AN APPRAISAL OF POTENTIALS FOR OUTDOOR RECREATION DEVELOPMENTS IN SELECTED KANSAS COUNTIES

by

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INTRODUCTION

THE IMPORTANCE OF THIS STUDY

Recreation, defined as the broad spectrum of activities and pursuits in which we engage during our leisure time, is and will continue to be an increasingly important part of American life. In 1962 a significant report was published by the Outdoor Recreation Resources Review Commission (ORRRC) (9) concerning present and future outdoor recreation needs on a national scale. That study showed that people are seeking outlets for their recreational interests at an ever increasing rate. The natural scene is being consumed at a prodigious rate. This consumption will continue unless effective action is taken promptly to insure that future generations will still be able to find areas of inspiration, tranquility and beauty.

This rapid growth of recreation in America, and particularly recreation in the out-of-doors, is a result of the transformation of this nation from an agricultural to an industrial society. The motivating forces affecting this are evident. First, we have a greater abundance of leisure than in the past. Secondly, our rising living standard and the accompanying availability of money for investment in leisure has increased the demand. The third factor which influences the demand for recreation is increased mobility. There is no doubt that we live in a smaller world than that which existed a generation ago. (5)

But what makes outdoor recreation so appealing? A U. S. Department of Commerce Report (14) states that recreation

reduces tension and gives relief to job pressure and urban stress. A confining urban environment is causing a migration during leisure to the outdoors, the uncrowded places, the quiet places of beauty where one can walk in the woods, or drive along a scenic way. This change in environment and the opportunity to enjoy an outdoor recreation experience, provides a new recreation experience for many people.

Appraising the potentials for outdoor recreation is an essential step in planning to meet these recreation needs. The appraisal of potentials is an examination of the opportunities for further development of resources for recreation uses. If meaningful recreational experiences are to be available in the future, an appraisal of potential for development of recreation areas or enterprises must be considered a basic element in any recreation plan.

The information contained herein will be of help to groups and individuals in pointing out the potential for certain types of recreation enterprises in the study area. Further, it may serve as a guide for evaluating the recreation possibilities for developing specific sites within the area. However, this study considers the area as a unit, and no attempt has been made to appraise individual sites for recreation development.

THE PROBLEM AND OBJECTIVES

In response to the need already established, this study will introduce a systematic approach to appraising the potentials for future outdoor recreation development in a selected area. The problem is to make these appraisals without long and costly surveys, and to identify and evaluate the areas of highest potentials for outdoor recreation developments in the study area.

This study was initiated to accomplish the following objectives:

Provide information needed for the effective development of natural resources for outdoor recreation;

Provide information for publicizing and promoting outdoor recreation in the study area;

Provide information useful for local planning by county and township governments, planning commissions, water boards, civic groups, Conservation Districts, and other community groups;

Provide information useful to state and federal agencies and planning consultants in advising landowners and others in the area;

Provide information useful to bankers and other lenders in evaluating financial needs and risks

for recreation developments;

Provide information for developing regional and state outdoor recreation plans;

Provide guidelines to more efficient and profitable use of certain natural resources and thereby improve the economic status of individual landowners and the community.

PROFILE OF THE STUDY AREA

Location and Size. Nine counties in southeastern Kansas are included in the SEE-KAN RC&D Project. (study area) The following map shows the project boundaries. They coincide with region 02 of regional delineations made for "701" HUD projects. (4) Counties included are Allen, Bourbon, Cherokee, Crawford, Labette, Montgomery, Neosho, Wilson, and Woodson.

The project area includes 2,947,925 acres. Acres by counties are: (12)

Neosho	329,919 acres	Woodson	289,906 acres
Wilson	330,677 acres	Crawford	321,391 acres
Labette	371,887 acres	Allen	303,128 acres
Bourbon	353,690 acres	Montgomery	345,245 acres
		Cherokee	302,082 acres

Cities over 5,000 population within the project area are Iola, Chanute, Parsons, Pittsburg, Independence, Coffeyville and Fort Scott. The RC&D project office is located at Chanute, a city of 10,341 population in Neosho county.

Physiography. The region consists of rolling and broken prairie with wooded stream valleys. There is a mixed pattern of soils, mostly on the marginal side and much of the area is plagued with drainage problems. The main streams and tributaries of the Neosho and the Verdigris rivers flow through the region from North to South. As a result of extensive strip mining that has occurred in the southeastern part

of the area, some very unique topography has been created. Thousands of tiny lakes have developed from seepage and run-off in the ravines between the high ridges formed in the mining process. These ridges were formed in somewhat symmetrical patterns throughout this mined area and resemble systems of miniature ranges. (4)

Major land resource areas in the project area are the Cherokee Prairies and a small portion of Ozark highlands and Bluestem Hills.

Study Area in Relation to State. The study area accounts for about 4.5% of Kansas land area with 5,268 miles of territory. Also this area comprises 8.5% of the state's population, 7.0% of its employment and 7.8% of its personal income. (12)

Southeast Kansas has steadily lost population from 1940 while the state as a whole has increased in population. It should be noted though, that 75 of Kansas' 105 counties had lost population between 1960 and 1970. Also, all but 23 of the state's 105 counties experienced net losses in rural population between 1960 and 1970. (16)

This data shows that Kansas is following the national pattern of urban center growth and rural decline and the study area is not alone in this plight.

This area has also seen an absolute loss of jobs, underemployment rise, and slowed growth of personal income. Professor Charles F. Floyd, in a study for the United States

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

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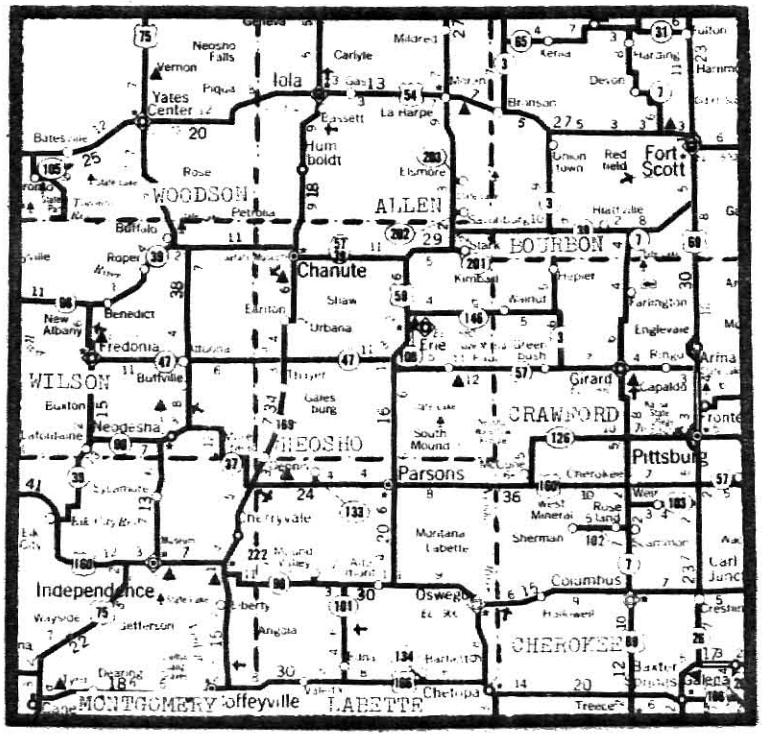
MAP OF STUDY AREA



Economic Development Administration, The Changing Structure of Employment and Income in the Ozarks Region established these indicators: (1)

> Between 1950 and 1967, Southeast Kansas lost 14,484 jobs or 20.1% of its 1950 employment level. (Nearly all this loss occurred from 1950 - 1959; the 1960 - 1967 period was relatively stable with only 335 jobs lost. But this relative stability came at a time when nation-wide employment was growing at a rate of 2.0% a year, and that of the rest of Kansas experienced a growth of nearly 1.0% per year rate.) During the 1950 - 1967 period, the rest of Kansas experienced an increase of 25.4% in the number of persons employed, or an absolute gain of 153,763 jobs.
>
> For the same seventeen year period, total personal income in the nine county area increased 92.1%, as compared with the gain of 146.1% experienced by the rest of the state. This difference occurred despite Southeast Kansas' high per capita income, a result Professor Floyd attributes to the combination of high average earnings per worker ($6,431 while the national average was $6,698), a declining population, and a low percentage of employment of the population (29% in 1967 while the national average was 38%). Table 3 compares these economic indicators for Southeast Kansas and Kansas as a whole.

Employment. During the late 19th and 20th centuries,

Southeast Kansas was a thriving economic region. The study area was a farming center and a producer of coal, lead, zinc, oil and gas. Railroads were also prominent in the Coffeyville and Parson area. (6)

These employment sectors, agricultural, mining and railroading accounted for more than a third of Southeast Kansas employment and helped generate a high per capita income. These three sectors, though are no longer as prominent. In fact, from 1950 - 1967 these three employment sectors experienced a loss of some 11,600 jobs in this period.

The cities, which are grouped mostly in the southern portion have complementary small industries in metal products, trading and urban services. The farmers produce cash grain crops, dairy products and some livestock. (4)

Soils. The geologic history and development of the area has played an important role in the formation and type of soils in the nine-county area. The thin outwash clay that veneers the Cherokee Shale in Cherokee, Crawford, and southeast Bourbon counties has a pronounced effect on the type of soil formed. Soils in the area are relatively shallow and often have a tight claypan. Because of this shallowness some parts of the area are affected by underlying bedrock. This is particularly true in areas underlain by limestone and thick massive sandstone. Ordinarily residual soils formed from weathering of limestone contain large amounts of clay and are reddish in color, whereas those formed from weathering

TABLE I

SOUTHEAST KANSAS
POPULATION DATA
1940 - 1970

County	1940	1950	1960	1970
Allen	19,874	18,187	16,369	15,043
Bourbon	20,944	19,153	16,090	15,215
Cherokee	29,817	25,144	22,279	21,549
Crawford	44,191	40,231	37,032	37,850
Labette	30,352	29,285	26,805	25,775
Montgomery	49,729	46,487	45,007	39,949
Neosho	22,210	20,348	19,455	18,812
Wilson	17,723	14,815	13,077	11,317
Woodson	8,014	6,711	5,423	4,789
Total	242,854	220,361	201,537	190,299
Total Kansas	1,801,028	1,905,299	2,178,611	2,246,578
% S.E. Kansas to Kansas	13.5	11.6	9.2	8.5

Source: U.S. Department of Commerce
Bureau of the Census

TABLE II

SOUTHEAST KANSAS
PERCENTAGE OF URBAN POPULATION
1940 - 1970

County	1940	1950	1960	1970
Allen	36.4	39.0	42.1	43.2
Bourbon	50.4	54.0	58.5	58.9
Cherokee	42.6	48.4	52.6	53.6
Crawford	45.5	48.1	50.4	60.1
Labette	47.1	50.4	52.0	50.5
Montgomery	69.8	73.7	75.7	70.3
Neosho	45.7	49.7	55.8	55.0
Wilson	38.9	47.1	52.2	56.3
Woodson	---	---	---	---
Total % Urban	48.1	52.2	55.8	56.5
Kansas % Urban	41.9	52.1	61.0	66.1

Source: U.S. Department of Commerce
Bureau of the Census

TABLE III

COMPARATIVE DATE
EMPLOYMENT AND INCOME
1940 - 1970

Category	1940	1950	1960	1970
Total Employment				
Kansas		678,030	774,638	817,310
S.E. Kansas	72,153	72,019	57,571	57,536
S.E. Kansas % of Kansas		10.6	7.4	7.0
Total Personal Income (000,000)				
Kansas	756	2,707	4,491	6,534
S.E. Kansas	95	265	382	510
S.E. Kansas % of Kansas	12.5	9.8	8.5	7.8
Per Capita Income				
Kansas	423	1,413	2,062	2,876
S.E. Kansas	394	1,194	1,897	2,576

Source: Charles F. Floyd, The Changing Structure of Employment and Income in the Ozarks Region
U.S. Department of Commerce
Bureau of the Census
Development Research Association

of sandy shales or sandstones are lighter in color, and may be very sandy especially where underlain by massive sandstone. Such soils are typical in the outcrop belt of the Douglas group in Woodson, western Wilson, and western Montgomery counties. (4)

All soils can be used for recreation of some kind. Some uses have no soil limitations. Other uses have moderate to severe limitations. In fact, some soils are actually dangerous if used for certain recreational activities, such as camping. For example, the use of a soil subject to flash flooding or landslides can lead to the loss of life and property.

Interpretations for specific recreational uses can best be made locally by those familiar with the soils and conditions in the area. Soils in an area are normally grouped into associations having similar characteristics according to their limitations for a specific recreational use. Before a specific site is developed for recreation, an inventory of the soils should be made and an interpretation of the qualities affecting recreational uses be developed from the inventory. This type of assistance is available from the local Soil Conservation Service office. (13)

Climate. Changes and extremes are dominant traits of this area's climate. Moisture laden air originating in the Gulf of Mexico, hot and dry air coming from the desert southwest, and cold arctic air masses cause frequent and abrupt

weather changes and brisk winds.

High intensity storms of short duration are common and often cause flash floods. The region has an average annual precipitation of 40 inches. Temperature ranges from an average low of 33.2 degrees to an average 79.9 degrees high. The mean yearly temperature is 57.8 degrees. (degrees in Fahrenheit) Precipitation ranges from 36 inches in the west to 40 in the east. High humidity and above seasonal temperatures in the summer are quite common. (17)

Fish and Wildlife Resources. Wildlife resources within the study area include numerous species occupying a variety of habitats. Soils and land use determine in large part the kinds and quality of habitat. This in turn reflects kinds and quantity of wildlife. (1) (See Table IV for Game Management Areas)

The predominant big game species is the white-tailed deer. Highest deer numbers are located along streams where timber provides food and cover.

Quail, mourning doves, rabbits and squirrels are the principal upland game species. The greater prairie chicken occupies suitable habitat in the area.

Migratory birds comprise a great variety of species, including ducks, geese, songbirds, hawks, and shore birds. Waterfowl migrate through the area along the Central Flyway.

Mink and muskrats are common fur-bearing animals within the area. Suitable habitat includes rivers, creeks,

lakes, ponds, and marsh areas, where food is readily available. Their numbers fluctuate widely from year to year due to natural causes. Beaver occupy suitable habitats along many streams and rivers. Badger, skunk, raccoon, and fox are other fur bearers in the area.

Coyote and fox are common predators. Bobcats are not uncommon.

A wide variety of game and non-game fish is common in lakes, ponds, and streams. Bass, bluegill, crappie, catfish, carp, suckers, bullheads, and various sunfish species are typical fish. A few private (as well as state) fish hatcheries and rearing ponds are located in the project area. The abundance of available water in many parts of the area enhances opportunities for further development of fish farming enterprises. (2)

Recreation Resources. Within the outdoor recreation category, the supply of water-oriented facilities is strong, with two major U.S. Army Corps of Engineers reservoirs, five state lakes of over 100 acres each, one county owned lake of over 100 acres, and three municipal lakes of more than 100 acres. There are also federal and state maintained campgrounds at each of the federal reservoirs and state and local park facilities at each of the major lakes. (3) (See Tables V and VI)

Also within this area is roughly 50,000 acres of land once devoted to strip mining in Bourbon, Cherokee, Crawford, and Labette counties, of which 12,000 acres is water area

INVENTORY OF GAME SPECIES

ALL SEE-KAN Counties

SPECIES	RELATIVE ABUNDANCE	MANAGEMENT POTENTIAL
Deer	Moderate	Good - whitetail predominate
Waterfowl	Moderate	Good - maintain and develop wetland
Mourning Dove	Moderate	Good - associated with agriculture
Bobwhite Quail	High	Good - with management
Ringnecked Pheasant	Low	Poor - outside pheasant range
Prairie Chicken	Moderate	Good - with management
Cottontail Rabbits	Low to Moderate	Good - brush management
Squirrels	Low to Moderate	Good - plant additional nut trees

created by seepage and surface run off. Some strip pit development has been undertaken through local sportsmen's associations and several individuals. (12)

Several major highways traverse the study area. They carry a considerable volume of traffic during the vacation season. Highways U. S. 54, 75, 160, 69, 166, 59, and 169, as well as Kansas 39, 96, 57, 47, and 146, make it easy to reach the area. (7)

There are 19 highway roadside parks in the area. They provide travelers a chance to rest, relax, and picnic. (7)

Within the study area there were approximately 77 private recreation enterprises in 1967, involving 14, 124 acres of land and water. (3)

Special Recreational Attractions. Another major category of tourist oriented facilities present in Southeast Kansas are special recreational attractions, including museums, historical sites and seasonal events. These attractions are listed below and briefly described: (1)

Museums:

Dalton Museum, Coffeyville - The Dalton Museum is the depository of artifacts relating to the final bank robberies of the Dalton Gang.

General Frederick Funston Home, Iola - The boyhood home of the hero of the Phillipine campaign of 1901.

ILLEGIBLE DOCUMENT

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TABLE IV

SOUTHEAST KANSAS GAME
MANAGEMENT AREAS

Facility	Total Area	Activities*
Crawford Co. Quail Farm	280	H
Crawford, Cherokee Co. St. Forestry	3,400	F, H, C
Neosho Co. Water Fowl Management Area	2,976	F, H, C
Big Hill Game Management Area	1,200	F, H
Strip Pits Wildlife Management Area	6,078	F, H
Toronto Game Management Area	4,366	F, H
Elk City Game Management Area	11, 680	F, H

*Code: F = Fishing
H = Hunting
C = Conservation

Source: Kansas Department of Economic Development

TABLE V

SOUTHEAST KANSAS
MAJOR WATER RESOURCES AND FACILITIES

RESOURCE OF FACILITY	OWNERSHIP	SURFACE ACREAGE
Reservoirs:		
Toronto Reservoir	Federal	2,800 (51 miles of shoreline)
Elk City Reservoir	Federal	3,550 (50 miles of shoreline)
Lakes:		
Bourbon Co. State Lake	State	103
Crawford Co. State Lake #2	State	150
Montgomery Co. State Lake	State	105
Wilson Co. State Lake	State	119
Woodson Co. State Lake	State	179
Neosho Co. Water Fowl Mgmt. Area	State	1,670
Elk Creek Lake	County	107
Lake Fort Scott	Municipal	352
Lake Parsons	Municipal	1,000
Yates Center Lake	Municipal	120
Riverways:		
Neosho River	--	--
Shoal Creek	--	--
Verdigris River	--	--

Sources: U. S. Army Corps of Engineers
Kansas State Park & Resources Authority
Kansas Department of Economic Development

TABLE VI

SOUTHEAST KANSAS MAJOR LAND DEVELOPMENT SUPPORT WATER RESOURCES

Resource or Facility	Ownership	Acreage*	Activities**	Water Resource Supported
Toronto Reservoir	Federal	5,941	S,PT,C,CT,B,F	Toronto Res.
Toronto State Park	Federal***	4,366	S,PT,C,CT,B,F	Toronto Res.
Elk City Reservoir	Federal	16,650	S,PT,C,CT,B,F	Elk City, Res.
Elk City State Park	Federal***		S,PT,C,CT,B,F	Elk City, Res.
Bourbon Co. State Lake	State	270	PT,B,F	State Lake
Crawford Co. State Lake #2	State	310	PT,F,S,C	State Lake
Montgomery Co. State Lake	State	303	S,PT,B,F	State Lake
Wilson Co. State Lake	State	172	S,PT,B,F	State Lake
Woodson Co. State Lake	State	266	S,PT,F	State Lake
Neosho Co. State Lake	State	124	PT,B,F	State Lake
Crawford Co. State Lake #1	State	358	PT,F	State Lake
Elm Creek Lake	County	254	S,PT,B,H,F	County Lake
Lake Fort Scott	Municipal	498	S,PT,B,F	Municipal Lake
Lake Parsons	Municipal	1,200	PT,C,CT,B,F,S	Municipal Lake
Yates Center Lake	Municipal	200	S,PT,C,CT,G,B,F	Municipal Lake
Riverside Park (Oswego)	Municipal	122	S,PT,G,F	Neosho
Riverside Park (Independence)	Municipal	114	P,S,PT,B	Verdigris River

* Excludes lake acreage

** Code: P = Playfields, S = Swimming, PT = Picnic Tables, C = Campsite, CT = Camping trailer sites, H = Hunting, F = Fishing, B = Boat Access, G = Golf

*** Administered by State Park and Resources Authority

Safari Museum, Chanute - An outstanding collection of artifacts and photographs of the South Seas and African expeditions of Martin and Osa Johnson, internationally known adventurers, photographers, and authors. Both Johnsons grew up in Southeast Kansas.

Bender Museum, Cherryvale - Artifacts belonging to the bender family, outlaws who ambushed and killed numerous travelers in the late nineteenth century.

Historic Sites:

Fort Scott - One of the earliest forts established in Kansas, Fort Scott consists of eleven buildings, some of which constitute the original military structures which made up the fort.

A museum containing Civil War period artifacts is present, as well as a reconstruction of Fort Blair, a Civil War fortification. The Fort area is part of a urban renewal project and is to be fully restored, over a period of years, around its central parade ground.

Fort Scott National Cemetery, Fort Scott - This military cemetery was established in 1862, and is one of the nation's oldest.

Norman No. 1 Oil Well, Neodasha - The Norman No. 1 Well, the first commercially successful oil well west of the Mississippi River, was drilled in 1892. A reconstruction of the drilling rig and a scaled, working model of the rig are among the oil equipment

present.

Baxter Springs National Cemetery, Baxter Springs- This military cemetery was established in 1869, to commemorate the Baxter Springs Massacre, in which nearly 100 Union soldiers were killed by Quantrill's Raiders.

PROCEDURE

INTRODUCTORY METHODS AND MATERIALS

The procedure was basically one of group judgment. Its accuracy and reliability depended heavily on the knowledge of the natural resources of the area being appraised that is possessed by the appraising group. They were provided a substantial body of factual information to use along with their experience. This information was in the form of inventories of important recreational resources and statistics on people, highways, climate, and land use. The use of data on people and highways that relate to recreation potentials carries this analysis somewhat beyond the appraisal of natural resources alone. This was done to make the appraisals more realistic and useful.

Selection of the small group to make the appraisal of potentials in a county is very important. It may consist of four or more representatives of resource agencies who are intimately familiar with local resources. The group may be selected from the Extension Service, Soil Conservation Service, State and Federal forestry agencies, county or State highway agencies, State and Federal wildlife agencies, or others. In addition to the basic group, consultations may be needed with representatives of the local historical society, Farmers Home Administration, soil and water conservation district governing body, Agricultural Stabilization and Conservation county committee, and others from the first-named resource agencies that do not participate throughout. (11)

The schedule followed for making the appraisal of recreation potentials called for the gathering of data and making the required inventories in advance of the appraisal itself. The first requirement was to select the major likely sources of urban vacationing clientele - the S.D.U.C.'s (see definitions following). With these locations selected, the statistics from the Census of Populations, Census of Agriculture, and the climate records can be compiled. Certain land-use data and the information on local highways can then be obtained locally to complete the statistics.

The inventories of Natural, Scenic, and Historic Areas, Existing Waters, and Potential Impoundment Sites required local resource specialists' help. The various parts were assigned to individuals (such as the historic sites), or subgroups (such as the natural and scenic areas). The impoundment site inventory for each county was completed by the Soil Conservation Service. An inventory of wildlife species and habitat was also made.

With these statistics and inventories completed, the appraising group was ready to "brain-storm" the potentials for each important kind of recreation development. Some of the results were derived almost automatically by using the gathered facts. Others were arrived at almost wholly through group judgment - conclusions which were reflected in numerical scores (interpreted by adjectives) and backed up by narrative explanations.

DEFINITIONS OF TERMS

Local Area of Influence (L.A.I.) - the county under consideration together with the surrounding, adjacent counties. The purpose of the L.A.I. is to define the area where day-use recreation is important.

Selected Distant Urban Centers (S.D.U.C.) - the urban centers (Standard Metropolitan Statistical Areas, Urbanized Areas, and Cities, as used by the Census Bureau) outward from the Local Area of Influence of the county under consideration up to a day's travel distance (up to 300 or more miles) that are selected as the locations from which people are most likely to come.

Statistice Work Sheet (SWS) - the form on which data was recorded and from which computations were made for use in analyzing certain key elements that apply to recreation potentials. These data included census figures for populations of people, their age groups, occupations and income, highways data, land-use information, and data on climate.

Key Element - any condition or situation that exerts a major influence on the potential for developing any important kind of recreation area or enterprise. Those that widely and commonly apply are: Climate; Scenery and Scenic Areas; Natural Areas; Historic Areas; Soils; Water-Existing Water Areas and impoundment Sites; Wildlife- Habitat and Populations; Populations of People- Size and Distribution, Age and Occupations, and Income Levels; Proximity and Access;

Rural Ownership and Land-use Patterns.

Limiting Factor - a key element that exerts such a negative influence on the potential for developing a kind of recreation area or enterprise that it imposes problems that are difficult or impossible to overcome.

In the appraisal process, three terms are used in arriving at a numerical evaluation. They are:

Multiplier - a number that represents the weighted importance of a particular key element in relation to the other key elements. Key elements that were judged to be significantly more important than others were assigned a weight number of two or more. This number is multiplied by the rating number to give the score for that key element for that kind of recreation development.

Rating - a number from zero to ten applied to a particular key element to indicate the degree of excellence represented by the key element for a particular kind of recreation development. Zero means that the key element contributes nothing and ten that it is ideal. The rating number is multiplied by the multiplier or weight number to give the score for the key element.

Score - a number which is the result of multiplying the multiplier (weight number) by the rating for a particular key element in appraising potential for a particular kind of recreation development. The sum of

the scores of all the key elements applying to a particular kind of recreation development give the numerical score for that kind of development.

Recreation Area - any prescribed expanse of outdoor natural resources suitable for recreational use or used for that purpose, either developed or undeveloped.

Recreation Development - any kind of an outdoor area now used for recreation, or planned to be established, or expanded and improved for recreational use.

Recreation Enterprise - a recreation development operated by an entrrepreneur for profit.

MAKING THE APPRAISALS OF POTENTIALS FOR OUTDOOR RECREATION DEVELOPMENTS

A standardization of procedure is needed in arriving at the appraisals. A standardized process is outlined here, utilizing a method of applying key elements to the analysis. Sometimes one or more of these key elements may be a limiting factor for the kind of development under consideration.

The question of limiting factors is given first consideration. If any key element is limiting, it may be so significant as to make any further consideration of other key elements useless. An element is a limiting factor when it imposes difficult conditions on the use of an area for a given kind of recreation that are hard or impossible to overcome. Thus, a warm climate would make winter sports impossible; a long, cold and snowy winter climate might make shooting preserves unfeasible. Thus, climate would be a limiting factor in these cases.

Where a limiting factor rendered a type of recreation area or enterprise wholly impracticable, the appraisal of potential was zero, and there was no need for further analysis. Where the factor was only partially limiting, or could be overcome by specified action, the key element involved was given a rating of from one to ten, depending upon the severity, with one being a very severe limitation and ten no limitation. In this case the appraisal was made largely in terms of the effect of the limiting factor regardless of the scores of other key elements.

For each element applicable to a kind of recreation area or enterprise, a number was given representing the weight assigned to this element in relation to others. It was used as a multiplier in appraising the element. This multiplier number reflects the weighted importance of the particular element in relation to the other elements used in appraising the particular kind of recreation development. Standard multipliers were used, adapted to fit local conditions. Appraisal of each element was based on group judgment, supported by statistics and information pertinent to the problem.

Appraisal of each key element that importantly affected the potential for a given kind of development was expressed by a rating figure from zero to ten where zero-two represents degress of "very poor", three-four "poor", five-six "fair", seven-eight "good", nine-ten "excellent". The weight number multiplied by its rating number gave the score. The sum of the scores for the applicable elements gave the total score for potential of the kind of area or enterprise.

Total score possible depends upon the total of element weights. For the "Vacation Cabins, Cottages, and Homesites" enterprise (see Appendix #1) this was 15 and the maximum total score was therefore 15 x 10 or 150. In making a summary appraisal of the potential for such a type of enterprise, its score was thus related to 150. On a "high", "medium", and "low", basis, dividing the whole into thirds, any score above 100 would rate "high" from 51-100 "medium", and from

50 or below would rate "low". (11)

Description of Key Elements. Ten key elements or factors with several subdivisions were used to evaluate potentials for outdoor recreation in the study area. These were applied in various combinations to each kind of recreation development as seen in Appendix #1. A judgment was then made of the total effect of these factors on recreation developments, and a rating of high, medium, or low was assigned by the appraising team. Each of these key elements is discussed below as they were used in making the appraisals.

A. Climate - Climate, as it affects various recreation activities and enterprises, can either be a contributing element or a limiting factor.

Seasonal temperatures, precipitation patterns, and sunshine were considered. Climate was appraised, in part, in relation to the climate where the recreationalists live. (16)

B. Scenery and Scenic Areas - Attractiveness of the general surroundings affects the potential for many kinds of outdoor recreation. The natural qualities of the environment - topography, vegetation, wildlife, geologic formations - are the major elements. Man-made improvements or destruction-water impoundments, landscaping, open-pit mining, gully erosion - may be important. For some purposes scenery was appraised in relation to that of the areas where the majority

of the recreationists live.

An inventory of scenic locations was made for the area. Each significant site of superior, distinctive, unusual or unique scenery that was not adequately developed for public use was named, described, and classified.

C. Natural Areas - Areas of distinctive natural environment that have not been affected by urbanization, farming, mining, lumbering, or other human changes are important for several recreation activities. Some of the natural areas have sufficient aesthetic and cultural interest to attract people to enjoy the areas or to study them.

An inventory of undeveloped natural areas was made. This included distinctive areas of natural environment that represented associations of soil, rocks, water, vegetation, and animal life essentially unaffected by man's changes.

D. Historic Areas - Sites where important events of history took place or historic structures (buildings, battlefields, burial grounds, etc.) offer opportunities for either public or private recreation areas. An inventory of local historic areas is given in the appendices.

In some areas distinctive historical sites are factors in the potential for other recreation area developments, such as vacation cabins, cottages, and

homes, camping grounds, and vacation farms.

E. Soils - Soils are of primary importance in evaluating the recreational potential of an area. The kind of soil dictates to a large degree the type and location of recreational facilities. Some soils are not desirable sites for campsites, play areas, cabin sites, picnic areas, nature trails, etc. For example, the clay soils present problems for using septic tanks, some of the loams are poorly suited for building lakes and ponds, while steep slopes and some surface textures will limit other facilities.

F. Water - An inventory of existing water areas in the study area was made. Because of the special importance of water areas to outdoor recreation, all water areas - streams, lakes, and ponds - were included whether presently developed for recreation, partly developed or undeveloped.

Undeveloped sites having characteristics feasible for impounding water represent an important potential for several lines of recreational developments. A partial listing of these sites based on a study of topographic maps is given in the appendices. General conditions of soils, geology, watershed hydrology, and presence of serious pollutants were considered in identifying these potential impoundment sites.

G. Fish and Wildlife - Food, cover, and water are

essential elements of wildlife habitat which must be available to sustain populations of wildlife. The quality and quantity of this habitat is a result of the type and intensity of land use which is in turn a reflection of soil conditions. Open land wildlife (rabbits, songbirds, quail, etc.); woodland wildlife (deer, turkey, squirrel, etc.); and wetland wildlife (duck, geese, muskrats, etc.) require different kinds of habitat. The suitability and quality of lakes, ponds, and streams for fish depend on such factors as water depth, temperature, degree of pollution, and steadiness of flow.

While this element has its prime significance in relation to hunting areas, fishing waters, and natural areas, it also has importance for vacation cabins, cottages, and homesites, camping grounds (vacation site) and vacation farms.

Population of various species of wildlife attract and are used by recreationists in different ways. The game species have particular importance for hunting and fishing.

H. Populations of People - Populations of potential users are important to all kinds of recreation development potentials. Population figures for the area, adjacent counties, and selected distant urban centers within 300 miles were considered. The populations of urban centers were used in relation to their distances

from the study area, and the kinds of recreation developments people living in these urban centers might use. Day-use activities are largely limited to the Local Area, week-end trip activities to the closer Selected Distant Urban Centers.

Certain characteristics of the population influence the potential for development of some kinds of outdoor recreation areas. These include age, sex, occupation, and education. Among these, age and occupation are key elements and were included in the appraisal for several kinds of recreation areas. (See appendices)

The economic well-being of the recreating public has a major influence on recreation potential. Family income is of such significance that it was given separate analysis as a key element. The median family income (15) was used as an index of how much money will be spent for recreation.

