalls.



The shoreline of Lake 2 is undeveloped, and offers opportunities for lake shore protection.



Houses are set back from the lake, and vary in size, material, and location on the property.



A narrow canal separates Lake 1 and Lake 2. During drought periods, the water levels are too low to be traversed by boats.



Homes in the study area are generally located on large lots with deep setbacks from the roadway. They are serviced by well and septic systems.



Many of the docks on Lake 1 seem to protrude beyond the allowed distance per the City Ordinance (Sec. 16-325) and fail to meet safety standards.



Non-residential uses in the study area range from civic uses (such as churches), to small-scale retail and service stations.



The Lake Protection Overlay zoning district has not prevented shoreline erosion or deferred maintenance of property.

LAND USE

The Twin Lakes study area is primarily rural and residential. Based on the land use patterns, if no changes were made to the study area, it would remain pastoral.

EXISTING LAND USE

Property in the Twin Lakes study area can cumulatively be described as rural. The density of residential development varies but generally averages larger lots (5+ acres) through the study area. While lots leased from the City are not platted, the proximity of residences to one another suggests the lots are smaller in size, however large enough to satisfy well and septic standards.

There is limited non-residential development in the study area - such uses being limited to a Dollar General and religious institutions. The Citizen Pottawatomie Nation operates a casino on the north side of I-40. Auto-related uses, such as gas stations and convenience stores, are located on I-40.

FUTURE LAND USE

The Shawnee Next Horizons Comprehensive Plan (2019) uses future land use categories to define the intended character of the Twin Lakes area, as described in **Figure 3.3**, Study Area Future Land Use (right) and illustrated in **Figure 3.4**, Twin Lakes Future Land Use Map (page 28).

- Agriculture/Open Space is designated as the long term growth area for the City of Shawnee. These areas may not be serviced by public utilities (i.e., water and sewer) today, but should be planned for future utilities where possible. This land use accommodates farming, large lot residences, and lower intensity developments.
- **Parks and Greenways** will remain undeveloped due to environmental features, and may be used as public parks. While there is a future land use category for parks, the existing lake parks are not shown as "Parks", rather they are shown as "Agriculture/ Open Space".
- Lake Oriented Commercial allows small scale retail opportunities to serve the residents and visitors to Twin Lakes, such as convenience stores, gas stations, neighborhood markets, and similar lake-oriented uses.

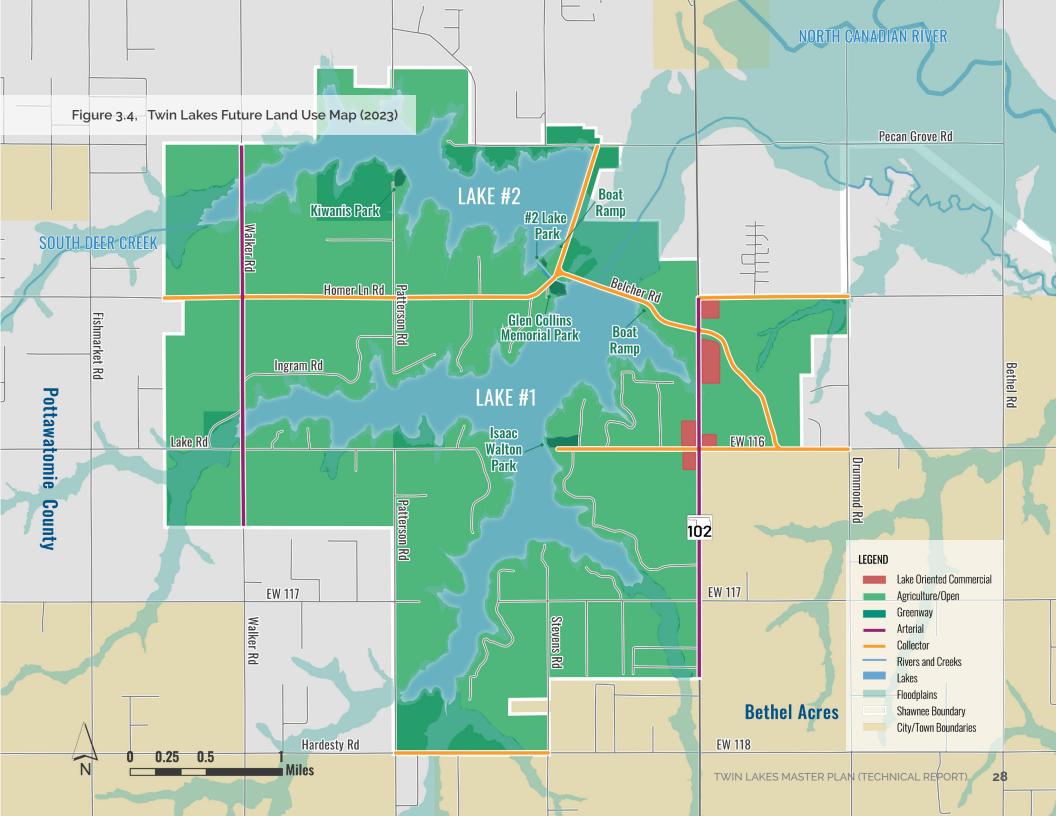
Figure 3.3, Study Area Future Land Use

Future Land Use Category	Approx. Acres	Percentage
Agriculture/Open Space	5,316	68.8%
Lake Oriented Commercial	62	0.8%
Park/Greenway	175	2.3%
Water Bodies*	2,166	28.1%
Totals	7,719	100%

*Water Bodies are not a future land use category, however, are split out to differentiate that area from the land uses.



While Lake 1 is more developed, there are pockets of vacant land that could be suitable for preservation, enhanced park spaces, or development purposes.



ZONING

The study area is primarily zoned as Rural Agricultural, with very limited Highway Commercial and Residential Estate, as shown in **Figure 3.5**, Study Area Zoning and illustrated in **Figure 3.6**, Twin Lakes Zoning (2023) (facing page). Commercial development is limited to one intersection on Lake Road. The City's properties, including recreation areas, are zoned Rural Agricultural, as the City does not have a "public lands" or "recreation" zoning district.

ZONING DISTRICTS

- **A-1 (Rural Agricultural)** supports lower intensity development and larger lot residential uses accompanied by rural activities. This may include farming and ranching, mining and extraction, plus limited rural-based commercial activities and civic facilities. The minimum lot size is five acres.
- **RE (Residential Estate)** allows for large lot, low density residential development. This type of development requires a minimum lot size of one acre, or the smallest a lot can be and meet the requirements of the Health Department or Department of Environmental Quality (DEQ). Typically public utilities are not available in RE or A-1 Zoning Districts.
- C-3 (Highway Commercial) supports services associated with automotive and recreation commercial corridors including accommodations, car-oriented uses, retail centers, and similar uses.

SHAWNEE TWIN LAKES PROTECTION ZONE

The "Lake Protection Zone" overlay district applies to lease lots for residential development on Lake 1. This overlay provides development requirements regarding setbacks, building heights, uses, and supplemental standards for construction. The overlay recommends utilizing native vegetation along the shoreline, provides for the allowance to construct docks, and does not require a residence to be located on a public roadway.

Figure 3.5, Study Area Zoning

Zoning District	Approx. Acres	Percentage
A-1 (Rural Agricultural District)	5,520	71.5%
RE (Residential Estate)	6	0.3%
C-3 (Highway Commercial)	27	0.1%
Water Bodies*	2,166	28.1%
Totals	7,719	100%

*Water Bodies are not a zoning district, however, are split out to differentiate that area from the other land uses.

REGULATORY CODE UPDATE

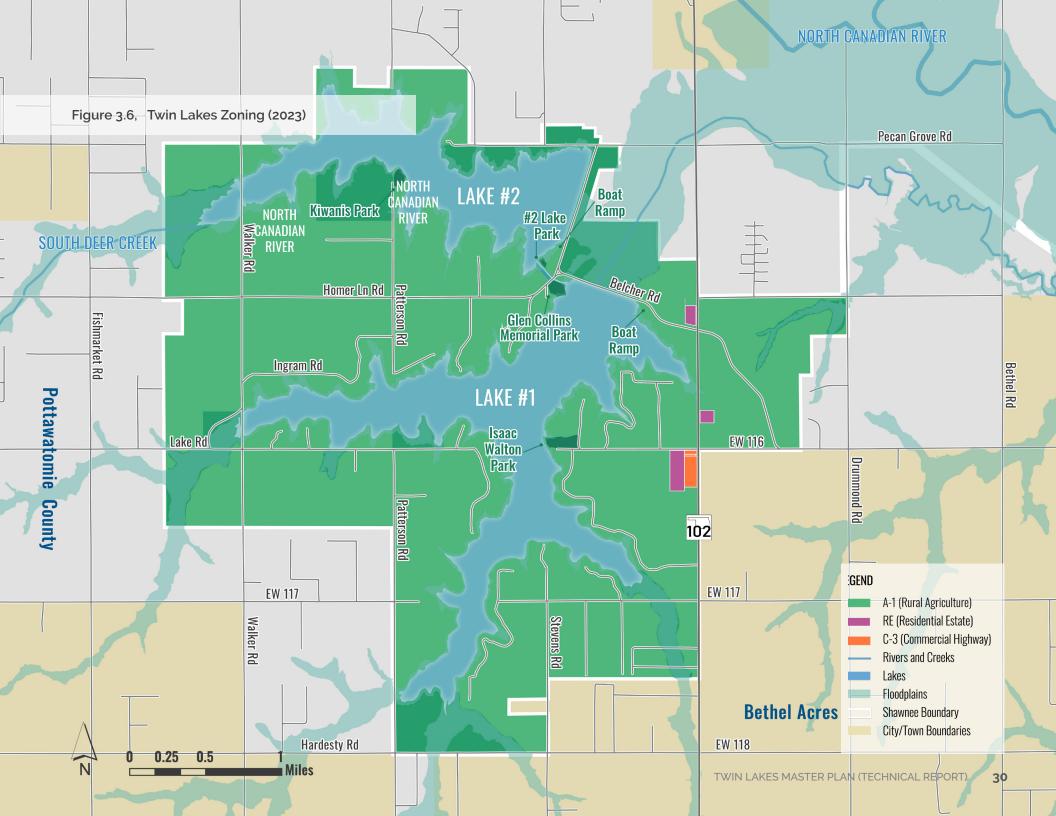
The City is in the process of re-writing their zoning regulations. This will allow any code-based recommendations that are a result of this Master Plan to be incorporated into the larger regulatory update.

OTHER CODES AND REGULATIONS

The City of Shawnee's Code of Ordinances places additional restrictions on property and uses within the Twin Lakes area. Codes that specifically apply to the study area include:

- **Chapter 16 Lakes** regulates water- and shore-based activities, sanitary standards, and the lake lot lease program.
- Chapter 20 Article IV Nuisances determines what kind of nuisances are prohibited as a means to protect public heath, peace, and safety.
- **Chapter 21 Parks and Recreation** regulates uses and activities within the City's public parks.

The results of the Twin Lakes Master Plan will likely necessitate text amendments to these chapters in order to implement the vision and guiding principles. Specific recommendations are provided in the Work Program.



PUBLIC INFRASTRUCTURE

Public infrastructure supports the growth and development of a community. The availability of public infrastructure, such as roads, water, and sewer services, is directly related to the level of development or redevelopment within a community. This section reviews the availability of public infrastructure in the Twin Lakes study area today.

MOBILITY AND ACCESS

Figure 3.8, Twin Lakes Infrastructure (facing page) shows the main roadway network within the study area. Lake Road is the primary east/west access from the Shawnee proper to the Twin Lakes. While secondary access is provided via Clear Pond Road and Hardesty Road, those roads are less accessible and further from Shawnee proper than Lake Road. I-40 to the north connects to OK-102 and Walker Road, which are the main north/south roads in the study area.

The classification of area roadways includes minor arterials, collectors, and local roads, as shown in **Figure 3.8**, Twin Lakes Infrastructure (facing page). Most of the roads in the study area are local roads, as shown in **Figure 3.7**, Study Area Roadways. While the collectors and minor arterials are paved, most of the local roads have a gravel surface. While the cost of pervious services may be less than paving a road, the continual maintenance is an ongoing and time consuming challenge. Other maintenance challenges include availability of labor, equipment, materials, and historical lapses in maintenance, requiring higher levels of investment at some point.

Figure 3.7, Study Area Roadways

Road Classification	Approx. Miles	Percentage
Minor Arterial	2.5	8%
Collector	11.9	36%
Local	18.2	56%
Totals	32.6	100%

The roadway cross-sections in the study area are indicative of a rural community, with open ditches for drainage and no pedestrian facilities. The collectors and minor arterials are two-lane roads, with no signalized intersections. The lower population densities and traffic volumes negates the need for roadway enhancements and signalization.

Levees along the northern shore of Lake 1 and the western shore of Lake 2 no only hold water in the lakes, but also provide vehicular access to surrounding properties and park spaces. The City is in the process of making improvements to the rip-rap, and will need to address anomalies discovered along the levee over time.

MULTI-MODAL FACILITIES

There are not provisions for pedestrians or cyclists in the study area. The comprehensive plan identified the goal to connect Shawnee through a connected network of trails, sidewalks, bicycle facilities, and roadways. This goal can be expanded to include the Twin Lakes. Trails were highlighted as a desired feature at Twin Lakes to allow for additional uses at the parks.

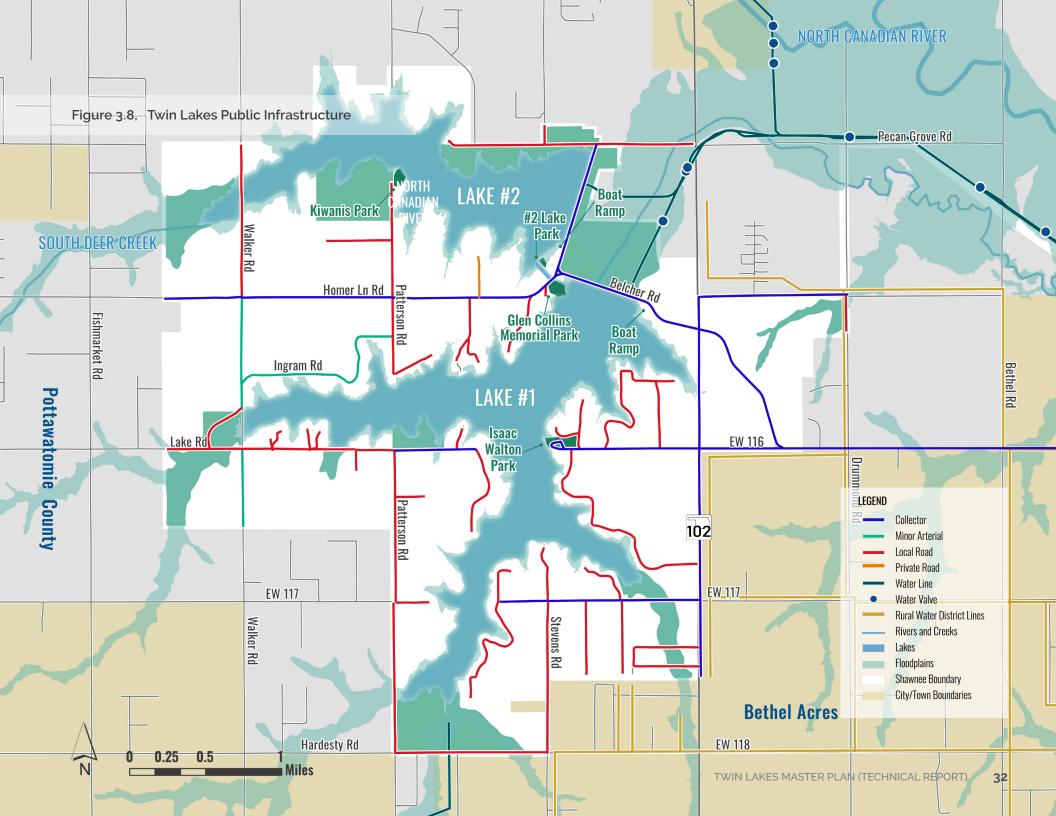
PUBLIC UTILITIES (WATER AND WASTE WATER)

While the Twin Lakes serve as Shawnee's primary water source, public water and sewer is not available in the study area. The nearest City pipe connection for water and sewer is approximately eight miles to the east in Shawnee proper. Properties within the study area incorporate private wells and septic systems, including those along the lake shore.

The Pottawatomie County Development Authority operates a rural water district (potable water only) to the east and south of the study area, outside of the municipal limits. The approximate location of the water lines are shown in **Figure 3.8**, Twin Lakes Infrastructure (facing page).

OTHER UTILITIES

Residents are provided electric and gas services from third party companies, such as Oklahoma Gas and Electric (OG&E), Canadian Valley Electric, and Oklahoma Natural Gas (ONG).



RECREATION

The City maintains four (4) recreation areas and two boat ramps along the Twin Lakes.

GLEN COLLINS PARK AND LAKE 2

Glen Collins Park is a lakeside recreation area located on the northern shore of Lake 2 on the west side of the levee. The park is roughly 3 acres in size and includes the following day-use amenities:

- Lake Access: Glen Collins Park has a swimming beach that requires frequent beach renewal due to its location on the lake relative to prevailing winds and currents. Lake 2 includes one boat ramp, a dock for loading and unloading boats, a fishing pier, and a kayak launch. The kayak launch is an ADA accessible ramp but is located in a manner that limits access, there is no accessible route from the parking area to the ramp, and the height of the ramp is prohibitive. The launch also is located close to the canal where boats are passing between lakes, which can create conflicts between vessels.
- Lake Uses: While swimming, tubing/towing, and the use of personal watercraft are allowed on Lake 1, only boating is allowed on Lake 2 (Sec. 16-86 and Sec. 16-229 of the Code of Ordinances). Kayaking and canoeing is allowed on both lakes. A permit is required for boating and fishing on Lake 2.
- **Gathering Spaces:** The park areas include a covered pavilion with picnic tables, uncovered picnic tables, grills, and benches which are generally not ADA accessible. The gathering spaces are at various stages of deterioration.
- **Play Equipment:** Glen Collins Park provides two swings, a spring rider, and a soft-surface basketball court. The swings and spring riders are older amenities and should be replaced. The soft-surface basketball court is not functional. There is no play equipment on Lake 2.
- Additional Elements: The parks have formal paved parking areas, gravel parking spots, updated restroom facilities, and large dumpsters in the main parking lot. There are no smaller trash receptacles throughout the park. During the summer months, parking availability is insufficient to accommodate all users of the park, resulting in some park users parking along the right-of-way near the levees. The restroom facility is a dated "snail" style restroom.



Limited non water-based park amenities are provided, however are rudimentary.



The covered pavilion at Glen Collins Park offers a shaded space for larger gatherings with family and friends, but could be updated to allow for a better user experience.



The kayak launch has an ADA accessible ramp and launch point. However, access to the launch is along a dirt path, and there is a 12-inch step to walk down the ramp.

ISSAC WALTON PARK

Isaac Walton Park is a lakeside recreation area located on the eastern shore of Lake 1. The park is roughly 4.5 acres in size and includes dayuse and overnight camping amenities such as:

- **Lake Access:** The park includes a swimming beach that requires frequent beach renewal due to its location on the lake relative to prevailing winds and currents.
- **Gathering Spaces:** The park includes a covered pavilion with picnic tables, uncovered picnic tables, grills, and benches which are generally not ADA accessible. The gathering spaces are at various stages of deterioration.
- **Overnight Stay Accommodations:** The park includes 15 primitive campsites with central toilet facilities. Permits are required for overnight camping, however, due to lack of enforcement and the general permitting system, few permits are collected for camping annually. The lack of enforcement also deters other visitors to Isaac Walton Park.
- Additional Elements: The park has gravel parking spots within the park, updated restroom facilities near the public swimming access, and large dumpsters at the entrance of the park. There are no smaller trash receptacles near the picnic tables or benches.



Isaac Walton Park is next to a lakefront wedding venue. With it's campsites, it has the opportunity to provide close-by overnight accommodations for wedding-goers.



Primitive camping spots provide spaces for tents and have picnic tables for eating. There is no running water or electricity connections.



The pavilion and picnic spaces provided gathering spaces for large and small groups.

LAKE #1 BOAT RAMP

Lake #1 Boat Ramp includes day-use and boat access facilities such as:

- Lake Access: The park provides lake access including two boat ramps, one of which is currently closed due to its pavement conditions and accessibility, a fishing house, and a dock for loading and unloading boats. Boating and fishing permits are required to participate in these activities on Twin Lakes. A drop box for permit fees is located at the boat ramp, toward the entrance of the park. This is away from where th boats are being loaded into and unloaded from the water. There is paved car and trailer parking.
- **Gathering Spaces:** The park includes uncovered picnic tables, grills, and benches which are generally not ADA accessible.
- Additional Elements: The parking areas at Lake 2 by the boat ramp accommodate vehicles and tows. The parking area by the kayak launch is a gravel lot. There are enclosed restroom facilities.

KIWANIS PARK

Kiwanis Park is a special use park that includes:

- **Gathering Spaces:** A covered pavilion with picnic tables and waste receptacles.
- **Special Uses:** The park is not accessible except during special events The park is used as a day-camp for school aged children to learn about outdoor activities. There are no restroom facilities.



The fishing house allows residents to access deeper water for fishing without having access to a boat. It can also provide reprieve from the elements. There are not fans or air conditioning though, so during the hotter months it may not be comfortable.



The two boat ramps at Lake #1 require different levels of maintenance due to deterioration. One boat ramp is currently closed due to its conditions.

RECREATION REVENUES

The City requires permits for specific uses at Twin Lakes. **Figure 3.9**, Recreation Revenues (by Type), identifies the revenues derived from the permits over the past 5 years and **Figure 3.10**, Recreation Revenues, provides the 2023 cost of each permit. These include:

- **Boating:** Boating permits are required for all boats and personal watercraft. These permits provide the greatest source of recreation permit revenues for the City and can be purchased as a day-use permit or annual permit.
- **Fishing:** Fishing permits are required to fish along the shoreline or on Lake 1 and 2. Fishing permits can be purchased as a dayuse permit or annual permit. Fishing permits are not required for individuals over the age of 65. The fishing and boating permits can be purchased as a combination set
- **Hunting:** Hunting is allowed on city-owned property on Lake 1 and Lake 2 that has been identified as a game refuge based on permitting, seasonal allowances, and on a species-by-species basis (Div. 5 of the Code of Ordinances). Hunting permits are not required for individuals over the age of 65. Hunting permits yield the least amount of recreation permit revenue for the City.
- **Camping:** Camping permits are required to use the campsites at Isaac Walton Park. The camping area does not accept reservations. Camping permits do no contribute much to the City's overall revenues.
- **Gathering Spaces:** The covered pavilions can be rented for \$25 dollars per 3-hour block.

There are three options to purchase permits for the Twin Lakes. The City's Parks and Recreation web page provides a link to purchase permits online, cash drop boxes are available at the parks, or a resident can purchase permits at the Recreation Center in person during regular Monday - Friday business hours. Permitting enforcement is difficult with the current system, as there are not stickers for boats nor is there clear guidance on if printed permits are necessary.

From January, 2022 - October 5, 2022, permits from Twin Lakes provided the City with nearly \$38,000 in revenue.

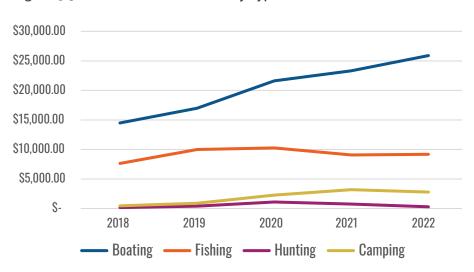




Figure 3.10, Permit Costs

Road Classification	Permit Cost
Boating (Day)	\$7
Boating (Annual)	\$30
Fishing(Day)	\$3
Fishing (Annual)	\$20
Boating & Fishing Combo (Annual Only)	\$45
Hunting (Day)	\$5
Hunting (Annual)	\$30
Camping (Day)	\$8
Pavilion Rental	\$25/3hrs

Source: Shawnee Parks and Recreation Department

PUBLIC HEALTH AND SAFETY SERVICES

Public health and safety services provided by the City of Shawnee to properties in the Twin Lakes study area include police, fire, emergency medical response and code enforcement. Provision of these services to Twin Lakes residents and visitors is an ongoing challenge due to the area's distance from Shawnee proper and its low population density. Public safety was a key concern brought up by residents during engagement opportunities.

