

Section 3 Environmental Resource Protection Recommendations

Previous Parks, Recreation, and Open Space Master Plans focused primarily on public parkland. During the Southlake 2025 process, environmental sustainability and open space preservation were identified as central goals. These goals cannot be adequately addressed through the consideration of public property alone. Accordingly, this update of the Parks, Recreation, and Open Space Master Plan also addresses environmental concerns and provides environmental protection recommendations for private property.



Of special consideration are the existing undisturbed, natural areas in city parks such as Bob Jones Parks. Because of its proximity to environmentally sensitive U. S. Army Corps of Engineers property, Bob Jones Park is a tremendous asset to the city, in that it provides a range of active and passive recreational opportunities, including nature center and environmental preservation areas. To the extent possible, any future development within Bob Jones Park should be directed towards passive recreational opportunities that are wholly compatible and consistent with the continued preservation of those natural resources. Likewise, development in all of the parks should strive to minimize the environmental impact and to preserve natural areas when possible and practical. City Staff, in conjunction with the Park Board and community groups should evaluate the potential for placing a conservation easement over portions of Bob Jones Park to implement the above conservation goals including the creation of a Cross Timbers habitat in areas of Bob Jones Park.

The following sections consolidate and expand upon the recommendations for environmental resource protection found in the Southlake 2025 Plan – Phase II area plans. The purpose of this consolidation is to place the recommendations in the context of the city and its region. This chapter and its accompanying map, known collectively as the Environmental Resource Protection Plan, serve as a guide for environmental decision making in the city. In particular, the Environmental Resource Protection Plan should be consulted when considering any new development.

Floodplains, Wetlands, and Streams

Protect and conserve the unique natural resources in Southlake and the Corps of Engineers areas. This applies not only to designated natural areas, but also to floodplains and other areas outside the park system. Natural, undeveloped floodplains, wetlands, and streams can add aesthetic value, provide habitat, and reduce flooding. The following recommendations were developed to protect these resources:

- Rehabilitate/protect stream corridors in conjunction with new development. Use the 100-year floodplain as an asset to development. Allow floodplains, wetlands, and streams to remain in a natural state. Consider alternative site design, such as clustering, to protect floodplains. *Protecting stream corridors reduces storm water runoff and reduces flooding. If protected in conjunction with an open space plan, protected stream corridors can add value to private development. Further, natural drainage systems reduce pollutants in runoff and provide valuable wildlife habitat.*
- Preserve a tree buffer adjoining floodplains, wetlands, and streams. Trees and vegetation within 20 feet of the stream corridor should remain in a natural state. *Trees provide habitat, add aesthetic value, reduce erosion, and reduce runoff volume. They also serve as a runoff “filter”, reducing the amount of pollutants entering waterways. In addition, trees provide natural shading that helps to protect water temperature – an important aspect of water quality for plants and animals.*
- Encourage the development of pedestrian greenways along creeks and floodplains to provide non-motorized access and connections from adjoining neighborhoods to commercial developments, schools, and parks. *The city has made a commitment to protect floodplains and to provide a network of pedestrian and bicycle facilities. Stream buffers provide open space that may be utilized for trails. Emphasis should be placed on continuous open spaces to provide for wildlife habitats.*
- If wetlands exist on property proposed to be developed, assurance or proof of compliance acceptable to the city must be provided at time of application that all federal regulations are met pertaining to the protection and mitigation of such areas. *Identify and protect wetland habitats.*
- Provide development incentives to protect the stream corridor as a natural drainage channel. Develop regulations that allow for creative and flexible site design that is sensitive to the stream valley.
- Encourage placement of floodplains and creeks into conservation easements.
- Market the community wide benefits of conserving the natural resources and enhancing the assets of Lake Grapevine.
- Recommend the Park Board and city staff to evaluate placing conservation easements over certain portions of Bob Jones Park to protect identified environmentally sensitive areas while providing for passive recreational uses that are compatible with conservation goals.

- Evaluate the feasibility of designating portions of Bob Jones Park as a Cross Timbers preservation area.