I. Proximity and Access - The importance of the distance of the recreation area from its source of clientele varies by degree depending upon the kind of development. Proximity for purposes of outdoor recreation is almost wholly measured by means of the public road system. For some kinds of recreation areas, the additional element of access is involved.

J. Rural Ownership and Land Use Patterns - The ownership and land use patterns of rural areas have

particular bearing on the potentials for developing vacation farms and hunting areas. The potential for vacation farms depends in part upon the existence of farms with substantial farmsteads or living quarters and operations that are interesting to urban people. The potential for hunting areas is affected by the size of units of rural land. Access is usually more easily obtained on private farms larger than 180 acres and on large corporate holdings and publicly owned lands. (15)

The key statistics relative to vacation farms potential used here are:

- Number of dairy, livestock, and general farming farms.

The key statistics used which affect hunting areas potential are:

- Number of farms over 180 acres in size
- Acreage of larger corporate ownerships
- Acreage of public land open to hunting.

THE APPRAISAL PROCEDURE IN USE

Twelve standard kinds of outdoor recreation areas and enterprises (developments) were used in making the study. They are found listed in appendix #1 in terms of the key elements used in the appraisal.

An asterisk (*) was used to denote those key elements that may, under certain circumstances, be limiting factors for the type of development involved. It was found that the asterisked elements needed to be considered first in the appraisal process. Where such an element proved to be so limiting in the county, or in specific parts of the county, that recreation development would be impossible or impractical, further consideration of the type of development was abandoned for the whole or specific parts of the county.

The chart of key elements and multipliers for each type of development was set up so that it was used as a score-card. (see appendix #1) Columns for the assigned ratings and scores for each key element were provided and a place for the total score (sum of the element scores).

As an example, the procedure used will be followed in appraising the potential for development of Vacation Cabins, Cottages, and Homesites in a selected Kansas county. (Wilson Co.) The same procedure was followed in appraising the remaining 11 kinds of recreation developments in all nine counties. The county appraisals were then combined to arrive at an overall appraisal of the study area. (10) (see summary sheet)

Vacation Cabins, Cottages, and Homesites - the key elements of appraisal, the multipliers, and the ratings given were:

Key Elements	Multipliers
A. Climate*	2 x 5 = 10
B. Scenery*	2 x 6 = 12
C. Natural Areas	1 x 5 = 5
E. Soils*	1 x 5 = 5
F. Water	
Existing water areas	1 x 6 = 6
Impoundment sites	3 x 7 = 21
H. Populations of People	
Size and distribution	1 x 10 = 10
Income levels	2 x 7 = 14
I. Proximity and Access	
Proximity	1 x 4 = 4
Access roads*	1 x 10 = 10
Total Key Element Multipliers (Weights)	15 Score 97
Total Possible Score	
High Potential	101-150 score
Medium Potential	51-100 score
Low Potential	0- 50 score

Vacation Cabins, Cottages, and Homesites represent

vacation living space in an area desirable for various recreation activities. This includes areas with living quarters developed for rental to clients, areas where vacation homes are built for sale to clients, and organized group "camps" that use permanent buildings. Rural vacation living is the one activity always supplied. Various other recreation activities may be available on the area as a part of the service provided.

This type of development is almost exclusively one for private enterprise. It provides employment in construction of living quarters, operation of group camps and cluster developments, and operation of recreation facilities. Local income is enhanced by increased property taxes and sales of supplies and services as well as through new jobs.

The key elements that were appraised in regards to this type of development are discussed below.

The climate element as applied here relates to its desirability for vacationing purposes. It was judged in relation to the climate in surrounding areas, especially in the S.D.U.C.'s, where the potential clientele are expected to come from. Favorable aspects of climate for vacationing are: An abundance of sunshine; no protracted rainy periods; cool summer nights; warm winter temperatures; low humidity. A zone up to a day's drive outside the county was judged as the area from which most vacationing clients would come. The climate in the county must be significantly better for vacationing than the climate in the urban centers of the outer

zone. Guidance in judging the climate element was obtained by comparing Weather Bureau data for areas of the county thought to be suitable for Vacation Cabins, Cottages, etc. with that for the urban centers likely to supply the clientele. A rating of five represented an equality of the data, and a favorable difference of one in the monthly averages (percent, inches, or degrees) added a point to the rating, an unfavorable difference of two, for example, ended in a subtraction of two points, etc. If the climate in the county would be definitely unfavorable, it would be a limiting factor. (17)

In our example county we had a rating of 5 for climate. This rating multiplied by the weight number 2 gave us a score of 10 for this element.

Scenery was examined as a relative matter, much as with climate. The Inventory of Scenic Areas furnished a guide to judging this element for Vacation Cabins, etc. Prevalence of atrractions such as mountain views, valley vistas, and the like in the inventory reflected a favorable rating. This rating was also influenced by a comparison of the scenic virtues of the county with other counties and areas that might compete for the same business. The example county had a rating of six for a score of twelve.

Interesting natural areas are part of the drawing power of a locality for vacationing customers. All significant natural areas were identified in the inventory and appraised as to their uniqueness, attractiveness, and

scientific, aesthetic and cultural values. Natural areas are part of the "Scenery" but are specific parts that deserve special consideration as attractions for vacation areas. A judgment was made as to the attraction of the natural areas in the county and, to the extent possible, in comparison with other areas that might attract clientele from the same urban areas.

The example county rated this element as 5. This gave an element score of 5.

Widespread soils characteristics that are not covered under "Scenery" or "Natural Areas" and that affect the potential for vacation living places are generally negative. Large areas of soils having severe limitations that affect water supply, waste disposal or building construction, or that are excessively muddy and slow to dry out, or are very dusty were identified. (12) These affect the potential for development and could be limiting factors.

The example county rated the soils as 5 for this element. This gave an element score of 5 as the multiplier was one.

The inventory of existing water areas reflected a phase of the potential for developing vacation living accomodations. This was judged by the extent of undeveloped shorelines and vista points having desirable recreation attributes.

The example county received a rating of 6 for this element. The total score was also six.

Water Impoundment Sites that are not yet dammed or

committed to an alternative use constitute an important key element in evaluating Vacations Cabins, etc. potential in many areas. Impoundment sites that exceeded five acres were identified in the inventory and classified as to suitability for various recreation uses. Sites that were relatively deep, and with a prospect of stable water levels were considered best suited for this type of development. Where the adjacent terrain had many vistas and overlooks above the sites the rating was improved. The rating was based on a summary judgment as to the prevalence of good sites.

The example county received a rating of 7 for this element. With a multiplier of 3 this gave a score value of 21 for this element.

The size and distribution of the population has a significant influence on the potential for Vacation Cabins, etc. enterprises. Current statistics are needed plus projections for 1990. Since the rental or sale of vacation cabins, cottages, and homes largely involves a clientele that is on vacation, it mainly concerns people who live at some distance from the vacation areas in the county. However, more and more people are acquiring second "vacation" homes close to their homes where choice water areas and other resources are nearby. Hence, some of the potential for vacation homes may be in the L.A.I.

A zone extending a day's drive outward around the county was considered as encompassing the majority of potential users. These are primarily urban people who seek a

change from their city life when on vacation. The total number of people projected to be in the S.D.U.C.'s in 1990 reflects this market potential. (16)

With a large number of people projected to be in the driving zone by 1990 (over 4 million), the example county received a maximum rating of 10. This gave a score of ten.

Income level of the population is generally important in determining recreation development potential. The potential clients are almost wholly from those whose family income is above the general average. Income information of the clientele was judged to be most important in this case, (the S.D.U.C.'s) rather than from the local county. Rating of the median family income for the S.D.U.C.'s followed a scale of one for $3,000 and one point added for each $500 more. Thus a $5,500 median income rated six, $6,500 rated eight and so on.

The example county rated the income element 7. This multiplied by 2 gives a score of 14.

Proximity to cities of the vacation areas in the county as a key element is partly covered in the population size and distribution element already discussed. The population was figured for the distance zone most closely related to use of vacation sites up to a day's auto travel out from the county. However, the location of urban centers, expecially S.D.U.C.'s within that zone at varying distances away from the county presented an additional consideration. If an urban center is 300 or more miles away, it is getting to the

outer edge of the major vacation clientele area. Urban centers closer are more favorably located. This has particular reference to week-end use of rental or owned properties for which the customers will rarely travel over 150 miles. Thus, a pattern of urban locations in the inner 50 to 150 portion of the up-to-300-mile band will give a relatively high rating whereas one of the urban centers located in the outer portion gets a lower rating. It was determined that the number of S.D.U.C.'s in the 50-150 mile zone, gave a suitable rating for this element.

A rating of 4 was given Proximity to Cities in the example county. The score for this element was also 4.

Access Roads as related to the potential for vacation living areas have reference to the accessibility of the desirable areas to the highway system. The more adequate the access roads, the higher the rating will be. In undeveloped country where there are few roads and many isolated areas, the lack of access may be a limiting factor. The scoring of access was obtained by measuring the miles of all-weather roads traversing the "vacation country", multiplying it by two and dividing the result by the square miles of "vacation country". The ratio multiplied by 100 gives the percentage of the area that is accessible. Scoring was made on the basis of a point for each ten percent. (7)

Access received a maximum rating of 10 for the example county. The score of the access element was 10.

Totaling the scores for each element under Vacation

Cabins, Cottages and Homesites, gives a result of 97. This places this type of recreation development in the category of medium potential for development in the example county. (See the appendices - Wilson County)

In appraising the remaining 11 types of recreation developments, this same procedure of group judgments and key elements was followed. Additional information on determining rating values can be found in Guide to Making Appraisals of Potentials for Outdoor Recreation Developments. (11) Each county appraising group had the same basic data for their respective counties. Summing and averaging the scores from all nine counties enabled the author to draw up a summary of appraisals for outdoor recreation for the study area. (See Table 7)

TABLE VII

SUMMARY OF APPRAISALS FOR OUTDOOR RECREATION
SEE-KAN RESOURCE CONSERVATION AND DEVELOPMENT AREA KANSAS

Kind of Recreation Development	Total Possible Score	Average Group Score	Adjective Potential Rating
1. Vacation Cabins, Cottages & Homesites	150	96	Medium
2. Camping			
Vacation Site	120	70	Medium
Pack Trip	100	24	Low
Transient	80	43	Medium
3. Picnic & Sports Areas			
Game, play & target areas	120	58	Medium
Bicycling & Motorcycling	110	27	Low
Picnicking	130	70	Medium
4. Fishing Waters			
Warm waters	100	68	Medium
Cold waters	100	- not rated -	

TABLE VII (continued)

Kind of Recreation Development	Total Possible Score	Average Group Score	Adjective Potential Rating
5. Golf Courses			
Standard & Par-3	120	53	Medium
Miniature & Driving Ranges	100	59	Medium
6. Hunting Areas			
Small game	140	112	High
Big game	120	80	Medium
Waterfowl	130	85	Medium
7. Natural, Scenic & Historic Areas			
Natural	150	66	Medium
Scenic	150	73	Medium
Historic	100	57	Medium
8. Riding Stables	120	37	Low
9. Shooting Preserves	120	52	Low

TABLE VII (continued)

Kind of Recreation Development	Total Possible Score	Average Group Score	Adjective Potential Rating
10. Vacation Farms & Ranches			
Farms	140	70	Medium
Ranches	130	40	Low
11. Water Sports Areas	120	63	Medium
12. Winter Sports Areas	- not rated -		

RESULTS, DISCUSSION, AND CONCLUSIONS

The twelve types of outdoor recreational developments studied and analyzed for the study area are discussed in the following portion of the paper.

I. Vacation Cabins, Cottages, and Homesites

Vacation cabins, cottages, and homesites represent rural living space close to various recreation activities. This includes living quarters developed for rent to clients, vacation homes built for sale and organized group "camps" that use permanent buildings. Various recreation activities may be available on the premises. Still other activities may be available in the vicinity on other developed areas, public and private.

Some of the developments may combine individual ownership of vacation homes with organized community services. Upkeep and maintenance of the properties, recreation activities, sources of supplies and personal services such as laundry may be provided.

This type of development has a medium potential for private enterprise in the area. The construction of larger impoundments would enhance the potential in this category. (8) This type of development provides employment in construction of living quarters, operation of group camps and cluster developments, and operation of recreation facilities. Local income would be enhanced by increased property taxes and sales of supplies and services as well as through new jobs.

The appraisal for each county is rated by key

elements and inserted in the respective county's appendix.

II. Camping Grounds

Three different types of camping areas and enterprises were considered in the study area, since there is considerable variation in the key elements that apply. These are: vacation site camping grounds - where the camper frequently stays several days to several weeks; canoe trip camping - for which an extensive system of rivers and streams is needed; transient camping grounds - where the camper stops overnight while traveling to a vacation site. Sometimes a succession of stops at transient sites make up a camping vacation.

Vacation site camping grounds and transient camping grounds both received a rating of medium potential. Pack trip camping was rated as having a low potential.

The vacation site camping ground is an area organized to accommodate families and others vacationing with tent, camper, or trailer facilities. While an enjoyable environment of attractive climate and scenery is the main idea, supplementary recreation activities are usually desired - either on the premises or nearby. Most commonly associated with camping are swimming, fishing, boating, and nature study. A substantial share of the potential for private campgrounds probably lies near the many rivers and streams and the existing and potential lakes.

Transient camping grounds serve quite a different purpose than do vacation site campgrounds. The most important

key element for transient camping grounds is the tourist route. The transient potentials are either adjacent to such highways or a mile or less away. The emphasis is on convenience and facilities.

Pack trip camping is exclusively associated with exceptional natural areas, often of the wilderness type.

III. Picnic and Field Sports Areas

Picnic and field sports are areas developed for concentrated play activities, other than golf and water sports. Some areas combine field and water sports, but generally an area is developed around one or the other group. Competitive games using ball diamonds, courts, tracks, and the like are one type of development. Others include the shooting sports with ranges for rifle, shotgun, pistol, and archery. Many areas have special facilities for small children.

Of the three activities evaluated, game play and target areas, and picnicking received a medium potential rating. Bicycling received a low rating.

IV. Fishing Waters

Fishing waters as recreational areas include any type of water area with significant opportunities for catching fish by sport fishing methods. The fishing waters enterprise may include ownership, management, and control of the waters, plus services, or it may be limited to furnishing access and services on public waters.

The potential for fishing waters takes into

consideration the additional fishing opportunities that could be provided by improved services, access, or fish management. Also included are realistic potentials of possible impoundments and of renovating waters now contaminated by weeds or trash fish.

Warm water fishing received a medium potential rating. Cold water fishing was not rated due to habitat requirements.

V. Golf Courses

Golfing activities are in two categories. One category includes standard golfing with courses of nine or eighteen holes and the newly popular par-3 type of golfing. The second category would include driving ranges and miniature golf. Courses for standard and par-3 golfing have substantial resource requirements. These requirements are flexible, however, and can be met in most areas. On the other hand, driving ranges and miniature golfing enterprises are primarily user-oriented and have minimal resource demands.

Age and occupation, and size and distribution of the population within the Local Area of Influence and the prospects for increase are the major considerations in appraising the potential for golf courses.

The potential for standard and par-3 golfing rated medium and miniature and driving ranges received a medium rating also.

VI. Hunting Areas

Although most rural lands have value for some kinds of wildlife, the potentials for quality hunting on private and public lands good enough to significantly affect the recreation program and the local economy are much more limited. Quality hunting refers to hunting that provides a substantial quantity of game with sufficient land available for hunting.

The three kinds of hunting areas for the purpose of this evaluation are small game, big game, and waterfowl. Small game includes pheasants, quail, doves, squirrels, and rabbits. Big game consists of the white-tailed deer. Waterfowl includes ducks and geese.

Recreation hunting areas are areas of land and water, public or private, where wild game is produced by habitat manipulation, through farming, forestry or game management methods.

Hunting is regulated by state laws for sedentary species and by federal and state laws for migratory species such as waterfowl, doves and shorebirds. The potential for private development of hunting areas is influenced by these regulatory measures as well as by the key elements considered.

In the study area, small game hunting areas received a high rating, big game hunting areas and waterfowl hunting areas each received a medium rating.

VII. Natural, Scenic, and Historic Areas

Natural areas and scenic areas have much in common.

Most natural areas of significance have attractive scenery and many scenic areas have natural areas included. Nevertheless, the two concepts are quite different. Natural areas are valued for their aesthetic, scenic, wild and undisturbed character. Scenic areas are valued for their beauty.

Historic areas are sites of past events that are of sufficient interest to attract people seeking to learn and observe the background of their heritage. Due to the distinctive natural, scenic, and historic areas in much of the area, these categories received a medium rating.

VIII. Riding Stables

Horseback riding may be an activity in recreation enterprises of a broader sort - such as a vacation farm or a group camp - or it may be the sole activity of an enterprise. The enterprise may include the resource area on which the riding is done or it may merely provide the services that enable riders to make use of a public area with bridle trails. Whether or not the riding area is on public ground, the activity is closely resource-oriented, particularly to natural areas. Further, the enterprise is almost always privately operated even when located on public land. We are concerned here with enterprises on which the primary activity is horseback riding.

Potential for development of riding stable enterprises is low in the study area as a whole because of the lack of large urban centers.

IX. Shooting Preserves

Shooting of stocked, domestic game under conditions simulating natural hunting has been done in parts of the United States for several decades. Some of these shooting "preserves" have been club arrangements and others commercial. The interest in this type of recreation has grown rapidly since World War II and its potential lies still in the future. Almost all game used on shooting preserves is of four species - ring necked pheasant, bobwhite quail, chukar partridge, and mallard duck. In some areas wild turkey is also used.

These operations are a complicated and demanding kind of enterprise with a combination of two or three activities. These may be farming the land to grow crops and control vegetation; raising game (or purchasing it from a game farm); raising, training, and handling bird dogs.

In the study area it was determined that there is a low potential for shooting preserves.

X. Vacation Farms and Ranches

Vacation farms and ranches usually house, feed, and offer recreation activities on a vacation basis for urban people. Both are heavily resource-oriented and place quite a lot of emphasis on home-cooked meals, country living, and a variety of activities. It is strictly rural in its "atmosphere". Other recreation activities may be offered such as fishing, horseback riding, and games.

Vacation farms was judged as having medium potential in the study area. Vacation ranches received a rating of low potential.

XI. Water Sports Areas

Areas of land and water devoted primarily to swimming, sun bathing, boating, water skiing, and skin diving are among the most popular for outdoor recreation today. It should be noted that enterprises using land and water primarily for fishing are covered under "Fishing Waters", but many of water sports areas may include fishing services. Likewise, picnicking, camping, and field sports facilities are frequently associated with water sports areas. The distinction is whether or not picnicking, camping, etc., are incidental to water activities or water activities incidental to the others. Here the water activities are considered to be primary.

The potential for water sports areas received a medium rating.

XII. Winter Sports Areas

A season of 120 days is needed for economical operation of many of the winter sports enterprises. The season is measured from the date of the first 16^{o} temperature in the fall to the date of the last one in the spring.

Because of this limiting climatic factor, the winter sports category of recreation was considered to have no potential in the study area.

Conclusions. The appraisal of potentials was an examination of the opportunities for further development of resources for recreation uses. The information on people, highways, climate, and land use was needed to make the appraisal more realistic and useful.

It is the author's opinion that this study falls into the second step of a three step process in recreation analysis. In this second step, (the first being a comprehensive inventory of existing developments, both public and private) the potential is analyzed without respect to whether or not newly developed resources are currently needed. The question of need should be covered in the third step of the process-estimate of recreation demand. So when completed, the appraisal of potentials can be related to the present and future market demand for recreation or needs.

With this in mind the author feels that this study should be correlated with the Outdoor Recreation Plan for Kansas or similar report. (3) This would give an individual an excellent idea of what type of recreation development would be most feasible.

Because the procedure was basically one of group judgment, its accuracy and reliability depended heavily on the knowledge of the natural resources of the appraised area, that is possessed by the appraising group. The procedure also relies on accurate data.

The procedure used is best described as a practical one. It can be adapted to any size geographical area, as

long as statistical data is available for that area.

The results show that in the nine Southeast Kansas counties, the highest potential for development is in the small game hunting areas. The potential for leasing hunting rights or development of an area specifically for hunting is one to be considered for the area.

A rating of medium potential was prevalent throughout the appraisal. This occurred because the group felt that they should temper their judgments with the fact that the Ozark Hills are within a day's drive of the nine county area. This direct competition with such an area is a problem for recreation developments in Southeast Kansas.

This study should compliment other recreation plans for this same geographical area. It should serve as a useful tool for individuals selecting an area to develop.

LITERATURE CITED

1. Development Research Associates, 1973
Southeast Kansas - Recreation and Tourism Implementation Program.

2. Kansas Department of Economic Development - Planning Division, 1968
Outdoor Recreation for Kansas. A report for the Kansas Joint Council on recreation, Report No. 17-A.

3. Kansas Department of Economic Development - Planning Division, 1974
Outdoor Recreation Plan for Kansas. A revision of the state outdoor recreation plan, Report No. 50.

4. Kansas Department of Economic Development - Planning Division, 1967
Southeast Kansas - Region 02 - Fact Book. Report No. 10.

5. Kansas Department of Economic Development - Planning Division, 1967
Southeast Kansas - Region of Progress - Development Plan. Basic goals, Report No. 10-A

6. Kansas Joint Council on Recreation, 1965
A Comprehensive Outdoor Recreation Plan for Kansas. A report prepared for the Department of Interior and Bureau of Recreation.

7. Kansas State Department of Highways, 1972
A Highway Map of Kansas.

8. Kansas State University, 1969
Outdoor Recreation and Tourism in Kansas. A survey of participation and demand, Report No. 6, Cooperative Extension Service.

9. Outdoor Recreation Resources Review Commission (ORRRC), 1962
Outdoor Recreation for America. A report to the president and to Congress, Washington, U. S. Government Printing Office.

10. United States Department of Agriculture, Soil Conservation Service, August, 1972
An Appraisal of Potentials for Outdoor Recreation Development. A SEE-KAN RC&D report.

11. United States Department of Agriculture, Soil Conservation Service, 1966
Guide to Making Appraisals of Potentials for Outdoor Recreation Developments.

12. United States Department of Agriculture, Soil Conservation Service, Salina, Kansas, 1972
Resource Conservation and Development Project Plan - Southeast Kansas.

13. United States Department of Agriculture, Soil Conservation Service, 1966
Soil Interpretation Tables - Kansas - Cherokee Prairies.

14. United States Department of Commerce, 1966
A Proposed Program for Scenic Roads and Parkways. A report prepared for the President's Council on Recreation and Natural Beauty, Washington, U.S. Government Printing Office.

15. United States Department of Commerce, Bureau of Census, 1969
Agriculture Census - Kansas Counties.

16. United States Department of Commerce, Bureau of Census, 1970
United States Census - Kansas, Missouri, and Oklahoma.

17. United States Department of Commerce, 1972
United States Weather Bureau - Weather Records for Kansas.

APPENDICES

APPENDIX NO. 1 - List of Twelve Types of Recreation Developments appraised along with their respective Key Elements and Multipliers.

I. VACATION CABINS, COTTAGES, AND HOMESITES

KEY ELEMENTS		MULTIPLIERS	
A. Climate*	2 x	=	
B. Scenery*	2 x	=	
C. Natural Areas	1 x	=	
E. Soils*	1 x	=	
F. Water			
Existing water areas	1 x	=	
Impoundment sites	3 x	=	
H. Populations of People			
Size and distribution	1 x	=	
Income levels	2 x	=	
I. Proximity and Access			
Proximity	1 x	=	
Access roads*	1 x	=	
Total Element Weights (Multipliers)	15	Total Score	
Total Possible Score	150		
High Potential	101-150		
Medium Potential	51-100		
Low Potential	0- 50		

II. CAMPING GROUNDS

KEY ELEMENTS	MULTIPLIERS VACATION SITE	PACK TRIP	TRANSIENT
A. Climate	2* x =	3 x =	1 x =
B. Scenery	2* x =	3* x =	1 x =
C. Natural Areas	2 x =	3* x =	
E. Soils	1* x =		1* x =
F. Water Areas			
Existing	2 x =	1 x =	
Water Impoundment Sites	2 x =		1 x =
I. Proximity and Access			
Access Roads	1 x =		
Tourist Routes			
Total Element Weights	12 Total Score___	10 Total Score___	9 Total Score___
Total Possible Score	120	100	90
High Potential	81-120	71-100	61-90
Medium Potential	41- 80	36- 70	31-60
Low Potential	0- 40	0- 35	0-30

III. PICNIC AND FIELD SPORTS AREAS

	KEY ELEMENTS	MULTIPLIERS GAME, PLAY, TARGET AREAS	BICYCLING	PICNICKING
A.	Climate	1 x =	1 x =	1 x =
B.	Scenery		1 x =	1 x =
E.	Soils	1* x =	1* x =	1* x =
F.	Water Areas			
	Existing			1 x =
	Water Impoundment Sites			1 x =
H.	Population--Size and Distribution	3 x =	3 x =	3 x =
	Age	1 x =	1 x =	
	Income	2 x =	1 x =	1 x =
I.	Proximity and Access			
	Proximity	3* x =	2* x =	3* x =
	Access Roads	1 x =	1 x =	1 x =
	Total Element Weights	12 Total Score____	11 Total Score____	13 Total Score____
	Total Possible Score	120	110	130
	High Potential	81-120	76-110	91-130
	Medium Potential	41-80	41- 75	46- 90
	Low Potential	0-40	0- 40	0- 45

IV. FISHING WATERS

KEY ELEMENTS		MULTIPLIERS				
		WARM WATERS			COLD WATERS	
A.	Climate	1 x	=		1 x	=
F.	Water Areas					
	Existing*	3 x	=		3 x	=
	Impoundment Sites	2 x	=		2 x	=
G.	Fishing Populations	2 x	=		2 x	=
H.	Population--Size and Distribution	1 x	=			
	Occupations				1 x	=
I.	Proximity to Cities	1 x	=		1 x	=
	Total Element Weights	10	Total Score		10	Total Score
	Total Possible Score	100			100	
	High Potential	71-100			71-100	
	Medium Potential	37- 70			36- 70	
	Low Potential	0- 35			0- 35	

V. GOLF COURSES

KEY ELEMENTS	MULTIPLIERS: STANDARD AND PAR-3 GOLFING	DRIVING RANGES AND MINIATURE GOLFING
B. Scenery	1 x =	
E. Soils*	1 x =	1 x =
H. Population--Size and Distribution	3 x =	3 x =
Age and Occupation	2 x =	2 x =
Income Level	3 x =	1 x =
I. Proximity and Access		
Proximity	2 x = _____	3 x = _____
Total Element Weights	12 Total Score_____	10 Total Score_____
Total Possible Score	120	100
High Potential	81-120	71-100
Medium Potential	41- 80	36- 70
Low Potential	0- 40	0- 35

VI. HUNTING AREAS

	KEY ELEMENTS	MULTIPLIERS SMALL GAME		BIG GAME		WATERFOWL	
A.	Climate	1 x	=	1 x	=	1 x	=
E.	Soils	1 x	=	1 x	=	1 x	=
F.	Water Areas						
	Existing					#	
	Impoundment Sites					#	
G.	Wildlife						
	Habitat	5 x	=	5 x	=	5 x	=
	Populations	3 x	=	3 x	=	3 x	=
H.	Population						
	Size and Distribution	2 x	=	2 x	=	1 x	=
	Income Level					2 x	=
I.	Proximity to Cities	1 x	=				
J.	Rural Ownership Pattern	1 x	=				
	Total Element Weights	14	Total Score____	12	Total Score___	13	Total Score____
	Total Possible Score	140		120		130	
	High Potential	96-140		81-120		91-130	
	Medium Potential	51- 95		41- 80		46- 90	
	Low Potential	0- 50		0- 40		9- 45	

Existing Water Areas and Water Impoundment sites have dominant influence on habitat for waterfowl and for this reason are included there..

VII. NATURAL, SCENIC, AND HISTORIC AREAS

KEY ELEMENTS	MULTIPLIERS NATURAL	SCENIC	HISTORIC
B. Scenery*	4 x =	5 x =	
C. Natural Areas	6 x =	4 x =	
D. Historic Areas*			5 x =
G. Wildlife			
Habitat	#		
Populations	1 x =		
H. Population--Size and Distribution	1 x =	2 x =	1 x =
I. Proximity and Access			
Proximity	1 x =	1 x =	1 x =
Access Roads	1 x =	2 x =	
Tourist Routes	1 x =	1 x =	3 x =
Total Element Weights	15 Total Score	15 Total Score	10 Total Score
Total Possible Score	150	150	100
High Potential	101-150	101-150	71-100
Medium Potential	51-100	51-100	36- 70
Low Potential	0- 50	0- 50	0- 35

Included in "Natural Areas"

VIII. RIDING STABLES

KEY ELEMENTS		MULTIPLIERS		
A.	Climate	1 x	=	
C.	Natural Areas	3 x	=	
H.	Population--Size Distribution	2 x	=	
	Age	1 x	=	
	Income Level	2 x	=	
I.	Proximity to Cities*	3 x	=	_____
	Total Elements Weights	12	Total Score	_____
	Total Possible Score	120		
	High Potential	81-120		
	Medium Potential	41- 80		
	Low Potential	0- 40		

IX. SHOOTING PRESERVES

	KEY ELEMENTS		MULTIPLIERS	
A.	Climate*	1	x	=
B.	Scenery	1	x	=
E.	Soils*	2	x	=
H.	Population--Size and Distribution	2	x	=
	Age and Occupation	1	x	=
	Income Level	3	x	=
I.	Proximity to Urban Centers	2	x	= _____
	Total Element Weights	12	Total Score	_____
	Total Possible Score	120		
	High Potential	81-120		
	Medium Potential	41- 80		
	Low Potential	0- 40		

X. VACATION FARMS AND RANCHES

KEY ELEMENTS		MULTIPLIERS FARMS		RANCHES	
A.	Climate*	3	x	3	x
B.	Scenery*	2	x	3	x
C.	Natural Areas	2	x	3	x
E.	Soils	1	x		
F.	Water Areas				
	Existing	1	x	1	x
	Impoundment Sites	1	x		
I.	Proximity to Cities	1	x		
J.	Rural Ownership and Land Use Patterns	3	x	3	x
	Total Element Weights	14	Total Score	13	Total Score
	Total Possible Score	140		130	
	High Potential	96-140		91-130	
	Medium Potential	51- 95		46- 90	
	Low Potential	0- 50		0- 45	

XI. WATER SPORTS AREAS

KEY ELEMENTS		MULTIPLIERS		
A. Climate		1	x	=
B. Scenery		1	x	=
F. Water Areas				
Existing*		4	x	=
Impoundment Sites*		3	x	=
H. Population--Size and Distribution		2	x	=
Age and Occupation		1	x	=
I. Proximity to Cities		1	x	= _____
Total Element Weights		13	Total Score	_____
Total Possible Score		130		
High Potential		91-130		
Medium Potential		46- 90		
Low Potential		0- 45		

XII. WINTER SPORTS AREAS

KEY ELEMENTS		MULTIPLIERS		
A.	Climate*	4	x	=
B.	Scenery	1	x	=
E.	Soils*	3	x	=
F.	Water Areas			
	Existing	1	X	=
	Impoundment Sites	1	x	=
H.	Population--Size and Distribution	1	x	=
	Age	1	x	=
	Income	1	x	=
I.	Proximity and Access			
	Proximity	1	x	=
	Access Roads*	1	x	= _____
	Total Element Weights	15	Total Score	_____
	Total Possible Score	150		
	High Potential	101-150		
	Medium Potential	51-100		
	Low Potential	0- 50		

APPENDIX NO. 2 - Statistics Work Sheet and
County Summary Sheet

APPRAISAL OF OUTDOOR RECREATION POTENTIALS

STATISTICS WORK SHEET

_______________ COUNTY _______________ SOIL & WATER CONSERVATION DISTRICT _______________ STATE DATE ______

AREAS (1)	TABLE I NUMBERS OF PEOPLE 1950 (2)	1960 (3)	TABLE III AGE GROUPS – 1960 15 - 29 (4)	30 - 44 (5)	45 (6)	TABLE IV OCCUPATION – 1960 Employed (7)	Professional (8)	Skilled (9)	TABLE V FAMILY INCOME – 1960 % L.A.I. Population (10)	Median Family Income (11)	Proportion L.A.I. – M.F.I. (12)
APPRAISAL COUNTY											
SURROUNDING COUNTIES											
TOTALS L.A.I.									100		
1965 PROJECTION						% of Total Employed			L.A.I. MEDIAN FAMILY INCOME		
1980 PROJECTION											
TOTAL POPULATION IN AGE GROUPS						U.S. Average		32			
			27	20	29	U.S.A. Average	S.D.U.C.'s		% S.D.U.C. Pop.	Median Family Income	Proportion S.D.U.C. M.F.I.
							MEDIAN FAMILY INCOME S.D.U.C.'s				

TABLE II

AREAS	1950	1960
SMALL URBAN CENTERS IN L.A.I. (5000–20,000)		
SUBTOTAL		
1965 PROJECTION		
1980 PROJECTION		
LARGE URBAN CENTERS IN L.A.I. Over 20,000		
SUBTOTAL		
1965 PROJECTION		
1980 PROJECTION		
TOTAL L.A.I. URBAN CENTERS		
1965 PROJECTION		
1980 PROJECTION		
S.D.U.C.'s	1950	1960
TOTAL S.D.U.C.'s		
1965 PROJECTION		
1980 PROJECTION		

TABLE VI

PROXIMITY & ACCESS

ROADS IN COUNTIES	MILES	
All Weather Roads		
Major Tourist Routes		
PROXIMITY	MILES	Total Road Miles
20 Mi. of Urban Centers 5000		
20 Mi. of Urban Centers 20,000		
40 Mi. of Urban Centers 20,000		
S.D.U.C.'s in 50 - 150 Mi. Zone		NUMBER
ACCESS	SQUARE MI.	Total Area
From Urban Areas of 5000		
From Urban Areas of 20,000		
Total Accessible Area		
Total Area of County		100

Data for Table VI and Lines 47-48 of Table VII are to be obtained locally

TABLE VII

RURAL OWNERSHIP & LAND USE

SIZE OF FARMS	ACRES
COUNTY TOTAL	
in 180 - 259 acre class	
in 220 - 259 acre class	
in 260 - 499 acre class	
in 500 - 1000 acre class	
in over 1000 acre class	
TOTAL 180 acres and over	
in 100 - 139 acre class	
in 140 - 179 acre class	
TOTAL - 259 acres	
	% of Total
180 acres and over	
100 - 259 acre	
TYPE OF FARMS	NO.
Dairy	
Livestock	
General	
TOTAL - Dairy, Livestock, General	
ALL FARMS	
	% of Total
Dairy, Livestock & General	
OTHER LANDS	ACRES
Public Lands - open to hunting	
Corporation Lands - open to hunting	
Public, Corporate and Farms over 180 acres	
TOTAL COUNTY	
	% of Total
Public, Corporate and Farms over 180 acres	

(See Instructions Reverse Side)

TABLE VIII

CLIMATE

WEATHER STATION LOCATIONS — NAMES

% POSSIBLE SUNSHINE									
JANUARY									
FEBRUARY									
MARCH									
APRIL									
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
MEAN TEMPERATURE									
JANUARY									
FEBRUARY									
MARCH									
APRIL									
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
PRECIPITATION									
JANUARY									
FEBRUARY									
MARCH									
APRIL									
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
WINTER									
Days 1st - Last 16 Degree								Give Special Winter Data Only	
Total Inches Snowfall								For Local Stations	

Data for Tables I, II, III, IV and V to be obtained from U. S. Census of Populations. Data for Table VII, except below Line 46, to be obtained from U. S. Census of Agriculture.