POLICE CALLS FOR SERVICE

Figure 3.11, Twin Lakes, Police Calls For Service, indicates that the Shawnee Police Department responded to over 307 calls for service in the Twin Lakes study area between March, 2020 and September, 2022. Incident categories described in **Figure 3.11**, Twin Lakes, Police Calls for Service, are derived from National Incident-based Reporting System (NIBRS) codes. The most common type of call requiring police dispatch are "All Other Offenses" which include health emergency assistance, 9-1-1 calls without incidents, welfare checks, suspicious activity, and similar offenses. An additional 18 percent were joint responses with Fire/EMS for health and fire related emergencies. Of the police related activity, many of the responses are related to disorderly conduct, assault, trespass, and larceny. Only one percent of the calls were related to water emergencies or responses.

The primary police station is in east Shawnee, but the police squads patrol actively throughout the City. While there are regular police patrols, the department does not have the staff for a patrol squad solely assigned to the Twin Lakes area. Response times vary based on where the patrols are located at the time of a call. During the summer months, there is additional coverage during the day to monitor the parks more frequently.

Figure 3.11,	Twin Lakes, Police Calls for Service (March 2020 -
September	2022)

Response Type	Number of Calls	Percent of Calls
All Other Offenses*	152	50%
Assault	14	5%
Burglary	3	1%
Destruction/Damage/ Vandalism	2	1%
Disorderly Conduct	27	9%
Driving Under the Influence	1	0%
Drug/Narcotic Offenses	2	1%
DUI	1	0%
Family Offenses, Nonviolent	1	0%
Fire	26	8%
Fraud Offenses	2	1%
Health Emergency	31	10%
Larceny/Theft	11	4%
Motor Vehicle Accident	15	5%
Other Emergency	1	0%
Sex Offense	2	1%
Stolen Property	1	0%
Trespass of Real Property	10	3%
Water Emergency	3	1%
Weapon Law Violation	2	1%
Totals	307	100%

Source: Shawnee Police Department

FIRE/EMS CALLS FOR SERVICE

Figure 3.12, Twin Lakes, Fire/EMS Calls For Service, indicates that the Shawnee Fire Department received 126 calls for service in the Twin Lakes study area between July, 2020 and November, 2022. The most common type of call requiring Fire or EMS dispatch was related to medical emergencies. Over a quarter of the calls were canceled in route, 14 percent were related to fires, However, only two percent of all calls over that two and a half year period were for water or ice-related rescues.

The City's fire stations are in Shawnee proper, with the nearest station in downtown Shawnee, some eight miles. When responding to emergencies, responders typically use I-40 to access the lake area due to roadway constraints between Shawnee proper and the study area, including:

- **Bridge Load Rating:** The bridge across Canadian River at Lake Road has a load rating of 10 tons, 16 tons less than the heaviest fire truck in operation by the City. While the City has waivers to use the bridges, it prefers to use the I-40 route.
- **Underpass Height:** Where Lake Road becomes W. Benedict Street, the roadway passes under an existing rail line with a crossing height of 12 feet. With the highest truck in the Shawnee fleet being 11 feet 7 inches, there is not much room for any obstructions under the bridge. For example, a large branch (one greater than 3 inches in diameter for example), or an added piece of equipment may cause the fire engine to scrape the top of the bridge.

Figure 3.12,	Twin Lakes, Fire/EMS Calls for Service (July 2020 -
November, 2	2022)

Response Type	Number of Calls	Percent of Calls
Fire, other	1	<1%
Structure Fire	1	<1%
Mobile Property Fire	5	4%
Natural Vegetation Fire	10	8%
Outside Rubbish Fire	3	2%
Medical Assist	9	7%
Emergency Medical Service (EMS) incident	46	37%
Water or ice-related rescue	3	2%
Person in Distress	3	2%
Public Service Assistance	11	9%
Good Intent Call, other	1	<1%
Dispatched and Canceled en Route	27	21%
Wrong Location, No Emergency Found	1	<1%
Controlled Burning	1	<1%
Steam, Other Gas Mistaken for Smoke	1	<1%
False Alarm and False Call, other	2	2%
System or Detector Malfunction	1	<1%
Totals	126	100%

Source: Shawnee Fire Department

CODE ENFORCEMENT

The City of Shawnee's building and nuisance code enforcement responsibilities are administered by the Engineering Department. Relevant codes for which code enforcement officers are dispatched include:

- Sec. 16-325 Boathouse, dock facilities; liability of City
- Sec. 20-170 Enumeration
- Sec. 20-171 Public peace and safety
- Sec. 20-173- Loud sound from amplification systems in private residences
- Sec. 20-202 Health nuisances
- Sec. 20-203 Littering

Although building code enforcement is pro-actively applied during the building and land development process, the City of Shawnee's policy toward nuisance code enforcement is largely complaint-driven, with enforcement officers responding to citizen requests for service. The City mainly receives complaints related to property conditions and standards, though the exact number of calls and types of repercussions was not available at the time of this Master Plan.

During a tour of the lake area, it was observed than many of the docks on Lake 1 do not appear to meet City regulations. Common concerns included lengths longer than 75-100 feet from the high water line, and general safety standards, as quite a few appeared dilapidated and unusable. These docks are safety hazards for boats, swimmers, and other lake users. Debris along the shoreline contributes to the degradation of water quality was also observed.



While boat houses are permitted on Lake 1, some boathouses and docks may require repairs.



While some docks may be within the length limits, there are many that appear to be dilapidated and in need of repairs.



Some lots in the study area have accumulated vehicles and other types of debris. In a complaint-based system, property related nuisances may never be addressed.



Hazardous boathouses and docks around the lake can be harmful for boaters, tubers, and other lake users.



Camping is allowed in Issac Walton Park for no more than seven nights at a time. Without enforcement procedures, some campers may be there for extended periods of time.



Permits are not required to construct retaining walls or seawalls along the lake shore. Removal of the native shoreline contributes to decreased water quality and increased erosion on other areas of the lake.

NATURAL FEATURES

Together, the Twin Lakes provide 25 miles of shoreline and accommodate approximately 29,300 acre-feet of water, though the water levels vary during periods of drought or excessive rainfall. The two lakes are connected through a narrow channel which is usually open for boats to travel between the two lakes, however, during low water periods when the channel is shallow buoys can be used to restrict migration. The levee outfall releases water to South Deer Creek to the north.

While the Twin Lakes are a primary source of Shawnee's drinking water, the floodplain and watershed are relatively limited in size. Changes in elevation are minor resulting in lower volumes of water that can be collected in stream channels. This impacts their recharge rate. **Figure 3.13**, Twin Lakes Natural Features illustrates the parks, floodplains, and general elevations around the lakes. This shows that the area around the lake is relatively flat and there are fewer streams and floodways to recharge the lakes.

Land development within the watershed is primarily rural and agricultural lands or open space. While this may help in filtration of stormwater runoff, it may also limit the amount of water entering the lakes as water is absorbed into the ground during smaller rain events. According to the MultiReservoir Yield and Operations Analysis (2012) performed for the City's water sources, there is sufficient capacity in the City's reservoir system (including Wes Watkins Lake) to supply water to the City through the study year of 2060.

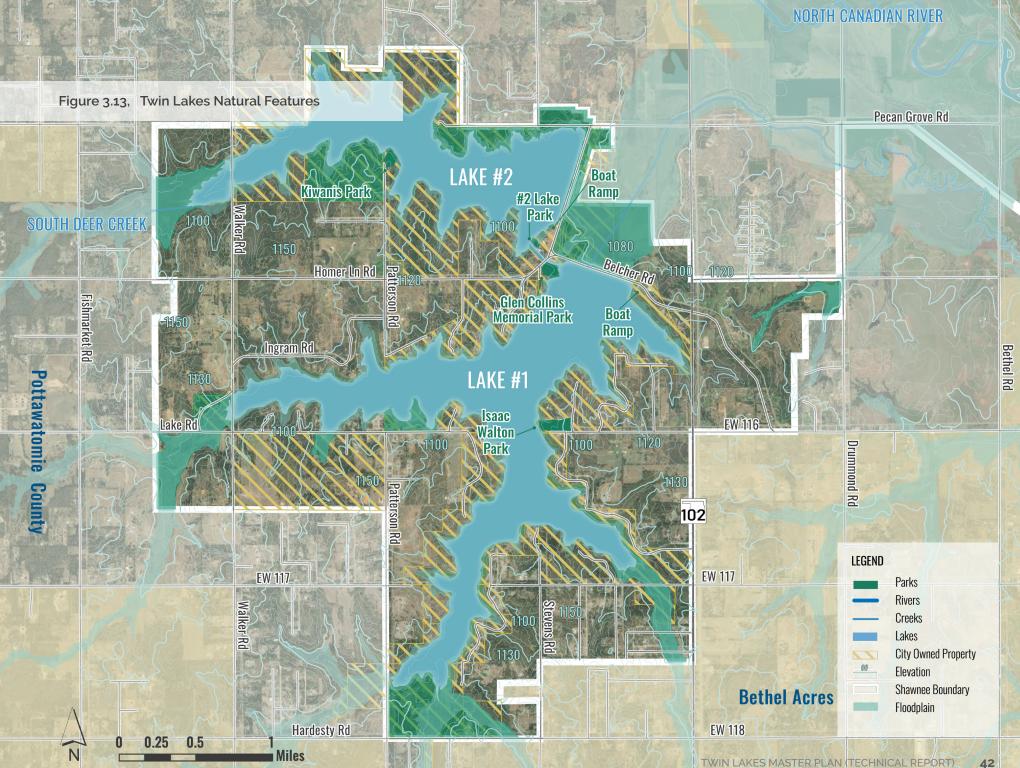
Many residents around Lake 1 have constructed seawalls, replacing native vegetation along the shoreline. Due to wave activity and winds causing waves, some of the seawalls have failed, releasing additional sediment and materials into the water. This effects overall water quality and erosion rates along the lake edges. Unlike Twin Lakes, similar lakes that are a source of a city's drinking water are regulated by the U.S. Army Corps of Engineers (USACE). The USACE requires a lake shore buffer with native vegetation to help protect and preserve water quality and shoreline stabilization.



Erosion and currents not only impact the shoreline, but can also have damaging effects on city infrastructure.



Failed seawalls create hard edges that are susceptible to waves and currents. This can endanger properties and structures and increase erosion rates.



BASELINE FISCAL ASSESSMENT SUMMARY

A fiscal assessment for a city reviews current revenues and expenditures to determine its fiscal health. The analysis compares property values on a per-acre basis, along with the tax revenues from the community, to visually display the performance of different development patterns and uses. The fiscal assessment for the Twin Lakes study area compared the costs associated with providing public services and public infrastructure compared to the revenues earned in the study area. The full assessment is attached as Appendix B.

REVENUES AND EXPENDITURES

The first step in establishing a baseline fiscal assessment is to review a city's revenues and expenses. This process identifies how a city makes its money and covers its expenses to provide public services. In Shawnee there are two main buckets for revenues, including the general fund and the utility fund. These are supported by sales tax, user fees, permits, and other types of charges. Expenses include a variety of public services, including public safety, infrastructure maintenance, and other government activities. **Figure 3.14**, Revenues and Expenses illustrates how the revenues feed into different public service categories.

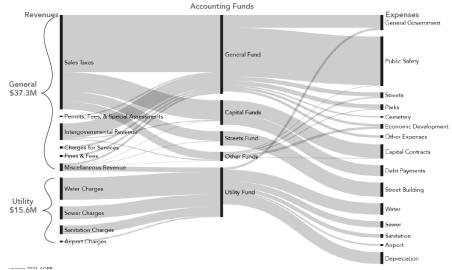


Figure 3.14, Shawnee Revenues and Expenses¹

Revenues in the Twin Lakes study area are generally derived from:

- **Sales Tax** associated with non-residential uses, which is limited in the study area. .
- Lot Lease Program in which lease holders pay \$750 annually for the provision of public services.
- **Permits** including boating, hunting, fishing, and camping permits as well as permits related to building, construction, and inspection.

The main expenses for the study area include:

- **Public Safety** consisting of Police, Fire/Rescue and EMS necessary to public health and safety emergencies.
- **Streets** maintenance in the study area for a mixture of gravel and paved surface roads. Larger roadway construction may be included on a case-by-case basis.
- **Parks** routine maintenance in the study area is for Glen Collins, Lake #1 boat ramps, Lake 2 access points, and Isaac Walton Park.

Based on the existing conditions, revenues equate to approximately \$300,00 dollars annually, and expenses amount to nearly \$890,000 annually. This results in a \$590,000 dollar deficit.

PUBLIC SERVICE COSTS

The public service costs for the study area primarily included the cost to maintain the roadways in the study area, as other public utilities are not within the study area. There are regular maintenance costs built into the budget for parks and recreation facilities, as well as costs for public safety services.

Roadway upkeep costs between \$750,000 and \$1,500,000² per year in the Twin Lakes area, based on the maintenance of gravel roads and minor repairs to paved roads. The generalized costs do not include unfunded infrastructure projects, such as new roadway construction, major repairs to bridges, or the expansion of water and sewer.

1 Source: City of Shawnee Budgets, Urban3 Analysis

2 Source: Estimates based on similar cities; Urban3

VALUE PER ACRE

Parcel evaluation can be looked at on a per parcel or per acre basis. The valuation per parcel shows the taxes based on the property value. While this can illustrate how well different land uses perform, it does not paint the whole picture in regards to development patterns. To best evaluate the impact development patterns have on growth, a valuation per acre shows the cost burden per acre. The cost burden is the city's expenditures related to public services and infrastructure.

Figure 3.15, Twin Lakes Study Area Value per Acre, shows the general value of property per acre in the study area. The bar height is associated with valuation of the properties. The low blocks with the darker green indicate a value between \$25,000 – 50,000 per acre. This is due to many of the parcels being larger in size with rural development patterns. The lighter the color, and higher the bar, indicates higher property values, with the highest and lightest equaling between \$500,000 and \$1,000,000 per acre.

The City of Shawnee does not profit from property taxes. In the Twin Lakes study area, the main revenue sources are sales taxes from the limited commercial services, fees related to the lakes and the lease program, and permitting costs. While the property value per acre does not have a direct revenue stream for the City, it is important to consider that the higher valuations are derived from smaller lots and commercial uses.



Larger roadway projects, such as bridge replacements, may not be included in the budget annually. A formalized Capital Improvements Plan (CIP) process can help a city plan out budgetary needs for the subsequent five to ten years.





RECREATION MARKET ASSESSMENT SUMMARY

The recreation market assessment reviewed state and regional trends related to recreation-based tourism. The assessment then compared the Twin Lakes offerings and permitting to similar lakes in the region. The market assessment helped identify which types of recreational elements should be prioritized for future investments in order to satisfy market demands and increase revenues for the City. The full recreation market assessment is attached as Appendix C.

REGIONAL CHARACTERISTICS

The Twin Lakes are approximately 30 minutes away from the Oklahoma City Metropolitan Statistical Area (MSA). The market area for the Twin Lakes serves the MSA, as well as surrounding counties and cities outside of the MSA limits, which includes over 1,000,000 residents. The age distribution is roughly even over the age of 20 and shown in **Figure 3.16**, Age Distribution; age distribution is an important element to consider because different age groups desire different types of amenities and facilities. Around 26 percent of residents within the MSA have incomes exceeding \$100,000 dollars annually. These residents may have a greater financial ability to travel more frequently.

RECREATION TRENDS

Statewide recreation trends influence future opportunities for investments at Twin Lakes. The gross domestic product (GDP) for core recreation goods and services (gear, equipment, fuel, concessions, maintenance, repair, and fees related to outdoor recreation activities) has grown around 2.6 percent annually since 2012, shown in **Figure 3.16**, Total Core Outdoor Recreation GDP. This continual growth indicates a rise in recreation popularity in Oklahoma. Of the growth, over 70 percent is contributed to boating and RVing activities as the cost to own a boat or RV is high. However, these activities can be included or expanded at Twin Lakes. Camping has grown in popularity over the last five years.

The market assessment also shows an increase in popularity for canoing and kayaking, as well as increases in shore fishing shown in **Figure 3.18**, Outdoor Recreation Popularity since 2012. In 2020 the COVID-19 pandemic likely had an impact on recreation popularity, as people sought opportunities to be outdoors.

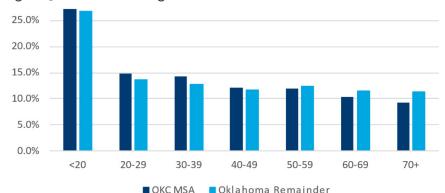
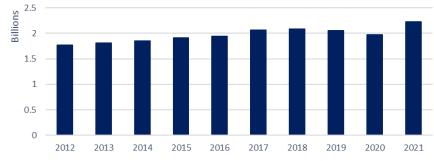
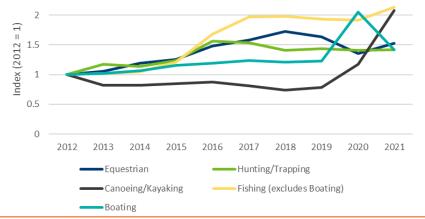


Figure 3.16, OKC MSA Age Distribution¹

Figure 3.17, Total Core Outdoor Recreation GDP1







1 Source: Bureau of Economic Analysis

TOURISM TRENDS

Visitation to Oklahoma has been growing steadily over the last decade. In 2021, there were nearly 23 million visitors² to the state, mostly to Oklahoma City and Tulsa, resulting in around \$10 billion dollars² in spending. Another travel group that has seen significant growth over the last five years are campers, which has grown by 12 percent since 2017. Campers spent approximately \$812 million in 2021² (or eight percent of the total travel spending), shown in **Figure 3.19**, Travel Spending by Campers in Oklahoma.

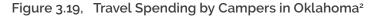
Park visitors will often visit restaurants, shop at local retail stores, and purchase recreation goods. While this activity may be limited, it still contributes to a city's overall tax revenue.

COMPARISON LAKES

The assessment compared recreation offerings and permitting systems between Twin Lakes and similar regional lakes, including Wes Watkins, and Sportsman Lake. Isaac Walton Park has limited overnight capacity compared to the other parks. Wes Watkins and Sportsman Lake offer RV camping as well. Otherwise, the Twin Lakes is comparable with the number of boat ramps and pavilion spaces. The permitting rates differ slightly per lake, as shown in **Figure 3.20**, Comparison Fees.

OVERNIGHT ACCOMMODATIONS

Providing overnight accommodations can attract visitors and provide a source of revenues. Overnight accommodations have different assumptions for occupancy rates and fees. Revenues and visitation increases as enhanced overnight accommodations are provided, as shown in **Figure 3.21**, Occupancy Rates.



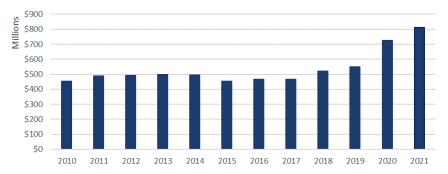


Figure 3.20, Comparison Fees

Item	Twin Lakes	Wes Watkins	Sportsman Lake
Tent	\$8/night	\$10/night	\$8/night
RV	N/A	\$25/night	\$20/night
Boating	\$7/daily \$30/annual	\$5/watercraft	\$5/daily \$25/annual
Fishing	\$3/daily \$20/annual	\$3 per person	Free
Equestrian	N/A	N/A	\$3/daily \$30/annual

Figure 3.21, Occupancy Rates²

ltem	Occupancy	Rate
Tent	5-10%	\$15/night
RV	20-30%	\$30-45/night
Yurt	25-35%	\$50-75/night
Cabin	30-40%	\$100-125/night

ASSESSMENT FINDINGS

The assessment findings summarize the engagement input and databased assessments based on topics. These findings will be further explored in the implementation action plan.

GROWTH AND DEVELOPMENT

DEVELOPMENT DENSITIES

Densities are limited in the study area. While this contributes to the pastoral nature of the study area, it also limits the number of households that support commercial uses, reducing tax revenues for the study area. By increasing densities and intensities in specific areas, additional revenues can support public investments at Twin Lakes.

ALLOWED USES

Much the study area is zoned for agriculture. The uses allowed within this zoning district may not all align with watershed protection. For example, oil drilling, mining/extractions, and sanitary landfills are allowed uses. As updates are made to the development code, uses should be evaluated within the study area to ensure they protect water quality. The commercial zoning district (C-3) also allows for intensive commercial uses that may have an impact on the overall character of development and water quality.

LOT LEASE PROGRAM

While the creation of the leased lots provides revenues to the City, the delineation of the lots are not clearly identified. The City should continue to survey and plat the existing lake shore lots as well as future leased lots on or off of the lake shore. TA consideration of existing fees, as well as any future lease program fees should be evaluated to ensure they are consistent with market rates and demand.

LAKE SHORE PROTECTION OVERLAY

The Lake shore Protection Overlay Zone is only applicable for leased properties along the lake. The overlay should apply to the entire lake and provide stricter native buffering and vegetation requirements to protect water quality standards.

LAKE SPECIFIC DEVELOPMENT PATTERNS

Generally, development patterns along Lake 1 should remain the same, with enhanced recreation facilities to accommodate overnight stays and improvements to the boat ramp. Additional commercial services (i.e. a restaurant, shop, or similar use) may be appropriate near the boat ramp area to support the parks and increased access along the lake shore.

Additional recreation services should be evaluated on Lake 2 to provide services on the lake and lake shore. These uses can support recreationbased tourism for the study area. Park enhancements with overnight stay accommodations should be included to allow for greater use of Lakes while maintaining a more natural character.



The Dollar General store is one of the only non-residential uses in the study area. It provides residents and visitors with goods.

MOBILITY AND ACCESS

ACCESS FROM SHAWNEE

Roadway access to the Twin Lakes study area is generally limited. Since heavier vehicles can cause significant strain on some roadways, there are weight limitations on the bridges that provide direct east/west access for heavier vehicles, including fire trucks, RV's and other similar vehicles. Infrastructure improvements related to access should be evaluated to ensure future recreation opportunities are accessible and emergency services have quicker response times. This may include improvements to existing roadways and bridges outside of the study area, or adopting new roadway cross-sections that support higher frequencies of heavy vehicles.

RURAL ROADWAY CONDITIONS

Many of the roadways in the study area are rural cross-sections with limited shoulder space and various surface types. Routine maintenance is necessary to ensure the roads are in good condition. Future improvements such as wider shoulders along the roads can facilitate multi-modal access to the Twin Lakes.

SIGNAGE

Additional wayfinding and informational signage is needed to help inform residents and visitors of the parks and lake access at Twin Lakes.

TRAILS

Trails are a highly desirable amenity for the Twin Lakes. The City's trail network should be evaluated to include new trail opportunities to connect Shawnee proper to the study area. Trails should also be included in future recreation improvements around the lakes and incrementally built, either through public or private investments, over time within parks, as part of roadway projects, and development over time. There are opportunities to incorporate hard- and soft-surface trails along the lakes, and should be designed in a context-sensitive manner.



The rural roadways are designed to have open drainage systems and do not have pedestrian facilities or wider shoulders to accommodate bicycles and connect residents to the Twin Lakes study area.



There are areas where the roadways run close to the lake shore. These roads are frequently washed out and should be considered for relocation.

PUBLIC UTILITIES

WATER & SEWER

Water and sewer services are not readily available in the study area. Without the expansion of water and sewer, there will be limited opportunities for increasing densities and intensities.

