

COMPREHENSIVE PLAN

City of Derby, Kansas



Future Land Use

Chapter 5 - Future Land Use

Land use and growth patterns are dictated by the physical circumstances presented by the specific geography of an area as well as various social, economic, and political forces that affect the community through time.

Introduction

The Future Land Use Chapter serves as a guide for planned and orderly growth of Derby. The major elements of this Chapter address how and where future development should occur in the Derby planning area. This includes limiting encroachment around the McConnell Air Force Base, identifying future growth areas and future land uses, and future land use recommendations.

The recommendations within this Chapter and **Chapter 6, Planning Principles and Design Guidelines** were shaped from valuable public input and discussion gained through a variety of public meetings, workshops, key person interviews conducted during the summer and fall of 2005. In addition, the Planning Commission provided additional review and guidance during the fall of 2005 and spring of 2006. Core planning ideas and preferences expressed in the public workshop were incorporated and used as a guide for preparation of the Comprehensive Plan. The recommendations of this Chapter should be used to shape future planning decisions as the Planning Commission and City Council collectively determine the future of Derby in cooperation with the citizens of Derby.

Key public meetings included a Focus Session and a Planning Policy Charrette. The following is a brief summary of the meetings, with complete summaries located in the appendices of the Comprehensive Plan.



Focus Session

In May 2005 the city sponsored a public Focus Session attended by planning commissioners, city council members and members of the general public. The group process, facilitated by the City planning consultant, identified and ranked critical issues facing Derby, as considered relevant to today's growth and future growth up to 25 years in the future. The issues were grouped into three general topics: "Quality of Life", "Economic Development", and "Future Land Use & Infrastructure." For a more complete summary of the Derby Focus Session see the appendices of the Plan (**Ref. Appendix A**).

Planning Policy Charrette

In June 2005, the same group of participants—joined by more community members—met in a “Planning Policy Charrette” workshop to build upon and address the critical issues identified during the Focus Session, and from other meetings and interviews with community members and key stakeholders. The “Planning Policy Charrette” was an interactive workshop with community members and key stakeholders designed to gain detailed insights about the issues impacting Derby and the preferred future of the community, while building consensus for community planning objectives and preferred “action strategies.”

The Charrette workshop was organized into teams, which also addressed issues grouped into the three general topics of “Quality of Life”, “Economic Development”, and “Future Land Use & Infrastructure”. Public input and discussion at the Charrette served as the basis for the future land use discussion, and for recommendations in **Chapter 4, Goals and Policies**. For a more complete summary of the Derby Planning Policy Charrette see the appendices of the Plan (**Ref. Appendix B**).



Quality of Life Issues: These issues influence the character and image of Derby and impact community assets that make Derby a desirable community for residents and visitors. While the definition of “Quality of Life” is subjective, the workshop session participants discussed topics addressing the need for “smart growth” and quality development; providing an adequate amount of parks and green space areas; maintaining a “small town” community atmosphere; and other characteristics that define Derby and make the community a desirable place to live, work and play. Parks, hike and bike trails, and proximity to the Arkansas River were identified as key assets for the community. Other key issues were the need to provide: affordable housing, adequate police and fire protection, and senior services. Participants also stressed the desire for the City of Derby and the Derby School District to foster and maintain good relationships.



Economic Development Issues: These issues related to retaining and attracting businesses and residents. Much of Derby’s current economic viability is based upon its citizens’ employment in manufacturing, education, and the health and social services sectors. Workshop participants recognized the community has limited ability to influence the national and global trends related its major employers. However, participants felt the Derby community should strive to position itself in a manner that will take advantage of future employment and population growth in the metropolitan area by enhancing the overall quality of life.

Charrette participants who focused upon economic development issues, strongly supported directing future community growth in a “smart” manner, based on an “effective” plan. Also, protecting McConnell Air Force Base from incompatible land uses was emphasized. It was further recognized that Derby must market its community strengths, and maintain affordable housing options in order to attract new residents and businesses to the community.



Future Land Use & Infrastructure Issues: These issues related to preferred development patterns and the intensity and the location of land uses in and around the City. Workshop participants recognized that Derby’s general growth pattern will mostly be focused to the east and northeast during the planning period. The expected growth will continue to create encroachment issues around McConnell Air Force Base, as well as possible conflicts with existing large acreages in the county’s unincorporated area. The key issues for future development and infrastructure identified by planning participants were related to the preferred

development pattern for Derby and the other jurisdictions in eastern Sedgwick County. Also, participants noted that new growth should occur in a manner that respects existing developed properties through growth plans and policies that minimize future conflicts.

5.1 McConnell Air Force Base Environs



A 2004 study using a 50-mile radius of the McConnell Air Force Base examined the direct economic impacts associated with expenditures related to on-base activities, as well as indirect impacts from jobs and expenditures within the area's economy. According to the study, payroll and annual base-related expenditures, combined with the estimated value of local wages in the affected area, resulted in an estimated total impact of over \$396 million in the area's economy due to the operation of the AFB.

For purposes of projecting future economic impact and development impact, the Comprehensive Plan assumes the McConnell AFB in the future will exert a stabilizing effect on the Derby economy (and the southeast Wichita MSA) given recent reaffirmations of commitment to the Base; and that, as a result, assumptions about continued growth—particularly in the retail and service commercial sectors—are valid.