SUMMARY OF APPRAISALS OF POTENTIALS FOR OUTDOOR RECREATION

DATE OF APPRAISAL _____ IN _____ COUNTY _____ SOIL (& WATER) CONSERVATION DISTRICT OF _____ STATE

KINDS OF RECREATION DEVELOPMENTS		SCORES FOR KEY ELEMENTS (RATINGS X MULTIPLIERS)																	TOTAL SCORE	APPRAISAL (ADJECTIVE)
							WATERS.		WILD-LIFE		POPULA.-PEOPLE			PROX. & ACCESS						
		CLIMATE	SCENERY	NATURAL AREAS	HISTORIC AREAS	SOILS	EXISTING	IMPOUNDMENT SITES	HABITAT	POPULATIONS	SIZE & DISTRIBUTION	AGE & OCCUPATION	INCOME LEVELS	PROXIMITY	ACCESS	TOURIST ROUTES	RURAL OWNERSHIP AND LAND USE PATTERN			
I. VACATION CABINS, COTTAGES, & HOMESITES					XXX				XXX	XXX		XXX				XXX	XXX			
II. CAMPING	-VACATION SITE				XXX				XXX	XXX	XXX	XXX	XXX	XXX		XXX	XXX			
	-PACK TRIP				XXX	XXX		XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX			
	-TRANSIENT			XXX	XXX		XXX		XXX	XXX	XXX	XXX	XXX	XXX	XXX		XXX			
III. PICNIC & SPORTS AREAS	-GAME, PLAY, TARGET AREAS		XXX	XXX	XXX		XXX	XXX	XXX	XXX						XXX	XXX			
	-BICYCLING			XXX	XXX		XXX	XXX	XXX	XXX						XXX	XXX			
	-PICNICKING			XXX	XXX				XXX	XXX		XXX				XXX	XXX			
IV. FISHING WATERS	-WARM WATERS		XXX	XXX	XXX	XXX			XXX			XXX	XXX		XXX	XXX	XXX			
	-COLD WATERS		XXX	XXX	XXX	XXX			XXX		XXX		XXX		XXX	XXX	XXX			
V. GOLF COURSES	-STANDARD & PAR-3	XXX		XXX	XXX		XXX	XXX	XXX	XXX					XXX	XXX	XXX			
	-MINIATURE & DRIVING RANGES	XXX	XXX	XXX	XXX		XXX	XXX	XXX	XXX					XXX	XXX	XXX			
VI. HUNTING AREAS	-SMALL GAME		XXX	XXX	XXX		XXX	XXX				XXX	XXX		XXX	XXX				
	-BIG GAME		XXX	XXX	XXX		XXX	XXX				XXX	XXX	XXX	XXX	XXX	XXX			
	-WATERFOWL		XXX	XXX	XXX		XXX	XXX				XXX		XXX	XXX	XXX	XXX			
VII. NATURAL, SCENIC, AND HISTORIC AREAS	-NATURAL AREAS	XXX			XXX	XXX	XXX	XXX	XXX			XXX	XXX				XXX			
	-SCENIC AREAS	XXX			XXX	XXX	XXX	XXX	XXX	XXX		XXX	XXX				XXX			
	-HISTORIC AREAS	XXX	XXX	XXX		XXX	XXX	XXX	XXX	XXX		XXX	XXX		XXX		XXX			
VIII. RIDING STABLES			XXX		XXX	XXX	XXX	XXX	XXX	XXX					XXX	XXX	XXX			
IX. SHOOTING PRESERVES				XXX	XXX		XXX	XXX	XXX	XXX					XXX	XXX	XXX			
X. VACATION FARMS AND RANCHES	-FARMS				XXX				XXX	XXX	XXX	XXX	XXX		XXX	XXX				
	-RANCHES				XXX	XXX		XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX				
XI. WATER SPORTS AREAS				XXX	XXX	XXX			XXX	XXX			XXX		XXX	XXX	XXX			
XII. WINTER SPORTS AREAS				XXX	XXX				XXX	XXX						XXX	XXX			
		A.	B.	C.	D.	E.	F.1	F.2	G.1	G.2	H.1	H.2	H.3	I.1	I.2	I.3	J.	K.		

APPENDIX NO. 3 - County Appendices

Each county has a separate appendix.
Included within the appendix:
Statistics Work Sheet
Summary of Appraisals
Inventory of Potential Impoundment Sites
Inventory of Natural, Scenic and Historic Areas
Inventory of Existing Water Areas

The counties are listed alphabetically.

ALLEN COUNTY

APPRAISAL OF OUTDOOR RECREATION POTENTIALS

STATISTICS WORK SHEET

Allen COUNTY Allen SOIL & WATER CONSERVATION DISTRICT Kansas STATE DATE 7-13-72

AREAS	TABLE I Numbers of People 1960	TABLE I 1970	TABLE III Age Groups 1970: 15-29	30-44	45	TABLE IV Occupation 1970: Employed	Professional	Skilled	TABLE V Family Income 1970: % L.A.I. Population	Median Family Income	Proportion L.A.I. - M.F.I.
APPRAISAL COUNTY											
Allen	16,369	15043	2784	2113	6388	5479	1094	1371	12	6835	820
SURROUNDING COUNTIES											
Woodson	5423	4789	783	621	2326	1650	281	375	4	5707	228
Coffey	8403	7397	1220	930	3063	2691	454	425	6	5852	351
Anderson	9035	8501	1509	1117	3634	2965	530	693	7	6557	459
Linn	8274	7770	1307	1040	3670	2872	518	676	6	6792	407
Bourbon	16090	15215	3045	2739	6730	6229	1249	1353	12	6777	515
Crawford	37032	37850	10662	4088	15129	13983	3299	3572	30	6642	1992
Neosho	19455	18812	3743	2702	7525	6727	1431	1887	15	7303	1096
Wilson	13077	11317	2004	1531	5186	4157	777	1260	8	6482	519
TOTALS L.A.I.	133,158	126,694	26,462	17,481	64,151	46,753	9224	11464	100		
1980 PROJECTION	123,462					% of Total Employed	20	25	L.A.I. MEDIAN FAMILY INCOME		6687
1990 PROJECTION	113,766										
TOTAL POPULATION IN AGE GROUPS			21	14	43	U.S. Average	20	32			
			24 %	17 %	31 %	U.S. Average					

SMSA's/SDUC's	% SDUC Population	Median Family Income	Proportion SDUC M.F.I.
Wichita	11	9413	1035
Topeka	5	9661	483
KC, Ks	12	11285	1354
KC, Mo	36	10242	3687
Springfield	4	8215	329
Tulsa, Okla	14	9296	1300
Oklahoma City	18	9345	1682
	100		
MEDIAN FAMILY INCOME SDUC's			9870

TABLE VI — PROXIMITY & ACCESS

ROADS IN COUNTIES	MILES	
All Weather Roads	736	
Major Tourist Routes	71	
PROXIMITY	MILES	Total Roads Miles
25 mi. of Urban Centers 5000	736	100
20 mi. of Urban Centers 20,000	—	—
40 mi. of Urban Centers 20,000	184	25
SDUC's in 50 - 150 mi. Zone	12	
ACCESS	SQUARE MI.	% Total Area
From Urban Areas of 5000	505	100
From Urban Areas of 20,000	—	—
Total Accessible Area	505	100
Total Area of County	505	100

Data for Table VI and Lines 47-48 of Table VII are to be obtained locally.

TABLE II

SMALL URBAN CENTERS IN L.A.I. (5000-20,000)	1960	1970
Iola	6885	6493
Ft Scott	9410	8967
Chanute	10849	10341
SUBTOTAL	27144	25801
1980 PROJECTION	25,134	
1990 PROJECTION	23,124	
LARGE URBAN CENTERS IN L.A.I. (Over 20,000)		
Pittsburg	18678	20,171
SUBTOTAL	18,678	20,171
1980 PROJECTION	31,664	
1990 PROJECTION	23,707	
TOTAL L.A.I. URBAN CENTERS	45822	45,975
1980 PROJECTION	46,125	
1990 PROJECTION	46,355	
SMSA SDUC's	1960	1970
Wichita	35,696	389,352
Topeka	141,286	155,322
KC Ks	321,387	404,567
KC Mo	1,092,545	1,253,916
Springfield	126,276	152,929
Tulsa, Okla	418,974	476,945
Oklahoma City	511,833	640,889
TOTAL SDUC's	3,00,827	3,473,860
1980 PROJECTION	3,70,877	
1990 PROJECTION	4,417,927	

Data for Tables I, II, III, IV and V to be obtained from U.S. Census of Populations. Data for Table VII, except below Line 46, to be obtained from U. S. Census of Agriculture.

TABLE VII — RURAL OWNERSHIP & LAND USE

SIZE OF FARMS	ACRES
COUNTY TOTAL	303,128
in 180 - 219 acre class	7905
in 220 - 259 acre class	16,351
in 260 - 499 acre class	80,864
in 500 - 1000 acre class	87,251
in over 1000 acre class	73,834
TOTAL 180 acre and over	268,205
in 100 - 139 acre class	5725
in 140 - 179 acre class	16942
TOTAL 100 - 259 acres	47123
% of Total: 100 acres and over	88
% of Total: 100 - 259 acres	16
TYPE OF FARMS	NO.
Dairy	88
Livestock	308
General	73
TOTAL Dairy, Livestock, General	469
ALL FARMS	894
% of Total: Dairy, Livestock & General	52
OTHER LANDS	ACRES
Public Lands open to hunting	
Corporate Lands open to hunting	
Public, Corporate and Farms over 180 acres	268,265
TOTAL COUNTY	303,128
% of Total: Public, Corporate and Farms over 180 acres	58

(See Instructions Reverse Side)

TABLE VIII — CLIMATE

WEATHER STATION LOCATIONS	[illegible]	Wichita	Okla City	KC Mo	Tulsa	Little Rock		
% POSSIBLE SUNSHINE								
JANUARY	50	59	59	52				
FEBRUARY	52	63	59	55				
MARCH	55	66	63	57				
APRIL	54	63	61	59				
MAY	57	61	65	63	57	64		
JUNE	65	75	75	69	65	70		
JULY	66	84	77	76	73	69		
AUGUST	68	82	81	73	75	72		
SEPTEMBER	74	84	72	69	73	69		
OCTOBER	67	65	69	68				
NOVEMBER	57	71	62	58				
DECEMBER	53	67	60	51				
MEAN TEMPERATURE								
JANUARY	35.7	32.0	37.0	31.7	37	42		
FEBRUARY	32.4	37.2	41.3	35.8	42	46		
MARCH	42.6	45.3	45.5	43.3	50	53		
APRIL	54.5	52.3	59.9	55.7	61	63		
MAY	64.8	64.9	68.4	65.6	68	70		
JUNE	73.8	75.3	78.0	75.7	78	78		
JULY	77.2	80.9	82.5	81.5	82	82		
AUGUST	77.6	79.9	82.8	79.8	83	81		
SEPTEMBER	69.0	71.7	73.8	71.3	74	75		
OCTOBER	57.9	60.2	63.9	60.2	63	64		
NOVEMBER	43.6	45.1	48.4	44.6	60	52		
DECEMBER	32.2	35.5	40.3	35.8	41	44		
PRECIPITATION								
JANUARY	1.07	1.05	1.31	1.41	1.98	5.12		
FEBRUARY	.97	.95	1.37	1.24	1.57	4.00		
MARCH	2.03	1.74	1.97	2.49	2.61	4.55		
APRIL	3.50	3.52	3.12	3.56	4.25	5.16		
MAY	4.32	3.77	5.19	4.40	4.77	4.85		
JUNE	4.54	4.19	4.47	4.57	5.15	3.73		
JULY	3.25	3.43	3.37	3.19	2.69	3.10		
AUGUST	4.66	3.96	2.52	3.77	3.23	3.15		
SEPTEMBER	3.44	3.23	3.02	3.25	4.25	3.55		
OCTOBER	2.56	2.18	2.51	2.86	3.09	2.85		
NOVEMBER	1.54	1.73	1.56	1.83	2.40	3.92		
DECEMBER	1.16	1.10	1.41	1.53	1.69	4.08		
WINTER								
Days 1st - Last 10 Degree	91	121				Give Span of Winter Data Only For Local Stations		
Total Inches Snowfall	18.7	7.7						

SUMMARY OF APPRAISALS OF POTENTIALS FOR OUTDOOR RECREATION

DATE OF APPRAISAL July, 1972 IN Allen COUNTY Allen SOIL (& WATER) CONSERVATION DISTRICT OF Kansas STATE

KINDS OF RECREATION DEVELOPMENTS		SCORES FOR KEY ELEMENTS (RATINGS X MULTIPLIERS)																TOTAL SCORE	APPRAISAL (ADJECTIVE)
		CLIMATE	SCENERY	NATURAL AREAS	HISTORIC AREAS	SOILS	WATER ARS. EXISTING	WATER ARS. IMPOUNDMENT SITES	WILD-LIFE HABITAT	WILD-LIFE POPULATIONS	POPULA.-PEOPLE SIZE & DISTRIBUTION	POPULA.-PEOPLE AGE & OCCUPATION	POPULA.-PEOPLE INCOME LEVELS	PROX. & ACCESS PROXIMITY	PROX. & ACCESS ACCESS	PROX. & ACCESS TOURIST ROUTES	RURAL OWNERSHIP AND LAND USE PATTERN			
		A.	B.	C.	D.	E.	F.1	F.2	G.1	G.2	H.1	H.2	H.3	I.1	I.2	I.3	J.	K.		
I. VACATION CABINS, COTTAGES, & HOMESITES		10	12	3	XXX	5	8	24	XXX	XXX	10	XXX	14	4	10	XXX	XXX		100	Medium
II. CAMPING	-VACATION SITE	10	12	6	XXX	5	16	16	XXX	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX		75	Medium
	-PACK TRIP	15	18	9	XXX	XXX	8	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		50	Medium
	-TRANSIENT	5	6	XXX	XXX	5	XXX	8	XXX	XXX	XXX	XXX	XXX	XXX	XXX	35	XXX		59	Medium
III. PICNIC & SPORTS AREAS	-GAME, PLAY, TARGET AREAS	5	XXX	XXX	XXX	5	XXX	XXX	XXX	XXX	6	0	2	30	10	XXX	XXX		58	Medium
	-BICYCLING, Motorcycling	5	5	XXX	XXX	5	XXX	XXX	XXX	XXX	6	0	2	—	—	XXX	XXX		23	Low
	-PICNICKING	5	5	XXX	XXX	5	8	8	XXX	XXX	6	XXX	2	—	—	XXX	XXX		39	Low
IV. FISHING WATERS	-WARM WATERS	7	XXX	XXX	XXX	XXX	21	16	XXX	16	6	XXX	XXX	10	XXX	XXX	XXX		76	High
	-COLD WATERS	—	XXX	XXX	XXX	XXX	—	—	XXX	—	XXX	—	XXX	—	XXX	XXX	XXX		—	—
V. GOLF COURSES	-STANDARD & PAR-3	XXX	9	XXX	XXX	7	XXX	XXX	XXX	XXX	6	20	6	0	XXX	XXX	XXX		48	Medium
	-MINIATURE & DRIVING RANGES	XXX	XXX	XXX	XXX	7	XXX	XXX	XXX	XXX	18	20	2	0	XXX	XXX	XXX		47	Medium
VI. HUNTING AREAS	-SMALL GAME	9	XXX	XXX	XXX	9	XXX	XXX	50	24	12	XXX	XXX	1	XXX	XXX	9		114	High
	-BIG GAME	9	XXX	XXX	XXX	9	XXX	XXX	30	18	8	XXX	XXX	XXX	XXX	XXX	XXX		74	Medium
	-WATERFOWL	9	XXX	XXX	XXX	9	XXX	XXX	35	18	6	XXX	4	XXX	XXX	XXX	XXX		81	Medium
VII. NATURAL, SCENIC, AND HISTORIC AREAS	-NATURAL AREAS	XXX	20	24	XXX	XXX	XXX	XXX	XXX	2	10	XXX	XXX	10	10	3	XXX		79	Medium
	-SCENIC AREAS	XXX	20	16	XXX	XXX	XXX	XXX	XXX	XXX	20	XXX	XXX	10	10	3	XXX		79	Medium
	-HISTORIC AREAS	XXX	XXX	XXX	25	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX	10	XXX	9	XXX		54	Medium
VIII. RIDING STABLES		6	XXX	18	XXX	XXX	XXX	XXX	XXX	XXX	2	0	4	0	XXX	XXX	XXX		30	Low
IX. SHOOTING PRESERVES		8	6	XXX	XXX	10	XXX	XXX	XXX	XXX	2	10	6	0	XXX	XXX	XXX		42	Medium
X. VACATION FARMS AND RANCHES	-FARMS	15	12	12	XXX	5	7	8	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX	9		78	Medium
	-RANCHES	15	18	18	XXX	XXX	7	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	9		67	Medium
XI. WATER SPORTS AREAS		5	8	XXX	XXX	XXX	32	24	XXX	XXX	4	0	XXX	10	XXX	XXX	XXX		83	Medium
XII. WINTER SPORTS AREAS		—	—	XXX	XXX	—	—	—	XXX	XXX	—	—	—	—	—	XXX	XXX		—	—

INVENTORY OF POTENTIAL IMPOUNDMENT SITES

Allen County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Acres)	Volume (Acre-Feet)	Drainage (Sq. Mi.)
1.	Trib. to Neosho River	25-24-17	15	111	1.60
2.	" " " "	12-25-17	42	374	5.40
3.	" " " "	25-26-17	18	139	2.00
4.	Trib. to Deer Creek	23-23-18	20	159	2.30
5.	" " " "	24-23-19	35	263	3.80
6.	" " " "	31-23-20	42	374	5.40
7.	" " " "	3-24-18	36	333	4.80
8.	Trib. to Rock Creek	17-24-19	13	97	1.40
9.	" " " "	10-24-19	17	125	1.80
10.	" " " "	7-24-20	38	277	4.00
11.	" " " "	18-24-20	24	173	2.50
12.	" " " "	14-24-19			
13.	Trib. to Elm Creek	4-25-20	12	83	1.20
14.	" " " "	7-25-19	17	152	2.20
15.	" " " "	16-25-19	17	125	1.80
16.	" " " "	13-25-19	18	132	1.90
17.	" " " "	8-25-20	19	152	2.20
18.	Trib. to Big Creek	12-25-20	—	—	—
19.	" " " "	13-25-20	—	—	—
20.	Trib. to Big Creek	14-25-20	24	194	2.80
21.	" " " "	24-25-20	—	—	—
22.	" " " "	25-25-20	—	—	—
23.	" " " "	27-25-20	48	437	6.30
24.	" " " "	35-25-20	—	—	—

INVENTORY OF POTENTIAL IMPOUNDMENT SITES (Cont'd - 2)

Allen County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Acres)	Volume (Acre-Feet)	Drainage (Sq.Mi.)
25.	Trib. to Big Creek	9-26-20	70	672	9.70
26.	Trib. to Coal Creek	35-25-19	27	215	3.10
27.	" " " "	27-25-19	22	173	2.50
28.	" " " "	30-25-19	22	249	3.60
29.	" " " "	35-25-18	33	333	4.80
30.	" " " "	5-26-19	14	103	1.50
31.	" " " "	7-26-19	26	291	4.20
32.	" " " "	18-26-19	13	97	1.40
33.	Trib. to Neosho River	25-26-18	30	256	3.70
34.	Trib. to Big Creek	23-26-19	33	291	4.20
35.	" " " "	24-26-19	46	423	6.10
36.	" " " "	34-26-19	11	111	1.60
37.	" " " "	28-26-20	17	132	1.90
38.	Trib. to Marmaton River	22-26-21	35	319	4.60
39.	" " " "	9-26-21	35	402	5.80
40.	" " " "	35-25-21	22	194	2.80
41.	Marmaton River	21-25-21	70	1,220	17.60
42.	Trib. to Marmaton River	9-25-21	36	270	3.90
43.	" " " "	32-24-21	16	125	1.80
44.	" " " "	30-24-21	42	298	4.30
45.	Trib. to Little Osage Creek	16-24-21	44	312	4.50
46.	" " " " "	2-24-20	36	284	4.10
47.	Trib. to Middle Creek	22-23-20	38	250	3.60

INVENTORY OF NATURAL, SCENIC, AND HISTORIC AREAS

Allen County

Name of Area	Township	Area	Description
Historic:			
Frederick Funston Home	Carlyle		Museum - 4½ miles north of Iola on Highway 169
Old Jail			Museum - Located in Iola
Scenic:			
Bassett Park	Iola		Located in Bassett on Highway 169
Meadow-Brook Park	Iola		Located in Iola
Moran City Park	Marmaton		Located in Moran
Humboldt City Park	Humboldt		Located in Humboldt
Natural:			
Riverside Park	Iola		Located in Iola
Wayside Park	Iola		Located in Iola

INVENTORY OF EXISTING WATER AREAS

Allen County

NAME	LOCATION	SIZE	PRESENT USE
Ponds Class II Dams			
Evans Mynatt	NW¼ NW¼ 13-25-19	4.68 surface acres	Warm water. Livestock, recreation
Lester Beebe	SE¼ NE¼ 30-23-19	5.49 surface acres	Warm water. Livestock, recreation
L. Howland	SW¼ SW¼ 11-24-19	4.84 surface acres	Warm water. Livestock, recreation
Herschel Bartlett	SW¼ 4-25-21	4.89 surface acres	Warm water. Livestock, recreation
John Q. Adams	NE¼ 4-23-20	5.03 surface acres	Warm water. Livestock, recreation
Gene Evans	E½SW¼ 34-23-19	6.43 surface acres	Warm water. Livestock, recreation

INVENTORY OF EXISTING WATER AREAS (Cont'd - 2)

Allen County

NAME	LOCATION	SIZE	PRESENT USE
Lyle Doughty	N½NW¼ 33-24-21	7.90 surface acres	Warm water. Livestock, recreation
Neosho River	Carlyle, Iola, Humboldt, Logan Townships	32 miles	
Deer Creek	Carlyle, Deer Creek, Geneva Townships. Flows into the Neosho River.		
Rock Creek	Deer Creek, Elm Townships. Flows into Elm Creek.		
Elm Creek	Elm and Iola Township. Flows into the Neosho River.		
Owl Creek	Logan Township. Flows into Neosho River.		

INVENTORY OF EXISTING WATER AREAS (Cont'd - 3)

Allen County

NAME	LOCATION	SIZE	PRESENT USE
Big Creek	Marmaton, Elsmore, Cottage Grove, and Elm Townships. Flows into Neosho River in Neosho County.		
Coal Creek	Humboldt, Elm, Salem Townships. Flows into the Neosho River.		
Marmaton River	Starts in Marmaton Township		
Cement Quarry		Approximately 100 acres	
All ponds less than 5 surface acres		1,350 acres	

BOURBON COUNTY

APPRAISAL OF OUTDOOR RECREATION POTENTIALS

STATISTICS WORK SHEET

Bourbon COUNTY Bourbon SOIL & WATER CONSERVATION DISTRICT Kansas STATE DATE 7-13-72

AREAS	TABLE I NUMBERS OF PEOPLE 1960	1970	TABLE III AGE GROUPS – 1970 15-29	30-44	45-	TABLE IV OCCUPATION – 1970 Employed	Professional	Skilled	TABLE V FAMILY INCOME – 1970 % LAI Population	Median Family Income	Proportion LAI-MFI
APPRAISAL COUNTY											
Bourbon	16,090	15,215	3,045	2,739	6,730	6,229	1,249	1,359	10	6,794	679
SURROUNDING COUNTIES											
Allen	16,369	15,043	2,784	2,115	6,388	5,479	1,094	1,371	10	6,835	683
Anderson	9,035	8,501	1,509	1,117	3,634	2,965	530	693	6	6,551	393
Linn	8,274	7,770	1,307	1,040	3,670	2,872	518	676	5	6,792	340
Bates (Mo.)	15,905	15,468	2,701	2,253	6,755	5,626	862	1,351	10	6,570	657
Vernon (Mo.)	20,540	19,065	3,549	2,699	8,543	3,735	1,124	1,310	13	6,237	811
Barton (Mo.)	11,113	10,431	1,908	1,434	4,836	3,735	727	851	7	6,013	421
Crawford	37,032	37,850	10,062	4,688	15,129	13,983	3,299	3,372	26	6,642	1,727
Neosho	19,455	18,812	3,743	2,702	7,525	6,727	1,431	1,589	13	7,303	949
TOTALS L A I	153,813	148,155	30,568	20,787	63,216	51,357	10,834	12,866	100		
1975 PROJECTION	145,326					% of Total Employed					
1980 PROJECTION	136,839						21	26	L A I MEDIAN FAMILY INCOME		6,660
TOTAL POPULATION IN AGE GROUPS			21	14	43	U S Average	20%	32%			
			27	17	37	U S Average 5051					

	% SDUC Population	Median Family Income	Proportion SDUC MFI
Wichita	11	9,413	1,035
Topeka	5	9,661	483
KC, Ks	12	11,285	1,354
KC, Mo.	36	10,242	3,687
Springfield	4	8,215	329
Tulsa	14	9,286	1,300
Okla City	18	9,348	1,682
MEDIAN FAMILY INCOME SDUC's			9,870

TABLE VI
PROXIMITY & ACCESS

ROADS IN COUNTIES	MILES	
All Weather Roads	560	
Major Tourist Routes	56	
PROXIMITY	MILES	% Total Road Miles
25 mi. of Urban Centers 5000	560	100
20 mi. of Urban Centers 20,000	0	0
40 mi. of Urban Centers 20,000	0	0
SDUC's in 50-150 Mi. Zone	10	NUMBER
ACCESS	SQUARE MI	% Total Area
From Urban Areas of 5000	639	100
From Urban Areas of 20,000	0	0
Total Accessible Area	639	100
Total Area of County	639	100

Data for Table VI and Lines 47-48 of Table VII are to be obtained locally.

TABLE II

SMALL URBAN CENTERS IN L A I (5000-20,000)	1960	1970
Iola	6,885	6,493
Nevada, Mo.	7,997	7,786
Chanute	10,849	10,341
SUBTOTAL	25,731	24,620
1975 PROJECTION	24,065	
1980 PROJECTION	22,398	
LARGE URBAN CENTERS IN L A I (Over 20,000)		
Pittsburg	18,678	20,171
SUBTOTAL	18,678	20,171
1975 PROJECTION	21,664	
1980 PROJECTION	23,904	
TOTAL L A I URBAN CENTERS	44,409	44,791
1975 PROJECTION	44,982	
1980 PROJECTION	45,555	
SDUC's SMSA	1960	1970
Wichita	381,626	389,352
Topeka	141,286	155,322
KC Ks.	329,287	461,567
KC Mo.	1,092,545	1,253,916
Springfield	126,276	152,929
Tulsa	418,974	476,945
Okla. City	511,833	640,889
TOTAL SDUC's	3,001,827	3,473,860
1975 PROJECTION	3,709,877	
1980 PROJECTION	4,47,927	

Data for Tables I, II, III, IV and V to be obtained from U. S. Census of Populations. Data for Table VII, except below Line 46, to be obtained from U. S. Census of Agriculture.

