

HARVEY COUNTY, KANSAS

COMPREHENSIVE PLAN

*A Guide for Making Land Use
and Development Decisions
into the 21st Century*

Agriculture, Open Space & Rural Preservation

Urban Fringe Management

I-135 Corridor Development

Equus Beds Aquifer Protection

Harvey County, Kansas **Comprehensive Plan**

ADOPTED BY THE
Harvey County Regional Planning Commission
& Board of County Commissioners
Pursuant to K.S.A 12-747

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Harvey County, Kansas Comprehensive Plan

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Harvey County, Kansas Comprehensive Land Use Plan

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Chapter 1

Vision Statement & Goals

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Section 1.3	Visioning Exercise
Section 1.4	Prioritization of Land Use Issues
Section 1.5	Goals of the Comprehensive Plan

Vision Statement & Goals

SECTION 1.1

Introduction

The purpose of this plan is to create a plan for Harvey County that will serve as the basis for making land use and development decisions into the next century. The foundation of a plan begins with a set of goals and a future vision of the county. Planning decisions that are consistent with the goals and vision statement will help to ensure the county's ability to achieve desired outcomes for a healthy, thriving, and secure future.

Goals and vision statement for the plan were identified at public work sessions. There were approximately 50 people in attendance at each of the work sessions. The major topics discussed at the work sessions are noted below:

- Scattered housing in the county.
- Water supply and quality of the Equus Beds Aquifer.
- Protection of natural resources.
- Commercial and industrial development in rural areas.
- Protection of farmland and rural areas.
- Affordable housing alternatives.
- Urban growth boundaries and utility service extension.

The following vision statement and list of goals are based on public opinions about the above topics.

SECTION 1.2

Vision Statement

In the year 2020, Harvey County will continue to offer a quality of life that attracts new residents and businesses to the cities. The sustained economic growth and success of the county's small towns and cities has not come at the expense of lost farmland, natural resources, and visual and cultural resources. Harvey County is recognized statewide as a leader in coordinated city/county land use planning, water resource management, protection of rural/agricultural land, and adherence to the principles of sustainable growth. Residents, visitors, and businesses are drawn to Harvey County because of the small town values and historic character, the rural landscape of farms, open space, and natural beauty of an area not harmed by urban sprawl.

SECTION 1.3

Visioning Exercise

At the first public work session participants identified what they believed was worth protecting, what needed to be created; and, what should be changed in the county. Their responses are listed below.

TO PROTECT

- Water Resources
- Agricultural Community
- Natural resources – land, water, air
- Infrastructure supports population
- Current zoning laws
- Maintain Agriculture areas
- Development on country roads
- Equus Bed – Water
- Air and soil pollution
- Erosion and flooding (Too much covered surface – parking lots, etc.)
- Water and Land
- Open spaces and rec. land
- Airspace – one mile buffer at least for approaches
- Protect against industry in I-35 corridor
- Developments keep rural atmosphere
- Manage growth
- Agriculture ground
- Industrial sites with infrastructure to sites and developed
- Land use regulations for cities control with county approval

- Create industrial growth in planned areas
- Create zoning influence areas around incorporated areas

TO CHANGE

- County take over road system
- 40 acre requirement
- Cities have ability to support controlled growth
- Extra-territorial zoning
- Widen I-135 corridor, ½ mile either side of Spencer
- More Local Control
- One house per 80 acres
- Metro licensing – contractors, developers
- Encourage youth to remain by creating the proper environment through jobs, etc.
- Limit large lots
- Denser clusters
- Preserve farmland
- Keep commercial-industrial in cities

TO CREATE

- Suburban housing comply with acceptable housing codes
- Review suburban acreage requirements
- Review standards for manufactured housing
- Water district west of interstate
- Guidelines for development – I-135 corridor area
- Guidelines for development around airport

- To support planned population growth in the urban fringe
- Urban & rural live together to protect our environment
- Allow shared lagoons with smaller lots
- Identify areas for specified development
- Buffer zone controlled or joint control
- Keep urban growth near the city (within 2 miles)
- Economic opportunity (diversified)
- Consider county unit system
- Diverse housing opportunities
- Controlled rural subdivisions close proximity to cities (2-3 miles – urban fringe)

SECTION 1.4

Prioritization of Land Use Issues

At the second work session each participant identified and ranked the top land use priority issue facing Harvey County. The results of this exercise are listed below, with the highest number of votes indicating the topic of highest priority.

1. Agricultural zoning (40 acre minimum)	14	
2. Rural development guidelines & regulations	14	
3. Rural transition boundary	13	
4. Overlay zoning to protect groundwater	9	
5. Encourage new housing to locate in or near existing subdivisions	9	
6. Cluster housing/conservation subdivision design	7	
7. Suburban development areas		7
8. Urban utility service extension boundary	6	
9. Require commercial, industrial, and multi-family to connect to city water and sewer service	6	
10. Restrict access to major roads		5
11. Floodplain regulations	4	
12. Critical area zoning to protect riparian areas	2	
13. On-site septic tank regulations	2	
14. Traditional subdivision development with large lots	1	

Goals of the Comprehensive Plan

Goal 1

Promote an economic development strategy that enhances the economic vitality of the cities, encourages reinvestment in downtown's, and balances economic growth by protecting the rural economic and natural resources of the county.

Goal 2

Promote compact urban development in new areas adjacent to existing cities and discourage the spread of scattered new urban uses in the urban fringe.

Goal 3

Direct new development to designated growth areas to protect and conserve agricultural and environmental resource areas, preserve open space, and provide public facilities and services efficiently and cost effectively.

Goal 4

Preserve agricultural land for the production of agricultural products and promotion of related agribusiness.

Goal 5

Protect, maintain, and restore the environmental resources [soil, equus beds aquifer, surface water, and air] and natural ecosystems, by promoting land use practices that are in balance with, and minimize adverse effects on, the natural environment.

Goal 6

Preserve the historic, cultural, scenic, and architectural heritage of the county.

Goal 7

Advocate the use of site plans and conservation subdivision design principles to ensure that new development preserves and protects the natural environment and rural visual resources of the county.

Goal 8

Promote inter-jurisdictional cooperation in planning and land use decisions, along with coordination with other agencies involved in

planning, resource management, economic development, and community development.

Chapter 2

Future Land Use Plan & Policies

Section 2.1	Introduction
Section 2.2	Agriculture, Open Space & Rural Preservation
Section 2.3	Urban Fringe Management
Section 2.4	I-135 Corridor
Section 2.5	Equus Beds Aquifer

Future Land Use Plan & Policies

SECTION 2.1

Introduction

The future land use plan implements the vision and goals identified in the previous section by addressing four key planning elements:

- AGRICULTURE, OPEN SPACE & RURAL PRESERVATION
- URBAN FRINGE MANAGEMENT
- I-135 CORRIDOR
- EQUUS BEDS AQUIFER

The land use plan identifies a set of goals for each planning element, key planning concepts, and implementation policy. The policy statements define a course of action or basic operational rule to achieve the goals of the plan. The Planning Commission and County Commission should review and consider each of these policies when they make decisions about land use, infrastructure, or other strategic issues affecting the future development of the county.

SECTION 2.2

Agricultural, Open Space & Rural Preservation

This section of the plan discusses how Harvey County intends to minimize encroachment of scattered urban uses and housing on agricultural lands. The county recognizes the economic challenges facing farmers and, at the same time, the need to balance private property rights with overall public welfare. The sale of a small tract of land may be an important source of revenue to a farming operation. At the same time, unregulated residential uses in rural areas can lead to a new set of problems for government officials. For this reason, Harvey County, through this land use plan, discourages unconstrained development in the rural portions of the county.

The agricultural landscape is an essential part of the character and environmental quality that makes Harvey County such an extraordinary place to live, work, or visit. This landscape is also an integral part of the regional economy that sustains livelihoods, contributes to the tax base of the county, and sustains the natural, renewable resources necessary for growth and stability in the future.

Agriculture is vastly more compatible with the conservation of natural resources such as open space, wildlife habitat, and watershed, than any alternative private

land use. The primary cause of farmland conversion is low density, sprawl development. Even at relatively low densities this type of conversion adversely affects virtually every environmental resource: visual and aesthetic value, water quality, biological resources, in addition to requiring costly infrastructure and increases in traffic on farm roads.

The continued loss of agriculture in Harvey County would be an environmental, economic and fiscal disaster. It would severely diminish environmental quality, undermine the county's economic and fiscal strength, reduce its social and cultural diversity, and undercut fundamental county-wide planning, housing, and transportation goals.

New highways and improved transportation routes make sprawl possible and developers find that farmland can be relatively inexpensive compared to developing areas. But the cost of providing community services to a widely scattered suburban population is far more expensive in terms of sewer lines, schools, and utilities. In fact, servicing sprawl development creates a direct subsidy for the new growth area that must be financed with increased taxes to those who live in more compact forms of development. In contrast, planning for new growth in areas where infrastructure can be made available is "smart growth."

Background

Agricultural land is the predominant land use in Harvey County and many people earn their living directly or indirectly from farming. In addition to the economic importance of preserving farmland, and the environmental services performed by this natural resource, there is also the value of open space to be considered. People are attracted to the county because of vast areas of farmland, open space, and tree-lined streamways. Harvey County has a tradition of using land use planning and local zoning to preserve its agricultural heritage beginning nearly 25 years ago when they adopted large-acreage requirements for residential dwellings in agricultural zones.

To summarize, agricultural land and rural scenic resources are important to Harvey County for the following reasons:

1. The economic contribution of farming and agri-businesses to the local economy.
2. The quality of life is enhanced when farmland, open space, and natural resources are preserved.

3. The current and future need for governmental services is reduced when non-agricultural land uses are prevented from encroaching rural areas.
4. The scenic value and rural character of the county is preserved.

Agricultural, Open Space & Rural Preservation Goals

- *Protect agricultural lands and limit development in order to preserve farmland for the production of agricultural products and promotion of related agribusiness.*
- *Preserve the rural character of the county and retain the historical, cultural, and physical features that define the rural landscape.*
- *Protect and preserve the natural resources (soil, water, and wildlife habitat) of the county.*

Key Planning Concepts

Agricultural/Rural Preservation Areas

The primary goal of the agricultural/rural preservation area is to retain agriculture and the rural character of the county by directing growth into community planning areas. The rural preservation areas are intended to limit the encroachment of scattered housing or urban types of activities. The agricultural/rural preservation area is a visible symbol of the county's commitment to conserve and maintain rural use and character.

Rural Resource Protection Areas

The rural resource protection areas are based primarily on floodplains, streams, riparian areas, public lakes, and parks. The plan recommends that limited development be allowed within these corridors. .

The map on page 24 shows the areas of Harvey County recommended for agricultural/rural preservation and rural resource protection areas. See also Section 2.5 Equus Beds Aquifer.

Agriculture/Rural Preservation Development Policies

Topic 1.0 Residential

- Policy 1.1 Residential subdivisions shall not be allowed to locate in the agricultural/rural preservation area.
- Policy 1.2 Housing shall be allowed in the agricultural/rural preservation area at a density of one dwelling unit per quarter-quarter (40 acres).
- Policy 1.3 Farms and woodlands shall be recognized as an integral part of the planning area's open space system and should be preserved.

Topic 2.0 Commercial & Industrial Activity

- Policy 2.1 Agriculture-related support businesses (both commercial and industrial) in the agricultural/rural preservation areas may be allowed, subject to conditional review and approval. The market being served or the character of the use must be distinctly non-urban in nature (i.e., agricultural commodities, plant nurseries, etc.). The sites for these proposed uses should be designed to meet the following conditions:
 1. Assurance that the roads providing access to the site is capable of handling the additional traffic without causing congestion or undue deterioration. Sites should be located with access to hard surfaced or major county roadways.
 2. Vehicular turning movements onto the site shall not cause a significant reduction in road capacity or represent a traffic safety hazard.
 3. A source of potable water is available in sufficient quantity to meet usage requirements. The county planning staff shall coordinate development review and approval with the affected rural water district.
 4. A sewage disposal system is available that can safely treat the anticipated quantity and type of wastewater without causing groundwater or surface water pollution.
 5. The planning commission may require a drainage study of the area by a licensed engineer.
 6. The proposed use is compatible with adjacent uses.
 7. The site is designed to conserve unique and sensitive natural features such as woodlands, steep slopes, streams, floodplains, and wetlands, by setting them aside from development.

8. The proposed location does not restrict existing agricultural operations or remove significant amounts of prime agricultural land, as defined by the Natural Resource Conservation Service, from production.

Policy 2.2 Urban commercial and industrial development shall not be allowed to locate in the agricultural/rural preservation area.

Policy 2.3 The county regional planning commission shall require buffers and/or open space between agricultural uses and commercial and industrial developments to minimize negative impacts.

Policy 2.4 Examine the need for dust treatment on county gravel roads leading to industrial or commercial areas.

Topic 3.0 Rural Resource Protection Area Policies

Policy 3.1 Defined FEMA 100-year floodplains areas should be restricted from development and reserved as open space.

Policy 3.2 Encourage private landowners to preserve and protect riparian areas and streambeds from destruction.

Policy 3.3 The county should adopt erosion and sedimentation guidelines for new development. These guidelines should address stormwater quality during and after construction.

Urban Fringe Management

This section addresses how Harvey County envisions the planning and management of urban fringe areas and the accommodation of limited rural development. Urban fringe development is a phenomenon that both small towns and urban cities must confront. The demand for rural land by individual homeowners, developers, and businesses has not abated since 1960 and in fact appears to be on the increase. Indeed, this is not a new situation facing Harvey County. The 1975 county comprehensive plan is worth repeating. "Non-farming dwelling units occupy numerous locations in the urban fringe areas particularly along major roadways. The incidence of non-farm housing is an increasing problem in the rural area in recent years due to the desire of urban dwellers to escape from the city environment." While Harvey County has a history of addressing urban fringe management, the consumer and economic forces at work 25 years ago still exist today because of the continued growth of metropolitan areas and a strong national economy.

There are three inter-related implementation strategies associated with managing the urban fringe as presented in this section.

- First is the **urban fringe**, which is defined as the land area located around a city that is expected or being planned to accommodate eventual urban growth and development. The urban fringe is the land a municipality plans to annex or directly control to promote urban housing, commerce or industry.
- Second is the **rural transition area**, which is the land adjacent to the urban fringe and is intended to accommodate limited suburban and residential housing. The development in the rural transition area is not planned to be served by municipal infrastructure. Cities prefer restricting development in the urban fringe to minimize land use conflicts and avoid problems in extending sanitary sewer or water mains. For this reason, it is important to identify rural areas that are suitable for supporting suburban subdivisions and housing on individual tracts with lateral fields or lagoon systems.
- Third is the **rural preservation area**, which delineates the portion of the county where agriculture and rural densities prevail. This is the part of the county where farmland and open space is protected from scattered or higher density housing or urban types of activities. See Section 2.2 for a complete review of the rural preservation area.

The amount of land influenced by urban fringe growth in the county is greatest in Newton and North Newton. However, urban fringe management issues and concerns apply to all seven of the incorporated cities of the county. The intricacy of urban fringe land use issues crossover county and city boundaries and require coordination in decision-making.

Background

Since 1975 the basic planning premise in Harvey County is to guide development into the county's seven cities and permit housing and subdivisions into defined "low intensity agriculture" areas. The low-intensity agriculture areas were intended to receive rural housing development. This low-intensity agriculture area as defined in the 1975 comprehensive plan is the focus of this section.

The application of "urban utility service areas" is not a new planning approach in Harvey County. In 1982, with the preparation of the Harvey County Wastewater Management Plan, service areas for the future were defined. These areas were selected on the basis of where growth could be reasonably expected to occur. In effect, this plan directed urban growth to preferred areas. Then in 1987 the Board of County Commissioners amended the service area boundary for the cities of Newton and North Newton by removing approximately 3,450 acres from the sewer service area.

Urban Fringe Management Goals

- *Balance the opportunity for the cities to expand their boundaries with limited suburban and housing in an extended district, and protect farmland and open space in the county*
- *Promote compact urban development in new areas adjacent to existing urban areas where public water and sanitary sewer lines can easily and economically be extended.*
- *Promote rural residential development that is in harmony with the surrounding built and natural environment, and in rural areas preserves the county's rural character.*
- *Preserve prime farmland, riparian areas, historic resources, and environmentally sensitive areas (wetlands, floodplains, and wildlife habitat).*
- *Avoid establishing airport hazards, lessen or prevent noise impacts affecting the public and the surrounding landowners, and promote*

a pattern of primary and secondary industrial development between the airport and its environs.

