# DEVELOPMENT OF AN AGRICULTURAL LANDS POLICY/PLAN FOR SHAWNEE COUNTY, KANSAS

by

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"We are in a society that places high value on the market system to allocate resources. We tend to be suspicious of non-market solutions. But will the market give us the allocation of resources society desires...? There are problems with relying on the market to allocate land resources. An efficient, competitive market assumes a homogeneous product (every acre like every other acre), which land is not. It assumes many buyers and sellers, all with equal knowledge about the product - conditions which are not met in the land market. Another problem with market solutions is that land is site-specific; there is only so much land immediately adjacent to an interstate interchange, and a developer invariably can bid this land away from a farmer. Once that land has gone for development, there will never be more of it available for farming... If the public has legitimate interests in the allocation of land resources, what are the bases of these interests? Society may have a legitimate concern for its future food supply and assuring that there is sufficient farmland to meet the needs. If open land, actively farmed, contributes to the aesthetic values in our quality of life, then public policy to preserve open land is justified..."

Dr. Robert O. Sinclair

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## I. ROLE OF AGRICULTURE IN THE UNITED STATES

> "American agriculture is one of this Nation's strongest assets. We enjoy an envied role as a leader in world food production, and the benefits this abundance brings to most of our citizens contribute in great measure to our high standard of living and well-being."
>
> Roger Blobaum[1]

Agriculture, although basic to our daily existence, has long remained misunderstood and taken for granted by the general public. In an urban-oriented society, concerned with rapid growth and expansion, the needs of agriculture have been generally overlooked or ignored. Agriculture was traditionally regarded as the least efficient and least profitable use for the land - the "lowest" use; a use to be tolerated and allowed to continue until development became profitable. Land use and zoning maps showed agricultural lands as "vacant," "undeveloped" or "available for urban expansion." The common misconception was that all land not otherwise developed was equally suitable for agricultural use, a belief which overlooked the quality of the land. It was partially due to this attitude that the United States, during its first 200 years, lost approximately 236 million acres from production due to the combined forces of soil erosion and land conversions.[2]

The causes behind the loss of productive agricultural lands are not easy to isolate and categorize.

> "The issues involved here are multi-faceted. They include the availability and price of food to consumers, the role of the United States as a major exporter of agricultural products, the building of new homes to accommodate our growing population, the use by agriculture of increasing amounts of our current energy supply, and the effect on agricultural lands of the search for new energy sources. In sum, agricultural concerns are really broader concerns, many of which have environmental overtones."[3]

Causes of Agricultural Land Loss:

Although it would be virtually impossible to individually list all of the causes of agricultural land loss, it is possible to group them into several generic categories:

•Poor Land Management Practices -- This category includes soil erosion and increased soil salinity and eventually sterility resulting from improper irrigation practices. While the Soil Conservation Service (SCS) has been active in educating farmers against the effects of poor land management practices, it is estimated that approximately 3.5 billion tons of soil are still lost annually due to erosion on farmlands.[4] In some cases, cropland which has been damaged by erosion or problems with soil salinity can be converted to rangeland uses, thus retaining the land in agricultural use, but still destroying its potential for crop production.

•Urbanization and "Urban Shadow" Effects -- The chief cause of farmland conversion in the United States is urbanization and its associated effects. Urbanization is a broad category which includes urban expansion (the outward growth from the core city, occurring at a relatively steady rate) as well as urban sprawl (unpatterned, uncontrolled "shotgun" developments such as scattered "ranchette" residences and commerical strip development along major transportation routes.) The losses due to the direct effects of urbanization are obvious and relatively easy to measure; those due to the effects of the "urban shadow" are not quite so obvious. R. H. Jackson describes these effects in a passage from his book, Land Use in America:

"Farmers living in the vicinity of cities face certain problems resulting in either lowered yields or land not farmed, even though the land is not actually converted to urban uses. This is referred to as the urban shadow effect. As the suburban fringe advances, farmers residing in areas subject to present or short-term future development pressure begin to devote less capital to farm improvement and maintenance. The productivity of the land begins to decline. Other land is purchased by developers who do not maintain it as agriculturally productive land, but allow it to lie idle until such time as the advancing suburbs justify transforming it into suburban areas. Farmers opting to maintain their farming enterprise at the pre-suburban pressure scale face several diseconomies. Industries may locate nearby, which cause pollutants that minimize crop yields; suburban neighbors may engage in vandalism or outright theft of crops and animals; and finally, suburban residents may force the farmer to sell the land for development because the farm and its associated animals create a nuisance activity in the suburban setting. Tax rates increase as the land becomes more desireable for subdivision and other urban developments, either forcing the farmer to sell a part or all of his land for development, or forcing his survivors to sell the land to pay the estate taxes upon the farmer's death. The net effect of these forces is to cause a much greater loss of land to urban uses than the figures normally given for land transferred to urban uses indicate. It is estimated that for each acre of land actually transferred into an urban related land use, from 1 to 2 acres of additional land is lost from agricultural use."[3]

•Land Speculation -- Land speculation is also responsible for a great deal of land lost from production. Land speculators purchase land in areas prime for growth; not only in the fringe areas, but in rural satellite communities and areas of rapid development (such as popular resort and retirement areas in the sun-belt). Speculation results in the loss not only of those lands actually developed, but also of those lands which are purchased and allowed to remain idle until development becomes profitable. Speculation speeds urbanization and encourages sprawl-type development problems for the satellite communities which must provide services, thereby

raising property taxes and undermining the existing agricultural economy. More specific problems may also arise in areas where there is limited groundwater availability; this type of development encourages the growing conflict over water rights between the agricultural community's demands and those of the new development.

• Resource and "Demand" Related Developments -- Another extremely broad category of conversions consists of those lands which are lost to resource development or demand projects. These include both natural and man-made resource projects and developments such as parks, wildlife refuges, large scale dam and flood protection projects, road and highway developments, as well as energy-related projects such as strip mines, nuclear reactor and waste storage sites and quarry operations. These types of development consume land at an enormous scale, if not at a steady pace. Not only is land necessary for the facility itself, but also for the many related uses during the active life of the project (roads for site access, waste storage and/or treatment facilities, worker housing and/or support services), the demands for which vary with the intensity and duration of the project. Another problem which arises from this type of development is related to the productive life of the project. While most of these projects involve permanent changes in the land use, many of the energy related developments do not. These types of development are temporary at best; dependant upon both the economics of continued operation and the extent and/or life of the resource. After the operation has ceased, the land remains in an extremely disturbed state, with most if its options for use either permanently destroyed or severely limited, and the costs of reclamation are staggering.

In addition to lands directly lost by development, there are those lands which are lost by the splitting of fields. A split field occurs when a parcel of productive land is divided into one or more smaller parcels by some form of development (highway right of ways and utility easements for large overland power lines are common examples). Due to the difficulties this development creates for the farmer (poor access, economics and/or the presence of a physical danger) the farmer is often forced to either abandon the property or sell it for development.

Effects of Farmland Conversions:

Although the conversion of farmland affects the agricultural community most directly, the impacts are felt throughout the remainder of society as well. In addition to the effect on the municipalities (and subsequently the taxpayers) which must provide the capital improvements and expanded services to the new developments, there are many more far-reaching effects. The loss of prime land leads to the cultivation of marginal lands, which require more labor, intensive farming practices and increased applications of chemical additives in order to meet the production quotas. These practices not only result in higher food costs, but increase the environmental costs as well. Marginal lands are more susceptible to erosion. Erosion, sedimentation and the increased chemical content of the runoff from fields increase the level of water pollution in both ground and surface waters. As rangelands and other reserves are transformed into croplands, wildlife habitats and natural ecosystems disappear. In the cases of unique farmlands and/or habitats, the losses can never be replaced.

Food production and retail prices are also adversely affected. Fresh produce which was once readily available to local markets is no longer being produced. Goods must be imported to the community--whether this is from another county or another country, the local economy suffers twice--from the loss of the goods once exported and again from the increased cost of imported goods. As more land is removed from cultivation, the demand for tillable land greatly increases, inflating the cost of available agricultural land, regardless of its quality. Increased land costs make it difficult, if not impossible for aspiring farmers and those displaced farmers seeking to relocate to enter the market. Fewer numbers entering the profession, combined with a larger amount of forced retirements, high taxes and other constraints combine to further accelerate the decline of the family farm, thus encouraging the sale of lands to either the developers or to coporate farming operations owned by large-scale conglomerates, which can afford to absorb the high costs of operation. There is also a ripple effect throughout the agricultural work force, from migrant workers to agri-business corporations which must either absorb the displaced work force or face reductions due to the changing demands for equipment, services and supplies. Finally, there is also the aesthetic consideration. Farmlands provide both a physical and emotional relief to the urban landscape, as well as recreational opportunities for area residents. While the amount and impact of this aesthetic loss is difficult to measure, it is no less significant.[6]

Reasons for Concern:

Survey of the Nation's Land Base--In the past, the public has tended to "react" rather than act on most agricultural land issues,

waiting until they reach crisis proportions before acknowledging the existence of the problem. With the emergence of the environmental ethic in the 1970's, the conception of agriculture as a "leftover" land use slowly began to change. Urban expansion was no longer viewed as necessarily desireable or inevitable, and communities began to search for methods to contain and channel the sporadic and inefficient growth patterns of the past. Out of this new awareness grew a recognition that not all land is equally suitable for agriculture, and that that which is most desireable is in limited supply. Recently, Congress passed the Farmland Protection Policy Act which recognized prime farmland as a unique and limited natural resource, and defined the classes of land to be protected:

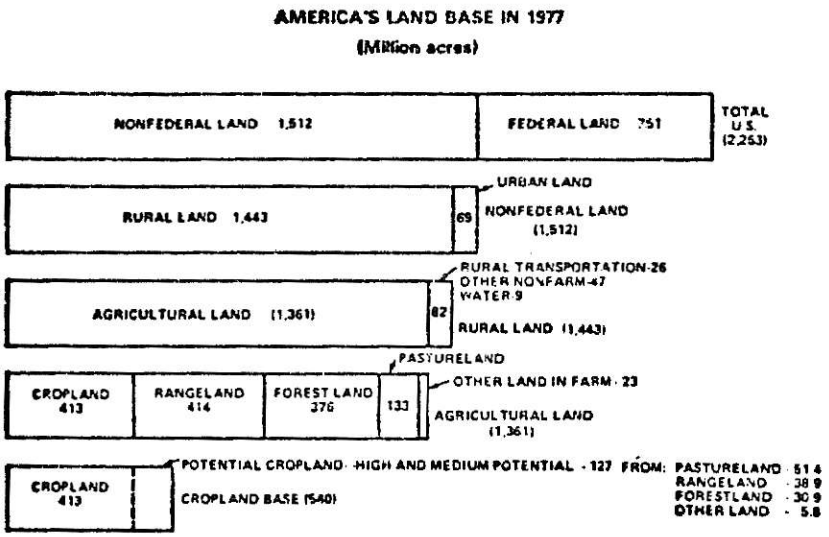
> "(1) the term 'farmland' includes all land defined as follows:
> (A) prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion,... Prime farmland includes land that possesses the above characteristics but is being used currently to produce livestock and timber. It does not include land already in or committed to urban development or water storage;
> (B) unique farmland is land other than prime farmland that is used for production of specific high-value food and fiber crops,... It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce substained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. Examples of such crops include citrus, tree nuts, olives, cranberries, fruits, and vegetables; and
> (C) farmland, other than prime or unique farmland, that is of statewide or local importance for the production of food, feed, fiber, forage, or oilseed crops, as determined by the appropriate State or unit of local government agency or agencies,..."[7]

(For the complete text of the Act, see Technical Appendix TA-1.)

In 1981, the National Agricultural Lands Study (NALS), a research group composed of concerned federal agencies, released its

final summary of the status of the nation's agricultural lands. Included in the report was the following breakdown of the nation's land base as of 1977:

Figure 1:




Source: NALS, Final Report, 1981, Executive Summary, p.3

Of the 413 million acre cropland base, only 47 million acres met the definition of "prime" established by the Department of Agriculture, and even less could be classified as "unique" or of "local or statewide importance." When the figures were broken down, the finite nature of the nation's farmland resources becomes readily apparent, and the spectre of continuing conversions to non-agricultural uses increasingly ominous.

Arguments for the Preservation of Agricultural Lands:

Despite the dramatic losses of agricultural lands in the past, and the indications that this trend will most likely continue, agricultural land has not yet become a scarce resource in the United States. In fact, ". . . The conversion of farmland poses no immediate or foreseeable threat to the nation's capacity to provide agricultural products,

aside from local shortages or specific (unique) crop losses. . ."˘ and increased product costs. The major arguments for the protection of prime agricultural lands may be summarized as follows:

- U.S. farmlands provide food and fiber not only for the United States, but for an international market. As world population grows and famine conditions increase, we have an ever increasing moral obligation to use our resources for the benefit of mankind.

- The farmland resource base provides diversity in both the local and regional economies, as well as providing a food source in times of temporary scarcities or interferences in the supply chain (such as natural catastrophes and strikes).

- Farmlands and the rural environment provide educational and aesthetic benefits to the surrounding areas.

- The preservation of prime farmlands makes sense economically. Prime land requires a minimum of input for a maximum of output. When marginal lands are brought into production, the resource input (labor, capital and energy) must be greatly increased in order to achieve the same level of return, and the environmental costs increase as well.

- Undue development pressure causes increased stress for the owner/operator of the family farm, which is a significant element in the traditional American social and economic structure.

An effective and viable farmland protection policy, one which results in the continuation of productive farming in the metropolitan area must do more than prohibit or control the rate of conversions; it must provide for the preservation of entire districts for long-term agricultural use.

## II. AGRICULTURE IN SHAWNEE COUNTY

### Extent and Quality of the Resource Base:

Shawnee County has a total agricultural land base of approximately 285,000 acres, or 82% of the total land area in the county.[10] This base may be subdivided into three component categories:

- Cropland Resource Base: Shawnee County has approximately 150,000 acres in croplands, of which approximately 122,500 acres were harvested in 1980-1981.[11] The major crops produced in the county are, in descending order: corn, sorghum, wheat, soybeans. There is also an extensive horticultural industry occurring in the river valleys.

- Grassland Resource Base: A Soil Conservation Service (SCS) inventory shows 114,500 acres of grass/pastureland in the county, 90% of which is in native grasses. The two major tame grasses in the area are Bromegrass and Kentucky fescue. Grasslands comprise 52% of the total farmland base in the Soldier Creek Basin, 48% in the Wakarusa, and 43% in the Kansas River Basins.[12]

- Woodland Resource Base: There are 21,000 acres of commercial forestlands in the county, occurring mostly along the stream banks. Timber harvested includes walnut, hackberry, oak, and some cottonwood.[13]

SEE AGRICULTURAL LAND BASE MAP #1

By SCS definition, Shawnee County has no agricultural lands which meet the qualifications for the "Unique" or "Important" farmlands classifications; however, approximately 80% of the county's soils in capability classes I-IV have been determined to meet the definition of "Prime." (See Technical Appendix TA-2 for SCS criteria.) This definition excludes urban land.

SEE PRIME AGRICULTURAL LANDS MAP #2

Characteristics of Agricultural Operations:

According to the Kansas Crop and Livestock Reporting Service (KCLRS), Shawnee County had 855 farms occupying 226,000 acres or 64.5% of the county in 1981. The mean size of the farms in 1981 was 264 acres. (SEE LAND OWNERSHIP MAP #3) Major crops in the county are:

Table 1:

CROPS HARVESTED -1981

| CROP | ACRES HARVESTED |
|---|---|
| Wheat | 37,000 |
| Corn (Irrigated) | 15,500 |
| Corn (Non-irrigated | 13,900 |
| Sorghum (Irrigated) | 1,400 |
| Sorghum (Non-irrigated) | 19,300 |
| Oats | 1,700 |
| Soybeans | 15,000 |
| | 103,800[14] |

Source: Kansas Crop and Livestock Reporting Service - Farm Facts 1981-82

Importance of Agriculture to the Local Economy:

While agriculture is not a major employer in the county, it has been a steady component of the county's economy, contributing almost 32 million dollars to the local economy in 1981,[15] and there is every reason to suspect that this trend will continue in the future. There has been a marked decline in the number of farms, land in farms and the average size of farms in Shawnee County during the period between 1969 and 1978, as evidenced by the data in the following table. Current

development trends (which will be explored in greater depth later in the chapter) indicate that this decline is continuing.

Table 2:

VALUE OF FARMS/FARM PRODUCTS FOR SELECTED YEARS:

| | 1969 | 1974 | 1978 |
|---|---|---|---|
| Number of Farms[16] | 1,071 | 981 | 855 |
| Land in Farms (Acres) | 272,509 | 244,947 | 213,254 |
| % of County in Farms | 77.8 | 69.9 | 60.8 |
| Average Size of Farms (Acres) | 254 | 250 | 249 |
| Average Value of Land & Buildings/Acre | N/A | $439 | $794 |
| Market Value of Agricultural Products Sold | $11,693,000 | $18,057,000 | $20,535,000 |
| Average Value/Farm | $17,988 | $26,170 | $31,351 |

Source: United States Census of Agriculture (Kansas), 1969, 1974, 1978.

Shawnee County also ranks second in the state in off-farm grain storage capacity; facilities in the City of Topeka, and other locations throughout the county combines to store almost 60,000,000 bushels in 1981.[17]

Farm Ownership/Income Characteristics:

The majority of farmers in Shawnee County are either full (500) or part (264) owners of their land. Only 94 farms (10.6%) are tenant operated.[18] Shawnee County has a substantial proportion of part-time farmers; of the 855 farms reporting in 1978, 496 (58%) of the operators had a principle occupation other than farming.[19]

Table 3:

DAYS WORKED OFF FARM:

| | |
|---|---|
| Did not work off farm | 290 |
| 1 - 49 days/yr. | 78 |
| 50 - 99 days/yr. | 19 |
| 100 - 49 | 18 |
| 150 - 199 | 35 |
| 200 or more | 391 |
| No Response | 24 |

Source: 1978 U.S. Census of Agriculture (Kansas)

Table 4:

FARM INCOME 1978:

| Number of Farms | (Value of farm products) Income Range |
|---|---|
| 43 | $100,000 or more |
| 77 | 40,000 - 99,999 |
| 91 | 20,000 - 39,999 |
| 127 | 10,000 - 19,999 |
| 144 | 5,000 - 9,999 |
| 173 | 2,500 - 4,999 |
| 200 | Less than 2,500 |

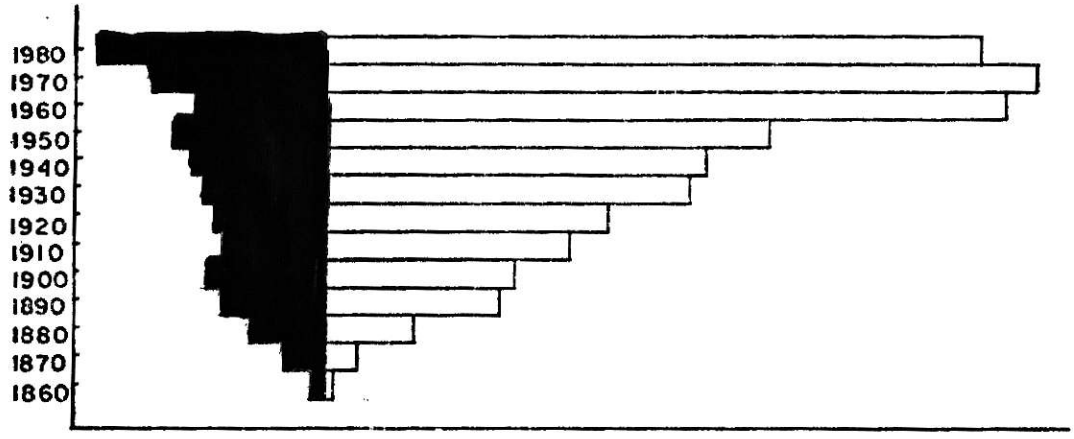
Average Income from farm products - $24,346.00

Source: 1978 U.S. Census of Agriculture (Kansas)

Characteristics of Development:

One indicator of the development patterns in the county may be found in the historic population distribution between the City of Topeka and the balance of Shawnee County.

Figure 2: HISTORIC POPULATION DISTRIBUTION
SHAWNEE COUNTY - CITY OF TOPEKA
1860 - 1980




SOURCES: TSCRPC, 1982 PRELIMINARY LAND USE PLAN, AND
U.S. CENSUS DATA (SEE RELATED TABLE IN APPENDIX A)

The population distribution of Shawnee County has historically been reflective of the predominent development trends occurring in the area. Shawnee County was settled originally in a scattered pattern of farming and trading settlements; this pattern is evident in the 1860 Census figures, which show 78% of the population residing in the balance of the county, and only 22% within the city limits of Topeka. This trend began to reverse itself almost immediatley in 1861 when Topeka was designated as the state capital, and the population began to shift towards the urban center. This trend continued into the 1960 Census, where 85% of the county's population was found to reside within the corporate limits of the City of Topeka, and only 15% in the balance of the county. However, in the late 60's and early 70's a shift to urban-rural migration began to become more noticeable, as the population sought to move back to the "country." The 1970

Census showed a drop in the percentage of the population residing in Topeka to 80%, a trend which has continued in the 1980 Census, with only 74% of the population residing in Topeka (the lowest percentage since 1940). If no measures are taken to channel growth into the existing urbanized/urbanizing areas of Topeka, the balance of the county may expect to absorb an increasingly greater proportion of the future development in the county. (See Associated Table in Appendix A)

Both Topeka and Shawnee County have experienced a relatively stable population growth rate historically, the exception to this trend occurring during the period between the 1970 and 1980 Census. In May of 1973, Forbes Air Force Base to the immediate south of Topeka was closed, a factor which contributed significantly to the overall population loss experienced in the 1980 Census. While the city lost a substantial amount of population during this period, the balance of the county experienced a significant population gain, primarily due to increased residential development in the rural areas. This net negative population growth is not expected to continue; a 1978 Planning Commission Staff report projected the population to the year 1000 using the cohort-survival technique. While these figures may be slightly high, the population is anticipated to stabilize itself, and resume a steady growth pattern.