TABLE VII
RURAL OWNERSHIP & LAND USE

SIZE OF FARMS	ACRES
COUNTY TOTAL	353,690
in 180-219 acre class	12,701
in 220-259 acre class	19,371
in 260-499 acre class	87,038
in 500-1000 acre class	94,190
in over 1000 acre class	95,867
TOTAL 180 acre and over	307,167
in 100-139 acre class	10,310
in 140-179 acre class	21,475
TOTAL 100-179 acres	63,857
	% of Total
180 acres and over	87
100-179 acres	18
TYPE OF FARMS	NO
Dairy	95
Livestock	401
General	62
TOTAL - Dairy, Livestock, General	558
ALL FARMS	1,043
	% of Total
Dairy, Livestock & General	53
OTHER LANDS	ACRES
Public Lands - open to hunting	
Corporate Lands - open to hunting	
Public, Corporate and Farms over 180 acres	307,167
TOTAL COUNTY	353,690
	% of Total
Public, Corporate and Farms over 180 acres	87

(See Instructions Reverse Side)

TABLE VIII
CLIMATE

WEATHER STATION LOCATIONS — NAMES

	Topeka	Wichita	Okla. City	KC Mo.	Tulsa	Little Rock		
% POSSIBLE SUNSHINE								
JANUARY	50	57	59	52				
FEBRUARY	52	63	59	55				
MARCH	55	66	63	57				
APRIL	54	63	61	59				
MAY	57	61	65	63	57	64		
JUNE	65	73	75	69	65	70		
JULY	66	84	77	76	73	69		
AUGUST	68	82	81	73	75	72		
SEPTEMBER	74	84	75	69	73	69		
OCTOBER	67	65	69	63				
NOVEMBER	57	71	62	55				
DECEMBER	52	67	60	51				
MEAN TEMPERATURE								
JANUARY	28.1	32.0	37.0	31.7	37	42		
FEBRUARY	33.4	37.2	41.3	35.8	42	46		
MARCH	42.6	45.3	48.5	43.3	50	53		
APRIL	54.5	56.2	57.9	55.7	61	63		
MAY	63.5	64.9	65.4	65.6	68	70		
JUNE	73.8	75.3	78.0	75.9	78	78		
JULY	79.2	80.9	82.5	81.5	82	82		
AUGUST	77.6	79.9	82.8	79.8	82	81		
SEPTEMBER	69.0	71.7	73.8	71.3	74	75		
OCTOBER	57.9	60.2	62.9	60.2	63	64		
NOVEMBER	42.6	45.1	48.4	44.6	50	52		
DECEMBER	32.2	35.5	40.3	35.8	41	44		
PRECIPITATION								
JANUARY	1.07	1.05	1.31	1.41	1.98	5.12		
FEBRUARY	.97	.98	1.37	1.24	1.57	4.06		
MARCH	2.03	1.74	1.97	2.49	2.61	4.85		
APRIL	3.50	3.52	3.12	3.56	4.25	5.16		
MAY	4.32	3.79	5.19	4.40	4.72	4.85		
JUNE	4.54	4.99	4.47	4.57	5.15	3.43		
JULY	3.25	3.43	2.37	3.19	2.69	3.10		
AUGUST	4.66	2.96	2.52	3.77	3.23	3.15		
SEPTEMBER	3.44	3.23	3.02	3.25	4.25	2.85		
OCTOBER	2.56	2.15	2.51	2.86	3.09	2.81		
NOVEMBER	1.57	1.73	1.56	1.80	2.40	3.92		
DECEMBER	1.16	1.16	1.41	1.53	1.69	4.08		
WINTER								
Days 1st - Last 16 Degree	91	107				Give Special Winter Data Only For Local Stations		
Total Inches Snowfall	18.7	7.7						

SUMMARY OF APPRAISALS OF POTENTIALS FOR OUTDOOR RECREATION

DATE OF APPRAISAL July, 1972 IN Bourbon COUNTY Bourbon SOIL (& WATER) CONSERVATION DISTRICT OF Kansas STATE

KINDS OF RECREATION DEVELOPMENTS		SCORES FOR KEY ELEMENTS (RATINGS X MULTIPLIERS)																	TOTAL SCORE	APPRAISAL (ADJECTIVE)
		CLIMATE	SCENERY	NATURAL AREAS	HISTORIC AREAS	SOILS	WATERS. EXISTING	WATERS. IMPOUNDMENT SITES	WILDLIFE HABITAT	WILDLIFE POPULATIONS	POPULA.-PEOPLE SIZE & DISTRIBUTION	POPULA.-PEOPLE AGE & OCCUPATION	POPULA.-PEOPLE INCOME LEVELS	PROX. & ACCESS PROXIMITY	PROX. & ACCESS ACCESS	PROX. & ACCESS TOURIST ROUTES	RURAL OWNERSHIP AND LAND USE PATTERN			
I.	VACATION CABINS, COTTAGES, & HOMESITES	10	16	2	XXX	5	9	27	XXX	XXX	10	XXX	14	5	10	XXX	XXX		108	High
II.	CAMPING -VACATION SITE	8	16	4	XXX	5	18	18	XXX	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX		79	Medium
	-PACK TRIP	-	-	-	XXX	XXX	-	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		-	
	-TRANSIENT	5	8	XXX	XXX	5	XXX	9	XXX	XXX	XXX	XXX	XXX	XXX	XXX	15	XXX		42	Medium
III.	PICNIC & SPORTS AREAS -GAME, PLAY, TARGET AREAS	5	XXX	XXX	XXX	5	XXX	XXX	XXX	XXX	9	0	2	30	10	XXX	XXX		61	Medium
	Motorcycling	5	8	XXX	XXX	5	XXX	XXX	XXX	XXX	9	0	1	20	10	XXX	XXX		58	Medium
	-PICNICKING	5	8	XXX	XXX	5	9	9	XXX	XXX	9	XXX	1	30	10	XXX	XXX		86	Medium
IV.	FISHING WATERS -WARM WATERS	7	XXX	XXX	XXX	XXX	21	18	XXX	16	6	XXX	XXX	10	XXX	XXX	XXX		78	High
	-COLD WATERS	-	XXX	XXX	XXX	XXX	-	-	XXX	-	XXX	-	XXX	-	XXX	XXX	XXX		-	
V.	GOLF COURSES -STANDARD & PAR-3	XXX	9	XXX	XXX	8	XXX	XXX	XXX	XXX	9	10	9	0	XXX	XXX	XXX		45	Medium
	-MINIATURE & DRIVING RANGES	XXX	XXX	XXX	XXX	9	XXX	XXX	XXX	XXX	9	12	3	0	XXX	XXX	XXX		33	Low
VI.	HUNTING AREAS -SMALL GAME	9	XXX	XXX	XXX	9	XXX	XXX	40	27	16	XXX	XXX	6	XXX	XXX	8		115	High
	-BIG GAME	9	XXX	XXX	XXX	9	XXX	XXX	35	18	10	XXX	XXX	XXX	XXX	XXX	XXX		81	High
	-WATERFOWL	9	XXX	XXX	XXX	9	XXX	XXX	40	18	5	XXX	2	XXX	XXX	XXX	XXX		83	Medium
VII.	NATURAL, SCENIC, AND HISTORIC AREAS -NATURAL AREAS	XXX	8	6	XXX	XXX	XXX	XXX	XXX	0	10	XXX	XXX	10	10	3	XXX		47	Low
	-SCENIC AREAS	XXX	25	8	XXX	XXX	XXX	XXX	XXX	XXX	20	XXX	XXX	10	20	3	XXX		86	Medium
	-HISTORIC AREAS	XXX	XXX	XXX	45	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX	10	XXX	9	XXX		74	High
VIII.	RIDING STABLES	7	XXX	24	XXX	XXX	XXX	XXX	XXX	XXX	0	0	2	0	XXX	XXX	XXX		33	Low
IX.	SHOOTING PRESERVES	8	9	XXX	XXX	15	XXX	XXX	XXX	XXX	0	10	3	0	XXX	XXX	XXX		46	Medium
X.	VACATION FARMS -FARMS	18	12	4	XXX	5	8	9	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX	12		78	Medium
	AND RANCHES -RANCHES	18	18	6	XXX	XXX	8	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	12		62	Medium
XI.	WATER SPORTS AREAS	5	8	XXX	XXX	XXX	12	24	XXX	XXX	6	0	XXX	10	XXX	XXX	XXX		65	Medium
XII.	WINTER SPORTS AREAS	-	-	XXX	XXX	-	-	-	XXX	XXX	-	-	-	-	-	XXX	XXX		-	
		A.	B.	C.	D.	E.	F.1	F.2	G.1	G.2	H.1	H.2	H.3	I.1	I.2	I.3	J.	K.		

USDA-SCS-LINCOLN, NEBR. 1969 - 5 R

INVENTORY OF POTENTIAL IMPOUNDMENT SITES

BOURBON COUNTY

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Areas)	Volume (Acre-Feet)	Drainage (Square Mile)
1.	Little Osage Creek	23-23-21	40	270	3.9
2.	Little Osage Creek	35-23-21	15	132	1.9
3.	Trib. Little Osage River	20-23-22	68	1,137	16.4
4.	" " " "	22-23-22	40	485	7.0
5.	" " " "	23-23-22	26	250	3.6
6.	" " " "	20-23-23	28	257	3.7
7.	Limestone Creek	9-24-22	100	1,796	25.9
8.	Trib. Limestone Creek	10-24-22	35	333	4.8
9.	Trib. Little Osage River	13-24-22	30	222	3.2
10.	" " " "	3-24-23	35	333	4.8
11.	" " " "	11-24-23	11	97	1.4
12.	" " " "	7-24-24	9	83	1.2
13.	" " " "	4-24-24	45	423	6.1
14.	" " " "	10-24-24	37	367	5.3
15.	" " " "	12-24-24	37	243	3.5
16.	" " " "	5-24-25	58	485	7.0
17.	" " " "	9-24-25	13	118	1.7
18.	" " " "	10-24-25	23	222	3.2
19.	Turkey Creek	34-24-22	60	510	4.7
20.	Trib. Turkey Creek	35-24-22	19	152	2.2
21.	Mill Creek	3-25-23	80	1,123	12.5
22.	Trib. Mill Creek	25-24-23	21	173	2.5
23.	" " "	19-24-24	40	395	5.7
24.	" " "	1-25-23	14	111	1.6
25.	" " "	7-25-24	23	146	2.1
26.	" " "	16-25-24	32	222	3.2
27.	" " "	33-24-24	28	222	3.2
28.	" " "	29-24-24	14	132	1.9
29.	" " "	2-25-24	16	125	1.8
30.	" " "	14-25-24	29	312	4.5

INVENTORY OF POTENTIAL IMPOUNDMENT SITES -(Cont'd. -2)

BOURBON COUNTY

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Areas)	Volume (Acre-Feet)	Drainage (Square Miles)
31.	Trib. Mill Creek	7-25-25	9	90	1.3
32.	" " "	6-25-25	38	416	6.0
33.	" " "	28-24-25	26	159	2.3
34.	" " "	27-24-25	34	291	4.2
35.	" " "	35-24-25	94	797	11.5
36.	" " "	2-25-25	19	180	2.6
37.	" " "	33-25-25	23	187	2.7
38.	Trib. Moors Branch Creek	12-26-25	8	69	1.0
39.	Moors Branch Creek	14-26-25	66	956	13.8
40.	Buck Creek	3-27-25	52	637	9.2
41.	W. Fork Dry Wood Creek	24-27-24	65	845	8.0
42.	Walnut Creek	13-27-24	44	471	6.8
43.	" "	11-27-24	38	270	3.9
44.	Trib. Pawnee Creek	32-26-24	41	312	4.5
45.	" " "	22-27-23	12	111	1.6
46.	Pawnee Creek	21-27-23	55	610	8.8
47.	Trib. Pawnee Creek	16-27-23	18	125	1.8
48.	So. Fork Marmaton Creek	7-27-23	41	284	4.1
49.	" " " "	7-27-23	8	83	1.2
50.	" " " "	11-27-22	37	319	4.6
51.	" " " "	14-27-22	45	401	5.8
52.	" " " "	10-27-22	22	222	3.2
53.	Yellow Paint Creek	29-26-22	40	374	5.4
54.	Trib. Marmaton River	31-25-22	10	97	1.4
55.	Trib. Tennyson Creek	17-25-22	49	167	5.3
56.	Trib. Marmaton River	15-25-22	15	132	1.9
57.	" " "	17-25-23	40	333	4.8
58.	Trib. So. Fork Marmaton River	36-26-22	52	617	8.9
59.	Trib. Yellow Paint Creek	33-26-22	15	125	1.8
60.	Moors Branch Creek	20-26-25	17	132	1.9

INVENTORY OF NATURAL, SCENIC AND HISTORIC AREAS
Bourbon County

Historic Areas:

Guthrie Mountain

Old Indian Boundary

Ft. Lincoln

Battle of Shiloh

Union Center Cemetery

Shiloh Creek

Military Bridge (1870)

National Cemetery #1

Site of Historic Ft. Scott
(Buildings dated from
1842 Congressional Act)

Old Military Bridge

Linn County (Bordering County)

Marias des Dygnes Wildlife Area
Fort Montgomery NW
Mound City

Battle of Mine Creek

Marias des Cygnes Massacre

John Brown Memorial Park

INVENTORY OF EXISTING WATER AREAS
Bourbon County

NAME	LOCATION	SIZE - Su. Ac.	PRESENT USE
Caldwell Davis	Franklin - SW¼ 23-23-21	8 Ac.	Bass, Bluegill, Channel
David Kuns	Marion - SW¼ 23-25-21	7 Ac.	
George Cobb	Walnut - SW¼ 13-27-21	7 Ac.	
John Gross	Timber Hill SW¼ 14-24-23	5 Ac.	
Elm Creek Lake	Pawnee - E½ 26-26-23	68 Ac.	
Homer Perry	Pawnee - NW¼ 8-26-24	5 Ac.	
John Zimmerman	Mill Creek NW¼ 8-25-24	6 Ac.	
Chester Boileau	Mill Creek SE¼ 28-24-24	5 Ac.	
Cody Bailey	Mill Creek SW¼ 27-24-24	13 Ac.	
Ralph Bowers	Marmaton - NE¼ 22-26-24	5 Ac.	
L. C. Johnson	Scott - E½ 24-26-24	7 Ac.	
Rock Creek Lake	Scott - W½ 2-26-24	73 Ac.	
Dale Hereford	Freedom - NW¼ 35-24-24	12 Ac.	
Robert Towles	Freedom - NE¼ 25-23-24	6 Ac.	
H. S. Freeman	- NE¼ 24-25-24	5 Ac.	
Gunn Park Lake	- NW* 36-25-25	8 Ac.	City Recreation Area
Ft. Scott Lake	- Sec. 15-26-24	325 Ac.	City Recreation Area-Boating, cabins
C. C. Cole	NE¼ 8-25-25	6 Ac.	
August Sinn	E½ 14-25-25	9 Ac.	
Henry Ericson	SE¼ 32-26-23	5 Ac.	
S. Lester Jackson	SE¼ 25-26-22	9 Ac.	
Wallace Darling	NE¼ 8-24-25	6 Ac.	
Ancel Johnson	NW¼ 26-25-23	5 Ac.	
A. E. Killion	SE¼ 25-24-23	6 Ac.	
W. E. Davis	W½ 8-27-23	15 Ac.	
Bourbon-Allen Co. State Lake	13-26-21	95 Ac.	City and County Recreation Area Camping - Cabins
3,000 ponds	All over county	2,250 Ac.	

INVENTORY OF EXISTING WATER AREAS -(Cont'd.- 2)
Bourbon County

NAME	LOCATION	SIZE - Su. Ac.	PRESENT USE
Little Osage River	Freedom & Osage	41 miles long 50' wide & 4' deep	Fishing
Indian Creek	Freedom	5 miles long 30' wide - 2' deep	Fishing
Fish Creek	Freedom	4 miles long - 2' deep	Fishing
North Hammond	Osage	3 miles long - 1' deep	Fishing
Shiloh	Osage	2 miles	
Wolverine	Scott	6 miles	
Marmaton River	Marion Marmaton, Scott Flows east	46 miles - 80' wide at exit. 4' deep	
Moore's Branch	Scott	3 miles	
Mill Creek	Mill Creek	15 miles - 50' wide - 3' deep	
Buck Run	Drywood	5 miles	
Drywood-West Fork	Drywood	7 miles - 40' wide - 4' deep	
Walnut	Drywood	5 miles	
Elk Creek	Freedam	2 miles	
Lost Creek	Timber Hill	5 miles	
Little Mill	Mill Creek	3 miles	
Cedar Creek	Marmaton	3 miles	
Paint Creek	Walnut, Marion, Marmaton	25 miles	
Clever Creek	Freedom	3 miles	
Crescent School	Mill Creek	2 miles	
Rock Creek	Marmaton	2 miles	
Walkertown Creek	Marmaton	3 miles	
Pawnee	Pawnee & Marmaton	7 miles	
Elm Creek	Marmaton	3 miles	
Limestone	Franklin	10 miles	

INVENTORY OF EXISTING WATER AREAS (Cont'd - 3)

Bourbon County

NAME	LOCATION	SIZE	PRESENT USE
Floyd Dotson	SE¼ 20-24-24	10 acres	No recreation installation; fishing warm, water level fluctuating little; no major pollution problems
Lyndon Lewelling	NW¼ 11-26-24	5 acres	Swimming facility; fishing, warm, water level fluctuating little; no major pollution problems
Irish	Franklin	3 miles	
Turkey	Marion	6 miles	
Hinton	Marion	3 miles	
H. D. Simpson	SW¼ SW¼ 19-27-24	5 acres	
Henery Coonrod	NE¼ 19-27-25	6 acres	
A. I. Pellett	SE¼ SE¼ 18-27-25	7 acres	
H. Beerbower	SW: 17=27=25	12 acres	
W. F. Malone	NW¼ 18-24-25	8 acres	
Jos. Gobl	SE¼ 9-27-25	6 acres	
Jos. Gobl	W½ 10-27-25	12 acres	
Jos. Gobl	N½ 3-27-25	10 acres	
Jos. Gobl	SE¼ 27-26-25	14 acres	

INVENTORY OF EXISTING WATER AREAS (Cont'd - 4)

Bourbon County

NAME	LOCATION	SIZE	PRESENT USE
Richard Johnson	NE¼ 12-27-24	8 acres	Stocked with bass, bluegill, catfish; pasture irrigation; warm, water level fluctuating moderately; no major pollution problems
Fort Scott Country Club	SW¼ 6-26-25	5 acres	Golf course, irrigation system; fishing, 3 species; picnicking; warm, water level fluctuating moderately; no major pollution problems
Earl Johnson	NE¼ 20-25-23	9 acres	No recreation installations. Stocked. Warm, water level fluctuating little; no major pollution problems.
Bronson City Lake	NE¼ 7-25-22	6 acres	Municipal water; fishing; warm, water level fluctuating moderately; no major pollution problems
Dan Laughlin	NE¼ 6-24-23	6 acres	No recreation installation; fishing; warm, water level fluctuating little; no major pollution problems
J. L. McKenney	SE¼ 32-25-25	13 acres	No recreation installation; fishing; warm, water level fluctuating little; no major pollution problems

CHEROKEE COUNTY

APPRAISAL OF OUTDOOR RECREATION POTENTIALS

STATISTICS WORK SHEET

Cherokee COUNTY Cherokee SOIL & WATER CONSERVATION DISTRICT Kansas STATE DATE 7-13-72

AREAS	TABLE I NUMBERS OF PEOPLE 1960	1970	TABLE III AGE GROUPS - 1970 15-29	30-44	45	TABLE IV OCCUPATION - 1970 Employed	Professional	Skilled	TABLE V FAMILY INCOME - 1970 SLAI Population	Median Family Income	Proportion LAI-MFI
APPRAISAL COUNTY											
Cherokee	22,279	21,549	4372	3112	8616	7090	1122	2637	8	6470	518
SURROUNDING COUNTIES											
Labette	26805	25775	5386	3487	10201	9,118	1903	2797	9	7316	658
Neosho	19,455	18,812	3743	2702	7525	6,727	1431	1887	7	7303	511
Crawford	37,032	37,850	10062	4688	15,129	13983	3277	3372	14	6642	930
Barton (Mo.)	11,113	10,431	1,808	1,434	4,836	3735	727	851	4	6013	241
Jasper (Mo.)	78,863	79,852	17,586	12,457	29,282	25,611	6361	9,302	30	7,312	2,194
Newton (Mo.)	30073	32,901	6909	5510	11621	11,377	2466	3840	12	6,557	826
Ottawa (Okla.)	28301	29,800	7052	4575	12,615	10,831	1,900	3133	11	7,264	799
Craig (Okla.)	16,303	14,722	3695	2,305	6,311	5,096	1081	1,360	5	6,215	311
TOTALS L.A.I.	270,244	271,713	59013	40,275	106,196	97,568	20,230	29684			
19__ PROJECTION	272,448										
19__ PROJECTION	274,651					% of Total Employed	21	30	L.A.I. MEDIAN FAMILY INCOME		6988
TOTAL POPULATION IN AGE GROUPS			22	15	39	U.S. Average	23	31			
			24th	17th	31st	U.S. Average					

TABLE VI — PROXIMITY & ACCESS

ROADS IN COUNTIES	MILES	
All Weather Roads	1132	
Major Tourist Routes	147	
PROXIMITY	MILES	Total Road Miles
25 mi. of Urban Centers 5000	906	80
75 mi. of Urban Centers 20,000	579	75
40 mi. of Urban Centers 20,000	1132	100
S.D.U.C. in 50-150 mi. Zone	10	NUMBER
ACCESS	SQUARE MI	Total Area
From Urban Areas of 5000	556	100
From Urban Areas of 20,000	556	100
Total Accessible Area	556	100
Total Area of County	556	[illegible]

Data for Table VI and Lines 47-48 of Table VII are to be obtained locally

TABLE II

SMALL URBAN CENTERS IN L.A.I. 5000-20,000	1960	1970
Chanute	10,849	10,341
Parsons	13,929	13,015
Carthage, Mo.	12,809	12,787
Webb City, Mo.	6,740	6811
Neosho, Mo.	7452	7517
Miami, Okla.	12,869	13,880
Vinita, Okla.	6027	5547
SUBTOTAL	70275	69894
19__ PROJECTION	69,704	
19__ PROJECTION	69,132	
LARGE URBAN CENTERS IN L.A.I. OVER 20,000		
Pittsburg	18678	20171
Joplin, Mo.	34400	37018
SUBTOTAL	53078	57189
19__ PROJECTION	59,245	
19__ PROJECTION	65,411	
TOTAL L.A.I. URBAN CENTERS	123353	127083
19__ PROJECTION	124,245	
19__ PROJECTION	134,870	
SMSA SDUC's	1960	1970
Wichita	381,626	389,352
Topeka	141,286	155,322
K.C., Ks	345,287	404,567
K.C., Mo	1092,545	1,253,916
Springfield	126,276	152,951
Tulsa	418,974	476,945
Okla. City	511,833	640,889
TOTAL SDUC's	3002,827	3413860
19__ PROJECTION	3,709,577	
19__ PROJECTION	4,417,927	

TABLE VII — RURAL OWNERSHIP & LAND USE

SIZE OF FARMS	ACRES
COUNTY TOTAL	362,684
180-219 acre class	11,540
220-259 acre class	9,372
260-499 acre class	78,773
500-999 acre class	117,261
1000 acres and over	45,700
TOTAL 180 acres and over	262,657
1-99 acre class	8,220
100-179 acre class	15,560
TOTAL 1-179 acre class	44,522
% of Total	
180 acres & over	87
1-179 acres	15
TYPE OF FARMS	**NO.**
Dairy	24
Livestock	155
General	27
TOTAL Dairy, Livestock, General	206
ALL FARMS	1037
% of Total Dairy, Livestock & General	20
OTHER LANDS	**ACRES**
Public Lands Open to Hunting	6,078
Corporate Lands Open to Hunting	—
Public, Corporate and Farms over 180 acres	268,137
TOTAL COUNTY	362,682
% of Total Public, Corporate and Farms over 180 acres	89

(See Instructions Reverse Side)

SMSA SDUC's	SDUC Population	Median Family Income	Proportion SDUC-MFI
Wichita	11	9413	1035
Topeka	5	9661	493
K.C. Ks	12	11,285	1354
K.C. Mo	36	10,142	3637
Springfield	4	8215	327
Tulsa	17	7736	1300
Okla. City	15	7348	1682
MEDIAN FAMILY INCOME SDUC's			7870

TABLE VIII — CLIMATE

WEATHER STATION LOCATIONS	Topeka	Wichita	Okla. City	KC Mo	Tulsa	Little Rock		
% POSSIBLE SUNSHINE								
JANUARY	50	59	57	52				
FEBRUARY	53	63	59	55				
MARCH	55	66	63	57				
APRIL	57	63	61	59				
MAY	57	61	65	63	57	64		
JUNE	65	75	75	69	65	70		
JULY	66	87	77	76	73	69		
AUGUST	68	83	81	73	75	72		
SEPTEMBER	74	87	75	69	73	69		
OCTOBER	67	65	69	65				
NOVEMBER	57	71	62	58				
DECEMBER	52	67	60	57				
MEAN TEMPERATURE								
JANUARY	25.7	32.0	37.0	31.7	37	42		
FEBRUARY	33.4	31.2	41.3	33.8	42	46		
MARCH	42.6	40.3	48.5	43.3	50	53		
APRIL	54.5	56.2	59.9	55.7	61	63		
MAY	63.8	64.9	68.4	65.6	68	72		
JUNE	73.8	75.3	78.0	75.9	78	78		
JULY	77.2	80.7	82.5	81.5	82	82		
AUGUST	77.6	79.9	83.8	79.8	82	81		
SEPTEMBER	66.0	71.1	73.8	71.3	74	75		
OCTOBER	57.9	60.2	63.9	60.2	63	64		
NOVEMBER	42.6	45.1	48.4	44.6	50	52		
DECEMBER	32.2	35.5	40.3	35.8	41	44		
PRECIPITATION								
JANUARY	1.07	1.05	1.31	1.41	1.98	5.12		
FEBRUARY	.97	.98	1.37	1.24	1.57	4.06		
MARCH	2.03	1.14	1.97	2.49	3.61	4.55		
APRIL	2.50	1.52	3.12	3.56	4.25	5.16		
MAY	4.32	3.61	5.17	4.40	4.77	4.85		
JUNE	4.57	4.94	4.47	4.57	5.15	3.43		
JULY	3.25	3.43	2.31	3.19	2.69	3.10		
AUGUST	4.16	3.96	3.52	3.77	3.23	3.15		
SEPTEMBER	3.47	3.23	3.02	3.25	4.35	2.85		
OCTOBER	2.52	2.18	2.51	2.86	3.04	2.81		
NOVEMBER	1.51	1.73	1.56	1.80	2.40	3.92		
DECEMBER	1.16	1.10	1.41	1.53	1.69	4.05		
WINTER								
Days 1st - Last 16 Degree	91	101				Give Special Winter Data Only For Local Stations		
Total Inches Snowfall	18.7	7.7						

Data for Tables I, II, III, IV and V to be obtained from U.S. Census of Populations. Data for Table VII, except below Line 46, to be obtained from U.S. Census of Agriculture.

SUMMARY OF APPRAISALS OF POTENTIALS FOR OUTDOOR RECREATION

DATE OF APPRAISAL July, 1972 IN Cherokee COUNTY Cherokee SOIL (& WATER) CONSERVATION DISTRICT OF Kansas STATE

KINDS OF RECREATION DEVELOPMENTS		SCORES FOR KEY ELEMENTS (RATINGS X MULTIPLIERS)																	TOTAL SCORE	APPRAISAL (ADJECTIVE)
		CLIMATE	SCENERY	NATURAL AREAS	HISTORIC AREAS	SOILS	WATER ARS. EXISTING	WATER ARS. IMPOUNDMENT SITES	WILD-LIFE HABITAT	WILD-LIFE POPULATIONS	POPULA.-PEOPLE SIZE & DISTRIBUTION	POPULA.-PEOPLE AGE & OCCUPATION	POPULA.-PEOPLE INCOME LEVELS	PROX. & ACCESS PROXIMITY	PROX. & ACCESS ACCESS	PROX. & ACCESS TOURIST ROUTES	RURAL OWNERSHIP AND LAND USE PATTERN			
I.	VACATION CABINS, COTTAGES, & HOMESITES	10	14	5	XXX	5	4	18	XXX	XXX	10	XXX	14	4	10	XXX	XXX		94	Medium
II.	CAMPING -VACATION SITE	10	14	10	XXX	5	12	8	XXX	XXX	XXX	XXX	XXX	XXX	7	XXX	XXX		66	Medium
	-PACK TRIP	—	—	—	XXX	XXX	—	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		—	—
	-TRANSIENT	5	7	XXX	XXX	5	XXX	4	XXX	XXX	XXX	XXX	XXX	XXX	XXX	30	XXX		51	Medium
III.	PICNIC & SPORTS AREAS -GAME, PLAY, TARGET AREAS	5	XXX	XXX	XXX	5	XXX	XXX	XXX	XXX	9	1	2	24	10	XXX	XXX		56	Medium
	-BICYCLING, Motorcycling	5	8	XXX	XXX	5	XXX	XXX	XXX	XXX	9	1	1	16	10	XXX	XXX		55	Medium
	-PICNICKING	6	7	XXX	XXX	5	7	7	XXX	XXX	9	XXX	1	24	10	XXX	XXX		76	Medium
IV.	FISHING WATERS -WARM WATERS	9	XXX	XXX	XXX	XXX	15	14	XXX	16	5	XXX	XXX	8	XXX	XXX	XXX		67	Medium
	-COLD WATERS	—	XXX	XXX	XXX	XXX	—	—	XXX	—	XXX	—	XXX	—	XXX	XXX	XXX		—	—
V.	GOLF COURSES -STANDARD & PAR-3	XXX	5	XXX	XXX	7	XXX	XXX	XXX	XXX	3	10	15	16	XXX	XXX	XXX		56	Medium
	-MINIATURE & DRIVING RANGES	XXX	XXX	XXX	XXX	7	XXX	XXX	XXX	XXX	3	10	5	24	XXX	XXX	XXX		49	Medium
VI.	HUNTING AREAS -SMALL GAME	9	XXX	XXX	XXX	7	XXX	XXX	45	24	12	XXX	XXX	10	XXX	XXX	9		116	High
	-BIG GAME	9	XXX	XXX	XXX	7	XXX	XXX	40	15	12	XXX	XXX	XXX	XXX	XXX	XXX		83	High
	-WATERFOWL	9	XXX	XXX	XXX	5	XXX	XXX	20	9	6	XXX	6	XXX	XXX	XXX	XXX		55	Medium
VII.	NATURAL, SCENIC, AND HISTORIC AREAS -NATURAL AREAS	XXX	16	24	XXX	XXX	XXX	XXX	XXX	8	10	XXX	XXX	3	5	7	XXX		73	Medium
	-SCENIC AREAS	XXX	25	20	XXX	XXX	XXX	XXX	XXX	XXX	20	XXX	XXX	3	10	7	XXX		85	Medium
	-HISTORIC AREAS	XXX	XXX	XXX	25	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX	3	XXX	21	XXX		59	Medium
VIII.	RIDING STABLES	6	XXX	15	XXX	XXX	XXX	XXX	XXX	XXX	2	7	6	24	XXX	XXX	XXX		60	Medium
IX.	SHOOTING PRESERVES	9	4	XXX	XXX	10	XXX	XXX	XXX	XXX	4	5	9	20	XXX	XXX	XXX		61	Medium
X.	VACATION FARMS AND RANCHES -FARMS	15	10	10	XXX	5	7	6	XXX	XXX	XXX	XXX	XXX	3	XXX	XXX	6		62	Medium
	-RANCHES	—	—	—	XXX	XXX	—	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	—		—	—
XI.	WATER SPORTS AREAS	5	4	XXX	XXX	XXX	8	15	XXX	XXX	6	4	XXX	5	XXX	XXX	XXX		47	Medium
XII.	WINTER SPORTS AREAS	—	—	XXX	XXX	—	—	—	XXX	XXX	—	—	—	—	—	XXX	XXX		—	—
		A.	B.	C.	D.	E.	F.1	F.2	G.1	G.2	H.1	H.2	H.3	I.1	I.2	I.3	J.	K.		

USDA-SCS LINCOLN, NEBR. 1967

5, L-24127-13

INVENTORY OF POTENTIAL IMPOUNDMENT SITES

Cherokee County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Acres)	Volume (Acre-Feet)	Drainage Sq. Mi.)
1.	Trib. to Lightning Creek	32-31-22	30	256	3.70
2.	Plum Creek	35-31-22	52	485	7.00
3.	Trib. to Lightning Creek	9-32-22	24	194	2.80
4.	Deer Creek	22-32-22	35	298	4.30
5.	Trib. to Cherry Creek	3-32-23	62	582	8.40
6.	Trib. to Cherry Creek	25-32-22	28	236	3.40
7.	Trib. to Little Cherry Creek	34-32-23	—	—	—
8.	Trib. to Little Cherry Creek	4-33-23	9	90	1.30
9.	Trib. to Cherry Creek	7-33-23	24	222	3.20
10.	Trib. to Cherry Creek	18-33-23	27	270	3.90
11.	Center Creek	34-33-22	38	333	4.80
12.	Trib. to Fly Creek	29-33-23	—	—	—
13.	Trib. to Fly Creek	33-33-23	—	—	—
14.	" " " "	32-33-23	—	—	—
15.	" " " "	6-34-23	72	707	10.20
16.	Fly Creek	3-34-23	—	—	—
17.	Fly Creek	8-34-23	105	1,053	15.20
18.	" "	15-34-23	—	—	—
19.	Trib. to Little Fly Creek	22-34-22	35	298	4.30
20.	Trib. adjacent to Fly Creek	10-35-22	24	201	2.90
21.	Trib. to Four Miles Creek	5-35-23	26	208	3.00
22.	Four Miles Creek	30-34-23	50	534	7.70
23.	Trib. 3 mi. west of Baxter Jct.	8-35-24	32	263	3.80
24.	Trib. 2 mi. S.E. Baxter Springs	8-35-25	33	402	5.80

INVENTORY OF POTENTIAL IMPOUNDMENT SITES (Cont'd - 2)

Cherokee County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Acres)	Volume (Acre-Feed)	Drainage Sq. Mi.)
25.	Trib. to Spring River	32-34-24	28	243	3.50
26.	" " " "	17-34-24	17	166	2.40
27.	" " " "	11-34-24	45	402	5.80
28.	" " " "	30-33-25	13	111	1.60
29.	" " " "	11-33-24	43	312	4.50
30.		31-32-24	12	83	1.20
31.	Trib. to Shawnee Creek	33-32-24	62	83	1.20
32.	" " " "	22-32-24	18	111	1.60
33.	" " " "	10-32-24	35	256	3.70
34.	Trib. to Cow Creek	11-32-25	40	291	4.20

INVENTORY OF NATURAL, SCENIC, AND HISTORIC AREAS

Cherokee County

Name of Area	Township	Area	Description
Historic:			
Baxter Springs, Kansas	Spring Valley		US 66 and 166. Baxter was first cowtown in Kansas and site of old Fort Baxter. Site of national cemetery and Baxter massacre.
Quaker Academy	Lowell		1 mile north, 1 west, $\frac{1}{4}$ north of Riverton. Unrestored building that was once used as a school for Quakers.
Columbus Museum	Columbus		Museum containing many relics and artifacts of area. On west country road in Columbus
Overland Stage Stop			3 miles north of Riverton on Ks. 26. Old stop on stage line between Westport and Baxter.