Trees

Aside from their aesthetic value, trees improve air quality, protect water, reduce energy consumption, reduce surface temperatures, and increase property values. Amend the city's pertinent development regulations, including the Tree Preservation, Zoning, and Subdivision regulations to provide appropriate standards and incentives to:

- Protect and preserve wooded areas where appropriate. Consider creative site design to maximize tree preservation.
- Preserve tree buffers adjacent to floodplains.
- Preserve tree buffers adjacent to neighborhoods. *Trees provide privacy, add aesthetic value, and help to shield neighborhoods from noise and light from surrounding developments.*
- Maintain existing vegetation adjacent to roadways when wooded areas are developed. Retain tree cover along rural cross-section roadways. *Trees along streets serve as a buffer between pedestrians and vehicles. In addition, a tree-lined street tends to enhance the perception of a street as narrow, slowing people down. Further, retaining tree cover will help to preserve rural character.*
- Protect significant wooded areas as identified by the Environmental Resource Protection Map. The map should provide decision makers a guide to the identification of significant and contiguous resources to be protected.

Topography and View Sheds

Existing development in Southlake has not always been sensitive to topography and view sheds. However, a significant portion of undeveloped land in Southlake has gently rolling slopes and view sheds. In an effort to preserve these remaining areas, the following recommendations are made:

- Adapt development to the topography rather than topography to the development. Large retaining walls are discouraged. *Maintaining the existing topography helps to preserve trees and other vegetation.*
- Incorporate significant landscape features into new development.
- Preserve view sheds that add value to development.
- Amend development regulations to provide appropriate incentives to protect identified areas of steep slopes and view sheds.

Water Quality

Protecting the aquifer recharge areas in Southlake is critical to protect ground water sources over the long-term. To that end the following recommendations to protect water quality are made:

- Protect the city's surface and groundwater sources from contamination by preserving tree buffers adjoining the floodplain corridor.
- Develop regional stormwater retention areas in conjunction with existing ponds and water bodies. *Retention areas detain stormwater and release it at a constant rate, minimizing erosion and the potential for flooding. Further, detaining stormwater gives physical, chemical, and biological processes time to work on pollutants.*
- Minimize impervious surfaces in new developments. Consider creative site design, such as clustering, to reduce impervious surfaces. *Impervious surfaces increase runoff volume, alter stream flow, reduce groundwater recharge, and increase stream sedimentation, all of which degrade water quality. Reducing impervious surfaces will help to decrease the impact of non-point source pollution through runoff. In fact, traditional suburban development can produce storm runoff almost 50% greater than more compact development.*
- Encourage the use of native and adapted plants in landscaping. *Natural vegetation can reduce runoff, provide habitat, and reduce water consumption. Compared to traditional landscaping, natural landscaping requires less maintenance and may improve air quality by reducing air emissions from lawn and garden equipment.*
- Create a water protection resource ordinance. Such an ordinance would provide incentives for development to follow best management practices (BMPs) for protecting water quality and reducing impervious surfaces, run-off, and water consumption. Development standards would seek an effective way to collect, store and use surface and groundwater data.
- Continue the development of education programs which provide information to the public regarding the protection of both surface and ground water.
- Adopt Groundwater Assessment Standards for proposed developments. Incorporate adopted standards into the subdivision ordinance.

Rural Character

Aesthetic and economic values of low-intensity rural ranching uses are significant. Open space also commands property value premiums and its preservation/conservation should be encouraged. The Southlake 2025 Plan – Phase I and II emphasize the protection of the city's rapidly eroding rural character through the following recommendations:



- Protect the city's remaining ranching/agricultural and environmental areas by requiring residential development to occur in a manner that has the minimum impact on these resources.
- Amend development ordinances to encourage conservation developments and purchase of development rights programs to encourage open space preservation.