Joint Land Use Study—JLUS

A Joint Land Use (JLUS) program and a final report prepared for the City of Derby, City of Wichita, and Sedgwick County was completed in May 2005 for the McConnell Air Force Base. One of the primary goals of the JLUS was to develop a *preferred land use plan* to guide future development on land within the area affected by operations at McConnell AFB and minimize potential future conflicts with McConnell's mission. Affected areas were defined by three distinct boundaries including, the Clear Zones/Accident Potential Zones (CZ/APZ), the 2004 Noise Contour Area, and the 1994 Noise Contour Area.

The JLUS report provides recommendations to address the "existing mission", as well as short-term and long-term recommendations for preserving the "maximum mission" capability (**Ref. Appendix C**). The JLUS indicates there is no need to regulate the larger noise impact area (1994 noise contours) with the existing mission activities of the KC-135 aircraft. However, at this time it is unknown if or when the missions at McConnell may return to the maximum mission with significantly more impacts. Therefore, the JLUS considered alternative land use strategies that allow for flexibility in land development and management activities around the Air Force Base.

Due to uncertainty of possible future mission changes at McConnell AFB, the JLUS recommends the cities' and county's future land use plans continue to be geared toward land use conflicts associated with the larger 1994 AICUZ areas. The JLUS further recommends that the future land use plans "*remain somewhat flexible at this time and the existing zoning remain in place for the next two or three years, or until such time as a more definitive determination is reached by the U.S. Air Force and/or the Department of Defense, regarding the long-term status of possible future missions at McConnell.*"

Two key recommendations impacting land use and development in the northern portion of Derby's planning area include the following:

- Continue to use and revise current regulatory requirements to manage growth within the Clear Zone (CZ)/ Accident Potential Zone (APZ) areas through the Zoning Ordinance, with some revisions to zoning regulations, existing standards, and as

appropriate the zoning of property to comply with federal Land Use Compatibility Guidelines (LUCG).

- Maintain Future Land Use Plans geared toward minimizing land use conflicts associated with the 1994 AICUZ areas. Future land use should remain somewhat flexible and existing zoning remain in place until a more definitive determination of the long-term future mission is reached.

JLUS Implementation Measures—City of Derby Response

In addition to land use plans and regulations, the City of Derby should consider economic-based responses to McConnell AFB development pressures. The first approach involves the use of a conservation easement with some features not found in conventional conservation easements. The City and County would create a “Farmland Trust Fund” for acquisition of development rights programs to pay farmers for the monetary value forgone by keeping farmland in crop production, primarily in the APZI and APZII areas south of the McConnell AFB runways. This economic tool would be combined with conservation easements that:

- require the owners to actively farm the land, and
- give the holder of the easement a purchase option that allows the resale price of the land to be limited to its agricultural value.

With the second approach the land is owned by a land trust or other nonprofit, which leases it to the farmer through a long-term, renewable, inheritable ground lease. Farmer-lessees are able to own houses, barns, and other improvements on the land. The lease limits the price for which the improvements can be sold and establishes land-use requirements, including the requirement that the lessees actively farm the land as a primary source of livelihood.

The City of Derby and Sedgwick County should partner with land trust organizations and other farmland preservationists to establish funds for purchasing development rights from farmers who own land in the APZI and APZII areas south of the McConnell AFB runways. The 2002 Farm Bill increased federal matching funds for such programs—typically on a 50/50 basis. More than 25 of the states in our nation have established state funds for matching federal farmland acquisition grants; however, to date the state of Kansas has not done so.

5.2 Future Land Use Expectations

Derby is projected to gain between 10,000 and 15,000 new residents by 2030 and single-family housing is expected to continue as the primary form of new residential development for new residents. However, changes in the overall new housing mix and home buyer demographics are expected to occur in the Derby housing market similar to nationwide trends. In years to come the changing face of home buyers will likely include an increased number of single professionals, married couples without children, senior citizens, and empty nesters. These changing homeowner demographics will result in smaller overall household sizes.

Future development planning in Derby must accommodate increasing demand for “maintenance-provided” housing, attached housing, and other owner-occupied multifamily housing products as the local and national home buying market evolves. There will be a growing market for those who prefer to spend their free time with activities other than yard care and home upkeep. In addition, higher development costs and increased open space preservation will necessitate new single-family housing

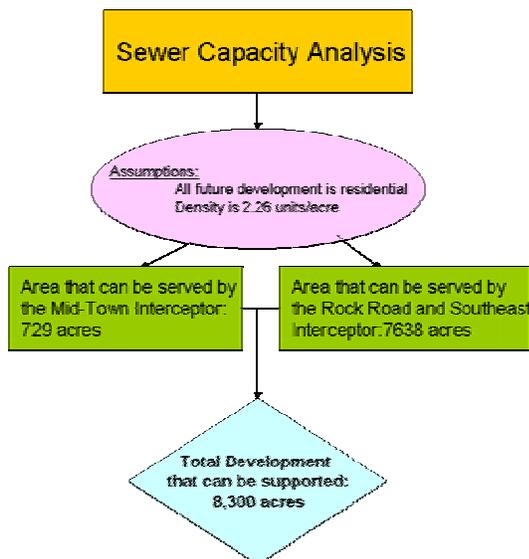
development areas in the community provide for smaller lots and somewhat higher densities in various locations.