INVENTORY OF NATURAL, SCENIC, AND HISTORIC AREAS (Cont'd - 2)

Cherokee County

Name of Area	Township	Area	Description
Scenic:			
Strip Pits		20,000 acres	Northwest of Columbus. Area created by mining for coal. Contains many bodies of water that are stocked with fish.
Lead-Zinc Mining Galena, Kansas		2,000 acres	Highway 166, 26, 66 around Galena. One of the leading areas in mining of lead and zinc in late 1800's and early 1900's.

INVENTORY OF EXISTING WATER AREAS

Cherokee County

NAME	LOCATION	SIZE	PRESENT USE
Shoal Creek	South of Galena - flows into Spring River	6 miles in county 50'- 60' wide 20' deep	Excellent bass and channel cat stream; good picnic facilities at Schermerhorn Park; camping facilities available. 10 month flow; mild flooding; temperatures - cool
Spring River	Flows across SE corner of county entering Kansas from Mo. 1 mile north of 96 highway at Kansas-Missouri line	20 miles in county 170' wide, 10'- 15' deep	Good fishing; camping area at Baxter; damned at Riverton - makes area for duck hunting. 9 month flow; severe flooding; water temperature variable; severely polluted from wastes
Brush Creek	Flowing from Columbus to north of Baxter Springs	20 miles long, 20'- 30' wide 4' depth	No recreation facilities; fair fishing; access good by numerous roads crossing. 6 month flow; moderately severe flooding; water temperature cool; moderately polluted from Columbus Sewage Plant
Neosho River	Western edge of county	15 miles in county 200' wide, 20'- 25' deep	Noted catfish stream. Some cabin development along stream. Two major highways cross west of Hallowell and east of Chetopa. Year round flow; subject to moderate flooding; water temperature cool

INVENTORY OF EXISTING WATER AREAS (Cont'd - 2)

Cherokee County

NAME	LOCATION	SIZE	PRESENT USE
Cow Creek	Enters county 2 miles west of highway 69 and 160. Flows into Spring River	9 miles in county 20'- 25' wide, 5' deep	No recreation developments; fair access; fair fishing. 6 month flow; moderate flooding - cool water; polluted from waste disposal and mining
Strip pits	Northwest of Columbus	2,000 acres of water pits 40'- 60' wide and 40'- 50' deep	Undeveloped; fishing is popular; access is good; Kansas Forestry, Fish and Game Commission has 3,300 acres for public hunting and fishing. Deep cold water formed by strip mining operations; new pits polluted by acid drainage - leaves in 2 to 3 years normally

CRAWFORD COUNTY

APPRAISAL OF OUTDOOR RECREATION POTENTIALS

STATISTICS WORK SHEET

Crawford COUNTY Crawford SOIL & WATER CONSERVATION DISTRICT Kansas STATE DATE 7-13-72

AREAS	TABLE I NUMBERS OF PEOPLE 1960	TABLE I 1970	TABLE III AGE GROUPS – 1970: 15-29	30-44	45	TABLE IV OCCUPATION – 1970: Employed	Professional	Skilled	TABLE V FAMILY INCOME – 1970: % L.A.I. Population	Median Family Income	Proportion L.A.I.-M.F.I.
APPRAISAL COUNTY											
Crawford	37032	37850	10062	4688	15129	13983	3299	3372	15	6642	996
SURROUNDING COUNTIES											
Neosho	19455	18812	3743	2702	7525	6727	1431	1889	8	7303	584
Allen	16369	15043	2784	2113	6388	5479	1094	1371	6	6835	410
Bourbon	16090	15215	3045	2739	6730	6229	1249	1353	6	6794	407
Vernon (Mo.)	20540	19065	3549	2699	8543	6729	1124	1310	8	6237	499
Barton (Mo.)	11,113	10431	1808	1434	4836	3735	727	851	4	6013	241
Jasper (Mo.)	78,863	79,852	17586	12459	27282	29611	6301	9305	33	7312	2413
Cherokee	22279	21549	4372	3112	8616	7010	1122	2637	9	6470	582
Labette	26,805	25775	5386	3487	10201	9118	1903	2797	11	7316	805
TOTALS L.A.I.	248,546	243,542	52335	36433	97250	88701	18250	24885	100		
1975 PROJECTION	241,115										
1980 PROJECTION	233,676					% of Total Employed	20	28		L.A.I. MEDIAN FAMILY INCOME	6937
TOTAL POPULATION IN AGE GROUPS			21	15	40	U.S. Average	29%	32%			
			24%	17%	31%	U.S. Average					

TABLE VI — PROXIMITY & ACCESS

ROADS IN COUNTIES	MILES	
All Weather Roads	1140	
Major Tourist Routes	164	
PROXIMITY	**MILES**	**Total Road Miles**
20 Mi. of Urban Centers 5000	684	60
20 Mi. of Urban Centers 20,000	1053	95
40 Mi. of Urban Centers 20,000	1140	100
S.D.U.C.'s in 50-150 Mi. Zone	11	NUMBER
ACCESS	**SQUARE MI**	**Total Area**
From Urban Areas of 5000	578	100
From Urban Areas of 20,000	578	100
Total Accessible Area	578	100
Total Area of County	578	100

Data for Table VI and Lines 47-48 of Table VII are to be obtained locally.

TABLE II

SMALL URBAN CENTERS IN L.A.I. (5000-20,000)	1960	1970
Chanute	10849	10,341
Iola	6885	6,493
Ft. Scott	9,410	8967
Nevada, Mo.	7997	7,784
Carthage, Mo.	12,909	12,783
Webb City, Mo.	6740	6811
Parsons	13929	13015
SUBTOTAL	68619	66,196
1975 PROJECTION	64995	
1980 PROJECTION	61,350	
LARGE URBAN CENTERS IN L.A.I. (Over 20,000)		
Pittsburg	18678	20171
Joplin, Mo.	34400	37018
SUBTOTAL	53078	57189
1975 PROJECTION	59245	
1980 PROJECTION	65411	
TOTAL L.A.I. URBAN CENTERS	121,697	123385
1975 PROJECTION	124,229	
1980 PROJECTION	126,761	
S.D.U.C.'s SMSA	1960	1970
Wichita	381,626	389352
Topeka	141,286	155,322
K.C., Mo.	1,093,544	1,253,716
Springfield	126,276	152,929
Tulsa, Okla.	418,974	476,945
Oklahoma City	511,833	640,889
K.C. Ks	319287	464,0[illegible]
TOTAL S.D.U.C.'s	3,092,223	3,473,860
1975 PROJECTION	3,707,877	
1980 PROJECTION	4,417,927	

TABLE V (continued)

SMSA S.D.U.C.'s	S.D.U.C. Population	Median Family Income	Proportion S.D.U.C. M.F.I.
Wichita	11	9413	1035
Topeka	5	9661	483
K.C. K.	12	11285	1354
K.C. Mo.	36	10242	3687
Springfield	4	8215	329
Tulsa	14	9256	1300
Okla. City	18	9348	1682
MEDIAN FAMILY INCOME S.D.U.C.'s			9870

TABLE VII — RURAL OWNERSHIP & LAND USE

SIZE OF FARMS	ACRES
COUNTY TOTAL	321391
in 180-219 acre class	12,348
in 220-259 acre class	20,865
in 260-499 acre class	87,072
in 500-1000 acre class	95,453
in over 1000 acre class	54,847
TOTAL 180 acre and over	275,585
in 100-139 acre class	5,276
in 140-179 acre class	26,375
TOTAL 100-259 acres	61,864
% of Total	
180 acres and over	86
100-259 acres	19
TYPE OF FARMS	**NO.**
Dairy	62
Livestock	297
General	64
TOTAL - Dairy, Livestock, General	423
ALL FARMS	1130
% of Total: Dairy, Livestock & General	37
OTHER LANDS	**ACRES**
Public Lands - open to hunting	3680
Corporate Lands - open to hunting	–
Public, Corporate and Farms over 180 acres	279265
TOTAL COUNTY	321,391
% of Total: Public, Corporate and Farms over 180 acres	87

(See Instructions Reverse Side)

TABLE VIII — CLIMATE

WEATHER STATION LOCATIONS — NAMES

	Topeka	Wichita	Okla City	KC Mo	Tulsa	Little Rock		
% POSSIBLE SUNSHINE								
JANUARY	50	59	59	52				
FEBRUARY	52	63	54	55				
MARCH	55	66	63	57				
APRIL	54	63	61	59				
MAY	57	61	65	63	57	64		
JUNE	65	75	75	69	65	70		
JULY	66	87	77	76	73	69		
AUGUST	68	83	81	73	75	72		
SEPTEMBER	74	87	75	69	73	69		
OCTOBER	67	65	69	68				
NOVEMBER	57	71	62	58				
DECEMBER	52	57	60	51				
MEAN TEMPERATURE								
JANUARY	28.7	32.0	37.0	31.7	37	42		
FEBRUARY	33.4	37.2	41.3	35.8	42	46		
MARCH	43.6	45.3	45.2	43.3	50	53		
APRIL	[illegible]	56.2	59.9	55.7	61	63		
MAY	[illegible]	64.9	68.4	65.6	68	72		
JUNE	73.8	75.3	78.0	75.7	78	78		
JULY	79.2	80.9	82.5	81.5	82	82		
AUGUST	72.6	79.9	82.8	79.8	82	81		
SEPTEMBER	68.0	71.7	73.8	71.3	74	75		
OCTOBER	57.9	60.2	62.9	60.2	63	64		
NOVEMBER	42.6	45.1	48.4	44.6	52	52		
DECEMBER	31.2	35.5	40.3	35.8	41	44		
PRECIPITATION								
JANUARY	1.07	1.05	1.31	1.41	1.98	5.12		
FEBRUARY	.97	.98	1.37	1.34	1.57	4.06		
MARCH	2.03	1.74	1.97	2.49	2.61	4.95		
APRIL	3.50	3.52	3.12	3.56	4.25	5.16		
MAY	4.32	3.79	5.19	4.40	4.77	4.85		
JUNE	4.54	4.49	4.47	4.57	5.15	3.43		
JULY	3.25	3.43	2.37	3.19	3.69	3.10		
AUGUST	7.66	2.76	2.52	3.17	3.23	3.16		
SEPTEMBER	4.44	3.23	3.62	3.25	4.25	2.85		
OCTOBER	2.52	3.15	2.57	2.86	3.09	2.81		
NOVEMBER	1.54	1.73	1.56	1.80	2.40	3.92		
DECEMBER	1.16	1.10	1.41	1.53	1.69	4.05		
WINTER								
Days 1st - Last 16 Degree	91	101				Give Special Winter Data Only		
Total Inches Snowfall	15.7	7.7				For Local Stations		

Data for Tables I, II, III, IV and V to be obtained from U. S. Census of Populations. Data for Table VII, except below Line 46, to be obtained from U. S. Census of Agriculture.

SUMMARY OF APPRAISALS OF POTENTIALS FOR OUTDOOR RECREATION

DATE OF APPRAISAL July, 1972 IN Crawford COUNTY Crawford SOIL (& WATER) CONSERVATION DISTRICT OF Kansas STATE

KINDS OF RECREATION DEVELOPMENTS		SCORES FOR KEY ELEMENTS (RATINGS X MULTIPLIERS)																TOTAL SCORE	APPRAISAL (ADJECTIVE)
		CLIMATE	SCENERY	NATURAL AREAS	HISTORIC AREAS	SOILS	WATER ARS. EXISTING	WATER ARS. IMPOUNDMENT SITES	WILD-LIFE HABITAT	WILD-LIFE POPULATIONS	POPULA.-PEOPLE SIZE & DISTRIBUTION	POPULA.-PEOPLE AGE & OCCUPATION	POPULA.-PEOPLE INCOME LEVELS	PROX. & ACCESS PROXIMITY	PROX. & ACCESS ACCESS	PROX. & ACCESS TOURIST ROUTES	RURAL OWNERSHIP AND LAND USE PATTERN			
I.	VACATION CABINS, COTTAGES, & HOMESITES	10	12	7	XXX	5	3	18	XXX	XXX	10	XXX	14	4	10	XXX	XXX		93	Medium
II.	CAMPING -VACATION SITE	10	12	14	XXX	5	6	12	XXX	XXX	XXX	XXX	XXX	XXX	6	XXX	XXX		65	Medium
	-PACK TRIP	—	—	—	XXX	XXX	—	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		—	—
	-TRANSIENT	5	6	XXX	XXX	5	XXX	6	XXX	XXX	XXX	XXX	XXX	XXX	XXX	50	XXX		72	High
III.	PICNIC & SPORTS AREAS -GAME, PLAY, TARGET AREAS	6	XXX	XXX	XXX	5	XXX	XXX	XXX	XXX	15	0	6	18	10	XXX	XXX		60	Medium
	-BICYCLING, Motorcycling	6	6	XXX	XXX	5	XXX	XXX	XXX	XXX	15	0	6	12	10	XXX	XXX		60	Medium
	-PICNICKING	6	6	XXX	XXX	5	7	7	XXX	XXX	15	XXX	6	18	10	XXX	XXX		80	Medium
IV.	FISHING WATERS -WARM WATERS	8	XXX	XXX	XXX	XXX	21	14	XXX	14	5	XXX	XXX	6	XXX	XXX	XXX		68	Medium
	-COLD WATERS	—	XXX	XXX	XXX	XXX	—	—	XXX	—	XXX	—	XXX	—	XXX	XXX	XXX		—	—
V.	GOLF COURSES -STANDARD & PAR-3	XXX	8	XXX	XXX	6	XXX	XXX	XXX	XXX	15	16	21	20	XXX	XXX	XXX		86	High
	-MINIATURE & DRIVING RANGES	XXX	XXX	XXX	XXX	6	XXX	XXX	XXX	XXX	15	16	7	10	XXX	XXX	XXX		54	Medium
VI.	HUNTING AREAS -SMALL GAME	8	XXX	XXX	XXX	7	XXX	XXX	45	24	12	XXX	XXX	10	XXX	XXX	9		115	High
	-BIG GAME	8	XXX	XXX	XXX	7	XXX	XXX	40	15	12	XXX	XXX	XXX	XXX	XXX	XXX		82	High
	-WATERFOWL	8	XXX	XXX	XXX	8	XXX	XXX	40	18	6	XXX	6	XXX	XXX	XXX	XXX		86	Medium
VII.	NATURAL, SCENIC, AND HISTORIC AREAS -NATURAL AREAS	XXX	16	24	XXX	XXX	XXX	XXX	XXX	5	10	XXX	XXX	10	10	8	XXX		83	Medium
	-SCENIC AREAS	XXX	25	20	XXX	XXX	XXX	XXX	XXX	XXX	20	XXX	XXX	10	20	8	XXX		103	High
	-HISTORIC AREAS	XXX	XXX	XXX	20	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX	10	XXX	24	XXX		64	Medium
VIII.	RIDING STABLES	8	XXX	15	XXX	XXX	XXX	XXX	XXX	XXX	6	3	6	27	XXX	XXX	XXX		65	Medium
IX.	SHOOTING PRESERVES	8	8	XXX	XXX	14	XXX	XXX	XXX	XXX	6	3	15	20	XXX	XXX	XXX		74	Medium
X.	VACATION FARMS AND RANCHES -FARMS	15	10	10	XXX	5	7	6	XXX	XXX	XXX	XXX	XXX	5	XXX	XXX	15		73	Medium
	-RANCHES	—	—	—	XXX	XXX	—	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	—		—	—
XI.	WATER SPORTS AREAS	6	5	XXX	XXX	XXX	8	6	XXX	XXX	12	3	XXX	5	XXX	XXX	XXX		45	Low
XII.	WINTER SPORTS AREAS	—	—	XXX	XXX	—	—	—	XXX	XXX	—	—	—	—	—	XXX	XXX		—	—
		A.	B.	C.	D.	E.	F.1	F.2	G.1	G.2	H.1	H.2	H.3	I.1	I.2	I.3	J.	K.		

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INVENTORY OF POTENTIAL IMPOUNDMENT SITES

Crawford County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Acres)	Volume (Acre-Feet)	Drainage Sq. Mi.)
1.	Little Walnut Creek	31-27-22	48	450	6.50
2.	Trib. to Little Walnut Creek	11-28-21	18	139	2.00
3.	Trib. to Walnut Creek	32-28-22	23	263	3.80
4.	" " " "	1-29-21	17	187	2.70
5.	Big Walnut Creek	9-28-22	50	409	5.90
6.	Trib. to Big Walnut Creek	14-28-22	100	1,011	14.60
7.	" " " " "	22-28-22	16	152	2.20
8.	" " " " "	27-28-22	25	243	3.50
9.	" " " " "	34-28-22	18	194	2.80
10.	Trib. 3 mi. W. 2 mi. S. of Greenbush	30-29-22	82	880	12.70
11.	Trib. 2 mi. W 4 mi. S. of Greenbush	5-30-22	13	97	1.40
12.	Trib. 2 mi. W. 5 mi. S. of Greenbush	8-30-22	38	402	5.80
13.	Trib. 3 mi. W. 6 mi. S. of Greenbush	18-30-22	17	146	2.10
14.	Trib. 3 mi. W 9 mi. S of Greenbush	31-30-22	26	215	3.10
15.	Trib. 2 mi. W. 1 mi. N. of McCune	7-31-22	15	111	1.60
16.	Trib. to Lightning Creek	32-28-23	—	—	—
17.	" " " "	34-28-23	—	—	—
18.	" " " "	3-29-23	—	—	—
19.	" " " "	17-29-23	17	152	2.20
20.	" " " "	15-29-23	18	146	2.10
21.	Trib. to Lightning Creek	30-29-23	75	707	10.20
22.	" " " "	28-29-23	12	97	1.40
23.	" " " "	10-30-23			
24.	" " " "	12-30-22	46	416	6.00

INVENTORY OF POTENTIAL IMPOUNDMENT SITES (Cont'd - 2)

Crawford County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Acres)	Volume (Acre-Feet)	Drainage Sq. Mi.)
25.	Trib. to Lightning Creek	13-30-22	14	118	1.70
26.	" " " "	17-30-23	100	1,220	17.60
27.	" " " "	34-30-22	—	—	———
28.	Lime Creek	33-30-23	90	1,067	15.40
29.	" "	3-31-23	22	208	3.00
30.	Trib. to Lightning Creek	3-31-22	98	1,025	14.80
31.	Trib. to Cow Creek	4-29-24	—	—	———
32.	" " " "	9-29-24	—	—	———
33.	" " " "	7-29-24	95	880	12.70
34.	" " " "	17-29-24	80	679	9.80
35.	Middle Cow Creek	13-29-24	60	471	6.80
36.	Trib. to Cow Creek	21-29-24	45	333	4.80
37.	" " " "	5-30-24	30	249	3.60
38.	" " " "	11-30-24	17	132	1.90
39.	Trib. to Little Cow Creek	3-31-25	26	215	3.10
40.	Trib. 1 mi. W. of Opolis	14-31-25	—	—	———

LABETTE COUNTY

APPRAISAL OF OUTDOOR RECREATION POTENTIALS

STATISTICS WORK SHEET

Labette COUNTY Labette SOIL & WATER CONSERVATION DISTRICT Kansas STATE DATE 7-13-72

Tables I, III, IV, V

AREAS	TABLE I Numbers of People 1960	TABLE I 1970	TABLE III Age Groups – 1970: 15-29	30-44	45-	TABLE IV Occupation – 1970: Employed	Professional	Skilled	TABLE V Family Income – 1970: % L.A.I. Population	Median Family Income	Proportion L.A.I. M.F.I.
APPRAISAL COUNTY											
Labette	26,805	25,775	5,386	3,487	10,261	9,118	1,903	2,797	12	7,316	878
SURROUNDING COUNTIES											
Montgomery	45,007	39,949	7,823	5,711	16,739	14,587	3,243	4,360	19	7,334	1,393
Wilson	13,077	11,317	2,009	1,531	5,186	4,157	777	1,260	5	6,492	324
Neosho	19,455	18,812	3,743	2,702	7,525	6,727	1,431	1,889	10	7,303	730
Crawford	37,032	37,850	10,062	4,658	15,129	13,983	3,299	3,372	18	6,642	1,196
Cherokee	22,279	21,549	4,372	3,112	8,610	7,090	1,122	2,637	10	6,470	647
Ottawa (Okla)	28,301	29,800	7,052	4,575	12,615	10,531	1,900	3,733	14	7,264	1,017
Craig (Okla)	16,303	14,722	2,695	2,308	6,371	5,096	1,081	1,260	7	6,215	435
Nowata (Okla)	10,848	9,773	1,775	1,514	4,134	3,457	555	1,091	5	5,728	286
TOTALS L.A.I.	219,107	209,547	44,917	29,628	86,516	75,046	15,311	22,399	100		
1980 PROJECTION	204,767										
1990 PROJECTION	190,427					% of Total Employed	20	30	L.A.I. MEDIAN FAMILY INCOME		6,906
TOTAL POPULATION IN AGE GROUPS			21	14	41	U.S. Average	20	32			
			24%	17%	31%	U.S. Average SMSA's SDUC's			% SDUC Population	Median Family Income	Proportion SDUC M.F.I.
						Wichita			11	9,413	1,035
						Topeka			5	9,661	483
						K.C. Ks.			12	11,285	1,354
						K.C. Mo.			36	10,242	3,687
						Springfield			4	8,215	329
						Tulsa			14	9,286	1,300
						Okla. City			18	9,345	1,652
						MEDIAN FAMILY INCOME SDUC'S					9,570

TABLE VI — PROXIMITY & ACCESS

ROADS IN COUNTIES	MILES	
All Weather Roads	1143	
Major Tourist Routes	112	
PROXIMITY	MILES	% Total Road miles
20 mi. of Urban Centers 5000	1,120	98
20 mi. of Urban Centers 20,000	—	—
40 mi. of Urban Centers 20,000	1029	90
SDUC's in 50-150 mi. Zone	11	NUMBER
ACCESS	SQUARE mi	% Total Area
From Urban Areas of 5000	654	100
From Urban Areas of 20,000	—	
Total Accessible Area	654	100
Total Area of County	654	100

Data for Table VI and Lines 47-48 of Table VII are to be obtained locally.

TABLE II

SMALL URBAN CENTERS IN L.A.I. (5000-20,000)	1960	1970
Independence	11,222	10,347
Coffeyville	17,382	15,116
Chanute	10,849	10,341
Parsons	13,929	13,015
Miami, Okla.	12,869	13,880
Vinita, Okla	6,027	5,847
SUBTOTAL	72,278	68,546
1980 PROJECTION	66,650	
1990 PROJECTION	61,082	
LARGE URBAN CENTERS IN L.A.I. (20,000+)		
Pittsburg	18,678	20,171
Joplin, Mo	34,400	37,018
Bartlesville, Okla	27,878	29,672
SUBTOTAL	80,956	86,861
1980 PROJECTION	57,814	
1990 PROJECTION	98,671	
TOTAL L.A.I. URBAN CENTERS	153,234	155,407
1980 PROJECTION	156,494	
1990 PROJECTION	159,753	
SMSA'S ~~SDUC'S~~	1960	1970
Wichita	381,626	389,352
Topeka	141,286	155,322
K.C., Ks.	329,287	404,507
K.C. Mo.	1,092,545	1,253,916
Springfield, Mo.	126,276	152,929
Tulsa	418,974	476,945
Okla. City	511,833	640,884
TOTAL SDUC'S	3,001,827	3,473,860
1980 PROJECTION	3,709,377	
1990 PROJECTION	4,417,927	

Data for Tables I, II, III, IV and V to be obtained from U.S. Census of Populations. Data for Table VII, except below Line 46, to be obtained from U. S. Census of Agriculture.

TABLE VII — RURAL OWNERSHIP & LAND USE

SIZE OF FARMS	ACRES
COUNTY TOTAL	371,887
in 180-219 acre class	10,589
in 220-259 acre class	19,991
in 260-499 acre class	96,498
in 500-999 acre class	130,541
in over 1000 acre class	61,647
TOTAL 180 acre and over	319,566
in 100-139 acre class	8,305
in 140-179 acre class	27,840
TOTAL 100-259 acres	67,025
	% of Total
180 acres and over	86
100-259 acres	18
TYPE OF FARMS	NO.
Dairy	88
Livestock	419
General	62
TOTAL Dairy, Livestock, General	569
ALL FARMS	1,213
	% of Total
Dairy, Livestock & General	47
OTHER LANDS	ACRES
Public Lands open to hunting	1,200
Corporate Lands open to hunting	—
Public, Corporate and Farms over 180 acres	320,766
TOTAL COUNTY	371,587
	% of Total
Public, Corporate and Farms over 180 acres	86

(See Instructions Reverse Side)

TABLE VIII — CLIMATE

WEATHER STATION LOCATIONS (NAMES)	Topeka	Wichita	Okla City	KC Mo.	Tulsa	Little Rock		
% POSSIBLE SUNSHINE								
JANUARY	50	57	59	52				
FEBRUARY	52	63	57	55				
MARCH	55	66	63	57				
APRIL	54	63	61	59				
MAY	57	61	65	63	57	64		
JUNE	65	75	75	69	65	70		
JULY	66	84	77	76	73	69		
AUGUST	68	82	81	73	75	72		
SEPTEMBER	74	84	75	69	73	69		
OCTOBER	67	65	69	68				
NOVEMBER	57	71	62	58				
DECEMBER	52	67	60	57				
MEAN TEMPERATURE								
JANUARY	28.7	32.0	37.0	31.7	37	42		
FEBRUARY	33.4	37.2	41.3	35.8	42	46		
MARCH	42.6	45.3	45.5	43.3	50	53		
APRIL	54.5	56.2	59.9	55.7	61	63		
MAY	63.5	64.9	65.4	65.6	68	70		
JUNE	73.8	75.3	75.0	75.9	78	78		
JULY	79.2	80.9	82.5	81.5	82	82		
AUGUST	77.6	71.9	82.8	79.8	82	81		
SEPTEMBER	69.0	71.7	73.8	71.3	74	75		
OCTOBER	51.9	60.2	62.9	60.2	63	64		
NOVEMBER	42.6	45.1	48.4	44.6	50	52		
DECEMBER	32.2	35.5	40.3	35.8	41	44		
PRECIPITATION								
JANUARY	1.07	1.05	1.31	1.41	1.98	5.12		
FEBRUARY	.97	.98	1.37	1.24	1.57	4.06		
MARCH	2.03	1.74	1.97	2.49	2.61	4.83		
APRIL	3.50	3.52	3.12	3.56	4.20	5.16		
MAY	4.32	3.79	5.19	4.40	4.77	4.85		
JUNE	4.54	4.99	4.47	4.57	5.15	3.43		
JULY	3.22	3.43	2.37	3.19	2.69	3.10		
AUGUST	4.66	2.96	2.32	3.77	3.23	3.15		
SEPTEMBER	3.44	3.23	3.02	3.25	4.22	2.80		
OCTOBER	2.56	2.18	2.51	2.56	3.09	2.81		
NOVEMBER	1.54	1.73	1.56	1.50	2.40	3.92		
DECEMBER	1.16	1.10	1.41	1.53	1.69	4.00		
WINTER						Give Special Winter Data Only For Local Stations		
Days 1st - Last 16 Degree	91	101						
Total Inches Snowfall	18.7	7.7						

SUMMARY OF APPRAISALS OF POTENTIALS FOR OUTDOOR RECREATION

DATE OF APPRAISAL July, 1972 IN Labette COUNTY Labette SOIL (& WATER) CONSERVATION DISTRICT OF Kansas STATE

KINDS OF RECREATION DEVELOPMENTS		SCORES FOR KEY ELEMENTS (RATINGS X MULTIPLIERS)																	TOTAL SCORE	APPRAISAL (ADJECTIVE)
		CLIMATE	SCENERY	NATURAL AREAS	HISTORIC AREAS	SOILS	WATER ARS, EXISTING	WATER ARS, IMPOUNDMENT SITES	WILD-LIFE HABITAT	WILD-LIFE POPULATIONS	POPULA.-PEOPLE SIZE & DISTRIBUTION	POPULA.-PEOPLE AGE & OCCUPATION	POPULA.-PEOPLE INCOME LEVELS	PROX. & ACCESS PROXIMITY	PROX. & ACCESS ACCESS	PROX. & ACCESS TOURIST ROUTES	RURAL OWNERSHIP AND LAND USE PATTERN			
I.	VACATION CABINS, COTTAGES, & HOMESITES	8	6	3	XXX	5	3	15	XXX	XXX	10	XXX	14	4	10	XXX	XXX		78	Medium
II.	CAMPING -VACATION SITE	10	6	6	XXX	3	4	8	XXX	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX		47	Medium
	-PACK TRIP	—	—	—	XXX	XXX	—	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		—	—
	-TRANSIENT	5	3	XXX	XXX	3	XXX	5	XXX	XXX	XXX	XXX	XXX	XXX	XXX	35	XXX		51	Medium
III.	PICNIC & SPORTS AREAS -GAME, PLAY, TARGET AREAS	8	XXX	XXX	XXX	8	XXX	XXX	XXX	XXX	18	0	2	30	10	XXX	XXX		76	Medium
	-BICYCLING	—	—	XXX	XXX	—	XXX	XXX	XXX	XXX	—	—	—	—	—	XXX	XXX		—	—
	-PICNICKING	8	9	XXX	XXX	7	6	6	XXX	XXX	18	XXX	1	30	10	XXX	XXX		95	High
IV.	FISHING WATERS -WARM WATERS	6	XXX	XXX	XXX	XXX	12	14	XXX	14	7	XXX	XXX	10	XXX	XXX	XXX		63	Medium
	-COLD WATERS	—	XXX	XXX	XXX	XXX	—	—	XXX	—	XXX	—	XXX	—	XXX	XXX	XXX		—	—
V.	GOLF COURSES -STANDARD & PAR-3	XXX	2	XXX	XXX	6	XXX	XXX	XXX	XXX	18	0	18	0	XXX	XXX	XXX		45	Medium
	-MINIATURE & DRIVING RANGES	XXX	XXX	XXX	XXX	0	XXX	XXX	XXX	XXX	15	0	6	0	XXX	XXX	XXX		31	Low
VI.	HUNTING AREAS -SMALL GAME	10	XXX	XXX	XXX	9	XXX	XXX	45	18	14	XXX	XXX	9	XXX	XXX	9		114	High
	-BIG GAME	10	XXX	XXX	XXX	9	XXX	XXX	40	6	14	XXX	XXX	XXX	XXX	XXX	XXX		79	Medium
	-WATERFOWL	10	XXX	XXX	XXX	9	XXX	XXX	25	9	7	XXX	12	XXX	XXX	XXX	XXX		72	Medium
VII.	NATURAL, SCENIC, AND HISTORIC AREAS -NATURAL AREAS	XXX	8	18	XXX	XXX	XXX	XXX	XXX	2	10	XXX	XXX	10	10	9	XXX		67	Medium
	-SCENIC AREAS	XXX	10	12	XXX	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX	10	20	9	XXX		71	Medium
	-HISTORIC AREAS	XXX	XXX	XXX	10	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX	10	XXX	27	XXX		57	Medium
VIII.	RIDING STABLES	9	XXX	12	XXX	XXX	XXX	XXX	XXX	XXX	10	3	12	0	XXX	XXX	XXX		46	Medium
IX.	SHOOTING PRESERVES	9	6	XXX	XXX	12	XXX	XXX	XXX	XXX	10	5	18	18	XXX	XXX	XXX		78	Medium
X.	VACATION FARMS AND RANCHES -FARMS	12	6	6	XXX	6	0	5	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX	9		54	Medium
	-RANCHES	3	6	9	XXX	XXX	0	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	9		33	Low
XI.	WATER SPORTS AREAS	9	3	XXX	XXX	XXX	4	12	XXX	XXX	8	4	XXX	9	XXX	XXX	XXX		49	Medium
XII.	WINTER SPORTS AREAS	—	—	XXX	XXX	—	—	—	XXX	XXX	—	—	—	—	—	XXX	XXX		—	—
		A.	B.	C.	D.	E.	F.1	F.2	G.1	G.2	H.1	H.2	H.3	I.1	I.2	I.3	J.	K.		