**THIS BOOK CONTAINS NUMEROUS PAGES WITH DIAGRAMS THAT ARE CROOKED COMPARED TO THE REST OF THE INFORMATION ON THE PAGE.**

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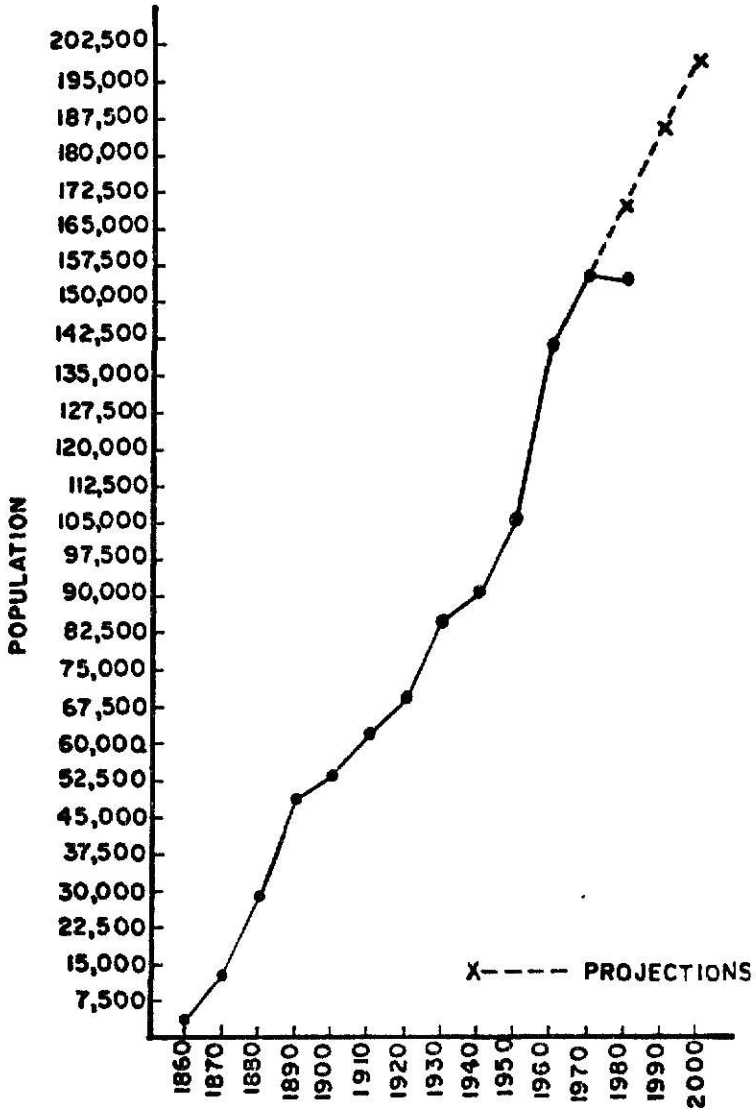
Figure 3:

POPULATION TRENDS - SHAWNEE COUNTY
1860 - 2000




SOURCES: U.S. CENSUS DATA, PROJECTIONS FROM TSCMPC, 1974 LAND USE MANAGEMENT PROGRAM.

The traditional development pattern in Shawnee County has been one of unmanaged growth, scattered and sprawling around the City of Topeka. A large proportion of the recent residential development in the county has occurred at low densities outside of the city limits with little or no regard for the quality of the agricultural land developed, or for the suitability/capability of the soil to support a septic system. This scattered development has been furthered by both the city's willingness to provide city services to outlying areas and by the county's failure to regulate rural sell-offs.

SEE EXISTING DEVELOPMENT MAP #4

The relative magnitude of the growth which has occurred in the county in recent years is indicated by the following building permit data for selected years. (Years were selected on the basis of the amount of information available.)

Table 5:

SHAWNEE COUNTY, KANSAS

BUILDING PERMIT DATA FOR SELECTED YEARS 1970 - 1980

| YEAR | TOTAL UNITS CITY & COUNTY | TOTAL UNITS COUNTY | % CO. | TOTAL ACREAGE COUNTY | % UNITS in RWD | % UNITS w/ SEPTIC | %UNITS w/ SEWER | % UNITS in SUB. | MEAN ACREAGE |
|---|---|---|---|---|---|---|---|---|---|
| 1970 | 518 | 218 | 42 | 2,360.34 | 66 | 70 | 30 | 63 | 10.83 |
| 1971 | 756 | 374 | 49 | 1,074.39 | 91 | 68 | 32 | 79 | 2.87 |
| 1974 | 515 | 351 | 68 | 2,038.13 | 70 | 71 | 29 | 63 | 5.80 (Median .77) (Mode .51) |
| 1978 | 1,017 | 596 | 59 | 3,081.36 | 61 | 49 | 51 | 70 | 5.17 |
| 1980 | 400 | 241 | 60 | 597.79 | 45 | 44 | 56 | 72 | 2.48 (Median .43) (Mode 3.0) |
| FIVE YEAR AVERAGES: | | | | | 1,201 (67%) | 1,054 (59%) | 726 (41%) | 1,242 (70%) | 5.43 |

SOURCES: City and County Building Permit Records

Of the 4502 building permits which have historically been issued by Shawnee County, 2030 had been issued prior to 1968 and the remaining 2472 have been issued since. Although no breakdown of the type of permit (residential, commercial, industrial) is readily available, the county zoning map provides an idea as to the nature of the permits. The vast predominence of the permits have been for residential construction.

SEE COUNTY ZONING MAP #5

Development Pressures -- As the City of Topeka is experiencing no major urban expansion, the chief development pressure on the rural and agricultural lands stems from the scattered single-family residential developments which occur throughout the county along the access roads. While the pressure on farmers to sell their lands for development has not been severe, it has proved profitable for the farmer to sell off individual lots along the access roads, creating a condition which eventually places a stranglehold on the farmland remaining in the center of the development.

SEE EXISTING DEVELOPMENT MAP #4

Idled Lands -- While it is difficult, if not impossible to ascertain the reason(s) for which lands have been idled from production in anticipation of future development, a good indicator is the condition of the land itself. When the pressure to develop is felt by the farmer, there is no longer the motivation to invest time, money and long-term improvements in the land, and deterioration (i.e. erosion) begins to occur in more severe proportions. While erosion patterns are scattered throughout the county (partially due to topography and soil types), it is possible to discern a higher concentration of severely eroded lands within the three-mile area surrounding the City of Topeka--especially to the south and east of the city.

SEE 1982 CRITICAL EROSION MAP #6

## III. PLANNING TO PRESERVE AGRICULTURAL LANDS IN SHAWNEE COUNTY

### Development of Community Goals:

Concern for the protection of agricultural lands has been expressed for some time in Shawnee County. In October 1980, the Topeka-Shawnee County Metropolitan Planning Commission (TSCMPC) began the process of developing a statement of community goals as the first step in the development of a comprehensive growth management plan for the planning area (Shawnee County). The following is a synopsis of the process of the development of the Community Goals Statement.

•October 4, 1980: A Community Conference was held at Washburn University with the stated purpose of bringing together a "cross-section of citizens to voice their ideas, concerns and desires for a better Topeka and Shawnee County." Approximately 130 persons participated in drafting a preliminary list of goals and ranking them.

•November 1980: The Planning Commission staff analyzed four major sources of input from previous studies and surveys on file at the commission offices. These were:

--Goals from the Community Conference, October 1980.

--The findings of the Shawnee County Attitude Survey, a questionnaire which was administered to randomly chosen respondents in 1979 and 1980. (The Shawnee County Attitude Surveys were conducted to determine the community's opinion of community issues. A random sample was chosen from census and voter registration records. In addition to those chosen randomly, 50 community leaders and 50 individuals receiving county services received the survey.)

--Previous Goals Programs--1968 Goals for Topeka, a preliminary goals statement drafted in 1967-1968, and "Basic Goals" which appear in the 1972 Statistics Report.

--Goals Research conducted by the staff--the review and evaluation of goals and the goals formation process in various other communities.

At the conclusion of the analysis stage, a list of preliminary goals (covering the eight areas of the Comprehensive Plan: Land Use, Transportation, Public Facilities, Human Services, Environment, Housing, Economic Development, and Government) was compiled and revised by the staff.

•January 1981: A series of eight public hearings were held at various locations throughout Topeka and Shawnee County, with the purpose of obtaining comments on the proposed preliminary statement of goals. Overall attendance and participation at the hearings was low (of 184 persons in attendance, only 89 returned ballots); however, the overall response from those returning ballots was favorable.

Table 6:

TOPEKA-SHAWNEE COUNTY
GOALS HEARINGS

(Outside Topeka)

| Date | | Citizens Attending | Ballots Returned |
|---|---|---|---|
| 1/7 | Seaman H.S. | 37 | 19 |
| 1/7 | Shawnee Heights H.S. | 50 | 13 |
| 1/8 | Washburn Rural H.S. | 20 | 16 |
| (Topeka) | | | |
| 1/12 | Highland Park H.S. (cancelled through lack of attendance) | | |
| 1/14 | Topeka Public Library | 43 | 11 |
| 1/14 | Landon Middle School | 4 | 2 |
| 1/15 | Chase Middle School | 17 | 12 |
| 1/15 | French Middle School | 13 | 5 |
| TOTAL | | 184 | 89* |

*Eleven Ballots were received through the mail.

Source: TSCMPC Staff Report

February 16, 1981: At their regualr monthly public hearing, the TSCMPC formed a goals subcommittee to review the comments received at the previous public hearings and to finalize the goals.

• April 2, 1981: The subcommittee presented its revised Statement of Goals and an accompanying "glossary" of terms to the full TSCMPC at a special public hearing.

• April 20, 1981: The final Statement of Goals was presented to the TSCMPC and was officially adopted by that body.

• July 1981: The final Statement of Goals was presented to the Topeka City Commission (July 14, 1981) and to the Shawnee County Commission (July 22, 1981); both adopted the statement.

Of the adopted goals, Goal V, Environment, specifically states the need to "Identify and strive to preserve prime agricultural land for the production of food and fiber." (For the complete Statement of Goals, as adopted, see Technical Appendix TA-3.) Thus, agricultural land preservation was identified as one of the objectives of the Comprehensive Growth Management Plan.

Development of an Agricultural Lands Policy:

The objectives of a successful agricultural lands preservation policy are threefold:

- to protect prime agricultural land from unnecessary development;
- to locate new development on suitable soils in areas where public services can be efficiently and economically provided;
- to ensure a proper balance of different land uses to meet future needs by not unduly restricting development.

The Topeka-Shawnee County Metropolitan Planning Commission recognizes the significance of prime agricultural lands and the family farm in contributing to economic and social resources of Shawnee County, and the importance of preserving the ability of these lands to fulfill their traditional productive environmental and aesthetic functions by preventing their indiscriminate removal from production. In order

to attain this goal it is necessary for the Planning Commission to adopt certain policies regarding agricultural land use in the county; the following should be considered prototypes for these policies.

·Permit only agricultural uses, and those uses incidental to agriculture on land identified as prime agricultural, beyond the stated urban service area.

·Permit residential and other non-agricultural uses only on lands capable of supportin them. Criteria to determine capability shall be set by the Land Evaluation and Site Assessment system (LESA) and shall include, but not be limited to, such physical characteristics as soil permiability, sub-surface drainage, soil capability class, flood potential and water availability. (The LESA system will be explained in greater detail in the Implementation Chapter.)

·Restrict development in the unincorporated areas of the county to low-potential agricultural lands which are capable of supporting the proposed use, and where the proposed use will not negatively impact the surrounding agricultural uses. Criteria to determine the impacts of the proposed use will be set by the LESA site assessment system.

·Provide incentives for development within the existing municipal infrastructure where water, sewers, schools and other public facilities are available. Such incentives might include provision for transfer of development rights.

·Protect the agricultural resource base of the county by working with the Soil Conservation District Office and area landowners to develop and implement soil conservation and land management practices which will assist in the maintenance of soil fertility and the control of soil erosion.

Defining and Identifying Agricultural Lands for Preservation:

Definition of "Prime":

The concept of what constitutes "prime" is difficult to define as the range of physical, social and economic considerations which determine a tract's desirability for a particular use is broad, and difficult to weigh objectively:

> ". . . the concept of prime farmland is useful, but it cannot be defined in terms of a system of cardinal measurement. . . the concept of prime land is merely an ordering device. While the chemical, physical and geodetic properties of a tract of land can be expressed in quantitative terms that reflect cardinal measurements, the weights that must be attached to these properties (soil series, landscape position, spatial distribution and configuration, location, etc.) are always relative weights."[20]

As the State of Kansas has neither a policy or legislation which defines and/or designates what constitutes "prime" farmland, Shawnee County must turn elsewhere for guidelines.

The Soil Conservation Service (SCS) has developed a system of criteria for ranking important farmlands nationwide which has proven to be broader and more flexible than the older method of classifying soils strictly by soil capability class, yet it retains the characteristic consistency of that system. (The complete technical criteria for this system is contained in the Secretary of Agriculture's Memorandum 9500-2, found in Technical Appendix TA-4.) The State Office of the SCS has applied these criteria to Kansas conditions, and developed the following definition of what constitutes "prime" land in Kansas:

> "Prime farmlands are:
> 1) Lands best suited for producing food, feed, forage, fiber and oilseed crops.
> 2) Lands also available for these uses. Prime farmland can be cropland, pastureland, rangeland, forest land, or other land, except urban builtup land or water areas. It has the quality, growing season, and moisture

supply needed to produce sustained high yields of crops economically when managed properly.

"Prime farmlands are determined by soil characteristics. In Kansas, prime farmlands are those with soils that:

*Have rainfall or irrigation sufficient to provide adequate moisture for the commonly grown crops in seven or more years out of ten.

*Have a range of pH favorable for growing a wide variety of crops.

*Have no water table that interferes with crop growth.

*Have no sodium or salinity problems.

*Are not flooded frequently during the growing season.

*Have no serious erosion hazards.

*Are sufficiently permeable that waterlogging does not occur for appreciable periods during the growing season.

*Have surface containing few rock fragments that interfere with tillage."

Source: SCS pamphlet--Preserve Prime Farmland

Using this definition, and the previously estabilshed soil capability classes for the county's soils, the Shawnee County Conservation District staff mapped the county's prime soils.

SEE PRIME FARMLAND SOILS MAP #7

As a result of SCS's survey, over 80% of the county's soils (excluding the urbanized area of Topeka) were identified as prime. While it would be optimal to preserve as much of this resource as possible, it is obviously not feasible to place the entire county in a preservation zone; therefore, criteria must be developed to identify those lands which are to be preserved for agriculture, and those which are to be reserved for future urban expansion.

The City of Topeka is presently involved in the development of a growth management plan which will regulate urban expansion until the

year 2005. The TSCMPC is presently in the process of determining the location of the "Urban Service Line"--that is the area which will be serviced by public facilities by 2005, and where urbanization is to be encouraged. Although this "line" has not yet been officially adopted, for planning purposes it is being set around the area which is projected to be served by municipal sewers in the year 2005, and for the purposes of this plan the line will be considered to be set here. It should be noted that this is not a permanent designation; like the rest of the growth management plan it will be reviewed and updated periodically as a part of the planning function.

SEE FUTURE LAND USE AREA DESIGNATIONS MAP #8

## IV. DEVELOPING THE PRESERVATION STRATEGY

### Range of Existing Policies/Programs

Federal:

The federal government has long been criticized for its lack of leadership in policy formation for the protection of the nation's agricultural resources. On December 22, 1981, the Farmland Protection Policy Act (Public Law 97-98) was passed, recognizing the problem of agricultural land loss and the need for regulatory and incentive measures. More specifically, the Act required that:

> ". . . the Department of Agriculture and other Federal agencies should take steps to assure that the actions of the Federal Government do not cause United States farmland to be irreversibly converted to nonagricultural uses in cases in which other national interests do not override the importance of the protection of farmland nor otherwise outweigh the benefits of maintaining farmland resources. . .
>
> "The purpose of this subtitle is to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that Federal programs are administered in a manner that, to the extent practicible, will be compatible with State, unit of local government, and private programs and policies to protect farmland."

(See Technical Appendix TA-1 for the full text of the Act.)

State:

Many states have taken the lead in developing innovative regulatory and incentive techniques for farmland preservation; Kansas as yet has not. In 1978, 92% of the land area of the state was in farms[21] and agriculture remains the backbone of the Kansas economy, providing the base for much of the state's business and industry. While the loss of farmland is an issue which is both recognized and a cause of concern within the state, there is a reluctance among state officials to develop the necessary legislation, programs and policies. A 1975 report by the Division of State Planning entitled

Kansas 2000 recognized that ". . . the withdrawal of land from agriculture for other uses requires the balancing of what is to be gained against the effect on the land as a resource"; but failed to develop the need for a preservation program for this valuable natural resource. The legislating of controls has remained politically unpopular in the state legislature, and there have been few attempts to introduce legislation in recent years. The exception has been the passage of Senate Bill 485 earlier this year; this bill is the equivalent of a "right-to-farm" bill and protects farmers from nuisance lawsuits resulting from urban expansion. (For the complete text of the bill, see Technical Appendix TA-5.) The reticence of the legislature to act upon the issue of preservation is reflective of its unpopularity in many of the rural regions of Kansas, where legislation is seen as removing the control of his land from the farmer, and a drastic departure from the current statutes which prohibit the regulation of agricultural lands.

> "No determination nor rule nor regulation shall be held to apply to the use of land for agricultural purposes, nor for the erection or maintenance of buildings thereon for such purposes so long as such land and buildings erected thereon are used for agricultural purposes and not otherwise." (K.S.A. 19-2908; 19-2921)

Kansas also does not have any taxation-relief programs designed to ease the farmer's burden in fringe areas, although there is a differential appraisal for state inheritance and estate taxation, as well as a highly controversial differential assessment for farm machinery; however, these do not necessarily protect the farmer in areas where pressure to convert is high.[22]

Local:

Local programs to protect agricultural lands are as numerous and varied as the communities which developed them. Currently, Shawnee County has no effective provisions specifically designed for the protection of agricultural lands in its ordinances. Shawnee County is governed by two zoning ordinances (both of which are currently being reviewed for update as a part of the Growth Management System); one is applicable within the three-mile extraterritorial boundary of the City of Topeka, the other is applicable in the balance of the county. Ideally, the regulations within the three-mile area should be oriented towards the needs of future urbanization, (consideration should be given to amending the boundaries of this area to coincide with the designated urban service area) and those regulations applicable to the balance of the county should be oriented towards preserving the agricultural nature of the county on a permanent basis. At present the two ordinances are similar to identical in many provisions, and fail to adequately distinguish between the two areas, permitting scattered residential development throughout the county. (See Technical Appendix TA-6 for a summary of County Zoning Classifications.)

Basis For Local Powers:

Local governments have several generic powers of control which are derived from the Constitution and statutory provisions. These powers provide the basis for all control programs, including farmland protection.

- Eminent Domain - the taking of private land for public purpose(s).
- Power of Taxation - the power to add to or subtract from the cost of land ownership.

- Police Power - the power to control land use for the public welfare (zoning, traditional and other control mechanisms).
- The power of local government to provide economic incentives, to annex lands and to subsidize capital improvements.[23]

Types of Controls:

Programs of control may include one or more measures based upon one or more of these powers. While the programs are as diverse in nature as the municipalities which developed them, most may be grouped based upon their purpose:

- Those designed to reduce the attractiveness of the subject land for development (conservation).
- Those designed to offset the effects and additional burdens created by the urban shadow (protection).
- Those designed to prevent development from occurring on designated lands (preservation).
- The first group of programs are designed to conserve agriculture lands and uses, by encouraging growth and development in other areas adjacent to, or within the existing urban area. Growth Management Programs, Comprehensive Planning, Utility Expansion Controls, Policies regarding Development decisions, and public improvement controls are a few of the measures employed in these programs.

The second group of programs are those which are designed to offset the effects and additional costs to the farmer brought about by urban sprawl and the urban shadow effect. The focus of these programs is the protection of agricultural land use, by reducing the pressures which force operators to "sell out" or "sell off." Reduction of Property Tax Assessments, Tax exemptions for utility assessments, protection from nuisance ordinances, restriction of the use of eminent domain, agricultural Districting are representative of the programs in this area.

The third area, those programs designed to preserve agricultural lands and uses by preventing development on designated parcels. These measures include: Ag zoning techniques, purchase and/or transfer of development rights, Critical area designations, Minimum Lot/Parcel Sizes, Quarter/Quarter selloffs, and permanent reservation of prime lands.

Range of Alternatives:

The preservation of agricultural lands can be accomplished in essentially two ways: by regulating and restricting the type and location of future growth, or by creating incentives which encourage the retention of agriculture as a viable and productive use for the land. As incentives are for the most part in the hands of the state, measures taken by local governments in Kansas will for the most part be regulatory in nature. It should be noted that while restrictive and regulatory measures are effective as temporary controls when development pressure is moderate, incentives are necessary for a program of permanent preservation. Alternatives for the preservation of agricultural lands are as varied and far-reaching as the communities which created them. Due to the general lack of state guidelines, the following regulatory zoning controls are presented as perhaps the most workable (but by no means exhaustive) techniques for application in Shawnee County.

Agricultural Zoning Techniques:

Zoning was designed as an urban tool: traditionally "agricultural" zoning was simply a catch-all classification for lands not yet developed for urban uses. As the concept of "agricultural use" changed, new

techniques of zoning for agriculture emerged which differ both in scope and application.