- *Encourage cluster housing to promote flexible development and appropriate site design to preserve natural amenities of rural land in the urban fringe and rural transition areas.*

Key Planning Concepts

Urban Growth Boundary & Service Areas

The concept of applying an “urban growth and service area boundary” is a central element of this plan. The need exists for each of the incorporated cities to have land located outside their corporate limits for growth. The planning concept is based on encouraging city growth to areas where municipal infrastructure can easily and economically be extended. The cities are encouraged to apply “concurrency management.” This is a technique to regulate development and manage growth concurrently with city revenues that are available to provide infrastructure.

An urban growth boundary is a defined area reached through the agreement of county and city officials. The boundaries mark the separation between rural and urban land. They are intended to encompass an adequate supply of buildable land that can be efficiently provided with urban services (such as roads, sewers, water lines and street lights) to accommodate the expected growth during a 20-year period. By providing land for urban uses within the boundary, rural lands can be protected from urban sprawl. There are a number of considerations to be accessed before the actual delineation of the boundary can be finalized. For instance, the shape of the boundary is often dictated by the nature topography and the limitations to sewer and water extensions. Projected population growth, general market trends, and environmental limitations must also be considered when defining the size of the area encompassed by the boundary.

The cities of Newton and North Newton identified new sewer and water service areas in their 1998 comprehensive plan. Generally, the plan contemplates sewer and water service into the five primary drainage basins in and around the two cities. The growth plans for the cities of Hesston, Halstead, Sedgwick, Burrton, and Walton do not identify utility service areas. Each of these cities is interested in providing water or sewer service to new community growth. The size of these communities and their projected populations, however, do not warrant an excessive amount of land to accommodate future growth. A challenge for any city arises when development leapfrogs open land, thereby pushing urban growth

outward. A good example is the city of Sedgwick when they extended municipal water and sewer service approximately one mile east of the city to accommodate the Hilands housing development.

Rural Transition Area

There are difficult planning issues associated with rural areas surrounding cities. One of the most complex is to balance the desire to protect agricultural lands against the desire or economic necessity of rural landowners to convert land to suburban/urban uses. This situation is compounded by the demand of urban households seeking a small tract of land in the country to build their suburban home. The challenge in land planning has always been striking a balance between private property rights and public policy.

The rural transition area is intended to accommodate some development in rural areas immediately adjacent to the defined urban fringe. The basic goal is to direct development to areas relatively close to incorporated cities that does not conflict with the long-range planning objectives of the cities or convert land use for valuable agricultural production.

Rural Preservation Area

Rural preservation areas are explained in Section 2.2. In general, the intent of the rural preservation area is to protect the agricultural base of the county, along with rural character and open spaces. Rural preservation must also strike a balance between conservation and the ability to provide services to an integral part of the county's agricultural sector. Rural is a "community of interests" with service, economic, and social needs that must be addressed if this sector is to remain viable. Agricultural output is not the only "product" of rural areas. Horticulture, crafts, wood products, tourism and tourist accommodations, to mention but a few, also contribute to the overall sense of rural community.

Newton City - County Airport

The airport is located in the urban fringe of Newton and is two miles east of the city. The airport receives joint funding from both the city and county, while the airport manager is an employee of the City of Newton.

A joint county-city project extended a 12-inch sanitary sewer line from the city of Newton treatment plant to the airport in 1998. The new line was required to treat industrial wastewater at the airport, because the Kansas Department of Health and Environment prohibited the use of the existing sewage disposal ponds. The extension of the sewer line creates new development possibilities for the airport,

and the unincorporated land between Newton and the airport. The airport is at the eastern edge of what Newton views as their sanitary sewer service boundary. The city of Newton also provides water service to the airport.

The airport is situated on 524 acres of land. As of the winter of 1999, there were 18 businesses located at the airport. According to Mr. Mason Short, Airport Manager, there are 50 acres of land suitable for industrial development on airport property. The industrial land has water and sewer service available, and the airport provides fire protection services. The airport works closely with JDC to promote economic development at the airport.

The 1998 Newton/North Newton future land use plan shows the airport as a public/semi-public land use. The city plan also contemplates an 80-acre parcel at the northwest corner of 1st Street and Oliver Road as industrial. The county zoned this 80-acre parcel and the current land use is agriculture. Apart from the future 80-acre industrial site, the city's future land use plan shows land around the airport as long-term development. This is because of the desire of the city to promote growth to the west and south, and the fact that the airport is located in the outermost drainage basin (i.e., West Fork-Jester Creek Basin).

An objective of this county plan is to avoid the establishment of airport hazards, lessen or prevent noise impacts affecting the public and the surrounding landowners, and promote a pattern of future land uses that encourages compatibility between the airport and its environs. The airport staff working with HNTB engineers identified an airport safety zone that has been included in this plan. The map contained on Figure 4 (see page 25) shows an airport safety zone extending $\frac{3}{4}$ of a mile beyond the end of the runways and $\frac{1}{2}$ mile from their sides. The result of the airport safety zone is that no residential development be allowed in these areas. With regard to the east-west crosswind runway residential development is precluded almost to Hillside on the west and approximately $\frac{1}{4}$ mile east of Woodlawn on the east. Discouraging residential development in an area approximately $\frac{1}{4}$ mile north of 24th Street and approximately $\frac{1}{2}$ mile south of 1st Street protects the main south-north runway. The south boundary corresponds to the mapped noise level contour.

Suburban Residential Development

The management of suburban residential development is a principal concern in Harvey County, given its proximity to the Wichita metro area and the spillover from Newton/North Newton. Suburban residential is defined as individual home sites or platted subdivisions located in an urban fringe. Another defining characteristic is that the homes are connected to an individual lateral field system or lagoon system. Typically, suburban housing is located along or near a paved road or highway, although there is a growing trend of suburban housing located along unpaved county roads.

The need to regulate suburban residential development is both a county and city planning issue. From the county's perspective, the development of suburban housing can contradict other planning objectives, such as conserving farmland, minimizing the demand for county services, and maintaining rural open space. The county is also interested in preventing disruptions or conflicts between farmers and suburbanites over perceived farming nuisances from dust, odor, or noise.

A city, on the other hand, has a direct interest in assuring that suburban housing does not prevent the opportunity to extend municipal utility services or local streets. It is in the best interest of the cities to discourage scattered suburban development because it leads to conflicts with more intense urban land development.

While the concerns over suburban residential development crossover both county and city land use planning, suburban housing is a function of consumer preference and market demand. Accordingly, a balancing of public and private interests is required to determine the extent of suburban housing that should be allowed within the urban fringe.

Implementation

Urban Growth Boundary

The urban growth boundaries for five cities need to be identified. The cities of Newton and North Newton identified an urban growth boundary or utility service area in their 1998 comprehensive plan and it has been incorporated into this plan. The other incorporated cities are encouraged to prepare a report defining where they predict logical growth patterns will occur. In addition, the report should provide population or economic growth projections demonstrating the amount of land needed to support future town growth. The report should include a map showing utility service areas where municipal water and sanitary sewer mains can be extended. Once the cities have identified their urban growth boundary, the Harvey County Regional Planning Commission should review and approve the urban boundary, subject to resolution of differences on the location of the boundary line. The recommendation of the Planning Commission is then forwarded to the Board of County Commissioners for official inclusion in the county comprehensive plan. The urban growth boundary prepared by the cities identifies the urban fringe boundary for county planning purposes.

Community Planning Areas

Until the county formally adopts urban growth boundaries, a community planning area is shown on the future land use map of this plan. The community planning areas identify a city's urban fringe and rural transition area. See pages 25 – 30 for

individual maps of the community planning areas. The community planning areas are intended to guide land use decisions, zone changes, and subdivision plats, until the cities submit their urban growth boundaries and adopted by the county.

Extra-Territorial Land Use Management

The majority of the seven incorporated cities in Harvey County have expressed an interest to implement extra-territorial zoning and subdivision regulations. There are three basic alternative arrangements for the management of land use in an urban fringe, based on Kansas enabling legislation:

- **County Control.** Continue with the current practice of allowing the county Planning Commission to make recommendations to the Board of County Commissioners for all land in the unincorporated areas of the county. [K.S.A. 12-715b and K.S.A. 19-2927]
- **City Control.** The Board of County Commissioners passes a resolution excluding the land around a city from county zoning regulations. In essence, the county grants the cities extra-territorial zoning and subdivision authority, thereby turning decision making to the cities. [K.S.A. 12-715b (c)]
- **Joint County-City Control.** The Board of County Commissioners and each municipality passes a resolution/ordinance creating a joint county-city planning commission to administer land use regulations in the extra-territorial area. [K.S.A. 12-715b (a). Another option for joint county-city decision making is to enter an inter-local agreement. [K.S.A. 12-2901] in which the Board of County Commissioners would receive a recommendation from a joint City/County Planning Commission for any rezoning outside the City limits, but within the extraterritorial area, but would make the final decision.

The recommendation of the Harvey County Regional Planning Commission is to develop county zoning regulations that compliment each of the cities' zoning regulations for the urban fringe areas and the county will administer zoning in the urban fringe areas that are not incorporated. The county planning staff will continue to inform the city staff about proposed rezoning within the urban fringe, and request city review and comment.

Cluster Housing & Conservation Subdivision Design

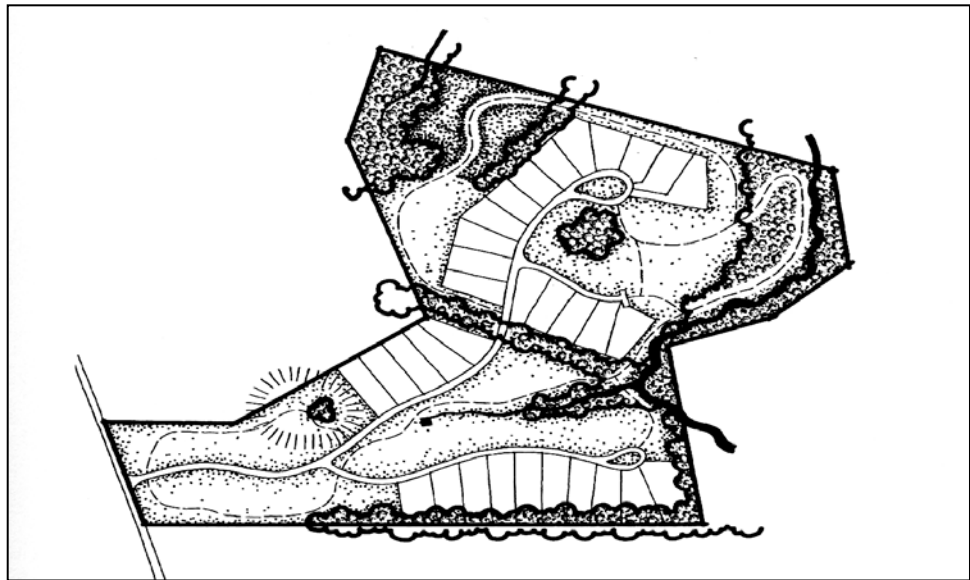
Clustering can be used to promote flexible development in the urban fringe and rural transition areas. Cluster development permits the grouping of housing on a small portion of the tract and thus promotes open space preservation and natural resources conservation. The intent is to cluster the houses or buildings away from environmental and scenic, historic, or cultural resources that might be found on the tract. For example, if a tract has an open meadow or wooded stream on the

site, the site plan or plat would be designed to keep the meadow and stream as open space and cluster the buildings together. As an incentive, some counties provide density bonuses to landowners that agree to cluster homes and place a conservation easement on the remaining open space.

The recommendation of this plan is for Harvey County to incorporate cluster housing or conservation subdivision design into their zoning/subdivision regulations. Since the land use plan contemplates a rural transition area where limited rural development will be allowed, the application of cluster housing is appropriate.

Figure 2-1 illustrates the principles of cluster development. The existing wooded areas on the edge of the property and stream that bisects the tract has been preserved. In addition, the residential lots have been grouped together to preserve a substantial portion of the meadow.

Figure 2-1
Residential Cluster Development



Urban Fringe Development Policies

Topic 3.0 Suburban Subdivisions

Suburban subdivision refers to the division of a lot, tract or parcel of land into two or more parts for the purpose, whether immediate or future, for sale of building residential structures.

- Policy 3.1 Residential subdivisions shall not be allowed to locate in the rural preservation areas and shall be directed to the rural transition area.
- Policy 3.2 Residential subdivisions seeking approval in the urban fringe area shall connect to municipal water and sewer service, seek annexation, and be required to meet the subdivision regulations of the bordering city.
- Policy 3.3 Residential subdivisions may be allowed in the rural transition area if all of the following conditions are met:
1. A detailed site/development plan is prepared when a subdivision is proposed to be located on watershed structures.
 2. Roads providing access to the site are capable of handling additional traffic without causing congestion, excessive dust, or undue deterioration. Vehicular turning movements onto the site must not cause a significant reduction in road capacity or represent a traffic safety hazard.
 3. A source of potable water must be available in sufficient quantity to meet usage requirements. The county planning staff shall coordinate development review and approval with the affected rural water district.
 - a. Where a public water system is not available, the individual residential tract size shall not be less than 5 acres, unless a clustering of dwelling units occurs.
 - b. Development proposals shall be accompanied by certification of adequate water availability.
 - c. All water supply provisions, whether private or public, shall meet the standards of the Kansas Department of Health and Environment.
 4. A sewage disposal system must be provided that can safely treat the anticipated quantity and type of wastewater without causing groundwater or surface water pollution.
 - a. Where surface lagoons are to provide the primary means of sewerage disposal, the developer shall be encouraged

to utilize project size systems rather than individual cells to each lot or tract.

- b. All surface disposal lagoons shall be located, designed, and screened to preserve a high visual quality.
 - c. All sewage systems shall be designed to meet Kansas Department of Health and Environment standards for collection and disposal of sanitary waste.
5. The planning commission may require a drainage study of the area by a licensed engineer.
 6. The proposed development must be compatible with adjacent uses.
 7. The preliminary plat shall be designed to conserve unique and sensitive natural features such as woodlands, steep slopes, streams, floodplains, and wetlands, by setting them aside from development.
 8. The overall design of the subdivision must avoid a "ribbon" of lots along the county right-of-way and prohibit drives facing public roads.

Policy 3.5 Harvey County is intent on balancing the demand for suburban subdivisions with the efficient provision of public facilities and services. In reviewing rezoning requests, subdivisions, and plan amendments, the county regional planning commission shall determine the impact on the level of service on schools, police and fire protection, and county road maintenance. If it can be demonstrated that a proposed rezoning or dividing of land overloads public services and requires an increase in government budgets or services, the application may be amended or denied.

Policy 3.6 Discourage development which is located within the path of potential flood waters arising from the catastrophic breach of a watershed structure, flood control or recreation lake.

Topic 4.0 Residential Housing Policies

Residential housing refers to an individual tract or parcel of land with the purpose, whether immediate or future, whose primary function is for residential or recreational purposes even though such properties may produce some agricultural products and maintain some farm animals. Residential typically involves the rezoning of agricultural land to a residential zoning district. It can also involve a sell-off or platting of residential zoned land into more than one lot, parcel, or tract.

- Policy 4.1 Housing shall be allowed in the rural preservation area at a density of one dwelling unit per quarter-quarter (40 acres).
- Policy 4.2 Housing shall be allowed in the rural transition or urban fringe area at a density of one dwelling unit per quarter/quarter section (40 acres).
- Policy 4.3 Housing may be allowed in the rural transition or urban fringe area if all of the following conditions are met:
1. Roads providing access to the site are capable of handling the additional traffic without causing congestion or undue deterioration. The county planning staff shall coordinate development review in the urban fringe with the bordering city to evaluate local plans for future road improvements.
 2. Vehicular turning movements onto the site will not cause a significant reduction in road capacity or represent a traffic safety hazard.
 3. A source of potable water is available in sufficient quantity to meet usage requirements. The county planning staff shall coordinate development review and approval with the affected rural water district and/or bordering city.
 4. A sewage disposal system is available that can safely treat the anticipated quantity and type of wastewater without causing groundwater or surface water pollution. The county planning staff shall coordinate development review in the urban fringe with the bordering city to evaluate local plans for extension of sewer systems.
 5. Storm water runoff does not increase flooding hazards to human life or property. The county shall coordinate development review in the urban fringe with the bordering city and the city engineer to determine if anticipated changes in runoff justifies a drainage study to manage stormwater runoff.
 6. The proposed use is compatible with adjacent uses.
 7. When a preliminary plat is required the site is designed to conserve unique and sensitive natural features such as woodlands, steep slopes, streams, floodplains, and wetlands, by setting them aside from development. The county regional planning commission should encourage cluster housing or subdivision conservation design increase net density to offset conserving natural site amenities.
- Policy 4.4 The county regional planning commission shall require buffers and/or open space between agricultural uses and residential

developments to minimize the negative impacts of one use on the other.