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INVENTORY OF POTENTIAL IMPOUNDMENT SITES

Labette County

No.	Watershed	Location (Sec.-T,-R.)	Area (Surface Acres)	Volume (Acre-Feet)	Drainage (Sq. Mi.)
1.	Trib. 6 mi. W. of Dennis	11-31-17	42	266	5.20
2.	Trib. west of Big Hill Creek	26-31-17	40	254	4.96
3.	" " " " " "	35-31-17	52	370	7.24
4.	Big Hill Creek	32-31-18			
			40	420	7.04
5.	Trib. to Big Hill Creek	17-32-18	35	255	4.28
6.	Trib. to Pumpkin Creek	13-32-18	28	198	3.32
7.	" " " "	18-32-19	50	408	6.84
8.	" " " "	30-32-19	9	93	1.56
9.	" " " "	26-32-18	15	127	2.12
10.	Trib. 1 mi. S. of Big Hill	19-32-18	5	76	1.28
11.	Trib. 2 mi. S. of Big Hill	25-32-17	31	229	3.84
12.	Trib. to Pumpkin Creek	18-33-18	35	260	4.36
13.	" " " "	4-33-18	20	153	2.56
14.	" " " "	8-33-18	40	287	4.80
15.	" " " "	7-33-19	20	131	2.20
16.	" " " "	32-32-19	55	454	7.60
17.	" " " "	25-33-18	13	84	1.40
18.	" " " "	2-34-17	42	482	8.08
19.	" " " "	4-34-18	50	501	8.40
20.	" " " "	16-34-18	27	275	4.60
21.	" " " "	13-34-18	16	153	2.56
22.	" " " "	23-34-18	11	88	1.48
23.	" " " "	21-34-18	13	124	2.08
24.	" " " "	20-34-18			

INVENTORY OF POTENTIAL IMPOUNDMENT SITES (Cont'd - 2)

Labette County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Acres)	Volume (Acre-Feet)	Drainage (Sq. Mi.)
25.	Trib. to Pumpkin Creek	24-34-17	13	122	2.04
26.	Trib. 4 mi. W. of Valeda	35-34-17	8	67	1.12
27.	Snow Creek	1-35-17	13	119	2.00
28.	" "	7-35-18	17	155	2.60
29.	" "	4-35-18	85	845	14.16
30.	Trib. 1 mi.E, 4 mi. S. of Edna	9-35-19	9	74	1.24
31.	Trib. 2 mi.E, 4 mi. S. of Edna	10-35-19	7	81	1.36
32.	Trib to Labette Creek	5-35-20	—	—	—
33.	" " " "	3-35-20	34	409	5.90
34.	" " " "	5-35-21	20	152	2.20
35.	" " " "	9-35-21	14	97	1.40
36.	" " " "	15-34-20	10	111	1.60
37.	" " " "	20-34-20	36	360	5.20
38.	" " " "	23-34-19	—	—	—
39.	" " " "	10-34-19	63	603	8.70
40.	" " " "	3-34-19	36	319	4.60
41.	" " " "	36-33-19	21	166	2.40
42.	Deer Creek	13-33-19	115	1,067	15.40
43.	" "	15-33-19	16	125	1.80
44.	" "	34-32-19	18	139	2.00
45.	Trib. to Labette Creek	32-32-20	62	589	8.50
46.	" " " "	13-32-19	15	111	1.60
47.	" " " "	14-32-20	18	180	2.60
48.	" " " "	12-32-19	—	—	—

INVENTORY OF POTENTIAL IMPOUNDMENT SITES (Cont'd - 3)

Labette County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Acres)	Volume (Acre-Feet)	Drainage (Sq. Mi.)
49.	Trib. to Labette Creek	7-32-20	—	—	—
50.	Bachelor Creek	33-31-19	64	610	8.80
51.	Labette Creek	34-31-20	11	83	1.20
52.	Trib. to Neosho River	31-31-21	32	263	3.80
53.	" " " "	29-32-21	10	125	1.80
54.	" " " "	25-31-20	25	236	3.40
55.	Trib. to Labette Creek	19-31-19	10	90	1.30
56.	Little Labette Creek	1-31-18	120	984	14.20
57.	" " "	8-31-19	16	125	1.80
58.	Trib. to Little Labette Creek	9-31-19	13	97	1.40
59.	" " " " "	10-31-19	13	97	1.40
60.	Trib. to Labette Creek	5-31-20	—	—	—
61.	" " " "	2-31-20	11	83	1.20

INVENTORY OF NATURAL, SCENIC AND HISTORIC AREAS

Labette County

Name of Area	Township	Area	Description
Historic:			
Pioneer Events Oswego	Oswego		KS 96 - Oswego, townsite located in part on a high bluff overlooking the Neosho River. Originally named Little Town by its founder John Mathews. Separated a few hundred yards from an Osage Indian Village known as "Little Town". Little Town (Oswego) was the first permanent white settlement in the area. It became the focal point for contact between north and south preceeding the Civil War. Much early history revolved around this trading post.
John A. Mathews Park	Oswego	2 acres	$\frac{1}{4}$ mile north K-96. A park located at the site of the well that provided water for Little Town. Well has been preserved.
A Kansas Landmark	Oswego	2 acres	A roadside park with historical marker denoting proximity of early governmental road, ancient Indian trail, Texas cattle trail.
Bender Mounds (Famous Event)	Osage		KS-160 - neighborhood. Several prominent mounds near site of famous Bender murders. Kansas Historical Marker in roadside park.

INVENTORY OF NATURAL, SCENIC AND HISTORIC AREAS (Cont'd - 2)

Labette County

Name of Area	Township	Area	Description
Historic:			
Parsons Library	Walton		KS-160 - Site of first library in Parsons on SE corner of 18th and Broadway.
Mansion House Homes of Famous People	Oswego		KS-96-US-59. A large mansion built by Robert O. Deming Sr. using lumber from buildings dismantled after the St. Louis World's Fair 1904 - 1906. Originally the lumber came from several foreign countries.
Historic and Scenic:			
Riverside Park	Oswego	26 acres	One mile North K-96. A well kept park in Oswego with facilities for recreation and rest. Provides a scenic view of Neosho valley from a bluff.
Scenic:			
Little Ozarks or Timber Hill Area	Osage and Mound Valley	6,000 acres	KS 160 - 5 miles south, KS 96 - 5 miles North. A rough timbered area in the west part of Labette County, centering midway between KS 160 and KS 96. Proposed Big Hill Lake on Big Hill Creek is in this area; present use, private farm, pasture and woodland.

INVENTORY OF NATURAL, SCENIC AND HISTORIC AREAS (Cont'd - 3)

Labette County

Name of Area	Township	Area	Description
Scenic:			
Chetopa Park and Dam	Richland	20 acres	KS 166. A low water dam on the Neosho River where it flows through Chetopa City Park. Good fishing below this dam has given use to the claim, "Catfish Capitol of the World".

INVENTORY OF EXISTING WATER AREAS

Labette County

NAME	LOCATION	SIZE	PRESENT USE
Ponds - 5 acres or less		1,584	
Ponds - 5 acres or more			
1. Eldon Summers	W¼ SW¼ Sec. 5-34-18		Recreation facilities
2. F. C. Redding	N½ SW¼ Sec. 30-34-18		
3. Orville Gregory	E½ NE¼ Sec. 2-34-17		
4. Lloyd L. Zimmerman	SW¼ Sec. 20-31-18		
5. G. W. Bath	N½ NW¼ Sec. 4-32-18		
6. J. G. O'Dell	E½ NE¼ Sec. 7-32-19		
7. J. J. Flynn	E½ SW¼ Sec. 21, 31-20		
8. Richard Rice	N½ NE¼ Sec. 28-31-20		
9. Fred Cooper	E½ Sec. 32-34-19		
10. D. A. Goodwin	NW¼ Sec. 7-35-19		
11. Ivan Myers	SE¼ Sec. 32-33-20		
12. Dale Maxson	NW¼ Sec. 2-35-18		Recreation facilities
13. Clarence Pearce	N½ SE¼ Sec. 1-31-18		
14. Delbert Mosler	N½ NE¼ Sec. 6-T-33-20		
15. J. O. Bussman	SE¼ Sec. 29, 33-18		
16. Larry Muller	SE¼ Sec. 2-34-17		
17. Edna Lake	SW¼ SW¼ Sec. 36,35,18	10 acres	Municipal water supply use
18. Idle Hour Lake-City of Altamont	NE¼ SE¼ Sec. 26, T-33, R-19	13 acres	Municipal water supply use
19. Bartlett City Lake	E½ NE¼ Sec. 28-34-20	13 acres	" " " "
20. Mallard Club	NE¼ NE¼ Sec. 29-34-18	8 acres	Private club
21. Joplin Gun Club	SW¼ SW¼ Sec. 26-31-21	6 acres	" "
22. Kansas Gas and Electric Company	SW¼ Sec. 34-31-21	168 acres	" "

INVENTORY OF EXISTING WATER AREAS (Cont'd - 2)

Labette County

NAME	LOCATION	SIZE	PRESENT USE
Ponds - 5 acres or more			
23. Horseshoe Lake	$E\frac{1}{2}$ $SE\frac{1}{4}$ Sec. 15 and $W\frac{1}{2}$ $SW\frac{1}{4}$ Sec. 14, T-33-R-21	42 acres	
(Richard Farris and J. H. Robinson — owners of land adjacent)			

MONTGOMERY COUNTY

APPRAISAL OF OUTDOOR RECREATION POTENTIALS

STATISTICS WORK SHEET

Montgomery COUNTY Montgomery SOIL & WATER CONSERVATION DISTRICT Kansas STATE DATE 7-13-72

AREAS	TABLE I Numbers of People 1960	TABLE I 1970	TABLE III Age Groups – 1970: 15-29	30-44	45	TABLE IV Occupation – 1970: Employed	Professional	Skilled	TABLE V Family Income – 1969: % L.A.I. Population	Median Family Income	Proportion L.A.I. – M.F.I.
APPRAISAL COUNTY											
Montgomery	45,067	39,949	7823	5711	16,737	14,587	3243	4360	23	7,354	1684
SURROUNDING COUNTIES											
Chautauqua	5956	4642	649	603	2430	1746	347	359	3	5537	166
Elk	5048	3858	566	462	2058	1491	229	183	2	5426	113
Wilson	13077	11,317	2009	1531	5180	4,157	777	1260	7	6482	454
Neosho	19,455	18,812	3743	2702	7525	6,727	1431	1887	11	7,303	803
Labette	26805	25,775	5386	3457	10201	9118	1903	2797	15	7316	1097
Craig (Okla.)	16303	14,722	2695	2308	6371	5096	1081	1260	9	7,264	654
Nowata (Okla.)	10848	9773	1775	1514	4134	3457	555	1091	6	6,315	373
Washington (Okla.)	42,347	42,277	8632	8042	14355	17050	5842	3186	24	9987	2396
TOTALS L.A.I.	184,846	171,125	33278	26,360	68999	63,429	15,408	16,385			
1980 PROJECTION	164,265					% of Total Employed	24	26	L.A.I. Median Family Income		7742
1990 PROJECTION	143,687										
TOTAL POPULATION IN AGE GROUPS			19	15	40	U.S. Average	20%	12			
			24%	17%	31%	U.S. Average					

TABLE VI PROXIMITY & ACCESS: ROADS IN COUNTIES	MILES	
All Weather Roads	1080	
Major Tourist Routes	117	
PROXIMITY	MILES	Total Road Miles
20 Mi. of Urban Centers 5000	1080	100
20 Mi. of Urban Centers 20,000	43	4
40 Mi. of Urban Centers 20,000	810	75
S.D.U.C.'s in 50-150 Mi. Zone	14	NUMBER
ACCESS	SQUARE MI.	Total Area
From Urban Areas of 5000	628	100
From Urban Areas of 20,000	84	14
Total Accessible Area	638	100
Total Area of County	628	100

Data for Table VI and Lines 47-48 of Table VII are to be obtained locally.

TABLE II: SMALL URBAN CENTERS IN L.A.I. 5000-20,000	1960	1970
Chanute	10849	10341
Parsons	13929	13015
Vinita Okla.	6027	5847
Independence	11,222	10,347
Coffeyville	17,382	15,116
SUBTOTAL	59409	57,666
1980 PROJECTION	52,295	
1990 PROJECTION	45,180	
LARGE URBAN CENTERS IN L.A.I. OVER 20,000		
Bartlesville	27878	29612
SUBTOTAL	27878	29,672
1980 PROJECTION	30569	
1990 PROJECTION	33,260	
TOTAL L.A.I. URBAN CENTERS	87287	87338
1980 PROJECTION	82364	
1990 PROJECTION	75440	
SMSA SDUC's	1960	1970
Wichita	381,626	389,352
Topeka	141,286	155,322
KC, Ks	329,287	404,502
KC, Mo	1,092,545	1,253,916
Springfield	126,276	152,921
Tulsa	418,974	476,945
Okla City	511,833	640,889
TOTAL SDUC's	3,001,827	3,473,840
1980 PROJECTION	3,709,877	
1990 PROJECTION	4,417,927	

Data for Tables I, II, III, IV and V to be obtained from U. S. Census of Populations. Data for Table VII, except below Line 46, to be obtained from U. S. Census of Agriculture.

TABLE VII: RURAL OWNERSHIP & LAND USE — SIZE OF FARMS	ACRES
COUNTY TOTAL	345,245
in 180-219 acre class	12,941
in 220-259 acre class	12,257
in 260-499 acre class	77,445
in 500-999 acre class	101,925
in over 1000 acres	86,761
TOTAL 180 acre and over	291,329
in 100-139 acre class	8556
in 140-179 acre class	25,083
TOTAL 100-259 acre	58,837
% of Farm	
180 acres and over	87
100-259 acres	17
TYPE OF FARMS	NO.
Dairy	55
Livestock	381
General	34
TOTAL – Dairy, Livestock, General	470
ALL FARMS	1187
% of Total: Dairy, Livestock & General	40
OTHER LANDS	ACRES
Public Lands open to hunting	11,680
Corporate Lands open to hunting	—
Public, Corporate and Farms over 180 acres	303,009
TOTAL COUNTY	345,245
% of Total: Public, Corporate and Farms over 180 acres	88

(See Instructions Reverse Side)

SMSA SDUC's	% SDUC Population	Median Family Income	Proportion SDUC M.F.I.
Wichita	11	9413	1035
Topeka	5	9661	483
KC, Ks	12	11355	1354
KC, Mo	36	10,242	3687
Springfield	4	8215	329
Tulsa	14	9286	1300
Okla. City	18	9348	1682
	100		
MEDIAN FAMILY INCOME SDUC's			9870

TABLE VIII

CLIMATE

WEATHER STATION LOCATIONS (NAMES)	Topeka	Wichita	Okla City	KC Mo	Tulsa	Little Rock	
% POSSIBLE SUNSHINE							
January	50	59	59	52			
February	52	63	59	55			
March	55	60	63	57			
April	54	63	61	59			
May	57	61	65	63	57	64	
June	65	75	75	69	65	72	
July	66	84	77	76	73	69	
August	68	82	81	73	75	72	
September	74	84	75	69	73	69	
October	67	65	69	68			
November	57	71	62	58			
December	52	67	60	51			
MEAN TEMPERATURE							
January	28.7	32.0	37.0	31.7	37	42	
February	33.4	37.2	41.3	35.8	42	46	
March	43.6	45.3	48.5	43.3	50	53	
April	54.5	56.2	59.9	55.7	61	63	
May	63.5	64.9	68.4	65.6	68	70	
June	73.5	75.3	78.0	75.1	78	78	
July	79.2	80.9	82.5	81.5	82	82	
August	77.6	79.9	83.8	79.8	82	81	
September	69.0	71.7	73.8	71.3	74	75	
October	57.9	60.2	62.9	60.2	63	64	
November	42.6	45.1	48.7	44.6	50	52	
December	32.2	35.5	40.3	35.8	41	44	
PRECIPITATION							
January	1.07	1.05	1.31	1.41	1.98	5.12	
February	.97	.98	1.37	1.24	1.57	4.06	
March	2.03	1.74	1.97	2.49	2.61	4.85	
April	3.50	3.52	3.12	3.56	4.25	5.16	
May	4.32	3.79	5.19	4.40	4.77	4.55	
June	4.54	4.99	4.47	4.57	5.15	3.43	
July	3.35	3.43	2.37	3.19	2.69	3.10	
August	4.66	2.96	2.52	3.17	3.23	3.15	
September	3.44	3.23	3.02	3.25	4.25	2.85	
October	2.56	2.13	2.51	2.86	3.07	2.81	
November	1.54	1.73	1.56	1.80	2.40	3.92	
December	1.16	1.10	1.41	1.53	1.69	4.05	
WINTER							
Days 1st - Last 16 Degree	91	101				Give Special Winter Data Only For Local Stations	
Total Inches Snowfall	18.7	7.7					

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DATE OF APPRAISAL July, 1972 IN Montgomery COUNTY Montgomery SOIL (& WATER) CONSERVATION DISTRICT OF Kansas STATE

KINDS OF RECREATION DEVELOPMENTS		SCORES FOR KEY ELEMENTS (RATINGS X MULTIPLIERS)																TOTAL SCORE	APPRAISAL (ADJECTIVE)
		CLIMATE	SCENERY	NATURAL AREAS	HISTORIC AREAS	SOILS	WATER ARS. EXISTING	WATER ARS. IMPOUNDMENT SITES	WILD-LIFE HABITAT	WILD-LIFE POPULATIONS	POPULA.-PEOPLE SIZE & DISTRIBUTION	POPULA.-PEOPLE AGE & OCCUPATION	POPULA.-PEOPLE INCOME LEVELS	PROX. & ACCESS PROXIMITY	PROX. & ACCESS ACCESS	PROX. & ACCESS TOURIST ROUTES	RURAL OWNERSHIP AND LAND USE PATTERN			
I.	VACATION CABINS, COTTAGES, & HOMESITES	10	14	5	XXX	2	3	18	XXX	XXX	10	XXX	14	4	4	XXX	XXX		84	Medium
II.	CAMPING -VACATION SITE	10	14	10	XXX	2	6	12	XXX	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX		64	Medium
	-PACK TRIP	15	3	3	XXX	XXX	1	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		22	Low
	-TRANSIENT	5	5	XXX	XXX	2	XXX	4	XXX	XXX	XXX	XXX	XXX	XXX	XXX	10	XXX		26	Low
III.	PICNIC & SPORTS AREAS -GAME, PLAY, TARGET AREAS	6	XXX	XXX	XXX	10	XXX	XXX	XXX	XXX	12	0	8	24	8	XXX	XXX		68	Medium
	-BICYCLING, Motorcycling	6	2	XXX	XXX	2	XXX	XXX	XXX	XXX	6	0	4	2	1	XXX	XXX		23	Low
	-PICNICKING	7	7	XXX	XXX	10	3	7	XXX	XXX	12	XXX	4	24	8	XXX	XXX		82	Medium
IV.	FISHING WATERS -WARM WATERS	7	XXX	XXX	XXX	XXX	9	14	XXX	14	3	XXX	XXX	10	XXX	XXX	XXX		57	Medium
	-COLD WATERS	—	XXX	XXX	XXX	XXX	—	—	XXX	—	XXX	—	XXX	—	XXX	XXX	XXX		—	—
V.	GOLF COURSES -STANDARD & PAR-3	XXX	5	XXX	XXX	4	XXX	XXX	XXX	XXX	9	20	18	20	XXX	XXX	XXX		76	Medium
	-MINIATURE & DRIVING RANGES	XXX	XXX	XXX	XXX	3	XXX	XXX	XXX	XXX	6	8	2	9	XXX	XXX	XXX		28	Low
VI.	HUNTING AREAS -SMALL GAME	10	XXX	XXX	XXX	10	XXX	XXX	30	18	10	XXX	XXX	10	XXX	XXX	8		116	High
	-BIG GAME	10	XXX	XXX	XXX	10	XXX	XXX	25	24	10	XXX	XXX	XXX	XXX	XXX	XXX		79	Medium
	-WATERFOWL	10	XXX	XXX	XXX	10	XXX	XXX	50	30	5	XXX	8	XXX	XXX	XXX	XXX		113	High
VII.	NATURAL, SCENIC, AND HISTORIC AREAS -NATURAL AREAS	XXX	8	12	XXX	XXX	XXX	XXX	XXX	10	8	XXX	XXX	10	4	2	XXX		54	Medium
	-SCENIC AREAS	XXX	10	8	XXX	XXX	XXX	XXX	XXX	XXX	16	XXX	XXX	10	8	2	XXX		54	Medium
	-HISTORIC AREAS	XXX	XXX	XXX	5	XXX	XXX	XXX	XXX	XXX	8	XXX	XXX	10	XXX	6	XXX		29	Low
VIII.	RIDING STABLES	7	XXX	6	XXX	XXX	XXX	XXX	XXX	XXX	10	3	8	6	XXX	XXX	XXX		40	Low
IX.	SHOOTING PRESERVES	6	5	XXX	XXX	8	XXX	XXX	XXX	XXX	2	3	6	4	XXX	XXX	XXX		34	Low
X.	VACATION FARMS AND RANCHES -FARMS	12	6	6	XXX	2	2	5	XXX	XXX	XXX	XXX	XXX	3	XXX	XXX	12		48	Low
	-RANCHES	12	6	6	XXX	XXX	2	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	12		38	Low
XI.	WATER SPORTS AREAS	10	5	XXX	XXX	XXX	4	3	XXX	XXX	8	4	XXX	8	XXX	XXX	XXX		42	Low
XII.	WINTER SPORTS AREAS	—	—	XXX	XXX	—	—	—	XXX	XXX	—	—	—	—	—	XXX	XXX		—	—
		A.	B.	C.	D.	E.	F.1	F.2	G.1	G.2	H.1	H.2	H.3	I.1	I.2	I.3	J.	K.		

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INVENTORY OF POTENTIAL IMPOUNDMENT SITES

Montgomery County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Acres)	Volume (Acre-Feet)	Drainage (Sq. Mi.)
1.	Bachelor Creek	14-31-13	30	252	4.92
2.	Sycamore Creek	4-31-15	55	542	10.60
3.	" "	3-31-15	9	68	1.32
4.	Pocket Creek	31-31-15	21	174	3.40
5.	" "	6-32-15	20	172	3.36
6.	Onion Creek	13-33-14	22	133	2.60
7.	" "	23-33-14	60	413	8.08
8.	Cheyenne Creek	27b-34-14	90	945	18.48
9.	" "	29-34-14	17	115	2.24
10.	" "	30-34-14	12	82	1.60
11.	" "	27a-34-14	9	72	1.40
12.	Fawn Creek	22-34-15	88	630	12.32
13.	Spring Creek	16-34-15	47	444	8.68
14.	Trib. to Onion Creek	11-34-15	9	65	1.28
15.	" " " "	3-34-15	12	102	2.00
16.	Prior Creek	15-31-16	17	135	2.64
17.	Chateau Creek	27-31-16	58	352	6.88
18.	Trib. to Verdigris River	10-32-16	32	274	5.36
19.	" " " "	15-32-16	20	108	2.12
20.	" " " "	27-32-16	11	72	1.40
21.	" " " "	23-33-16	10	70	1.36
22.	" " " "	28-33-16	13	106	2.08
23.	" " " "	3-34-16	10	78	1.52
24.	Cedar Creek	28-33-16	38	348	6.80
25.	" "	32-33-16	—	—	—

INVENTORY OF POTENTIAL IMPOUNDMENT SITES (Cont'd - 2)

Montgomery County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Acres)	Volume (Acre-Feet)	Drainage (Sq. Mi.)
26.	Run Creek	12-34-15	15	102	2.00
27.	Dead Man Creek	2-35-15	30	217	4.24
28.	Trib. to Onion Creek	11-35-15	16	125	2.44
29.	" " " "	5-35-16	11	86	1.68
30.	" " " "	29-34-16	7	45	0.88
31.	" " " "	30-34-16	—	—	—
32.	" " " "	28-34-16	32	274	5.36
33.	" " " "	15-35-16	9	70	1.36
34.	" " " "	17-35-17	—	—	—
35.	Trib. to Pumpkin Creek	4-35-17	13	115	1.72
36.	" " " "	28-34-17	11	88	1.48
37.	Spring Creek	16-34-17	20	141	2.36
38.	Claymore Creek	9-34-17	50	404	6.76
39.	Potato Creek	22-33-17	45	396	6.64
40.	" "	20-33-17	10	60	1.00
41.	Trib. to Hill Creek	7-33-17	10	81	1.36
42.	" " " "	5-33-17	12	93	1.56
43.	" " " "	34-32-17	10	84	1.40
44.	" " " "	27-32-17	32	275	4.60
45.	Cherry Creek	27-31-17	14	78	1.52
46.	Drum Creek	18-31-17	23	176	3.44
47.	Salt Creek	3-31-16	—	—	—
48.	Drum Creek	4-31-17	—	—	—
49.	" "	9-31-17	28	239	4.68

INVENTORY OF NATURAL, SCENIC, AND HISTORIC AREAS

Montgomery County

Name of Area	Township	Area	Description
Historic:			
Harry Sinclair Home	Independence		Founder of the Sinclair Oil Company
Alfred Landon Home	Independence		Presidential nominee and former Governor of Kansas
Dalton Museum & Dalton Cemetery	Coffeyville		Relics and possessions of Dalton Brothers and notes on some of their raids. Cemetery in south part of town.
Bender Museum	Cherryvale		Authentic rooms of the Bender home, etc.
Site of Civil War Battle	East of Independence	1 acre	Confederate officers enroute West for recruits massacred by Indians friendly to Union - one survival. U.S. 160
Scenic:			
Elk City Dam Overlook	Elk City Resv.		Excellent view of Elk City Reservoir area. Recording can be heard of entire process of building
Sycamore Valley Overlook	Sycamore	1 acre	Set in natural surroundings, developed by Garden Club. U.S. 75
Blackjack Timber Country	West part of Montgomery Co. Rutland & Caney Twsp.		

INVENTORY OF EXISTING WATER AREAS

Montgomery County

NAME	LOCATION	SIZE	PRESENT USE
Elk City Reservoir	Independence & Rutledge townships	3,000 acres	Boating, camping areas, fishing, water skiing, swimming. 12,000 acre recreation area
State Lake	6 miles south 1 mile east Independence	96 acres	Fishing, boating, swimming, camping. 312 acres around the lake for a recreation area, some wooded areas.
Havana Lake	2 miles east, 1 mile south Havana	22 acres	Camping, golf, fishing, swimming for owners and guests.
Verdigris River			
Elk River			
Farm Ponds		½ to 10 acres	Privately owned and in grass or pastureland. Mostly fishing and hunting by permission.

NEOSHO COUNTY

APPRAISAL OF OUTDOOR RECREATION POTENTIALS

STATISTICS WORK SHEET

Neosho COUNTY Neosho SOIL & WATER CONSERVATION DISTRICT Kansas STATE DATE 7-13-72

AREAS	TABLE I Numbers of People 1960	1970	TABLE III Age Groups - 1970: 15-29	30-44	45-	TABLE IV Occupation - 1970: Employed	Professional	Skilled	TABLE V Family Income - 1970: S.L.A. Population	Median Family Income	Proportion S.L.A. M.F.I.
APPRAISAL COUNTY											
Neosho	19,455	15,812	3,743	2,702	7,525	6,727	1,431	1,889	10	7,303	730
SURROUNDING COUNTIES											
Wilson	13,077	11,317	2,009	1,531	5,186	4,157	777	1,260	6	6,452	389
Woodson	5,423	4,789	783	621	2,326	1,650	281	375	3	5,757	171
Allen	16,369	15,043	2,784	2,113	6,388	5,479	1,049	1,371	8	6,835	202
Bourbon	16,090	15,215	3,045	2,739	6,730	6,229	1,249	1,353	8	6,794	264
Crawford	37,032	37,850	10,062	4,650	15,129	13,983	3,299	3,572	20	6,642	1,328
Cherokee	22,279	21,549	4,372	3,112	8,616	7,090	1,122	2,651	11	6,470	712
Labette	26,805	25,775	5,386	3,457	10,241	9,118	1,903	2,757	13	7,316	951
Montgomery	45,007	39,949	7,523	5,711	16,734	14,287	3,243	4,560	21	7,334	1540
TOTAL S.L.A.	201,537	191,300	40,007	26,701	78,846	69,020	14,354	19,474			
7_ PROJECTION	186,181					% of Total Employed	21	28	S.L.A. MEDIAN FAMILY INCOME		7,230
9_ PROJECTION	175,945					U.S. Average	21	12			
TOTAL POPULATION IN AGE GROUPS			21	14	41						
			247	17p	3?	U.S. Average					

TABLE II

SMALL URBAN CENTERS IN S.L.A. (5000-20,000)	1960	1970
Chanute	10,519	10,341
Iola	6,885	6,493
Ft Scott	9,410	8,967
Parsons	13,929	13,015
Independence	11,222	10,347
Coffeyville	17,352	15,116
SUBTOTAL	69,677	64,279
7_ PROJECTION	61,552	
9_ PROJECTION	53,459	
LARGE URBAN CENTERS IN S.L.A.		
Pittsburg	18,678	20,171
SUBTOTAL	18,678	20,171
7_ PROJECTION	21,664	
9_ PROJECTION	23,904	
TOTAL S.L.A. URBAN CENTERS	88,355	84,450
7_ PROJECTION	82,498	
9_ PROJECTION	76,640	
SDUC's	1960	1970
Wichita	381,626	389,352
Topeka	141,286	155,322
KC Ks	229,287	164,567
KC Mo	1,092,545	1,253,916
Springfield	126,276	152,929
Tulsa	418,974	476,945
Okla City	511,833	640,889
TOTAL SDUC	3,001,827	3,473,840
7_ PROJECTION	3,709,877	
9_ PROJECTION	4,417,927	

TABLE V (SDUC)

SDUC	SDUC % S.L.A. Population	Median Family Income	Proportion SDUC M.F.I.
Wichita	11	9,4?3	1,035
Topeka	5	[illegible]	483
KC Ks	12	[illegible]	1,334
KC Mo	36	10,142	3,057
Springfield	4	8,2?5	324
Tulsa	14	9,356	1,310
Okla City	15	[illegible]	1,632
MEDIAN FAMILY INCOME SDUC'S			9,870

TABLE VI PROXIMITY & ACCESS

ROADS IN COUNTIES	MILES	
All Weather Roads	1066	
Major Tourist Routes	116	
PROXIMITY	MILES	% Total Road Miles
20 Mi. of Urban Centers 5000	1066	100
20 Mi. of Urban Centers 20,000	21	2
40 Mi. of Urban Centers 20,000	853	80
SDUC in 50-150 Mi. Zone	NUMBER 11	
ACCESS	SQUARE MI	% Total Area
From Urban Areas of 5000	587	100
From Urban Areas of 20,000	42	7
Total Accessible Area	587	100
Total Area of County	587	—

Data for Table VI and Lines 47-48 of Table VII are to be obtained locally

TABLE VII RURAL OWNERSHIP & LAND USE

SIZE OF FARMS	ACRES
COUNTY TOTAL	329,919
in 1-99 acre class	9,619
in 100-259 acre class	18,925
in 260-499 acre class	90,378
in 500-999 acre class	94,663
in 1000 acre class	13,311
TOTAL 180 acre and over	256,946
in 1-49 acre class	9,082
in 50-179 acre class	21,871
TOTAL under 180 acres	58,491
	% of Total
180 acres and over	87
180 - under	18
TYPE OF FARMS	NO.
Dairy	80
Livestock	386
General	50
TOTAL Dairy, Livestock, General	516
ALL FARMS	1023
	% of Total
Dairy, Livestock & General	50
OTHER LANDS	ACRES
Public Lands open to hunting	2,976
Corporate Lands open to hunting	—
Public, Corporate and Farms over 180 acres	287,922
TOTAL COUNTY	329,919
	% of Total
Public, Corporate and Farms over 180 acres	88

(See Instructions Reverse Side)

TABLE VIII CLIMATE

WEATHER STATION LOCATIONS — NAMES

	Topeka	Wichita	Ok. City	KC Mo.	Tulsa	Little Rock	
% POSSIBLE SUNSHINE							
JANUARY	50	57	57	52			
FEBRUARY	52	63	57	55			
MARCH	55	66	63	57			
APRIL	54	63	61	57			
MAY	57	61	65	63	57	64	
JUNE	60	75	75	69	65	70	
JULY	66	81	77	76	73	69	
AUGUST	65	54	81	73	75	72	
SEPTEMBER	64	57	75	69	73	69	
OCTOBER	67	26	69	68			
NOVEMBER	57	71	62	53			
DECEMBER	52	67	60	51			
MEAN TEMPERATURE							
JANUARY	25.7	32.0	37.0	31.7	37	42	
FEBRUARY	33.7	32.2	41.3	35.8	42	46	
MARCH	42.6	42.3	48.5	43.3	50	53	
APRIL	54.5	56.2	57.9	55.7	61	63	
MAY	63.5	64.7	63.4	65.6	68	70	
JUNE	73.5	[illegible]	78.0	75.9	75	78	
JULY	79.2	80.9	81.5	81.5	82	82	
AUGUST	77.6	79.9	80.8	79.3	82	81	
SEPTEMBER	67.0	71.7	73.5	71.3	74	75	
OCTOBER	57.9	60.2	62.9	60.2	63	64	
NOVEMBER	42.6	45.1	49.4	44.6	50	52	
DECEMBER	32.2	35.2	40.3	35.8	41	44	
PRECIPITATION							
JANUARY	1.07	1.05	1.31	1.21	1.98	5.12	
FEBRUARY	1.17	.75	1.37	1.24	1.57	4.06	
MARCH	2.03	1.74	1.97	2.24	2.61	4.85	
APRIL	3.56	3.02	3.12	3.56	4.25	5.16	
MAY	4.32	3.79	5.19	4.40	4.77	4.53	
JUNE	4.27	4.11	4.47	4.57	5.15	3.43	
JULY	3.25	3.43	2.37	3.19	2.69	3.10	
AUGUST	4.66	3.76	2.52	3.77	3.23	3.15	
SEPTEMBER	3.44	3.23	3.02	3.25	4.25	2.85	
OCTOBER	2.56	2.13	2.51	2.86	3.09	2.81	
NOVEMBER	1.57	1.73	1.56	1.80	2.40	3.92	
DECEMBER	1.16	1.15	1.41	1.53	1.69	4.08	
WINTER							
Days Av. Less 16 Degree	91	73				Give Special Winter Data Only	
Total Inches Snowfall	18.7	17				For Local Stations	

Data for Tables I, II, III, IV and V to be obtained from U. S. Census of Populations. Data for Table VII, except below Line 46, to be obtained from U. S. Census of Agriculture.