Air Quality

Air quality is a serious problem in North Central Texas that can impact quality of life by causing health problems, damaging natural resources, and damaging property (oxides rust iron and damage building stone). Accordingly, the following air quality recommendations are made:

- Encourage mixed use developments to reduce travel miles. *Automobiles are a key source of air pollution in the area.*
- Develop the infrastructure for and encourage the use of alternative travel options, such as walking and biking.
- Protect existing tree cover and plant more trees. *Tree leaves remove ozone, nitrogen dioxide, carbon dioxide, and particulate matter from the air.*
- Encourage the use of low maintenance landscaping. *Low maintenance landscaping using native and adapted plants reduces the use of gasoline-powered lawn and garden equipment that contribute to air pollution.*

Solid Waste

Population growth leads to an increase in the generation of solid waste. Further, the increasing urbanization of the Dallas Fort Worth Metroplex is expected to limit the area's solid waste disposal options, such as building new landfills or expanding existing landfills. According to the North Central Texas Council of Governments (NCTCOG), landfill disposal capacity in the Dallas-Fort Worth Metroplex (including Tarrant, Dallas, Kaufman, Ellis, and Johnson counties) is expected to be an issue as early as 2020. The simplest way to increase the longevity of existing landfills is to reduce the flow of waste entering them. To achieve solid waste reduction, the following recommendations are made:

- Encourage source reduction.
- Encourage the use of recycled or reused materials.
- Encourage recycling, including construction and demolition waste recycling.
- Encourage building deconstruction (rather than demolition).

Environmental Resource Protection Map

The Environmental Resource Protection (ERP) Map is a critical element of the implementation of the Environmental Resource Protection Recommendations.

Specifically, the ERP Map identifies priority areas for the protection of significant environmentally sensitive areas in the city. The emphasis is on establishing a contiguous network of open spaces between floodplains, city parks, private parks, linear parks, and greenways.

The purpose of the ERP Map is to identify important resources to insure that they are considered during the review of development proposals and to encourage the evaluation of individual resources in the context of a larger system. Accordingly, developers should consult the ERP Map as early as possible to incorporate environmental resource protection recommendations into their development proposals.

The ERP Map is not intended to hinder development, but rather insure that new development complements important natural resources. The ERP Map serves as a general guide that is flexible; the boundaries of resources are not intended to be regulatory nor all encompassing. Site specific conditions and the type of development may impact the exact locations and the extent of preservation. However, any proposal for resource protection included with a development application must be in harmony with the purpose and spirit of the Environmental Resource Protection Plan.

Section 4 Plan Development Process

Historical Perspective
Meeting Schedule

Plan Development Process

As stated in the introduction, Southlake citizens, city staff, and the development community take long-range planning very seriously and consider it to be one of the most intrinsic functions undertaken by elected and appointed officials in this municipality. The Parks, Recreation, and Open Space Master Plan has undergone some significant iterations in the past decade or more, and like any good plan, it has evolved and become more relevant with each examination. Below is a brief outline of the significant plan adoptions and updates of the Park Master Plan. This is a long range (20-year) planning document that is frequently updated to reflect changing needs and priorities and to meet the Southlake Charter requirement of four (4) year updates. The Community Services Department will make periodic reviews at least every two years throughout the four-year periods and make minor revisions as needed.

Specifically, the plan development process for the Parks, Recreation, and Open Space Plan followed two parallel tracks. The first track is the Southlake 2025 Plan Phase I and II and the second track is the Park Board planning process which involved developing park concepts and programming based on community input to meet Texas Parks & Wildlife Department (TPWD) standards. Several overarching goals, objectives, and recommendations as they pertain to parks, open space, and environmental resource protection were adopted by the City Council



as a part of the Southlake 2025 Plan, phase I and II. This effort provided the basis for:

1. Augmenting the Goals and Objectives section of this plan to better integrate parks and open space planning with other master plan elements, specifically the land use plan; and
2. Section 3 of this plan that consolidates the environmental resource protection recommendations from the area plans of the Southlake 2025 Plan – Phase II.