- Policy 4.5 When a subdivision development is proposed on prime agricultural lands, the county regional planning commission should encourage the clustering of dwellings to preserve a significant portion of the land for continuing agricultural uses.

Topic 5.0 Commercial & Industrial Policies

- Policy 5.1 Urban commercial and industrial uses shall not be allowed in the agricultural/rural preservation or rural transition area. These uses shall be directed to locate inside the corporate limits of a municipality.
- Policy 5.2 Commercial or industrial uses that provide goods or services that are clearly non-urban in nature (e.g. farm supplies or services, agricultural commodities or processing, plant nurseries) may be allowed in the agricultural/rural preservation or rural transition area.
- Policy 5.3 Non-urban commercial or industrial uses may be allowed in the rural preservation or rural transition area if all of the following conditions are met:
1. Roads providing access to the site are capable of handling the additional traffic without causing congestion or undue deterioration. Hard surfaced access and parking shall be provided on the site.
 2. Vehicular turning movements onto the site will not cause a significant reduction in highway capacity or represent a traffic safety hazard.
 3. A source of potable water is available in sufficient quantity to meet usage requirements and, preferably, meet fire-fighting requirements. The county planning staff shall coordinate development review and approval with the affected rural water district.
 - a. Development proposals shall be accompanied by certification of adequate water availability.
 - b. All water supply water provisions, whether private or public, shall meet the standards of the Kansas Department of Health and Environment.
 4. A sewage disposal system is available that can safely treat the anticipated quantity and type of wastewater without causing groundwater or surface water pollution.

- a. All surface disposal lagoons shall be located, designed, and screened in to preserve a high visual quality.
 - b. All sewage systems shall be designed to meet Kansas Department of Health and Environment standards for collection and disposal of sanitary waste.
5. The planning commission may require a drainage study of the area by a licensed engineer.
 6. The proposed use is compatible with adjacent uses.
 7. The development of the site will not result in the loss or destruction of established hedgerows, woodland habitat, riparian lands, and historic or cultural features.

Policy 5.4 Restricted commercial or industrial uses may be allowed in the rural transition or urban fringe area, provided the activity is an ancillary use to a principal residence and provides services to the agricultural community.

Policy 5.5 Commercial or industrial uses seeking approval in the urban fringe area should be connected to municipal water and sewer service, seek annexation, and zoning approval from the bordering municipality.

Policy 5.7 Preliminary and final plats should include utility easements to accommodate planned municipal utility extensions and public right-of-way in accordance with the municipal future land use plan/major street plan. See Policy 9.4

Policy 5.8 The county regional planning commission shall require buffers and/or open space between agricultural uses and commercial or industrial developments to minimize the negative impacts of one use on the other.

Topic 6.0 Newton City-County Airport Policies

Policy 6.1 Encourage the creation and adoption of an airspace protection code or airport overlay district to regulate land uses and structures that might impose a hazard to the airport and to lessen or prevent noise impacts affecting the public and surrounding landowners.

Policy 6.2 Discourage the development of urban or suburban residential subdivisions to locate on land surrounding the airport. Map 4 shows an airport safety zone extending $\frac{3}{4}$ of a mile beyond the end of the runways and $\frac{1}{2}$ mile from their sides. The result of the airport safety zone is that no residential development be allowed in these areas. With regard to the east-west crosswind runway residential development is precluded almost to Hillside on the west and approximately $\frac{1}{4}$ mile east of Woodlawn on the east.

Discouraging residential development in an area approximately ¼ mile north of 24th Street and approximately ½ mile south of 1st Street protects the main south-north runway. The south boundary corresponds to the mapped noise level contour.

- Policy 6.3 Support industrial uses on or near the airport property, provided the location and uses comply with the airport safety plan, and are connected to public water and sanitary sewer service.
- Policy 6.4 Ensure that adequate right-of-way and access spacing is provided for 1st Street. According to the Newton comprehensive plan, 1st Street is classified as an arterial street, which requires a 100-120 feet of right-of-way.
- Policy 6.5 Land situated within one-quarter mile west and north of the Newton City-County airport is classified as “industrial reserve”. The intent is to prevent this land from being zoned to either commercial or residential, thereby precluding the option of future industrial development. The industrial property located at the airport, and the 80-acre tract at 1st Street and Oliver Road, is the primary industrial development area, while the one-quarter mile industrial reserve, is the secondary industrial development area. The land south and east of the airport is located in the rural preservation area, hence, urban development and rural housing is not encouraged.
- Policy 6.6 Require that any proposed industrial development proposal in the industrial reserve be accompanied with a storm water management study showing how surface drainage will be retained or detained on-site.

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**Map__
Harvey County
Rural Preservation, Urban Fringe, Rural Transition and Rural Resource
Protection Areas**

This page reserved for an 11x17 map of the county

Map__
City of Burrton
Urban Fringe/Rural Transition Area



Urban Fringe Area

Rural Transition Area



North

Map__
City of Halstead
Urban Fringe/Rural Transition Area





Urban Fringe Area



Rural Transition Area

North

Map__
City of Sedgwick
Urban Fringe/Rural Transition Area



Urban Fringe Area

Rural Transition Area



North

Map__
City of Walton
Urban Fringe/Rural Transition Area



Urban Fringe Area



Rural Transition Area



North

Map__
Cities of Newton & North Newton
Urban Fringe/Rural Transition Area





Urban Fringe Area



Rural Transition Area

North

Map__
City of Hesston
Urban Fringe/Rural Transition Area





Urban Fringe Area



Rural Transition Area

North

I-135 Corridor

The I-135 corridor is a development area extending along Interstate Highway 35 and old Highway 81 (Kansas Road). These two highways parallel each other and bisect Harvey County. The cities of Newton, North Newton, and Hesston are situated within the corridor. From a historical and contemporary perspective, these highways function as facilitators of development and changes in land use in the county. The construction of I-135 has caused several former highway retail businesses located along old Highway 81 to close because of displaced traffic patterns. However, several isolated industrial tracts still remain along old Highway 81.

While the commercial appeal of old 81 (outside the urban areas) is diminished, it continues to open the urban fringe areas of Hesston, North Newton, and Newton to the suburban/rural housing market. The Kansas Department of Transportation (KDOT) designed I-135 with controlled access, thus limiting the opportunity within the corridor for direct access to the highway. However, Interstate Highway I-135 creates an attractive situation for certain commercial and industrial users, as evidenced by the Newton Mall.

Background

The I-135 Corridor is a strategic land development resource and offers both challenges and opportunities for Harvey County. Development opportunities flow from the high-speed access and open nature of the corridor. However, the I-135 Corridor presents a number of planning challenges similar to all development corridors in metropolitan-adjacent regions. The most important challenge is the selection of appropriate development in terms of intensity, scale, and viability. Successful corridor planning is based on the concept of land use support - the idea that linear development must be connected, both physically and economically, to a suitable support base (infrastructure), labor supply, and economic development strategy. Table 2-1 offers reasons for and against corridor development.

Table 2-1
Reasons For and Against the Development of the I-135 Corridor

Reasons For Development	Reasons Against Development
<ul style="list-style-type: none"> ■ Convenient access to Interstate Highway ■ Convenient access to Kansas Road ■ Convenient commute to Newton/Wichita 	<ul style="list-style-type: none"> ■ Loss of farmland ■ Lack of public sewers or water ■ Increased service and maintenance costs to county

- High visibility to Interstate traffic for commercial business
- Capitalize on existing investment that improved Kansas Road
- More efficient use of resources and tax dollars to promote development in the urban areas
- Loss of rural visual character in lieu of creating urban sprawl

The basic problem in corridor planning in the United States is that this form of linear development can "take on a life of its' own." They serve as an open opportunity to transfer traditional commercial activities from municipal locations to less expensive, open sites clustered around highway interchanges. Eventually, this form of "strip development" can virtually become the center business district of a municipality. Residential developments located along most corridors take on the appearance of classic urban sprawl. Without support infrastructure, they cannot reach the critical density necessary to become a new addition to a community. Rather, they become isolated, large lot islands stretching from access point to access point along the highway that feeds the corridor. In Harvey County's case, a low density and predominately rural area, corridor development also transforms the general open/rural character of the landscape.

Defining a future vision of the I-135 - Highway 81 Corridor for the next 20 - 25 years is critical. There are at least three essential keys to defining this vision statement.

- 1) Development must proceed in a compact form. This compact form must be located within the present or foreseeable "footprint" of existing communities.
- 2) Development must be selected at an appropriate level. To be appropriate, new development must support local economic development goals, compliment existing services or offer new opportunities, rather than compete with existing firms and services.
- 3) Development must be selected at a suitable scale. Small scale, isolated development is wasteful of current and future resources, a major contributor to spiraling transportation and infrastructure costs, and almost certain to cause major social and economic problems because of the eventual incompatibility of land use.

The crux of the challenge facing the I-135 corridor is whether it should retain its predominate rural/agricultural character that exists in 2000 or be allowed to develop with commercial, industrial and suburban housing. The advantages of highway access and location to Wichita and Newton could easily facilitate a ribbon of retail or industrial uses. In all probability, the corridor will not develop at urban intensities, but there is a real potential for scattered, individual sites from businesses seeking access and visibility. The vision of the I-135 corridor recommended by this plan is as follows.

Corridor Vision Statement

Open pastures, cultivated farmland, and the retention of the environmental and rural scenic resources define the Harvey County I-135 Corridor in the year 2020. A clear edge exists between the cities within the corridor and the unincorporated areas of the county. The people of the county are proud to have a highway corridor that has not been a victim of urban sprawl.

I-135 Corridor Goals

- *Encourage urban commercial, industrial, and urban residential uses to locate within the urban service area and connect to a municipal water and sanitary sewer system.*
- *Promote compact urban development and discourage urban sprawl.*
- *Discourage the leap-frogging of urban land uses into a rural area.*
- *Prevent the gradual conversion of Kansas Road (Old 81) and I-135 to a commercial strip of individual development sites.*
- *Accommodate limited rural subdivisions into a primary development area and allow lower density housing in a secondary development area.*
- *Encourage cluster housing or subdivision conservation design to protect natural amenities and rural character of the corridor.*

Key Planning Concepts

Newton Retail/Business Node. The City of Newton envisions a “mixed-use business park center” to anchor the northern end of the corridor. Their intent is to supply land for large-scale business parks, industrial parks, and office-commercial uses. According to their 1998 comprehensive plan, “the west side of I-135 should develop as office, research and development, lodging, and service-commercial developments, such as car dealerships and auto service, as well as large-scale retail uses that generate relatively light traffic, such as furniture stores. On the east side of I-135, only industrial and distribution uses would be permitted with some accessory office development on approximately 120 acres. The plan shows

approximately 200 acres of land on the west side of I-135 for future service commercial development and office/research/business parks.

The county should not rezone land for urban commercial or industrial activity in the unincorporated areas of the corridor. The intent is to encourage commercial or industrial uses to connect to municipal services and seek annexation, given the opportunities to develop these uses at the northern edge of the I-135 corridor. The goal is to allow commercial and industrial uses to cluster at the 36th Street interchange. Examples of commercial activities include highway retail services such as fast food, gasoline sales, and hotels. It also includes auto dealers, furniture stores, multi-tenant shopping centers, as well as service-oriented businesses such as truck stops.

Depending on the extent and location of residential development that is allowed within the primary development area of the corridor during the 20-year planning period, there may be a need to allow limited retail to provide convenience goods and services to these households. Generally, a five-acre site should accommodate the limited amount of retail needed to serve a rural-based housing demand. The intent is to create a planned cluster or multi-tenant building.

Rural/Suburban Housing. The opportunity to support rural/suburban housing along the corridor is tremendous. As previously mentioned, Kansas Road (Old 81) and I-135 provides safe and convenient access to homeowners commuting to Wichita and Newton. The intent is to allow suburban subdivisions and rural housing in the area of the corridor north of Highway 196, which is entitled the "Primary Suburban Residential Development Area". While suburban housing is considered an appropriate land use, care should be given to designing plats and individual tracts to accommodate future utilities and road improvements. The land area south of Highway 196 is envisioned to retain a rural and open space land use character. The intent is to allow limited housing in this area, which is known as the "Open Space/Farmland Preservation and Rural Residential Area".

Rural Industrial. In certain instances, it may be reasonable to allow a rural industry to locate within the corridor. A rural industry is defined as one that provides goods, materials, or services to the agricultural sector of the county. The overriding planning principle should be one of limited industry within the corridor. The county's zoning regulations should include special provisions for reviewing and authorizing rural industry in the corridor. The rezoning of sites to light or heavy industry should be avoided; and, instead allow specific rural industrial users.

Public Utility Extension. The lack of sanitary sewers and public water within the corridor is a limiting factor for intensive development. As pointed out in the 1991 corridor study by Wilson & Co., “adequate supplies of potable water, beyond that required to serve only an isolated use point, or a small group of users, will be dependent upon access to water from one or more possible supply points in the surrounding area.” On the topic of sanitary sewers, the Wilson & Co. study states, “it is likely that the northern one-third of the corridor will be served by one sewage treatment facility or the sewage pumped to Newton, while the southern two-thirds of the corridor will be served by a separate treatment facility.” The City of Newton constructed a sanitary sewer main to serve the Newton Mall, along with municipal water line. The availability of this municipal infrastructure supports and encourages commercial and industrial uses to locate in the Newton urban service area.

As in 1991, it is *possible* in 2000 to bring water and sanitary sewer utilities to the corridor. The fact remains; however, the lack of development pressure has not created a situation where the extension of sewers or water is economically feasible. The one exception is the Newton Mall. The planning principles and policies advocated in the 1991 Wilson & Co. study of phased utility service remains a sound approach.

Protection of Rural/Agricultural Land. The predominant land use in the corridor is agricultural production and open land reserve. According to the Natural Resource Conservation Service (formerly the Soil Conservation Service), most of the soils in the corridor are classified as prime farmland. Preservation of farmland and rural character is an overarching goal of the Harvey County comprehensive plan.

The best technique to safeguard the rural character of the corridor is to maintain a clear edge between town and country. A compact urban growth pattern within a defined urban boundary assures the protection of rural open space and agricultural lands. In the year 2020 when driving from Wichita to Newton what visual image should the corridor present? The goal of this plan is to ensure that in twenty years the corridor projects an image of rural open space and not a five-mile corridor of back-to-back large-lot subdivisions or commercial uses lining both sides of the highway.

¹ The use of individual on-site waste systems and private wells or rural water defines rural housing, as opposed to urban housing which is connected to public water and sewer facilities.

Future Land Use Map

The future land use map for the I-135 corridor is presented on the following page. The future land use map shows the planned locations of the ensuing land use activities:

- Newton Retail/Business Node.
- Primary Suburban Residential Development Area.
- Open Space/Farmland Preservation & Rural Residential Area.

The implementation of the future land use map must be used in conjunction with the vision statement, principles, and policies for the I-135 Corridor. The county should evaluate each land use decision in the context of how the proposed land use supports the ideas expressed in the vision statement, principles, and policies.

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Map__
Future Land Use Map for the I-135 Corridor

Future Land Use Principles

The land use principles guiding the development of the I-135 Corridor are listed below.

Principle One: *Maintain compact urban development and preserve a distinctive edge between urban and rural.*

Much of the I-135 Corridor is rural in character and identified with agriculture and rural, uncluttered open space. . In order to preserve this land use pattern, the I-135 corridor development plan supports urban housing, commercial, and industrial activity within defined urban service boundaries, and areas located beyond the urban service boundary land should remain rural.

Principle Two: *Require commercial development to be clustered and submit a site plan addressing the placement of buildings, access, parking, landscaping, signage, and future expansion.*

If the rezoning of rural land to accommodate limited commercial is determined reasonable, then development should be clustered within a single parcel to avoid a typical linear strip commercial zone within the corridor, or development at all four corners of an intersection. It is possible that a small (5-acre) site is justified to support commercial goods to serve rural households. The county should ensure that there is adequate land for future expansion adjacent to the proposed retail site. Requiring the preparation of a site plan accompanying all rezonings that detail strengthens this principle how the site will be developed.