·Large Lot Zoning--Large Lot Residential Zoning in rural areas has been a traditional method of "preserving" agricultural land was concerned, but results in application were minimal. These "rural residential" zones merely treated agricultural lands as holding areas for rural subdivisions--the traditional zones between urban and rural uses. "Ranchettes" were common occurrences in these zones; while this type of use may indeed preserve the land from dense development, it also effectively removes it from productive use.

Recently, the application of large lot zoning has begun to change in focus, as more innovative approaches have evolved. No longer regarded as a transitional or timing device for urban growth, Large Lot Zoning is being looked at with other techniques as a possible tool for the preservation of farmland.

Rather than basing lot size on the area necessary for maintaining a septic system, minimum lot size is based on the minimum area necessary to achieve a successful farming practice. In order to determine what the minimum size should be, such factors as land ownership patterns, development trends and policies, projected land use, soil and other natural conditions/constraints and productivity of farms in the area are considered. Naturally, these factors vary significantly from area to area, and there are no magic numbers.

> ". . . The result is often a series of lot sizes each of which is tailored to specific conditions in a specific area. In this way, the ordinances can account for areas that it is most important to retain, areas most likely to be retained, and areas least important or least likely to be retained."[24]

Exclusive Agricultural Zoning:

The premise behind exclusive agricultural zones is simply a variation of the traditional method of ag zoning. If land isn't designated as urban, it is zoned agricultural--thus, the agricultural designation includes all classes of agricultural and resource lands. In an exclusive agricultural zone, farming is the only permitted use; non-farm residential development is prohibited. Exclusive ag zoning is not a cumulative technique--agricultural uses are regarded as the highest and best use for the land, and no lower uses or exceptions are permitted. The concept of "farm" is defined in the ordinance, and a minimum size set; this lot size then becomes the minimum lot size for the district. (i.e. Blackhawk County, Iowa, has set the minimum size for a "farm" at 35 acres--any tract less than 35 acres can then be zoned. This skirts the problem of how to regulate agricultural uses in a state which prohibits regulation of agriculture, as does Kansas.)

Exclusive agricultural zoning suffers from the same limitations and pitfalls as other forms of zoning. The basis for the designation of exclusive ag zones must be clearly defined and "reasonable"--a municipality may not arbitrarily designate land for agricultural use simply to control growth. "The question arises whether an ordinance placing such a drastic limitation on the use of land reasonably serves the public health, safety and welfare."[25] If the basis for the designation is not defensible, and if adequate provision for the displaced uses (i.e. housing) has not been made in the comprehensive plan, the ordinance may be subject to accusations of exclusion. Several agricultural classes may be developed to allow for a range of densities which prohibits the expansion of subdivisions and creates a holding

zone to contain urban development. An example would be the structure of the Walworth County Wisconsin ag zones:

"$A^1$ Prime Agricultural Land District - 35 acre minimum/exclusive ag use.

$A^2$ Agricultural Land District - provides for small farms on units of non-prime land 5 acre minimum.

$A^3$ Ag Land Holding District - Transitional district where urban expansion is planned, 35 acre minimum designed to prevent premature subdivision and promote orderly expansion.

$A^4$ Ag-Related Manufacturing, Warehousing and Marketing District - designed to provide a location for major important ag businesses services

$A^5$ Single Family Homes on odd lots in ag areas where lots are unsuitable for ag due to size, shape, location and condition."[26]

The effectiveness of this technique in preserving agricultural lands rests with the ability of the Planning Commission and the Governing Bodies to make cohesive decisions. Each request for rezoning is required to be accompanied by an Agricultural Impact Assessment, the purpose of which is to determine the extent of negative impacts of the proposed use upon the agricultural community and production, the environment, the existing infrastructure and the economy of the area. These cases are then evaluated by a standard set of criteria (established by policy in the comprehensive plan); if the request satisfactorily meets the criteria it may be approved; if not, denied.

(Example Criteria: Comlumbia County, Wisconsin):

"Goal:

> "In areas having prime agricultural soils, all types of residential development should be discouraged, unless the housing unit will be for farm labor. In areas having marginal agricultural soils, housing units could be permitted where they are not in conflict with existing agricultural uses and where these future housing units would be located in such a fashion as to minimize their impact on the agricultural tax base.

"Criteria:

> "Lands shall not be removed from the agricultural district unless:

"A. The area is of such size or shape that it is impractical to cultivate.

B. The area is needed for development, ...and there are no alternate areas available...

C. The area is located adjacent to a municipality or an established residential district and can be served by a central water and sewer system.

D. Existing or planned activities on adjacent properties are incompatible with the agricultural use of the area.

E. The area is not economically viable for agricultural use.

F. The change in land use would not cause conflicts with the existing agricultural use on adjacent properties.

G. Areas with severe or very severe soil conditions, as defined in the S.C.S. Soil Survey of Columbia County, or lands subject to flooding (unless they can overcome these conditions, they)...shall not be approved for development...

H. The proposed development would not place an undue burden upon the local government and require services which said government would be unable to provide.

I. The public investment in the highway system shall be protected and extreme caution shall be used in approving development adjacent to these highways.

J. The development be designed to minimize the amount of land removed from cultivation."[27]

Quarter/Quarter Zoning--Quarter/quarter zoning is a rural-oriented technique designed to maintain agriculture as a permanent land use by regulating residential density. This method, while restricting residential development also recognizes that there is a minimum size for continuing a productive agricultural operation. "Ranchettes," while they lower residential density, do not keep the land in productive use. A quarter/quarter zoning district is defined as: "a parcel of land having one quarter/quarter section containing approximately forty (40) acres or more, or two (2) or more abutting parcels under the same ownership having an area of approximately forty (40) acres, measured from the center line of abutting roads for purposes of residential density."[28]

Blue Earth County, Minnesota, has developed a variation of the quarter/quarter technique which encourages cluster developments by

providing for transfer of development rights (TDR) and establishing a bonus provision which encourages development in low-potential agricultural lands. The "contiguous lots" provisio of Blue Earth ordinance allow two or more contiguous property owners to combine their lots in order to meet the quarter/quarter section requirement (40 acres). An agreement must be signed by all affected property owners, filed with the Zoning Administrator and registered with the County Recorder; agreement must contain the name of owners, location of property, legal description of property being used to calculate number of permitted lots. This provision provides for TDR's between owners and increases the development potential of a single quarter/quarter section (density is limited only by the size of the farms involved.). Under a special permit, a bonus lot may be allowed for land which has not been cultivated within five years prior to the date of application for a building permit. (One additional unit may be granted, but it still must satisfy the performance standards before the permit will be issued.)

Quarter/quarter zoning, like other methods of agricultural zoning must be based on firm environmental data (such as soil capability and productivity) in order to be defensible. This technique is best suited for large, effective, and individually owned farming operations. If there is more than one owner in a quarter/quarter section, the system is likely to become unfair. In an area where fractured ownership occurs only occasionally, a "grandfather clause" may be inserted in the ordinance to permit lots of record. (If the zoning tract had previously been split into several lots of record, each lot would be entitled to one non-farm home, unless a non-farm home previously existed on the site.) Other strengths and weaknesses of the system are:

- It is best suited to areas where development pressures are moderate.

- Ordinance must be carefully designed in such a way as to encourage development on the least productive acres. Additional measures need to be added to discourage development on environmentally sensitive lands. (Care must be taken that development standards are not so strict as to prohibit the permitted development--the ordinance must do what it is supposed to.)

- A quarter/quarter ordinance has several advantages for the farm community. It allows the farmer (not the government) to have the final authority over the use of his land. It permits, and even encourages farmers to develop their land, especially if it has a low agricultural potential; however, it does not force the farmer to sell of land in large lots as many traditional ordinances do.

## V. IMPLEMENTATION

Although policy and program development are essential elements of the overall plan, the key to its success lies in the design of the implementation program. An effective implementation program should be a strategy designed to coordinate the policies and objectives of agricultural lands preservation with those of the overall growth managment system. An effective implementation program must be more than a "laundry list" of ordinances tacked on at the end of the planning process--it must evolve along with the plan from the beginning of the goals formation process.

> "Implementation action taken at the county level can be divided into two sections: Planning programs and ordinances. The plans and programs represent positive actions designed to encourage or induce land use changes to further the plan objectives. Ordinances, on the other hand, are usually restraints designed to prevent land use changes in the wrong direction; e.g., to prevent development from occurring in preservation areas. Both positive actions and restraints, working together, form an effective implementation program."[19]

Planning Program:

The planning program for Shawnee County is the Comprehensive Growth Management Plan which includes the elements of transportation; public and community facilities; open space and recreation; housing; conservation/preservation/environmental, intergovernmental coordination; capital improvements and land use. The county has been divided into four areas for the purposes of channeling growth to desired areas, and the policies of each element enforce these divisions.

- URBANIZED AREA - Includes the City of Topeka as well as the four incorporated cities in the county (Auburn, Willard, Rossville, and Silver Lake) and existing urbanized areas which are developed to urban densities.

• PRIMARY URBAN SERVICE AREA - Includes the area projected to become urbanized by the year 2005. All future growth and development within this area shall be accommodated with standard urban facilities such as water, sanitary sewer, storm sewer, fire and police protection, refuse service, etc. The extension of such services and facilities shall be programmed as a part of the Capital Improvements Program, and such extensions shall be promoted by the local jurisdictions. Interim or lesser standards shall not be permitted with respect to services and facilities.

• SECONDARY URBAN SERVICE AREA - Includes the area beyond the primary Urban Service Area, but within the outer limits of the immediate drainage basins. This area is designated to be the growth area beyond the year 2005, and may be considered as the ultimate design limits for the urbanization of the Topeka Metropolitan Area. The standards of facilities and services may be relaxed as compared to the Primary Urban Service Area, but urban densities shall not be permitted. Strong emphasis shall be placed on agricultural uses.

• RURAL SERVICE AREA - This area includes the remaining balance of the county which will not be served by public facilities and services. Agricultural uses will be the predominant land use and rigid protective measures will be placed thereon. Non-farm uses may be allowed on lands with poor agricultural potential, as demonstrated by a land evaluation/ site assessment.

Agricultural Land Evaluation and Site Assessment:

In order to provide a comprehensive and equitable system which considers the entire range of physical, social and economic

factors which influence land use, USDA/SCS developed the Agricultural Land Evaluation and Site Assessment System (LESA). LESA is divided into two component systems--the first develops the Land Evaluation System; the second develops a site and area viability system.

Agricultural Land Evaluation System: This section identifies three types of agricultural land: cropland, forestland, and rangeland (the primary emphasis is on evaluation for cropland use). The actual evaluation employs such factors as land capabilities, soil productivity, definition(s) of the land(s) to be protected, important farmland classifications and soil potential. The factors are then ranked on a scale developed to meet the needs of the local area, but based upon national criteria. The information necessary for the development of this system would be compiled as a cooperative effort between the TSCMPC staff and the staff of the District Conservation office. This system would provide a defensible basis for establishing land use categories based upon the quality of the land (which could serve as the basis for delineation between specific use zones in the revised zoning ordinance).

Site Assessment System: This section applies consistent factors and locally developed weights to each individual proposed change in land use. Factors considered in the section include:

- % of the subject area in agricultural uses within a set distance of the proposed site.
- % of agricultural land uses adjacent to the proposed site.
- % of the subject site utilized for agricultural purposes.
- % of land zoned for agriculture within a set distance of the site.
- Availabilility of land already zoned appropriately for the proposed use.
- Distance from the urbanized area.
- Environmental Impact of the proposed use.
- Compatibility of the proposed use with the surrounding area.
- Impact of the proposed use upon unique historical and cultural features of the area.
- Transportation accessitility.

- Availability of sanitary sewer with adequate capacity.
- Availability of, and the effect on agricultural support systems and service.
- Suitability of the soils for on-site waste disposal.
- Size of the proposed site in relation to a feasible farm operation.
- Consistency of the proposed use with the county land use plan.
- Consistency of the proposed use with the Municipal plan.

With the cooperation of the Shawnee County Conservation District (SCCD) Office, the first phase of LESA (land evaluation) for Shawnee County, has been completed. What now remains is for the appointment of an Agricultural Advisory Committee (consisting of local agricultural leaders, farmers, city and county officials and representatives of the members and staffs of TSCMPC and SCCD) which will establish the specific criteria to be considered in land use conversion proposals, and to assign the appropriate weights to each criteria based upon the existing conditions and goals of the county. This system will then establish a consistent process and standards for the review and evaluation of all land conversion proposals in the county.

Specific implementation tools in addition to the LESA evaluation system will be necessary if the objectives of the plan are to be satisfied. Both of the county's zoning ordinances are presently under review prior to an update process. Regardless of the specifics of the zoning technique(s) adopted by the planning commission and governing bodies, the specific zones should be defined based upon the LESA land evaluation criteria, and the LESA evaluation and site assessment should be used as the final basis of all rezoning decisions. The zoning ordinance must also specifically spell out what is to be meant by "agriculture," "agricultural operations," "farm" and similar terms if contention is to be avoided over permitted uses. Due to the nature of the LESA site evaluation system, consideration should also be given to utilizing the

system in the evaluation of proposed subdivisions in the county, and the appropriate revisions should be included in the revised subdivision regulations for the county. All definitions and permitted uses should be developed and approved by the Agricultural Advisory Group.

On-Going Planning:

Once a plan has been developed and adopted, it is a common perception that the planning process is complete. This belief ignores the effects of time on the plan, and the necessity of the inevitable changes in the existing situation which merit amending the plan. There is no way to know the future--a plan can only anticipate it; thus, the effectiveness of the plan depends upon periodic updates to maintain its relevance. The Agricultural Advisory Group should also be charged with the function of evaluating the plan's effectiveness, and with proposing amendments. The plan should be periodically updated as a portion of the Comprehensive Growth Management Plan.

FOOTNOTES

1. Rodefeld, Richard D. et al., editors; Change in Rural America; C.V. Mosby Company; St. Louis; 1978; p. 389.

2. Beatty, Marvin T. et al., editors; Planning the Uses and Management of Land; Soil Science Society of America, Inc.; Madison; 1978; p. 291.

3. Rodefeld; loc. cit. p. 389.

4. Rodefeld; op. cit., p. 391.

5. See: Jackson, R.H.; Land Use in America; Wiley; New York; 1981.

6. See: Beatty, op. cit.; Rodefeld, op. cit.; and National Agricultural Lands Study; The Protection of Farmland: A Reference Guide for State and Local Governments; 1981.

7. Farmland Protection Policy Act; Public Law 97-98; Subtitle I, Section 1539-1549; December 22, 1981.

8. Beatty, op. cit., p. 292.

9. See: Beatty; op. cit. and Rodefeld; op. cit.

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1. See: Kansas Crop and Livestock Reporting Service; Shawnee County Farm Facts 1980-1981, 1981-1982; Kansas State Board of Agriculture; Topeka; and Shawnee County Conservation District; op. cit.

2. Shawnee County Conservation District; op. cit.

3. ibid.

4. *103,800 represents only the acreage of the listed major crops harvested in 1980-81; minor agronomical and horticultural crops are not included.

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6. *U.S. Census definition of farm (as of 1975) is: "any place from which $1,000 or more of agricultural products were sold, or normally would have been sold, during the census year."

   Prior to 1975, the definition was: "any place with less than 10 acres from which $250 or more of agricultural products were sold or normally would have been sold during the census year, or any place of 10 acres or more from which $50 or more of agricultural products were sold or normally would have been sold during the census year."

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# APPENDIX

# SHAWNEE COUNTY INVENTORY

## I. LOCATION AND GENERAL INFORMATION:

Shawnee County is located in the third tier of counties in northeast Kasnas, and, with a population of 154,916 is the third most populated county in the state.[1] The county has a land base of 348,800 acres (545 square miles), which can be divided by use as follows:

Table 7:

SHAWNEE COUNTY LAND BASE - 1980

| | | |
|---|---|---|
| Agricultural Uses | 285,500 Acres | 82% |
| Cropland | 150,000 | 43 |
| Grassland | 114,500 | 33 |
| Woodland | 21,000 | 6 |
| Urban Uses | 54,000 | 15% |
| Topeka - City | 32,000 | 9 |
| Water | 6,000 | 2% |
| Misc. Fed. State & Co. Holdings | 3,300 | 1% |
| TOTAL | 348,800 | 100% |

SOURCES: (57) (69)
(See: AGRICULTURAL LAND BASE MAP #1)

Although Shawnee County is in a metropolitan area and has experienced the subsequent pressures of urbanization, the agricultural community continues to provide a significant contribution to the economic base of the area. The Kansas Crop and Livestock Reporting Service (KCLRS) estimated the number of farms in Shawnee County at 855, with a total acreage of 225,000 acres.[2] The total value of agricultural products (crop and livestock) produced in the county in 1980 was in excess of 25 million dollars.[3]

## II. HISTORICAL DEVELOPMENT OF SHAWNEE COUNTY:

The first cultivation to take place occurred in the Mission Creek Valley in 1835 where a farm was established by federal agents sent to instruct the local Indians in farming methods. In 1835, the Territorial County Legislature established Shawnee County as one of Kansas' 33 original counties. (The original county was located entirely to the south of the Kansas River, and included

a portion of present-day Osage County. In 1860, the northern boundary was extended to include that portion of Jackson County below the second parallel. In 1868, Shawnee County was established within its present boundaries.) In 1854, Topeka was established as a townsite, and settlement in the area began in earnest. In 1857, the City of Topeka was incorporated by the Territorial Legislature. In 1855, the Territorial Legislature designated Tecumseh as the county seat of Shawnee County, an action which was heartily protested by the towns of Auburn, Burlingame and Topeka. In 1858, a public election was held, and as a result Topeka was established as the permanent county seat. In 1861, Topeka was designated the State Capitol. Heavy settlement in the county began around 1858, and increased as treaties were established with the Indians.[4]

Population figures illustrate the county's steady growth from its establishment until its peak in the 1970 Census. The closing of Forbes Air Force Base in the early 1970's precipitated the population decline which became evident in the 1980 Census.

Table 8:

POPULATION DISTRIBUTION - TOPEKA & SHAWNEE COUNTY
1860-1980

| YEAR | TOPEKA POPULATION | % IN CITY | COUNTY POPULATION (EXCLUDING TOPEKA) | % IN COUNTY | TOTAL COU POPULATI |
|---|---|---|---|---|---|
| 1860 | 759 | 22 | 2,754 | 78 | 3,513 |
| 1870 | 5,790 | 44 | 7,331 | 56 | 13,121 |
| 1880 | 15,452 | 53 | 13,641 | 47 | 29,093 |
| 1890 | 31,007 | 63 | 18,165 | 37 | 49,172 |
| 1900 | 33,608 | 63 | 20,119 | 37 | 53,727 |
| 1910 | 43,684 | 71 | 18,190 | 29 | 61,874 |
| 1920 | 50,022 | 72 | 19,137 | 28 | 69,159 |
| 1930 | 64,120 | 75 | 21,080 | 25 | 85,200 |
| 1940 | 67,833 | 74 | 23,414 | 26 | 91,247 |
| 1950 | 78,791 | 75 | 26,627 | 25 | 105,418 |
| 1960 | 119,484 | 85 | 21,802 | 15 | 141,286 |
| 1970 | 125,011 | 80 | 30,311 | 20 | 155,322 |
| 1980 | 115,266 | 74 | 39,650 | 26 | 154,916 |

SOURCES: TSCRPC; Preliminary Land Use Plan, U.S. Bureau of the Census.

## III. CLIMATE:

Shawnee County has a typical continental climate which is characterized by hot summers, cold winters, moderate surface winds prevailing from the southwest, and frequent changes in the weather. The maximum precipitation occurs during the growing

season, (approximately 70% of the annual precipitation falls between April and September) and the principal source of this moisture is the Gulf of Mexico. The average annual precipitation is 33 inches. Dry spells lasting for several months are not uncommon, and longer droughts may occur. The annual temperature range is wide, with the recorded extremes being 25° below zero and 114°; seasonal changes occur rather rapidly. Except during periods of prolonged drought, conditions in Shawnee County are favorable for crop growth.[5]

IV. TOPOGRAPHY/PHYSIOGRAPHY:

Shawnee County is divided into two major physiographic regions separated by the Kansas River. The northern portion of the county lies in the Dissected Till Plains Section; its somewhat subdued topography is a result of glaciation. The southern portion of the county lies in the Osage Plains Section; its low, rounded hills with sharp breaks and rock outcrops are a result of the differential erosion of the limestone, sandstone and shale parent materials. The two sections are separated by the broad flat floodplain, and the associated terraces and rounded hills of the Kansas River Valley.

The county is laced with numerous deeply cut creeks and streams which flow into the two major drainage systems, the Kansas and Wakarusa Rivers. The Kansas River and its tributaries drain roughly the northern 3/4 of the county; the Wakarusa the southern 1/4; both rivers flow east. The average elevation in the county is about 1000 feet above sea level; the lowest elevation (835 feet above sea level) occurring in the Kansas and Wakarusa River Valleys on the eastern border of the county, and the highest elevation (1290 ft. above sea level) southwest of Topeka.[6] SEE TOPOGRAPHY MAP #9.

Slope Divisions:

Slopes in Shawnee County range from level (0%) to steep (45%) with areas of extreme variation. For mapping purposes, slope divisions have been established as follows:

| | |
|---|---|
| LEVEL - NEARLY LEVEL | 0-2% SLOPES |
| NEARLY LEVEL - GENTLY SLOPING | 1-3% |
| GENTLY SLOPING - SLOPING | 3-8% |
| SLOPING - STRONGLY SLOPING | 8%-15% |
| STRONGLY SLOPING - STEEP | 15-45% |

SEE SLOPE MAP #10.

## V. GEOLOGY:

The geology of Shawnee County is responsible for the formation of its soils. Basically, the parent materials from which the soils formed may be broken into four groups: UPPER PENNSYLVANIAN LIMESTONE AND SHALE; KANSAS TILL; LOVELAND LOESS AND PEORIAN SILTS; RECENT ALLUVIUMS. (Some general characteristics of each of these groups are given below; more specific details are included in the SOILS section.)