SUMMARY OF APPRAISALS OF POTENTIALS FOR OUTDOOR RECREATION

DATE OF APPRAISAL July, 1972 IN Neosho COUNTY Neosho SOIL (& WATER) CONSERVATION DISTRICT OF Kansas STATE

KINDS OF RECREATION DEVELOPMENTS		SCORES FOR KEY ELEMENTS (RATINGS X MULTIPLIERS)																	TOTAL SCORE	APPRAISAL (ADJECTIVE)
		CLIMATE	SCENERY	NATURAL AREAS	HISTORIC AREAS	SOILS	WATER ARS. EXISTING	WATER ARS. IMPOUNDMENT SITES	WILD-LIFE HABITAT	WILD-LIFE POPULATIONS	POPULA.-PEOPLE SIZE & DISTRIBUTION	POPULA.-PEOPLE AGE & OCCUPATION	POPULA.-PEOPLE INCOME LEVELS	PROX. & ACCESS PROXIMITY	PROX. & ACCESS ACCESS	PROX. & ACCESS TOURIST ROUTES	RURAL OWNERSHIP AND LAND USE PATTERN			
I.	VACATION CABINS, COTTAGES, & HOMESITES	8	10	5	XXX	6	6	27	XXX	XXX	10	XXX	14	4	9	XXX	XXX		99	Medium
II.	CAMPING -VACATION SITE	8	8	8	XXX	5	12	18	XXX	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX		69	Medium
	-PACK TRIP	12	3	6	XXX	XXX	5	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		26	Low
	-TRANSIENT	—	—	XXX	XXX	—	XXX	—	XXX	XXX	XXX	XXX	XXX	XXX	XXX	—	XXX		—	—
III.	PICNIC & SPORTS AREAS -GAME, PLAY, TARGET AREAS	5	XXX	XXX	XXX	5	XXX	XXX	XXX	XXX	12	0	2	30	10	XXX	XXX		64	Medium
	-BICYCLING	—	—	XXX	XXX	—	XXX	XXX	XXX	XXX	—	—	—	—	—	XXX	XXX		—	—
	-PICNICKING	5	6	XXX	XXX	7	9	8	XXX	XXX	15	XXX	1	30	10	XXX	XXX		91	High
IV.	FISHING WATERS -WARM WATERS	8	XXX	XXX	XXX	XXX	27	18	XXX	16	1	XXX	XXX	6	XXX	XXX	XXX		79	High
	-COLD WATERS	—	XXX	XXX	XXX	XXX	—	—	XXX	—	XXX	—	XXX	—	XXX	XXX	XXX		—	—
V.	GOLF COURSES -STANDARD & PAR-3	XXX	2	XXX	XXX	5	XXX	XXX	XXX	XXX	3	0	18	2	XXX	XXX	XXX		30	Low
	-MINIATURE & DRIVING RANGES	XXX	XXX	XXX	XXX	—	XXX	XXX	XXX	XXX	—	—	—	—	XXX	XXX	XXX		—	—
VI.	HUNTING AREAS -SMALL GAME	9	XXX	XXX	XXX	7	XXX	XXX	45	21	2	XXX	XXX	8	XXX	XXX	9		101	High
	-BIG GAME	9	XXX	XXX	XXX	8	XXX	XXX	35	18	2	XXX	XXX	XXX	XXX	XXX	XXX		72	Medium
	-WATERFOWL	10	XXX	XXX	XXX	10	XXX	XXX	45	27	1	XXX	2	XXX	XXX	XXX	XXX		95	High
VII.	NATURAL, SCENIC, AND HISTORIC AREAS -NATURAL AREAS	XXX	4	6	XXX	XXX	XXX	XXX	XXX	6	10	XXX	XXX	11	10	0	XXX		47	Low
	-SCENIC AREAS	XXX	—	—	XXX	XXX	XXX	XXX	XXX	XXX	—	XXX	XXX	—	—	—	XXX		—	—
	-HISTORIC AREAS	XXX	XXX	XXX	35	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX	11	XXX	0	XXX		56	Medium
VIII.	RIDING STABLES	—	XXX	—	XXX	XXX	XXX	XXX	XXX	XXX	—	—	—	—	XXX	XXX	XXX		—	—
IX.	SHOOTING PRESERVES	10	8	XXX	XXX	14	XXX	XXX	XXX	XXX	2	2	3	16	XXX	XXX	XXX		55	Medium
X.	VACATION FARMS AND RANCHES -FARMS	15	8	8	XXX	4	9	9	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX	15		78	Medium
	-RANCHES	15	6	6	XXX	XXX	9	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	0		36	Low
XI.	WATER SPORTS AREAS	8	9	XXX	XXX	XXX	32	27	XXX	XXX	6	5	XXX	10	XXX	XXX	XXX		97	High
XII.	WINTER SPORTS AREAS	—	—	XXX	XXX	—	—	—	XXX	XXX	—	—	—	—	—	XXX	XXX		—	—
		A.	B.	C.	D.	E.	F.1	F.2	G.1	G.2	H.1	H.2	H.3	I.1	I.2	I.3	J.	K.		

USDA SCS LINCOLN NEBR 1967

5, L-24127-13

INVENTORY OF POTENTIAL IMPOUNDMENT SITES

Neosho County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Acres)	Volume (Acre-Feet)	Drainage (Sq. Mi.)
1.	Trib. to Village Creek	23-27-17	26	236	3.40
2.	Turkey Creek	7-28-18	75	755	10.90
3.	" "	17-28-18	—	—	—
4.	Trib. to Neosho River	13-28-18	—	—	—
5.	Elk Creek	31-28-19	34	298	4.30
6.	Trib. to Elk Creek	5-29-18	48	506	7.30
7.	" " " "	4-29-18	13	118	1.70
8.	" " " "	2-29-18	60	554	8.00
9.	Trib. to Neosho River	4-29-19	35	485	7.00
10.	Trib. to Elk Creek	11-29-18	—	—	—
11.	Trib. 3 mi. W. 3 mi. S. of Earlton	2-29-17	40	332	6.48
12.	Trib. 3 mi. W 4 mi. S. of Earlton	11-29-17	20	119	2.32
13.	Trib. 2 mi. N 1 E. of Morehead	19-30-18	9	59	1.16
14.	Trib. 1 mi. E of Morehead	36-30-17	27	133	2.60
15.	Trib. west of Little Labette Creek	21-30-18	50	380	6.36
16.	Trib. to Lake Parsons	34-29-18	30	236	3.40
17.	" " " "	36-29-18	33	263	3.80
18.	" " " "	4-30-19	17	166	2.40
19.	Trib. to Labette Creek	15-30-19	25	194	2.80
20.	" " " "	14-30-19	12	83	1.20
21.	" " " "	25-30-19	—	—	—
22.	" " " "	28-30-20	9	62	0.90
23.	" " " "	32-30-20	—	—	—
24.	Trib. to Neosho River	6-27-19	13	132	1.90
25.	Trib. to Big Creek	4-27-19	33	408	5.90

INVENTORY OF POTENTIAL IMPOUNDMENT SITES (Cont'd - 2)

Neosho County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Acres)	Volume (Acre-Feet)	Drainage (Sq. Mi.)
26.	Trib. to Big Creek	1-27-19	11	132	1.90
27.	Trib. to Neosho River	12-27-18	12	118	1.70
28.	Trib. to Big Creek	16-27-19	14	118	1.70
29.	" " " "	14-27-19	12	125	1.80
30.	Trib. to Canville Creek	2-27-20	78	1,150	16.60
31.	" " " "	5-27-21	30	256	3.70
32.	" " " "	7-27-21	12	125	1.80
33.	" " " "	22-27-20	13	152	2.20
34.	" " " "	25-27-19	35	416	6.00
35.	" " " "	28-27-20	12	152	2.20
36.	" " " "	26-27-20	13	132	1.90
37.	" " " "	4-28-20	8	90	1.30
38.	Rock Creek	28-27-21	120	1,469	21.20
39.	" "	27-27-21	13	139	2.00
40.	Four Mile Creek	14-28-20	58	547	7.90
41.	Trib. to Neosho River	22-29-19	13	111	1.60
42.	" " " "	19-29-20	23	208	3.00
43.	" " " "	27-29-19	45	402	5.80
44.	" " " "	35-29-20	33	340	4.90
45.	" " " "	33-29-20	40	360	5.20
46.	" " " "	26-30-20	16	173	2.50
47.	" " " "	34-29-21	21	166	2.40
48.	Slough Creek	27-29-21	33	333	4.80
49.	Trib. to Neosho River	15-29-21	16	118	1.70
50.	" " " "	9-29-21	26	222	3.20

INVENTORY OF EXISTING WATER AREAS

Neosho County

NAME	LOCATION	SIZE	PRESENT USE
Neosho Waterfowl Area and Game Refuge	Sections 19 & 20-29-21 (Mission Township)	1390 acres	Game refuge. Fishing in season; boating. Not well developed recreation areas. Toilets built in 1969. No cabins. Divided into three pools, each may be drained and/or flooded at will. 800 acres; 250 acres; and 340 acres pools. A large percentage is shallow and two pools include cropland that is flooded without harvesting crops.
Parsons City Lake	Ladore Township	825 acres	Water supply for city of Parsons. Fishing, boating, picnicking and swimming in designated areas. Few cabins. Built across Labette Creek. Drainage area is not well protected, and pollution is apparent in upper end of lake. Conservation plan drawn up on surrounding area to decrease pollution and silt, which is also a problem.
Neosho County State Lake	Lincoln Township	35 acres	Fishing, boating, camping and picnicking. Dam on intermittent stream. Fairly clear water. Moderate silting.

INVENTORY OF EXISTING WATER AREAS (Cont'd - 2)

Neosho County

NAME	LOCATION	SIZE	PRESENT USE
Thayer Reservoir	W½ NW¼ 31-29-18 Chetopa Township	25 acres	Water supply for city of Thayer. Fee fishing and boating. Good drainage area, from woodland.
Neosho River	Across county from NW to SE corners	200 miles in county 50 to 70 feet wide 8 feet deep	No recreation installations. Few cabin sites along banks, mostly on lower half. Little or no boating for recreation. Some carp and catfish fishing. Fishing in general is on the decrease due to high water level a large part of spring and summer. Nearly year round flow, uneven and highly polluted. High silting rate due partly to undercutting of banks caused by river being run three-quarters bank full two to three weeks following rain.
Roy Metzger	SW¼ 17-27-20 Big Creek Township	20 acres	Stockwater. Could probably be developed for duck hunting. Large area of shallow water. Moderate pollution from silt. Pond weeds probably will be a problem.
Harding's Lake	NW¼ 34-27-20 Grant Township	26 acres	Fishing, boating, camping, picnicking and cabin sites. Six or seven permanent homes. Private. Tri-city Lake. Built for water supply for rural water line. Clear water.

INVENTORY OF EXISTING WATER AREAS (Cont'd - 3)

Neosho County

NAME	LOCATION	SIZE	PRESENT USE
Stevens Lake	NE¼ 22-27-19	9 acres	Fishing could be developed further. Private. Dam built on intermittent stream. Clear water. Drainage from good bluestem pasture.
Dr. E. C. Bryan	E½ NE¼ 16-30-20 Lincoln Township	12 acres	Fishing, stockwater. High potential for further development.
Ken Caldwell Lake	N½ NW¼ 24-27-18 Tioga Township	12 acres	Fishing, boating picnicking. Water infested with pond weeds.
W. S. Hammons	NW¼ 20-28-20 Erie Township	11 acres	Duck hunting blinds, fishing, stockwater. Dam on intermittent stream. Large area of shallow water.
O. H. Spieker	SW¼ 16-28-18 Canville Township	11 acres	Duck hunting and fishing. Dam on intermittent stream. Large area of shallow water.
Charles Forsyth	S½ NW¼ 9-28-20 Walnut Grove Twp.	10 acres	Stockwater, fishing. Dam on intermittent stream. Large area of shallow water.
Ralph Boaz Lake	SE¼ 5-27-19 Big Creek Township	9 acres	Stockwater. Owner has plans to develop for limited recreation. Private. Built last fall. Good site with more than 60% of the drainage from native grassland in fair to good condition.

INVENTORY OF EXISTING WATER AREAS (Cont'd - 4)

Neosho County

NAME	LOCATION	SIZE	PRESENT USE
Fred Beachner	NE¼ 3-30-21 Lincoln Township	6 acres	Stockwater. Dam on intermittent stream.
Fred Beachner	SW¼ 27-29-21 Mission Township	6 acres	Stockwater.
Bill Bath	SE¼ 30-27-21 Grant Township	6 acres	Detention
Gerald McMillan	SW¼ 27-29-19 Centerville Twp.	5 acres	Stockwater
Robert Smith	NW¼ 32-29-20 Centerville Twp.	5 acres	Stockwater and fishing
Jan Hayden	S½ NW¼ 31-27-21 Grant Township	5 acres	Fishing and picnicking. Dam on intermittent stream.
Mary Mollett	W½ SW¼ 29-27-20 Big Creek Twp.	5 acres	Dam built on intermittent stream. Clear water.
Farm Ponds	All over the county	1300 acres	Stockwater and fishing

WILSON COUNTY

APPRAISAL OF OUTDOOR RECREATION POTENTIALS

STATISTICS WORK SHEET

Wilson COUNTY Wilson SOIL & WATER CONSERVATION DISTRICT Kansas STATE DATE 7-13-72

AREAS	TABLE I NUMBERS OF PEOPLE 1960	1970	TABLE III AGE GROUPS - 1970 15-29	30-44	45-	TABLE IV OCCUPATION - 1970 Employed	Professional	Skilled	TABLE V FAMILY INCOME - 1970 % L.A.T. Population	Median Family Income	Proportion L.A.T.-M.F.I.
APPRAISAL COUNTY											
Wilson	13,077	11,317	2009	1,531	5,186	4,157	777	1,260	8	6,452	519
SURROUNDING COUNTIES											
Elk	5048	3858	566	462	2058	1,746	229	183	3	5,537	166
Greenwood	11,253	9141	1535	1,287	4,291	3,357	648	810	7	5,994	420
Woodson	5,423	4789	789	621	2,326	1,650	281	375	4	5,707	228
Allen	16,369	15,043	2,784	2,113	6,383	5,479	1,094	1,371	11	6,555	752
Neosho	19,455	18,512	3,743	2,702	7,525	6,727	1,431	1,881	14	7303	1,022
Labette	26,805	25,775	5,356	3,487	10,261	9,118	1,903	2,797	19	7,316	1,390
Montgomery	45,007	39,949	7823	5,711	16,734	14,587	3,243	4,360	30	7,334	2,200
Chautauqua	5,956	4,642	649	603	2,480	1,746	347	357	3	5,537	166
TOTALS L.A.T.	148,393	133,326	25,278	18,577	57,145	48,567	9,953	13,404			
1980 PROJECTION	125,799										
1990 PROJECTION	103,192					% of Total Employed	20	35	L.A.T. MEDIAN FAMILY INCOME		6,863
TOTAL POPULATION IN AGE GROUPS			19	14	43	U.S. Average	23	32			
			24%	17%	31%	U.S. Average	5,000's				

TABLE VI PROXIMITY & ACCESS	MILES	% Total Road Miles
ROADS IN COUNTIES		
All Weather Roads	874	
Major Tourist Routes	100	
PROXIMITY	MILES	% Total Road Miles
20 mi. of Urban Centers 5000	700	80
20 mi. of Urban Centers 20,000	—	—
40 mi. of Urban Centers 20,000	—	—
S.D.U.C.'s in 50 - 150 mi. Zone	13 (NUMBER)	
ACCESS	SQUARE MI	% Total Area
From Urban Areas of 5000	574	100
From Urban Areas of 20,000	—	—
Total Accessible Area	574	100
Total Area of County	574	100

Data for Table VI and Lines 47-48 of Table VII are to be obtained locally.

S.D.U.C.	S.D.U.C. Population	Median Family Income	Proportion S.D.U.C.-M.F.I.
Wichita	11	9413	1,035
Topeka	5	9,661	483
K.C. Ks.	12	11,285	1,354
K.C. Mo.	36	10,242	3,687
Springfield	4	8,215	324
Tulsa	14	9,286	1,300
Okla. City	18	9,345	1,682
MEDIAN FAMILY INCOME S.D.U.C.'s			9,870

TABLE II SMALL URBAN CENTERS IN L.A.T. (2,500-20,000)	1960	1970
Iola	6,885	6,493
Chanute	10,849	10,341
Parsons	13,929	13,015
Independence	11,222	10,347
Coffeyville	17,382	15,116
SUBTOTAL	60,267	55,312
1980 PROJECTION	52,835	
1990 PROJECTION	45,402	
LARGE URBAN CENTERS IN L.A.T. (Over 20,000)		
SUBTOTAL		
1980 PROJECTION		
1990 PROJECTION		
TOTAL L.A.T. URBAN CENTERS	60,267	55,312
1980 PROJECTION	52,835	
1990 PROJECTION	45,402	
S.D.U.C.'s	1960	1970
Wichita	381,626	389,352
Topeka	141,286	155,322
K.C. Ks.	329,257	404,507
K.C. Mo.	1,092,545	1,253,916
Springfield Mo.	126,276	152,929
Tulsa, Okla.	418,974	476,945
Oklahoma City Okla.	511,833	640,889
TOTAL S.D.U.C.'s	3,001,527	3,473,360
1980 PROJECTION	3,709,877	
1990 PROJECTION	4,417,927	

TABLE VII RURAL OWNERSHIP & LAND USE — SIZE OF FARMS	ACRES
COUNTY TOTAL	330,677
in 180 - 219 acre class	6,703
in 220 - 259 acre class	10,425
in 260 - 499 acre class	76,354
in 500 - 1000 acre class	115,852
in over 1000 acre class	54,757
TOTAL 180 acre and over	263,631
in 100 - 139 acre class	5,091
in 140 - 179 acre class	11,236
TOTAL ... 259 acres	33,958
	% of Total
180 acre and over	80
100 - 179 acres	10
TYPE OF FARMS	NO.
Dairy	30
Livestock	320
General	47
TOTAL Dairy, Livestock, General	397
ALL FARMS	785
	% of Total
Dairy, Livestock & General	50
OTHER LANDS	ACRES
Public Lands open to hunting	/
Corporate Lands open to hunting	/
Public, Corporate and Farms over 180 acres	263,631
TOTAL COUNTY	330,677
	% of Total
Public, Corporate and Farms over 180 acres	80

(See Instructions Reverse Side)

TABLE VIII CLIMATE

WEATHER STATION LOCATIONS	Topeka	Wichita	Okla. City	K.C. Mo.	Tulsa	Little Rock
% POSSIBLE SUNSHINE						
JANUARY	50	54	59	52		
FEBRUARY	52	63	59	55		
MARCH	55	66	63	57		
APRIL	54	63	61	59		
MAY	57	61	65	63	57	64
JUNE	65	75	75	69	65	70
JULY	66	84	77	76	73	69
AUGUST	68	82	81	73	75	72
SEPTEMBER	74	84	75	69	73	69
OCTOBER	67	65	69	68		
NOVEMBER	57	71	62	55		
DECEMBER	52	62	60	51		
MEAN TEMPERATURE						
JANUARY	28.7	32.0	37.0	31.7	37	42
FEBRUARY	33.4	37.2	41.3	35.8	42	46
MARCH	42.6	45.3	48.5	43.3	50	53
APRIL	54.5	56.2	59.9	55.7	61	63
MAY	63.8	64.7	68.4	65.6	68	70
JUNE	73.8	75.3	78.0	75.4	78	78
JULY	79.2	80.9	82.5	81.5	82	82
AUGUST	77.6	79.9	82.8	79.8	82	81
SEPTEMBER	64.0	71.7	73.8	71.3	74	75
OCTOBER	57.9	60.2	62.9	60.2	63	64
NOVEMBER	42.6	45.1	48.4	44.6	50	52
DECEMBER	32.2	35.2	40.3	35.8	41	44
PRECIPITATION						
JANUARY	1.07	1.03	1.31	1.44	1.98	5.12
FEBRUARY	.97	.95	1.31	1.24	1.57	4.06
MARCH	2.03	1.74	1.97	2.49	2.61	4.85
APRIL	3.50	3.52	3.12	3.56	4.25	5.16
MAY	4.32	3.79	5.19	4.40	4.77	4.83
JUNE	4.54	4.99	4.47	4.57	5.15	3.43
JULY	3.25	3.43	2.31	3.19	2.69	3.10
AUGUST	4.22	2.96	2.52	3.77	3.23	3.15
SEPTEMBER	3.44	3.23	3.62	3.25	4.25	2.83
OCTOBER	2.56	2.18	2.51	2.86	3.09	2.81
NOVEMBER	1.34	1.73	1.56	1.50	2.40	3.92
DECEMBER	1.72	1.10	1.41	1.53	1.69	4.08
WINTER						
Days 32° or Less to Degree	91	107				
Total Inches Snowfall	18.7	7.7				

Give Special Winter Data Only For Local Stations

Data for Tables I, II, III, IV and V to be obtained from U.S. Census of Populations. Data for Table VII, except below Line 46, to be obtained from U.S. Census of Agriculture.

SUMMARY OF APPRAISALS OF POTENTIALS FOR OUTDOOR RECREATION

DATE OF APPRAISAL July, 1972 IN Wilson COUNTY Wilson SOIL (& WATER) CONSERVATION DISTRICT OF Kansas STATE

KINDS OF RECREATION DEVELOPMENTS		SCORES FOR KEY ELEMENTS (RATINGS X MULTIPLIERS)																TOTAL SCORE	APPRAISAL (ADJECTIVE)
		CLIMATE	SCENERY	NATURAL AREAS	HISTORIC AREAS	SOILS	WATERSHEDS: EXISTING	WATERSHEDS: IMPOUNDMENT SITES	WILDLIFE: HABITAT	WILDLIFE: POPULATIONS	POPULATION-PEOPLE: SIZE & DISTRIBUTION	POPULATION-PEOPLE: AGE & OCCUPATION	POPULATION-PEOPLE: INCOME LEVELS	PROX. & ACCESS: PROXIMITY	PROX. & ACCESS: ACCESS	PROX. & ACCESS: TOURIST ROUTES	RURAL OWNERSHIP AND LAND USE PATTERN			
I.	VACATION CABINS, COTTAGES, & HOMESITES	10	12	5	XXX	5	6	21	XXX	XXX	10	XXX	14	4	10	XXX	XXX		97	Medium
II.	CAMPING -VACATION SITE	10	12	10	XXX	5	12	14	XXX	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX		73	Medium
	-PACK TRIP	15	18	15	XXX	XXX	5	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		53	Medium
	-TRANSIENT	5	6	XXX	XXX	5	XXX	4	XXX	XXX	XXX	XXX	XXX	XXX	XXX	25	XXX		45	Medium
III.	PICNIC & SPORTS AREAS -GAME, PLAY, TARGET AREAS	4	XXX	XXX	XXX	5	XXX	XXX	XXX	XXX	6	0	3	24	10	XXX	XXX		52	Medium
	-BICYCLING	—	—	XXX	XXX	—	XXX	XXX	XXX	XXX	—	—	—	—	—	XXX	XXX		—	—
	-PICNICKING	4	4	XXX	XXX	5	6	7	XXX	XXX	6	XXX	3	24	10	XXX	XXX		69	Medium
IV.	FISHING WATERS -WARM WATERS	6	XXX	XXX	XXX	XXX	18	14	XXX	14	6	XXX	XXX	4	XXX	XXX	XXX		62	Medium
	-COLD WATERS	—	XXX	XXX	XXX	XXX	—	—	XXX	—	XXX	—	XXX	—	XXX	XXX	XXX		—	—
V.	GOLF COURSES -STANDARD & PAR-3	XXX	8	XXX	XXX	7	XXX	XXX	XXX	XXX	6	20	9	0	XXX	XXX	XXX		50	Medium
	-MINIATURE & DRIVING RANGES	XXX	XXX	XXX	XXX	5	XXX	XXX	XXX	XXX	6	20	3	0	XXX	XXX	XXX		34	Low
VI.	HUNTING AREAS -SMALL GAME	9	XXX	XXX	XXX	8	XXX	XXX	50	24	10	XXX	XXX	0	XXX	XXX	8		109	High
	-BIG GAME	9	XXX	XXX	XXX	8	XXX	XXX	50	18	10	XXX	XXX	XXX	XXX	XXX	XXX		95	High
	-WATERFOWL	9	XXX	XXX	XXX	8	XXX	XXX	50	21	5	XXX	6	XXX	XXX	XXX	XXX		99	High
VII.	NATURAL, SCENIC, AND HISTORIC AREAS -NATURAL AREAS	XXX	24	30	XXX	XXX	XXX	XXX	XXX	1	10	XXX	XXX	8	6	4	XXX		83	Medium
	-SCENIC AREAS	XXX	30	20	XXX	XXX	XXX	XXX	XXX	XXX	20	XXX	XXX	8	12	3	XXX		93	Medium
	-HISTORIC AREAS	XXX	XXX	XXX	40	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX	8	XXX	9	XXX		67	Medium
VIII.	RIDING STABLES	6	XXX	18	XXX	XXX	XXX	XXX	XXX	XXX	2	0	6	0	XXX	XXX	XXX		32	Low
IX.	SHOOTING PRESERVES	8	6	XXX	XXX	10	XXX	XXX	XXX	XXX	0	10	9	0	XXX	XXX	XXX		43	Medium
X.	VACATION FARMS AND RANCHES -FARMS	15	14	10	XXX	6	7	8	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX	9		79	Medium
	-RANCHES	15	14	15	XXX	XXX	7	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	9		60	Medium
XI.	WATER SPORTS AREAS	5	7	XXX	XXX	XXX	28	24	XXX	XXX	2	0	XXX	8	XXX	XXX	XXX		74	Medium
XII.	WINTER SPORTS AREAS	—	—	XXX	XXX	—	—	—	XXX	XXX	—	—	—	—	—	XXX	XXX		—	—
		A.	B.	C.	D.	E.	F.1	F.2	G.1	G.2	H.1	H.2	H.3	I.1	I.2	I.3	J.	K.		

USDA-SCS-LINCOLN, NEBR 1967

5,L-24127-13

INVENTORY OF POTENTIAL IMPOUNDMENT SITES

Wilson County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Acres)	Volume (Acre-Feet)	Drainage (Sq. Mi.)
1.	Trib. 7 mi. E. of Buffalo	8-27-17	42	367	5.30
2.	Trib. 8 mi. E. of Buffalo	4-27-17	25	201	2.90
3.	Trib. 9 mi. E. of Buffalo	10-27-17	17	132	1.90
4.	Village Creek	21-27-17	—	—	———
5.	Trib. to Village Creek	28-27-17	—	—	———
6.	" " " "	36-27-16	12	125	1.80
7.	Trib. to Cedar Creek	17-28-17	16	125	2.10
8.	" " " "	16-28-17	—	—	———
9.	" " " "	22-28-17	23	114	2.23
10.	Pumpkin Creek	5-29-17	—	—	———
11.	Trib. to Chetopa Creek	22-29-17	25	186	3.64
12.	" " " "	33-29-17	13	113	2.20
13.	Dry Creek	16-30-17	20	158	3.08
14.	" "	21-30-17	15	117	2.28
15.	" "	20-30-17	10	78	1.52
16.	Trib. 8 mi. W. 2 mi. S. of Neodesha	27-30-17	32	215	4.20
17.	Dry Creek	30-30-17	7	61	1.20
18.	Trib. to Dry Creek	14-30-16	31	227	4.44
19.	Trib. to Chetopa Creek	5-30-17	16	158	3.08
20.	" " " "	19-29-17	15	80	1.56
21.	East Cedar Creek	34-28-16	10	60	1.01
22.	" " "	23-28-16	22	198	3.32
23.	Cedar Creek	24-28-16	14	57	0.95
24.	Crooked Creek	7-28-16	27	365	6.12
25.	Elders Creek	1-28-15	100	1,058	17.72
26.	Woodruff Creek	24-27-15	75	992	16.62
27.	Trib. to Verdigris River	19-28-16	12	124	2.08
28.	Trib. 4 mi. W of LaFontaine	33-30-15	17	129	2.52

INVENTORY OF POTENTIAL IMPOUNDMENT SITES (Cont'd - 2)

Wilson County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Acres)	Volume (Acre-Feet)	Drainage (Sq. Mi.)
29.	Trib. to Fall River	15-30-15	15	136	2.28
30.	" " " "	5-30-15	27	382	6.40
31.	" " " "	34-29-15	19	198	3.32
32.	Trib. to Verdigris River	24-29-15	35	296	4.96
33.	" " " "	35-28-15	18	74	1.24
34.	Clear Creek	20-29-15	50	387	6.48
35.	Trib. to Fall River	6-29-15	9	74	1.24
36.	Trib. of Branch Creek	32-28-15	17	117	1.96
37.	" " " "	22-28-15	18	110	1.84
38.	Trib. to Snake Creek	12-28-14	—	—	—
39.	" " " "	10-28-14	4	83	1.40
40.	" " " "	3-28-14	17	138	2.32
41.	Trib. to Verdigris River	19-27-15	20	134	2.24
42.	" " " "	12-27-14	18	104	2.04
43.	" " " "	6-27-15	20	114	2.22
44.	" " " "	14-27-13	50	552	9.24
45.	Brush Creek	25-27-13	16	127	2.12
46.	Trib. to Verdigris River	32-27-14	40	418	7.00
47.	" " " "	4-28-14	10	100	1.68
48.	Trib. to Fall River	14-28-13	24	234	3.92
49.	" " " "	25-28-13	20	191	3.20
50.	" " " "	29-28-14	30	291	4.88
51.	Willow Creek	24-29-13	25	253	4.24
52.	Rainbow Creek	31-29-14	50	547	9.16
53.	Plum Creek	8-30-14	19	162	2.72
54.	Trib. to Plum Creek	2-30-14	18	167	2.80

INVENTORY OF NATURAL, SCENIC, AND HISTORIC AREAS

Wilson County

Name of Area	Location	Area	Description
Historic:			
Fort Row	Highway 96 - 10 mi. north of Fredonia	2 acres	Militia fort in 1861.
Martinson Building	Wilson		Last of the original business buildings on Main Street. Built in 1870.
New Albany Historical Museum	New Albany		Museum.
Norman No. 1 Well Park	Neodesha	3 acres	Museum, historical oil well derrick, picnic grounds.
Coy Greathouse Park	Coyville Highway 54 - 96		Park. 1870 home of Elisha Coy is located here. Home is made of hand-made brick shaped of clay from the creek bank close to the house.
Scenic:			
Harley Masters Gardens	1½ miles north of Benedict	3 acres	Picnic grounds and rock gardens.