Principle Three: *Accommodate limited suburban/rural housing at appropriate locations within the corridor.*

The I-135 corridor is capable of supporting limited residential activity without diminishing the rural setting. A primary suburban residential growth area is identified north of Highway 196, while a residential growth area is located south of Highway 196. The intent is to accommodate planned subdivisions in the primary growth area and housing on large tracts in the secondary growth area. The key is to evaluate each proposal on a case-by-case basis to assess traffic, environmental characteristics, road conditions, loss of prime farmland, and fiscal impact on the county.

Principle Four: *Encourage housing to develop in a cluster pattern and encourage the design of subdivisions to protect wildlife habitats and rural roadside character.*

Subdivision design should protect wooded streambeds, existing hedgerows, or mature stands of trees on a site. Direct lot access onto existing public roads should be avoided. The creation of a

buffer/landscape zone along Kansas Road (Old 81) is encouraged.

I-135 Development Policies

Topic 8.0 Interchange Area Development Policies

- Policy 8.1 Direct urban commercial and industrial development to locate at the 36thth Street and Highway I-135 interchange.
- Policy 8.2 Prevent residential, commercial, or industrial development at or near the following Highway I-135 interchanges: State Highway 196 and 125 Street.

Topic 9.0 Subdivision Design & Residential Development Policies

- Policy 9.1 Suburban residential subdivisions shall be encouraged to locate north of Highway 196 and discouraged from locating south of Highway 196.
- Policy 9.2 The land area north of Highway 196 is the primary suburban residential development area, while the land area south of Highway 196 is considered the open space/farmland preservation, and residential development area.
- Policy 9.3 Residential subdivisions within the primary suburban residential development area shall be encouraged to develop with access to Kansas Road and Spencer Road. Careful site design consideration should be given to subdivisions wanting to locate adjacent to I-135 and, generally, discouraged to locate on land abutting I-135 Highway.
- Policy 9.4 Residential subdivisions may be allowed in the primary residential development area of the I-135 Corridor if all of the following conditions are met.
 - 1. Roads providing access to the site are capable of handling the additional traffic without causing congestion, or undue deterioration. Subdivisions shall be located with direct access to Kansas Road Spencer Road or other hard surfaced roadway.
 - 2. Vehicular turning movements onto the site will not cause a significant reduction in highway capacity or represent a traffic safety hazard.
 - 3. A source of potable water is available in sufficient quantity to meet usage requirements. The county planning staff shall coordinate development review and approval with the affected rural water district and/or bordering city.

- a. Where a public water system is not available, individual residential tract size shall not be less than 5 acres, unless a clustering of dwelling units occurs.
 - b. Development proposals shall be accompanied by certification of adequate water availability.
 - c. Project design of new subdivisions shall include provisions for an eventual distribution system to be connected to an approved public water supply.
 - d. As a condition of subdivision approval, the developer shall agree to commit current and future landowners to connect with a public water supply when a system becomes available.
 - e. All water supply provisions, whether private or public, shall meet the standards of the Kansas Department of Health and Environment.
4. A sewage disposal system is available that can safely treat the anticipated quantity and type of wastewater without causing groundwater or surface water pollution. The county planning staff shall coordinate development review with the bordering city to evaluate local plans for extension of sewer systems.
- a. Utility design shall include adequate provisions for rights-of-way and/or easements to allow construction of utility systems to serve the entire area.
 - b. Layout of utilities and streets rights-of-way shall be designed to allow extension of service to adjacent undeveloped lands and to allow connection of the system to an area-wide system when said system is available.
 - c. All new development shall be required to prepare plans for adequate utility services meeting the bordering city public standards as part of the project review.
 - d. The cost of utility services both on and off-site required to meet the demands of a specific development shall be borne by the developer.
 - e. As a condition of project approval, the developer shall agree to connect the development with the area utility system when available, and shall prepare for this eventuality through appropriate project design and administrative agreement.
5. The planning commission may require a drainage study of the area by a licensed engineer.

6. Provisions are made concerning utilities.
 - a. Design of subdivision shall include adequate rights-of-way and/or easements to assure utility access with provisions for operation and maintenance.
 - b. All utility line routings should follow established public rights-of-way or dedicated utility easements.
 - c. Plans for electric substations, gas value stations and similar utilities within one-quarter mile of I-135 shall include provisions for special screening and/or other visual enhancement. Plans shall be submitted for review and approval by the county prior to construction.
7. The proposed use is compatible with adjacent uses.
8. The preliminary plat is designed to conserve unique and sensitive natural features such as woodlands, steep slopes, streams, floodplains, and wetlands, by setting them aside from development. In addition, site design consideration is afforded to preserving historic or cultural features located on the site.
9. The preliminary plat is designed to prohibit lots facing onto county roads or highways with individual lot access or the conventional "ribbon" of lots.

Policy 9.5 Residential housing may be allowed in the "Open Space/Farmland Preservation & Rural Residential Area" of the I-135 corridor subject to a density of one dwelling unit per quarter/quarter (40 acres) or by encouraging clustering in accordance with the provisions of the standards in Policy 4.4.

Policy 9.6 Residential housing in the "Open Space/Farmland Preservation & Rural Residential Area" of the I-135 Corridor shall be discouraged locating adjacent to I-135.

Policy 9.7 All subdivisions shall include landscape buffer zones of a minimum 25' along Kansas Road and Spencer Road.

Policy 9.8 Provisions for pedestrian access and circulation shall be provided in locations where deemed advisable by the county regional planning commission.

Topic 10 Commercial & Industrial Development Policies

Policy 10.1 Urban commercial and industrial development shall not be allowed in the I-135 rural transition area; this class of development should be guided to the 36th Street Interchange or within a

defined urban service boundary as identified by the bordering city.

- Policy 10.2 Commercial or industrial uses seeking approval in the urban fringe areas of the I-135 Corridor shall be connected to municipal water and sewer service, seek annexation, and zoning approval from the bordering municipality.
- Policy 10.3 Non-urban commercial or industrial uses may be allowed in the I-135 Corridor rural transition area, subject to the provisions of Policy 5.3.
- Policy 10.4 Preliminary and final plats shall include utility easements to accommodate planned municipal utility extensions and public right-of-way in accordance with the municipal future land use plan/major street plan.
- Policy 10.5 The county regional planning commission shall require buffers and/or open space between agricultural uses and commercial or industrial developments to minimize the negative impacts of one use on the other.
- Policy 10.6 All proposals for urban or non-urban commercial and industrial development in the I-135 Corridor shall be accompanied by site plans.
- Policy 10.7 The size and the number of freestanding pole and building signs shall be restricted to promote visual quality.
- Policy 10.8 Access from individual parcels, tracts, or lots to "Old 81" and other area travelways shall be prohibited. The intent is to cluster commercial and/or industrial uses using internal circulation.

Topic 11 Aesthetic Improvement Policies

- Policy 11.1 Consider the use of site plans or the creation of an overlay district to govern commercial and industrial site design, architectural compatibility, landscaping, and signage.
- Policy 11.2 Ensure that sign regulations protect the corridor from excessive signage and to avoid adverse visual impact.
- Policy 11.3 Special provisions for decorative screening, including architectural and/or landscape features, should be required for residential subdivisions adjacent to a public road or where commercial or industrial development will abut a residential area.

Topic 12 Environmental Quality Policies

- Policy 12.1 Defined 100 floodplain areas should be withheld from development and formally reserved as open green space for low-density recreational use.
- Policy 12.2 A development proposal should include storm water management plans to help assure that downstream properties will not be adversely affected by increased runoff.
- Policy 12.3 All development proposals should include, as part of a plat review or site plan review, consideration of protection of existing hedgerows, woodland habitat, streambeds, ponds, and historic or cultural features.
- Policy 12.4 When a subdivision development is proposed on prime agricultural lands, the county regional planning commission should encourage the clustering of dwellings to preserve a significant portion of the land for continuing agricultural uses.

Equus Beds Aquifer

The Equus Beds Aquifer is a source of water for multiple users including Harvey County municipalities, rural water districts, farmers, and the City of Wichita. Groundwater supply and the quality of water have been important regional and state planning issues in Harvey County for several decades. The county recognizes the importance of the Equus Beds as a natural resource and intends to play a leadership role in protecting and preserving the quality and quantity of the groundwater. A map showing the location of the Equus Beds Aquifer is on page 73.

Equus Beds Aquifer Goals

- Protect the groundwater supply in Harvey County.
- Protect the quality of the groundwater supply in Harvey County.

Key Planning Concepts

The role of county government in achieving the above goals is limited. The county can work with the Equus Beds Groundwater Management District No. 2, the State of Kansas, and private landowners, but it has limited regulatory authority to address issues of non-point pollution and water consumption. The principal planning concept advanced in this plan is to prevent inappropriate land uses from locating in areas where they may pose an environmental risk to the Equus Beds.

Implementation

Topic 13 Equus Beds Aquifer Policies

- Policy 13.1 Encourage and coordinate cooperation among public water supply systems and the Equus Beds Groundwater Management District No. 2. Since the Equus Beds Groundwater Management District has "safe yield" regulations that limit water removal and well spacing, public water systems must plan accordingly for future water removal.
- Policy 13.2 Encourage coordination of municipal water use management practices as set forth in the Equus Beds Groundwater Management District No. 2 Management Program.
- Policy 13.3 Encourage rural development in areas with adequate infrastructure for rural water service. The approval process for

new housing developments should take into consideration the feasibility of public water systems to supply water to the location.

Policy 13.4 Establish communication and coordination regarding land use issues with the Equus Beds Groundwater Management District No. 2.

Policy 13.5 County planners should work with Equus Beds Groundwater Management District No. 2 and the Natural Resource Conservation Service to adopt measures that identify and protect especially sensitive groundwater areas within the county. Protection measures may include:

1. Prohibiting construction of septic tanks and lateral systems in areas where depth to water is shallow.
2. Requiring new housing developments of a specific density threshold to have a public sewerage system. This policy will help reduce infiltration of wastewater into the aquifer.
3. Require new housing in urban fringe areas to be connected to municipal water and sewerage system.
4. Prohibiting the construction of landfills over the Equus Beds Aquifer.
5. Development of a wellhead protection plan. According to the Kansas Department of Health and Environment, local governments should develop wellhead protection plans that are guided by the state-approved wellhead protection program. Options available to local governments for wellhead protection include voluntary measures, educational programs, financial incentives, or regulatory measures.
6. Encouraging implementation of "best management practices" similar to those used by the North Fork-Ninnescah Watershed Water Quality Project in Reno County. This organization takes advantage of several federally and locally funded programs that reduce non-point source pollution.

Policy 13.6 Amend the subdivision regulations to require stream buffers or provide incentives that preserve existing riparian buffers.

Policy 13.7 Adopt appropriate land use controls to minimize inappropriate development in critical areas of the Equus Beds. This could include an "Aquifer Area Overlay Zone"

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Chapter 3

Planning Issues of Harvey

County

Section 3.1	Population Trends
Section 3.2	Housing Trends
Section 3.3	Rural Water Service
Section 3.4	Environmentally Sensitive Areas
Section 3.5	City Growth Plans & Policies
Section 3.6	Existing Zoning & Land Use

Planning Issues of Harvey County

SECTION 3.1

Population Trends

Historic Overview

Throughout this century Kansas is considered to be a low-average growth performance state in comparison to the U.S. with average annual and decade rates of growth. This unremarkable performance is tied to four important factors generally considered to be key elements related to growth generation.

- First, Kansas is a rural state linked to and surrounded by a group of rural Great Plains states. For the past 50 years being a rural state in the Great Plains is synonymous with high out migration rates, declining communities, and the loss of basic industries. Currently Kansas ranks as the nation's 32nd most populous state and is 33rd in rate of growth. It contains 1 percent of the nation's population and this percent ratio is not expected to change within the next 15 years.
- Second, metropolitan areas [MA's] serve as growth poles and Kansas lacks metropolitan centers. Even Kansas City, which is by far the principal growth generator in Kansas and the nation's 25th largest urban area, ranks only 134 out of 273 MA's in growth rate. Wichita is the 76th largest urban area and ranks 160 of 273 MS's in growth rate.
- Third, about 25 percent of rural regions are performing at or above the national average. The vast majority of these areas are tied to recreation, tourism, Federal lands, and scenic amenities. Kansas, although not amenity poor, ranks in the lowest 10 percent of all states for tourist destinations, recreation, and Federal lands ownership.
- Fourth, since 1960, higher rates of growth in the U.S. are associated with clusters of related activities populated by younger, well educated groups and/or technically trained individuals drawn by wages, opportunities, and living conditions. Although Kansas can claim several clusters, namely aircraft, agri-production/research, and fabrication, the potential synergy has never developed because of the unrelenting drain of highly educated persons to other regions.

In Kansas, five different types of county growth patterns are evident throughout this century. Generally speaking, each type of growth pattern is distinct and is also a good predictor of future performance.

- Type I - Declining - Persistent: These counties reached their population peak either in the last century or early in the 20th Century. They experienced population decline in all, or nearly all decades throughout the 20th Century. An example is Marshall County with a current (1998 est.) population of 11,705 person and a decade rate of growth of -6.0 percent.
- Type II - Declining - Cycling: This county group has cycled upward and downward from the state's mean growth rate throughout the 20th Century. Allen County is an example with a current population (1998 est.) of 14,556 and a decade growth rate of -0.6 percent.
- Type III - Mean Rate - Cycling: This county group maintained population size at or slightly above the mean growth rate of Kansas throughout the 20th Century. Reno County is an example with a current population of 63,211 (1998 est.) and a decade growth rate of 1.3 percent.
- Type IV Diverging - Upward: This small group of counties shows inconsistent growth rates since 1960. Although they are not "boom and bust" related (and thus tied to single, dominating industries), they can, at times, exhibit little or no growth, moderate growth, or even strong growth. Harvey County is an example with a current population (1999 est.) of 34,361 with a decade growth rate estimated between 6.0 and 10.0 percent. This compares to a low of -1.8 percent between 1930 and 1940 and a 19.0 percent rate of growth between 1950 and 1960.
- Type V - Strong Growth - Persistent: This very small group of counties shows strong, persistent growth above the state and national averages since 1950. All are either metropolitan or metropolitan fringe counties. Examples are Johnson County, Miami County, and Sedgwick County.

Harvey County is a consistent growth performer having doubled in population over this century. The rate of population growth and the change in population show definite signs of cycling due to metropolitan (overspill) influence over the past 30 years. Its current estimated rate of population change is twice that of the national growth rate and the grand mean rate of growth for Harvey County through this century is 2.5 to 3.0 times that of Kansas as a whole. The basic data for growth and change are shown in Table 3.1 and Figure 3.1. The

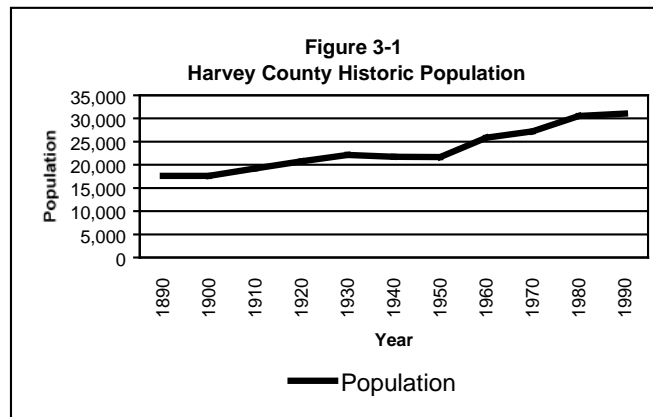
population trend line in Figure 3.1 is an excellent representation of a county cycling in and out of strong and moderate growth modes

From a historical assessment, it is obvious that Harvey County is well positioned to enter the 21st Century. It is one of the 20 counties that can be counted as a Type IV or V group. From a strategic standpoint, there are no reasonably foreseeable factors likely to change this positioning. Population increases are almost inevitable as long as the Wichita MA continues to perform at its present pace. The rate of change and cycling will persist as long as Harvey County continues as a metropolitan fringe county with a heavy dependency on labor flows between southern Harvey County and Newton to and from the Wichita MA. In addition, rates of growth will fluctuate due to heavy competition for labor, jobs, and life quality factors with other strong performers in the region - notable Hutchinson City, McPherson City, and Butler County as a whole.