Upper Pennsylvanian Limestone and Shale: These limestone and thick shale bedrock provided the parent materials for the formation of residual soils. There are bedrock outcrops on all slopes in the south and southwestern portions of the county, as well as on most slopes in the glaciated north and eastern portions. Soils formed from these materials include: MARTIN, ELMONT, SIBLEYVILLE, LABETTE, SOGN, KIPSON AND VINLAND series.

Kansas Till: During the Kansan stage, glaciers covered portions of northern Shawnee County, and the uplands north of the Kansas River are layered with glacial till, ranging from a veneer to a depth of greater than 40 feet in some areas. Kansan till is deeply weathered and characterized by high contents of silt and clay. Most of these soils in Shawnee County are in the PAWNEE series, although SHELBY AND MORRILL series developed where there was a higher proportion of sand and gravel.

Loveland Loess and Peorian Silts: These materials were deposited subsequent to the Kansan till. Deposits range in depth from about 10 feet thick, south of the Kansas River, to a thin veneer on the ridgetops in the uplands of the Kansas River. The subsoil in the northern portion of the county is Kansan till; in the southern portion it is clay beds. Typical soils are the GYMER (loess), SHARPSBURG (silts), LADYSMITH (silts), and DWIGHT (silts) series.

Recent Alluvium: Alluvium is the parent material for all soils formed on the floodplains and stream terraces in the county. These soils range in composition from sands and loam in the Kansas River bottoms to dense clays on the stream terraces. Soils in this group include the SARPY, WABASH, EUDORA, MUIR and READING series.

## VI. EARTH RESOURCES:

Sand, gravel and limestone are the only earth resources of current economic importance in the county. Sand and gravel could be produced from terraces and the Kansas River Valley Floodplain as well as from glacial drift deposits, but this material is of limited quantity and poorly sorted. The most economical source of sand and gravel is dredging directly from the Kansas River. Although extensive dam building on

Limestone is quarried mainly in the east and central portions of the county. As a better quality stone for building material is found in other nearby counties, Shawnee County's limestone is primarily crushed and used for agricultural lime.

Quality shale deposits suitable for brick-making are found in the county, but establishment of a sizeable industry based upon this resource is unlikely due to the absence of an adequate local fuel supply.

Coal is also present in the county, but is not economical to mine as it generally occurs in seams of less than 17" thickness.

Oil and gas have been found in scattered lcoations throughout the county, but there is no commercial production at the present time, and there is little potential in the near future.[8]

## VII. VEGETATION:

Shawnee County has three categories of native vegetation: TALLGRASS PRAIRIE, OAK-HICKORY FOREST and FLOODPLAIN.

The predominent vegetation in the county is the Tallgrass or Bluestem Prairie which is characterized by dense stands of medium tall to tall grasses with a mixture of forbs. The dominent species are: Big bluestem, Little bluestem, switchgrass and Indian grass. Other characteristic species include: side oats grama, sand lovegrass, western wheatgrass, prairie cordgrass, blue grama, drop seed and buffalograss. The heaviest concentration of native grasslands at present is in the north central portion of the county in the Soldier Creek Drainage Basin.

The Oak-Hickory Forest occurs as a mosaic pattern, mainly in the southeastern portion of the county, and is characterized by medium-tall broadleaf deciduous trees. The dominent species are: Bitternut hickory, Shagbark hickory, White oak, Red oak and Black oak.

The Floodplain Vegetation is a broad category which includes the forests and often dense undergrowths which occur along the water courses in the county. The dominent species include: Hackberry, Cottonwood, Peachleaved Willow, Black Willow, and American Elm. Other characteristic species are: Walnut, oak, sycamore, box elder, hickory and ash. The total forested area represents less than 10% of the total land in the county.[9]

## VIII. WILDLIFE:

Wildlife in Shawnee County is varied and typical of a disturbed prairie. In its undisturbed state, the prairie was grazed by unfenced, roaming animals such as buffalo and antelope, which were preyed upon by wolves, coyotes, cougars and other preditors. As the prairie was settled, this cycle was disturbed and only

that wildlife which could adapt remains. Wildlife varies with the vegetation in the area; some typical species (and their habitats) are:

OPENLAND WILDLIFE - (inhabitats croplands, pastures, fields). Typical species include: Pheasant, quail, cottontail, meadowlark, coyote, badger.

WOODLANDS - (forested areas with mixture of other vegetation). Typical species: Whitetailed deer, squirrel, raccoon, thrush.

WETLANDS - (wet areas, lakes, streams, marsh). Typical species: ducks, shorebirds, beaver, mink and muskrat. Fish in area lakes include bass, bluegill and channel catfish.

Other species which are found widely distributed throughout the county are: fox, skunk, opossum, songbirds, mourning dove, prairie chicken.[10]

IX. SOIL RESOURCES:

Soil, next to water, is probably the single most important natural resource of any area; it provides the foundation for all land use. Whether the site be proposed for use as cropland or construction, it is the various characteristics of the particular soils which determine their capability and suitability for the proposed use. Soil quality is not an accident of nature, but rather a result of the interaction of factors in a particular location, over a period of time. These factors consist of: the parent material from which the soil was derived, climate, topography, drainage and vegetation, upon all of which the process of weathering acts over time to form the soil. The geologic origin or parent material of a soil has a tremendous influence in determining its physical properties and relative fertility. In Shawnee County, the soils may be grouped into three broad categories based upon their geologic origin:

Soils formed by the process of weathering of bedrock (generally sandstone, limestone and shale).

Alluvial soils formed by the deposition of sediments on flood-plains and terraces.

Soils formed by the deposition of loess (wind-deposited materials) and glacial till.

Soil Associations:

A soil association is "... a landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soils and at least one minor soil, and it is named for the major soils. The soils in one association may occur in another, but in a different pattern." (55) p. 2. Soil Association maps are useful for determining general porperties of the soil(s)

in a given area, but should not be the basis of detailed decisions as individual characteristics such as slope, depth and drainage vary with the specific soil. Shawnee County has eight such soil associations, described as follows. (NOTE: these characteristics were adapted from the SCS, Soil Survey of Shawnee County, Kansas; for more detailed information, refer to the text):

1) READING-WABASH - "Deep well-drained to somewhat poorly drained soils that have a silty clay loam or a silty clay subsoil; on floodplains and low terraces."

This association covers approximately 10% of the county. Most of the land in this association is cultivated; the major soils are suitable for all crops grown in the county. Some isolated spots, and those areas along the channels and steep banks of the streams are wooded. The major problems with this association are slow drainage and local flooding.

2) EUDORA-MUIR - "Deep well-drained soils that have a loam to silty clay loam subsoils; on benches in the Kansas River Valley."

This association covers approximately 12% of the county, and consists of the nearly level soils of the alluvial plain of the Kansas River. Soils in this association are well suited to all crops grown in the county, including horticultural crops, and, except where residential and/or industrial development has occurred, nearly all of this land is under cultivation. (Stream banks and non-arable sites are in tress).

Major problems: Unless protected by levees, low areas are subject to occasional flooding; higher areas are subject only to major floods.

3) PAWNEE-SHELBY-MORRILL - "Deep well-drained and moderately well drained, gently sloping to strongly sloping soils that have a clay or clay loam subsoil; on uplands."

This association covers approximately 23% of the county and covers most of the area to the north of the Kansas River, including a large part of the City of Topeka. That area which is not in urban use is generally cultivated, as it is suited for all crops grown in the county. Areas which cannot be cultivated are used for pasture or range.

Major problem: Erosion control is necessary on cultivated lands.

4) LADYSMITH-PAWNEE - "Deep, moderately well-drained, nearly level and gently sloping soils that have a silty clay or clay subsoil; on uplands."

This association covers approximately 9% of the county, and occurs in scattered areas. These soils are suitable for most common crops, and most are in cultivation; those which are uncultivated are in pasture or range.

Major problems: Erosion control and the maintenance of soil tilth and fertility of cultivated lands.

5) MARTIN-PAWNEE-LABETTE - "Deep and moderately deep, well-drained, and moderately well-drained, sloping to strongly sloping soils that have a silty clay or clay subsoil; on uplands."

This association covers approximately 6% of the county, and occurs on uplands in the southeastern portion of the county. These soils are suitable for most crops grown in the county, and the land use is mostly split between cultivated and range/pasture uses. The areas along drainage ways and steeper slopes have some hardwood trees.

Major problems: Erosion and runoff control; maintenance of tilth and fertility of cultivated lands.

6) MARTIN-LADYSMITH - "Deep, moderately well-drained, nearly level to strongly sloping soils that have a silty clay subsoil; on uplands."

This association covers approximately 22% of the county, mainly in the southwestern quarter. The land use in this association is about evely split between cultivated and range/pasture uses with some hardwood occurring along stream banks and steep slopes. Soils are suitable for common crops.

Major problems: Erosion and runoff controls; maintenance of soil tilth and fertility of cultivated lands.

7) GYMER-SHELBY-SHARPSBURG - "Deep, well-drained, sloping and strongly sloping soils that have a silty clay loam or clay loam subsoil; on uplands."

This association covers about 5% of the county, and occurs along the bluffs of the Kansas River Valley. The soils in this association are suitable for crops, but the slope of the land limits its use for cultivation. The gentler slopes are cultivated, the steeper slopes being reserved for pasture. The drainageways and steep slopes are in timber.

Major problems: Erosion and runoff control and the maintenance of soil fertility.

8) MARTIN-SOGN - "Deep, moderately well drained soils that have a silty clay subsoil and shallow, somewhat excessively drained soils; on uplands."

This association covers approximately 13% of the county and occurs along ridgetops, side slopes and small valleys throughout the county. These soils are not well suited for cultivated crops, but are well suited for prairie. About 2/3 of the land area in this association is in prairie/rangelands; the majority of the remaining third is in cropland with the areas along the streams and slopes in timber.

Major problems: Erosion control is needed on all land uses. Croplands also must be concerned with managing runoff and maintaining soil tilth and fertility.

SEE SOIL ASSOCIATION MAP #11.

Soil Capability Classifications:

The soil capability classification system was developed by USDA/SCS as a means of classifying soils by their limitations and management needs for agricultural purposes. Each classification consists of three levels of ratings: capability class, subclass and unit. There are eight capability classes, ranging from Class I (with no limitations restricting agricultural use) to Class VIII soils (which have severe limitations which preclude many agricultural uses). There are four capability subclasses (designated by e-erosion; w-water in or on soil; s-shallow, dry or stony soil; c-climate, too dry or cold) which are used to indicate the major limitation(s) of the soil. Class I soils have no limitations, and therefore no subclasses; however, other classes may have one or more limitations (subclasses). Capability units (designated by 1-3) are assigned by the susceptibility to damage and the management needs of the soil. (For a more detailed description of the system, see Technical Appendix 2 , "Using Soil Capability Classes for Land Use Planning Alternatives in Shawnee County, Kansas," which describes the criteria for the classes found in Shawnee County; see also: SHAWNEE COUNTY PRIME FARMLAND MAP.)

Soil Drainage Capabilities:

Soil drainage capability classifications are based on a variety of factors (permeability, porosity, seasonal and permanent high water tables, slope, erosion, surface runoff, hardpan layers, depth of soil to bedrock) and have application in determining the suitability of the soil(s) for on-site sewage disposal systems. The soils have been divided into three classifications based upon their drainage characteristics and the resultant suitability for on-site sewage disposal system.

Table 9:

SOIL DRAINAGE CAPABILITIES
(SEPTIC TANK SUITABILITY LIMITATIONS)
SHAWNEE COUNTY, KANSAS

| DRAINAGE/LIMITATIONS | DESCRIPTION | SOILS |
|---|---|---|
| Satisfactory/Slight | Soils are generally suitable for on-site sewage disposal systems. | Eudora<br>Eudora-Kimo Complex |
| Variable/Moderate | Conditions are variable; soils may be suitable if permeable & soils are not shallow or on steep slopes. | Elmont, Konawa, Morrill Muir, Shelby, Shellabarger, Sibleyville |
| Unsatisfactory/ Severe | Soils are not suitable for on-site sewage disposal systems dueto the presence of one or more restricting factors (ie; water-restricting layers, high water tables, alluvial soils.) | Dwight, Dwight-Martin Complex, Gymer, Kennebec, Kimo, Kipson-Sogn Complex, Labette, Ladysmith, Martin, Pawnee, Reading, Sarpy, Sarpy-Eudora Complex, Sharpsburg, Vinland, Wabash, Welda |

SOURCES: SCS, Shawnee County Soil Survey
Unger, Soils and Land Use Planning

The high clay content of most of the county's soils causes both a low permeability rate and a high shrink-swell potential. The low permeability of the soils poses a problem for on-site sewage disposal systems. The only soils with slight to moderate limitations on such systems occur within the Eudora-Muir Association; all other soils have severe limitations which require larger lot sizes, extra laterals and in some cases, connection to public sewers. (It should be noted that the employment of larger lot sizes and extra laterals is not necessarily the answer to soils with an inability to deal with effluent. If the area later comes to be served by a public sewer system, the front footage costs and the extensive land areas to be serviced could be prohibitive.) See SOIL DRAINAGE CAPABILITY/SEWAGE DISPOSAL SUITABILITY MAP #12.

## X. WATER RESOURCES:

### Surface Water:

Surface water is available from streams, rivers, lakes and farm pond reserves throughout the county. The principal waterway in the county is the Kansas River, which is controlled by five major reservoirs above Topeka (Wilson, Glen Elder, Kanopolis, Milford and Tuttle Creek). The primary functions of these reservoirs are flood control and stream flow during dry periods. Other major streams in the county are: the Wakarusa River and Blacksmith, Cross, Deer, Half Day, Indian, Mission, Muddy, Shunganunga and Soldier Creeks. Minor creeks in the county include Colby, Linn, Stinson, Thompson, Vesper, Ward-Martin as well as several other un-named creeks.

There are currently three major lakes (Shawnee County State Lake, Lake Shawnee and Lake Sherwood) in the county. The largest of these lakes is Lake Shawnee located to the immediate southeast of the City of Topeka. Lake Shawnee is a city-county lake with a surface area of 401 acres, and a primarily recreational function. Lake Shawnee, to the southwest of Topeka, has a surface area of 350 acres. Sherwood is a private development and the use of the recreational facility is confined to the property-owners. Shawnee County Lake is a county-state lake in the northwest portion of the county with a suraface area of 135 acres, also used for primarily recreational purposes. There are also two minor lakes (Jivaro and Silver Lake) as well as numerous farm ponds throughout the county. (SEE SURFACE WATER/FLOODPLAIN MAP #13)

### Ground Water:

Shawnee County's groundwater resources are found primarily in the Early and Late Wisconsin gravel, the recent alluvium in the Kansas River floodplain, and the alluvium of Soldier Creek. The largest aquifer in the county occurs in the Kansas River Valley--it has an average width of 2.6 miles and a thickness of 50 feet at Topeka.[11] Groundwater provides the major water supply for the county's rural water districts and for agricultural irrigation. Irrigation is the chief threat to groundwater depletion, but relatively few areas of Shawnee County have potential for irrigation (areas of flat land where groundwater occurs).

Exact aquifer storage capacities and recharge capabilities are unknown.

"Estimates of 3 inches per year for the Kansas River Alluvium and 1 inch per year for the Soldier Creek alluvium are available. Additional inflow probably occurs because of runoff from the highlands bordering the floodplains and from the rivers themselves."[12] There is presently no shortage of groundwater foreseen for the county.

Water Quality:

The water quality in Shawnee County is generally good, with no significant concentrations of heavy metals or pesticides. As none of the county's lakes are located in the drainage basins of high-intensity agriculture, there has been no incidence of eutrophication in the major water bodies. The major water quality problem in the county's lakes has been a high level of suspended silt, which produces "murky" waters.

Water quality of groundwater sources varies throughout the county. In general, water from the Kansas River Valley Alluvium is higher in dissolved solids and hardness than is surface water.

Water quality in the Kansas River varies with the amount of discharge from the upstream reservoirs, but is generally good.

DRAINAGE:

There are three major watersheds in Shawnee County: the Kansas River, which drains approximately 191,807 acres; the Wakarusa which drains 98,626 acres; and Soldier Creek which drains 62,847 acres.[13]

FLOODPLAINS:

A significant portion of the county is subject to periodic flooding; development within subject areas is regulated by ordinance.

## FOOTNOTES

1. United States Department of Commerce; Bureau of the Census; 1980 Census of Population and Housing, Kansas: Advance Reports PHC80-V-18; U.S. Government Printing Office; Washington, D.C.; May 1981.

2. Kansas Crop and Livestock Reporting Service; Shawnee County Farm Facts 1980-1981; Kansas State Board of Agriculture; Topeka.
   Note: The District office of the Soil Conservation District estimated the number of farms at 1397 for the same period.

3. ibid.

4. See: Soil Conservation Service; Soil Survey, Shawnee County, Kansas; U.S. Government Printing Office; 1970.

   Shawnee County Conservation District; Long Range Program, 1980; Topeka, 1980.

   Topeka-Shawnee County Regional Planning Commission; Preliminary Land Use Plan; TSCRPC; 1962.

5. SCS; Soil Survey; op. cit.

6. SCS; op. cit.

   White, James E. et al.; Topeka and Vicinity Comprehensive Wastewater Facilities Plan, Segment I; Burns and McDonnell; 1981.

7. SCS; op. cit.

   TSCRPC; op. cit.

8. SCS; op. cit.

   Topeka-Shawneee County Metropolitan Planning Commission; 1978 Land Use Management Program; TSCMPC; March 1978.

   TSCRPC; op. cit.

9. Kuchler, A.W. "A New Vegetation Map of Kansas;" Ecology; Vol. 55, No. 3, Late Spring 1974; p. 586-604.

   Shawnee County Conservation District; op. cit.

10. ibid.

11. White; op. cit., p. III-5.

12. Kiene and Bradley Partnership; Water Quality Management Plan; Shawnee County, Kansas, 1974, p. 2-10.

13. SCCD; op. cit.

# TECHNICAL APPENDICES

# ILLEGIBLE DOCUMENT

THE FOLLOWING DOCUMENT(S) IS OF POOR LEGIBILITY IN THE ORIGINAL

THIS IS THE BEST COPY AVAILABLE

## Subtitle I—Farmland Protection Policy Act

### SHORT TITLE

SEC. 1539. This subtitle may be cited as the "Farmland Protection Policy Act".

### FINDINGS, PURPOSE, AND DEFINITIONS

SEC. 1540. (a) Congress finds that—

(1) the Nation's farmland is a unique natural resource and provides food and fiber necessary for the continued welfare of the people of the United States;

(2) each year, a large amount of the Nation's farmland is irrevocably converted from actual or potential agricultural use to nonagricultural use;

(3) continued decrease in the Nation's farmland base may threaten the ability of the United States to produce food and fiber in sufficient quantities to meet domestic needs and the demands of our export markets;

(4) the extensive use of farmland for nonagricultural purposes undermines the economic base of many rural areas;

(5) Federal actions, in many cases, result in the conversion of farmland to nonagricultural uses where alternative actions would be preferred;

(6) the Department of Agriculture is the agency primarily responsible for the implementation of Federal policy with respect to United States farmland, assuring the maintenance of the agricultural production capacity of the United States, and has the personnel and other resources needed to implement national farmland protection policy; and

(7) the Department of Agriculture and other Federal agencies should take steps to assure that the actions of the Federal Government do not cause United States farmland to be irreversibly converted to nonagricultural uses in cases in which other national interests do not override the importance of the protection of farmland nor otherwise outweigh the benefits of maintaining farmland resources.

(b) The purpose of this subtitle is to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that Federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local government, and private programs and policies to protect farmland.

(c) As used in this subtitle—

(1) the term "farmland" includes all land defined as follows:

(A) prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion, as determined by the Secretary. Prime farmland includes land that possesses the above characteristics but is being used currently to produce livestock and timber. It does not include land already in or committed to urban development or water storage;

(B) unique farmland is land other than prime farmland that is used for production of specific high-value food and fiber crops, as determined by the Secretary. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. Examples of such crops include citrus, tree nuts, olives, cranberries, fruits, and vegetables; and

(C) farmland, other than prime or unique farmland, that is of statewide or local importance for the production of food, feed, fiber, forage, or oilseed crops, as determined by the appropriate State or unit of local government agency or agencies, and that the Secretary determines should be considered as farmland for the purposes of this subtitle;

(2) the term "State" means any of the fifty States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, or any territory or possession of the United States;

(3) the term "unit of local government" means the government of a county, municipality, town, township, village, or other unit of general government below the State level, or a combination of units of local government acting through an areawide agency under State law or an agreement for the formulation of regional development policies and plans;

(4) the term "Federal program" means those activities or responsibilities of a department, agency, independent commission, or other unit of the Federal Government that involve (A) undertaking, financing, or assisting construction or improvement projects; or (B) acquiring, managing, or disposing of Federal lands and facilities. The term "Federal program" does not include construction or improvement projects that on the effective date of this subtitle are beyond the planning stage and are in either the active design or construction state; and

(5) the term "Secretary" means the Secretary of Agriculture.

FARMLAND PROTECTION POLICY

SEC. 1541. (a) The Department of Agriculture, in cooperation with other departments, agencies, independent commissions, and other units of the Federal Government, shall develop criteria for identifying the effects of Federal programs on the conversion of farmland to nonagricultural uses.

(b) Departments, agencies, independent commissions, and other units of the Federal Government shall use the criteria established under subsection (a) of this section, to identify and take into account the adverse effects of Federal programs on the preservation of farmland; consider alternative actions, as appropriate, that could

lessen such adverse effects; and assure that such Federal programs, to the extent practicable, are compatible with State, unit of local government, and private programs and policies to protect farmland.

(c) The Department of Agriculture may make available to States, units of local government, individuals, organizations, and other units of the Federal Government information useful in restoring, maintaining, and improving the quantity and quality of farmland.