In 2005 there was approximately 3,000 acres of developed land and approximately 1,100 acres undeveloped platted and zoned property within the city limits of Derby (**Ref. Existing Land Use Map, and Table 3.A, Chapter 3**). This land can accommodate a large portion of future growth in the immediate future. However, continued growth in Derby requires maintaining an adequate amount of land in the pipeline for future development with adequate public facilities as it is warranted for development by market demand.

The Comprehensive Plan future land use needs analysis considers future sanitary sewer capacity, population projections, residential density, number of persons per household trends, and land use market trends to identify the amount of land in the planning area which should be considered to accommodate future growth by 2030. Projecting future growth and land use needs is not an exact science and must be based on many different variables. However the Comprehensive Plan land use needs analysis provides a reasonable outlook for the area which can most efficiently be served with municipal services and for which future growth should be guided. It is reasonable to expect changing market conditions during the 2030 planning period will require adjustments to the land area designated for near-term and long-term development.

The future land use needs analysis considers two scenarios to calculate the amount of land which should be used as the planning area for growth by 2030. Scenario 1 is a general review based on the assumption that existing land use ratios and densities will continue unchanged in the future. Scenario 2 includes more detailed review of land use types and incorporates additional assumptions for changes in future land use needs. Both scenarios assume the same population growth and the same decrease in persons per household based on national trends. In addition, both scenarios include a multiplier of 3 to account for inefficient development, land use choice and undevelopable land such as floodplains or park lands. The multiplier acknowledges the market reality that growth will not occur completely contiguous due to market inefficiencies and other factors such as land owners unwilling to sell property for development. Land will also be absorbed at a faster pace than absolutely needed and long term development (beyond 2030) will fill in areas left undeveloped due to market inefficiencies during the 2030 planning period.

FIGURE 5.1: SEWER CAPACITY ANALYSIS



Sewer Capacity to Serve Future Development

The March 2006 City of Derby Sewer Capacity Analysis indicates the Mid-town Interceptor can serve up to 729 acres of development north of current city limits and the Rock Road and Southeast Interceptors can serve up to 7,638 acres east and south of current City limits without any major upgrades to the current sewer plant (**Ref. Chapter 3, Figure 3.1: Existing Wastewater Interceptor Lines and Future Capacity**). The methodology of the 2006 Sewer Analysis is outlined in **Figure 5.1**.

The 2006 Sewer Analysis’s basic assumption considered all future development to be residential and at a density of 2.26 dwelling units per acre. This assumption does not account for other land uses such as commercial, industrial, and higher density housing that will likely develop within

the planning area. Therefore the actual amount of land area which can be served without major sewer system upgrades will be less than the approximately 8,367 acres identified by the report.

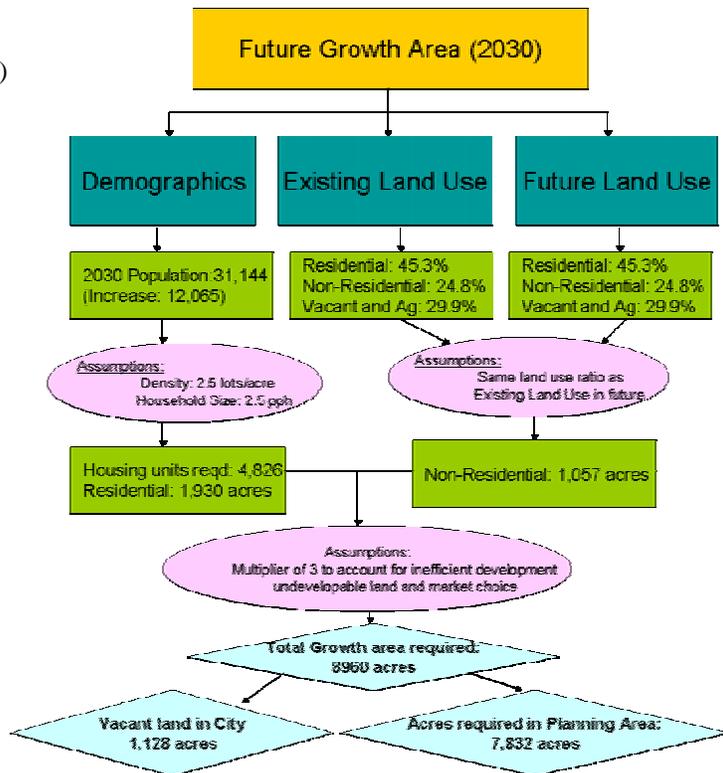
**Future Growth Area Needs Scenario 1:
(Using Existing General Land Use Assumptions)**

This analysis considers general land use categories for projecting future land use needs to serve Derby’s future population growth, and is based on the assumption that existing land use ratios and densities will continue unchanged in the future. The basic assumptions of this analysis include:

- 12,065 population increase by 2030.
- Overall future residential development density of 2.6 units per acre (current overall residential density in Derby for single family and multifamily combined). The overall combined residential density will consist of a mixture of single-family homes on conventional sized lots, single-family homes on smaller or cluster lots, and multi-family / attached housing.
- Overall household size (all residential types) to decrease over time from 2.9 persons per household to 2.5 persons per household, which reflects a closer alignment with the Census 2000 Wichita Metro Area ratio of 2.54.
- Similar ratio of residential land to non-residential land uses (approx. 45% residential, 25% nonresidential with the remaining 30% vacant or agricultural land).