**Table 3-1
Harvey County Population Counts, 1890-1990**

Year	Population	Percent Change
1890	17,601	
1900	17,591	0.0%
1910	19,200	9.1%
1920	20,744	8.0%
1930	22,120	6.6%
1940	21,712	-1.8%
1950	21,698	4.0%
1960	25,865	19.2%
1970	27,236	5.3%
1980	30,531	12.1%
1990	31,028	1.6%

Source: Kansas Statistical Abstract 1997



Brief Regional Summary & State Benchmarks

Harvey County cannot be viewed in isolation from its region. Harvey County is part of a group of counties experiencing alternating strong and moderate growth over the past 15-25 years. This group includes Butler, Marion, McPherson, Reno, and Sedgwick counties. The performance of the group, shown in Table 3-2, is very solid with over a 14.0 percent rate of change since 1990. Growth, as expected, is concentrated in Sedgwick and Butler, which are most closely tied to change occurring in the Wichita metropolitan area. Reno, to the West, and Marion County, to the northeast, actually experienced population decline. Harvey County, though

experiencing recent growth much lower than the state, has remained stable over the same period, atypical of normal rural Kansas counties which have experienced decline.

**Table 3-2
Regional Benchmark Population Change, 1980-1990**

County	1980	1990	1999 (est.)	1990-1999 Percent Change
Harvey	30,531	31,028	34,261	10.4%
Butler	44,782	50,580	62,769	24.0%
Marion	13,522	12,888	13,544	5.1%
McPherson	26,855	27,268	28,815	5.7%
Reno	64,983	62,389	63,702	2.1%
Sedgwick	367,088	403,662	451,684	11.9%
Regional	547,761	587,815	654,775	11.4%
State of Kansas	2,364,236	2,477,588	2,654,052	7.1%

Source: *Kansas Statistical Abstract, 1997 and U.S. Census*

Population Trends in the Cities

Recent population change in Harvey County (during the past 20 years) is highly suggestive of metropolitan influence. In this mode, rural unincorporated areas typically grow faster than towns as scattered development proceeds along major highway corridors and at the edges of settlements. In this particular case, the unincorporated areas are gaining population at a slightly higher rate than Harvey County communities as a whole. Using 1980 and 1990 data, along with 1998 population estimates from the U.S. Census, and early pre-counts from the 2000 Census, it appears that the population of the county is growing at about twice the rate of the cities. Table 3-3, contains various population estimates for Harvey County and selected communities and township areas.

The smaller communities in Harvey County, with the exception of Burrton, do not follow the typical pattern for settlements under 2,000 persons in Kansas. Rather than insipid decline, the general performance of the small communities continues to be no growth or moderate loss. This indicates that Harvey County holds a strategic economic position in its region sufficiently strong to support small town population and local services.

Outlying areas in the unincorporated portions of Harvey County appear to be experiencing an increase in population. The data (estimates and pre-counts) indicate a rate of change within the 8.5 percent to 10.0 percent range within

certain townships. This follows a pattern of outlying, scattered growth in urban counties along the I-70, I-35, and I-135 corridors within Kansas. Data provided by Woods and Poole (Harvey County, 1999 Data Pamphlet) support this outlying growth pattern. Their estimates show a steady decrease in the non-farm median age, but little change in the birth rate. Normally, this points to a pattern of in-migration of younger couples with fewer children.

Table 3-3
City Population Change, 1980-1998 (est.)

City	1980	1990	1998 (est.)	Percent Change 1990-1998 (est.)
Burton	976	866	889	2.7%
Halstead	1,994	2,015	2,085	3.5%
Hesston	3,013	3,012	3,863	28.3%
Newton	16,332	16,700	18,070	8.2%
North Newton	1,222	1,262	1,491	18.1%
Sedgwick	1,471	1,438	1,518	5.6%
Walton	269	226	239	5.7%
County Cities	25,277	25,519	28,155	10.3%
Outlying Areas	5,254	5,509	6,106	10.8%
Harvey County	30,531	31,028	34,261 ¹	10.4%

Source: U.S. Census for Population and Housing; Kansas Statistical Abstract 1997 ¹ 1999 Estimate from U.S. Census Bureau

Population Trends in the Townships

At the county level, the unincorporated portions of the townships are the most basic unit for population data. Historically, the unincorporated portions of townships decline in population due to the loss of farm families and a decrease in family size. Any positive change in population is normally associated with in-migration from recreation related amenities, from younger or retired couples seeking rural amenities, or job location opportunities. Since Harvey County is a metropolitan fringe area, the expectation is that those townships located closest to the metropolitan area will show the greatest concentration of in-migration. Table 3-4 shows population data in the townships to the east, west, and south of Newton—those townships most

closely related to Wichita. The population of the city of Newton is not included.

Darlington, Macon, Newton, Pleasant, Richland, and Sedgwick townships have remarkably different growth trends. Macon and Pleasant townships, to the west and east of Newton respectively, are the townships where rural growth is concentrated. This is a national trend where population overflows to the fringes of communities in the 25,000 to 50,000 range. Reasons for the overflow are varied, but generally are tied to increasing affluence and independence in life style. The remaining four townships either experienced little growth, or decline. Compared to the county as a whole, though, growth in these six townships more than doubled that of the county.

**Table 3-4
Southeast Harvey County Township Population Change, 1980-1990**

Township	1980	1990	% Change
Darlington	527	471	-10.6%
Macon	632	819	29.6%
Newton	1,708	1,694	-.8%
Pleasant	323	389	20.4%
Richland	211	200	-5.2%
Sedgwick	1,682	1,701	1.1%
Area Total:	5,083	5,274	3.8%
Harvey County	30,531	31,028	1.6%

Source: U.S. Bureau of the Census: 1980, 1990

Looking at the rest of the townships in Harvey County, there has been a decline in population, though very slight. The townships that experienced the greatest population losses are those in the southwest corner of the state, Burrton, Lake, and Lakin. The remaining townships experienced stability or little growth. Highland township, directly north of Newton, experienced the greatest percentage of increase at 5.7 percent.

**Table 3-5
Southwest Harvey County Township Population Change, 1980-1990**

Township	1980	1990	% Change
----------	------	------	----------

Alta	242	243	.4%
Burton	1,211	1,149	-5.1%
Emma	3,618	3,612	-.2%
Garden	296	301	1.7%
Halstead	378	390	3.2%
Highland	386	408	5.7%
Lake	219	191	-12.8%
Lakin	346	327	-5.5%
Walton	426	418	-1.9%
Area Total:	7,122	7,039	-1.2%
Harvey County	30,531	31,028	1.6%

Source: U.S. Bureau of the Census: 1980, 1990

Age Cohort Population Change

Table 3-6 contains Harvey County age data for 1980, 1990 and the rate of change during the decade. The 10-year trend can be summarized as follows:

1. Raw birth rates calculated in the 0-4 years cohort show a slight downturn, but this should be considered insignificant because of periodic cycling.
2. The out migration of young adults (ages 15 - 29) is significant, but this trend follows the high rate of loss for Kansas as a whole and is also related to the lack of major higher education facilities. The combined 23 percent decline in the young adults from 1980-1990 is indicative of a metropolitan fringe county that is service job oriented without a critical mass of high tech and higher skilled jobs to retain or attract young adults in their first or second job move.
3. The age groups that represent established families and middle aged householders (ages 30 -49) show above average performance for Kansas and average performance for metropolitan influence counties. These cohorts show strong in-migration trends because of the increase of children in the age 5-14 years range.
4. The upper tier, middle age groups (50-59) confirm both a Kansas and a national trend towards out-migration for early retirement and a return to true metropolitan locations for "empty nesters" and childless couples. Since Harvey County cannot be considered a major retirement destination, this upper tier age group will continue to out-migrate at an increasing rate. The national trend indicates that the probability of "retirement-in-place" is now

about three chances in ten. This can be compared to eight chances in ten in 1960.

5. The upper age cohorts in Harvey County follow the state and national trends. As the population group born in 1930 and afterwards continues to move through their life cycle, these age cohorts will continue to increase in size. Some of the reasons for this are rather obvious, such as significantly longer life spans and markedly improved affluence over this century, but perhaps the most important reason is that these current cohorts are the last generation to retire-in-place.
6. An overall assessment of the age data for 1980-1990 is important. The ten years from 1980-1990 is considered a benchmark decade in the United States. It was an era of significant population shift from smaller to larger metropolitan areas and a time of severe loss in rural areas. Strategically, a Mid-Western county that came through this decade with strength and vitality will be well positioned for the next 20 - 30 years. From this standpoint, Harvey County's age profile appears to be progressing at the Mid-Western average with the exception of the young adult age groups. The rate change is higher than expected and is quite possibly related to several fundamental weaknesses in the economic base from 1982 to 1989 and regional capability to create jobs.

**Table 3-6
Harvey County Age Cohorts and
Rate of Change, 1980-1990**

Age Group	1980 Data	1990 Data	Difference	Rate of Change
0-4	2,281	2,130	-151	-6.6%
5-9	2,047	2,396	349	17.0%
10-14	2,170	2,368	198	9.1%
15-19	2,957	2,296	-661	-22.4%
20-24	2,781	1,958	-823	-29.6%
25-29	2,558	2,133	-425	-16.6%
30-34	2,051	2,372	321	15.7%
35-39	1,682	2,435	753	44.8%
40-44	1,472	2,021	549	37.3%
45-49	1,502	1,624	122	8.1%
50-54	1,546	1,415	-131	-8.4%
55-59	1,448	1,380	-68	-4.7%
60-64	1,351	1,401	50	3.7%
65-69	1,262	1,302	40	3.2%
70-74	1,052	1,194	142	13.5%
75-79	991	1,026	35	3.5%
80-84	718	726	8	1.1%
85+	662	851	189	28.5%
Totals:	30,531	31,028	497	1.6%

Source: U.S. Bureau of the Census, 1980, 1990

Data for 2000 and estimates for 2010 to 2020 are shown in Table 3-7. Estimates are given in thousands of persons to conform to the new Census counting methods for electronic data. The estimates are based on 1980-1990 standard forecasts for the Wichita-Sedgwick County Metropolitan Area (SMA) and Woods and Poole commercial forecasts. Forecasts based on age groups will vary significantly from forecasts based on other mathematical projections. The cohort projections are particularly weak when in and out-migration is a strong factor in population change. This model is also susceptible to error if there is a strong outflow of population in the young adult years, which is the situation in Harvey County. The 30 year trend from 1990 - 2020 can be summarized as follows:

1. The number of live births and children under 5 years of age can be expected to remain relatively constant over time. Although the native born birth rate is decreasing overall in the United States (while immigrant birth rates are increasing), it seems probable that the County's youngest cohorts will not increase to any great extent if the trend towards the out-migration of the young adults continues unabated. If, in fact, all trends continue, the 0-4 age

cohort is probably only within a three to seven percent margin of error.

**Table 3-7
Harvey County Estimated Age Groups 2000 - 2020 (thousands)**

Age Groups	2000		2010		2020		Total 2020
	Male	Female	Male	Female	Male	Female	All Ages
0-4	0.98	0.95	0.95	0.91	0.99	0.93	1.92
5-9	1.15	1.08	1.09	1.00	1.10	1.01	2.11
10-14	1.32	1.23	1.24	1.15	1.20	1.10	2.30
15-19	1.34	1.16	1.34	1.13	1.25	1.06	2.30
20-24	0.77	0.73	0.86	0.80	0.82	0.75	1.57
25-29	0.83	0.83	0.80	0.82	0.86	0.79	1.65
30-34	0.89	0.95	0.79	0.81	0.90	0.87	1.77
35-39	1.25	1.20	1.02	0.97	1.01	0.97	1.98
40-44	1.31	1.24	1.15	1.02	0.92	0.89	1.80
45-49	1.15	1.22	1.25	1.22	0.97	1.02	1.99
50-54	1.00	1.11	1.23	1.38	1.05	1.15	2.20
55-59	0.78	0.87	1.10	1.33	1.29	1.35	2.64
60-64	0.66	0.67	0.88	1.09	1.34	1.39	2.73
65-69	0.54	0.60	0.59	0.74	1.06	1.16	2.23
70-74	0.54	0.67	0.52	0.65	0.88	1.08	1.96
75-79	0.48	0.65	0.48	0.60	0.63	0.77	1.41
80-84	0.31	0.52	0.37	0.55	0.41	0.55	0.96
85+	0.30	0.73	0.37	0.84	0.44	0.83	1.28
Totals:	15.60	16.14	16.05	17.02	17.11	17.68	34.78

2. Very little change in the young adult cohort (aged 14-29 years) can be expected over time. Out-migration appears to be constant unless major employers are attracted to the general area. No margin of error can be assigned for two basic reasons. One, out-migration of the young is a constant from all areas except certain recreation/amenity locations and the central counties of metropolitan areas. Two, retention of the young is accomplished by opportunities in-place. Opportunities cannot be predicted with any accuracy.
3. From 1980 to 1990 the young family and middle aged cohorts represented the strongest growth age group. The data in Table 3-7 indicate a downturn in in-migration for this group. The margin of error is quite probably very high and is due to the inherent weakness of using an age group model to forecast future events. The young family and middle age group will naturally show a decrease (statistically) because of the anticipated lowered birth rates. From a common sense standpoint, the age group 30-49 depends on in-migration of new households more than any other factor.

4. There is little doubt that the upper age groups follow the nationwide trend towards aging. For the next fifty years, at least, the country and the world in general will age and the number of very old will increase significantly.
5. In summary, age group data is most useful when analyzing current populations and loses value for future forecasts in metropolitan regions. It is most accurate in rural regions that show continuous decline.

Persons 65 and Older

During the next 25-30 years Harvey County, the Wichita-Sedgwick MSA, and Kansas as a whole will continue to "age" as the group of persons born from 1930 to 1950 move through the population cycle into the oldest years. The current median age of the County's population is 35.1 years - or about one-half year older (34.4) than the national population. Over the next few decades the median age of the population in Harvey County will increase appreciably as the "baby boomers" age. From about 2010 to about 2040, the largest single age group in counties with rural characteristics will be persons aged 65 and older. The estimates for 1990 to 2000 suggest that Harvey County experienced growth at least double that of the country as a whole in the 80+ age group.

In the near future, as shown in Table 3-8, the population of those 65 and older will increase from 5,090 persons to 5,790 persons, between 2000 and 2010. In later years, the population of aged persons in Harvey County is expected to increase 20.0 percent through 2020 to 7,430 persons. A graphic representation of this increase is shown in Figure 3-2 for persons 65 years and older in Harvey County.

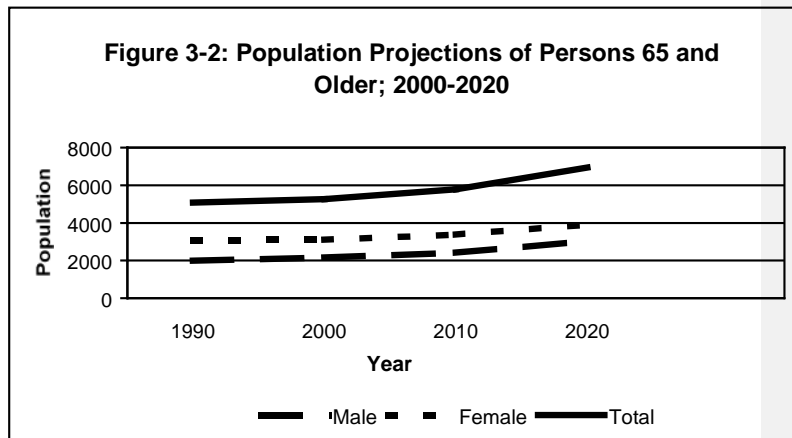


Table 3-8
Population Projections of Persons 65 and Older,
Harvey County 1990-2020 (Thousands 000)

	1990	2000	2010	2020
Male	1.99	2.17	2.41	3.04
Female	3.10	3.17	3.38	4.39
Total	5.09	5.34	5.79	7.43

Source: Woods and Poole 1998; U.S. Census Projections, 1997

Population Forecasts

Population forecasts for Harvey County, Figure 3-3, shows different possibilities. Three separate forecasting models were used to project the future population of Harvey County – the standard U.S. Census model, the SMA Growth Model, and the Cohort Model.

The U.S. Census Model is based on historical trends adjusted for net domestic and international in-migration. It assumes that the base population grows incrementally over time and is based on an average growth per decade of the past 30 years. Incremental growth (the change in size per decade) is averaged to account for upward and downward cycles over time. The linear model indicates growth of just over 4,000 persons in Harvey County. The model forecasts that the population will reach about 32,300 by 2000, 33,700 persons by 2010, and 35,000 by 2020. This model must be adjusted in 2001 when the final census counts for 1990-2000 are released since these data do not agree with the 1998 census estimates.