EXISTING POLICIES AND PROCEDURES

SEC. 1542. (a) Each department, agency, independent commission, or other unit of the Federal Government, with the assistance of the Department of Agriculture, shall review current provisions of law, administrative rules and regulations, and policies and procedures applicable to it to determine whether any provision thereof will prevent such unit of the Federal Government from taking appropriate action to comply fully with the provisions of this subtitle.

(b) Each department, agency, independent commission, or other unit of the Federal Government, with the assistance of the Department of Agriculture, shall, as appropriate, develop proposals for action to bring its programs, authorities, and administrative activities into conformity with the purpose and policy of this subtitle.

TECHNICAL ASSISTANCE

SEC. 1543. The Secretary is encouraged to provide technical assistance to any State or unit of local government, or any nonprofit organization, as determined by the Secretary, that desires to develop programs or policies to limit the conversion of productive farmland to nonagricultural uses.

FARMLAND RESOURCE INFORMATION

SEC. 1544. (a) The Secretary, through existing agencies or interagency groups, and in cooperation with the cooperative extension services of the States, shall design and implement educational programs and materials emphasizing the importance of productive farmland to the Nation's well-being and distribute educational materials through communications media, schools, groups, and other Federal agencies.

(b) The Secretary shall designate one or more farmland information centers to serve as central depositories and distribution points for information on farmland issues, policies, programs, technical principles, and innovative actions or proposals by local and State governments.

GRANTS; CONTRACTS

SEC. 1545. The Secretary may carry out the purposes of this subtitle, with existing facilities and funds otherwise available, through the use of grants, contracts, or such other means as the Secretary deems appropriate.

REPORT

SEC. 1546. Within one year after the enactment of this subtitle, the Secretary of Agriculture shall report to the Committee on Agriculture, Nutrition, and Forestry of the Senate and the Committee on Agriculture of the House of Representatives on the progress made in

implementing the provisions of this subtitle. Such report shall include information on—

(1) the effects, if any, of Federal programs, authorities, and administrative activities with respect to the protection of United States farmland; and

(2) the results of the reviews of existing policies and procedures required under section 1542(a) of this subtitle.

STATEMENT OF LIMITATION

SEC. 1547. (a) This subtitle does not authorize the Federal Government in any way to regulate the use of private or non-Federal land, or in any way affect the property rights of owners of such land.

(b) None of the provisions or other requirements of this subtitle shall apply to the acquisition or use of farmland for national defense purposes.

PROHIBITION

SEC. 1548. This subtitle shall not be deemed to provide a basis for any action, either legal or equitable, by any State, local unit of government, or any person or class of persons challenging a Federal project, program, or other activity that may affect farmland.

EFFECTIVE DATE

SEC. 1549. The provisions of this subtitle shall become effective six months after the date of enactment of this Act.

# USING SOIL CAPABILITY CLASSES FOR LAND USE PLANNING ALTERNATIVES IN SHAWNEE COUNTY, KANSAS

By: Shawnee County Conservation District Board of Supervisors

Prime farmland is land that has the best combination of physical and chemical characteristics for producding food, feed, forage, fiber, and oilseed crops, and is also available for these uses (the land could be cropland, pastureland, rangeland, forestland, or other land, but not urban built-up land or water). It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding.

The general Prime Farmland Map of Shawnee County shows that the majority of the county land area is prime farmland. The map is informative and serves as a useful tool in making planning decisions that effect the use of agricultural land. Most often when the land is converted to urban uses it is lost from agriculture forever. It is not reversable back to agriculture.

Recognizing that the Topeka-Metropolitan area must develop and grow, the Shawnee County Conservation District supports planned development that will maintain as much prime farmland as possible. Since a multitude of planning schemes toward achieving this goal are being considered it is not the intent of this report to provide another. This report provides soil data and interpretations for use in considering alternative sites for planned development of non-agricultural land uses.

In Shawnee County 36 different soil map units, defined in the Shawnee County Soil Survey, are designated as prime farmland. With the assistance of the USDA Soil Conservation Service these 36 prime farmland soils are grouped into four classes. Each class consists of soils with similar limitations that restrict their use for crop production. A colored interpretive map shows the location of the four classes of prime farmland in Shawnee County. The land area that is not prime farmland is not colored.

The Shawnee County Conservation District Board of Supervisors supports the idea that if agricultural land is to be developed to an irreversible land use then non-prime farmland should be developed first. Since urban development of non-prime farmland is not always possible the Conservation District supervisors prefer development of land areas of primarily CLASS IV soils as a second priority, CLASS III soils a third priority, CLASS II soils a forth priority, and CLASS I soils as the lowest priority for non-agricultural development.

CLASS I. Soils have few limitations that restrict their use for agricultural production.

Soils in this class are suited to a wide range of plants and may be used safely for cultivated crops, pasture, range, woodland, and wildlife. The soils are nearly level and erosion hazard (wind or water) is low. They are deep, generally well drained, and easily worked. They hold water well and are either fairly well supplied with plant nutrients or highly responsive to inputs of fertilizer.

The soils in class I are not subject to damaging overflow. They are productive and suited to intensive cropping.

Soils in class I that are used for crops need ordinary management practices to maintain productivity--both soil fertility and soil structure. Such practices may include the use of one or more of the following: Fertilizers and lime, cover and green-manure crops, conservation of crop residues and animal manures, and sequences of adapted crops.

CLASS I. The Shawnee County Soil Survey Prime Farmland map units and symbols are:

| | |
|---|---|
| Et | Eudora silt loam |
| Mr | Muir silt loam |
| Re | Reading silty clay loam |

choice of plants or require moderate conservation practices. Soils in class II require careful soil management, including conservation practices, to prevent deterioration or to improve air and water relations when soils are cultivated. The limitations are few and the practices are easy to apply. The soils may be used for cultivated crops, pasture, range, woodland, or wildlife food and cover. Limitations of soils in class II may include singly or in combination the effects of (1) gentle slopes, (2) moderate susceptibility to wind or water erosion or moderate adverse effects of past erosion, (3) less than ideal soil depth, (4) somewhat unfavorable soil structure and workability, (5) slight to moderate salinity or sodium easily corrected but likely to recur, (6) occasional damaging overflow, and (7) wetness correctable by drainage but existing permanently as a moderate limitation. The soils in this class provide the farm operator less latitude in the choice of either crops or management practices than soils in class I. They may also require special soil-conserving cropping systems, soil conservation practices, water-control devices, or tillage methods when used for cultivated crops. For example, deep soils of this class with gentle slopes subject to moderate erosion when cultivated may need one of the following practices or some combination of two or more: Terracing, stripcropping, contour tillage, crop rotations that include grasses and legumes, vegetated water-disposal areas, cover or green-manure crops, stubble mulching, fertilizers, manure, and lime. The exact combinations of practices vary from place to place, depending on the characteristics of the soil and the farming system.

CLASS II. The Shawnee County Soil Survey Prime Farmland map units and symbols are:

| | |
|---|---|
| Es | Eudora sandy loam, sandy variant, 1-3% slopes |
| Ev | Eudora-Kima complex |
| Ew | Eudora-Kima complex, overwash |
| Kb | Kennebec silt loam |
| Kc | Kennebec silt loam clayey substratum |
| Km | Kima silty clay loam |
| La | Labette silty clay loam 1-3% slopes |
| Ld | Ladysmith silty clay loam, 0-1% slopes |
| Mb | Martin silty clay loam, 1-3% slopes |
| Pa | Pawnee clay loam, 0-3% slopes |
| Sq | Sharpsburg silty clay loam, 1-3% slopes |
| Sk | Shelby clay loam, 1-3% slopes |
| Wb | Wabash silty clay loam |

CLASS III. Soils in class III have severe limitations that reduce the choice of plants or require special conservation practices, or both.

Soils in class III have more restrictions than those in class II and when used for cultivated crops the conservation practices are usually more difficult to apply and to maintain. They may be used for cultivated crops, pasture, woodland, range, or wildlife food and cover. Limitations of soils in class III restrict the amount of clean cultivation; timing of planting, tillage, and harvesting; choice of crops; or some combination of these limitations. The limitations may result from the effects of one or more of the following: (1) Moderately steep slopes; (2) high susceptibility to water or wind erosion or severe adverse effects of past erosion; (3) frequent overflow accompanied by some crop damage; (4) very slow permeability of the subsoil; (5) wetness or some continuing waterlogging after drainage; (6) shallow depths to bedrock, hardpan, or claypan that limit the rooting zone and the water storage; (7) low moisture-holding capacity; (8) low fertility not easily corrected; and (9) moderate salinity or sodium.

When cultivated, many of the wet, slowly permeable but nearly level soils in class III require drainage and a cropping system that maintains or improves the structure and tilth of the soil. To prevent puddling and to improve permeability it is commonly necessary to supply organic material to such soils and to avoid working them when they are wet. In some irrigated areas, part of the soils in class III have limited use because of high water table, slow permeabllity, and the hazard of salt or sodic accumulation. Each distinctive kind of soil in class III has one or more alternative combinations of use and practices required for safe use, but the number of practical alternatives for average farmers is less than that for soils in class II.

CLASS III. The Shawnee County Soil Survey Prime Farmland Map units and symbols are:

| | |
|---|---|
| El | Elmont silt loam, 3-7% slopes |
| Em | Elmont silt loam, 3-7% slopes, eroded |
| Gm | Gymer silt loam, 3-8% slopes |
| Gy | Gymer silt loam, 3-8% slopes, eroded |
| Ku | Konowa fine sandy loam, 4-8% slopes |

| | |
|---|---|
| Lb | Labette silty clay loam, 3-6% slopes |
| Lc | Labette silty clay loam, 3-6% slopes, eroded |
| Lm | Ladysmith silty clay loam, 1-3% slopes |
| Mc | Martin silty clay loam, 3-7% slopes |
| Mm | Morrill clay loam, 3-8% slopes |
| Mn | Morrill clay loam, 3-8% slopes, eroded |
| Sh | Sharpsburg silty clay loam, 3-6% slopes |
| Me | Martin silty clay loam, 3-7% slopes, eroded |
| Sm | Shelby clay loam, 3-8% slopes |
| Sn | Shelby clay loam, 3-8% slopes, eroded |
| Sp | Shellabarger fine sandy loam, 3-8% slopes |
| Wa | Wabash silty clay |

CLASS IV. Soils in class IV have very severe limitations that restrict the choice of plants, require very careful management, or both. The restrictions in use for soils in class IV are greater than those in class III and the choice of plants is more limited. When these soils are cultivated, more careful management is required and conservation practices are more difficult to apply and maintain. Soils in class IV may be used for crops, pasture, woodland, range, or wildlife food and cover.

Soils in c ss IV may be well suited to only two or three of the common crops or the harvest produced may be low in relation to inputs over a long period of time. Use for cultivated crops is limited as a result of the effects of one or more permanent features such as (1) steep slopes, (2) severe susceptibility to water or wind erosion, (3) sever effects of past erosion, (4) shallow soils, (5) low moisture-holding capacity, (6) frequent overflows accompanied by severe crop damage, (7) excessive wetness with continuting hazard of waterlogging after drainage, and (8) severe salinity or sodium.

Some of the poorly drained, nearly level soils placed in class IV are not subject to erosion but are poorly suited to intertilled crops because of the time required for the soil to dry out in the spring and because of low productivity for cultivated crops. Some soils in class IV are well suited to one or more of the special crops, such as fruits and ornamental trees and shrubs, but this suitability itself is not sufficient to place a soil in class IV.

Soils is class IV may produce good yields of adapted cultivated crops during years of above average rainfall; low yields during years of average rainfall; and failures during years of below average rainfall. During the low rainfall years the soil must be protected even though

there can be little or no expectancy of a marketable crop. Special treatments and practices to prevent soil blowing, conserve moisture, and maintain soil productivity are required. Sometimes crops must be planted or emergency tillage used for the primary purpose of maintaining the soil during years of low rainfall. These treatments must be applied more frequently or more intensively than on soils in class III.

CLASS IV. The Shawnee County Soil Survey Prime Farmland map units and symbols are:

| | |
|---|---|
| Ls | Ladysmith silty clay loam, 1-3% slopes, eroded |
| Sr | Shellabarger fine sandy loam, 3-8% slopes, eroded |
| St | Sibleville loam, 3-7% Slopes |

## STATEMENT OF GOALS

**ADOPTED BY:**

**Topeka-Shawnee County Metropolitan Planning Commission**

**April 20, 1981**

**City of Topeka, City Commissioners**

**July 14, 1981**

**Shawnee County, County Commissioners**

**July 22, 1981**

### STATEMENT OF PURPOSE

**INFLUENCE THE DEVELOPMENT OF A BETTER TOPEKA AND SHAWNEE COUNTY THROUGH BALAN( THAT WHICH IS DESIRABLE WITH THAT WHICH IS ACHIEVABLE.**

### GOAL I. COMPREHENSIVE PLANNING

**MANAGE GROWTH TO MEET FUTURE DEMAND WHILE RECOGNIZING THE FISCAL AND ENVIRONM COSTS OF DEVELOPMENT.**

1. Guide future development through on-going comprehensive planning.
2. Undertake new methods to gain citizen input into public policy-making and planning.
3. Direct new growth and developable areas served by existing public facilit:

### GOAL II. TRANSPORTATION

**MAINTAIN A TRANSPORTATION SYSTEM WHICH WILL ENABLE EASE OF MOVEMENT THROUGHOU TOPEKA AND SHAWNEE COUNTY.**

1. Encourage the expansion of the mass transit system in routes and ridershi
2. Reinforce adequate maintenance of the existing roadway system.
3. Support an efficient airport system and facilities.
4. Implement alternative transportation systems in meeting future energy constraints.

*GOAL III. PUBLIC FACILITIES*

*PROVIDE FOR ACCEPTABLE LEVELS OF PUBLIC FACILITIES THAT ARE CONSISTENT WITH ORDERLY GROWTH AND DEVELOPMENT.*

1. *Use the Community's provision of public facilities as a method of guiding growth.*
2. *Utilize cost/benefit analysis in guiding the supply of growth facilities and services.*
3. *Encourage the development of parks in areas where they are needed through the development of a Comprehensive Park Plan.*
4. *Coordinate city and county public facilities and services.*

*GOAL IV. HUMAN SERVICE*

*MAINTAIN A COORDINATED HUMAN SERVICES PROGRAM THAT IS RESPONSIVE TO LOCAL NEEDS AND AFFORDABLE TO THE OVERALL COMMUNITY.*

1. *Encourage the most beneficial use of existing health facilities and services.*
2. *Emphasize methods of prevention in the reduction of health care costs.*
3. *Respond to the health and human service needs of the elderly and the handicapped with programs outside of institutions.*
4. *Identify and address the special human service needs of children and families.*

*GOAL V. ENVIRONMENT*

*IDENTIFY AND PRESERVE THE UNIQUE, NATURAL AND HISTORIC RESOURCES OF THE LOCAL ENVIRONMENT.*

1. *Identify environmentally sensitive areas and guide development away from areas of greatest adverse environmental impact.*
2. *Preserve the Community's identity as expressed in its buildings and landmarks of historical, ethnic, or architectural significance.*
3. *Encourage new development designed in accord with its surrounding area.*
4. *Identify and strive to preserve prime agricultural land for production of food and fiber.*

*GOAL VI. HOUSING*

*STRIVE TO ASSURE A VARIETY OF HOUSING AND NEIGHBORHOOD CHOICES FOR ALL HOUSEHOLDS.*

1. *Coordinate public and private activities in housing rehabilitiation.*
2. *Encourage residential development near existing essential services, facilities and centers of employment.*
3. *Support new forms of mortgage financing to expand the housing market to more households.*

## GOAL VII. ECONOMIC DEVELOPMENT

PROMOTE COMMERCIAL AND INDUSTRIAL GROWTH THAT WILL STRENGTHEN THE LOCAL ECONOMIC BASE, ADD EMPLOYMENT OPPORTUNITIES, AND INCREASE HOUSEHOLD INCOMES.

1. Revitalize the central city, emphasizing a mixture of uses in the downtown area.
2. Commit public and private resources towards attracting industrial development that is responsive to local health, safety, and welfare to ensure economic expansion.

## GOAL VIII. GOVERNMENT

ENHANCE THOUGHTFUL AND ACCOUNTABLE GOVERNMENT POLICY/DECISIONMAKING.

1. Encourage careful evaluation of financial soundness in all activities.
2. Assist development and redevelopment activities through the encouragement tax adjustments and continuous review of the regulatory controls.
3. Support new economic development that will broaden the tax base.

UNITED STATES DEPARTMENT OF AGRICULTURE

OFFICE OF THE SECRETARY

WASHINGTON, D. C. 20250

March 10, 1982

SECRETARY'S MEMORANDUM 9500-2

# Statement on Land Use Policy

1 PURPOSE

The Nation's farmlands, forest lands, rangelands, flood plains, and wetlands are unique natural resources providing food, fiber, wood, and water necessary for the continued welfare of the people of the United States and protection from floods. Each year, large amounts of these lands are converted to other uses. Continued conversion of the Nation's farmlands, forest lands, and rangelands may impair the ability of the United States to produce sufficient food, fiber, and wood to meet domestic needs and the demands of export markets. Continued conversion of the Nation's wetlands may reduce the availability of adequate supplies of suitable-quality water, indigenous wildlife species, and the productive capacity of the Nation's fisheries. Continued encroachments on flood plains decrease the natural flood-control capacity of these land areas, create needs for expensive manmade flood-control measures and disaster-relief activities, and endanger both lives and property.

Land use allocation decisions are matters of concern to USDA. Decisions concerning land use arise from needs to accommodate needed growth and development; prevent unwarranted and costly sprawl; avoid unwarranted conversion of farm, range, and forest lands and wetlands from existing uses and unwarranted encroachment on flood plains; maintain and enhance agricultural and forest production capabilities; maintain wildlife, fish, and seafood habitat; provide or improve community services and facilities; assure appropriate environmental quality; and assure adequate supplies of suitable-quality water. These needs are highly interdependent and often compete with each other for the limited supply of available and suitable land and water.

It is Departmental policy to promote land use objectives responsive to current and long-term economic, social, and environmental needs. This policy recognizes the rights and responsibilities of State and local governments for regulating the uses of land

under their jurisdiction. It also reflects the Department's responsibility to (a) assure that the United States retains a farm, range, and forest land base sufficient to produce adequate supplies, at reasonable production costs, of high-quality food, fiber, wood, and other agricultural products that may be needed; (b) assist individual landholders and State and local governments in defining and meeting needs for growth and development in such ways that the most productive farm, range, and forest lands are protected from unwarranted conversion to other uses; and (c) assure appropriate levels of environmental quality.

In accordance with the authority contained in 7 U.S.C. 1010 and 7 U.S.C. 2204 and consistent with 7 C.F.R. 2.19 (f) and provisions of the Farmland Protection Policy Act, Subtitle I, Title XV, P.L. 97-98, the Department sets forth this statement of policy on land use.

## 2 CANCELLATIONS

This memorandum supersedes Secretary's Memorandum No. 1827, Revised, dated October 30, 1978, and Supplement No. 1, dated October 30, 1978, and Secretary's Memorandum No. 1807, Revised, dated December 14, 1977.

## 3 POLICY

Federal agencies, in implementing programs, make decisions that affect current and potential uses of land. The Department will:

a Promote and support planning procedures that allow landholders, interest groups, and State and local governments to have input at all appropriate stages of the decisionmaking process for public projects, programs, or activities; that recognize the rights and responsibilities of landholders in making private land use decisions; and that recognize the responsibility of governments in influencing how land may be used to meet public needs.

b Assure that programs of the agencies within the Department discourage the unwarranted conversion to other uses of prime and unique farmlands, farmlands of statewide or local importance, prime forest lands and those of statewide or local importance, and prime rangelands, as defined in appendix A; the unwarranted alteration of wetlands or flood plains; or the unwarranted expansion of the peripheral boundaries of existing settlements.

c Manage both its land use-related programs and USDA-administered land in such manner as to: (1) demonstrate leadership in meeting short- and long-term needs for growth and development, while assuring adequate supplies of needed food, fiber, and

forest products; (2) assure appropriate levels of environmental quality and adequate supplies of water; and (3) discourage unwarranted expansion of peripheral boundaries of existing settlements. Wherever practicable, management of USDA-administered lands shall be coordinated with the management of adjacent private and other public lands.

d Conduct multidisciplinary land use research and education programs responsive to identified State, local, and national needs and, when requested, assist State and local governments, citizens groups, and individual landholders in determining alternative land use values, thereby enabling local officials to make judicious choices to meet growth and development needs and to protect the community's farm- and forest-related economic base.

e Assist landowners and State and Federal agencies in the reclamation of abandoned surface-mined lands. This reclamation will help eliminate safety, health, and environmental problems.

f Assist in planning for the extraction of coal and other nonrenewable resources in such manner as to facilitate restoration. This restoration would reestablish or enhance food, fiber, or forest productivity or contribute to other beneficial uses of the land as mining is completed in defined areas or sites.

g Advocate among Federal agencies:

(1) The retention of important farmlands, rangelands, forest lands, and wetlands, whenever proposed conversions to other uses (a) are caused or encouraged by actions or programs of a Federal agency or (b) require licensing or approval by a Federal agency, unless other needs clearly override the benefits derived from retention of such lands; and

(2) Actions that reduce the risk of flood loss and soil erosion; that minimize impacts of floods on human safety, health, and welfare; that preserve natural flood-control and other beneficial functions and values of wetlands and flood plains; and that reduce future need for expensive manmade flood-control systems, disaster-relief assistance, or Federal rehabilitation assistance in the event of flooding.

## 4 ABBREVIATIONS

USDA - U.S. Department of Agriculture
NRE - Natural Resources and Environment Committee

5 DEFINITIONS

Complete definitions for the terms "farmlands," "forest lands," "rangelands," "wetlands," and "flood plains" are found in appendix A.