To provide water and sewer, the public utility lines would need to be extended around eight miles to reach the lakes area. An alternative to extending the sewer line to the study area would be to construct a package water treatment plant large enough to accommodate the volume from the study area. The expansion of water and sewer would represent a large investment for the City, and would only be fiscally sustainable with greater development in the area.

While the rural water district supplies water to surrounding areas, it does not have a sewer system. If the City were to construct a water treatment plant near the study area, higher usage fees could be charged for noncity residents to support the ongoing use and maintenance of the facility.

FUNCTIONAL PRIVIES AND SEPTIC SYSTEM STANDARDS

Section 16-59 of the Code of Ordinances regulates sewage systems along the Twin Lakes. The code restricts the use of functional privies on leased properties. This code should be expanded to include all development along the lake shore, whether leased or owned, and properly define "function privies". Inspections for septic systems is outlined in this section, however, should be reviewed and strengthened to ensure highest quality and sanitation standards to protect the water quality in Twin Lakes.

RECREATION

CURRENT INVESTMENTS

The study area's existing parks provide opportunities for passive recreation activities such as picnicking and swimming. While new investments have been made to replace the restroom facilities at Glen Collins Park and Isaac Walton Park, other amenities have various levels of maintenance needs. Improvements to existing facilities may include:

- Relocation of swimming beaches to other parts of the lake to reduce maintenance needs
- · Additional waste receptacles at picnic tables with grills
- Replacement of the children's play equipment
- Relocate the kayak launch to a more suitable location that provides better ADA access and reduces conflicts between motorized and non-motorized boats
- Maintenance Lake 1 boat ramps to provide two operational ramps
- ADA improvement measures (i.e. accessible routes to picnic tables, kayak launch, etc.)
- Improvements to pavilions to modernize the facilities, including recovering the pavilions, power outlets, and access to WiFi.



Existing amenities at Glen Collins park are at various stages of deterioration. Improvements can make the parks much more attractive to both area residents and visitors.

SAFETY

There are three main safety concerns related to recreation in the study area.

- The location, seclusion, and lack of amenities to attract users during slow times of the year contributes to not feeling safe while using the facilities.
- Behaviors of people using the parks can deter other residents from visiting parks. The addition of police patrols during the summer months, beyond what is currently provided, would monitor behavior during the busier time of the year.
- Additional signage related to rules and regulations at each park would inform visitors of the expectations for those using the parks.
- On-water safety concerns include boater behavior and the limited enforcement of rules on the lakes. A dedicated police dock, vessel, and staff would quicken response time for emergencies and allow the patrol the lakes more readily. Incremental investments can be made to allow improved safety over time.
- Camping enforcement and the use of Isaac Walton Park was also noted as a concern. Better enforcement of time limits and permit requirements could encourage more use of the park.

PERMITTING SYSTEM

Revenues derived from the existing permitting process are limited. Improvements to the permitting system and permits requirements may improve recreation revenues.

- Required boat stickers and periodic inspection to easily identify those who have a permit.
- Printed or digital permits for hunting and fishing should be required and readily available to show patrols.
- · Camping reservations accompanied by a permit should be required.
- Parking for non-trailer vehicles in city parking lots would monitor lake usage and increase revenues.
- Current fees for pavilion rental should be evaluated, with consideration given to increasing fee rates during busier months.
- Improvements to the online and on-site permitting systems to increase the number of visitors acquiring required permits.



During the preferences assessment, the perception of safety with homeless campers at Isaac Walton Park was a concern expressed by numerous residents.



The permit cash boxes result in an honor-based permitting system that is not followed without enforcement.

FUTURE PARK AMENITIES

The Twin Lakes lack a regional draw. They provide on-water opportunities for boating, fishing, and tubing, yet there are limited shoreline amenities. In addition to improvements to existing parks, additional recreation amenities will help draw in more users. Based on the needs assessment, the following amenities should be considered:

- A mixture of paved and soft-surface trails along Lake 2, within lake parks, and connecting to Shawnee proper;
- Additional parking areas to support higher demand times;
- Incorporation of overnight stay accommodations (including RV campsites, yurts, cabins, or a lodge);
- Large destination-based recreation opportunities that are feeentry to draw more visitors; and,
- Supportive commercial uses such as a bait shop, vending machine or kiosk, small convenience store, restaurant, or food truck area.

The market-assessment compared similar amenities to support overnight stay parks. This may include facilities and amenities from **Figure 3.22**, Overnight Examples and **Figure 3.22**, Day Examples. Additional day uses with associated fees will support the revenues for the study area.

Figure 3.22, Overnight Examples

Item	Occupancy
Tent/Primitive	Tent Pad Development
RV	Full Hookups, Pull-throughs
Cabin/Yurt	Simple or Upscale
Various	Spacing, Tree/Ground Cover, Setting (inland, waterfront, etc.), WiFi
Auxiliary	Showers/Restrooms, Laundry, Camp Store, Food Trucks, Electric Car Charging
Management	Park Rangers, On-site staff, Online Reservation System

Figure 3.23, Day Examples

ltem	Occupancy	
Water Oriented	Developed swimming area, slides, non-motorized watercraft rental, fishing gear rentals, pool/hot tub/sauna, marina	
Land Oriented	Child play-area, bicycle rental, trail development (paved, ADA accessible, gravel, retaining structure), shore quality development	
Event Spaces	E Spaces Personal: Pavilions (electricity, water, cooking), Building (electricity, water, restrooms, small kitchen). Performance: Amphitheater (simple or full-stage)	
Auxiliary	Showers/Restrooms, Food Trucks, Electric Car Charging	
Management	Park Rangers, On-site staff, Online Reservation System	



Example of a lake shore RV camping site with a picnic table for campers to use. The location of the RV site and amenities can create significantly higher revenue opportunities.



Shaded play structures can provide non-water activities for families with young children during the summer.



Soft surface nature trails can accommodate walkers enjoying nature or mountain bikers. These are types of activities not available at the Twin Lakes today.



Non-motorized boat rentals allow residents and visitors to enjoy being on the water without having to worry about owning or transporting a kayak or canoe.

PUBLIC SAFETY SERVICES

FIRE/EMS

The emergency response times for public safety services should be reduced. This may be accomplished by one of the following ways:

- Roadway improvements from Shawnee proper will allow Fire/EMS vehicles to use routes other than I-40 to respond to emergencies in the study area.
- The addition of a fire station in the study area would help response times, however, may be cost prohibitive. Additional coordination with surrounding communities may help in staffing a new emergency response center. This can start with staging of equipment in the area to assist with response times.

POLICE

The Shawnee Police Department patrols the roads and lakes in the study area.

- To improve response times, an additional patrol squadron dedicated to the Twin Lakes area may be considered.
- On-water support should be evaluated to ensure orderly boating and activities on the lake. The addition of a new police dock and boat, and a police unit to patrol the lakes would ensure safety on the lakes.

CODE ENFORCEMENT

The current system for code enforcement is reactive and complaint based. A proactive approach may need to be taken to improve safety on the lakes, including the evaluation of docks and shoreline seawalls. This may include an annual permit and inspection for all docks to ensure they are safely maintained and do not obstruct boating flow.

Regular visual inspections for shoreline debris should be conducted to reduce unnatural materials entering the lakes. During the site tour seawalls falling into the lake, lawn decorations, chairs, and play structures were observed, and were described as frequent occurrences by area stakeholders. Debris can impact water quality and local ecology , and also makes the lakes less attractive for visitors.



A new police boat dock on Lake 1 would provide more police presence and coverage on the lakes.



Annual permitting and inspection requirements can help ensure all docks are safe and meet city regulations.

NATURAL FEATURES

SHORELINE WATER QUALITY

To protect the water quality for Lakes 1 and 2, it will be important to evaluate conservation measures. This may include:

- Reviewing and increasing setbacks and buffering requirements from the lake shore.
- Requiring the use of "low impact development" techniques, stormwater management methods that assist with improving water quality for development, for any commercial or more intensive development near the lake shore.
- Improvements for permitting uses on the lake and structures along the lake shore.
- Continual maintenance of the floodplains and floodways to ensure there is clear flow and no obstructions into the lakes.
- Limiting public roadways within the floodplain, or relocating existing roads out of the floodplains to not block water flow.

WATER QUALITY PROTECTION

On-water measures should be considered to limit pollutants from entering the water bodies. While it may be appropriate to maintain motorized boats on Lake 1, the limitation of boat usage on Lake 2 to manpowered boats such as kayaks and canoes should be considered. By reducing oils and gas from motorized boats entering the water at Lake 2, it will protect water quality and improve for non-motorized lake users.

ZEBRA MUSSELS

=Zebra Mussels are an invasive species and have been detected in the Twin Lakes. Invasive species pose a risk to local ecology and ecosystems. Shawnee should continue to support efforts to reduce the growth of the Zebra Mussel population. Continuing a robust public awareness campaign can help inform the public of how to help reduce the spread of the invasive species.

FISCAL CONDITIONS

TWIN LAKES REVENUES

Current growth patterns and permits limit revenues for the study area. Considerations to produce additional revenues for the Twin Lakes, which can help pay for infrastructure improvements and offset public safety services costs, include:

- Evaluating land uses and development patterns to encourage additional non-residential uses and higher density development patterns to increase tax revenues.
- Assessing existing permit fees and identifying new types of permits to provide additional revenue streams.
- New funding sources can be explored to support public services and projects, such as:
 - Public safety district or an assessment district;
 - Higher user fees for sewer outside of the City limits; and,
 - An increase in the lot lease fees

PUBLIC EXPENDITURES

In order to support growth in the Twin Lakes area for residents and visitors, substantial public infrastructure projects will be required. This may include:

- Expansion of water and sewer services to support new and expanded development.
- Enhancements of existing parks to support more diverse uses.
- Development of new parks to incorporate overnight accommodations and new day use activities to draw more tourism and support economic growth.
- Improvements to existing roadway infrastructure within and outside of the study area to enhance access.
- Additional public safety units (Fire/EMS and police), code enforcement officers, and maintenance crews to enhance public safety and address maintenance needs.



TWIN LAKES MASTER PLAN (TECHNICAL REPORT)

CREATING THE GROWTH SCENARIOS

Having a future development plan that is balanced and supports the community's vision can be created through a scenario planning process. Scenario planning uses future land use designations coupled with anticipated revenues and expenditures to evaluate how various growth patterns will impact the City's fiscal sustainability. While scenario planning is an important tool in evaluating different growth options, it should be used with other data and resident wishes to paint a complete picture. One significant value of scenario planning is that it provides a baseline for continued evaluation and measuring progress over time.

The scenario planning process included the following steps:

- 1. Baseline Conditions: The baseline fiscal conditions for the Twin Lakes area set the foundation to evaluate future growth trends. This critical step evaluates how the current land uses and infrastructure impact the City's overall budget. The baseline conditions are described in Chapter 2 and attached as Appendix B.
- 2. Growth Scenario Workshop: The planning team hosted a workshop with the Advisory Committee and vested community members to put pen to paper while envisioning future land uses for the study area.
- 3. Business As Usual Assessment: The business as usual scenario provided the anticipated fiscal implications if no changes were made to current land use and growth patterns.
- **4. Scenario 1: Step It Up:** The Step It Up Scenario evaluated growth based on slightly increasing allowed land uses in the study area.
- 5. Scenario 2: Think Big!!!: The Think Big Scenario evaluated growth based on expanding water and sewer to the area and dramatically increasing allowed densities and intensities in the study area.
- 6. **Consensus Scenario:** The Consensus Scenario , prepared using input from the Advisory Committee and residents, is built by blending the preferred aspects of the previous scenarios, and provides a balanced mix of growth to provided a balanced mix of growth to support recreation improvements, economic growth, and anticipated population growth.



The canal connecting Lake 1 and Lake 2 can signify the two different proposed development patterns around the lakes identified in the consensus scenario.



Improvements to existing parks to improve and modernize amenities can help support higher usage as Shawnee grows.

GROWTH SCENARIO WORKSHOP

A future growth scenario workshop which a variety of community members and the advisory committee was convened to explore growth under two possible scenarios.

The first part of the workshop included a review of existing growth patterns, including zoning and land use. Place types were introduced based on a mixture of the existing land use categories in the Next Horizons Comprehensive Plan (2019) and types specifically curated for the Twin Lakes. The baseline conditions and "Business as Usual" scenario were reviewed to create a foundation to build from.

The meeting facilitated small groups discussions related to the place types and the potential level of infrastructure investments associated with the Step It Up and Think Big scenarios. Study area needs included looping trails, general entertainment and services, overnight stay accommodations, enhanced public safety, and improved conservation measures.

The input from the workshop led to the place type designation and fiscal performance for each scenario. The results were discussed with the advisory committee in order to create the final consensus scenario.



Small group discussions allowed participants to express their opinions and hear from others.

SCENARIO DEVELOPMENT FISCAL ALIGNMENT

In order to determine the fiscal alignment of each scenario, a variety of data inputs and assumptions were necessary. The fiscal alignment applies a generalized cost per acre to each place type designation based on the anticipated revenues and costs of development in the defined area. The general formula for calculating the alignment per place type is as follows:

Total Revenue Values (per acre) - Total Costs (per acre) = Net Value Per Acre

In the formula above, total revenues total revenues are based on taxes, payments, permits, and similar sources, and costs are related to City expenditures such as roads, utilities, and similar public services. The net value per acre is multiplied by the total amount of acreage for the place type.

The evaluations of the overall acreage for the place types were then normalized based on the general assumptions for the scenarios. The assumptions focus on estimated population growth over the plan horizon and a general percent build-out of each place type.

A summary of the two possible scenarios is shown on the following pages.



Each group presented their scenarios, including what kind of uses should be allowed where, and what recreation facilities should be included.

"BUSINESS AS USUAL" SCENARIO

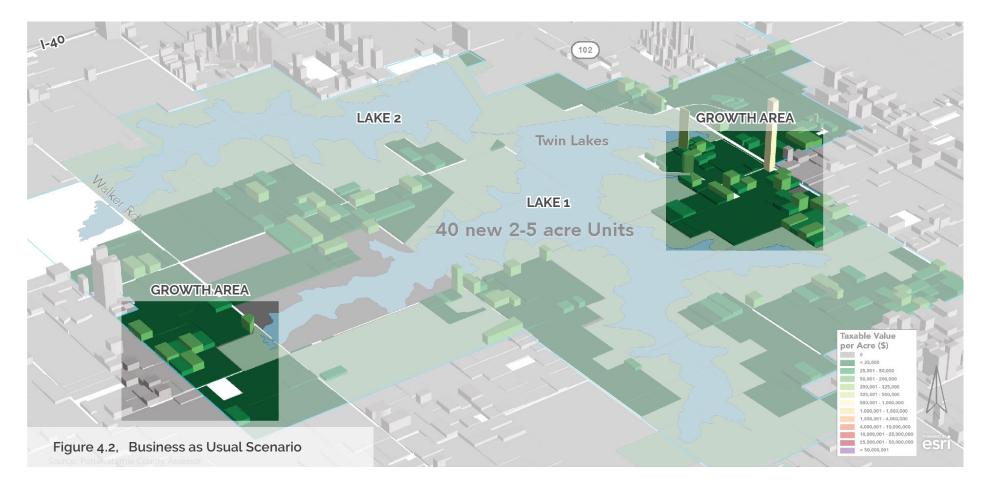
The "Business as Usual" scenario used the projection of current development trends and types to illustrate future growth in the study area. **Figure 4.1**, Current Development (below) shows the existing value per acre, and **Figure 4.2**, Business as Usual Scenario (page 60) illustrates the anticipated location and estimated value per acre for new residential development in the study area, primarily on the western and eastern sides of Lake 1, as shown within the boxes in the figure and labeled as "Growth Area".

The Business as Usual scenario assumed that similar development trends and investments would be made through the plan horizon. This included approximately 40 new dwelling units and no new commercial. The low projected growth rate limits new revenue for the City. The Business as Usual scenario assumes no changes to the future land use map in the study area.



New growth is assumed to occur near OK-102, where recent rezoning requests have been made, and on the west side of the study area to absorb population growth from the Oklahoma City metropolis. New residential development is consistent with larger lot (one acre or more) home sites serviced by well and septic systems.

The scenario also assumes the same level of investment in public infrastructure, including limited improvements to recreation areas, routine maintenance to roads, and no expansion in the delivery of public services. By limiting future expenditures, the City does not assume many new costs for the area. The estimated net fiscal performance for this scenario is \$145,396, likely due to the limited infrastructure improvements and investments.



STEP IT UP SCENARIO

The Step It Up Scenario evaluated the study area as if the development was increased slightly from the business as usual scenario.

- **Residential Assumptions:** This scenario assumes a population growth of 800 new residences in the study area, which is around 14 percent of the future population growth assumed for the City of Shawnee. To accommodate this, there is an assumed increase in large lot residential primarily east and north of the Twin Lakes where population is expected to expand to first from Shawnee proper.
- **Commercial Assumptions:** Expanded commercial growth is generally limited in scale, and is assumed to be consolidated at key intersections along OK-102 and Lake Road. The addition of "Lakeside Markets" at parks will provide supplemental small-scale commercial services at these areas.
- **Recreation Assumptions:** Investments to existing recreation facilities are moderate. Improvements are assumed to include the modernization of recreational amenities at existing parks and developing limited areas for RV and short-term overnight stay accommodations, such as primitive campgrounds.
- **Public Infrastructure Assumptions:** There will be limited improvements to public infrastructure. There may be minor roadway improvements to support new recreation uses and residential growth. Water and sewer services would not be extended to the area.

FISCAL IMPLICATIONS

The Step It Up Scenario is estimated to have a negative net revenue for the City of approximately \$350,000 dollars annually. This largely stems from the lack of commercial and recreation growth which are the largest contributors to revenue generation for the study area.

Approx. **Place Type Category** Percentage Acres **Residential Estate** 3.658 47% Large Lot Residential 13% 996 Lakeside Market 32 <1% Lake Oriented Commercial 1% 103 Parks/Greenways 764 10% The Twin Lakes* 28% 2.166

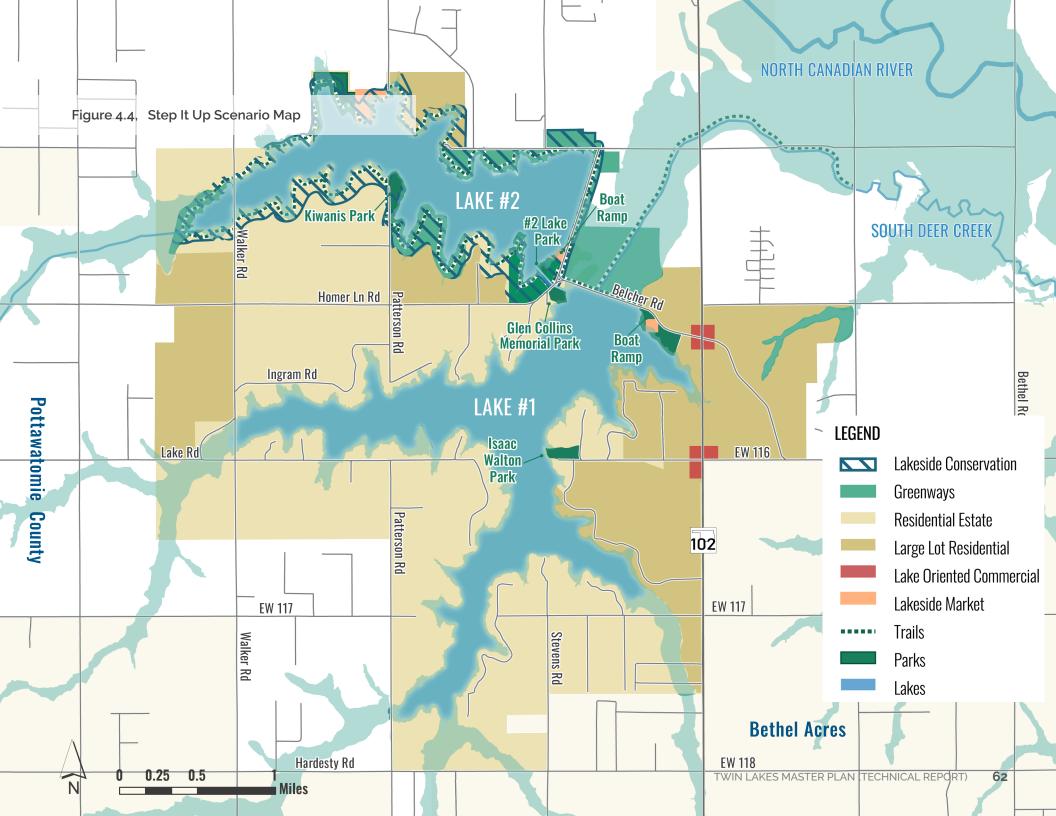
*The Twin Lakes area consists of the lakes. While a conservation overlay may be applied to the overall area, it is not included as its own acreage. It is included within other place type calculations.

7,719

100%

Figure 4.3, Step It Up Scenario Summary

Totals



THINK BIG!! SCENARIO

The Think Big Scenario evaluated the study area if there were major increases to densities and intensities from the business as usual scenario.

- **Residential Assumptions:** This scenario assumes a population growth of 2,000 new residences in the study area, which is around 34 percent of the future population growth assumed for the City of Shawnee. To accommodate this, there is an assumed increase in residential units of varying densities east and north of the Twin Lakes including smaller lot single-family, townhomes, and apartments. Additional large lot residential along the western edge of the study area is anticipated due to growth pressures extending from the OKC Metroplex.
- **Commercial Assumptions:** There is greater commercial and mixeduse growth east of the Twin Lakes. These areas accommodate retail, entertainment, overnight stay accommodations, and offices. The larger scale commercial areas support residences and visitors.
- Recreation Assumptions: There are major investments to recreational facilities, including the development of RV Parks, the addition of Destination Recreation, and general modernization of existing amenities. The enhanced amenities will draw more visitors to the Twin Lakes.
- **Public Infrastructure Assumptions:** There may be major roadway improvements to support new recreation uses and residential growth. Water and sewer services are extended to the area.

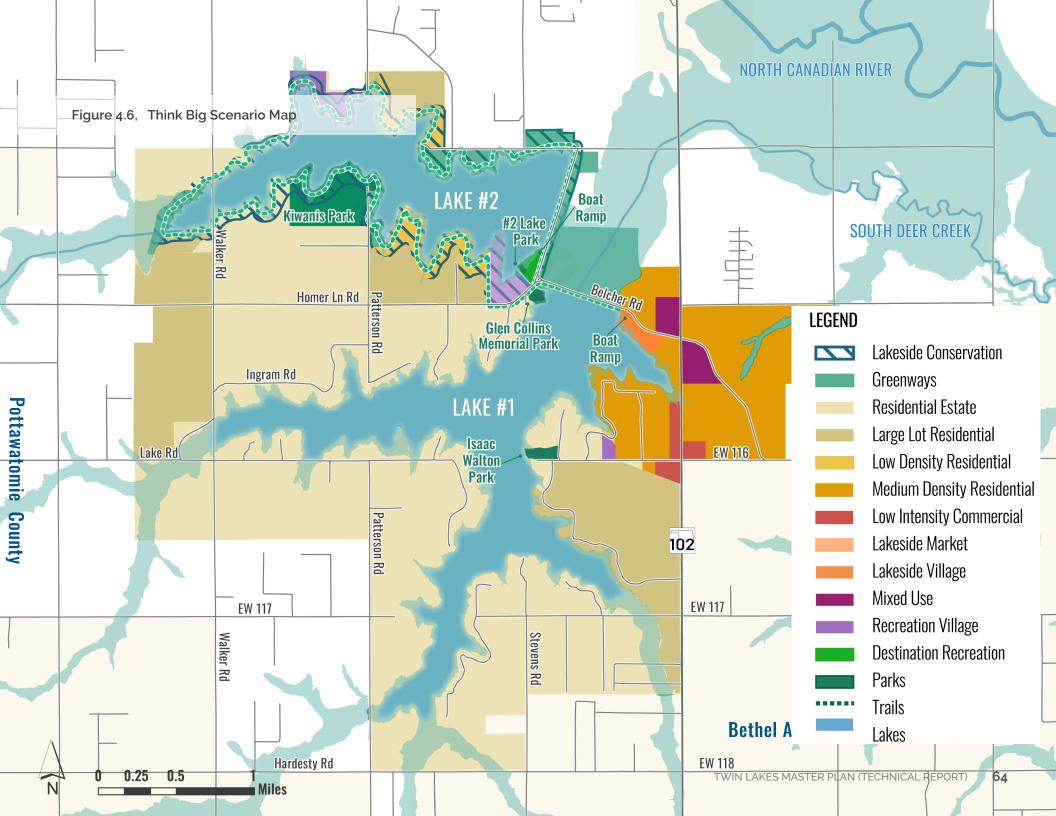
FISCAL IMPLICATIONS

The Step It Up Scenario is estimated to have a negative net revenue for the City of approximately \$641,000 dollars annually. This largely is due to the cost to expand water and sewer services to the study area.