The SMA Growth Model, also used by the U.S. Census Bureau, is also based on linear forecasts, but assumes population cycling due to in and out-migration within the Metropolitan Statistical Area. The data anchor for this model is based on current Census estimates of the population. In 1998, the U.S. Census estimates the population of Harvey County at 34,000 persons (approximate). This data, released in March of 1999 includes 3,311 live births and 840 net migrants from 1990 to 1998. The accuracy of this data can only be confirmed with the adjusted 2000 Census release in 2001. If projections are based on this model, Harvey County will experience a higher rate of growth over the next 20

years. The data indicate a population increase to 34,361 by 2000, 36,700 by 2010, and 39,800 by 2020.

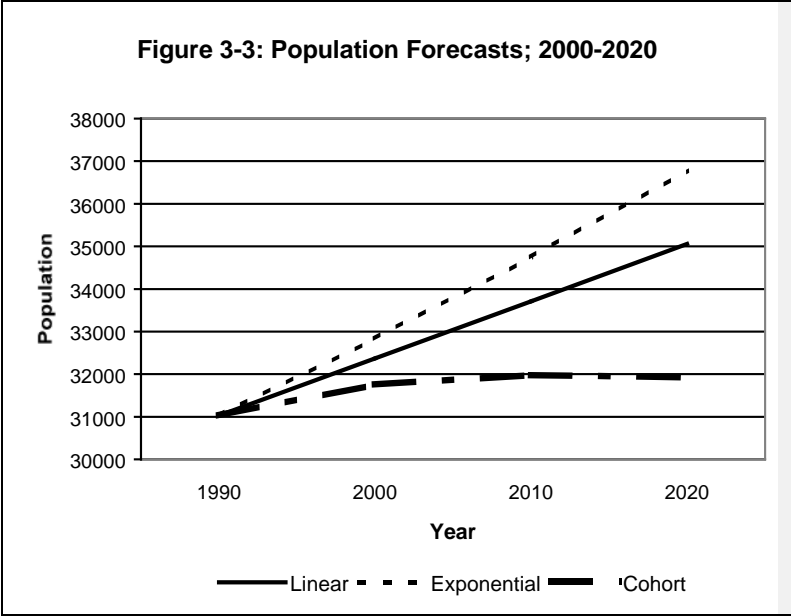
The final model, already discussed in this section under age groups, is the cohort forecast method. This model uses the number of people per age group from the past two censuses, established birth rates, death rates, and fertility rates. The general weakness of the model is that it cannot accurately predict in and out-migration and/or retirements. The most sensitive age groups are those associated with child bearing years (ages 16 - 35). Slight changes in migration in the child-

bearing years will have profound effects on the forecasted population within 20 years. Unlike the other two models, the projections based on age indicated that the total population over the next two decades will remain constant or increase only slightly. Based on the current age composition of Harvey County's population, the model indicates that the population is expected to hover near 34,000 people through the year 2020.

Table 3-9
Harvey County Population Forecasts; 2000-2020

	1990	2000	2010	2020	% Change
Linear	31,028	32,371	33,713	35,056	13.0%
Exponential	31,028	32,838	34,753	36,781	18.5%
*Cohort	31,028	31,760	31,975	31,928	2.9%

**Source: Kansas Statistical Abstract, 1997*



External Evidence for Population Change

Some external evidence is available to support the forecasts indicating moderate population growth in Harvey County over the next 20-25 years. As such, the evidence is not conclusive, but does tend to sustain the proposition that Harvey County will continue to share in regional growth.

1. From a national perspective, there is no evidence to support the idea that the 30 years trend of deep rural to metropolitan migration will cease over the coming decades. As a metro fringe county, Harvey County will continue to benefit from this trend.
2. Kansas population dynamics are built around the growth triangle formed by Interstates 70, 35 and 135. Harvey County, with its interstate location and metro fringe position is ideally situated. There is also good evidence that regional "county towns" such as Newton, with population sizes between 25,000

and 50,000 persons, will be the future winners in the "smart growth" movement of the first quarter of the 21st Century.

3. Affluence is a demographic indicator of wealth, employment, and confidence. Forecasts indicate that Harvey County will experience continued gains in personal wealth and non-farm income over the next 20 years. In 1990, Harvey County residents had an adjusted wealth index (Woods and Poole, 1998) equal to 92 percent of the national average. Over the next 20 years, the index is expected to increase to 96 of the national average (adjusted, constant 1992 dollars).
4. Employment projections are a good indicator of residents' confidence in their local place. U.S. Department of Commerce (USDoC, 1997) estimates an increase of approximately 25 percent (approximately 6,000 new jobs) in all sectors over the next 20 years. This growth in the economic sector is consistent with 4,000 - 5,000 person population gain when adjusted for the loss in farm employment.

Identification of Issues

Population demographics are the most dynamic of all factors used in the future planning process. Although constantly changing, the rate of change is usually marginal from decade to decade unless there is a high order impact to the local economy. Significant international in-migration, or the loss of a major employer are examples of high order impacts with the ability to rapidly change demographic factors. The following demographic topics should be considered key issues over the next 20 years.

1. First, the data presented in this section is consistent with the nationwide trend towards sprawl occurring outward from metropolitan areas. Our awareness of sprawl is not recent - in fact, it began in the 1950's. However, our knowledge of the cost of near metro sprawl is relatively new. For our Kansas region, we estimate that a more compact form of growth, better mixed use development, and concurrent facilities, if given sufficient time to develop over 50 years, would result in a 5 percent savings in the cost of schools, a 20 percent savings in utilities, and a 25 percent savings in roads and support infrastructure. Based on this assumption alone, the wealth gained from Harvey County's projected population increase nearly equals the savings that would result from a highly compact growth form and dramatically restrictive rural controls on development. With its linear growth

form, Newton would be a prime candidate for urban growth boundaries.

2. Harvey County, in terms of the well being of its population, is doing "well." But, this condition should be considered marginal. Over dependence on the retail sector is evident, since the wealth index should be at or slightly above the U.S. average. The County should focus on sustainable economic growth, exploit its location, size advantage, and capitalize on the benefits of the four county area.
3. Harvey County will age appreciably over the next 25 years. For at least the first quarter of the 21st Century, the median age will rise past 40 years. With this change will come the need for altered services. The smart growth trend suggests that a new focus for partnerships with health care, transportation, amenities, and residential construction will be required.
4. S.W.O.T - The major strengths/weaknesses of Harvey county bear repeating; these are:

**Table 3-10
Major Strengths, Major Weakness, and
Possible Opportunities Based on Harvey County Demographic**

Major Strengths	Major Weakness	Possible Opportunities, based on demographics
■ Regional location	■ Little opportunity for retirement destination development	■ Education/training development
■ Interstate influence	■ Low opportunity for tourism development	■ High tech and fabrication tech development
■ Population stability	■ Costs of sprawl	■ Sufficient distance from metro core for stand alone development
■ Critical mass of population	■ Heavy regional competition	■ Transportation orientation
■ Work ethic productivity	■ Bi-polar commercial development	
■ Slow, but steady increase in affluence		

Conclusions

Geographically, Harvey County is part of the Wichita Kansas - Oklahoma Economic Area; a part of the Wichita - Hutchinson Plus DMA (Demographic Metropolitan Area); and, the Wichita Metropolitan Statistical Area. It is near-metro, and thus very convenient for major services, but essentially retains rural characteristics. Its growth rate, although by no means high, positions it to be among the most sustainable communities in Kansas. The County is not

overly dependent on industrial or government jobs, but highly dependent on service sector employment. It faces threats from an aging population and a shrinking base of youth, but it has a strong and vital family and middle age in-migration. Its population mass allows it to possess excellent, second tier retail, health care, governmental, and labor force characteristics. Currently (March of 1999) the unemployment rate is 2.6 percent with 50 percent of the residents in the regional civilian labor force, and 13,357 persons as youth or retired. State benchmarks, shown in Table 3.11 place Harvey County in the upper quartile of Kansas for critical indicators of vitality.

Table 3.11
Harvey County - Selected Factors
And Benchmarks at a Glance

Category	Years	Value	Rank in Kansas Counties
Population growth rate	1970-2000	+0.53%	21
Population rank	2000	16	
Employment growth rate	1970-2000	1.41%	26
Employment change	1970-2000	+4,044 (est.) persons	18
Population change	1970-2000	+7,064 (est.) persons	15
Percent aged 0-19	2000	28.77%	39
Percent aged 65+	2000	16.67%	69
Income per capita	2000	\$28,478 (current \$)	15
Median Income	1998	\$34,902 (current \$)	12
Household retail sales	2000	NA	31
Percent manufacturing jobs	2000	16.20% (est.)	18
Percent service jobs	2000	33.03% (est.)	2
Percent farming jobs	2000	4.30% (est.)	91
Percent government jobs	2000	10.18% (est.)	104

Source: Woods and Poole, 1998; U.S. Census Estimates, 1998; U.S. Department of Commerce, 1998

SECTION 3.2

County Housing Trends

Residential Construction Trends: 1990-1998

The trend of population growth in Harvey County is reflected in new housing construction within the county. In the unincorporated portions of the county, single family home¹ construction has averaged 39 new homes per year between 1990-98, although 18 of these homes are classified as manufactured or modular. A total of 354 new single-family homes were built in unincorporated areas during that period, compared with 527 in the five largest incorporated places. According to local real estate agents, property south of U.S. Highway 50 is in greatest demand because of its proximity to Wichita. Subdivisions in the unincorporated areas of the county are locating generally in the eastern one-third of the county, near the Interstate 135 corridor, Highway 96, and near Newton.

Among incorporated places, Newton has experienced the greatest total growth, averaging 31 new single family homes between 1990-98. Beginning in 1993 Newton saw a substantial increase in new single family homes. The number of new homes built in 1993 was more than double that for 1992 and has maintained a higher level of growth throughout 1998. Hesston had the second largest annual average new home construction in the county, with 14 new homes per year built during the same period. The figure for Hesston is likely inflated due to home reconstruction following a 1990 tornado. However, new home construction has remained relatively high compared other locales in the county.

Sedwick's location near Wichita and Interstate 135 makes it an attractive area for residential development. The Hilands subdivision, platted in 1996 within the city limits, is one of the largest new developments in the county. Although a greater distance from Wichita, Halstead has also begun attracting metropolitan spillover. The final plat for a new subdivision within the city limits has 52 lots.

¹ The term single family home includes site-built, manufactured, mobile, and modular homes.

**Table 3-12
New Residential Construction, Harvey County,
1990-1998**

Location	Housing Type	1990	1991	1992	1993	1994	1995	1996	1997	1998	Total
Unincorporated Harvey County	Single Family	19	17	37	38	26	21	29	28	31	246
	Manufactured	9	12	9	10	16	16	8	15	13	108
	Duplex & Triplex	0	0	0	0	0	0	0	0	0	0
	Four or More Units	0	0	0	0	0	0	0	0	0	0
City of Newton	Single Family	14	11	21	46	43	38	31	30	48	282
	Duplex & Triplex	0	0	0	0	2	1	2	1	0	6
	Four or More Units	0	0	0	0	9	0	2	0	0	11
City of North Newton	Single Family	4	7	9	4	8	9	13	6	7	67
	Duplex & Triplex	1	7	0	0	0	0	2	0	7	17
	Four or More Units	0	0	0	0	0	1	0	0	0	1
City of Hesston	Single Family	32	8	8	12	17	12	15	9	16	129
	Duplex & Triplex	1	0	3	1	6	1	2	5	6	25
	Four or More Units	0	1	1	0	1	2	1	0	1	7
City of Halstead	Single Family	0	0	3	5	1	2	5	0	2	18
	Duplex & Triplex	0	0	0	0	0	0	0	0	0	0
	Four or More Units	0	0	0	0	0	0	0	0	0	0
City of Sedgwick	Single Family	4	4	2	2	1	0	5	3	10	31
	Duplex & Triplex	0	0	0	0	0	0	0	0	0	0
	Four or More Units	0	0	0	0	0	0	0	0	0	0
Total		100	81	84	107	130	114	124	83	125	948

Comment [JPH1]: Note the increase since about 1993 in the text

Source: County and Municipal Building Permit Records

Inventory of Buildable Lots

It appears that much of the new unincorporated residential development is taking place outside of planned subdivisions. Table 3-12 shows that the larger subdivisions were platted prior to 1990 and few of them have vacant lots available. Of the five largest subdivisions, only 7 lots are known to be available. Only three small subdivisions have been constructed during the 1990s.

Observations of the Housing Market

Local real estate and development professionals were surveyed in order to acquire insight regarding the current housing market in Harvey County. The survey emphasized 1) market drivers, 2) characteristics of new resident households, and 3) prime areas for future development. These three topics are addressed individually below.

Market Drivers

Those interviewed were asked to respond to possible factors that are influential in attracting new residents to Harvey County. The five factors considered were convenient access to Wichita, rural atmosphere, school systems, affordable land and housing, and other.

- The two most important factors are believed to be the attraction of the rural atmosphere and the county's school districts. Given that areas south of Highway 50 are in greatest demand, proximity to Wichita is also an important factor.
- Affordable housing may be considered of less importance. One Realtor indicated that new housing prices in smaller incorporated places are comparable to those in Wichita and Newton.
- Harvey County would likely attract more new residents if zoning regulations were changed. Many prospective buyers are interested in 5-10 acre tracts of land, but the subdivision of land tracts of this size are limited by current zoning practices.
- It was also noted that there might be an increase in the purchase of larger tracts of land, 40 acres or more, which are purchased for rural residential use and recreation.
- The number of new residents is also limited by a lack of rental housing. One informant replied that there is tremendous demand for rented single family houses, but there simply is not enough available at this time.

Characteristics of New Residents

Typical new residents are families with school-age children and retirees. It is the experience of the interviewees most of the inquiries for new housing are from those qualified to purchase middle and upper income-level housing.

Prime Areas for Future Development

Currently most inquiries for new single family housing are for tracts south of Highway 50. There is interest in property located outside of incorporated places, but there is more interest in property located in or near cities. Paved roads are preferred and should be considered prime areas for development.

Proximity to Hutchinson and McPherson may lead to future in-migration from those cities as well. Tim Wagner, Harvey County Sanitarian has observed a recent increase in the number of requests for septic systems in the western portion of the county. Although there are concerns about water quality in western Harvey County, Wagner does not believe it is currently hindering residential development.

The eastern half of Harvey County is viewed as preferred market location because of proximity to Wichita and interesting terrain. According to Tim Wagner and officials at Rural Water District No. 1, the District is nearing its capacity to adequately serve new users. Some plans for new subdivisions within Rural Water District No. 1 have not moved forward due to an inability to provide rural water service at desired prices.

**Table 3-13
Inventory of Buildable Residential Lots, Harvey County**

Name	Year Platted	Zoning	Total No. of Lots	No. of Vacant Lots
Robert's First Subdivision	1993	R-S	3	NA
Prairie Meadows	1994	A-R	5	3
Betty Sandstrom Addition	1983	R-S	5	0
Albertson's Subdivision		R-S		0
Wolf's Subdivision	1959		4	0
Schreiber Addition	1984	R-S	2	2
Rosfield Addition	1985	R-S	2	0
Nickels Subdivision	1976	R-S	17	0
Sand Creek Subdivision	1977	R-S	5	0
Schmidt Subdivision	1978	R-S	3	0
Moorlands West	1974	R-S	14	0
Hidden Meadows	1983	R-1	43	1
Moorlands East	1993	A-R	4	1
Lazy Creek	1986	R-1	52	6
Essex Heights	1974	R-S	6	0
Essex Heights Second Addition	1977	R-S	13	5
Country Meadows Subdivision	1981	R-S	9	1
Wilderness Acres	1983	R-S	5	1
Sunset Acres Subdivision	1971	R-S	35	NA
Royer West		R-R		
Sugar Grove		R-S		
Millers		R-S	1	
Koehn		R-S		
Farmington	1970	R-S	15	
Total:			227	20

Rural Water Service

Introduction

Public water supplies in Harvey County are taken exclusively from groundwater sources, as shown in Table 3-14. The main source of water of groundwater is the Equus Beds Aquifer, which underlies the western half of the county. The eastern half of the county is not regarded as a major source of water supply. A key planning issue is the maintenance of the supply and quality of the aquifer for multiple uses, including drinking water, industrial use, and agriculture. In recognition of the need to manage this water source, the Equus Bed Groundwater Management District No. 2 was formed in 1975. The map on the following page shows the geographic boundary of the Equus Bed Groundwater Management District No. 2.