INVENTORY OF EXISTING WATER AREAS

Wilson County

NAME	LOCATION	SIZE	PRESENT USE
Buffalo State Lake	On Buffalo Creek 1 mile southeast of Buffalo	100 acres, 1¼ miles long, 1200 feet wide	Picnicking; fishing, bass, B.G., channel cat. Highway 75 crosses dam. Open to public. Year round flow.
Oscar Larson	SW½ 8-28-17	10 acres	Stockwater and detention. Intermittent stream flow.
Jack Grubb	NW¼ 29-29-16	9 acres	G-3. Intermittent stream flow.
Melvin Small	SW¼ 35-30-15	5 acres	Stockwater and recreation, intermittent stream flow
Fryers Lake	SW¼ 17-30-15	8 acres	Stockwater and recreation, Neodesha Recreation Club, intermittent stream flow
Cecil Pryor	NW¼ NW¼ 28-27-14	5 acres	Stockwater and detention, intermittent stream flow
Charles Manley	NE¼ 26-29-13	8 acres	Stockwater, intermittent stream flow
Kerm Trimble	SE¼ 7-28-14	10 acres	G-3, intermittent stream flow

INVENTORY OF EXISTING WATER AREAS (Cont'd - 2)

Wilson County

NAME	LOCATION	SIZE	PRESENT USE
W. N. Wiggins	NW¼ 17-28-17	10 acres	Detention and recreation, intermittent stream flow
McCager Thompson	SW¼ 11-28-14	8 acres	Stockwater, intermittent stream flow
Dale Nelson	NE¼ 1-27-16	7 acres	Water supply for house and livestock, intermittent stream flow
Alva Mayeska	SE¼ 31-28-14	9 acres	Stockwater, intermittent stream flow
Dr. Robert Young	SE¼ 2-28-13	5 acres	G-3, intermittent stream flow
McMillen Estate	NW¼ 9-28-17	10 acres	Flood control, intermittent stream flow
Dale Newton	NE¼ 14-29-16	16 acres	Flood control, intermittent stream flow
Leroy Barker	NE¼ 16-28-17	4 acres	Flood control, intermittent stream flow

WOODSON COUNTY

THIS BOOK CONTAINS NUMEROUS PAGES THAT ARE CUT OFF

THIS IS AS RECEIVED FROM THE CUSTOMER

APPRAISAL OF OUTDOOR RECREATION POTENTIALS

STATISTICS WORK SHEET

Woodson COUNTY Woodson SOIL & WATER CONSERVATION DISTRICT Kansas STATE DATE 7-13-72

AREAS	TABLE I Numbers of People 1960	1970	TABLE III Age Groups – 1970: 15-29	30-44	45	TABLE IV Occupation – 1970: Employed	Professional	Skilled	TABLE V Family Income 1970: SEA Population	Median Family Income	Population ...
APPRAISAL COUNTY											
Woodson	5,423	4,789	783	621	2,326	1,650	281	315	4	5,707	228
SURROUNDING COUNTIES											
Greenwood	11,253	9,141	1,535	1,287	4,291	3,351	645	810	9	5,994	570
Lyon	26,928	32,071	11,566	3,875	9,413	12,921	3,274	2,592	30	7,121	2,406
Coffey	8,403	7,397	1,22.	930	3,263	2,641	454	472	1	5,352	410
Anderson	9,035	8,501	1,507	1,117	3,659	2,965	530	693	8	6,551	524
Allen	16,369	15,043	2,234	2,113	6,333	2,777	1,094	1,311	12	6,333	957
Neosho	19,455	18,812	3,743	2,704	7,325	6,121	1,431	1,551	15	7,303	1,315
Wilson	13,077	11,317	2,009	1,531	2,186	4,121	777	1,260	10	6,434	645
TOTAL SEA	109,443	107,071	25,449	14,196	42,526	37,941	5,443	9,465	10		
1980 PROJECTION	105,655										
2000 PROJECTION	161,327										
% of Total Employed							22	24			
TOTAL POPULATION IN AGE GROUPS %			24	13	40						
U.S. Average			24	17	31						

SEA Median Family Income: 7,028

TABLE II

SMALL URBAN CENTERS in L.A.T. (5000-20,000)	1960	1970
Iola	6,885	6,493
Chanute	9,410	8,467
SUBTOTAL	16,295	15,460
1980 PROJECTION	15,042	
2000 PROJECTION	13,789	
LARGE URBAN CENTERS in L.A.T. (Over 20,000)		
SUBTOTAL		
1980 PROJECTION		
2000 PROJECTION		
TOTAL L.A.T. URBAN CENTERS	16,295	15,460
1980 PROJECTION	15,042	
2000 PROJECTION	13,789	
~~SDUC~~ 531543	1960	1970
Wichita	351,626	389,352
Topeka	141,286	155,322
K.C. Ks	329,287	404,367
K.C. Mo	1,092,545	1,253,916
Springfield	126,276	152,929
Tulsa, Okla	418,974	476,945
Okla City	511,833	640,889
TOTAL SDUC	3,001,527	3,413,860
1980 PROJECTION	3,964,817	
2000 PROJECTION	4,417,927	

TABLE V (continued) – SDUC

SDUC	SEA Population	Median Family Income	Population ...
Wichita	11	8,713	1,035
Topeka	5	9,661	433
K.C. Ks	12	11,283	1,354
K.C. Mo	36	9,442	3,631
Springfield	-2	5,215	329
Tulsa	14	9,256	1,300
Okla City	15	9,345	1,682
Median Family Income			9,510

TABLE VII
RURAL OWNERSHIP & LAND USE

SIZE OF FARMS	ACRES
COUNTY TOTAL	289,956
[illegible]	427
[illegible]	10,631
[illegible]	52,471
[illegible]	76,553
[illegible]	135,235
TOTAL [illegible]	273,95[illegible]
[illegible]	5,479
[illegible]	7,302
TOTAL [illegible]	26,180
[illegible]	921
[illegible]	9
TYPE OF FARMS	NO.
Dairy	14
Livestock	226
General	40
TOTAL Dairy Livestock General	280
ALL FARMS	523
% of Total Dairy, Livestock & General	51
OTHER LANDS	ACRES
Public Lands open to hunting	4,366
Corporate Lands open to hunting	—
Public, Corporate and Farms over 180 acres	218,296
TOTAL COUNTY	289,966
% of Total Public, Corporate and Farms over 180 acres	91

(See Instructions Reverse Side)

TABLE VI
PROXIMITY & ACCESS

ROADS IN COUNTIES	MILES	
All Weather Roads	800	
Major Tourist Routes	50	
PROXIMITY	MILES	% Total Road Miles
20 mi. of Urban Centers 5000	—	—
20 mi. of Urban Centers 20,000	—	—
40 mi. of Urban Centers 20,000	—	—
SDUC's in 50-150 mi. Zone		NUMBER
ACCESS	SQUARE MI	% Total Area
From Urban Areas of 5000	—	—
From Urban Areas of 20,000		
Total Accessible Area	495	99
Total Area of County	497	100

Data for Table VI and Lines 47-48 of Table VII are to be obtained locally.

TABLE VIII
CLIMATE

WEATHER STATION LOCATIONS (NAMES)	Topeka	Wichita	[illegible] City	K.C. Mo	Tulsa	Little Rock		
POSSIBLE SUNSHINE								
January	52	57	54	52				
February	52	65	54	55				
March	55	66	63	57				
April	54	65	61	57				
May	51	67	62	63	57	64		
June	65	75	75	69	65	70		
July	66	81	77	76	73	69		
August	65	82	82	73	75	72		
September	54	84	75	69	73	69		
October	67	65	69	68				
November	57	71	62	58				
December	52	67	66	51				
MEAN TEMPERATURE								
January	25.7	32.1	31.0	31.7	37	42		
February	33.4	37.2	41.3	35.8	42	46		
March	42.6	45.3	48.5	43.3	50	53		
April	54.5	56.2	59.9	55.7	61	63		
May	63.3	64.2	65.4	65.6	68	70		
June	73.5	75.2	78.0	75.9	78	78		
July	79.2	80.9	82.5	81.5	82	82		
August	77.6	79.9	82.8	79.8	82	81		
September	68.6	71.7	73.5	71.3	74	75		
October	57.8	60.2	62.4	60.2	63	64		
November	42.6	45.1	43.4	44.6	50	52		
December	32.2	35.2	40.3	35.8	41	44		
PRECIPITATION								
January	1.07	1.05	1.31	1.41	1.98	5.12		
February	.97	.78	1.31	1.24	1.57	4.06		
March	2.63	1.74	1.91	2.49	2.61	4.85		
April	3.56	3.52	3.12	3.56	4.25	5.16		
May	4.32	3.79	2.19	4.40	4.77	4.55		
June	4.57	4.49	4.47	4.57	5.15	3.43		
July	3.25	3.43	2.31	3.19	2.69	3.10		
August	4.66	2.96	2.52	3.77	3.13	3.15		
September	3.44	3.43	3.62	3.25	4.25	2.85		
October	2.56	2.18	2.31	2.86	3.09	2.81		
November	1.54	1.73	1.56	1.80	2.40	3.92		
December	1.12	1.10	1.41	1.53	1.69	4.03		
WINTER								
Days 1st - Last 32 Degree	97	101				Give Special Winter Data Only For Local Stations		
Total Inches Snowfall	15.7	17						

Data for Tables I, II, III, IV and V to be obtained from U.S. Census of Populations. Data for Table VII, except below Line 46, to be obtained from U.S. Census of Agriculture.

SUMMARY OF APPRAISALS OF POTENTIALS FOR OUTDOOR RECREATION

DATE OF APPRAISAL July, 1972 IN Woodson COUNTY Woodson SOIL (& WATER) CONSERVATION DISTRICT OF Kansas STATE

KINDS OF RECREATION DEVELOPMENTS		SCORES FOR KEY ELEMENTS (RATINGS X MULTIPLIERS)																TOTAL SCORE	APPRAISAL (ADJECTIVE)
		CLIMATE	SCENERY	NATURAL AREAS	HISTORIC AREAS	SOILS	WATER ARS. EXISTING	WATER ARS. IMPOUNDMENT SITES	WILD-LIFE HABITAT	WILD-LIFE POPULATIONS	POPULA.-PEOPLE SIZE & DISTRIBUTION	POPULA.-PEOPLE AGE & OCCUPATION	POPULA.-PEOPLE INCOME LEVELS	PROX. & ACCESS PROXIMITY	PROX. & ACCESS ACCESS	PROX. & ACCESS TOURIST ROUTES	RURAL OWNERSHIP AND LAND USE PATTERN			
I.	VACATION CABINS, COTTAGES, & HOMESITES	14	16	5	XXX	5	7	24	XXX	XXX	10	XXX	14	10	10	XXX	XXX		115	High
II.	CAMPING -VACATION SITE	14	16	10	XXX	5	14	16	XXX	XXX	XXX	XXX	XXX	XXX	10	XXX	XXX		85	High
	-PACK TRIP	21	24	15	XXX	XXX	7	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		67	Medium
	-TRANSIENT	7	8	XXX	XXX	5	XXX	6	XXX	XXX	XXX	XXX	XXX	XXX	XXX	15	XXX		41	Medium
III.	PICNIC & SPORTS AREAS -GAME, PLAY, TARGET AREAS	5	XXX	XXX	XXX	5	XXX	XXX	XXX	XXX	3	5	6	0	0	XXX	XXX		24	Low
	-BICYCLING	5	5	XXX	XXX	5	XXX	XXX	XXX	XXX	3	5	3	0	0	XXX	XXX		26	Low
	-PICNICKING	5	5	XXX	XXX	5	7	8	XXX	XXX	3	XXX	3	0	0	XXX	XXX		36	Low
IV.	FISHING WATERS -WARM WATERS	7	XXX	XXX	XXX	XXX	24	16	XXX	16	5	XXX	XXX	0	XXX	XXX	XXX		68	Medium
	-COLD WATERS	—	XXX	XXX	XXX	XXX	—	—	XXX	—	XXX	—	XXX	—	XXX	XXX	XXX		—	—
V.	GOLF COURSES -STANDARD & PAR-3	XXX	7	XXX	XXX	5	XXX	XXX	XXX	XXX	3	20	9	0	XXX	XXX	XXX		44	Medium
	-MINIATURE & DRIVING RANGES	XXX	XXX	XXX	XXX	5	XXX	XXX	XXX	XXX	3	20	3	0	XXX	XXX	XXX		31	Low
VI.	HUNTING AREAS -SMALL GAME	9	XXX	XXX	XXX	8	XXX	XXX	45	27	12	XXX	XXX	0	XXX	XXX	10		111	High
	-BIG GAME	9	XXX	XXX	XXX	8	XXX	XXX	30	18	8	XXX	XXX	XXX	XXX	XXX	XXX		73	Medium
	-WATERFOWL	9	XXX	XXX	XXX	8	XXX	XXX	35	21	4	XXX	6	XXX	XXX	XXX	XXX		83	Medium
VII.	NATURAL, SCENIC, AND HISTORIC AREAS -NATURAL AREAS	XXX	8	18	XXX	XXX	XXX	XXX	XXX	1	10	XXX	XXX	10	8	3	XXX		58	Medium
	-SCENIC AREAS	XXX	10	12	XXX	XXX	XXX	XXX	XXX	XXX	20	XXX	XXX	8	20	3	XXX		73	Medium
	-HISTORIC AREAS	XXX	XXX	XXX	20	XXX	XXX	XXX	XXX	XXX	20	XXX	XXX	8	XXX	9	XXX		57	Medium
VIII.	RIDING STABLES	5	XXX	18	XXX	XXX	XXX	XXX	XXX	XXX	2	0	6	0	XXX	XXX	XXX		31	Low
IX.	SHOOTING PRESERVES	8	5	XXX	XXX	12	XXX	XXX	XXX	XXX	0	10	9	0	XXX	XXX	XXX		44	Medium
X.	VACATION FARMS AND RANCHES -FARMS	15	14	10	XXX	6	7	8	XXX	XXX	XXX	XXX	XXX	8	XXX	XXX	9		77	Medium
	-RANCHES	15	21	15	XXX	XXX	7	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	9		67	Medium
XI.	WATER SPORTS AREAS	5	9	XXX	XXX	XXX	28	18	XXX	XXX	2	0	XXX	0	XXX	XXX	XXX		62	Medium
XII.	WINTER SPORTS AREAS	—	—	XXX	XXX	—	—	—	XXX	XXX	—	—	—	—	—	XXX	XXX		—	—
		A.	B.	C.	D.	E.	F.1	F.2	G.1	G.2	H.1	H.2	H.3	I.1	I.2	I.3	J.	K.		

USDA-SCS-LINCOLN, NEBR 1967

L-24127-13

INVENTORY OF POTENTIAL IMPOUNDMENT SITES
Woodson County

No.	Watershed	Location (Sec.-T.-R.)	Area (Surface Areas)	Volume (Acre-Feet)	Drainage (Square Mile)
1	Trib. Verdigris River	25-24-13	38	281	6.7
2	" " "	36-24-13	20	151	3.4
3	" " "	1-25-13	14	71	1.7
4	" " "	7-25-14	16	84	2.0
5	Cedar Creek	17-25-14	38	185	4.4
6	Trib. Cedar Creek	21-25-14	29	97	2.3
7	Trib. Verdigris River	5-26-14	11	92	2.2
8	" " "	32-26-14	10	63	1.5
9	Trib. Big Sandy Creek	35-26-14	6	42	1.0
10	" Big Sandy Creek	23-26-14	8	63	1.5
11	" " " "	18-26-15	5	34	.8
12	" " " "	7-26-15	23	197	4.7
13	Big Sandy Creek	1-26-14	44	378	9.0
14	Trib. Big Sandy Creek	25-25-14	12	42	1.0
15	" " " "	31-25-15	37	202	4.8
16	" " " "	32-25-15	6	46	1.1

INVENTORY OF POTENTIAL IMPOUNDMENT SITES -(Contd. - 2)
Woodson County

No.	Watershed	Location (Sec.-T-R)	Area (Surface Acres)	Volume (Acre Feet)	Drainage (Sq. Mi.)
17	West Buffalo Creek	33-26-15	48	265	6.3
18	Trib. W. Buffalo Creek	26-26-15	79	454	10.8
19	" " " "	36-26-15	8	46	1.1
20	" E. Buffalo Creek	28-26-16	12	84	2.0
21	" " " "	21-26-16	9	50	1.2
22	" " " "	34-26-16	10	50	1.2
23	Duck Creek	19-23-15	100	1012	14.6
24	Trib. Duck Creek	29-23-15	9	104	1.5
25	" " "	26-23-15	11	111	1.6
26	Turkey Creek	34-23-15	16	180	2.6
27	Trib. Turkey Creek	5-24-15	26	312	4.5
28	" " "	11-24-14	8	125	1.8
29	" " "	15-24-14	75	873	12.6
30	" " "	14-24-14	9	90	1.3
31	Trib. Owl Creek	7-25-15	18	139	2.0
32	" " "	8-25-15	8	90	1.3
33	" " "	28-24-15	50	457	6.6

INVENTORY OF POTENTIAL IMPOUNDMENT SITES - (Contd.- 3)
Woodson County

No.	Watershed	Location (Sec.-T.-R.)	Area (Su.Acres)	Volume (Ac. Ft.)	Drainage (Sq.Mi.)
34	Trib. Owl Creek	21-24-15	37	353	5.1
35	" " "	36-24-15	35	305	4.4
36	" " "	32-24-16	28	249	3.6
37	" " "	9-25-16	9	69	1.0
38	Duck Creek	20-23-16	28	236	3.4
39	Rock Creek	21-23-16	12	125	1.8
40	Trib. Neosho River	35-23-16	17	194	2.8
41	" " "	7-24-17	20	187	2.7
42	" " "	16-24-17	22	208	3.0
43	" " "	21-24-17	21	166	2.4
44	Trib. Cherry Creek	5-24-16	27	228	3.3
45	" " "	7-24-16	46	416	6.0
46	Trib. Cherry Creek	10-24-16	19	152	2.2
47	" " "	26-24-16	19	152	2.2
48	Plum Creek	31-24-17	18	173	2.5

INVENTORY OF POTENTIAL IMPOUNDMENT SITES -(Contd. - 4)
Woodson County

No.	Watershed	Location (Sec.-T.-R.)	Area Su. Acres)	Volume (Ac.Ft.)	Drainage (Sq.Mi.)
49	Trib. Plum Creek	5-25-17	32	270	3.9
50	" " "	4-25-17	28	201	2.9
51	Trib. S. Owl Creek	10-26-17	25	201	2.9
52	" " " "	35-25-15	22	173	2.5
53	Trib. Scatter Creek	27-26-17	9	69	1.0
54	Scatter Creek	22-26-17	55	527	7.6
55	Big Creek	19-23-14	44	188	6.4

INVENTORY OF NATURAL, SCENIC, AND HISTORIC AREAS

Noteworthy Sites and History in Woodson County, Kansas

1. 200 million year old worm tracks on bottom of shallow sea, now fossilized in bottom of Duck Creek W ½ NW ¼ S 24 Twp 23 Range 14.
2. 200 million year old coal deposits containing fossilized pine cones and other coniferous remains along U.S. Highway 54 northeast of Toronto, Kansas.
3. 200 million year old fossilized coniferous tree trunk on property of $E\frac{1}{2}$ $NE\frac{1}{4}$ Sec 17 Twp 24 Range 15.
4. 50 million year old earthquake fault and volcanic intrusion and dike of peridotite green granite - the only granite in Kansas - along a fault plane starting from Rose Dome ($NE\frac{1}{4}$ $SE\frac{1}{4}$ 13-26-15) running southwest about seven miles to Silver City ($S\frac{1}{2}$ 30-26-15). Peridotite is found in only about six spots in North America and is the type of rock in which diamonds are found in Kimberly South Africa and Murfreesboro, Arkansas. This volcanic outcrop is described in USGA Fredonia Quadrangle Folio obtainable from Rollo, Missouri USGS office.
5. 25 million years ago Dinosaurs roamed shallow stream bottoms of Woodson County and a series of thirty tracks were reported by Dr. Fred Mulsow fifty years ago in the bottom of Turkey Creek in $N\frac{1}{2}$ 33-23-15.
6. About 15 million years ago streams flowed west from Lake of the Ozarks in Missouri into shallow oceans in Kansas and deposited Missouri Iron Ore here and there in depressions especially noticeable north along U.S. #75 north of Yates Center.

7. The Rose Dome volcanic intrusion of granite was so hot that it created a sort of mud paint pots in southern Woodson County and also melted sandstone into the only quartzite in Kansas near Silver City (N½ 30-26-15).

8. As a network of drainage began to eat back from the Verdigris and the Neosho Rivers the last time Woodson County rose out of the ocean ground waters here and there ate back caves in the soft rock underlying harder overlapping rocks particulary in northwest Woodson County. One of these was Coopers Caves N½ 29-24-25 another Dry Creek Caves NW¼ 13-24-13 and another Dassow Cave SE¼ 8-25-15. The Smithsonian Institution excavated Dry Creek Caves and found Indian spear heads 9,000 years old, arrow heads 6,000 years old.

9. The first American Capt. Zebulon Pike was sent west by President Jefferson in 1806 to Kansas coming up the Osage to about Garnett then south to Iola then west across the Neosho River at Neosho Falls and across northern Woodson County to the divide between the Neosho and the Veridgris then northwest.

10. The Phillips family on East Rutledge St., Yates Center, Kansas, working for sixty years have found more than 20,000 Indian culture artifacts mostly along the Big Sandy in southern Woodson County which the Smithsonian people said was probably the largest collection made by one man in one county in North America. There are Aksarben artifacts, Lewellian artifacts, Folsom points, peace pipes from Pipeston, Minnesota, firemaking stones from Ohio, musket flints from seventeenth century France, obsidian points from New Mexico, and other items from many other parts of Indian North America.

11. In 1825 Congress passed laws to move all woodland Indians east of the Mississippi to reservations in the plains Indian country running west from Eastern boundaries of Kansas and Oklahoma. Forty Indian reservations were marked off from the eastern boundaries of Kansas and Oklahoma. Woodson County was partly in Osage Indian country and mostly in New York Indian reservation area. Debauchery, disease and robbery by white men so reduced New York Indian numbers that only 38 servived by 1860 so the New York reservation was withdrawn for white settlement and the first whites began arriving about 1855 and settling along Owl Creek east of Yates Center.

12. The Homestead Act brought in Civil War Veterans in 1865 and thereafter. There are several log cabins still standing built between 1856 and 1875. They should be preserbed and quickly, before they fall down or are bulldozed down.

13. The Katy Railroad was founded by Col. N. S. Goss of Neosho Falls about 1866 as Union Pacific Railroad Southern Branch and was given a 500,000 grant of land from Junction City to Parsons, Kansas by Congress to pay for its construction. Col. Goss completed construction for the first 50 to 60 miles down to Neosho Falls, Woodson County when Eastern Bankers moved in and took the road away from Col. Goss and pushed him out and built on down to Texas and they changed the name to the Katy. Judge Parsons was the eastern banker who headed this new group and Parsons, Kansas was named after him.

14. The Fort Scott, St. Louis and Wichita Railroad was built across Woodson County in 1892, by a group from Ft. Scott, Kansas under the leadership of Capt. Ira Bronson. When he got to Eureka, he ran out

of money and the road was snapped up by Jay Gould which Jay Gould then made part of the Missouri Pacific he was trying to build to the Pacific Ocean.

15. Yates Center was named County Seat of Woodson County before it had been incorporated as a city in 1874. The first courthouse was a building rolled up on logs from Kalida (3 miles Southeast of Yates Center) to the northwest corner of Block 30 in Yates Center. Part of this courthouse is still standing.

16. Yates Center was named after Abner Yates of Jacksonville, Illinois who gave the SW¼ 11-25-15 to start it. His brother, Richard Yates, was the first law graduate from Illinois State College at Jacksonville and both Abner and Richard formed lifelong friendships with Abraham Lincoln who advised Richard how to be elected Governor of Illinois. After Richard's death Abner moved to Kansas and was active in the early expansion of Yates Center as a county seat.

17. The Yates Center County Courthouse was designed by a noted architect, S. P. Washburn who is noted for his design of several prominent courthouses in northwest Kansas including the one at Ottawa, Kansas and perhaps the one at Olathe, Kansas.

18. The first Unidentified Flying Object (UFO) ever sighted in the United States was first seen the night of April 19, 1897, over 16-24-16 six miles northwest of Yates Center, Kansas, by Capt. Alexander Hamilton whose reputation for honesty was supported by affidavit of fifteen leading citizens. A calf was lassoed and drawn up into the midnight sky and the bones found the next day wrapped neatly in the hide on a neighbors farm.

19. Thurlow Lieurance, a famous writer of Indian music, wrote many of his famous songs in his home at Neosho Falls, Kansas, which is still standing.

20. Buster Keaton, one of the three greatest silent film comedians was born in Piqua, Kansas, ten miles east of Yates Center.

21. Toronto Dam Lake and Lake Fegan, Kansas State Lake, are noted for fishing and boating and vacation activities in southeast Kansas.

INVENTORY OF EXISTING WATER AREAS
Woodson County

Name	Location	Size-Surface Acres	Present Use
Toronto Reservoir	Southwestern Woodson County & southeastern Greenwood County	2,800	Warm water lake--water elevations fluctuate; flood control-recreation
Woodson County State Lake Lake Fagen	Belmont Township	187	Warm water lake-recreation
Yates Center City Reservoir	Center Township	115	Warm water lake--city water supply and recreation
Pond	SW¼ 3-24-17	7.5	Warm water--livestock and recreation
Pond	NE¼ 11-24-16	7.5	" " " "
Pond	SE¼ 1-24-15	22.0	" " " "
Pond	SE¼ 7-25-15	5.0	" " " "
Pond	NW¼ 3-25-16	8.2	" " " "
Pond	SE¼ 33-24-17	35.3	" " " "
Pond	SW¼ 21-24-16	5.0	" " " "
Pond	SE¼ 27-25-15	6.0	" " " "
Pond	NW¼ 24-25-14	5.0	" " " "
Pond	NW¼ 27-25-14	8.0	" " " "
Pond	SW¼ 29-25-14	5.8	" " " "

INVENTORY OF EXISTING WATER AREAS - (Cont'd. - 2)

Woodson County

Name	Location	Size-Surface Acres	Present Use
Pond	SW¼ NE¼ 36-23-16	5.2	Warm water--livestock and recreation
Pond	W½ NW¼ 34 and NE¼ 33-26-15	8.0	" " " "
Pond	W½ SE¼ 2-24-14	6.4	" " " "
Pond	NW¼ SE¼ 35-25-13	6.7	" " " "
Pond	NE¼ 28-25-15	5.8	" " " "
Pond	S½ NW¼ 28-24-15	10.7	" " " "
Pond	SW¼ 26-24-15	10.6	" " " "
Neosho River	Everett & Neosho Falls Townships	12 mi.long & 225' to 250' wide	Flow fluctuates because of John Redmond reservoir--seasonal flooding--some pollution. Neosho Falls & Rural Water District Supply & catfish fishing. Some recreation.
Verdigris River	Toronto Township	Only ½ mi. in Woodson Co. 100' to 125'wide	Flow fluctuates because of watershed dams. Good white bass & channel cat fishing.
Turkey Creek	North & Liberty Townships	15 mi. long; 40' to 50' wide; 3' to 4' deep	Year-round flow-some seasonal flooding. Some fishing.
Duck Creek	Liberty Township	7 mi.long; 40' to 50' wide. 6" to 1.0' deep	Year-round flow--seasonal flooding; some fishing.
Dry Creek	North & Toronto Townships	8 mi.long; 25' to 30' wide; 1.0 to 1.5' deep	" " " "

INVENTORY OF EXISTING WATER AREAS (Cont'd - 3)
Woodson County

Name	Location	Size-Surface Acres	Present Use
Pond	NE¼ 28-23-15	6.5	Warm water--livestock and recreation
Pond	SW¼ SE¼ 22-24-16	7.3	Warm water--livestock and recreation
Pond	NE¼ 31-24-17	14.0	Warm water--recreation and flood prevention
Pond	N½ NE¼ 36-24-16	12.0	Warm water--livestock, recreation and flood prevention
Pond	SE¼ 27-25-16	6.3	Warm water--livestock, recreation and flood prevention
Pond	SE¼ SW¼ & SW¼ SE¼ 33-24-15	6.9	Warm water--livestock, recreation and flood prevention
Pond	SE¼ SE¼ 33-24-15	6.1	Warm water--livestock, recreation and flood prevention
Pond	SW¼ 15-24-14	10.0	Warm water--livestock, recreation and flood prevention
Pond	SE¼ NW¼ 23-25-15	5.9	Warm water--livestock and recreation
Pond	W½ SW¼ 34-25-15	5.2	Warm water--livestock and recreation
Pond	SW¼ 27-26-15	5.4	Warm water--livestock and recreation

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AN APPRAISAL OF POTENTIALS FOR OUTDOOR RECREATION DEVELOPMENTS IN SELECTED KANSAS COUNTIES

by

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AN ABSTRACT OF A MASTER'S THESIS

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Outdoor recreation has been established as an important factor in maintaining the well-being of an individual. As people experience mounting demands and pressures from population growth, urbanization, and technological growth, opportunities for mental and physical renewal through outdoor recreation will become increasingly important.

Areas suitable for recreation must be developed to meet this demand. Too often because conflicting demands are made of these areas, recreation potential is sacrificed to the bulldozer and land developer. So in order to preserve these quality areas, appraising the potentials for recreation development must be an essential step in planning. Also, the economic feasibility of development demands the appraisal of recreation potentials.

This appraisal of potentials is an examination of the opportunities for further development of resources for recreation uses. It also recognizes that development potential depends upon people, and upon public facilities necessary for development.

The objectives of this study were to:

(1) Introduce a method of identifying and evaluating the potentials for recreation development in an area;

(2) Provide information needed for the effective

development of natural resources for outdoor recreation;

(3) Provide information to more efficient and profitable use of certain natural resources and thereby improve the economic status of individual landowners and the community.

The appraisal method involved preliminary inventories of fish and wildlife resources, natural, scenic, and historic areas, and potential impoundment sites. Twelve types of recreation developments were appraised. Certain key elements were assigned each type of development and weighted numbers (multipliers) given to these key elements. Each key element was then rated by group judgment and a score was determined by multiplying the weighted number by the rating number. These key element scores were then summed and a score for each development was determined. This procedure was followed for each county and a summary was computed for the entire nine county study area. The study area included the nine most southeastern Kansas counties - allen, Bourbon, Cherokee, Crawford, Labette, Montgomery, Neosho, Wilson, and Woodson.

The summary appraisal showed that small game hunting areas received the highest potential rating. The recreation developments that received low potential ratings were pack trip camping; bicycling and motorcycling areas; riding stables; shooting preserves; and vacation ranches. A medium potential rating was given to the following developments--vacation cabins, cottages, and homesites; vacation site

camping, transient camping; game, play and target areas; picnicking areas; warm water fishing areas; standard and Par-3 golf courses, miniature golf courses and driving ranges; big game, and waterfowl hunting areas; natural, scenic, and historic areas; vacation ranches; water sports areas.