Place Type Category	Approx. Acreage	Percentage
Residential Estate	2,655	34%
Large Lot Residential	412	5%
Low Density Residential	542	7%
Medium Density Residential	698	9%
Low Intensity Commercial	115	1%
Lakeside Market	11	0%
Lakeside Village	84	1%
Mixed Use	49	1%
Parks/Open Space	714	9%
Recreation Village	245	3%
Destination Recreation	28	0%
Twin Lakes	2,166	28%
Totals	7,719	100%

*The Twin Lakes area consists of the lakes. While a conservation overlay may be applied to the overall area, it is not included as its own acreage. It is included within other place type calculations.

Figure 4.5, Think Big Scenario Summary



CONSENSUS SCENARIO

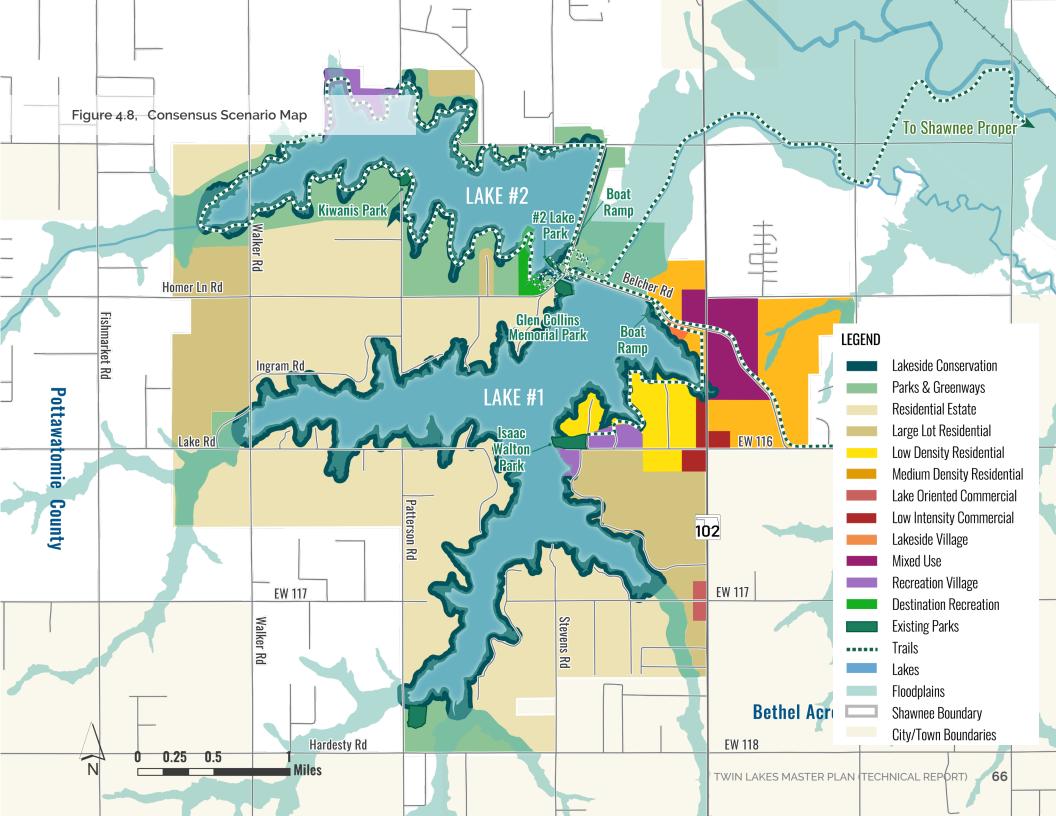
The Consensus Scenario blended the two scenarios in order to achieve a more balanced growth pattern and fiscal outcomes.

- **Residential Assumptions:** The scenario assumes a population growth of 2,000 new residences in the study area, which is around 34 percent of the future population growth assumed for the City of Shawnee. To accommodate this, there is an assumed increase in residential units of varying densities east of the Twin Lakes, including smaller lot single-family, townhomes, and apartments. Not all of the land area designated for residential place types are assumed to be built-out through the 20-year plan horizon.
- Commercial Assumptions: There is greater commercial and mixeduse growth east of the Twin Lakes, concentrated near the OK-102 and Lake Road intersection. These areas accommodate retail, entertainment, overnight stay accommodations, and offices. The larger scale commercial areas support residences and visitors. While larger areas have commercial-based place types, only a small percentage of the parcels are projected to be built-out through the 20-year plan horizon.
- **Recreation Assumptions:** There are major investments to recreational facilities, including the development of RV Parks, Destination Recreation, a lodge, and the modernization and redevelopment of existing amenities. The enhanced amenities will draw more visitors to the Twin Lakes and provide more opportunities for camping, recreating, and relaxing at the Twin Lakes.
- **Public Infrastructure Assumptions:** There may be major roadway improvements to support new recreation uses and residential growth. Water and sewer services are extended to portions of the area north of Lake Road. Municipal services may be provided at higher rates to development outside of the City limits.
- **Conservation Measures:** Enhanced conservation areas around the lakes will ensure the long-term sustainability of the lakes water quality.

Figure 4.7, Consensus Scenario Summary

Zoning District	Approx. Acreage	Percentage
Residential Estate	2,584	33%
Large Lot Residential	741	10%
Lake Oriented Commercial	49	1%
Low Density Residential	236	3%
Medium Density Residential	418	5%
Low Intensity Commercial	65	1%
Lakeside Village	5	0%
Mixed Use	138	2%
Parks and Greenways	991	13%
Destination Recreation	4	0%
Recreation Village	99	1%
Twin Lakes & Lakeside Conservation	2,389	31%
Totals	7,719	100%

*The Twin Lakes & Conservation area consists of the lakes, floodplains, and additional buffers. The conservation area may be increased in areas that are environmentally sensitive or publicly owned.



CONSENSUS SCENARIO FISCAL PERFORMANCE

The Consensus Scenario is estimated to have a negative net revenue for the City of approximately \$23,000 dollars annually, based on 2023 dollars, however it should be noted that the numbers can affected by many things and will vary over time. This largely is due to the cost to expand water and sewer to the study area. While the consensus scenario does not show a positive return, there are factors that can contribute to a more balanced future.

- Land Use Mix: As highlighted in the assumptions, there are a variety of residential and commercial uses permitted with the consensus scenario. The assumptions include 2,000 new residences and only a portion of the parcels being built out by the planning horizon. If growth rates are higher with greater development in retail and commercial services, there would be higher revenues due to more residents sharing the cost of the public infrastructure and greater tax revenues.
- **Recreation Fees:** There is a larger emphasis placed on revenue opportunities with recreational areas, including payment for entry, rentals, overnight stay accommodations, Enhancements to the permitting system and increasing the types of permits, will help increase general revenues which can then be filtered back into the recreation components in the Twin Lakes.
- **Public Infrastructure Fees:** The expansion of municipal services may be not limited to city residents. While the rural water district provides potable water, there is not access to sanitary sewer. If residents outside of the City limits request access to the sanitary sewer system, Shawnee could charge higher rates for non-city residents. This type of fee system can supplement the City's investment into the utility system.
- Lease Program: The City of Shawnee owns a significant amount of land around the lakes and within the study area. If the lease program continues, the City should evaluate a tiered fee system in addition to increasing the existing fees to better support the provision of public services to the area.

THE FUTURE DEVELOPMENT PLAN

The Future Development Plan is based on the "Consensus Scenario". The development plan establishes the formal policy for land use and development in the Twin Lakes study area. The future development map depicts growth though a place-based approach, which uses land uses as well as the intended character and scale of development, to guide how future growth should occur within an area. The Twin Lakes Master Plan applies 12 distinct place types, ten of which originate from the Shawnee Next Horizons Comprehensive Plan (2019) but have been updated to better support the desired development pattern within the Twin Lakes study area. Place types are described in more detail on pages (71-82).

FUTURE DEVELOPMENT PLAN INTERPRETATION

In considering development proposals and zoning decisions for Twin Lakes study area properties, policy makers, plan implementers, developers, and the public should make the following assumptions:

GENERALIZED MAP¹

The Future Development Plan map should be interpreted generally and is not intended to provide the specificity or the rigidity of a zoning map or engineering document.

The boundaries between land uses on the map are "fuzzy" lines and are meant to show approximate areas for transition, rather than rigid boundaries. The exception to this are those areas that preserve floodplains and wetlands.

PROPERTY OWNERS DECIDE¹

The Future Development Plan map depicts new land uses for privately owned properties. The transition of these properties from their current use to the depicted use is expected to occur slowly over time, in response to market demands as property owners voluntarily sell, develop, or change the use of their land, or in the case of municipal properties, at the time the City chooses to promote new investment opportunities.

1: Derived from Shawnee Next Horizons Comprehensive Plan (2019)

STREET CONNECTIVITY¹

Critical arterial and collector street connections are specified on the Future Development Plan map, though the exact routes will depend on detailed engineering studies. Local streets will be determined as development occurs.

PRECEDENCE

The distribution of place types on the Future Development Plan map differs than those in the Shawnee Next Horizons Future Land Use Plan. New place types have also been added to the Future Development Plan while pre-existing land use classifications have been modified on a caseby-case basis.

Where such variations exist, the provisions of this Master Plan will take precedence.

GROWTH PATTERNS

While the Future Development Plan depicts development patterns and place types significantly higher than what currently exists today, it is important to acknowledge that the growth is focused within a small part of the study area. Over 83 percent of the study area is classified as rural or conservation place types. This means that a majority of the study area will remain like it is today, with a more pastoral and placid atmosphere.

PLACE TYPES

The Twin Lakes future development plan has been prepared by using a 'place based' approach to land use and development patterns. This approach looks beyond the basic use of land to also consider building and site design characteristics - including development intensity and form, appearance, and physical arrangement - to present the preferred image of the area over time. The place types are grouped into three overarching categories based on the intended uses, area character, and development scale. The three categories are rural, lake district, and conservation.

RURAL PLACE TYPES

Rural place types are sparsely developed areas that include significant areas of open space. These areas may include low density residential, farming, agricultural uses, and floodplains. The areas are serviced by well and septic and have rural roadway design.

LAKE DISTRICT PLACE TYPES

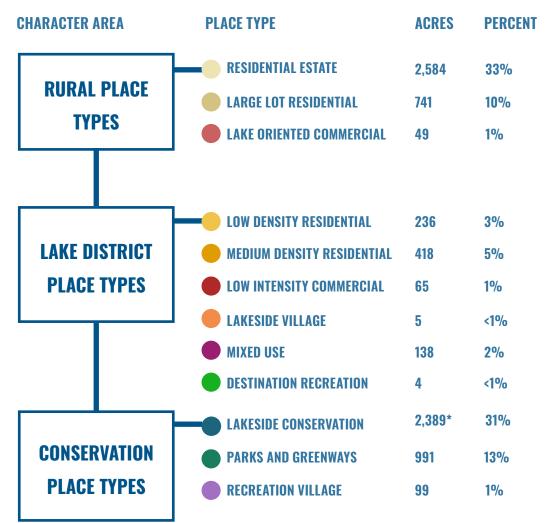
Lake district place types are where growth and development is anticipated to provide a wider range of uses, intensities, and densities. These areas are intended to create an environment to support tourism, retail, services, and residential uses. These areas are serviced by water and sewer and have urban roadway design that enhances walkability and connectivity.

CONSERVATION PLACE TYPES

Conservation place types support recreation and preservation along and near the twin lakes. These place types promote regional and local use of the parks while ensuring the long-term water quality of the Twin Lakes.

STUDY AREA PLACE TYPE BREAKDOWN

The following shows the breakdown of character areas, associated place types, and the approximate assigned acreage and percent of each place type within the Twin Lakes study area.



PLACE TYPE DESCRIPTIONS

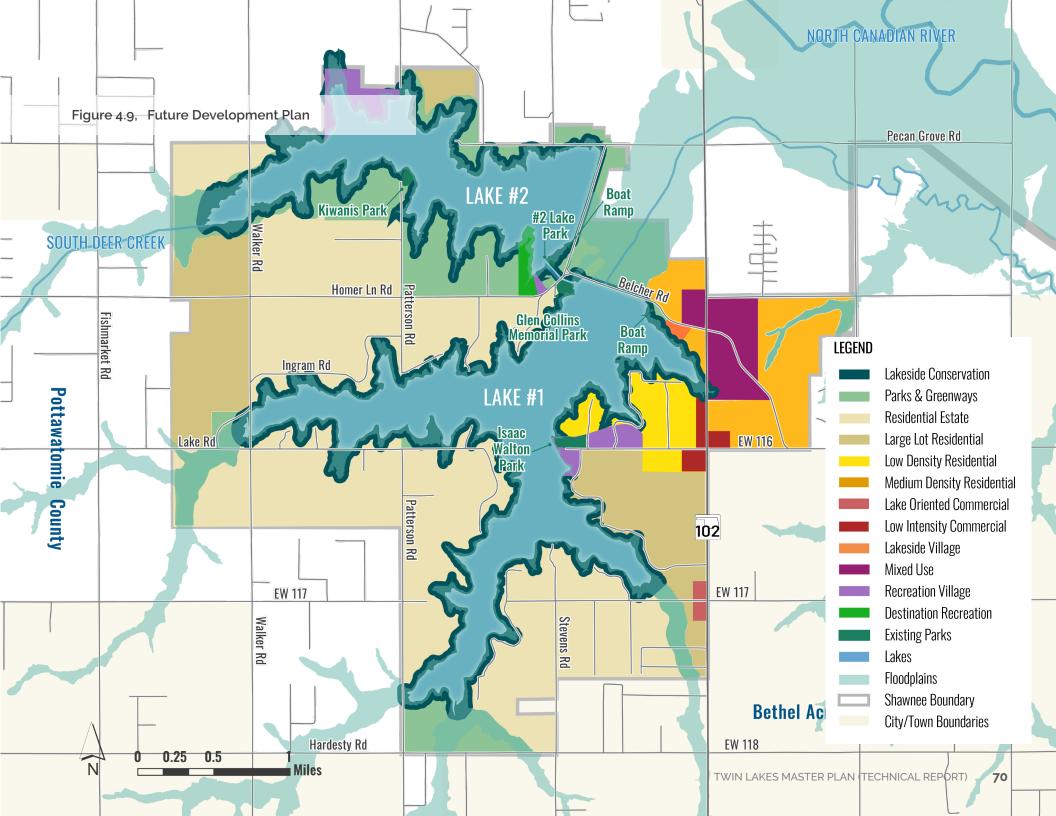
The Twin Lakes Master Plan applies 12 distinct place types, ten of which originate from the Shawnee Next Horizons Comprehensive Plan (2019) but have been updated to better support the desired development pattern within the Twin Lakes study area.

Each place type includes the following elements:

- Description: The purpose and overarching character.
- **Potential Zoning:** Each place type may be implemented through a variety of existing zoning districts. In some cases, new zoning districts may be required.
- **Intensity:** The scale of growth, either expressed as dwelling units per acre.
- **Uses:** Lists general uses allowed in each place type.
- Form: Highlights development parameters to create the intended character, including general location, development considerations, and mobility connectivity.
- **Compatibility:** Defines how developments should align with surrounding areas.
- Parking: Describes how parking areas should be designed.

The place types build on the existing future land use categories. The abbreviation N/A is used where there are no differences from the comprehensive plan development parameters.

*Approximate area of lakes and conservation area, however the conservation area may extend into other place types.



RESIDENTIAL ESTATE

DESCRIPTION

Residential Estate areas are intended for large lot (5+ acre) rural living areas that emphasize single family, and may include themed subdivisions or clustered to preserve open space. Low-intensity agricultural-related commercial uses may be allowed along major roadways.

POTENTIAL ZONING

Agricultural District, Lake Zoning District

INTENSITY

1 unit per 5-acres

USES

Large lot residential homes, ranchettes, and agriculture related services are appropriate in these areas. Civic uses are generally allowed, with special permission for higher intensity uses.

FORM

Larger residential development lots (5+ acres) will be on well and septic serviced by rural roadways. Residential Estates will have deep setbacks and wide lots to promote a sense of more rural living. Open spaces and environmentally sensitive areas, such as drainage ways, native prairies, or other floodplains, should be preserved.

COMPATIBILITY

Compatible with most detached single-family housing. Traffic and higher intensity uses should be directed away from these areas. Building elements and scale should be consistent with the surrounding areas.

PARKING

A majority of parking should be accommodated off-street in private garages and driveways. For commercial uses, off-street parking areas should be accommodated in surface parking lots. Parking facilities should be designed to manage stormwater and be screened from adjacent, noncomplimentary land-uses.



Example of Residential Estate



Example of Residential Estate

LARGE LOT RESIDENTIAL

DESCRIPTION

Large Lot Residential neighborhoods emphasize single-family detached homes on lots greater than one acre.

POTENTIAL ZONING

Agricultural District, Lake District

INTENSITY

>1 unit per acre

USES

The Large Lot Residential uses are single-family detached housing with 1 unit per acre. Civic uses, such as parks, churches, schools, and government uses may be allowed. Developments larger than three acres per unit will likely not have city services in the future.

FORM

N/A (see Large Lot Residential in Shawnee Next Horizons Comprehensive Plan (2019) page 91).

COMPATIBILITY

Compatible with most detached single-family housing. Traffic and higher intensity uses should be directed away from these areas. Building elements and scale should be consistent with the surrounding areas.

PARKING

N/A (see Large Lot Residential in Shawnee Next Horizons Comprehensive Plan (2019) page 91).



Example of Large Lot Residential Type



Example of Large Lot Residential Type

LAKE ORIENTED COMMERCIAL

DESCRIPTION

Areas with easily accessed by the Shawnee lakes. Commercial services should serve residents in the area and visitors using the lakes for recreational purposes. These areas are serviced by well and septic systems.

POTENTIAL ZONING

Local Commercial, Lake District

INTENSITY

N/A

USES

A mix of complementary small scale commercial uses including service oriented businesses.

FORM

N/A (see Lake Oriented Commercial in Shawnee Next Horizons Comprehensive Plan (2019) page 99).

COMPATIBILITY

N/A (see Lake Oriented Commercial in Shawnee Next Horizons Comprehensive Plan (2019) page 99).

PARKING

N/A (see Lake Oriented Commercial in Shawnee Next Horizons Comprehensive Plan (2019) page 99).



Example of Lake Oriented Commercial



Example of Lake Oriented Commercial

LOW DENSITY RESIDENTIAL

DESCRIPTION

Neighborhoods emphasizing single-family detached homes, although other single-family attached and small lot single-family homes may be permitted based on location.

POTENTIAL ZONING

Single-Family Residential districts

INTENSITY

1-4 units/acre

USES

Primarily single-family detached development, although innovative single-family forms may be permitted with special review. Civic uses are generally allowed, with special permission for higher intensity uses. Development will be serviced by city utilities (i.e., water and sewer).

FORM

N/A (see Low Density Residential in Shawnee Next Horizons Comprehensive Plan (2019) page 92).

High emphasis shall be placed on providing pedestrian trails and connections to the Twin Lakes parks.

COMPATIBILITY

Compatible with most detached single-family housing. Limited attached single-family and townhomes may be appropriate near commercial uses. Traffic and higher intensity uses should be directed away from these areas. Building elements and scale should be consistent with the surrounding areas.

PARKING

N/A (see Low Density Residential in Shawnee Next Horizons Comprehensive Plan (2019) page 92).



Example of Low Density Residential



Example of Low Density Residential

MEDIUM DENSITY RESIDENTIAL

DESCRIPTION

Neighborhoods that incorporate a mix of housing types, including single-family detached and attached, townhouse, and small lot single-family. Civic uses would also generally be allowed, with special permissions for higher intensity uses.

POTENTIAL ZONING

Combined Residential District

INTENSITY

4-12 units per acre

USES

There should be a mix of housing styles including single-family detached, single-family attached, and townhouses. Civic uses are allowed. Limited multi-family development may be allowed with special review

FORM

N/A (see Medium Density Residential in Shawnee Next Horizons Comprehensive Plan (2019) page 93).

High emphasis shall be placed on providing pedestrian trails and connections to the Twin Lakes parks.

COMPATIBILITY

Compatible with a mixture of residential uses. Appropriate buffers shall exist between higher density and intensities areas with lower density single-family detached areas.

PARKING

N/A (see Medium Density Residential in Shawnee Next Horizons Comprehensive Plan (2019) page 93).

Off-street parking lots shall incorporate low-impact development techniques and manage stormwater.



Example of Medium Density Residential



Example of Medium Density Residential

LOW INTENSITY COMMERCIAL

DESCRIPTION

These are areas with easily accessed neighborhood commercial services. Development in this area may support lake users, residents, or customers from the larger region.

POTENTIAL ZONING

Neighborhood Commercial District; Suburban Office Commercial District

INTENSITY

7-12 units per acre

USES

Smaller scale commercial uses with limited higher density residential uses and civic uses. Amenities such as parks, plazas, and quality streetscapes should act as neighborhood centers.

FORM

N/A (see Low Intensity Commercial in Shawnee Next Horizons Comprehensive Plan (2019) page 96).

High emphasis shall be placed on providing pedestrian trails and connections to the Twin Lakes parks.

COMPATIBILITY

N/A (see Low Intensity Commercial in Shawnee Next Horizons Comprehensive Plan (2019) page 96).

PARKING

N/A (see Low Intensity Commercial in Shawnee Next Horizons Comprehensive Plan (2019) page 96).

Off-street parking lots shall incorporate low-impact development techniques. Generally, off-street parking areas should be located to the side and rear of commercial buildings.



Example of Low Intensity Commercial



Example of Low Intensity Commercial

LAKESIDE VILLAGE

DESCRIPTION

These areas include a mix of commercial and residential uses along the lake shore of Lake 1. This area should include a diversity of land uses along interconnected streets to encourage walkability and activate the lakes for commercial and retail services.

POTENTIAL ZONING

Neighborhood Commercial District; Central Business District

INTENSITY

12+ units per acre

USES

Integrated mixed-use development including commercial, multi-family, single-family attached, tourism-related uses, and offices to support a dynamic lakeside community.

FORM

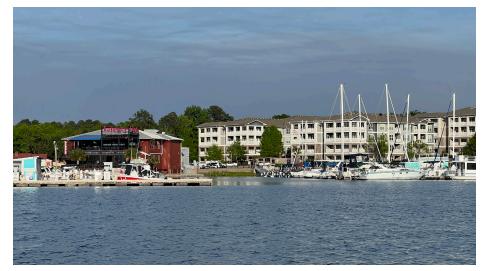
High emphasis shall be placed on providing pedestrian trails and connections to the Twin Lakes parks and lake shore. Buildings are less than four stories and set back a minimum of 100' from the normal high water line. There should be a high level of connectivity throughout the lakeside village, and the site and building design and operations should support a pedestrian friendly environment.