6 RESPONSIBILITIES

a The Office of the Secretary is responsible for (1) encouraging, assisting, and coordinating efforts of other Federal departments and agencies to implement policies and procedures supportive of the objectives of this memorandum; (2) resolving issues and acting on recommendations raised to the Secretary's Policy and Coordination Council by the Departmental committees; and (3) raising unresolved issues and recommending actions to the appropriate Cabinet Council.

b The NRE Committee, created under the Secretary's memorandum dated July 22, 1981, will provide departmentwide leadership for the implementation of this policy statement. In implementing this policy, the NRE Committee will:

(1) Recommend Departmental guidelines to the Secretary and schedule reviews of each agency's procedures for implementation;

(2) Monitor implementation of this policy;

(3) Encourage, support, and provide guidance to State- and local-level USDA committees in implementing this policy;

(4) Coordinate the work of USDA agencies in carrying out the provisions of this memorandum; and

(5) Advise the Secretary annually as to progress and problems encountered.

c Each USDA agency will review and make the necessary administrative changes in existing and proposed rules, regulations, guides, practices, or policies and propose needed legislative changes to bring agency programs into compliance with the provisions of this memorandum.

d Each USDA agency having programs that will be affected by this memorandum shall develop implementing procedures, consistent with the guidelines provided by the NRE Committee, and shall provide to all offices of the agency copies of this policy statement, Departmental guidelines, and agency procedures to implement this policy.

e USDA agencies will encourage State and local governments and individual landholders to retain important farmlands, rangelands,

forest lands, and wetlands and to avoid encroachments on flood plains when practicable alternatives exist to meet developmental needs. Appropriate agencies will assist State and local governments, citizens groups, and individual landholders in identifying options and determining alternative land use values as the basis for making judicious choices in meeting growth and development needs.

f USDA agencies will encourage other Federal, State, and local government agencies to exchange information on plans or projects that may impact on important farmlands, rangelands, forest lands, wetlands, or flood plains and to involve appropriate USDA agencies early in the planning process. USDA agencies will participate in a timely manner at appropriate stages in the planning process on Federal or federally assisted projects or activities when requested. Where opportunity for such participation is not forthcoming, the Department may intercede, consistent with policy contained in this memorandum, at appropriate stages in the decisionmaking process through review and comments on plans, as provided for in authorized administrative review procedures for such projects, activities, or actions.

g When land held either in public or private ownership will be directly affected by USDA actions, the implementing agency will notify the affected landholders at the earliest time practicable of the proposed action and provide such landholders an opportunity to review the elements of the action and to comment on the action's feasibility and alternatives to it.

h Agencies of USDA will assure that their actions, investments, and programs on nonfederal lands will conform, to the extent practicable, with the uses permitted under land use regulations adopted by State or local governments.

i When land use regulations or decisions are inconsistent with USDA policies and procedures for the protection of important farmlands, rangelands, forest lands, wetlands, or flood plains, USDA agencies shall not assist in actions that would convert these lands to other uses or encroach upon flood plains, unless (1) there is a demonstrated, significant need

for the project, program, or facility and (2) there are no practicable alternative actions or sites that would avoid the conversion of these lands, or if conversion is unavoidable, reduce the number of acres to be converted or encroached upon directly and indirectly.

John R Block

Secretary of Agriculture

# APPENDIX A

## DEFINITIONS

The following definitions apply to Secretary's Memorandum No. 9500-2 dated March 10, 1982

1 IMPORTANT FARMLANDS 1/

a Prime Farmlands 1/

(1) General Criteria. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses (the land could be cropland, pastureland, rangeland, forest land, or other land but not urban built-up land or water). It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding. Examples of soils that qualify as prime farmland are Palouse silt loam, 0 to 7 percent slopes; Brookston silty clay loam, drained; and Tama silty clay loam, 0 to 5 percent slopes.

(2) Specific Criteria. Prime farmlands must meet all the following criteria. Terms used in this section are defined in these USDA publications: "Soil Taxonomy, Agriculture Handbook 436," "Soil Survey Manual, Agriculture Handbook 18," "Rainfall-Erosion Losses From Cropland, Agriculture Handbook 282," "Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss, Agriculture Handbook 346," and "Saline and Alkali Soils, Agriculture Handbook 60."

(a) The soils have:

1 Aquic, udic, ustic, or xeric moisture regimes and sufficient available water capacity within a

1/ 7 C.F.R. 657.5

depth of 40 inches, or in the root zone (root zone is the part of the soil that is penetrated by plant roots) if the root zone is less than 40 inches deep, to produce the commonly grown cultivated crops (cultivated crops include, but are not limited to, grain, forage, fiber, oilseed, sugar beets, sugarcane, vegetables, tobacco, orchard, vineyard, and bush fruit crops) adapted to the region in 7 or more years out of 10; or

2 Xeric or ustic moisture regimes in which the available water capacity is limited, but the area has a developed irrigation water supply that is dependable (a dependable water supply is one in which enough water is available for irrigation in 8 out of 10 years for the crops commonly grown) and of adequate quality; or

3 Acidic or torric moisture regimes, and the area has a developed irrigation water supply that is dependable and of adequate quality; and

(b) The soils have a temperature regime that is frigid, mesic, thermic, or hyperthermic (pergelic and cryic regimes are excluded). These are soils that, at a depth of 20 inches, have a mean annual temperature higher than 32 degrees Fahrenheit. In addition, the mean summer temperature at this depth in soils with an O horizon is higher than 47 degrees Fahrenheit; in soils that have no O horizon, the mean summer temperature is higher than 59 degrees Fahrenheit; and

(c) The soils have a pH between 4.5 and 8.4 in all horizons within a depth of 40 inches or in the root zone if the root zone is less than 40 inches deep; and

(d) The soils either have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow cultivated crops common to the area to be grown; and

(e) The soils can be managed so that in all horizons within a depth of 40 inches or in the root zone if the root zone is less than 40 inches deep, during part of each year the conductivity of the saturation extract is less than 4 mmhoc/cm and the exchangeable sodium percentage is less than 15; and

(f) The soils are not flooded frequently during the growing season (less often than once in 2 years); and

(g) The product of K (erodibility factor) times the percent slope is less than 2.0, and the product of I (soils erodibility) times C (climatic factor) does not exceed 60; and

(h) The soils have a permeability rate of at least 0.06 inch per hour in the upper 20 inches, and the mean annual soil temperature at a depth of 20 inches is less than 50 degrees Fahrenheit; the permeability rate is not a limiting factor if the mean annual soil temperature is 59 degrees Fahrenheit or higher; and

(i) Less than 10 percent of the surface layer (upper 6 inches) in these soils consists of rock fragments coarser than 3 inches.

b Unique Farmland 1/

(1) General criteria. Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high-quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods. Examples of such crops are citrus, tree nuts, olives, cranberries, fruit, and vegetables.

(2) Specific characteristics. Unique farmland is used for a specific high-value food or fiber crop. It has a moisture supply that is adequate for the specific crop; the supply is from stored moisture, precipitation, or a developed irrigation system. It combines favorable factors of soil quality, growing season, temperature, humidity, air drainage, elevation, aspect, or other conditions, such as nearness to market, that favor the growth of a specific food or fiber crop.

c Additional Farmland of Statewide Importance. 1/ This is land, in addition to prime and unique farmlands, that is of statewide importance for the production of food, feed, fiber, forage, and oilseed crops. Criteria for defining and delineating this land are to be determined by the appropriate State agency or agencies. Generally, additional farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce as high a yield as prime farmlands if conditions are favorable. In some States, additional farmlands of statewide importance may include tracts of land that have been designated for agriculture by State law.

1/ 7 C.F.R. 657.5

d Additional Farmland of Local Importance. 1/ In some local areas, there is concern for certain additional farmlands for the production of food, feed, fiber, forage, and oilseed crops, even though these lands are not identified as having national or statewide importance. Where appropriate, these lands are to be identified by the local agency or agencies concerned.

2 PRIME FOREST LANDS 2/

Because of the multiple use of forested lands, several categories, i.e., timber, wildlife, and recreation, may be developed. For purposes of this memorandum only, the following timberland definitions will apply.

a Prime Timberland. 2/ Prime timberland is land that has soil capable of growing wood at the rate of 85 cubic feet or more/acre/year, under proper management (at culmination of mean annual increment), in natural stands and is not in urban or built-up land uses or water. Generally speaking, this is land currently in forest but does not exclude qualifying lands that could realistically be returned to forest. Delineation of these lands will be in accordance with national criteria.

b Unique Timberland. 2/ Unique timberlands are lands which do not qualify as prime timberland on the basis of producing less than 85 cubic feet/acre/year, but are growing sustained yields of specific high-value species or species capable of producing specialized wood products under a silvicultural system that maintains soil productivity and protects water quality. Delineation of these lands will be in accordance with national criteria.

c Timberland of Statewide Importance. 2/ This is land, in addition to prime and unique timberlands, that is of statewide importance for the growing of wood. Criteria for defining and delineating these lands are to be determined by State forestry planning committees or appropriate State organizations.

d Timberlands of Local Importance. 2/ In some local areas, there is concern for certain additional forest lands for the growing of wood, even though these lands are not identified as having national or statewide importance. Where appropriate, these lands are to be identified by a local agency or agencies concerned.

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1/ 7 C.F.R. 657.5

2/ Prime Forest Land Definition and Criteria, U.S. Forest Service, May 26, 1977

3 WETLANDS 3/

Wetlands are those areas that are inundated by surface or ground water with a frequency sufficient to support and, under normal circumstances, do or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas, such as sloughs, potholes, wet meadows, river overflows, mudflats, and natural ponds.

4 FLOOD PLAINS 3/

The term "flood plain" means the lowland and relatively flat areas adjoining inland and coastal waters, including floodprone areas of offshore islands, including, at a minimum, those that are subject to a one percent or greater chance of flooding in any given year.

5 PRIME RANGELAND 4/

Prime rangeland is rangeland which, because of its soil, climate, topography, vegetation, and location, has the highest quality or value for grazing animals. The (potential) natural vegetation is palatable, nutritious, and available to the kinds of herbivores common to the area.

3/ Definitions contained in Executive Orders 11988 and 11990

4/ USDA proposed definition, for intradepartmental use only



GPO 888-819

SENATE BILL NO. 465

By Senators Talkington, Doyen, Montgomery, Arasmith, Kerr, Bogina, Ehrlich, Werts, Reilly, Allen and Thiessen

AN ACT relating to agriculture; concerning the conservation and protection of farmland for the production of food and other agricultural products; and protecting such activities from nuisance lawsuits.

Be it enacted by the Legislature of the State of Kansas:

Section 1. It is the declared policy of this state to conserve and protect and encourage the development and improvement of farmland for the production of food and other agricultural products. The legislature finds that agricultural activities conducted on farmland in areas in which nonagricultural uses have moved into agricultural areas are often subjected to nuisance lawsuits, and that such suits encourage and even force the premature removal of the lands from agricultural uses. It is therefore the purpose of this act to provide agricultural activities conducted on farmland protection from nuisance lawsuits.

Sec. 2. Agricultural activities conducted on farmland, if consistent with good agricultural practices and established prior to surrounding nonagricultural activities, are presumed to be reasonable and do not constitute a nuisance, public or private, unless the activity has a substantial adverse effect on the public health and safety.

If such agricultural activity is undertaken in conformity with federal, state, and local laws and regulations, it is presumed to be good agricultural practice and not adversely affecting the public health and safety.

Sec. 3. As used in this act:

(a) "Agricultural activity" means the growing or raising of horticultural and agricultural crops, hay, poultry and livestock, and livestock, poultry and dairy products for commercial purposes.

(b) "Farmland" means land devoted primarily to an agricultural activity.

Sec. 4. This act shall take effect and be in force from and after its publication in the statute book.

SHAWNEE COUNTY ZONING RESOLUTION

Summary Description of Zoning Districts
(Within the Three-Mile Boundary)

"R-1" - RESIDENTIAL DWELLING DISTRICT:

Permits single family dwellings, parks, churches, schools, golf courses, and home occupations (restricted). Height limitation: 35 feet.

"M-1" - TWO-FAMILY DWELLING DISTRICT:

Permits two family dwellings, single family attached dwellings, and all uses permitted in the "R-1" zoning district. Height limitation: 35 feet.

"M-2" - MULTIPLE FAMILY DWELLING DISTRICT:

Permits multiple family dwellings, condominiums, townshouses, boardening and lodging houses, mobile home parks with a special permitted in the "M-1" zoning district. Height limitation: 35 feet.

"O&I" - OFFICE AND INSTITUTIONAL DISTRICT:

Permits banks, trusts, savings and loan companies, commercial educational and training facilities, funeral homes, gymnasiums, health clubs, institutional homes, laboratories, nursing and convalescent homes, offices, public and private schools, colleges, and universities, day nurseries, fraternal organizations, non-profit religious or philanthropic institutions. Height limitation: 35 feet.

"C-1" - LOCAL SHOPPING DISTRICT:

Permits certain local service commercial uses such as service stations, bakeries, barber and beauty shops, drug stores, restaurants, theatres, self-services laundries, and similar retail uses and all uses permitted in the "O & I" zoning district. Height limitation: 35 feet.

"C-2" - COMMERCIAL DISTRICT:

Permits more intensive commercial uses such as amusement places, public garages, mobile home parks, hotels and motels, automobile and farm equipment sales/lots, hospitals and clinics for animals and the uses permitted in the "C-1" zoning district. Height limitation: 45 feet.

"I-1" - LIGHT INDUSTRIAL DISTRICT:

Permits all uses and activities which do not constitute a hazard or a nuisance and which are not expressly prohibited by the district. Height limitation: 130 feet unless further restricted by airport regulations.

"I-2" - HEAVY INDUSTRIAL DISTRICT:

Permits all uses and activities, provided however, that the location of certain enumerated uses which may be hazardous or a nuisance are subject to the expressed permission of the Board of County Commissioners after report by the Planning Commission. Height limitation: None except for applicable airport regulations.

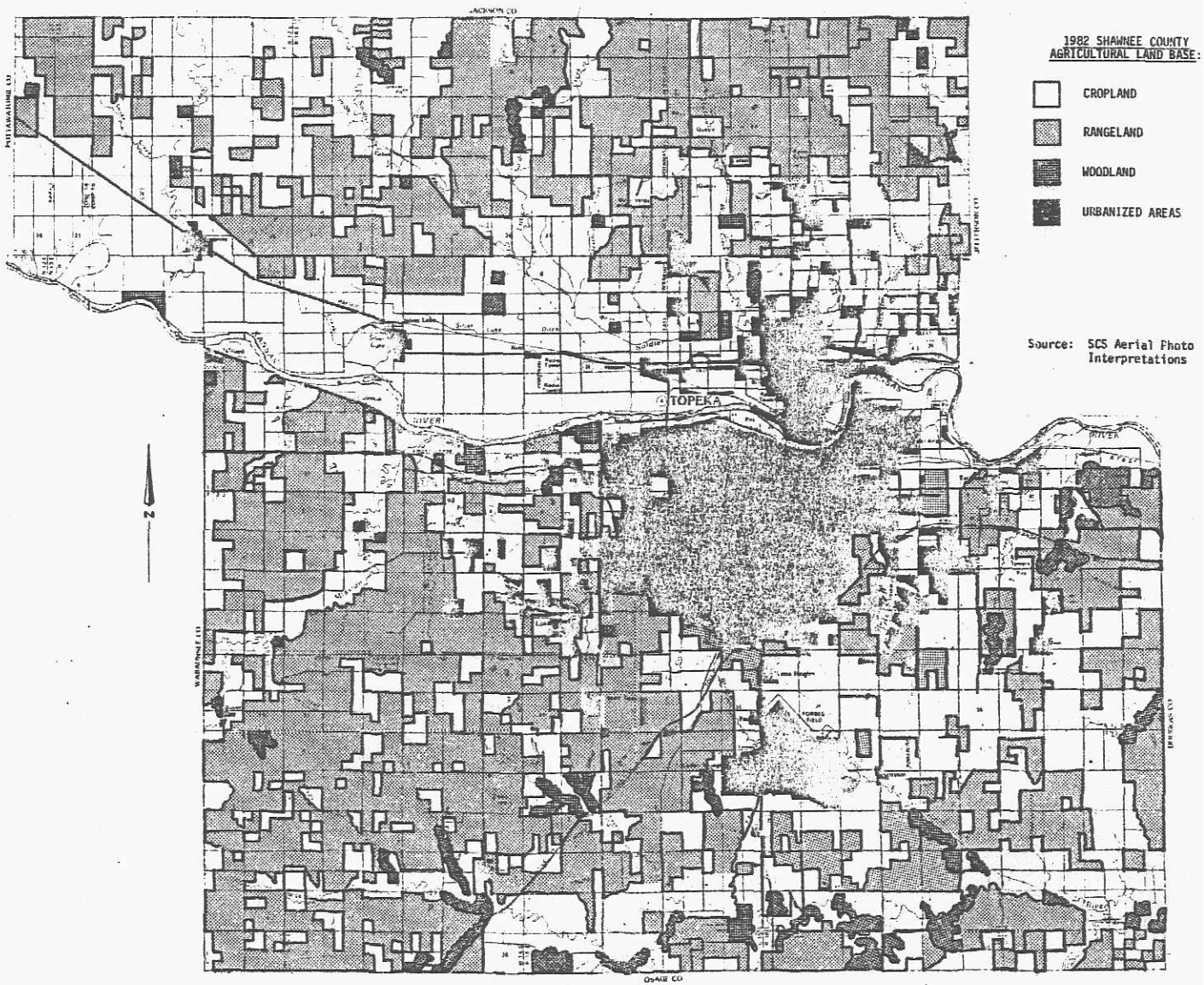
SHAWNEE COUNTY ZONING RESOLUTION

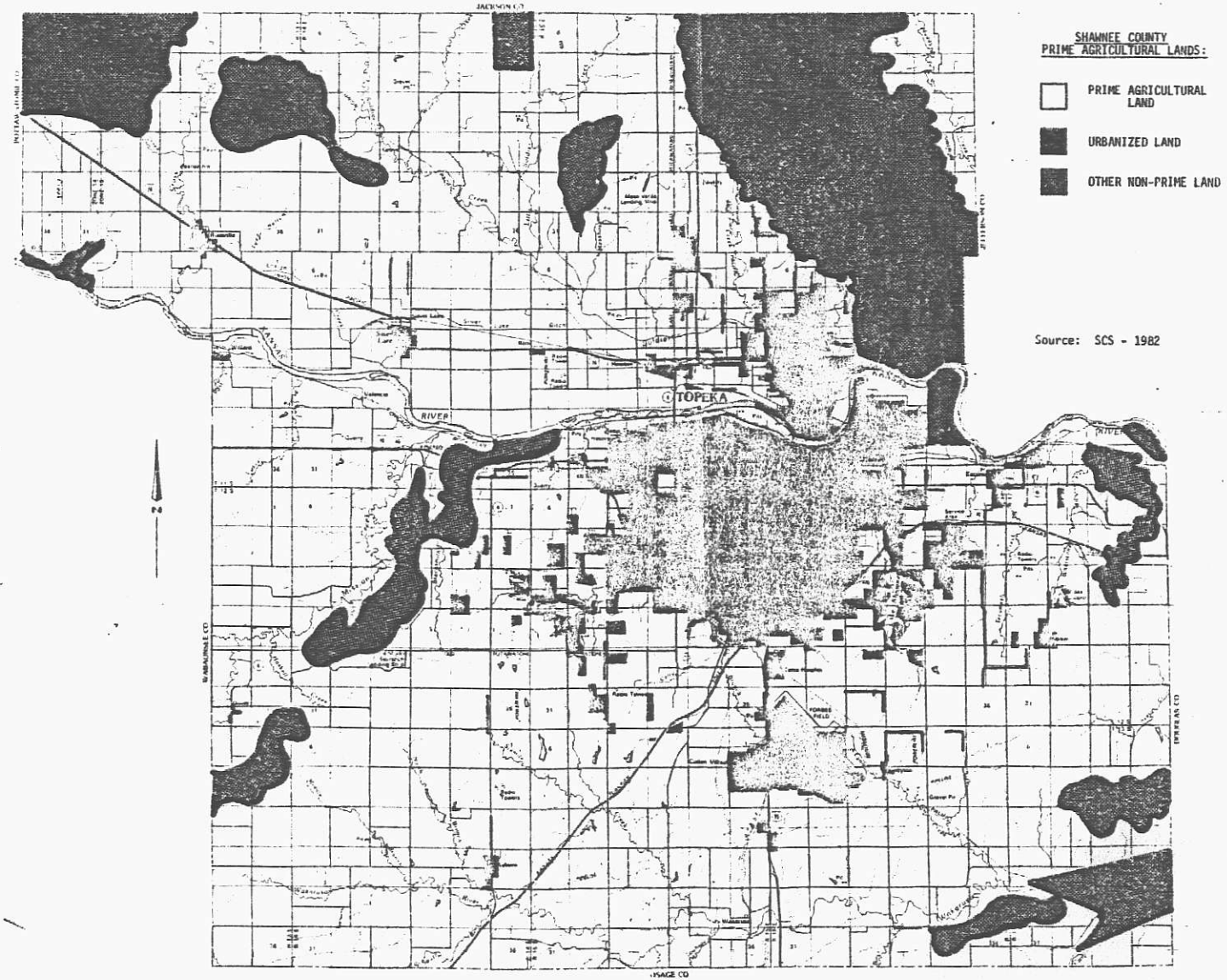
Summary Description of Zoning Districts*
(Beyond The Three-Mile Boundary)

"RA-1" - AGRICULTURAL DISTRICT:

Permits agricultural uses and any activity connected therewith normally found necessary and essential to this purpose, single family dwellings (restricted), utilization and conservation of natural resources, churches, public schools, and park-recreational areas. Height limitation: 35 feet except for agricultural uses.

* Descriptions for "M-1", "M-2", "O&I", "C-1", "C-2", "I-1" and "I-2" are the same as described above.