This analysis outlined in **Figure 5.2** indicates a planning area of 7,832 acres should be considered for future growth by 2030, recognizing this land area calculation includes the multiplier to account for land that will not develop in the planning area by 2030. Long term development will continue to fill in the portions of the planning area that does not develop by 2030.

FIGURE 5.2: FUTURE GROWTH AREA (2030)



Source: BWR Corporation

Future Growth Area Needs Scenario 2: (Using Changing Future Land Use Ratios)

This analysis anticipates changes in Derby's future land use development patterns from those of existing established developments and incorporates an expanded review of land use types. Anticipated changes in future land use include a greater amount of nonresidential development per new resident such as with the addition of new big-box retail centers, office parks, and industrial uses. It also accounts for an increase in lower density attached housing products and a reduction in the number of higher density apartment complexes.

The basic assumptions in this analysis are:

- 12,065 population increase by 2030.
- Future single family residential development density of 2.26 units per acre (consistent with recent single family residential development densities in Derby).
- Future multifamily residential development density of 5 units per acre. This represents a density reduction from past development in Derby, primarily due to increased demand for lower density attached housing products such as town homes, row homes, condominiums, lifestyle communities etc., while still providing for limited amount of apartment building developments.
- Single family household size decrease over time from 2.92 to 2.69 persons per household.
- Multifamily household size decrease over time from 2.57 to 2.24 persons per household.
- Office and retail commercial development will consist of an increased square footage per new resident due to a less dense development pattern, and due to the likelihood of more regional office and commercial development in the emerging Rock Road and 63rd Street corridors.
- Industrial development will also require more square feet per new resident for similar reasons. Employment uses anticipated to develop in the area west of Rock road and south of McConnell Air Force Base will be larger than the businesses located in the city's existing industrial park west of K-15 Highway.
- Other non-residential uses such as institutional, public/semi-public, parks and open space will have similar land needs as existing facilities in Derby.

Table 5.A provides a summary of the calculations used in this analysis and indicates an area of 6,772 acres should be considered for the planning area to accommodate future growth needs by 2030, again recognizing this land area calculation includes a multiplier to account for land that will not develop during the planning period. It should be noted the lower land area needed for future growth in this scenario is primarily due to the assumptions related to single-family and multifamily household size. The 2.69 persons per household assumption for single-family housing which will accommodate over three-quarters of new housing development in the future results in a need for fewer total residential units and less land area than Scenario 1 which assumed a 2.5 persons per household for all residential types combined.

Table 5.A Future Growth Area Needs Scenario 2

	Existing Land Use Analysis			Future Land Use Area Projection					
	Acres	FAR (Assumed)	Sq.ft per resident	Vacant Land (Zoned)	Sq.ft per new resident	Multiplier	Gross Density	Total Acreage needed	Acreage needed in Growth Area
NON RESIDENTIAL									
Office Commercial	45	0.25	25		40	3		127	
Retail Commercial	138	0.25	77		80	3		253	
Total Commercial				312					276
Industrial/Warehouse/Mini-storage	62	0.3	41	30	60	3		158	148
Institutional, Public/Semi Public	166		368		370	3		293	293
Parks and Open Space	648		1,437		1,500	3		1,188	1,188
	Acres	Dwelling Units	Gross Density		New Dwelling Units	Multiplier	Gross Density	Total Acreage needed	Acreage needed in Growth Area
RESIDENTIAL									
Single Family	1,789	4,664	2.61		3,377	3	2.26	4,482	
Multifamily	144	1,266	8.77		1,078	3	5.00	647	
Total Residential				786					4,867
TOTAL Developed Area	2,992			1,128				7,148	6,772

Notes:

Floor Area Ratio Assumed is from similar development in the Midwest

2004 Population Estimate used to calculate sq. ft per resident: 19,646

2030 Projected Population is 31,144

Multiplier is assumed to account for inefficient development

$$\text{Total Acreage needed (Non Residential)} = \frac{\text{Sq.ft per new resident} \times \text{No. of New Residents} \times \text{Multiplier}}{\text{FAR} \times 43,560}$$

$$\text{New Dwelling Units (Single Family)} = \frac{\text{No. of New Residents} \times 0.79 \text{ (Percentage of single family housing in Derby)}}{2.69 \text{ (Census 2000 Persons/Household for Owner Occupied Housing Units in Wichita Metro Area)}}$$

$$\text{New Dwelling Units (Multifamily)} = \frac{\text{No. of New Residents} \times 0.21 \text{ (Percentage of multifamily housing in Derby)}}{2.24 \text{ (Census 2000 Persons/Household for Renter Occupied Housing Units in Wichita Metro Area)}}$$

$$\text{Total Acreage needed (Residential)} = \frac{\text{New Dwelling Units} \times \text{Multiplier}}{\text{Net Density}}$$

Source: BWR Corporation

Future Urban Growth Area:

The two future land use growth scenarios indicate that a planning growth area of between approximately 6,700 to 7,800 acres should be considered to accommodate growth by 2030 when factoring in market inefficiencies and other reasons that keep some properties from developing during the planning period. The recommended Near Term Growth Area to accommodate growth by 2030 is identified on the **Growth Area Map**.

The 2030 Near Term Growth Area provides for 6,700 acres of land to serve future growth outside the existing city limits. It must be noted that the Near Term Growth Area will not build out by 2030 and that the area will continue to experience development after 2030. It must also be recognized that the Near Term Growth Area is in addition to the

approximately 1,000 acres of undeveloped platted land within the city limits in 2005. The long term growth area should be considered the land area located beyond the area needed to accommodate growth in Derby by 2030, and generally identified as “Rural/Agricultural” on the **Future Land Use Map**.