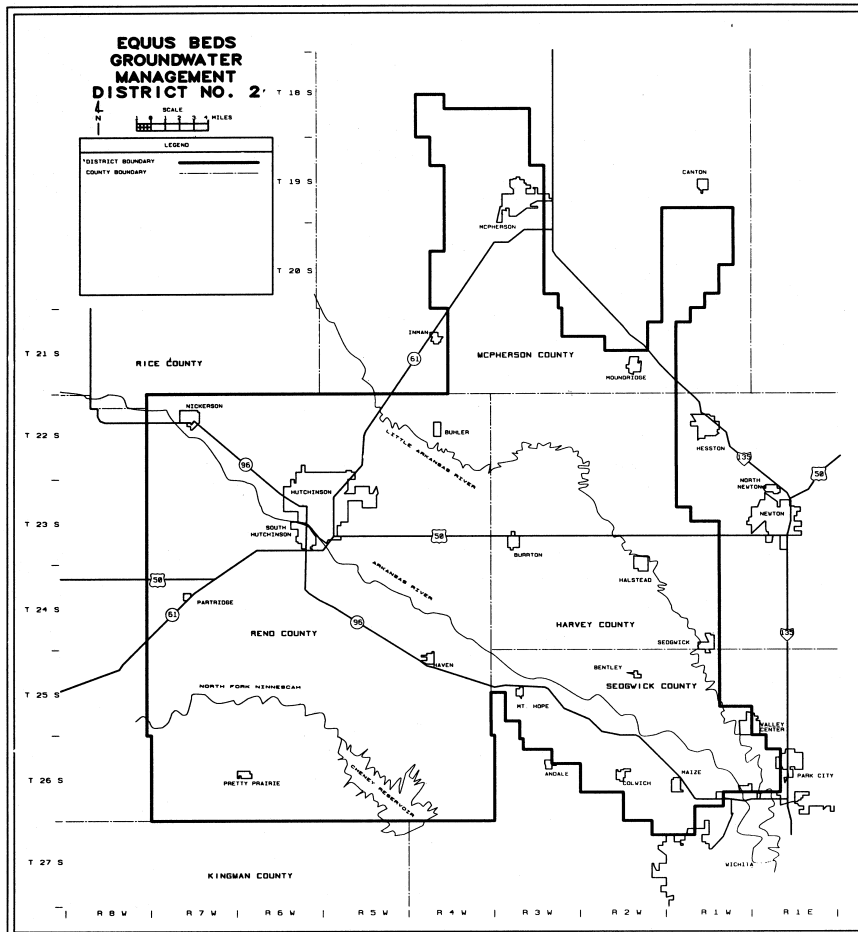
**Table 3-14
Inventory of Water Systems in Harvey County**

Name	Population Served	Primary Source of Water
City of Burrton	866	Ground Water
City of Halstead	2,015	Ground Water
City of Hesston	3,012	Ground Water
City of Newton	17,011	Ground Water
City of North Newton	1,262	Purchased Ground Water
City of Sedgwick	1,438	Ground Water
City of Walton	284	Purchased Ground Water
Countryside Christian School	50	Ground Water
Garden View Christian School	40	Ground Water
Harvey Co. RWD No. 1	1,650	Purchased Ground Water
Harvey Co. RWD No. 2	5	Purchased Ground Water
Harvey Co. West Park, East Well 2	26	Ground Water
Harvey Co West Park, West Well 1	26	Ground Water
Heartland Family Resort, Inc	25	Ground Water
Wedgewood Public Golf Course	45	Ground Water

Source: Environmental Protection Agency

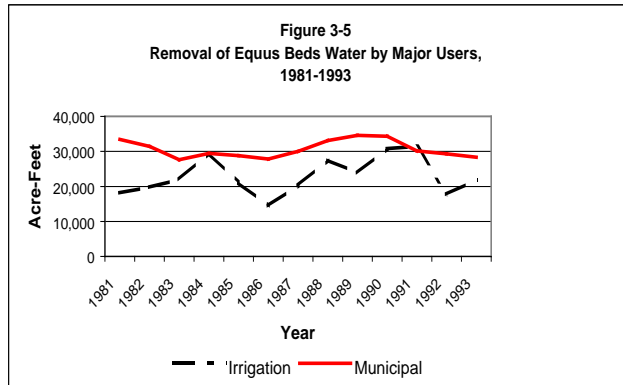
Included in the District's management goals are monitoring water quantity and quality, managing the Equus Beds Aquifer on a "safe yield" principle, improving recharge, preventing deterioration, and cooperating with local, state, and federal agencies and organizations. Because the Equus Beds Groundwater Management District regulates use within its boundaries, planning for rural water service must incorporate its goals and regulations.

Figure 3-4
Equus Beds Groundwater Management District No. 2 Boundary Map



Source: *Equus Beds Groundwater Management District No. 2 Management Program, July 1, 1990.*

Managing groundwater supplies under a “safe yield” principle simply means that a balance between removal and recharge will be maintained. One method of maintaining that balance is the regulation of new wells and groundwater withdrawal, which requires planning by the Groundwater Management District, rural water districts, municipalities, and other users. The proportion of water removed from the Aquifer in Harvey County by the three major users is shown in Figure 3-5.



Rural Water District No. 1

This water district serves the eastern one-third of Harvey County, as well as adjacent portions of Butler, McPherson, Marion, and Sedgwick counties. The District purchases its water from the City of Newton.

Demand for rural water is approaching the limits of existing infrastructure to meet that demand. Kansas Water Office estimates show a water usage increase of over 50 percent for the District during the next 20 years. However, this is not consistent with the average number of new users added to the District between 1990-98. Roughly 25 new users have been added annually to the entire district during that period, which is not indicative of such a large increase in demand. Nevertheless, due to existing infrastructure limitations, a new water tower and lines are being constructed north of Newton.

Anticipated future water supply problems have also prompted the formation of a wholesale water district. The cities of Newton, North Newton, Sedgwick, and Halstead initiated the wholesale water district in order to obtain more water rights and to improve the quality of water to the cities of Sedgwick and Halstead. Construction of new wells and other infrastructure is under way, and the project is anticipated to be completed in late 1999 or early 2000. The wholesale water district is projected to meet the needs of the member cities and Rural Water District No. 1 through the next fifty years.

Rural Water District No. 2

This rural water district was created in 1976 to serve only a few families. It currently provides water to five customers and the water

lines are too small to add new customers. According to the manager of the District, there are no problems with water quality or water pressure.

Environmentally Sensitive Areas

Equus Beds Groundwater

Though Harvey County has only doubled in population over the past 100 years, the population growth rate has remained relatively stable, unlike other rural parts of Kansas where counties have actually experienced recent population losses. Only 15 percent of Kansas counties retained population or showed population growth during the same period.

Only through the 1930's did Harvey County actually lose population. Since then, the county has experienced alternating decades of modest growth and strong growth, but population growth, nonetheless. Local and regional population growth, along with increased center-pivot irrigation since the 1970s, has at times placed a strain on the Equus Beds Aquifer. A brief description of the Equus Beds Aquifer and major issues surrounding its future are provided below.

The Equus Beds Aquifer is the easternmost extension of the High Plains aquifer in Kansas (See map on page 73). The Equus Beds are alluvial deposits and have a saturated thickness of up to 250 feet. Depth to groundwater ranges from less than 10 feet to 110 feet. The aquifer is recharged naturally by infiltration of surface water and precipitation. The Aquifer is recharged annually at rates that range from 3 inches per year to 6 inches per year, depending on location.

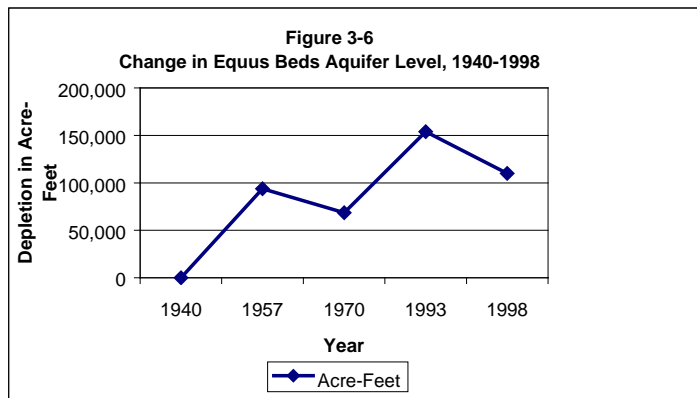
The Wichita Well Field was developed to pump water from the Equus beds to supply water to the City of Wichita. The Wichita Well Field consists of approximately 55 wells that lie between the Arkansas and Little Arkansas Rivers. The Wichita Well Field lies mostly in southwestern Harvey County, with a smaller extension into northern Sedgwick County. The Equus Beds Groundwater Management District No. 2 was created in 1975 to manage groundwater supplies in the region. The primary planning issues regarding the aquifer are as follows:

Maintaining Water Supply Levels in the Aquifer

The aquifer has been a major source of water for cities in Harvey County and also for the city of Wichita since 1940. It has been the major source for irrigated agriculture since the early 1970s. The combined effects of urban and agricultural uses, in addition to periodic drought, have resulted in levels of water withdrawal that exceed natural recharge. For the entire Groundwater Management District No. 2, which includes multiple counties, crop irrigation

accounts for about 50 percent of all aquifer water usage, while municipalities consume about 34 percent, and industry consumes about 15 percent. For Harvey County crop irrigation and municipalities dominate usage. Municipalities use an average of 50-60 percent, while crop irrigation accounts for the bulk of the remainder of all water withdrawn from the aquifer. Industrial and other uses account for less than one percent of all water used.

In the Wichita Well Field, the volume of water decreased by 110,000-acre feet between 1940 and 1998, which includes a period of increased volume between 1993-98. That translates to water-level declines of over 40 feet for some wells in the Wichita Well Field. The period of increase between 1993 and 1998 was caused by a period of adequate precipitation for recharge and a shift in water supply policy by the City of Wichita in 1993. In 1993, Wichita began taking a larger proportion of its water supply from the Cheney Reservoir. Prior to the period of increase from 1993-98, many wells experienced their lowest water levels between 1991-93 due to drought. "At their lowest in January 1993, water-level declines resulting from city and agricultural withdrawals encompassed an area of about 190 square miles, extending from the Arkansas River to the Little Arkansas River in the vicinity of Halstead and Sedgwick." The peak of ground-water depletion in the Wichita Well Fields occurred in January 1993 when the aquifer had declined by 255,000 acre feet. Figure 3-6 shows the peak depletion level in 1993 and the subsequent increase in water level since 1993.



Maintaining Water Quality

Decreasing water levels in the aquifer may result in contamination of the water supply. The Equus Beds became an important supply of water for Wichita

because of its high quality. If water levels continue to decline, however, it is possible that water quality in the aquifer will suffer as a result of intrusion from oil fields (brine) and water (saline) from nearby rivers. According to the Equus Beds Groundwater Management District, oil field brine has contaminated portions of western Harvey County to levels that are unsuitable for most uses. Oil field brine contamination is typically associated with high concentrations of iron. During the period of maximum decline in the early 1990s the flow of underground water actually shifted briefly. It is important to maintain aquifer levels in order to prevent contamination.

Artificial Recharge of the Aquifer

Projected water demand for Wichita is expected to eventually exceed the combined supply of water from Cheney Reservoir and the Wichita Well Field. The Aquifer Storage and Recovery Program is designed to use artificial recharge techniques to recharge the aquifer by diverting water from the Little Arkansas River in Harvey County. The first phase, which will divert water to several recharge points to the west of the Little Arkansas River, is projected to be functional in three to five years and is expected to improve the water supply situation.

One concern about this project is the potential for poorer water quality. For example, agricultural chemicals from non-point runoff may be introduced to the drinking water supply. One study has demonstrated that chloride and atrazine levels in diverted water exceed minimum EPA standards at times of peak runoff. This led to increased concentrations of the substances in some wells following recharge demonstrations, although test levels taken from the wells did not exceed minimum drinking water standards. Mr. Mike Dealy, Manager of the Equus Beds Groundwater Management District, believes there needs to be a more detailed study of non-point pollution sources in the Little Arkansas Watershed. Dealy also supports the formation of a regional committee that can implement a watershed plan to improve the quality of water that will be used to recharge the aquifer.

Private Water Systems

According to Tim Wagner there has been a recent increase in ground water nitrates throughout the county. He indicated that areas east of Newton have a pronounced problem with both nitrates and mineral content.

Other groundwater contamination problems have been identified in the eastern portion of the county where oil field waste has been discharged. Brine,

a by-product of oil and gas production, was discharged or injected into pits that have since infiltrated back to the Equus Beds Aquifer. Two areas have been given special attention with regard to studying and monitoring oil-field brine contamination. The Burrton Intensive Groundwater Control Area, established in 1982, has been replaced by the Equus Beds Oil and Gas Brine Committee. The Equus Beds Special Water Quality Use Area overlies the Hollow-Nikkel Oil Pool. Special management practices have been recommended for both of these areas in eastern Harvey County.

Private Septic Systems

Tim Waggner estimates that there are about 40 failed septic systems per year in Harvey County. Typical causes for failure are aging septic systems and unsuitability for local soil conditions. Waggner believes current septic system codes are adequate. Lot suitability for private sewerage systems are approved on a site by site basis. Lots must meet setback requirements and absorption area requirements.

Hazardous Sites

The Kansas Department of Health and Environment and the Environmental Protection Agency both provide information about contaminated sites in Harvey County. The 1997 report published by the KDHE Bureau of Environmental Remediation listed twelve contaminated sites in Harvey County. Most of the sites are located in urban areas, except for the following sites.

**Table 3-15
Inventory of Environmental Remediation Sites in Harvey County, 1997**

Site Name	Contaminant	Contaminated Media	Source
Hay & Forage Industries	Volatile organic compounds/Heavy metals	Groundwater/ Soil	Underground Storage Tank
KSU Agronomy Farm (Hesston)	Pesticides	Groundwater/ Private Well	Spill
PNG Burrton Station	Refined Petroleum	Groundwater/ Soil	Underground Storage Tank, Spill, Pipeline

The Environmental Protection Agency lists four Superfund Sites in Harvey County, including Halstead Public Water Supply #5.

Floodplain

Harvey County participates in the National Flood Insurance Program (NFIP), which is administered by the Federal Emergency Management Agency (FEMA). FEMA has provided the county with detailed technical reports and a Flood Boundary and Floodway Map. Local management of the floodplain is achieved through zoning, which is used to prohibit and regulate development in designated flood hazard areas. Zoning is supplemented by subdivision regulations, which provide an administrative review to ensure that a project meets specified development standards. The use or application of cluster development or planned unit development is useful for the flood fringe area where certain kinds of development are acceptable. Cluster development or planned unit development can permit a site to be developed at a higher land use intensity than would otherwise be permitted, thus leaving the remainder of the site as open space.

The map on page 72 shows the FEMA 100-year and 500-year flood boundary floodway. The floodway is the channel of a river or watercourse and the adjacent land areas that must be reserved to discharge the one-percent probability flood without cumulatively increasing the water surface elevation more than a designated height, generally one foot.

Map_
Harvey County
FEMA Floodplain Map

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Map_
Harvey County
Equus Bed Aquifer

This page reserved for an 11x17 map of the county

City Growth Plans & Policies

Introduction

This section analyzes the comprehensive plans of the incorporated cities in Harvey County to understand how they view long-term growth and development within their spheres of planning influence. Understanding the planning goals, objectives, and policies of the cities helps to ensure that the county plan acknowledges municipal plans.

Rural conservation will be more sustainable if municipal and county government have a clear understanding of regional planning goals and policies. Even though Harvey County has planning authority for the unincorporated areas of the county, the cities identified below have planned for future growth beyond their current city limits.

City of Newton & North Newton

The cities of Newton and North Newton prepared a new comprehensive plan in 1998. As of June 1999, the plan has not been officially adopted, although public hearings are expected during the summer. One of the future land use issues identified in the plan is the coordination of land use planning in the urban fringe. The concern for Newton and North Newton is to coordinate future urban growth with Harvey County to ensure land use compatibility in the urban fringe and to accommodate annexation of growth areas by the respective cities.

Several policies encourage city and county planning coordination of the urban fringe. The plan also identifies areas where urban growth in the unincorporated areas of the urban fringe is expected to occur. Both cities plan to accommodate growth in the urban fringe and ensure that adequate public utilities and services are available or can be extended.