1982 SHAWNEE COUNTY
AGRICULTURAL LAND BASE:
CROPLAND
RANGELAND
WOODLAND
URBANIZED AREAS
Source: SCS Aerial Photo
Interpretations
TOPEKA
JACKSON CO
POTTAWATOMIE CO
JEFFERSON CO
WABAUNSEE CO
OSAGE CO
N


SHAWNEE COUNTY
PRIME AGRICULTURAL LANDS:
PRIME AGRICULTURAL LAND
URBANIZED LAND
OTHER NON-PRIME LAND
Source: SCS - 1982
TOPEKA
RIVER
JACKSON CO
OSAGE CO

2

1975

map of

Shawnee County

Kansas

too large to be microfilmed,

see bound copy (call number LD 2668 .R4 1982 A27)

# 1975 MAP of SHAWNEE COUNTY KANSAS

COUNTY ENGINEER
Harold Foley

Prepared by: YORK PUBLICATIONS

JACKSON COUNTY

POTTAWATOMIE COUNTY

JEFFERSON COUNTY

WABAUNSEE COUNTY

DOUGLAS COUNTY

OSAGE COUNTY

ROSSVILLE

MENOKEN

SOLDIER

GROVE

SILVER LAKE

DOVER

MISSION

TOPEKA

TECUMSEH

AUBURN

WILLIAMSPORT

MONMOUTH

FORBES FIELD
KANSAS AIR NATIONAL GUARD

Res 6
E.S.A.
Dennis

Res 7
Minnie Hummer

Sherwood Est

Sherwood Lake

Lake Shawnee

Lake Sherwood

Lake Dyard

Silver Lake

Willard

Wakarusa

Cullen

Meriden

Oldfield

Grantville

Valencia

Tecumseh

Monmouth

Ward

Dover

Mission

Auburn

Williamsport

Rossville

Menoken

Soldier

Grove

Silver Lake

Topeka

WASHBURN University

MUNICIPAL AIRPORT

Kansas River

Shunganunga Creek

Mission Creek

Soldier Creek

Deer Creek

Indian Creek

Big Soldier Creek

Little Soldier Creek

Mill Creek

Rock Creek

Cedar Creek

Dry Creek

Hoyt Creek

Coal Creek

Turkey Creek

Stinson Creek

Wolf Creek

Spring Creek

Muddy Creek

Big Elk Creek

Little Elk Creek

Elk Creek

Big Indian Creek

Little Indian Creek

Big Rock Creek

Little Rock Creek

Big Cedar Creek

Little Cedar Creek

Big Dry Creek

Little Dry Creek

Big Hoyt Creek

Little Hoyt Creek

Big Coal Creek

Little Coal Creek

Big Turkey Creek

Little Turkey Creek

Big Stinson Creek

Little Stinson Creek

Big Wolf Creek

Little Wolf Creek

Big Spring Creek

Little Spring Creek

Big Muddy Creek

Little Muddy Creek

Big Elk Creek

Little Elk Creek

Big Indian Creek

Little Indian Creek

Big Rock Creek

Little Rock Creek

Big Cedar Creek

Little Cedar Creek

Big Dry Creek

Little Dry Creek

Big Hoyt Creek

Little Hoyt Creek

Big Coal Creek

Little Coal Creek

Big Turkey Creek

Little Turkey Creek

Big Stinson Creek

Little Stinson Creek

Big Wolf Creek

Little Wolf Creek

Big Spring Creek

Little Spring Creek

Big Muddy Creek

Little Muddy Creek

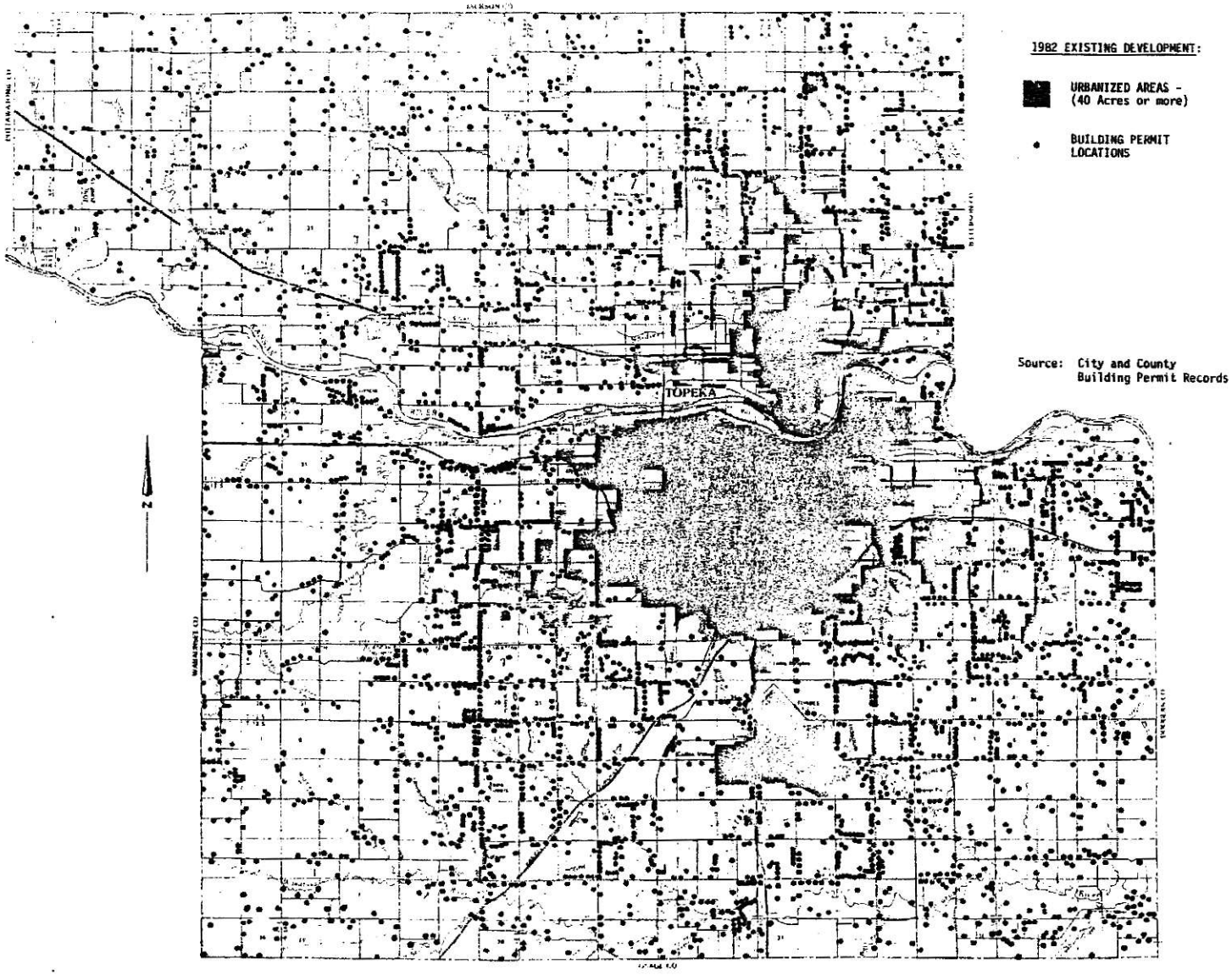
## LEGEND

SCALE
0 ¼ ½ 1 MILE 2

KANSAS TURNPIKE AND INTERSTATE ROUTES
FEDERAL HIGHWAYS
STATE HIGHWAYS
COUNTY ROADS - F A S
ROCK
GRADED OR DIRT
RAILROADS
COUNTY LINE
TOWNSHIP BOUNDARY
RESERVE LINE
PIPE LINES
CEMETERY

* A Rod is 16½ feet — A Chain is 4 Rods or 66 feet
A Mile is 320 Rods = 80 Chains or 5,280 feet
AN Acre contains 43,560 square feet or 160 square Rods

© YORK PUBLICATIONS 1975

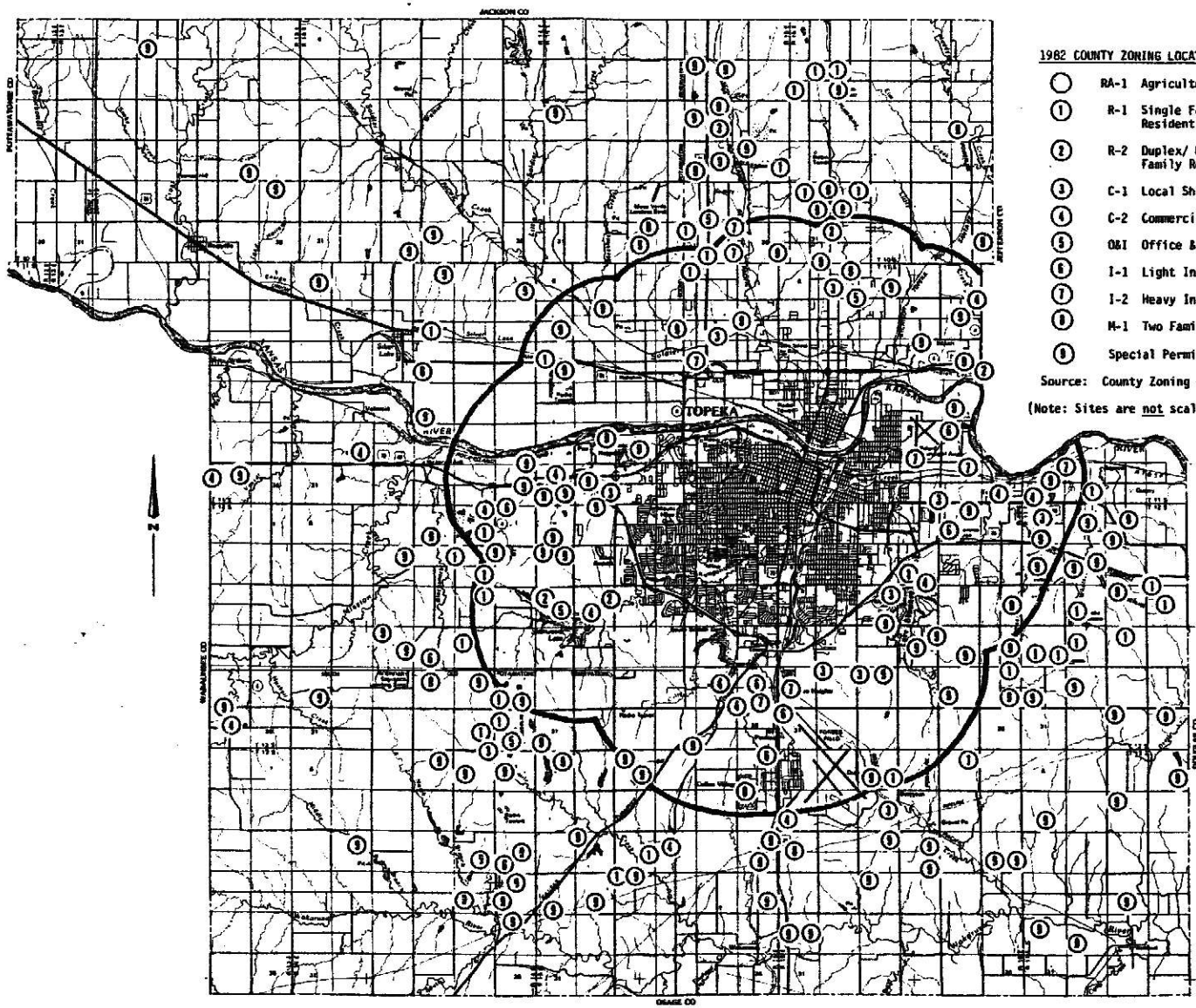



1982 EXISTING DEVELOPMENT:

URBANIZED AREAS - (40 Acres or more)

BUILDING PERMIT LOCATIONS

Source: City and County Building Permit Records

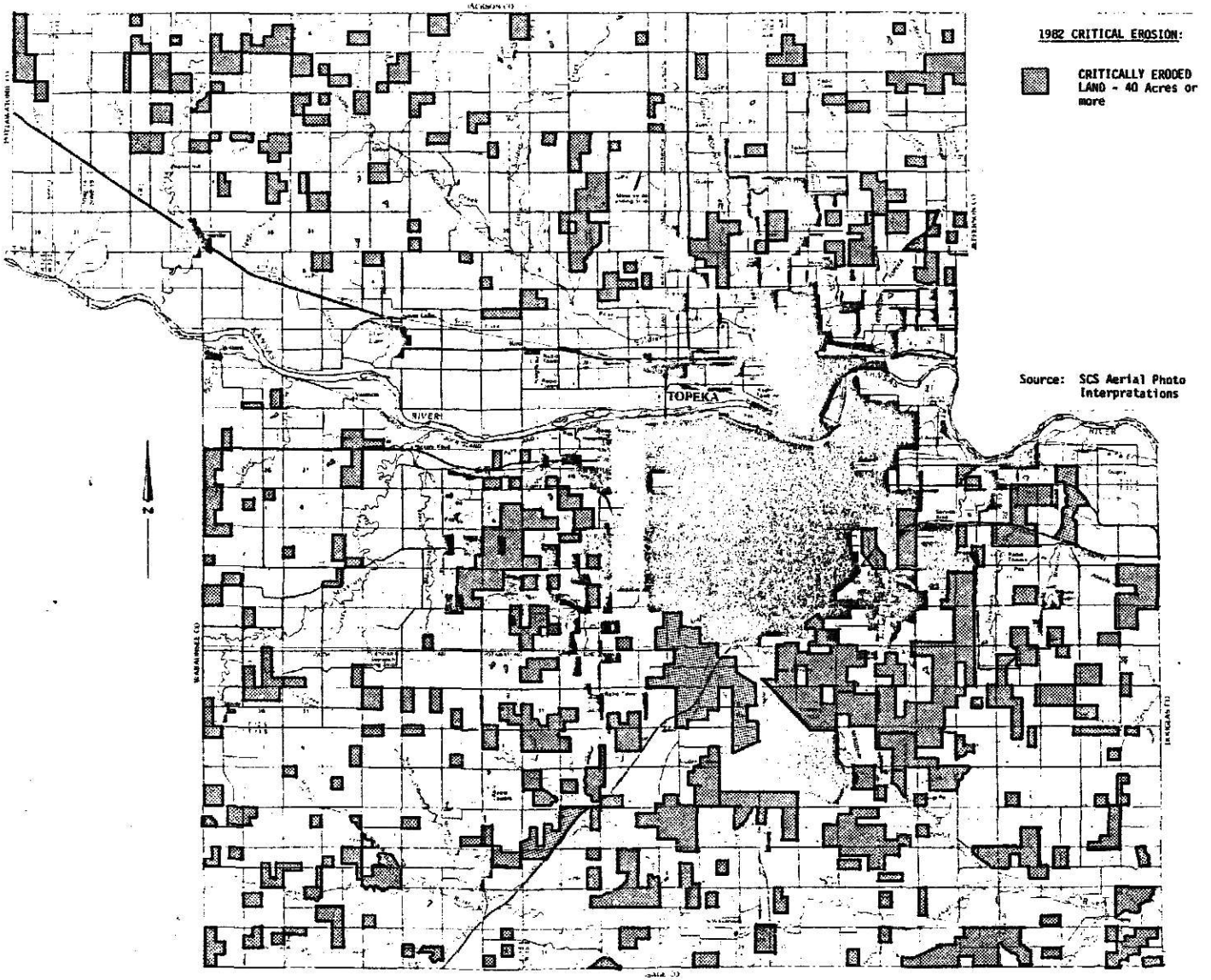


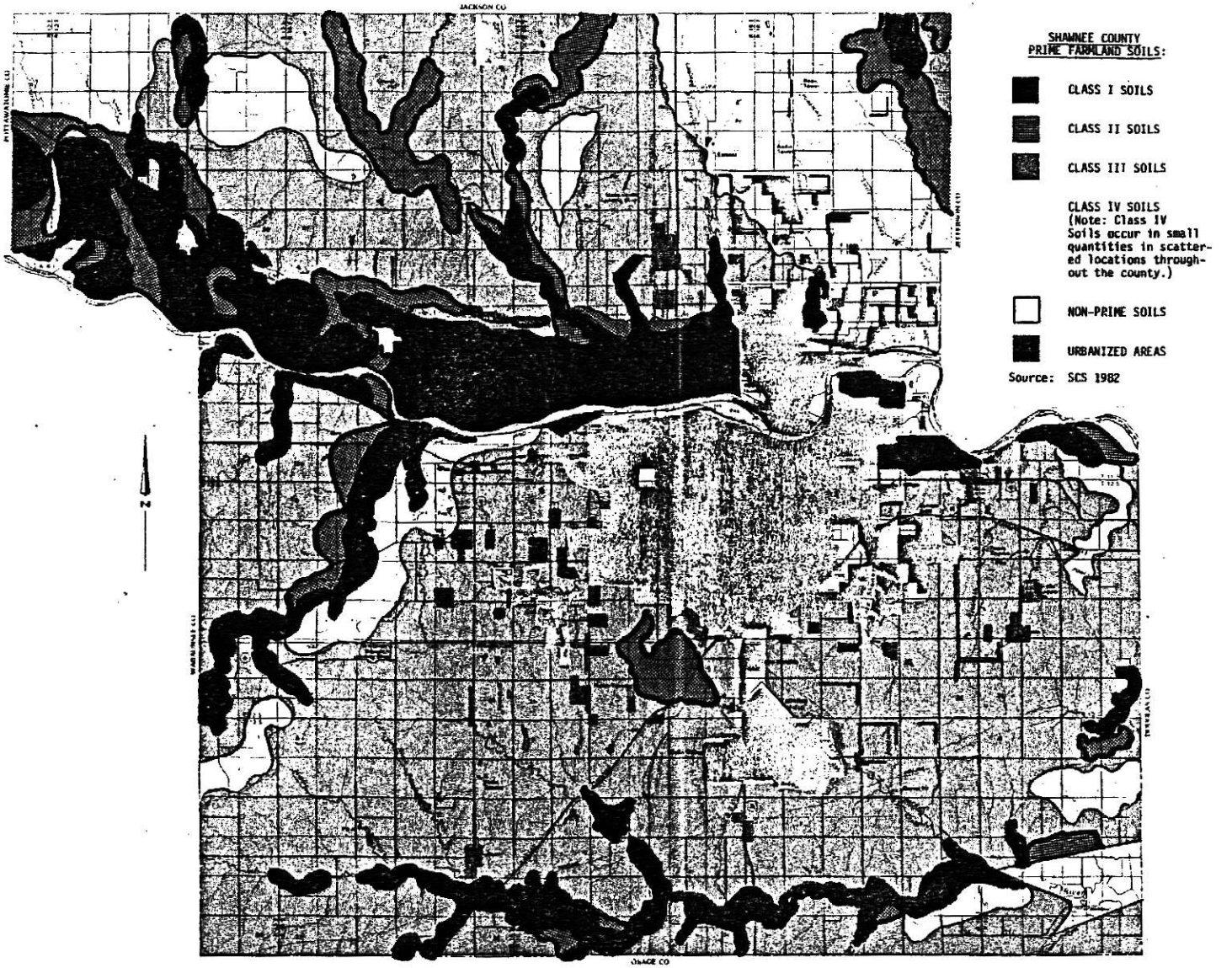

1962 COUNTY ZONING LOCATIONS:

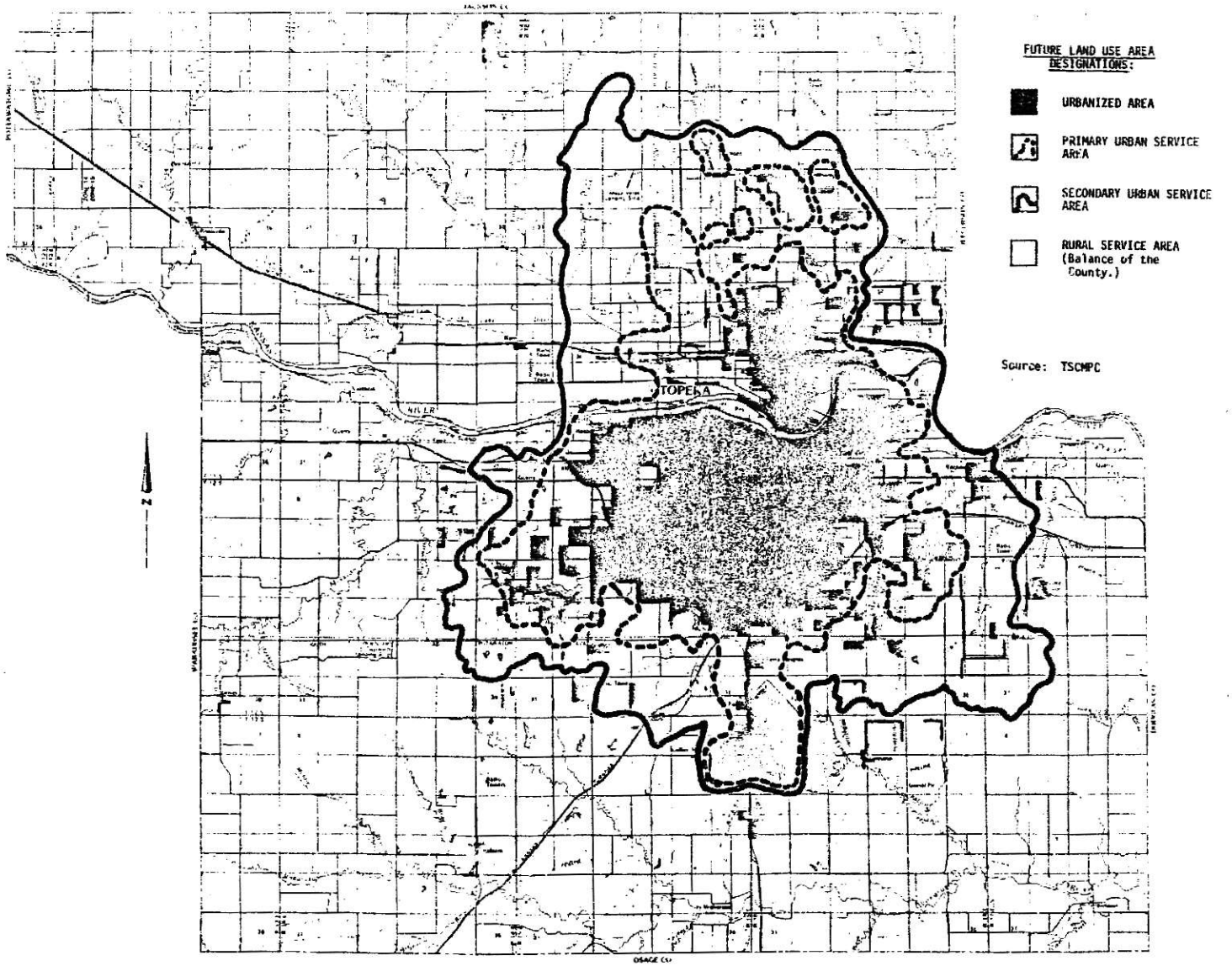
| | | |
|---|---|---|
| ○ | RA-1 | Agricultural |
| (1) | R-1 | Single Family Residential |
| (2) | R-2 | Duplex/ Multi Family Residential |
| (3) | C-1 | Local Shopping |
| (4) | C-2 | Commercial |
| (5) | O&I | Office & Instit. |
| (6) | I-1 | Light Industrial |
| (7) | I-2 | Heavy Industrial |
| (8) | M-1 | Two Family |
| (9) | | Special Permit |

Source: County Zoning Maps

(Note: Sites are not scaled.)