COMPATIBILITY

Compatible with a mixture of uses that can be close together and horizontally or vertically integrated. Appropriate buffers shall exist between the development and the lake shore, and between less intensive land uses.

PARKING

Parking is accommodated through surface parking lots or parking structures. Parking should be screened from street fronts behind active store fronts. Off-street parking lots shall incorporate low-impact development techniques and manage stormwater.



Example of Lakeside Village



Example of Lakeside Village

MIXED USE

DESCRIPTION

These areas improve economic performance and opportunities for social interaction, by locating diverse and complementary uses in close proximity. Higher-density mix of housing, major commercial, office, and tourism-related uses create vibrant areas.

POTENTIAL ZONING

Neighborhood Commercial District; Central Business District

INTENSITY

12+ units per acre

USES

Integrated mixed-use development including commercial, multi-family, single-family attached, tourism-related uses, offices, and other regional attractors. Residential uses range from townhomes to apartments.

FORM

N/A (see Mixed Use in Shawnee Next Horizons Comprehensive Plan (2019) page 95, except industrial uses are not permitted).

High emphasis shall be placed on providing pedestrian trails and connections to the Twin Lakes parks.

COMPATIBILITY

N/A (see Mixed Use in Shawnee Next Horizons Comprehensive Plan (2019) page 95).

Buildings shall be less than five stories and incorporate buffers between less compatible uses.

PARKING

N/A (see Mixed Use in Shawnee Next Horizons Comprehensive Plan (2019) page 95).

Off-street parking lots shall incorporate low-impact development techniques.



Example of Mixed Use



Example of Mixed Use

DESTINATION RECREATION

DESCRIPTION

Destination Recreation are recreation facilities that acts as a statewide draw for tourism. Destination Recreation will include elements not typically found in other parks.

POTENTIAL ZONING

New District Likely Needed

INTENSITY

N/A

USES

Should include ADA accessible facilities, such as kayak launches, play equipment, and walking paths. Small-scale commercial uses could be included within the destination recreation area. Overnight accommodations in the form of a lodge or hotel may be appropriate.

FORM

High emphasis shall be placed on providing pedestrian trails and connections to the Twin Lakes parks and lake shore. Tourism-related uses and park infrastructure is ADA accessible. Structures shall generally be less than three stories or 45 feet.

COMPATIBILITY

Compatible with a mixture of uses that support tourism, including a small theme park or destination resort that is a regional tourism attraction. Appropriate buffers shall exist between the development and the lake shore.

PARKING

Parking is accommodated through surface parking lots or parking structures. Parking should be screened from street fronts. Off-street parking lots shall incorporate low-impact development techniques and manage stormwater.



Example of Destination Recreation



Morgan's Wonderland in San Antonio, Texas is an example of a type of Destination Recreation. Photo Source: Leisurecamp.net

LAKESIDE CONSERVATION

DESCRIPTION

Lakeside Conservation areas are an overlay area along the lakeside with standards to protect the shoreline. The lakeside conservation will protect water quality, enhance wildlife habitats, and reduce shoreline erosion.

POTENTIAL ZONING

Improvement to Existing Overlay

INTENSITY

N/A

USES

The area should maintain and enhance native vegetation. The removal of native vegetation for excavation, building, seawalls, or similar uses is prohibited. Permits are required to build docks through the lakeside conservation areas.

FORM

High emphasis shall be placed on protecting the shoreline. An additional setback from the ordinary high water line should be placed for any structure. Development within the setback is limited.

COMPATIBILITY

Appropriate spacing requirements must be met between any buildings and the lakeside conservation area. Any future clearing of vegetation is prohibited, and existing seawalls shall not be expanded.

PARKING

N/A



Example of Lakeside Conservation



Example of Lakeside Conservation

PARKS AND GREENWAYS

DESCRIPTION

Parks are areas that provide recreation opportunities along Twin Lakes.

POTENTIAL ZONING

Various

INTENSITY

N/A

USES

Parks uses are primarily natural. If there is any development, it is recreational and low impact to the environment to protect the open natural space. Some development examples might be park shelters, trail corridors, or nature preserves.

FORM

N/A (see Parks & Greenways in Shawnee Next Horizons Comprehensive Plan (2019) page 102).

COMPATIBILITY

N/A (see Parks & Greenways in Shawnee Next Horizons Comprehensive Plan (2019) page 102).

Generally, more intensive recreation uses, such as ball fields, are discouraged.

PARKING

N/A (see Parks & Greenways in Shawnee Next Horizons Comprehensive Plan (2019) page 102).

Off-street parking lots shall incorporate low-impact development techniques.



Example of Campsite Amenities and Pad Space



Example of a Lakefront Park Amenity

RECREATION VILLAGE

DESCRIPTION

A Recreation Village is an overnight stay park, with a wide variety of recreation facilities and services needed to support a range of users. All recreation villages must be ADA accessible.

POTENTIAL ZONING

N/A

INTENSITY

N/A

USES

Overnight accommodations such as camping hook-ups, cabins, yurts, and lodges facilitate visitor stays at the Twin Lakes. Supporting recreational uses such as trails, kayaking, beaches, play equipment, and picnic areas support park users. Small-scale commercial uses within the park, such as a convenience store or restaurant is allowed within the park area.

FORM

High emphasis shall be placed on protecting the shoreline. An additional setback from the ordinary high water line should be placed for any structure. Development within the setback is limited to passive recreation uses. An interconnected trail network should be included within the park and connecting to surrounding areas.

COMPATIBILITY

Appropriate spacing requirements must be met between any buildings or camping areas and the lakeside conservation area. Appropriate buffering between surrounding residential areas and the campgrounds should be included.

PARKING

Off-street parking lots shall incorporate low-impact development techniques and manage stormwater. RV parking areas must incorporate vegetation and spacing to promote privacy within each parking area.



Example of a Recreation Village Cabin



Example of a Recreation Village RV Campsite





TWIN LAKES MASTER PLAN (TECHNICAL REPORT)

THE WORK PROGRAM

This final chapter represents the collective recommendations and implementation work program based on the needs assessments. The work program serves as a checklist for Shawnee moving forward as the City implements the plan over the next 20 years.

The work program focuses on policies, programs, and investments related to specific topics for Twin Lakes growth and development. These include:

- **Growth Patterns** focus on implementing the Future Development Plan and encouraging appropriate development character for the study area (pages 87 - 91).
- Public Infrastructure:
 - **Roadways and Multi-Modal Access** includes roadway and pedestrian improvements throughout the study area to enhance access for all types of movement (pages 93 98).
 - **Utilities** provides recommendations on the timing type of expansion of water and wastewater services (pages 99 102).
 - **Recreation** outlines recommendations to improve existing and future recreation areas (pages 103 116).
- **Public Safety Services** produces guidance to improve emergency responses in the study area (pages 117 122).
- **Natural Features** supports water quality preservation and the protection of the shoreline (pages 123 128).

Work program strategies are provided on subsequent pages with explanatory text. Each topical section is concluded with the work program table. Strategies are organized by topic, not priority level. Please reference the work program tables (Figures 5.1 - 5.6) for strategy type, timeframe, general cost range, implementing agency, potential partnerships, guiding principles, and corresponding strategies.

STRATEGY TYPES

The work program includes over 64 recommended strategies (actions) which can be undertaken to address the needs outlined by the Master Plan to create a Twin Lakes that is more broadly enjoyed, environmentally secure, and better served than today. Each recommended strategy is categorized by type.

PROGRAM AND POLICY STRATEGIES:

- **Study:** Follow-up analysis or investigation required to determine the best solution.
- **Regulation:** New or change to existing regulation which requires Council approval of changes to City ordinances.
- **Policy:** New or modified formal process or procedure that guides and/or enforces City decisions.
- **Partnership:** Formal or informal agreement with an external entity to pursue shared goals.
- **Revenue:** New or modified fees to increase revenues to support the public projects recommended by the Master Plan.
- **Program**: A city initiative related to education, recreation, or sports.

INVESTMENT STRATEGIES:

- **Capital:** New or modified capital expenditure for project or operational cost.
- Operational: New or modified program or staffing arrangement.

TIMEFRAME

Each strategy is assigned a timeframe based on when the strategy is anticipated to be initiated. Short-term strategies are more easily implementable or are a high priority for the City, while long-term strategies may be more difficult or expensive to implement.

- **Short-Term:** Strategies to be initiated in the first five years of plan implementation. Could represent high-priority strategies that are low-cost and easy to implement.
- **Mid-Term:** Strategies to be initiated in years six to 10 of plan implementation. Could represent strategies that are not high priority but should be implemented before longer-term, more visionary strategies.
- **Long-Term:** Strategies to be initiated after year 10 of plan implementation. Could represent strategies that are more complex or expensive to implement.
- **Ongoing:** Strategies that occur to an extent today and should be continuously implemented over time, or strategies that should be immediately implemented.

COST RANGES

The strategies that are categorized as investments and studies will require funding commitments to implement. The cost ranges listed in the implementation program represent relative costs as described below.

- N/A = strategies that do not require significant funding
- \$ = \$50,000 or less
- \$\$ = \$50,000 to \$100,000
- \$\$\$ = \$100,000 \$500,000
- \$\$\$\$ = \$500,000 \$2,000,000
- \$\$\$\$ = \$2,000,000 or more

COORDINATING AGENCY

The primary City department(s) which may oversee implementation efforts for individual actions. "Oversight" suggests that the coordinating City agency may lead implementation efforts or may facilitate or support implementation by partnering agencies. Where the City Manager's Office is placed in the Coordinating Agency column, it may be interpreted that the action has not yet been delegated or that one of the divisions within the City Manager's Office will be responsible for coordinating the action.

POTENTIAL PARTNERS

Although this plan was initiated by the Community Development Department, there are other departments and external partners that should be involved in implementing the plan over time. The types of implementation partners could include, but are not limited to:

- City of Shawnee Departments
- Elected and appointed officials
- Community groups, volunteer groups, sports leagues, and special interest groups
- Nearby communities and counties
- Transportation agencies
- Utility companies
- Private and for-profit entities

GUIDING PRINCIPLES

Each recommendation supports the guiding principles of the plan.

- **R:** Provide beloved and beneficial recreational amenities
- P: Facilitate the efficient delivery of public services
- N: Embrace the stewardship of our natural resources
- G: Promote fiscally responsible (but beneficial) growth patterns

CORRESPONDING STRATEGIES

While the implementation plan groups strategies by topics, some strategies may be related to or supported by others.

GROWTH PATTERNS

Current development within the Twin Lakes area is sparse, with acreage home sites and limited commercial services. The existing growth patterns do not support the public infrastructure needed to maintain high levels of service and quality recreation facilities in the area. Increasing densities and intensities will absorb anticipated population growth in Shawnee, and provide the City with resources to improve the provision of public services in the Twin Lakes area.

To maintain a primarily rural community that provides enhanced recreational services, directed growth is needed to fiscally support enhanced recreational offerings and provide residents with more opportunities to shop and access services closer to home. Development standards and focused growth will support the character and scale of development outlined in the "Lake District" place types.

Growth in the study area should support residents and visitors by providing a mix of commercial and retail services, entertainment options, and overnight accommodations. While development intensities and densities may be greater in the "Lake District" place types, the remainder of the study area should generally reflect the small-scale and rural nature that exists today.

POLICIES & PROGRAMS

Action G.1: Future Development Plan. Use the Future Development Plan (FDP) to guide growth and development in the Twin Lakes.

The FDP should be used as a tool for decision makers when deciding whether to approve or deny rezone requests, regulatory code updates, and policies for the study area. See pages 67 and 68 for Future Development Plan interpretation for rezone requests and guidance. Action G.2: Lot Lease Program. Modify the lake lot lease program to help offset the costs of providing necessary public services.

- Complete the platting of existing lake lease properties to correctly determine lot sizes and boundaries.
- When the current lots are platted, future lease properties should be platted concurrently to establish boundaries prior to the lease agreement for any lot.
- Update lease fees, with an initial increase and an annual review thereafter to ensure the leases reflect a fair market value. An example of the lease fee increases is provided below:
 - Existing/Legacy leases \$1,500 annually per acre
 - All new lake-front leases \$2,250 annually per acre
 - All new non-lakefront leases \$750 annually per acre

The Lake Lot Lease Program allows the City to maintain control over the lake shore while providing revenues dedicated for improvements to the Twin Lakes area. Existing leased lots are not surveyed or platted, which creates confusion and disputes for leaseholders. To accurately charge for leases, a formalized plat and a fee system that reflects lot size and lake frontage is necessary. Platting lots will also ensure setbacks for all primary, secondary, and ancillary uses are met.

The example lease prices exhibited herein are based on a review of recent land sale values in the study area during 2023. Higher fees may be appropriate based on the value of lake access to the City and its residents, regardless of land ownership. The actual values charged should be determined by the City following a more detailed revenue study.

When modifying the lease lot structure, additional adjustments to lease agreement language should also be considered to ensure that Cityowned property is being utilized by leaseholders in accordance with City regulations and the recommendations of this Master Plan. Modified lease agreement language may consider lease lengths, terms of usage, design standards, City intervention for cause, enforcement surcharges, etc. Action G.3: Improvement Districts. Evaluate adopting an improvement district for one or more of the Lake District place types, as identified in the Future Development Plan, to help fund public infrastructure projects.

The State of Oklahoma allows cities to establish improvement districts to help fund public improvements such as infrastructure, utilities, lighting, parks, landscaping, and parking, among others in a specified area or district (§11-39). Property owners within a district pay a special assessment to go towards these improvements. Property owners are responsible for creating the assessment district and the City administers the district on their behalf after it has been created. The improvement district would create a dedicated funding source for the Twin Lakes area, which would help expedite public improvements.

Action G.4: Study Area Design Standards. Adopt design standards for non-residential development in the Twin Lakes area.

- Require pedestrian facilities along roadways and connecting to buildings, ensure all public rights-of-way standards are met.
- Create aesthetic standards for development in the Lake District place types to ensure quality design, such as parking locations to the side and rear of buildings, shallow setbacks that engage pedestrian areas, high levels of open or gathering spaces, and transparency into buildings to ensure visibility and create a pedestrian-friendly environment.
- Establish maximum building heights and uses that are compatible with surrounding development and protect the character of the Twin Lakes area.
- Review signage criteria to regulate appearance, location, and general signage types allowed within the study area.

Design standards will help ensure consistent and quality development within the study area. Standards can ensure all future development is at a character and scale that supports community prosperity and enhances the public realm. Design standards may be in the form of an overlay district, supplemental zoning standards, or as a form-based code.



Non-residential development standards ensure development occurs in a manner that supports the overall desired character of a corridor. Standards may consider parking location, access requirements, setbacks, signage, building scale and massing, uses, and similar standards.



The plan recommends a wide range of infrastructure improvements, and an assessment district is a funding mechanism that can be used to support public projects Trails, the expansion of utilities, acquisition of land, park development, roadway improvements, and other types of projects can be supported through assessment district funds. Action G.5: Conservation Development: Prepare and apply conservation subdivision standards.

Conservation subdivisions group the residences in one area of development so open space is conserved in other areas of the development. This helps to protect the natural environment and maintain a rural character. In the example to the right, building sites are clustered together, with larger areas of open space preserved within the subdivision. Conservation subdivisions can limit the cost of expanding utilities by clustering development within one area, however, in areas where well and septic systems are required, some development regulations allow the placement of septic systems in the open areas to maintain smaller, clustered, lot sizes.

Action G.6: Destination Recreation: Incentivize private investment in "Destination Recreation" attractions and accommodations.

The development of "Destination Recreation" will take incentives, public infrastructure improvements, and significant private investments. There are a variety of measures the City can take to help encourage and support the development of destination recreation, which may include:

- Waiving development fees for the review process for destination recreation development plans
- Proactively rezone the property to reflect uses needed to support the development of Destination Recreation
- Reducing lease costs and adjusting lease terms for the land
- Extending water and sewer to the property boundary
- Support Economic Development partnerships and contribute funds when able
- Support the development of a public-private-partnership (P3)





Conservation subdivisions, which are also known as cluster developments, group the residences in one area of development so open space is conserved in other areas. This helps to protect the natural environment and maintain a rural character. The examples above show a site plan and Serenbe, GA outside of Atlanta.



Destination recreation will create a type of development that is a regional or statewide draw. There may be a variety of recreational amenities and activities that are not available on other lakes, such as a fully accessible park, on-water inflatables or slides, rides, or other types of amenities. The pictures are examples of these types of amenities for reference only.

Action G.7: Lake 2 Shoreline: Reserve a perpetual conservation buffer around Lake 2.

The Future Development Plan illustrates that Lake 2 is a primarily recreation and conservation-based lake, with park areas, lakeside conservation, and smaller short-term overnight accommodations with camping areas and a lodge. To maintain a serene atmosphere and ensure shoreline quality, the City should restrict residential development along Lake 2. Residential development may be allowed outside of conservation areas, but there should be no dock or boat access to Lake 2 outside of the designated boat launch areas.



Maintaining the natural shoreline of Lake 2 will help protect water quality, the serenity of the lake, and limit boat capacity. Not allowing residences along the lake with direct dock access will reduce the amount of boats in Lake 2 on a daily basis.

Figure 5.1, Growth Patterns Strategies Table

Strategy Number	Strategy	Strategy Type	Time- frame	Estimated Cost Range	Implementing Agency	Partnerships	Guiding Principle	Corresponding Strategy
Policy &	Programs							
G.1	Future Development Plan. Use the Final Development Plan to guide growth and development in the Twin Lakes area.	Policy	0	N/A	Community Development	City Departments (various)	G	
G.2	Lot Lease Program Modify the lake lot lease program to offset the costs of providing public services.	Various	S	\$\$\$	City Manager's Office	Engineering	G	
G.3	Improvement Districts. Evaluate adopting an improvement district for one or more of the Lake District place types, as identified in the Future Development Plan, to help fund public infrastructure projects.	Revenue	L	N/A	City Manager's Office	Community Development, Engineering	G	
G.4	Study Area Design Standards. Adopt design standards for development in the Twin Lakes area.	Study	S	\$\$\$	Community Development	Parks and Rec Tourism	G	
G.5	Conservation Development. Prepare and apply conservation subdivision standards.	Regulation	S	\$	Community Development		G	
G.6	Destination Recreation. Incentivize private investment in "Destination Recreation" attractions and accommodations	Capital	М	\$\$\$	City Manager's Office	Community Development	G, R	
G.7	Lake 2 Shoreline. Reserve a perpetual conservation buffer around Lake 2.	Policy	м	N/A	City Manager's Office	Community Development	G, R	

*Types of Strategies:

Study: Follow-up analysis or investigation required to determine the best solution. Regulation: New regulation or change to existing regulation requiring City Council action. Policy: New or modified formal process or procedure that guides City decisions. Partnership: Formal or informal agreement with an external entity to pursue shared goals. Revenue: New fee or revenue collection opportunity to support public projects. Program: A city initiative related to education, recreation, or sports. Capital: New or modified capital expenditure for a project. Operational: New or modified program or staffing arrangement.

**<u>Timeframe:</u>

S - Short-Term: 1-3 years M - Mid-Term: 3-5 years L - Long-Term: 5+ years O - Ongoing or Immediate

***Cost Considerations:

\$ - Less than \$50K \$\$ - \$50K - \$100K \$\$\$ - \$100K - \$500K \$\$\$\$ - \$500K - 2M \$\$\$\$\$ - \$500K - 2M \$\$\$\$\$ - More than 2M N/A - Operation of policy change - no significant additional cost

****Guiding Principle:

R: Provide beloved and beneficial recreational amenities P: Facilitate the efficient delivery of public services N: Embrace the stewardship of our natural resources G: Promote fiscally responsible growth patterns



Lake Park in Lewisville, Texas fronts Lewisville Lake and provides residents and visitors with a variety or amenities and facilities, including camping, golfing, swimming, disc gof, sports fields, and play fields. A majority of the land along Lewisville Lake within the municipal limits is undeveloped aside from a marina area and apartments which are set back from the shoreline. This helps to protect the water quality of the lake and offers residents and visitors different experiences than other areas of the lake.

MOBILITY & ACCESS

Vehicular and pedestrian access to the study area is limited with roadways that have a primarily rural character with open drainage ditches, limited shoulders, and no pedestrian facilities. Due to the study area's low density development patterns, local roads are limited to two lanes and have little need for signalized intersections. Roadways aside from the major collectors and arterials are typically gravel which can present an on-going maintenance challenge.

As growth continues to occur, it will be critical to enhance access to and mobility within the study area to accommodate higher development intensities. This will ensure traffic flow moves efficiently as development occurs, and should include intersection improvements, roadway enhancements, and multi-modal provisions. Improvements to the mobility network should also accommodate emergency service access, effectively improving service response times.

Multi-modal access in the area will enhance recreation and transportation around the lakes. Trails can incorporate a variety of accessory amenities to encourage exercise and exploration. Incorporating bicycle, walking, or transit routes within the study area will allow all residents and visitors to enjoy lakeside recreation areas and future commercial or mixed-use centers without dependence on automobiles.



Trails can provide safe alternative access to parks, commercial centers, and downtown. A paved or soft surface trail around Lake 2 would provide recreation opportunities as well as promote healthy living

POLICIES & PROGRAMS

Action M.1: Roadway Cross-Sections: Adopt new roadway crosssections for the Twin Lakes area to include multi-modal transportation elements, such as shoulders, sidewalks, or trails.

Roadways are constructed and improved based on approved engineering cross-sections and standards. Existing cross-sections should be evaluated and updated to enhance access for all modes of transportation to the Twin Lakes. Today vehicular access is the only means of transportation to the area. As growth and development occur, it will be important to consider other methods of access to the parks and retail centers.

Rural cross-sections may include wide shoulders, bike lanes, sidewalks, or shared-use paths to help move pedestrians as well as bicyclists. Cross-sections for the more developed areas (i.e. the "Lake District" place types) will need to reflect urban roadways, with curbs, gutters, sidewalks, and similar elements. Actual roadway design for the study area should be reflective of "context-sensitive" characteristics which consider not only the users of the road but the adjacent development patterns when determining cross-section elements. Using a "context-sensitive" approach to roadway design allows flexibility based on the physical setting, scenic and aesthetic needs, and incorporates safety into the overall layout of the roadway cross section.

Context-sensitive design and roadway enhancements can improve the public rights-of-way and major gateways into the study area. These areas should incorporate placemaking and aesthetic elements to the overall character of the study area and create a distinct "brand." Gateways are usually enhanced through landscaping, banners or a unified signage system, urban design, and other types of corridor enhancements to enhance the entry points into a destination area and to increase a unique sense of place.



Roadway cross-sections are used to construct and improve roads in a community. Shoulders on rural roadways or major rural arterials can be used as breakdown lanes in case of emergency, but also facilitate bicycle and pedestrian movement. Off-street trails can be incorporated into rural areas to improve multi-modal access and safety. Shawnee can use nationwide best practices to create cross-sections for the study area, including *Small Towns and Rural Multi-modal Networks (from the Federal Highway Administration or FHWA), American Association of State Highway and Transportation Officials (AASHTO)*, and other state and national standards.

Action M.2: Roadway Improvement District: Consider adopting a roadway improvement district in the study area.

Roadway improvement districts, as allowed by Oklahoma State Statue §11-36-227, are approved by the written consent of citizens within a designated area and are used to create a dedicated funding source for roadway capital projects and routine maintenance. A dedicated funding source for roadway improvements can ensure that street conditions improve, and that maintenance is not deferred or degraded. With most of the roads in the study area being gravel or unpaved, paving roads could help reduce annual maintenance costs and improve overall roadway conditions. Action M.3: Capital Improvements Plan: Create metrics to incorporate transportation needs into the Capital Improvements Plan.

A capital improvements plan (CIP) is a resource used by a city to guide large expenditures and capital projects over the next five to ten years. The CIP should include larger City expenditures, including roadways, utilities, park development, government facilities, and similar types of large-scale projects.