The Southlake 2025 Plan is the city's first comprehensive master plan. It is the blueprint for the physical development of the city for the next 20 plus years. This plan process began in October 2003 and was undertaken in two phases. Phase I was adopted in March 2004 and established a vision, and goals and objectives for the city. Phase II began in July 2004 and concluded in May 2005 with the adoption of the last area plan. Both phases included several meetings of the Southlake 2025 Steering Committee, the Southlake Planning and Zoning Commission, and the Southlake City Council. For more information on the Southlake 2025 Plan process, please visit the internet at: www.cityofsouthlake.com/2025/default.asp.

This plan has been prepared to also meet the guidelines for park and recreation system master plans set forth by Texas Parks & Wildlife Department (TPWD). TPWD provides a variety of matching grant programs, and approved plans enhance an applicant's chances of qualifying for matching grants for the implementation of projects.

Previous Parks and Recreation Master Planning:

1992 Parks, Recreation & Open Space Master Plan

- This was the City's first attempt to look at park and recreation resources in a comprehensive manner. At that time, the city's population was around 8,000, and the city owned 14 acres of park land, all in Bicentennial Park. The City's build-out population was projected to be more than 48,000, one-third more than the current projection. The recommended park acreage was six to ten acres per 1,000 population, which would have yielded 289 to 483 acres at build-out. Schrickel, Rollins and Associates, Inc. of Arlington prepared the plan.

1996 Parks, Recreation and Open Space Master Plan

- This plan updated land and facility inventory, planning and design criteria, plan recommendations and implementation sections of the original plan. The focus of the update was "on the preservation, development or enhancement of attributes important to reflect the native condition of the North Texas landscape that attracted residents to the community." By this time, Bicentennial Park had been expanded to forty-one acres and two neighborhood parks, Koalaty (5 acres) and Lonesome Dove (8 acres), had been acquired. Purchase of 131 acres of land for Bob Jones Park was contemplated. A park and recreation citizen's survey was designed and

administered by Glass & Associates. The park and open space standard was raised to 21 acres per 1,000 residents, almost double the regional standard. The update was prepared by the City of Southlake staff.

2001 Parks, Recreation and Open Space Master Plan

- o This plan update reflected the most comprehensive analysis of the Southlake park system and its potential for orderly development to date. The most important result to emerge from this study was 100% compliance with TPWD standards for parks master plans, which assured the maximum points available in that category would be available on any TPWD-sponsored grant submittals. All subsequent plans will conform to TPWD guidelines at a minimum in the future. This plan saw increases in the number of parks, park acreages, park inventories, comprehensive mapping, individual park conceptual planning, and prioritization of projects.

2004-2005 Plan Update Meeting Schedule

- o A large number of focus meetings were held during this most recent plan update. Most were broken down by user group topics of interest or geographically. The Southlake Program for the Involvement of Neighborhoods (SPIN), which employs a network of public meeting notification measures, hosted the focus meetings. In addition, periodic updates were presented at Planning and Zoning Commission work sessions in conjunction with the Southlake 2025 Plan meetings. The following is a listing of public meetings held as part of the plan update process:

12-06-04	Kick-off Meeting hosted by SPIN
12-13-04	Park User Survey Results and Analysis at Park Board
01-03-05	Open Space Planning hosted by SPIN
01-19-05	Athletics Forum hosted by SPIN
02-02-05	Southlake Youth Action Commission (SYAC)
02-07-05	Park Issues North of SH 114 (SPIN)
02-10-05	Daytime (2:00 p.m.) Meeting with Com. Svc. Groups
02-17-05	Park Board Work Session - Parks
02-21-05	Central Area Park Issues (114 to 1709) (SPIN)
02-23-05	Library Board / FOSL
03-02-05	Park Board Work Session - Parks
03-07-05	Southern Park Issues (South of 1709) (SPIN)
03-10-05	Joint Use Issues with CISD
03-11-05	Senior Advisory Commission
03-31-05	Park Board Work Session - Trails
04-11-05	Park Board Work Session
04-25-05	Park Board Work Session
05-02-05	Park Board Recommendations
05-09-05	Park Board Recommendations
05-31-05	Park Board Recommendations
07-21-05	P&Z Consideration
08-04-05	P&Z Recommendation
September 2005	City Council Adoption