1982 CRITICAL EROSION:
CRITICALLY ERODED LAND - 40 Acres or more
Source: SCS Aerial Photo Interpretations
TOPEKA
RIVER
N


JACKSON CO
OSAGE CO
N
SHAWNEE COUNTY
PRIME FARMLAND SOILS:
CLASS I SOILS
CLASS II SOILS
CLASS III SOILS
CLASS IV SOILS
(Note: Class IV Soils occur in small quantities in scattered locations throughout the county.)
NON-PRIME SOILS
URBANIZED AREAS
Source: SCS 1982


FUTURE LAND USE AREA DESIGNATIONS:
URBANIZED AREA
PRIMARY URBAN SERVICE AREA
SECONDARY URBAN SERVICE AREA
RURAL SERVICE AREA (Balance of the County.)
Source: TSCMPC
TOPEKA
N

Shawnee County

Kansas

Topography

too large to be microfilmed,

see bound copy (call number LD 2668 .R4 1982 A27)

# SHAWNEE COUNTY

KANSAS

Topeka - Shawnee County
REGIONAL PLANNING COMMISSION
topeka, kansas

TOPOGRAPHY
contour interval 50 feet

UNDER 900'
900' to 950'
950' to 1000'
1000' to 1050'
1050' to 1100'
1100' to 1150'
1150' to 1200'
OVER 1200'

DATUM IS MEAN SEA LEVEL

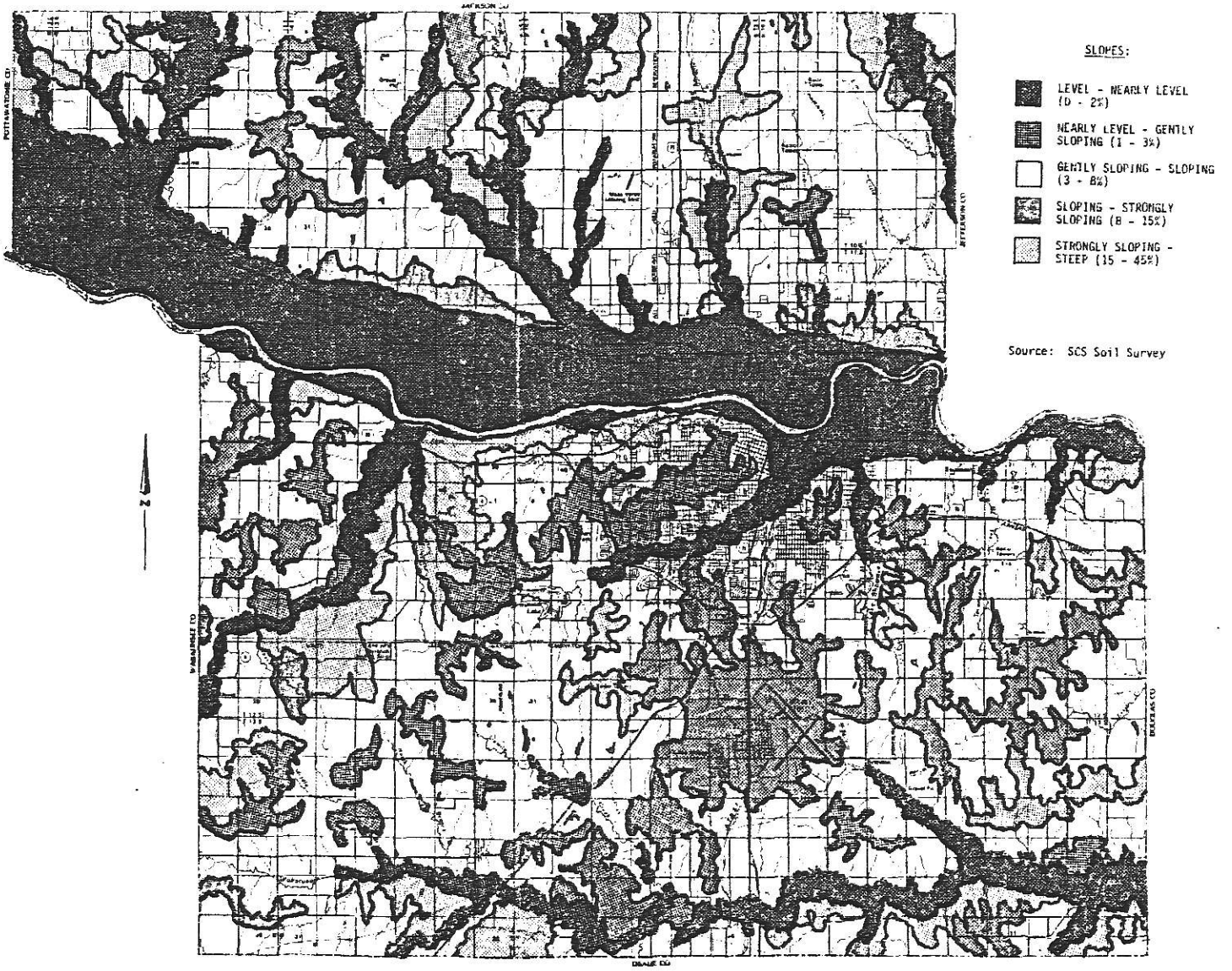
DATA OBTAINED FROM USGS QUADRANGLE SHEETS

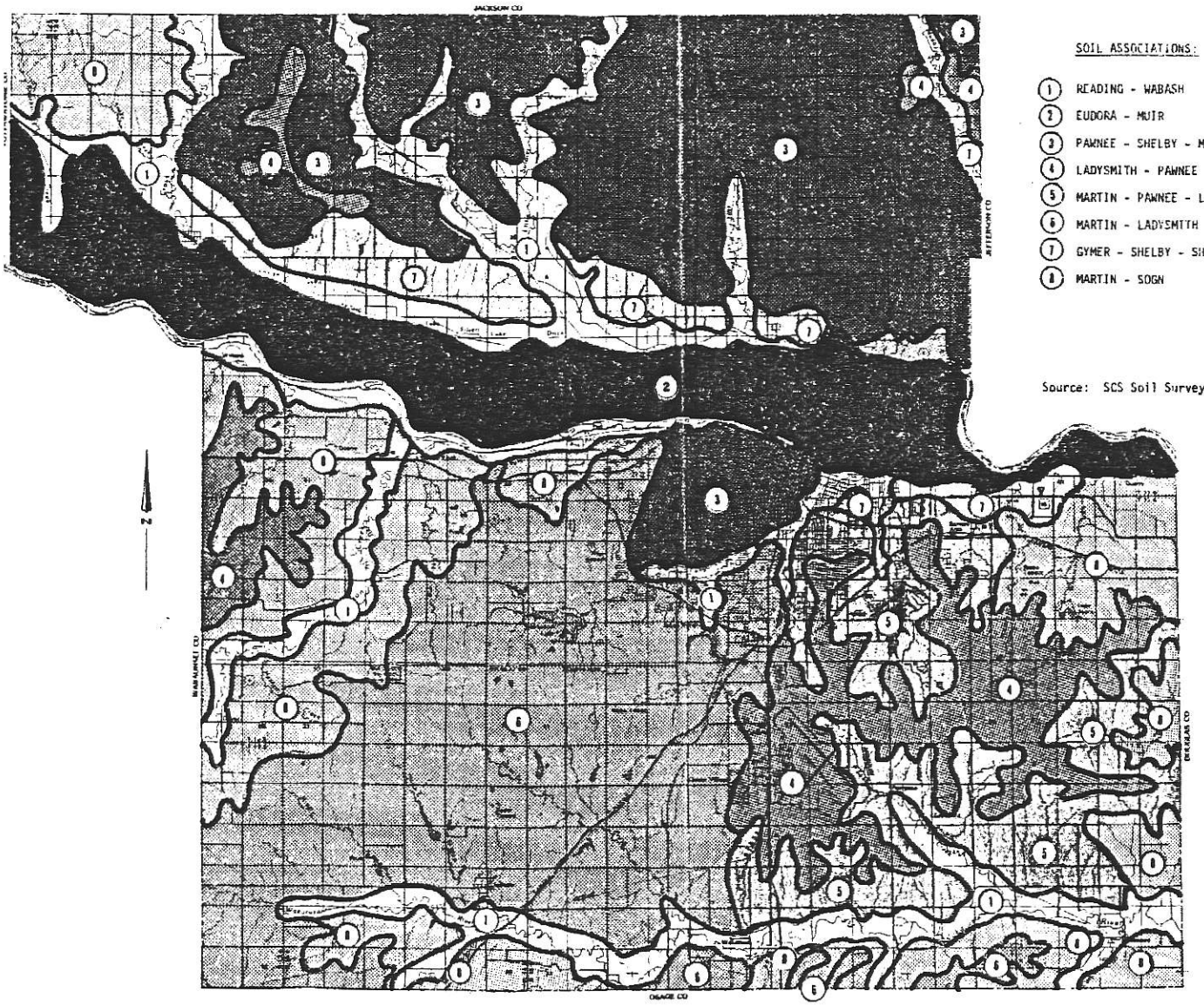
JACKSON COUNTY
OSAGE COUNTY
WABAUNSEE COUNTY
DOUGLAS COUNTY
POTTAWATOMIE COUNTY
JEFFERSON COUNTY

RANGE 12 EAST — RANGE 13 EAST — RANGE 14 EAST — RANGE 15 EAST — RANGE 16 EAST — RANGE 17 EAST

TOWNSHIP 10 SOUTH — TOWNSHIP 11 SOUTH — TOWNSHIP 12 SOUTH — TOWNSHIP 13 SOUTH

Grove
Elmont
Rossville
Silver Lake
Willard
Kiro
Menoken
Valencia
TOPEKA
Tecumseh
Watson
Dover
Pauline
Berryton
Auburn
Wakarusa
Richland

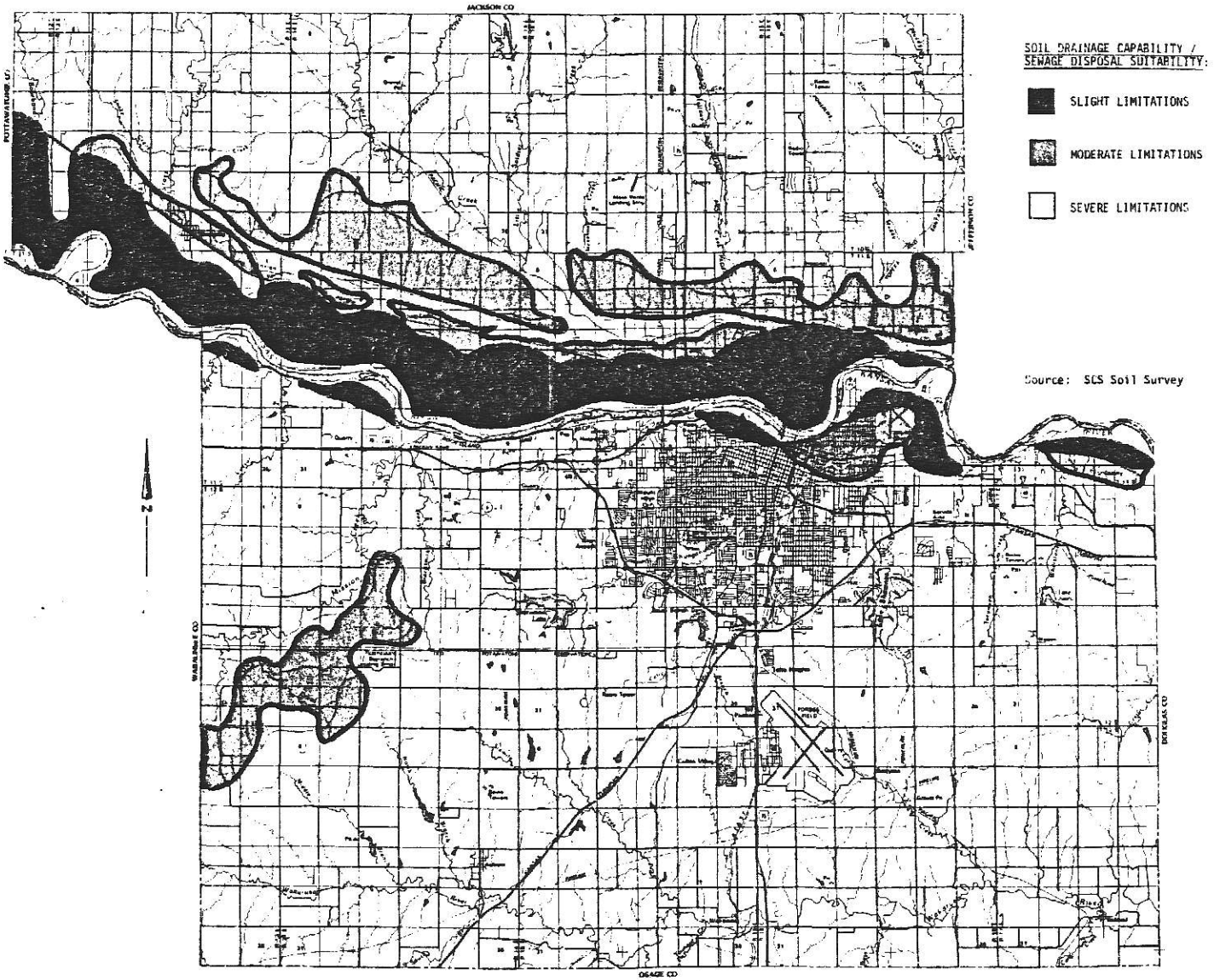

SLOPES:
LEVEL - NEARLY LEVEL (0 - 2%)
NEARLY LEVEL - GENTLY SLOPING (1 - 3%)
GENTLY SLOPING - SLOPING (3 - 8%)
SLOPING - STRONGLY SLOPING (8 - 15%)
STRONGLY SLOPING - STEEP (15 - 45%)
Source: SCS Soil Survey

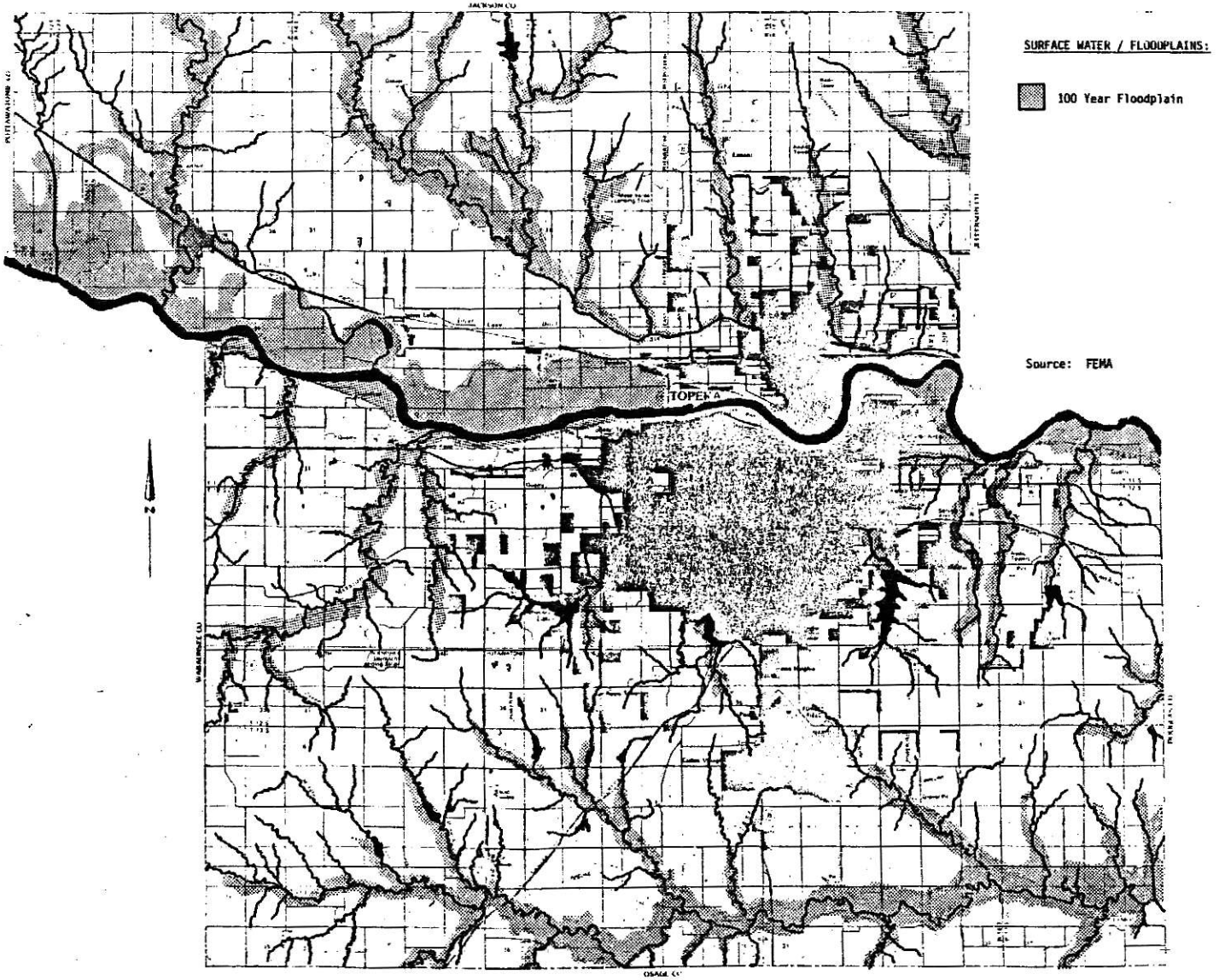


SOIL ASSOCIATIONS:

1. READING - WABASH
2. EUDORA - MUIR
3. PAWNEE - SHELBY - MORRILL
4. LADYSMITH - PAWNEE
5. MARTIN - PAWNEE - LABETTE
6. MARTIN - LADYSMITH
7. GYMER - SHELBY - SHARPSBURG
8. MARTIN - SOGN

Source: SCS Soil Survey


JACKSON CO
POTTAWATOMIE CO
JEFFERSON CO
WASHINGTON CO
OSAGE CO
SOIL DRAINAGE CAPABILITY / SEWAGE DISPOSAL SUITABILITY:
SLIGHT LIMITATIONS
MODERATE LIMITATIONS
SEVERE LIMITATIONS
Source: SCS Soil Survey


SURFACE WATER / FLOODPLAINS:
100 Year Floodplain
Source: FEMA
TOPEKA

# DEVELOPMENT OF AN AGRICULTURAL LANDS POLICY / PLAN

FOR

SHAWNEE COUNTY, KANSAS

by

KRISTEN A. ABRAHAMSON

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AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF REGIONAL AND COMMUNITY PLANNING

Department of Regional and Community Planning

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1982

The importance of agriculture has been generally overlooked in traditional land use planning. Agriculture has been traditionally regarded as the "lowest" use for the land, and therefore has simply been regarded as a holding zone for urban expansion. With the emergence of the environmental ethic in the 1970's, this perception began to change. It was recognized that not all land was equally suitable for agricultural production, and that which was best suited (ie "prime" land) was a unique and limited natural resource.

Kansas is one of the few states which has not yet taken any major initiatives in developing an integrated program for the preservation of prime agricultural lands, prefering instead that the local governing bodies devise their own policies and programs. A 1978 Soil Conservation Society Survey identified over 80% of the non-urbanized area of Shawnee County as qualifying for the "prime" designation, and the county has for some time been concerned with the identification and protection of this important natural resource.

The goal of the Agricultural Lands Policy / Plan is to develop a policy for the classification of agricultural lands within the planning area, and which will successfully integrate with the County's overall growth management objectives. This policy recognizes that,in order to be effective and viable, a policy for the protection of agricultural lands which will result in the continuation of productive farming practices in the metropolitan area must do more than prohibit or limit the number of short term conversions; it must also provide for the long term preservation

of an entire districts for agricultural use.

An Agricultural Preservation Plan is similar to most standard land use plans, except that the central idea or emphasis of the plan is on the protection of prime farmlands and the agricultural uses associated with them. Most of the information necessary for formulating the plan has been previously gathered and is available from existing sources; it merely needed to be compiled into a single reference. The plan is based upon this data as well as more detailed studies of the County's agriculture, natural resources and land development trends, and develops the county's policies and proposed programs for preserving farmland, while providing for future urban growth.