CIP project prioritization metrics should be completed and applied not just to recommended investments in the Twin Lakes study are, but the entirety of Shawnee. Metrics are typically divided into "community benefit" (qualitative metrics that are tied to community goals and objectives) and "operational" (quantitative metrics on costs, constructibility, funding sources, and more).

Action M.4: Transit Opportunities: Create transit options to provide accessibility to future study area attractions and events.

Shawnee's transit service is provided by the Central Oklahoma Transit System. There are no current routes that serve the Twin Lakes area. When the area begins to attract more visitors and residents, it will be important to evaluate how the transit system can expand to provide better access to the area during peak visitation periods or in relation to special events. This may include dedicated routes or evaluating how an on-demand service could better service the area.

Action M.5: Trails and Bikeways: Conduct a feasibility study to prioritize and phase study area trail and bikeway design and construction.

A trails and bikeways feasibility study will provide an in-depth evaluation of future trail and bikeway projects. Feasibility studies review rights-of-way constraints, environmental constraints, and considerations, and provide detailed cost estimates to construct the facilities. These studies help to review and plan for future trails and bikeways expenditures. The proposed projects with associated costs can be built into the CIP or other funding opportunities to assist with the construction of the trail and bikeway network.

INVESTMENTS

Action M.6: Levee Improvements: Evaluate improvements to protect the integrity of the levees, improve access by large vehicles, and incorporate a trail system.

The levees along Lake 1 and Lake 2 are used as mechanisms to preserve and retain water in the Twin Lakes. Routine maintenance and improvements are regularly needed to ensure they function as intended, protect surrounding land, and maintain water quality and levels.

As growth and development around the lakes change, the levees will need to support larger vehicles on a more regular basis. As uses between Glen Collins Park and Lake 1 Boat ramp continue to change, it will be important to provide pedestrian connections between the two areas.

Action M.7: Bridge Improvements: Initiate improvements to the Lake Road bridge to accommodate Fire/EMS vehicles and RV travel.

As discussed in Chapter 3, the bridge crossing North Canadian River on Lake Road has a weight limit of 10 tons, which generally does not accommodate RV/Campers and much of the Fire/EMS fleet. To enhance access to the Twin Lakes by these users, improvements to the bridge to allow for higher weight loads is necessary. The total reconstruction of the bridge may be required to improve weight loads. If the bridge is reconstructed, pedestrian access should be included.

Action M.8: Underpass Improvements: Lower the grade of Benedict Street between Kennedy Avenue and Daley Street to allow for Fire/EMS vehicles to traverse under the railroad crossing.

Due to constraints at the railroad underpass between North Kennedy Avenue and Daley Lane, public safety services avoid using the route to access the Twin Lakes area. Lowering the roadway grade in this area will increase vertical separation between the road and the bridge, which will allow public safety vehicles to use the route without concerns of damaging vehicles or getting stuck. This will allow quicker access for Fire and EMS services to the southern parts of the study area.



In August, 2023 structural anomalies were discovered along a portion of the Lake 1 levee. Additional studies will be necessary to determine the extent and necessary repairs to the levee. As a result, Lake 1 will begin draw down measures so that the rehabilitation can take place. While the draw down and improvements will occur over several years, this process will provide an opportunity to prioritize recreation investments, restore the shoreline, and design pedestrian facilities along the levee during rehabilitation efforts.



Lake Road bridge has a weight load that cannot hold most of the Shawnee fire fleet. Improvements to the bridge would allow access to the study area via Lake Road as opposed to I-40.

Action M.g: South McCloud Road Improvements: Upgrade South McCloud Road to provide RV/travel trailer access to the Recreation Village on the north side of Lake 2.

The Future Development Plan promotes a Recreation Village along the northern side of Lake 2, with direct access to I-40 from McCloud Road. The current roadway conditions of McCloud Road would not support large vehicles (i.e. RV/Camper) traveling to the RV park. Shawnee should partner with the City of McCloud and Pottawatomie County to improve the road so that large vehicles can access the campground.

Action M.10: Lake Road Realignment: Relocate Lake Road between Brown Road and Burlison Road away from the edge of Lake 1.

The current location of Lake Road between Brown Road and Burlison Road is within the floodplain, along the southern edge of Lake 1. With the movement of water, flooding impacts, and erosion, there is a chance in the future Lake Road will erode into Lake 1. To prevent this from happening, the roadway should be relocated south of its current location, out of the floodplain. When this happens, the current roadway infrastructure should be removed from the edge of Lake 1.

Action M.11: Glen Collins Park Intersection: Commence design work for the improvements at the intersection of Belcher Road and Lake 2 Dam Road.

During the master planning process it was noted that the intersection of Belcher Road and Lake 2 Dam Road is unsafe, especially during summer months when there is overflow parking along the roadway adjacent to fast-moving vehicles. The improvements to the intersection should enhance safety and accessibility for all roadway and park users. As improvements are made to Glen Collins Park, Lake 2 Park, and the Lake 2 Boat Launch Park, it will be important to improve access and safety.

An example improvement is to construct a roundabout to facilitate travel movements in all directions, improve pedestrian safety between lake parks, and reduce travel speeds along the corridor. Improvements should be made concurrent with park improvements to Glen Collins Park and Lake 2 Park.



An example where an old roadway was eroded by the lake currents. Proactive measures can be taken to relocate Lake Road to limit disruptions in the mobility network.



Roundabouts can help improve safety for pedestrians crossing the road and enhance travel flow compared to stop intersections. The center of the roundabout can be used to display landscaping or a public art piece, acting as an icon or gateway feature to an area.

Figure 5.2, Mobility and Access Strategies Table

Strategy Number	Strategy	Strategy Type	Time- frame	Estimated Cost Range	Implementing Agency	Partnerships	Guiding Principle	Corresponding Strategy
Policy &	Programs							
М.1	Roadway Cross-Sections. Adopt new roadway cross-sections for the Twin Lakes area to include multi-modal transportation elements, such as shoulders, sidewalks, or trails.	Policy	S	N/A	Engineering	Community Development	G, P	G.4
M.2	Roadway Improvement District. Consider adopting a roadway improvement district in the study area.	Revenue	М	\$	Finance	Engineering	Ρ	
M.3	Capital Improvements Plan. Create metrics to incorporate transportation needs into the Capital Improvements Plan.	Policy	0	N/A	City Manager's Office	Engineering	G, P	U.3, R.9
M.4	Transit Opportunities. Create transit options to provide accessibility to future study area attractions and events.	Partnership	L	N/A	City Manager's Office	Community Development, Tourism, COTS	G, P	
M.5	Trails and Bikeways. Conduct a feasibility study to prioritize and phase study area trail and bikeway design and construction.	Study	S	\$\$\$	Engineering	Parks and Rec	G, R	R.4, R.31-R.34

*Types of Strategies:

Study: Follow-up analysis or investigation required to determine the best solution. Regulation: New regulation or change to existing regulation requiring City Council action. Policy: New or modified formal process or procedure that guides City decisions. Partnership: Formal or informal agreement with an external entity to pursue shared goals. Revenue: New fee or revenue collection opportunity to support public projects. Program: A city initiative related to education, recreation, or sports. Capital: New or modified capital expenditure for a project. Operational: New or modified program or staffing arrangement.

**<u>Timeframe:</u>

S - Short-Term: 1-3 years M - Mid-Term: 3-5 years L - Long-Term: 5+ years O - Ongoing or Immediate

***Cost Considerations:

\$ - Less than \$50K \$\$ - \$50K - \$100K \$\$\$ - \$100K - \$500K \$\$\$\$ - \$500K - 2M \$\$\$\$\$ - \$500K - 2M \$\$\$\$\$ - More than 2M N/A - Operation of policy change - no significant additional cost

****Guiding Principle:

R: Provide beloved and beneficial recreational amenities

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G: Promote fiscally responsible growth patterns

Strategy Number	Strategy	Strategy Type	Time- frame	Estimated Cost Range	Implementing Agency	Partnerships	Guiding Principle	Corresponding Strategy
Investm	ents							
M.6	Levee Improvements. Evaluate improvements to protect the integrity of the levees, improve access by large vehicles, and incorporate a trail system.	Capital	0	\$\$\$\$	Engineering		Ρ	M5, R.31
M.7	Bridge Improvements. Initiate improvements to the Lake Road bridge to accommodate Fire/EMS vehicles and RV travel.	Capital	М	\$\$\$\$	Engineering		P, R, G	
M.8	Underpass Improvements. Lower the grade of Benedict Street between Kennedy Avenue and Daley Street to allow for Fire/EMS vehicles to traverse under the railroad crossing.	Capital	L	\$\$\$\$	Engineering		Ρ	
M.9	South McCloud Road Improvements. In coordination with the City of McCloud and Pottawatomi County to upgrade South McCloud Road to provide RV/ travel trailer access to the Recreation Village on the north side of Lake 2.	Capital, Partnership	L	\$\$\$\$	Engineering	County, Cities, City Manager's Office	P, R, G	
M.10	Lake Road Realignment. Relocate Lake Road between Brown Road and Burlison Road away from the edge of Lake 1.	Capital	L	\$\$\$\$	Engineering		P, N	
M.11	Glen Collins Park Intersection. Commence design work for the improvements at the intersection of Belcher Road and Lake 2 Dam Road.	Capital	М	\$\$\$\$	Engineering	Public Works, Parks and Recreation, Community Development	P, R, G	Glen Collins and Lake 2 Park Improvements

UTILITIES

Water and sewer are not readily available or currently feasible within the Twin Lakes study area. Shawnee residents are serviced by well and septic systems, even along the lake shore. While the well and septic systems support the rural patterns of development, it also limits the ability to grow and improve services for residents and visitors.

The long-term expansion of water and sewer to the study area (in conjunction with Future Development Plan recommendations) will allow for focused higher density development. Extending water lines and developing a small wastewater treatment facility to support this long-term development pattern will require significant expenditures. The City will need to evaluate funding sources, user fees, partnerships, and policies related to further expansions to ensure the system is supported and has adequate capacity. The City should strongly consider soliciting public and/or private development partners to facilitate the future development patterns recommended by this plan.



Example of a small water treatment plant, a similar system can be constructed in the Twin Lakes Study Area to support wastewater services. Smaller treatment plans have less capacity, which helps ensure the higher densities and intensities are concentrated in the study area.

As the population continues to grow and expand, additional investments in telecommunications service should also be evaluated to eliminate weaknesses in coverage zones

POLICIES & PROGRAMS

Action U.1: User Fees. Adopt higher connection fees for utility users outside of the city limits.

As water and sewer become available (see Actions U.6 and U.7, on Page 100), properties outside of the municipal limits without utilities may request connections to the system. Non-Shawnee residents should pay higher fees. Due to the rural water districts around the Twin Lakes, it is anticipated that the possibility of providing municipal waste water services to targeted properties outside of the municipal limits may be a more realistic scenario than municipal water.

Action U.2: Connections. Require new development to extend lines beyond the city's initial installation of pipes.

While the City may make the initial expansion of water and sewer into the study area (see Actions U.6 and U.7, on Page 100), it should be the responsibility of property owners and developers to extend lines to their respective properties. The initial investment by property owners to extend the lines will reduce immediate costs for the City, however, the City will be required for the long-term maintenance of the system. The City should evaluate where lines are located and adopt policies that ensure the concentration of water and sewer lines to reduce the long-term maintenance costs.

Action U.3: Capital Improvements Plan. Continue to evaluate and incorporate utility projects into the annual Capital Improvements Plan.

Utility projects should be incorporated into the City's Capital Improvements Plan (CIP) when necessary to construct, expand, and maintain the water and sewer system. It is anticipated that the water and sewer projects would not be needed into immediate 5-year CIP, but rather at year 10. However, timing and needs should be evaluated based on population growth and study area popularity. Action U.4: Utility Master Planning. Integrate water and wastewater recommendations from this plan into any city-wide master plans.

The Twin Lakes Master Plan proposes significant projects related to utilities. The improvements to the system should be integrated into any future updates to the City's water and wastewater master plans. The actual cost to expand water and sewer will need to be further evaluated through the plan update process, and the projects can be incorporated into the CIP program when necessary.

Action U.5: Telecommunications. Evaluate broadband,

telecommunications, and wifi coverage throughout the study area and surrounding areas.

A Telecommunications Master Plan reviews the existing coverage of wireless communications services, identifies gaps in the coverage, and provides recommendations for the siting of future facilities. This analysis will allow Shawnee with surrounding municipalities and unincorporated areas to continue to meet the needs of wireless communications in a growing area. As private providers approach the City to install new towers, the City will have guidance on where the towers are most needed. This type of plan can also provide guidance on the design of future cell towers and facilities while meeting other national standards for facility design.



Telecommunication towers can be designed as trees to be camouflaged into the natural environment.

INVESTMENTS

Action U.6: Water Service. Extend a main water line to the Twin Lakes to accommodate growth that aligns with the Future Development Plan.

The growth patterns promoted within the Future Development Plan will necessitate the expansion of public water service into the study area. While water is drawn from the Twin Lakes for public consumption, it is treated north of the City and is only available in Shawnee proper.

A main potable water line will need to be extended approximately eight miles back from Shawnee proper to the "Lake District" place types to support greater growth rates than what exists today. Absent additional high density development beyond the current municipal (and study area) limits, the construction of an additional water treatment facility will be cost-prohibitive.

Action U.7: Wastewater Service. Extend wastewater services to the Twin Lakes to accommodate growth that aligns with the Future Development Plan.

As with public water, the growth patterns promoted within the Future Development Plan will necessitate the expansion of public wastewater services to the study area. The City can construct a package water treatment plant in close proximity to the study area to support growth in the "Lake District" place types, as identified on the Future Development Plan. The concentration of growth and wastewater services will require a reduced capacity system to meet anticipated long-term demand (while allowing the rural character among remaining study area properties to be retained).

The anticipated timing of build-out identified by the Future Development Plan may require a phased approach for constructing and operating a package treatment system. As the need for wastewater services increases, the City should determine the treatment needs at the time of design, and plan for future expansions to the system over time to accommodate future growth.

Figure 5.3, Utilities Strategies Table

Strategy Number	Strategy	Strategy Type	Time- frame	Estimated Cost Range	Implementing Agency	Partnerships	Guiding Principle	Corresponding Strategy			
Policy &	Policy & Programs										
U.1	User Fees. Adopt higher connection fees for utility users outside of the city limits.	Revenue	L	N/A	Public Works	City Manager's Office, City Clerk	Ρ	U6, U7			
U.2	Connections. Require new development to extend lines beyond the City's initial installation of pipes.	Policy	L	N/A	City Manager's Office	Engineering, Community Development, Public Works	Ρ	U6, U7			
U.3	Capital Improvements Plan. Continue to evaluate and incorporate utility projects into the annual Capital Improvements Plan.	Policy	0	N/A	Engineering	Finance, Public Works, City Manager's Office	G, P	М.3			
U.4	Utility Master Planning. Integrate water and wastewater recommendations from this plan into any city-wide master plans.	Study	S	\$\$\$	Public Works	Engineering	Ρ				
U.5	Telecommunications. Evaluate broadband, telecommunications, and wifi coverage throughout the study area and surrounding areas.	Partnership, Study	S	\$\$\$	Community Development	Engineering, Surrounding communities	G, P				

Strategy Number		Strategy Type	Time- frame	Estimated Cost Range	Implementing Agency	Partnerships	Guiding Principle	Corresponding Strategy
Investm	ents							
U.6	Water Service. Extend a main water line to the Twin Lakes to accommodate growth that aligns with the Future Development Plan.	Capital	L	\$\$\$\$	Public Works	Engineering	G, P	U4
U.7	Wastewater Service. Provide wastewater services to the Twin Lakes to accommodate growth that aligns with the Future Development Plan.	Capital	L	\$\$\$\$	Public Works	Engineering	G, P, N	U4

*Types of Strategies:

Study: Follow-up analysis or investigation required to determine the best solution. Regulation: New regulation or change to existing regulation requiring City Council action. Policy: New or modified formal process or procedure that guides City decisions. Partnership: Formal or informal agreement with an external entity to pursue shared goals. Revenue: New fee or revenue collection opportunity to support public projects. Program: A city initiative related to education, recreation, or sports. Capital: New or modified capital expenditure for a project. Operational: New or modified program or staffing arrangement.

**Timeframe:

- S Short-Term: 1-3 years
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\$ - Less than \$50K \$\$ - \$50K - \$100K \$\$\$ - \$100K - \$500K \$\$\$\$ - \$500K - 2M \$\$\$\$\$ - More than 2M N/A - Operation of policy change - no significant additional cost

****Guiding Principle:

R: Provide beloved and beneficial recreational amenities P: Facilitate the efficient delivery of public services N: Embrace the stewardship of our natural resources G: Promote fiscally responsible growth patterns



The Twin Lakes are a source of the City's drinking water, however, public water is not available to residents and businesses around the lake.

RECREATION

The Twin Lakes offers local residents and visitors with convenient opportunities to enjoy water-based activities, with boat ramps and launches, piers and public beaches supported by accessory facilities geared toward the comfort of those wishing to access the waters of Lake 1 and Lake 2. In contrast, land-based recreational facilities on municipally-owned lakeside property are limited. Opportunities abound to enhance the experiences of visitors with trails, playscapes and open play areas that provide recreational diversions to suit varying interests. Investments in new park infrastructure, fee collection systems, and programs will improve the quality, accessibility, and appeal of the Twin Lakes' public parks and recreation holdings.

Public parks are an essential component of promoting healthy communities by providing access to recreation, providing places for socialization, enhancing learning, and improving the fiscal foundation of a community. By investing in parks around the Twin Lakes, Shawnee will not only improve the quality of life for its residents, but can leverage the "right" types of investments in a way that sets it's recreation areas apart from other communities in the greater Oklahoma City region.



Park spaces can provide opportunities to socialize with friends, relax, and enjoy the outdoors.

POLICIES & PROGRAMS

Action R.1: Event Programming. Partner with host organizations to recruit revenue-producing events.

Larger events, such as marathons, triathlons, and fishing tournaments, increase awareness, tourism and visitation to an area. These types of events attract vendors, participants, and supporters who will spend multiple days in a community. Some may stay in RV campgrounds, lodges, or similar overnight accommodations, and others may stay nearby in downtown areas. The attraction of an event like this can bring additional sales tax revenue to all of Shawnee.

Action R.2: Swimming. Allow swimming on Lake 2.

Swimming is currently only allowed on Lake 1 at the Glen Collins Park and Isaac Walton Park swimming beaches. With the improvements to Lake 2 proposed by this Master Plan, and the incorporation of no-wake zones near parks, swimming should be allowed on Lake 2 at the time that improvements are made to the portion of Glen Collins Park facing Lake 2 park and to Kiwanis Park - both of which are proposed to incorporate lake shore access for swimming. An update to the City ordinance Sec. 18-86 will be required.

Action R.3: User Fees. Adopt user fees for lake uses, including parking, camping, fishing, boating, hunting, pavilion rentals, non-motorized aquatics rentals, etc.

To support parks and recreation offerings at Twin Lakes, the City should adopt a comprehensive suite of updated user fees to associated with all visitation. In addition to adopting new fees, Shawnee should evaluate current fees to ensure they are consistent with those in comparison communities. Incorporating fees is a way to increase revenues for parks and limit park and lake access capacities. To effectively charge and monitor fees, improvements to the permitting system should be made (see recommendation R.12 on page 107). Action R.4: Recreation Partners. Develop partnerships with trail user groups to help construct and maintain soft-surface trails around Lake 2.

Cities can benefit from building and fostering partnerships with community organizations to help construct or maintain trails and parks. Community interest groups can volunteer their time to help clear areas for soft-surface trails, host "adopt a park or trail programs" to help clean up or maintain parks, and similar types of events. Shawnee can utilize these groups to help create a soft-surface trail network around Lake 2, assist in shoreline restoration efforts, or lead educational programs.

Action R.5: Private Vendors. Incorporate small scale commercial uses within lake parks.

Small-scale commercial vendors, such as food truck operators, equipment rentals, and similar uses should be allowed at the lakes with requisite permits, provided the lake parks can support the uses. These types of uses provide services that may not be readily available, such as food, concessions, small stores such as bait shops, restaurants, or rentals. Permits will allow the City to have control over when vendors are in the park and will provide additional revenues through permitting fees and sales taxes.

Conceptual plans for the redevelopment of lake areas should identify future opportunities for incorporating private services and amenities into the park system. As the park areas are developed, the City should solicit vendors to meet additional commercial and service needs.

Action R.6: Boat Permits. Require permits for all boats operating on the lakes.

Boat permits are a way to regulate boat users on the lakes. All residents and visitors should be required to have permits for their boats. Annual permit holders can use a system similar to car registrations to have stickers for easily recognizable permits, while visitors with day use passes may be able to use print out versions (see recommendation PHS.3 on page 115 for additional information on a sticker permit system).



Food trucks can provide diverse dining options to a community. With minimal on-site investment, food trucks can be used to draw people to events and support the local economy.



Educational programs can provide after school and weekend activities to youths that may not otherwise be available in Shawnee.

Action R.7: Public Art. Incorporate cultural and public art elements into public parks.

Public art is a great way to build community pride by showcasing local history, culture, and expression. Art pieces carefully integrated into a landscape can encourage exploration, and a marketing or "passport" campaign can encourage usage of the parks for purposes other than active recreation. As the Twin Lakes recreation areas are redeveloped, Shawnee should incorporate public and cultural art into its re=programmed spaces (which is also required through Article 9 of the City's zoning regulations). The style, type, and positioning of public art should meet the requirements of City Code, and be approved by the Arts and Culture Commission.

Action R.8: Plan Integration. As city-wide parks and recreation master plans are updated, integrate the recommendations of this Master Plan.

A Parks and Recreation Master Plan should guide decision-making related to city-wide parks programming and expenditures. The Twin Lakes Master Plan recommends various lakefront parkland and facility improvements. To create a more detailed work program for the Twin Lakes, where this Master Plan's recommendations are prioritized in relation to other municipal investments in recreation, an update to the Parks and Recreation Master Plan should be initiated to incorporate the proposed recreation area improvements recommended herein.

Action R.g: Lakes Recreation Fund. Create a designated fund to directly support the long-term operation and maintenance of recreation-related investments.

A dedicated "parks and recreation fund" for the Twin Lakes would allow the City to allocate direct revenues from user fees and reservations to the programs and offerings at the Twin Lakes recreation areas without competing with other elements of a general fund or municipal budget. The collection of fees can help offset some costs associated with the services the City is providing, however they will likely not cover all of the associated costs for study area recreation services. Action R.10: Detailed Master Plan. Prepare detailed master plans for each recreation area to generate precise programming, phasing and cost estimates.

Detailed master plans for each of the Twin Lakes' recreation areas will provide the City with an implementation work program for each designated park space. For the development of each park to be successful, a committed program of spaces and facilities must be identified and appropriate phasing must be defined to assist with the allocation of funds necessary to support the improvements.

The site plans provide a much more precise direction for the type and timing of recreation area investments to should be prioritized, and provide the City with more detailed cost estimate for the various amenities and facilities tied to appropriate and reasonable phasing for the improvements. The City should focus on near-term improvements to produce revenues which can then be used for other park improvements (e.g. accommodations, access controls, water access upgrades).



Public art, such as the panels in the above picture, can be incorporated into parks to showcase local artists, tell the history of a place, or celebrate culture.

INVESTMENTS

Action R.11: Recreation Area Staffing. Create new park enforcement and maintenance positions to monitor and maintain park improvements, overnight stay areas, and park areas.

Improvements to the recreation area facilities in the Twin Lakes study area will require additional maintenance and park staff positions. Staff will help with rentals, monitoring the parks, enforcement of entry regulations, and performing routine maintenance duties. During the peak season, some of the services may be supplemented through the use of camp hosts (see PHS 11, page 119). Another opportunity to help monitor overnight parks is o include public safety housing on site (see PHS 12, page 119).

Action R.12: Permitting System. Implement a permitting payment system that uses current best practices and technology for user-friendliness including on-demand options.