New suburban acreage development should not be allowed in the Near Term Growth Area. Development in this area prior to urbanization is intended to be restricted to one unit per a minimum 20 acres unless otherwise approved as part of a cluster design subdivision setting aside land for temporary preservation until public utilities are available to accommodate redevelopment. Development at higher densities should only be allowed following the extension of public utilities. In any case, development should demonstrate the ability to redevelop at the time utilities can be provided to ensure that public services can be cost effectively extended in the future.

5.3 Future Land Use Plan

The Future Land Use Plan serves as a guide for the direction and magnitude of future growth, but at the same time accommodates changes in the market demands and our style of living. The **Future Land Use Map** is but one aspect of the Comprehensive Plan. The entire Comprehensive Plan, including the Land Planning Principles, should be referenced and considered when viewing the maps and for determining the appropriateness of zone change applications.

Future urban growth in the Derby planning area must also consider the possibility of a future “South Bypass,” the alignment for which (at least in concept as of today) would run between Derby and Mulvane. The “South Area Transportation Study” for the south part of the metropolitan planning area—as initiated by the Wichita Area Metropolitan Planning Organization (WAMPO) in summer of 2005—will determine the benefits of a South Bypass (and related regional transportation investments), their impacts on land use, and a preferred alignment and right-of-way requirements. This would all be contingent on whether a bypass is ultimately recommended. Clearly, any such major regional roadway that may be planned, funded, and built in the future (yet to be determined) would have a significant impact on Derby’s future land use and urban growth pattern east and south of the City.

The **Future Land Use Map** displays the generalized location of each land use. It is not intended to be used to determine the exact boundaries of each designation. The area of transition from one land use is often gradual. The Comprehensive Plan also encourages the integration of compatible land uses, rather than a strict segregation of different land uses. **Table 5.B** summarizes the land use acreages as identified on the **Future Land Use Map** for the unincorporated portion of the planning area.

Table 5.B: Future Land Use Map Acreages (Unincorporated Portion of Planning Area)

Land Use	Area in Acres
Employment-Industrial	905
General Commercial	44
Golf Course	124
Low Density Suburban Residential	1,159
Mixed Use	417
Mixed Use-Residential	1,042
Moderate Density Residential	4,227
Parks/Open Space/Floodplain	4,724
Public/Semi-Public	63
Rural Suburban Acreage	4,911
Rural/Agriculture	10,837

Source: BWR Corporation

FUTURE LAND USE PLAN MAP LEGEND

The following is a list of land use categories and their definitions as used in the Future Land Use Plan map. These projections are based on the population projections, land use planning principles, and development patterns identified by the Plan.

Parks/Open Space:

Areas of predominately active and passive parks, open space, recreation, environmentally sensitive areas, or any other lands reserved for permanent open space purposes. Land identified as preferred or acceptable areas for public parks are distinguished from other open space. This category includes woodlands, land within floodplains, and golf courses. Floodplains in Derby's future growth area should be preserved for open space, parks, wildlife habitats, natural preserves, golf courses, hike and bike trails, and storm water drainage.

Water Features:

This category includes rivers, streams, lakes, and ponds.

Public and Semi-public:

This category includes all public, semi-public, and institutional uses such as schools, churches, post offices, hospitals, fire stations, libraries, cemeteries, governmental uses and religious institutions.

Rural/Agriculture (generally 1 or fewer units per 20 acres):

Land area principally in use for agricultural production and may be used for farming, crops, pasture, agribusiness ventures such as growing and marketing of products, and a limited number of rural residences. Such area is predominately located in the unincorporated area and subject to Wichita-Sedgwick County Zoning Regulations. This category serves as a holding zone to preserve land from premature development that would negatively affect the area while preserving the agricultural uses in the immediate area. As long-term development potential is a relevant consideration for these areas, residential development that is approved should demonstrate the ability to be further subdivided in the future.

Rural/Suburban Acreage (generally 1 unit per 5 acres or less, unless developed as a cluster design subdivision): This category reserves land area developed with rural single-family dwellings on large lots, typically served by on-site private sanitary sewer/septic systems, commonly called acreages. Such areas are typically already developed with residential dwellings on 1-to-5 acre or larger parcels, and full range of municipal services are neither available nor planned. The City is not expected to extend municipal water, sewers, or other services to areas within this category.

Low-Density Suburban Residential (generally up to 3 units per acre): This category is to accommodate residential development for areas surrounded by or near Rural/Suburban Acreages in which a full range of municipal water, sewers, and other services are not currently available, but may be extended in the long-term future. Development in this category should be limited until municipal services are provided, and should be subject to a “transition” policy addressing development layout, lot sizes, density, and other elements to minimize growth conflicts when located adjacent to suburban acreages with different levels of compactness.

Moderate Density Residential (generally up to 6 units per acre): Development within this category is primarily characterized by a mix of single-family detached dwellings and moderate density attached residential dwellings with a mix of housing types. This category is also appropriate for planned public and semi-public uses which are generally considered compatible with residential uses. In locations where the land is severely restricted by floodplain, significant vegetative cover, and other significant natural features such as along existing creeks and streams net density may be lower.