A key point of the land use plan is to give the cities a voice in land development occurring in growth areas adjacent to the cities. City policy makers believe that they should be involved in land use decisions that will impact the growth and development of their communities. The rationale behind the city's growth areas is based on their ability to extend sewers into the urban fringe. The city of Newton sewer utility is planned "as far east as the city-county airport, as far south as the factory outlet mall and as far west as the Royer West subdivision along the west ridge of the Mud Creek basin". The underlying premise of the plan is the cities' ability to extend sewers into major drainage basins, creating the rationale for extraterritorial land use regulation

and annexation by the cities. According to the plan, "the development demands of the late 1990's require multiple strategies, a rational annexation plan linked to rural sewer service extension policies; and city-county cooperation on extraterritorial land use regulation."

The fringe area is referred to as the PLURAL area, which stands for Planning and Land Use Regulatory Area Layer. The acronym promotes cooperative regulatory authority among the two cities and the county. The future land use plan recognizes that the outer fringe of the PLURAL area is a long-term development prospective given the amount of available land for development and the projected rate of growth. The plan states two low-density residential development patterns should be allowed in the near-term. The first is sell-offs in the A-Ag Zoning Districts at densities of approximately one non-farm residence per forty acres. The second is to accommodate large lot residential development at densities of one dwelling per 5-10 acres.

"The PLURAL area should be planned for coordinated growth under the influence of the cities of Newton and North Newton to maximize local municipal coordination of services." The plan proposes formation of a new "Regional Planning Commission" appointed by the cities and the counties, and governed by one set of rules instead of two. Also, building codes could be extended to the PLURAL area once the cities exercise administrative control, as provided by the Kansas State statute.

City of Hesston

The City of Hesston prepared Phase I of their *Comprehensive Community Plan in 1998*. In general, the plan recommends a compact urban form with new neighborhoods contemplated on the west and east sides of Hesston. Commercial development is anticipated to take advantage of I-135 access and visibility.

The plan focuses on the development pattern in the 3-mile extraterritorial area and provided the following finding. "The data summary for the extraterritorial study area indicates a generally low density development throughout, but with substantial elements of residential expansion, amounting to between 500 and 600 acres of land."(p. 15). The plan states that the rural development pattern around Hesston shows an increase in non-farm residential development.

This phase of the Hesston plan does not show a future land use plan for the extraterritorial area or identify specific policies on how the City of Hesston envisions guiding development of the unincorporated area around the

community. The plan does identify the need for Hesston to annex fringe areas to promote orderly growth for the city. A recommendation of the plan is that fringe areas should be under the jurisdiction of the city.

City of Halstead

In 1991, the City of Halstead adopted the *Comprehensive Development Plan for the Halstead Area* for the period 1990-2010. The plan covers the city of Halstead and a planning area around the city that is two miles north/south and 2.15 miles east/west. The plan encourages new development within the city limits or close to the city where public utilities can be readily extended.

The plan specifies several land use goals that describe how the city views the planning of the unincorporated area around Halstead. The goals listed below are identified because they appear to be directed towards development in the rural planning area.

- Continue to concentrate urban development around the city so as to avoid scattered "urban sprawl" and, thereby, maximize the efficiency and economy of providing services.
- Preserve good farmland from the intrusion of unnecessary non-farm uses, that detract from the productivity and amenities of the rural area.
- Petition the County for extraterritorial zoning and subdivision jurisdiction.

Concerning future land use outside the city, the comprehensive plan states, "In effect, the County is implementing the City's plan by encouraging urban-type residential development to plat and connect to public utilities."

Conclusion

The four major incorporated municipalities in Harvey County [Newton, North Newton, Hesston, and Halstead] identified similar concerns that typically arise from uncoordinated fringe development. Plans prepared by each of these communities identified the need for policy and planning cooperation in the form of joint control or extraterritorial zoning and subdivision.

Existing Zoning and Land Use

Introduction

This section analyzes the existing land use and zoning pattern of Harvey County. The basic idea is to understand the general location, extent, and character of current and probable development patterns in the county. This information will promote better decision-making for future land use choices and patterns. Information and data used to prepare this section include the current county zoning map, 1986 aerial photographs, and a windshield survey of the county.

Rural Residential Land Use

The general residential development pattern in rural Harvey County can be categorized under two or the three classic forms experienced throughout the United States in rural and/or metropolitan fringe areas. The first is scattered, non-farm dwellings that exploit land sales opportunities. The second is rural residential, usually on large lots [5+ acres], within platted subdivisions. A recent trend, noted by the County Planner, is the purchase of 20 and 40-acre tracts for the sole purpose of building a single family dwelling unit. Historically, this was not a common event. However, with the strong economy of the 1990's, depressed rural land prices, and desire of urban households to locate in a rural setting, there is a definite trend towards the purchase of larger initial tracts. There is also a strong likelihood that the owners these tracts will request splits to smaller lots in the very near future.

Rural Subdivisions

Rural subdivisions are authorized under the R-S, Residential-Suburban zoning district. The R-S zoning district permits single family dwellings and manufactured homes, subject to a 20-acre minimum tract with individual lots at a minimum three acres. A complete listing of platted subdivisions in the unincorporated area of the county is located in Table 3-13 on page 64. The development pattern of rural subdivisions adhere to following these location characteristics:

1. **I-135 Corridor:** There are several suburban residential tracts/subdivisions within the I-135 Corridor from the City of Newton to the Segdwick County line. Most of these tracts and subdivisions take advantage the convenient access provided by Kansas Road (Old Highway 81).

2. **Newton Urban Fringe:** Several rural subdivisions have developed around the outer fringe of the cities of Newton and North Newton. An established node of residential development is located approximately $\frac{3}{4}$ mile west of Newton on North West Road. Again, most of these subdivisions are located near or adjacent to a paved county road.

3. **Hesston Urban Fringe:** Four subdivisions ranging from 5 lots to 35 lots have been built around the outskirts of Hesston. These subdivisions are not located on a paved county road, but are located within a half mile.

Large Tract Non-Farm Housing

Harvey County adopted a set of zoning regulations in 1975 designed to control land use development, protect agricultural operations, and prevent haphazard development in the rural areas of the county. The A-2, Agricultural Transition District and A-R, Agricultural Residential District require that no more than one single family dwelling structure be allowed per quarter-quarter section (40 acres). The A-2 district permits a five-acre dwelling site under certain conditions and limitations. The R-S, Residential District was designed to control the subdivision of land in the unincorporated areas of the county by requiring a 20-acre minimum tract. The stated purpose, and indeed the effect of these regulations, has been to limit scattered non-farm housing in Harvey County by requiring the purchase of large tracts (either 40 or 20 acres).

Over the past nearly 25 years, these regulations have generally accomplished their objectives. It is important to remember that these zoning regulations were not intended to prohibit non-farm housing, but to control its proliferation.

As the name "scattered" implies, there are not easily identifiable location characteristics, except the following broad trends.

- Many of the tracts are located on or near a paved county road.
- The I-135 corridor contains a concentration of suburban homes.
- Generally, the eastern one-third of the county shows a greater number of suburban homes than the western two-thirds.

Commercial Land Use

The amount of commercial land use and zoning in the unincorporated portion of the county is limited. Several commercial developments are present along Kansas Road (Old Highway 81) and U.S. Highway 50. However, the commercial development along U.S. Highway 50 and Kansas Road does not constitute "strip highway commercial" development. Many of the retail services (gas stations and hotel) that developed along old Highway 81 are vacant, which is most likely a result of traffic shifting to Highway I-135.

The Factory Outlet Mall, located at I-135 and SE 36th Street, is the major commercial use within the I-135 corridor. The City of Newton extended a sanitary sewer and water line to the mall site, and annexed the property. A gas station (Total) and fast food restaurant (Burger King) are located immediately north of the mall site.

Overall, commercial development in the unincorporated areas of the county has been kept in check and not allowed to create a haphazard land use pattern.

Industrial Land Use

Industrial activity in the unincorporated areas of the county is restricted to a limited number of sites. The Newton City County Airport, approximately two miles east of the City of Newton on East 1st Street, is zoned I-1, Light Industrial. The amount of business/industry at the airport is limited, although a joint city/county funded project financed the extension of a municipal sanitary sewer line to the airport. This infrastructure improvement now makes it capable of stimulating development at the airport and along East 1st Street. A parcel immediately west of the airport on First Street received county industrial zoning, but as of 2000 no development plans have been implemented.

There are several industrial uses within the I-135 Corridor, but they are all located adjacent to Kansas Road. An outdoor storage yard for an oil/gas business and an outdoor storage yard for a tractor repair business is located at the Segdwick county line. There are two auction businesses along Kansas Road. There is a large tract zoned industrial adjacent to I-135, but the landowner has not pursued his original plans.

Another industrial node of activity is located at Highway 50 and the Burlington/Santa Fe railroad tracks at the southwest edge of Newton. This is an older industrial park that is not connected to the Newton sanitary sewer line; thus the businesses have individual lagoons.

Conclusions

There are several important findings or land use issues identified that should be considered by the county. These findings and issues are as follows:

1. How effective has the control of suburban subdivisions and scattered non-farm housing been over the past 25 years?
2. Is the development of suburban subdivisions occurring at appropriate places, densities, and distances from cities?
3. Is the county approved development (residential, industrial, commercial) in the urban fringe of cities negatively impacting the potential for city growth and expansion?
4. As development pressures move northward from the City of Wichita and southward from the City of Newton, is the I-135 Corridor developing into an urban/suburban corridor the county envisions and desires?
5. Does the county desire to promote and encourage industrial development east of Newton near the airport?

6. There are several vacant tracts in the unincorporated areas around the smaller cities in the county that may no longer be necessary or appropriately zoned. According to the County Planner, when the 1975 comprehensive zoning map was adopted the county rezoned several tracts to be in compliance with the future land use map. The county should evaluate downzoning these tracts.
7. There are several commercial and industrial tracts along Kansas Road that the county should evaluate the merit of downzoning.

An analysis of the existing polices and patterns of rural development in Harvey County leads to several conclusions. First, the regulatory scheme promoted by the county was developed nation-wide in the 1960's to preserve rural character by dispersing residential and commercial development throughout a wide area on large tracts. The thinking at this time was that scattering development would preserve the open space characteristic of rurality, limit local government liability in service needs, and promote limited access to rural lands because of high initial land costs. The system still works in rural counties have margin growth characteristics and remote, scattered farm patterns.

In general, the social patterns and economy that made rural development popular in the 1960's have now given way to affluence and land market driven by a growth economy fully recovered from the recessions of the early 1980s.

Aggressive sales of marginal crop lands, the decline of family farming, and the ability to trade modest urban homes for large rural tracts have contributed to a development pattern that is costly, wasteful, and eventually destructive of the way of life it seeks to promote.

The metro fringe and rural growth models of the 1990s and next millennium are based on a new form of compact development and appropriate growth. The compact form of development promotes smaller, well-designed lots within medium sized subdivisions. All subdivisions are located within the current or anticipated service areas of municipalities or within benefit districts organized by the rural governments.

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Chapter 4

Plan Implementation

Section 4.1	Agricultural & Rural Preservation
Section 4.2	Urban Fringe Management
Section 4.3	I-135 Corridor
Section 4.4	Equus Beds Aquifer

Section 4.1

Agriculture & Rural Preservation

	Goal or Policy Statement	Action Plan	Responsible Party
1.1	Protect agricultural lands and limit non-farm developments in order to preserve farmland for the production of agricultural products and promotion of related agribusiness.	Review and amend the current county zoning to ensure that regulations are in place to control or prevent non-agricultural uses and activities from encroaching into land used for agricultural production.	County Regional Planning Commission and Board of County Commission.
		Support voluntary techniques for protecting farm property from urban conversion through nonprofit conservancies, land trusts, and conservation easements.	Private landowners, interested citizens, and Board of County Commission.
1.2	Preserve the rural character of the county and retain the historical, cultural, and physical features that define the rural landscape.	Support local historical groups to identify, research, and inventory buildings, landscapes, landmarks, and structures that contribute to the historic, cultural, and visual significance of rural Harvey County.	Local historical groups, interested citizens, and the Board of County Commission.
		Adopt zoning and subdivision regulations that encourage landowners to prepare site development plans and plats to preserve historical, cultural, and environmental sensitive features.	County Regional Planning Commission and Board of County Commission.
		Amend the county zoning regulations to include “cluster development” as a technique to encourage a more natural and site sensitive design approach to rural housing development.	County Regional Planning Commission and Board of County Commission.

		Cooperate with the Harvey County Natural Resource Conservation District to promote and implement Federal and State programs designed to protect the environment.	NRCD, private landowners, and the Board of County Commission.
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PLAN ISSUE 4.2

Urban Fringe Management:

	Goal or Policy Statement	Action Plan	Responsible Party
2.1	Promote compact urban development in new areas adjacent to existing urban areas where public water and sanitary sewer lines can easily and economically be extended.	<p>Encourage each of the incorporated cities to identify urban growth boundaries or utility extension service areas.</p> <p>The urban growth boundary for each city should be reviewed by the county and eventually adopted for inclusion in the county comprehensive plan.</p> <p>Encourage each city to adopt an "Adequate Public Facilities Ordinance". The ordinance identifies the types and level of services that are needed to permit new development and established a policy about when infrastructure and public services must be in place. The ordinance also requires that a developer must demonstrate that the required levels of public facilities and services area, or will be, available to the proposed project.</p>	County Regional Planning Commission and Board of County Commission in cooperation with each of the incorporated cities.
2.2	Strive to avoid the establishment of airport hazards, lessen or prevent noise impacts affecting the public and surrounding landowners.	Adopt an airspace protection code or airport overlay district to regulate land uses and structures.	County Regional Planning Commission and Board of County Commission.
2.3	Encourage cluster housing to promote flexible development and appropriate site design to preserve natural amenities of rural land.	<p>Develop and adopt regulations that promote cluster subdivision design.</p> <p>Encourage developers with a bonus system to use "clustering" as an alternative subdivision design.</p>	County Regional Planning Commission and Board of County Commission.

PLAN ISSUE 4.3

I-135 Corridor

	Goal or Policy Statement	Action Plan	Responsible Party
3.1	Encourage urban commercial, industrial, and residential uses to locate within the urban service area and connect to a municipal water and sanitary sewer system.	Deny rezoning requests for urban land uses and direct these activities to the urban fringe where municipal services are available.	County Regional Planning Commission and Board of County Commission.
3.2	Discourage leap-frogging of urban land uses into a rural area and promote compact urban development.		
3.3	Accommodate limited rural subdivisions in the corridor.	Promote the rural residential nodes within the primary development area of the corridor.	County Regional Planning Commission and Board of County Commission
3.4	Downzone tracts of property that are incompatible with the plan goals, policies, and map.	Identify tracts that have remained zoned and undeveloped for a long period and are no longer consistent with the comprehensive plan.	County Regional Planning Commission and Board of County Commission.

PLAN ISSUE 4.4

Equus Beds Aquifer:

	Goal or Policy Statement	Action Plan	Responsible Party
4.1	Protect the groundwater supply.	Encourage and coordinate cooperation among public water supply systems and the Equus Beds Groundwater Management District No. 2. Since the Equus Beds Groundwater Management District has "safe yield" regulations that limit water removal and well spacing, public water systems must plan accordingly for future water removal.	Board of County Commission, County and City staff.
		Encourage coordination of municipal water use management practices as set forth in the Equus Beds Groundwater Management District No. 2 Management Program.	
		Establish communication and coordination regarding land use issues with the Equus Beds Groundwater Management District No. 2.	
4.2	Protect the quality of the groundwater supply.	Prohibit construction of septic tanks and lateral systems in areas where depth to water is shallow	County Regional Planning Commission, Board of County Commission, and County staff.
		Require new housing developments of a specific density threshold to have a public sewerage system.	
		Require new housing in urban fringe areas to be connected to municipal water and sewerage system	
		Development of a wellhead protection plan. Options available to local governments for wellhead protection include voluntary measures, educational programs, financial incentives, or regulatory measures	

		Prohibiting the construction of landfills over the Equus Beds Aquifer	
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	Goal or Policy Statement	Action Plan	Responsible Party
4.2	Protect the quality of the groundwater supply.	Encourage implementation of "best management practices" similar to those used by the North Fork-Ninnescah Watershed Water Quality Project in Reno County. This organization takes advantage of several federally and locally funded programs that reduce non-point source pollution.	County Regional Planning Commission, Board of County Commission, and County staff.
		Amend the subdivision regulations to require stream buffers or provide incentives that preserve existing riparian buffers	
		Adopt land use controls to minimize inappropriate development in critical areas of the Equus Beds. This could include an "Aquifer Area Overlay Zone"	