The permitting system in place today can be confusing for residents and visitors to use, despite the availability of three purchase options. To acquire a physical permit, a resident or visitor must travel to the recreation center, far from the study area. There are also cash boxes for fishing and boating permits at the Twin Lakes recreation area boat ramps, and there is the ability to purchase permits online.

The City however does not have the staff capacity to enforce permit requirements. Technological improvements to the permitting system would make it easier to acquire permits on site. Such improvements may include a mobile application to purchase permits that can be printed at home or be displayed on their phones, or a kiosk with the various permit options which can then print permits in real time. These types of system upgrades - along with gate-controlled access to each recreation area would allow the City to manage permits and collect fees more effectively. Action R.13: Marketing. Increase marketing for revenue-producing efforts at Twin Lakes.

The realization of the Future Development Plan will draw new users to the study area. Greater use of the Twin Lakes' lakeside recreation areas and surrounding municipal lands will increase direct revenues for the City and the Twin Lakes study area through permit sales and tourism-related sales taxes. Additional marketing efforts should be made to draw new visitors to these places public land-holdings are redeveloped and user fees are established. Marketing may include pamphlets, brochures, online advertising, and similar measures that draw residents from the larger region, state, and even nation.

Action R.14: Recreation Equipment. Purchase and rent equipment to boost study area recreational activities.

To promote the recreational activities highlighted in the Master Plan - such as kayak and canoe rentals - the City will should purchase equipment to rent to visitors. Examples may include kayaks, canoes, water bikes, life jackets, fishing poles, and similar rental gear.



Kayak and canoe rentals will allow residents and visitors enjoy water-based activities at Twin Lakes without the need to own and transport this type of equipment to the lakes.

GLEN COLLINS PARK & LAKE 2 PARK IMPROVEMENTS

Glen Collins Park (including Lake 2 Park) is imagined to include new and unique active and passive water-based and land-based recreation opportunities with the potential to create a "destination" sought-out by visitors. The integration and combined development of these recreation spaces will allow for overnight stays through RV campsites and potentially a privately operated lodge or similar larger-scale accommodations.

Conceptual plans for Glen Collins Park include a variety of day-use amenities to attract residents, including inclusive play areas, trails, pavilions, kayak launches and boat rentals, restrooms, and an area for food trucks. The recreation area includes a space reserved for potential long-term private investment to attract visitors from the larger region. Key elements of the Glen Collins Park conceptual plan include:

Action R.15: RV Campgrounds. Establish overnight camping accommodations in the current Glen Collins Park.

The current Glen Collins Park day-use area should be transitioned to RV campsites with a gated entry system. The campsites should be reserved and rented at a competitive rate to allow the City to collect revenues.

Action R.16: Shoreline Restoration. Perform shoreline restoration along Lake 1 near the current swimming beach location.

The existing swimming beach at Glen Collins Park is subject to erosion due to the prevailing winds. With the proposed development of beach access near the Lake 1 boat ramp and along Lake 2, the current beach grounds should be restored with native vegetation.

Action R.17: Wildflower Zone. Construct a wildflower garden on the shore of Lake 1.

Wildflower gardens are used to boost local biodiversity, have lower maintenance obligations, and provide aesthetic quality to an area. In conjunction with lake shore restoration measures, a wildflower garden along the shore of Lake 1 would enhance efforts for shoreline improvements, reduce overall maintenance needs, and provide a visually appealing landscape along the shoreline. Action R.18: Day Use Amenities. Reprogram the Lake 2 day-use area including the following features:

- Pavilion rentals
- Boat house and relocated boat launch
- Inclusive playground
- Food truck pavilion
- Restrooms
- Parking area improvements
- Trails

Improvements to the Lake 2 day use facilities should be coupled with the levy of new user fees such as paying to park, kayak and canoe rentals, and the reservation of pavilion spaces. A phased approach to development may be taken for the successful construction of the park and build the park development into the CIP over time.

Action R.19: Private Uses. Reserve an area for private "destination recreation" and accommodation uses.

The lodge area and Future Development Plan's "destination recreation" are anticipated to be privately funded and developed. To streamline the process, the City should actively rezone the property for these uses once water and sewer have been expanded into the area.



The incorporation of RV Campsites along Lake 1 will allow for the scenic viewing from campers, and provide a source of revenue for the City to help fund other recreation improvements.

LAKE 1 BOAT RAMP

The Lake 1 boat ramp is the Twin Lakes' primary day-use area to launch boats onto Lake 1 or Lake 2. The long-term redevelopment of this space may include the improvement of both boat launches so they are usable, and includes a variety of day-use amenities adjacent to the boat launch and fishing location, such as a play area, open field with an amphitheater, trails, restroom facilities, a small shop, and a swimming beach.

Lake 1 day-use improvements will allow better usage of the recreation area to allow for a diversity of activities and events. Key elements of the Lake 1 boat ramp conceptual plan include:

Action R.20: Gated Entry. Install gates at the entryway to the boat launch and parking area.

As a method of managing access to the water, a gated entry system will ensure boat access is limited and that revenues are collected for the parking of boats with trailers.

Action R.21: Park Name. Rename the Lake 1 boat ramp recreation area to promote the branding of the Twin lakes.

The Lake 1 boat ramp recreational area should be renamed to reflect the lakes, nature, and history of Shawnee in a way that can enhance branding and placemaking for the Twin Lakes.

Action R.22: Boat Ramps. Improve the existing boat ramps.

Both boat ramps accessing Lake 1 should be improved. Having one operational boat ramp may create bottlenecks and discourage people from using the lakes. Higher quality amenities will help justify charging rates for boat parking and access.

Action R.23: Access. Improve access to the boat ramps and existing fishing pier.

Improvements to the pedestrian network near the boat ramps and connecting to the existing picnic area would help keep people out of the parking lot and reduce potential conflicts between recreation area users.. Action R.24: Day Use Amenities. Reprogram the Lake 1 day-use area including the following features:

- Pavilion rentals
- Playground
- Restroom Facility
- Store
- Parking area with gated entry
- Stage with lawn area
- Trails
- Public Art
- Swimming Beach



A stage with lawn space services multiple purposes; it can function as a stage for music or plays, can be used as a screen to showcase movies in the park, or be used as a functional space. When not in use for viewing the stage, the lawn area can serve as a space to picnic, play, or rest. This multi-purpose use supports the long-term success of the park.

KIWANIS PARK

Reprogramming of Kiwanis Park will transform it into the new home of primitive camping on the Twin Lakes. The development of this area is intended to be less intense than the study area's other lakeside recreation areas, and will function with low-impact day-use and overnight-use amenities. The space is conceptually planned to allow for concentrated day-use amenities with designated tent campsites and a tent host space with associated facilities (such as a restroom and shower facility).

Key elements of the Kiwanis Park conceptual plan include:

Action R.25: Gated Access. Install gated parking access and improve the parking area.

As a park with both day-use and overnight accommodations gatecontrolled access will control overall visitor numbers during times of peak visitation, ensure that payments are collected to use the facilities, and improve security for overnight campers.

Action R.26: Day Use Amenities. Improve day-use facilities, such as:

- Pavilion rentals
- Kayak launch
- Play area
- Swimming beach
- Trails
- Open space
- Bird watching

Proposed day-use amenities are designed to support low-impact activities for daytime and overnight users.

Action R.27: Primitive Campsites. Improve primitive campsites.

Facilities necessary to attract overnight tent camping, and promote a positive user experience may include:

- Identified tent pads for primitive camping
- An enhanced camp host tent site to monitor the camping area
- Restroom facilities with showers and lockers
- Reservation system improvements to monitor campsite use

While primitive camping may not produce revenues as substantial as RV campsites, there is still a market for including tent sites along lake shores. These allow for different experiences and can be more cost-effective than larger facilities. To support campers, it will be important to provide the necessary services, such as restrooms with showers and lockers, to allow for multi-night stay. A camp paid can be recruited to help the City monitor and manage the tent camping areas and ensure the campers have the correct permits and reservations.



Camping outdoors can be a great way to experience nature, spend time with friends, or be "unplugged". By incorporating primitive campsites at Lake 2, the City can provide residents and visitors with a variety of experiences and ways to enjoy nature.

ISAAC WALTON PARK

As the City's original camping destination at the Twin Lakes, Isaac Walton Park is overdue for a transformation that supports upgraded camping opportunities including RVs, yurts, or even cabins. This recreational area's proximity to an existing wedding venue and commercial use proposed by the Future Development Plan, makes it a prime location for improved camping with supporting amenities, such as restrooms, vending machines or a small convenience store, trails, picnic areas, and a potentially a swimming beach.

Redevelopment of this recreation area may generate an opportunity for a public-private-partnership (P3) for the further development of the recreation area. Key elements of a re-imagined Isaac Walton Park include:

Action R.28: Gated Access. Install gated access to the park area to monitor usage.

Gated-controlled access will ensure proper entry for use of the campsites and associated amenities. Developed exclusively to support overnight accommodations, there should be fewer day users on the site.

Action R.29: Camping. Construct various campsite accommodations including RV campsites, yurts, or cabins.

Higher quality camping areas will allow the City to charge higher rates to stay at the campgrounds. "Glamping" accommodations, such as yurts, can attract a new user group to the lakes. With the wedding venue located next door, these camping options may be highly desirable for wedding guests and parties.

Action R.30: Park Amenities. Construct various campsite amenities to support campers.

Amenities to support campers will make the site more desirable to visit and use. Amenities may include restroom with showers and lockers, native trails throughout the property, play areas, pavilion and picnic spaces, a swimming beach, and similar types of options. A small store or vending machines can provide easy access for small conveniences visitors may need while staying on the campground.



Native trails throughout the "Isaac Walton Park" property, expanding beyond its current limits, can allow campers to explore nature along the lake shore and exercise while staying at the Twin Lakes. By offering a variety of experiences, the City will attract a variety of users to the parks.



"Glamping" in yurts is an emerging trend in the camping world. Yurts are canvas tents with beds and modern day conveniences such as lighting, and may provide climate control elements. These spaces allow visitors to enjoy being outdoors, without having to set up their own tents, or sleep on the ground, smaller blow up pads, or cots.

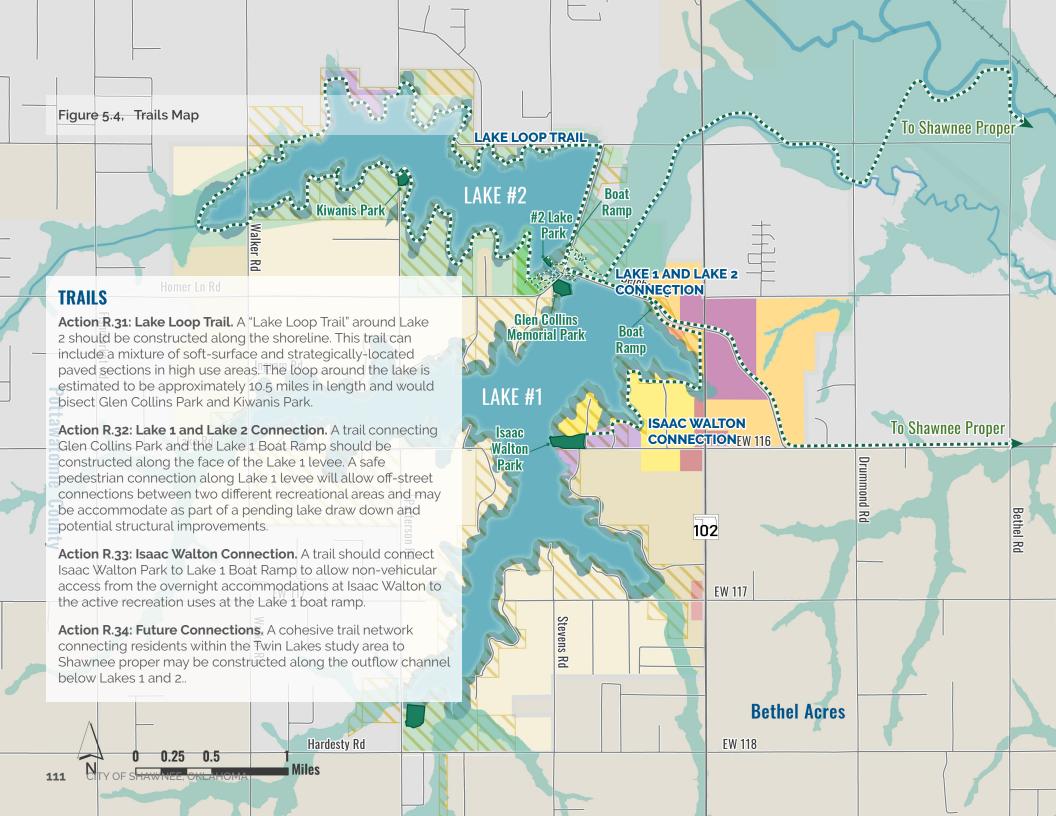


Figure 5.5, Recreation Strategies Table

Strategy Number	Strategy	Strategy Type	Time- frame	Estimated Cost Range	Implementing Agency	Partnerships	Guiding Principle	Corresponding Strategy
Policy &	Programs							
R.1	Event Programming. Partner with host organizations to recruit revenue-producing events.	Program	М	\$\$	Tourism	Parks and Rec - Public Works	R	
R.2	Swimming. Allow swimming on Lake 2.	Policy	0	N/A	City Manager's Office	Parks and Rec - Public Works	R	NR.1, R.17, R.26
R.3	User Fees. Adopt user fees for lake uses, including parking, camping, fishing, boating, hunting, pavilion rentals, etc.	Policy	0	\$	Parks and Rec - Public Works	City Manager's Office	R	PHS.12, R.12, R.17, R.20, R.25, R.28
R.4	Recreation Partners. Develop partnerships to help construct and maintain soft-surface trails around Lake 2.	Partnership	S	N/A	Parks and Rec - Public Works	City Manager's Office, Engineering	R	
R.5	Private Vendors. Incorporate small scale commercial uses within lake parks.	Policy, Revenue	0	\$	City Manager's Office	Community Development	R, G	
R.6	Boat Permits. Require permits for all boats operating on the lakes.	Policy	0	\$	City Manager's Office	Parks and Rec - Public Works, Police	R, P	PHS.3
R.7	Public Art. Incorporate cultural and public art elements into public parks.	Policy	0	N/A	Parks and Rec - Public Works	Community Development, Tourism	R	
R.8	Plan Integration. Integrate the recommendations from this master plan into updated parks and recreation master plans	Study	S	\$\$\$	Parks and Rec - Public Works	Finance, City Manager's Office, Community Development	R	
R.9	Lakes Recreation Fund. Create a designated fund within the City's budget to directly support the long- term operation and maintenance of recreation-related investments.	Regulation	S	N/A	City Manager's Office	Finance	R	

Strategy Number	Strategy	Strategy Type	Time- frame	Estimated Cost Range	Implementing Agency	Partnerships	Guiding Principle	Corresponding Strategy
R.10	Master Plans. Prepare detailed master plans for each recreation area to generate precise programming, phasing, and cost estimates.	Regulation	S	N/A	City Manager's Office	Finance, Parks and Rec, Community Development	R	
Investme	nts							
R.11	Recreation Area Staffing. Create new park enforcement and maintenance positions to monitor and maintain park improvements, overnight stay areas, and park areas.	Operational	L	\$\$\$	Parks and Rec - Public Works	Finance, City Manager's Office	R, P	PHS.10, PHS.11
R.12	Permitting System. Implement a permitting payment system that uses current best practices and technology for user-friendliness including on- demand options.	Capital	0	\$\$	Parks and Rec - Public Works	Finance, IT, Police	R	
R.13	Marketing. Increase marketing for revenue-producing efforts at Twin Lakes.	Operational	0	\$\$	Tourism	Parks and Rec - Public Works	R, G	
R.14	Recreation Equipment. Purchase and rent equipment to boost study area recreational activities.	Capital	М	\$\$\$	Parks and Rec - Public Works		R	

*Types of Strategies:

Study: Follow-up analysis or investigation required to determine the best solution. Regulation: New regulation or change to existing regulation requiring City Council action. Policy: New or modified formal process or procedure that guides City decisions. Partnership: Formal or informal agreement with an external entity to pursue shared goals. Revenue: New fee or revenue collection opportunity to support public projects. Program: A city initiative related to education, recreation, or sports. Capital: New or modified capital expenditure for a project. Operational: New or modified program or staffing arrangement.

**<u>Timeframe:</u>

S - Short-Term: 1-3 years M - Mid-Term: 3-5 years L - Long-Term: 5+ years O - Ongoing or Immediate

***Cost Considerations:

\$ - Less than \$50K \$\$ - \$50K - \$100K \$\$\$ - \$100K - \$500K \$\$\$\$ - \$500K - 2M \$\$\$\$\$ - \$600K - 2M \$\$\$\$\$ - More than 2M N/A - Operation of policy change - no significant additional cost

****Guiding Principle:

R: Provide beloved and beneficial recreational amenities P: Facilitate the efficient delivery of public services N: Embrace the stewardship of our natural resources G: Promote fiscally responsible growth patterns

Strategy Number	Strategy	Strategy Type	Time- frame	Estimated Cost Range	Implementing Agency	Partnerships	Guiding Principle	Corresponding Strategy
Glen Coll	ins Park and Lake 2 Park Improvements							
R.15	RV Campgrounds. Establish overnight camping accommodations in the current Glen Collins Park.	Capital	S	\$\$\$\$			R	
R.16	Shoreline Restoration. Perform shoreline restoration measures along Lake 1 near the current swimming beach location.	Capital	S	\$	Parks and Rec - Public Works	Engineering	N	
R.17	Wildflower Zone. Construct a wildflower garden on the shore of Lake 1.	Capital	S	\$\$			R, N	
R.18	Day Use Amenities. On Lake 2, make park improvements that allow for day-uses.	Capital	М	\$\$\$\$			R	
R.19	Private Uses. Rezone the destination recreation and lodge area to allow for private investments.	Policy	L	N/A	Community Development		G	U.6, U.7
Lake 1 Bo	at Ramp Improvements							
R.20	Gated Entry. Install gated boat parking.	Capital	S	\$\$\$\$	Parks and Rec - Public Works	Engineering	R, P	
R.21	Park Name. Rename the Lake 1 boat ramp recreation area to promote the branding of the Twin lakes.	Policy	S	N/A	Parks and Rec - Public Works	City Manager's Office	R	
R.22	Boat Ramps Improve existing boat ramps.	Capital	S	\$\$\$		Engineering	R	
R.23	Access. Improve access to boat ramps and existing fishing pier.	Capital	S	\$\$	Parks and Rec - Public Works	Engineering	R	
R.24	Day Use Amenities. Construct gated parking area and day-use facilities.	Capital	L	\$\$\$\$			R	

Strategy Number	Stratedy	Strategy Type	Time- frame	Estimated Cost Range	Implementing Agency	Partnerships	Guiding Principle	Corresponding Strategy	
Kiwanis	Kiwanis Park Improvements								
R.25	Gated Access. Install gated access and improve designated parking facilities.	Capital	S	\$\$\$\$		Engineering	R, P		
R.26	Day Use Amenities. Improve day use facilities.	Capital	S	\$\$\$\$	Parks and Rec - Public Works		R		
R.27	Primitive Campsites. Construct other overnight use facilities.	Capital	М	\$\$\$\$			R		
Isaac Wal	ton Park Improvements								
R.28	Gated Access. Install gated access to the park area to monitor usage.	Capital	S	\$\$\$\$		Engineering	R, P		
R.29	Camping. Construct various campsite accommodations including RV campsites, yurts, or cabins.	Capital	S	\$\$\$\$	Parks and Rec - Public Works		R		
R.30	Park Amenities. Construct various campsite amenities to support campers.	Capital	М	\$\$\$\$			R		



Camp grounds should provide a variety of amenities that support daily use, including picnic tables, grills, waste receptacles, and similar amenities.

Strategy Number	Stratedy	Strategy Type	Time- frame	Estimated Cost Range	Implementing Agency	Partnerships	Guiding Principle	Corresponding Strategy
Trails								
R.31	Lake Loop Trail. A "Lake Loop Trail" around Lake 2 should be constructed along the shoreline.	Capital	S	\$\$\$\$	Parks and Rec - Public Works		R	
R.32	Lake 1 and Lake 2 Connection. A trail connecting Glen Collins Park and the Lake #1 Boat Ramp should be constructed.	Capital	S	\$\$\$\$			R	
R.33	Isaac Walton Connection. A trail should connect Isaac Walton Park to Lake #1 Boat Ramp.	Capital	M	\$\$\$\$			R	
R.34	Future Connections. A cohesive trail network connecting residents within the Twin Lakes study are as well as within Shawnee proper to the events and activities at the lakes should be constructed over time.	Capital	L	\$\$\$\$		Community Development, Engineering	R, G	



Soft surface trails cost less to construct and may be a better fit in certain environmentally sensitive areas or where a more natural feel is desired.

PUBLIC HEALTH AND SAFETY

As the frequency of calls for public safety services increases around the Twin Lakes due to heightened usage of the parks, and population grows in accordance with the Future Development Plan, it may become necessary to invest in a full-time public safety presence in the study area. This may include a graduated increase in equipment, facilities, and staffing for park and lake security, general safety, fire/rescue, and emergency medical services.

With a low population and population density, today's desire for permanent police and fire stations within the study area is not feasible in the near-term (nor does it outweigh the need for additional public safety resources within Shawnee proper). Pre-positioned resources such as a new police dock and boat, may assist response times and improve on-water patrolling during busy summer months in the meantime. "Prepositioning" of staff resources may also be accommodated in a targeted manner by providing housing at recreation areas for public safety staff.



The incorporation of public safety housing or camp host spaces can supplement park patrols and maintenance needs while providing a sense of safety and security within an overnight camping park.

POLICIES & PROGRAMS

Action PHS.1: Public Safety District. Determine the feasibility of a public safety district to supplement police and fire resources.

In 2021, Oklahoma passed the "Oklahoma Public Safety Protection District Act" which allows municipalities to create a public safety protection district to help fund the provision of public safety services, if approved by voters. The act allows a city to place annual assessments on properties to fund public safety, including the purchase and maintenance of equipment and vehicles, employment for fire, protection, and EMS services, and payment for emergency services. By creating a Public Safety District for Shawnee, the City could raise addition revenues to support the provision of public safety, not just in the study area, but throughout the entire City.

Action PHS.2: Police Presence. Continue enhanced police presence at the Lake parks during summer months.

Shawnee's school resource officers have assisted in the patrol of Glen Collins Park and Isaac Walton Park during the last two summers. This program has improved conduct and the perception of safety during the busier summer months. The program should be continued until additional staff capacity is added within the parks to assist with monitoring park usage and compliance.

Action PHS.3: Boat Stickers. Institute sticker permits for all boats to aid in law enforcement.

A boat sticker program should be implemented to ensure all boats have the proper permits for the lakes. Stickers improve visibility for patrols and can show whether the permits are for a day use or annual. While there should be opportunities to purchase day permits for visitors, it would be easier to use a mail-based system to send stickers out for annual permit holders, like the vehicle registration system. Action PHS.4: Derelict Docks. Implement an additional fees for the public removal of derelict docks.

Based on the review of existing docks on Lake 1, there may be instances where the City needs to assist with the removal of derelict docks. In these instances, additional fines should be charged to cover the City's cost for derelict dock removal, including any subcontracting costs, permitting, and debris disposal.

Action PHS.5: Code Enforcement Process. Adopt proactive code enforcement measures related to the protection of the lake shore:

- Monitor and enforce the lakes to ensure the lake shore conservation zone is maintained
- Monitor docks and any lake encroachments and ensure all docks follow permitting and inspection requirements
- Require the abatement when the lake shore protection measures are not followed

The City's complaint-based code enforcement system that operates today, does not address the needs of the lakes. By switching to a proactive system, the City will be able to monitor and protect public health and safety on the Twin Lakes, including monitoring dock safety and standards and lake shore conservation requirements. A proactive code enforcement policy for targeted violations can more readily require abatement measures when there are code-related infringements.