Higher-Density Residential (generally exceeding 6 units per acre): Development within this category typically is characterized by higher density attached or detached residential uses including smaller lot single-family detached dwellings, attached single-family dwellings, duplexes, town homes, condominiums, and other multifamily dwellings and special residential accommodations for the elderly (assisted living, congregate care and nursing homes).

General Commercial:
This category includes a broad variety of regional office, retail, and general business service uses whether located in centers or in stand alone buildings. Uses are generally larger in scale and are more automotive-oriented in nature.

Mixed Use-Residential:
This category promotes a variety of medium to high density residential land uses including single-family, two-family, townhouse, condominium, and multifamily apartment dwellings which may be intermixed throughout the neighborhood. In addition, small offices (i.e. medical, professional services, financial services, etc.) and limited retail stores (i.e. bakery, dry cleaners, small neighborhood eating establishments with limited seating, etc.) are permitted in this category only through planned zoning and by establishing strict site design, architectural, and land use controls with development approval. Such commercial uses are intended to provide services only to the residents of the surrounding area and placed in locations with a design character that blends into the neighborhood, rather than

backing up to or screened from residential. Parking areas for retail uses are small due to limited parking needs. Uses not compatible for such an area include automotive related businesses, drive-through businesses, conventional strip pad sites, high traffic generating uses or businesses requiring large parking lots, uses oriented toward a regional customer service area beyond nearby neighborhoods, and other uses deemed not compatible in close proximity to residential uses.

All areas of a Mixed Use-Residential area must be designed in a manner to promote pedestrian activity through a system of interconnected streets and varied streetscapes that also provide safe and efficient movement of vehicular traffic, and must comply with the design elements of **Chapter 6, Planning Principles and Design Guidelines**. Residential densities may be as high as permitted in Higher Density Residential Areas, but tend to vary throughout the neighborhood.

Mixed Use-Commercial:

This category promotes a mixture of neighborhood-oriented office, retail-commercial, institutional, and medium to higher density residential uses (i.e. town homes, condominium, and multifamily apartment dwellings) intermixed through compatible site planning and building design. A variety of these land uses should be commingled at specific locations to promote diversity and a successful pedestrian environment. This category supports a variety of zoning districts; however, the focus of development within the category is not so much on land use as it is on physical design. Given close proximity to residential uses, all development projects should be well-planned and designed to ensure a high level of compatibility with surrounding development. Non-residential uses should be limited to compact, pedestrian/neighborhood-oriented services rather than large-scale or automotive-oriented uses.

Employment/Industry:

This category accommodates land uses associated with industrial activities such as assembly, manufacturing, warehousing, and some office/commercial activities as defined in the city's zoning regulations.

McConnell AFB Buffer Zone (areas within the 1994 AICUZ boundaries):

In accordance with the recommendations of the Joint Land Use Study for McConnell Air Force Base (May 2005), proposed future land use in the area within the 1994 AICUZ boundaries should remain flexible and the existing zoning remain in place for the next two or three years (2008), or zoning regulations amended and zone changes pursued to reflect the recommendations of the Federal Land Use Compatibility Guidelines (LUCG). These actions should be taken until such time as a more definitive determination is reached by the U.S. Air Force and/or the Department of Defense regarding the long-term status of possible future missions at McConnell AFB. Much of this area is located outside the aircraft hazard areas but subject to potential noise impacts.

Gateways:

Gateway areas are identified for areas key to promoting a positive image to the residents and visitors as they enter and exit the City. Special consideration should be given to development projects in such areas. Also, gateways should include community investments in special entry features, sculptures, statues, signage, landscaping, streetscaping, or other public improvements that will improve the overall image of the City. Strategies for implementation of the gateways are recommended in **Chapter 6, Planning Principles and Design Guidelines**.

5.4 Annexation

Annexation is the process by which a city adds surrounding fringe areas to the city and extends its municipal services, regulations, voting privileges and taxing authority to new territory. There are methods for annexing contiguous property (areas adjacent to the annexing city) as well as noncontiguous property. The primary methods of annexing property in Kansas are by:

- voluntary petition,
- annexation for municipal purposes (unilateral or by county consent),
- boundary line adjustments,
- election, and
- annexation of federally owned areas.

Annexation Policy

Annexation of land includes fiscal implementations, such as the cost of providing municipal services. The cost of municipal services must be weighed against the anticipated revenues of the land areas to be annexed. However, the City's annexation policy should not be based solely on areas with positive cash flow. Some land areas may need to be annexed due to other considerations including instances when health, safety, environmental, or other factors take priority over fiscal considerations. As a policy, future annexation should benefit existing residents of Derby and conform to the long-term growth recommendations of the Comprehensive Plan—including the timing and phasing of growth. Typically properties contiguous to the city should be given priority for annexation and development over properties not contiguous to the city. An annexation strategy should spell out:

- Costs of growth;
- How that cost will affect property taxes and other local taxes; and
- How that cost may be funded with alternate financing mechanisms or revenue sources.

5.5 Public Facilities Plan

The **Public Facilities Map** identifies existing and proposed facilities such as police and fire stations. The 2030 future growth area will require providing new facilities to serve the expected demands of an increased population and larger service area.

The **Public Facilities Map** identifies general locations for future fire stations to serve the 2030 growth area based on the current service response radius of 1.5 miles. The actual location of future fire stations will depend on several factors including actual drive times, rate of development, availability of land and level of service required. The existing County fire station at 63rd Street and Rock Road would not be a suitable location for a future city fire station due to its close proximity to an existing station as well as its inability to meet the 1.5 mile service response standard for the northern reaches of the 2030 growth area.