Action PHS.6: Dock Permits. Require annual dock permit renewal with inspections to ensure the safety and quality of docks.

The existing system to report and monitor code enforcement cases is not transparent or simple. By improving the system for City staff, as well as residents, will help ensure the timely response and aid the City in managing the case status, types of cases, and locations. A digital system can help with workflow automation, reduce paperwork, and make the system more efficient.





Examples of docks on Lake 1 that are in need of maintenance or replacement. Without the proper mechanisms in place, such as proactive code enforcement and abatement measures, it may be years before the docks are improved to meet current safety requirements.

INVESTMENTS

Action PHS.7: Police Dock. Construct a police dock on Lake 1 with a new patrol boat and unit to monitor the lakes.

A dedicated police dock and storage space will allow on-water patrols to have quick access to the water and respond to emergencies. The construction of the dock on Lake 1 near the existing boat ramp will be close to other City storage facilities and is a central location on the Lake to improve time in emergency situations.

Action PHS.8: Emergency Access. Ensure Lake 2 has proper emergency services access and accommodations.

To allow water patrols to respond to emergencies on both lakes, the connecting canal should remain open to emergency services unless water conditions prevent boat access due to water depth. To ensure emergency services have adequate access regardless of water levels, the boat launch area of Lake 2 should be improved and the kayak/canoe boat launch area should be of sufficient size and quality to allow for City watercraft to tie up in the case of responses.

Action PHS.g: Police Services. Reserve space for a future substation to serve the study area when calls for service volumes increase.

While calls for police service originating from the study area are limited today, as reprogrammed recreation areas attract more overnight visitors and the population increases, the number of calls will likely increase as well. This may necessitate a police squadron dedicated to patrolling the study area. A joint-use facility with fire/emergency services may reduce costs and travel times by providing a central location to rest during patrols and to store vehicles or other police equipment.

Action PHS.10: Fire Services. Reserve space for a future fire station in the study area when calls for service volumes increase.

While the current fire/EMS calls for service originating from the study are limited, as reprogrammed recreation areas attract more overnight visitors and the population increases, the number of calls will likely increase as well. Although routes to the study area may be improved to allow for quicker response times, a fire station in the study area would allow for the quickest responses. The City can partner with surrounding communities to fund and staff the development of a future fire station. Incremental steps can be taken to establish a fully functional fire station. For example, in the near term a site can be used to stage equipment, followed by a fully staffed fire/EMS station.

Action PHS.11: Camp Hosts. Utilize "Camp Hosts" to monitor campgrounds.

Camp hosts are used to assist with the managing of camping and RV parks. Camp hosts stay at the campgrounds for a season, usually for free or for a small stipend, and assist with regular maintenance and running of the camps. They can be used to supplement staff needs, and act as an on-site system of security. This system is commonly used in national parks and similar types of parks throughout the United States.

Action PHS.12: Public Safety Housing. Include housing for public safety at campground locations.

In addition to the use of camp hosts, public safety housing can be included in overnight campgrounds. Public safety housing, or smaller on-site housing for police or safety officers, can be offered in return for a police officer staying on site at the campground. While a police officer may not be required to perform duties off-hours, the police vehicle and overall presence will improve the perception of safety. Action PHS.13: Recreation Area Access. Install gate-controlled access to recreation areas.

All public park areas should have gated entry. A gated entry system will collect parking fees, limit the number of users within each park area and on the lake, and improve safety at the parks. The City can use timed-use permits with printed tickets during the busy season to meet capacity constraints, use a entry ticket system at gates, or surface parking stations with a phone-based application to help monitor and pay for parking. When deciding which type of payment system to install, there will be several factors the City will need to consider. There may be increased maintenance and operations, the need for personnel to monitor the gated access, initial infrastructure costs, and lot capacity review systems.

Action PHS.14: Code Enforcement Officer. Create a new code enforcement position to proactively monitor and enforce regulations.

To enforce code compliance around the lake, additional code enforcement staff and equipment will be needed. This includes additional full-time staff positions, a vehicle to travel around the lake, and a boat or drone to monitor the lake shore requirements.

Action PHS.15: Code Enforcement System. Improve reporting and monitoring systems for code enforcement cases.

The existing system to report and monitor code enforcement cases is not transparent or straightforward. Technological improvements to the system can assist with workflow, transparency, and efficiency. By improving the system for City staff, as well as residents, will help ensure the timely response and aid the City in managing the case status, types of cases, and locations of violations.



Gated entry systems can be used to ensure the parks are not overburdened, and prevent illegal parking. A variety of systems can be used, including timed gates with a payment station, parking ticket entry systems, and gates that also open automatically for annual permit holders. The City will need to consider various costs associated with gated access prior to determining which route to pursue.



Campground hosts are used in national and state parks around the United States to help enforce rules and regulations of campgrounds, assist with minor maintenance needs, and check-in campers. This system helps reduce full-time staffing needs during the peak season.

Figure 5.6, Public Health and Safety Strategies Table

Strategy Number	Strategy	Strategy Type	Time- frame	Estimated Cost Range	Implementing Agency	Partnerships	Guiding Principle	Corresponding Strategy
Policy &	Programs							
PHS.1	Public Safety District. Determine the feasibility of a public safety district to supplement police and fire resources.	Revenue	L	\$	City Manager's Office	Fire/EMS, Police	Ρ	
PHS.2	Police Presence. Continue enhanced police presence at the Lake parks during summer months.	Policy	0	\$\$\$	Police		Ρ	
PHS.3	Boat Stickers. Institute sticker permits for all boats to aid in law enforcement.	Revenue	0	\$	Parks and Rec - Public Works	Police	Р	R.6
PHS.4	Derelict Docks. Implement an additional fee for the public removal of derelict docks.	Policy	S	\$\$	City Manager's Office	Finance, City Commission	N, P	
PHS.5	Code Enforcement Process. Adopt proactive code enforcement measures related to the protection of the lake shore.	Regulation	S	\$	Engineering	Community Development	G, N	NR.2
PHS.6	Dock Permits. Require annual dock permit renewal with inspections to ensure the safety and quality of docks	Regulation, Revenue	0	\$	Engineering	City Manager's Office	R	NR.5
Investm	ents							
PHS.7	Police Dock. Construct a police dock on Lake 1 with a new patrol boat and unit to monitor the lakes.	Capital, Operational	S	\$\$\$\$	Police		Ρ	
PHS.8	Emergency Access. Ensure Lake 2 has proper emergency services access and accommodations.	Capital	Varies	\$\$\$	Police	Engineering	Р	

Strategy Number	Strategy	Strategy Type	Time- frame	Estimated Cost Range	Implementing Agency	Partnerships	Guiding Principle	Corresponding Strategy
PHS.9	Police Services. Reserve space for a future substation to serve the study area when calls for service volumes increase.	Operational	L	\$\$\$	Police		P, G	
PHS.10	Fire Services. Reserve space for a future fire station in the study area when calls for service volumes increase.	Partnership, Capital	L	\$\$\$\$	Public Works	Finance, Fire/ EMS	P, G	
PHS.11	Camp Hosts. Utilize "Camp Hosts" to monitor campgrounds.	Operational	L	\$\$	Parks and Rec - Public Works	Finance	P, R	R.27
PHS.12	Public Safety Housing. Include housing for public safety at campground locations.	Capital	L	\$\$\$	Parks and Rec - Public Works	Police	P, R	
PHS.13	Recreation Area Access. Install gate- controlled access to recreation areas.	Capital	0	\$\$\$	Parks and Rec - Public Works		Ρ	R.3, R.15, R.18, R.20, R.25, R.28
PHS.14	Code Enforcement Officer. Create a new code enforcement position to proactively monitor and enforce regulations.	Operational	S	\$\$	Engineering	Finance	G, P	
PHS.15	Code Enforcement System. Improve reporting and monitoring systems for code enforcement cases.	Operational	0	\$\$	Engineering	Community Development, Finance	G	

*<u>Types of Strategies:</u>

Study: Follow-up analysis or investigation required to determine the best solution. Regulation: New regulation or change to existing regulation requiring City Council action. Policy: New or modified formal process or procedure that guides City decisions. Partnership: Formal or informal agreement with an external entity to pursue shared goals. Revenue: New fee or revenue collection opportunity to support public projects. Program: A city initiative related to education, recreation, or sports. Capital: New or modified capital expenditure for a project.

Operational: New or modified program or staffing arrangement.

**<u>Timeframe:</u>

S - Short-Term: 1-3 years M - Mid-Term: 3-5 years L - Long-Term: 5+ years O - Ongoing or Immediate

***Cost Considerations:

\$ - Less than \$50K \$\$ - \$50K - \$100K \$\$\$ - \$100K - \$500K \$\$\$\$ - \$500K - 2M \$\$\$\$ - \$00re than 2M N/A - Operation of policy change - no significant additional cost

****Guiding Principle:

R: Provide beloved and beneficial recreational amenities P: Facilitate the efficient delivery of public services N: Embrace the stewardship of our natural resources G: Promote fiscally responsible growth patterns

NATURAL FEATURES

As the Twin Lakes serve as Shawnee's primary source of drinking water as well as a recreational facility, it is critically important to preserve the quality of the water and environment. Shoreline erosion and sedimentation were noted as key issues during the planning process,

The strategies necessary to unsure the long-term quality of the City of Shawnee's drinking water supply include recommendations on lake usage and restoration, improvements to the City's Code of Ordinances, and educational opportunities around the lakes.



Strategic shoreline restoration activities are necessary to reduce ongoing erosion on the banks of Lake 1.

POLICIES & PROGRAMS

Action NR.1: Boating Access. Establish "No Wake" zones on Lake 2.

To protect the quality of the lakefront parks on Lake 2, "No Wake" zones should be implemented within 100 feet of any lakefront park and within the channel. No Wake" zones reduce wave impacts on the shoreline, which reduces shoreline erosion. Fewer waves and slower traveling boats improve swimming safety.

While ideally motorized boat access should be limited on Lake 2 to protect shoreline stability and water quality, No Wake" zones are an incremental step for long-term preservation of Lake 2.

Action NR.2: Lake Protection Zone. Update the Lake Protection Zone Regulations (Ch. 22 of the LDC):

- Require that all lakefront properties are subject to the lake shore conservation regulations, whether leased, privately owned, or owned and maintained by the City
- Increase the depth of the Lake Protection Zone to at least 35' from the mean high-water line
- Require setbacks from the ordinary mean high-water line of 50' for any primary structures and 35' for any secondary structures
- Prohibit the removal of healthy native vegetation within 25' of the mean high-water line
- Prohibit the construction of seawalls and similar hardscaping
- Require a minimum setback of 75' for any septic systems from the mean high water line, and require annual inspections and permits.

The regulation of the shoreline is in the interest of public health, safety, and welfare of a community. A healthy shoreline contributes to water quality and environmental preservation. The current shoreline composition is a mixture of manicured landscaping, native grasses, and seawalls, which can be unappealing to view and contribute to higher rates of shoreline erosion and degradation of water quality. Shoreline control measures can reduce severe erosion, protecting property values and reduce sediment in the water. Action NR.3: Infrastructure Connections. Require connections to wastewater when available for properties in the area to limit septic tanks near the lake shore.

Septic systems near the City's primary water source require regular monitoring and inspections to ensure they are functioning properly. If not monitored, they could allow waste to leech into the lake, creating extra contamination to the drinking water. As sewer becomes available (see Action U.7 on Page 100), connections to the system should be required to reduce the possibility of human waste entering the Twin Lakes.

Action NR.4: Zebra Mussels. Increase education and outreach to reduce the impact of Zebra Mussels.

Zebra mussels are invasive mollusks that are harmful to local ecosystems and can clog pipes. They filter algae and attach onto other mollusks, and surfaces, which can kill the native species and clog pipes, causing damage to water, sewer, and stormwater systems. They are nearly impossible to eradicate once found in a lake, however measures can be taken to reduce the prevalence and spread. Additional education measures can be taken to inform residents of their presence, impact, and ways to help stop the spread, which may include news releases or additional signage at lakes and boat storage facilities.

Action NR.5: Low Impact Development. Adopt stronger standards to protect the watershed, such as the utilization of "Low Impact Development" techniques for developments near the lakes, and increased buffers around established floodplains.

Non-point source pollution can run into larger waterways through streams and creeks. To protect the water quality of the Twin Lakes, all new development should ensure the stormwater is managed and treated on property to reduce pollution entering the City's source of drinking water.

Methods to manage stormwater run-off for larger developments can reduce pollutants in the water. Low-impact development (LID) techniques may include rain gardens, bioswales, pervious pavement, rain cisterns, and similar methods. LID should supplement the stormwater management system and help treat run-off before it re-enters aquifers or larger water bodies. Stormwater retention and detention ponds can include native vegetation and aquatic life to help clean the water.





On-site stormwater management can include activated stormwater retention ponds (top picture), rain gardens (bottom picture), or similar methods that utilize native plants and soils to filter and treat stormwater. These methods can reduce run-off into the lakes of untreated water, protecting water quality and reducing localized flooding. Action NR.6: Informational Signage. Incorporate informational signage and educational opportunities related to natural features and ecosystems.

Educational programs and events, such as summer camps, interpretive signage, and programs can be used to teach residents and visitors about the importance of natural resource conservation, water systems, and the natural environment. Summer camps can be available for children and could include camping, swimming, hiking, and exploration of the conservation areas around Lake 2. Interpretive signage can be located along trails, at boardwalks or pavilions, or along the lake shore to teach visitors about native plants, animals, and water systems. These amenities and programs can encourage regular use of parks, increase knowledge, and provide more things to do in parks around Twin Lakes.

Action NR.7: Partnerships. Identify partnerships to help with lake shore restoration.

Identify community groups to help volunteer with shoreline restoration. As water from Lake 1 is drawn down, there will be more opportunities to help replant and stabilize the shoreline. Having volunteers assistance will reduce the City staffing needs and help build ownership and shared responsibility for the lake quality, build resident interest in the lakes, and create community champions. Volunteer groups can also assist in the long-term maintenance of the shoreline through hosting volunteer days, or by "adopting a shoreline" to clean and maintain. Schools can teach classes on the shoreline and assist with restoration efforts. To gain local interest in restoration projects, the City can send out press releases, fliers, and broadcast on local radio and television stations.



Parks can incorporate educational signage to help teach residents about nature, the environment, or other outdoor systems. These opportunities can encourage exploration of parks and educate residents and visitors.

INVESTMENTS

Action NR.8: Shoreline Restoration. Restore the shoreline in areas where there are current beaches that will be relocated, or in any area which may need shoreline restoration that's City-owned. Restoration measures should include the use of native vegetation that will support long-term water quality and reduce erosion.

With the recent anomalies found on the Lake 1 Levee, there will be opportunities to restore the shore line and native vegetation. This may include at city parks where current swimming beaches will be relocated, or where significant erosion has occurred. Restoring the shoreline can help stabilization, provide a sanctuary for local ecology, ensure long-term water quality, and mitigate the impacts of stormwater run-off. The City can use a variety of native plants, which not only support aquatic life, but can also attract butterflies, bees, birds, and other types of terrestrial life.

Action NR.9: Infrastructure Debris. Remove infrastructure debris (i.e., Walker Road culvert) from the lake shore.

There are areas where infrastructure debris, such as failing roads, have fallen into the water. These features can create hazards for lake users and impede water flow. The removal of debris can assist in long-term water quality and safety along the lake shore.

Action NR.10: Cleaning Station. Construct an off-lake water cleaning station to reduce the spread of zebra mussels.

The spread of zebra mussels can be increased when boats with zebra mussels attached to them enter waters, or when boats are cleaned and the zebra mussels travel to water bodies through pipes. In addition to signage to inform lake users of the spread and impact of zebra mussels, the City can construct an off-lake cleaning station for boats or ensure other cleaning stations at boat storage places have protective measures against the spread of zebra mussels. This may include the use of ponds adjacent to cleaning stations which do not have pipes or other measures to move the water away from the cleaning station.

Action NR.11: Staffing. Ensure there is adequate staff to review permits and inspections for boat docks and septic systems.

Additional full time staff positions may be necessary to ensure all permits and inspections for water-quality and safety measures are enforced in a timely manner. This may include new building permit or inspection specialists who can review dock permits, septic systems, and similar permits near the shore line.



Shoreline restoration efforts support local ecology and beautification. Lake Phalen (shown above¹) solicited community volunteers to participate in a large-scale shoreline restoration effort. Together, the community restored over 1.2 miles of shoreline. The effort used a mixture of native plants, riprap, and limestone to restore areas that had been significantly impacted by erosion and stormwater run-off. The area has seen an increase in local ecology and reduced shoreline erosion as a result of the project. The community was heavily involved and still invested in the outcome of the project.

1: Photo Source: https://stormwater.pca.state.mn.us/index.php?title=Lake_Phalen_shoreland_restoration_-_shore_restoration_of_a_high-use_urban_lake

Figure 5.7, Natural Features Strategies Table

Strategy Number	Strategy	Strategy Type	Time- frame	Estimated Cost Range	Implementing Agency	Partnerships	Guiding Principle	Corresponding Strategy
Policy 8	Programs							
NR.1	Boating Access. Establish "No Wake" zones on Lake 2.	Policy	0	N/A	City Manager's Office	Police	R, N	
NR.2	Lake Protection Zone. Update the Lake Protection Zone Regulations (Ch. 22 of the LDC).	Regulation	0	N/A	Community Development	City Manager's Office	Ν	
NR.3	Sewer Connections. Require connections to wastewater when it's available for properties in the area to limit septic tanks near the lake shore.	Policy	L	N/A	Utilities	Engineering	P, N	
NR.4	Zebra Mussels. Increase education and outreach to reduce the impact of Zebra Mussels.	Program	0	\$	Parks and Rec - Public Works		N	
NR.5	Low Impact Development. Adopt stronger standards to protect the watershed, such as the utilization of "Low Impact Development" techniques for developments near the lakes, and increased buffers around established floodplains.	Regulation	S	N/A	Community Development	Engineering	Ν	G.8
NR.6	Informational Signage. Incorporate informational signage and educational opportunities related to natural features and ecosystems.	Program	S	\$	Parks and Rec - Public Works		N, R	
NR.7	Partnerships. Identify partnerships to help with lake shore restoration.	Partnership	0	N/A	Parks and Rec - Public Works		N	

Strategy Number	Strategy	Strategy Type	Time- frame	Estimated Cost Range	Implementing Agency	Partnerships	Guiding Principle	Corresponding Strategy
Investm	ents							
NR.8	Shoreline Restoration. Restore the shoreline in areas where there are current beaches that will be relocated, or in any area which may need shoreline restoration that's city-owned. Restoration measures should include the use of native vegetation that will support long-term water quality and reduce erosion.	Capital	S	\$\$	Public Works	Engineering	Ν	
NR.9	Infrastructure Debris. Remove infrastructure debris (i.e., Walker Road culvert) from the lake shore.	Capital	Μ	\$\$\$	Public Works		N, P	
NR.10	Cleaning Station. Construct an off-lake water cleaning station to reduce the spread of zebra mussels.	Capital	L	\$\$\$	Parks and Rec - Public Works	Engineering	Ν	
NR.11	Staffing. Ensure there is adequate staff to review permits and inspections for boat docks and septic systems.	Operational	0	\$\$	Engineering	Finance	R	NR.2, PHS.6

*Types of Strategies:

Study: Follow-up analysis or investigation required to determine the best solution. Regulation: New regulation or change to existing regulation requiring City Council action. Policy: New or modified formal process or procedure that guides City decisions. Partnership: Formal or informal agreement with an external entity to pursue shared goals. Revenue: New fee or revenue collection opportunity to support public projects. Program: A city initiative related to education, recreation, or sports. Capital: New or modified capital expenditure for a project. Operational: New or modified program or staffing arrangement.

**<u>Timeframe:</u>

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PLAN IMPLEMENTATION AND ADMINISTRATION

The Twin Lakes Master Plan is an addendum to the Shawnee Next Horizons Comprehensive Plan. As such, this report presents methods to interpret and apply the Twin Lakes Future Development Plan to future land use and development decisions. Successful Plan implementation, however, requires more. As principal Plan Administrator, the City of Shawnee will be responsible for Plan coordination, monitoring, education, and amendments – all activities that must be closely aligned with comprehensive plan administration.

ROLES AND RESPONSIBILITIES

As official policy of the Shawnee Mayor and City Commission, implementation of the Twin Lakes Master Plan is a shared responsibility of all municipal departments, boards, and commissions.

CITY DEPARTMENTS

The Community Development Department is responsible for day-to-day administration of this Plan. The City Manager's Office will ensure that all other City departments are responsive to ongoing plan administration needs. City plan administration includes:

- Managing the day-to-day implementation of the plan.
- Supporting and carrying out the capital improvement planning efforts
- Drafting new or amended land development regulations consistent with the plan
- Conducting additional studies and plans
- Reviewing applications for consistency with the Plan
- Providing a progress report of implementation to elected and appointed officials on a regular basis

BOARDS AND COMMISSIONS

The Shawnee Board of Adjustment, Planning Commission, and other appointed bodies will render decisions that promote the intent of this Plan.

- **City Council.** Adopt amendments related to zoning, development regulations, and similar regulatory measures, guide policy decisions associated with the plan. Identify funding opportunities and align priorities from the plan with the City's budget.
- **Board of Adjustment.** Review and make final decisions related to any variances from the zoning regulations or code of ordinance related deviations.
- **Planning Commission.** Review and make recommendations to City Council related to the zoning, development, and other planning related recommendations found within this plan.
- Beautification, Parks, and Recreation Committee. Review and make recommendations to City Council related to the implementation of recreation-related strategies identified in this plan, including budget, park design, and prioritization of strategies.

IMPLEMENTATION METHODS

The three primary tools for implementing a long-range growth and development plan include policies and programs, municipal code updates, operating budgets, and capital programming.

- Policies and Programs. Various policies and programs are outlined in the work program. When the policies are brought before elected bodies, there should be a direct reference to the applicable policy
- Development Process. To implement the Twin Lakes Master Plan, amendments will need to be made to municipal codes. The development review process will consider applicable Plan principles and recommendations.
- Operational Budget. Fees adjustments and revenue allocations may decrease deficits in providing public services.
- Capital Programming. Capital project lists should align with recommended Plan investments.

MONITORING THE PLAN

City staff will monitor and report on the progress of Plan implementation. These activities ensure that the City is addressing Plan commitments and adjusting course as necessary.

ANNUAL PROGRESS REPORTS AND AMENDMENTS

As part of the ongoing implementation process, benchmarking and monitoring should take place regularly. Annual progress reports should include a status update on implementation, important actions and accomplishments that occurred over the previous year, and identify recommendations for the upcoming year.

Map amendments may occur in conjunction with the development process. General amendments may be considered as part of the annual reporting process.

FIVE YEAR PLAN UPDATE

A five year update evaluates the original assumptions regarding growth and development trends, emerging issues, and determines if the remaining action plan is still relevant. The five year update should include:

- A summary of plan amendments and accomplishments to date
- Changes in trends and development patterns since plan adoption (i.e., changes in predicted growth rates, demographic composition, community attitudes, availability of resources, or other political, environmental, or social issues
- Conflicts between decisions made and implementation actions yet to be undertaken
- Changes in state law, procedures, or programs which impact implementation actions
- A review and update of the Implementation Action Plan

TEN YEAR PLAN UPDATE

The plan should be taken through a full update after 10 years. This should include the elements included in the five-year plan update as well as:

- Community visioning and re-engagement
- Evaluation of action items that have yet to be considered
- Re-analysis of the issues and trends related to growth and community development
- Review of the fiscal analysis for the study area related to development patterns
- A new plan of action reflective of the refined vision for the future.

PREPARED IN ASSOCIATION WITH:



111 N. Lee Avenue, Suite 400 Oklahoma City, Oklahoma 73103

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