Future water demands of the future growth must also be addressed during the planning period. The existing El Paso Water Company water rights are a significant asset to Derby which may either be used as a revenue source or as a future water source for the community.

The City Library is anticipated to provide services in the future from a new facility on an undeveloped site located north of the existing facility at City Hall. The new library site would remain close for much of the existing developed portion of Derby and would serve as a geographic central location for the community during the 2030 planning period as future growth predominately moves eastward. Given the central location, it would be desirable for the new library facility to incorporate community meeting rooms and programming to meet the needs of the community at large including those of senior citizen residents.

5.6 Key Future Land Use Recommendations

Future land use and infrastructure planning will play a significant role in determining how and where Derby grows in the future. The following key fundamentals must be addressed as future growth occurs:

McConnell Air Force Base Interests

The Derby community must address and implement the recommendations of the Joint Land Use (JLUS) Program for McConnell Air Force Base and participate in the McConnell/JLUS Implementation Coordinating Committee (MICC) to maintain communication with all involved parties. The City of Derby should particularly pursue any necessary revisions to regulatory requirements to manage growth within the Clear Zone (CZ)/Accident Potential Zones (APZ I and II) and to comply with the federal Land Use Compatibility Guidelines (LUCG). In addition, these implementation efforts should pursue a real estate disclosure process as well as possible land protection/acquisition opportunities in the CZ/APZ areas.

Future Growth Areas

The Spring Creek drainage basin extending east and northeast of Derby should serve as Derby's primary urban growth area since it can be most easily served with extensions of water and sewer services. Long term growth areas beyond the 2030 planning period should be reserved for the areas generally designated as "Rural/Agriculture" located west of the Arkansas River, the upper reaches of the Spring Creek drainage basin, and the areas generally beyond the Spring Creek basin. As development progresses into the future growth area, it should continue to occur in a compact, orderly pattern. "Leap-frog" development should be discouraged.

As growth occurs to the east and northeast in the Spring Creek basin, the current rural section line roadways must be improved to urban standards. Many of the rural section line roads are currently unpaved and those that are paved must be upgraded to urban standards including curbs, gutters, storm sewer, street lights, sidewalks, etc. in order to serve new development. In addition, community facilities such as parks and public safety facilities needs must be provided to serve the demands of future growth. Fair and equitable financing mechanisms for these infrastructure and facility improvements, such as impact fees and/or benefit districts, must be approved and implemented to meet the needs of new development so not to place added burden upon existing residents of the city.

Annexation Plan

An annexation plan for future growth areas should be developed and implemented by the City of Derby. As annexation occurs, properties should be annexed in a contiguous manner and avoid creating unincorporated "pockets" surrounding by the city. The annexation plan should address the following:

- Costs of growth;
- How that cost will affect property taxes and other local taxes; and
- How that cost may be funded with alternate financing mechanisms or revenue sources.

Suburban Acreage Development

Acreage development should be directed to areas outside of the future urban growth areas including areas designated as “moderate density residential” and “rural/agricultural” in order to minimize conflicts between urban and rural acreage uses and so the City may provide future urban services as efficiently as possible. The City of Derby should limit platting exemptions, but also consider allowing a “limited” amount of large-acreage development in “rural/agricultural” areas, provided such development has mandated lot clustering so as to not preclude future urban development and provided that development includes provisions for future water and sanitary sewer services. In addition, the Comprehensive Plan’s “Transition Policy for Developments Adjacent to Rural Suburban Acreages” (**Ref. Section 6.1, Chapter 6, Planning Principles and Design Guidelines**) should be used to address development layout, lot sizes, density, and other elements for new developments when located adjacent to suburban acreages.

Open Space

High priority should be given to expanding the community’s parks and the hike and bike trail systems, as well as preserving natural streamway corridors as a public amenity.

While Derby’s existing hike and bike facilities are primarily located within city parks or parallel to major roadways, future hike and bike facilities should also be incorporated along open space and natural drainage corridors whenever possible. Spring Creek and its adjoining floodplain lands should be preserved as a linear park / streamway corridor. In addition, land acquisition for at least two larger community park sites should be pursued in the northeast and southeast areas generally near the Spring Creek linear park / streamway. Other community park and/or regional park locations should be considered along the Arkansas River Corridor.

The Spring Creek streamway corridor and the associated floodplain lands should be targeted for park and open space to meet the needs identified by the Parks Plan for developments within at least 1-mile of the corridor. New parks and recreation facilities within proximity of Spring Creek and its tributaries should be linked with hike and bike paths, with linkages also extending into area subdivisions.

As development occurs along the Spring Creek streamway and floodplain lands, the corridor area should remain open and visible to the public as much as possible to serve as a public amenity for the entire community. Development should not encroach into the floodplain and should not occur in a manner in which it “backs up” upon the open space, thus secluding the streamway.

Although the community currently has adequate land area to meet the 2030 needs for neighborhood size parks based on standards recommended by the Park Plan, such land is within the current city limits and is not located appropriately to serve future growth areas. Therefore, land for new mini and neighborhood parks must be acquired in the future growth area using the same service area and recommended general size as outlined by the ***Parks and Opens Space Plan***. In the near term, the City should pursue developing the existing undeveloped parks including: Brookwood, Bur Oak, Oak Forest, Oakwood Valley, Rainbow Valley, and Stone Creek East.

Additional community park sites, generally 25+acres in size need to be acquired to meet existing and future park needs. The **Parks, Trails, and Schools Map** identifies possible general locations for up to five community park sites. The preferred locations are

generally along the Arkansas River corridor and the Spring Creek corridor. The river and creek corridors are most ideal given opportunities to take advantage of land within or near floodplains and due to their ability to connected with either the city's hike and bike trail network or future regional trails. Two of the locations along the Arkansas River are along major east-west access roads into the community and can serve as important gateways into Derby. Not all of the identified general park locations must be acquired to meet the community's needs by 2030. However, two sites should be obtained in the future growth area in the Spring Creek Corridor. One or more of the possible sites along the Arkansas River may be replaced by a possible regional park. The five possible areas to consider for future community parks include:

- Northeast: Area near Spring Creek generally around 63rd Street and the future Webb Road extension.
- Southeast: Area near Spring Creek generally around 87th Street between Rock Road and Webb Road.
- Arkansas River: Area along the west bank near the old 83rd Street bridge.
- Arkansas River: Area along the east bank near 97th Street.
- Arkansas River: Area along the east bank near 63rd Street.

A regional metropolitan park of 200-acres or more in size must be acquired and developed to serve the Derby / southeast Sedgwick County area. The Arkansas River corridor and related floodplain lands should be targeted for such a regional park facility with the location to be determined. Local and regional trails should link the park to the greater Derby community.

Low Impact Development (LID)

As development occurs in the future growth areas, it should incorporate "Best Management Practices" (BMP) and technologies that simultaneously conserve and protect natural resource systems and reduce infrastructure costs. The practice of such strategies will allow land to be developed in an environmentally responsible manner and help developers reduce costs associated with more stringent design requirements for traditional storm water collection and conveyance systems. They will also help increase water quality and reduce the possibility of flooding in the lower portions of drainage basins, such as the developed portions of the Spring Creek basin area in southern Derby, which may be impacted as the upper portions of the drainage basin become urbanized in the future.

Strategies for new development in Derby's growth areas should fall under two broad categories of **practices** and **site design**. Basic LID strategy for handling runoff is to: 1) reduce the volume of runoff and 2) decentralize flows. This may best be accomplished by creating a series of smaller retention / detention areas that allow localized filtration rather than carrying runoff to a remote collection area, by retaining wider areas for drainageways, and increasing the setbacks from natural drainage areas. Many LID strategies will require commitment by the City of Derby, developers, and property owners. In some cases the city's conventional development standards and public improvements standards must be revised to allow for LID strategies.

Based on the soil of the underlying topography, common methods that should be encouraged by the City and considered in new developments in Derby's future growth areas include the following:

- **Bio-retention cells** which typically consist of grass buffers, sand beds, a ponding area for excess runoff storage, organic layers, planting soil and vegetation. The cells will provide storage area, away from buildings and roadways, where storm water collects and filters into the soil.

- **Grass swales** which function as alternative to curb and gutter systems, generally along residential streets or highways. The swales should use grasses or other vegetation to reduce runoff velocity and allow filtration, while high volume flows are channeled away safely. An alternative residential street cross-section must be adopted by the City to allow for such a system in new neighborhoods where deemed appropriate.
- **Filter strips** designed as landscape features within parking lots or other areas that collect flow from large impervious surfaces. These strips should be used to direct water into vegetated detention areas or special sand filters that capture pollutants and gradually discharge water over a period of time.
- **Disconnected impervious areas** that direct water flows collected from structures, driveways, or streets, into separate localized detention cells instead of combining it in drainpipes with other runoff.
- **Cistern collection systems** which can be used to store rainwater for dry-period irrigation, rather than channeling into streams.

Decreasing impervious surfaces through improved site design in the new growth areas will serve as a simple strategy to avoid problems from storm water runoff and water table depletion by reducing surfaces that prevent natural filtration. Methods that should be promoted and considered in new development include:

- **Permeable pavement surfaces** using an engineered sub-base which allow water to flow through to replenish soil areas directly beneath.
- **Vegetative roof systems (green roofs)** that create a lightweight, permeable vegetative surface on an impervious roof area. Such a roof landscape may include moss, grass, herbs, wildflowers, and native plants.

Public Facilities

New growth generally north of 63rd Street, and to the east and south of Spring Creek will require new emergency services facilities in order to maintain the city's service response radius of 1.5 miles. It may be necessary to provide for up to three additional fire station / public safety buildings to serve the 2030 future growth area if the two existing city fire stations are retained in their current location. However if a suitable site can be obtained in a location that would maintain adequate response times, a new emergency services facility in the southern portion of the community, such as along Rock Road, may allow for the possible elimination of the existing police facility and Fire Station #1, and therefore reduce the overall number of necessary facilities. Whenever possible the city should pursue joint emergency services facilities for police, fire, and EMS, as well as possible community facilities such as meeting rooms, parks and recreation uses, senior services, or satellite library services.

The city's public library should be maintained in a geographically central location within the 2030 planning area. The existing library facility at City Hall, or a possible new main library facility on an undeveloped site located north of City Hall, are excellent centrally located sites to serve the future population of Derby. This central library facility should also be considered for community meeting rooms and programming to meet the needs of the community at large including those of senior citizen residents.