

A SURVEY: SERVICE RELATED LAND USE  
INFORMATION NEEDS

by

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## PREFACE

The idea of this non-thesis project was developed while working for the Kansas Department of Economic Development (KDED) on a HUD workstudy program. While working at KDED in the area of land-use, I became aware of the existence of much land-use legislation in many states and the growing emphasis on land-use information data bank systems by such legislation.

Data bank systems can greatly improve the efficiency of local, state, and federal agencies by making available to them a centralized consolidation of land-use data items. The data system, however, can only be beneficial to such agencies if the data that is stored in them is such that it assists the agency in making its decisions and performing the various services that are provided by it efficiently and effectively: The selection and type of land-use data and its relationship to the services provided by various agencies in Kansas is the main concern on this non-thesis project. In this context, it should be perceived as a preliminary yet significant step in the Kansas land-use movement.

## Chapter 1

### INTRODUCTION

Traditionally, states have possessed the ultimate authority for land use control but, historically, have delegated such power to local governments, with little or no guidance from the state level. This has resulted in many problems and much misuse of land and natural resources by the local governments, who, often cannot solve extra-local or regional problems.<sup>1</sup> The passage of time has broadened the scope of public concern over the use and management of our land, environment, and natural resources. The need to maintain different types of land in a way which reflects their natural productivity and other characteristics is of great importance and concern in any society. This has caused many states to reexamine the practice of delegating land-use control power to local governments.

States are presently experiencing emerging land-use powers. Twenty-five of the states have current land use laws which document the "quiet revolution" in land use control---a trend toward state control over selected areas of activities that possess greater-than-local impact.<sup>2</sup> The general thrust of

proposed national land use legislation is to give states federal financial assistance to encourage state planning and control over land use of clearly "more than local concern."<sup>3</sup> By this legislation, states would have wide latitude in determining how much or what specific land should be controlled, and by what methods.

The U. S. Senate recently passed its version of Senate Bill 268. The Bill is concerned with national land use legislation. It seeks to establish a national land use policy and to make it mandatory for all states to adopt a statewide land use planning program. More specifically, it called for: studies pertaining to techniques and methods for the procurement, analysis, and evaluation of data and information related to land use planning and management; and for states to maintain and update land use data and information.<sup>4</sup> On February 26, 1974 the House Rules Committee unexpectedly voted to kill the land use legislation by a vote of 9-4. Opposition to the bill came primarily from conservative groups, business, industrial and development associations. They claimed that this would be a "no growth" piece of legislation. However, this should not be considered the end of this national land use legislation. Congressman Udall called it a "temporary and unexpected setback."<sup>5</sup> Currently, legislators have placed much emphasis on a much greater involvement of the states in land use

control. The large percentage in favor of U. S. Senate Bill 268 when it was approved in the Senate by 64 to 11 and in the House Interior Committee by 26 to 11 is also proof that it had wide support.<sup>6</sup> The legislation will probably be introduced in the next session of Congress. Thus we can see the need for the maintenance and upkeep of land use data, and information is an element that has been included in much of the present Federal and state land use legislation. This need has caused many governmental officials and professional planners to turn to information systems as a possible answer to this problem.

Ideally, planners as well as governmental officials require an enormous amount of land use information. Planner's information needs have been considered only in relation to the development of a particular plan or planning component.<sup>7</sup> Severe problems in data availability have frequently been encountered, so that only a partial or incomplete look at problems and proposed solutions have been possible.<sup>8</sup> Land-Use Information Systems make available required data for use in solving a particular problem. These specialized land use data are collected on a continuing basis, stored at a centralized location, and organized so that the data needed by different agencies or sources is readily available. A land-use data system, however, can be beneficial to the user only if it contains the information that is needed by the user in order

to reach a particular goal or solve a particular problem. Stated otherwise, in order for the system to be used beneficially it must be user oriented.<sup>9</sup>

If the trend in land use control is directed back toward the state level, state officials should be in a position to make more intelligent decisions concerning the use of our lands and natural resources. State land use data systems can greatly benefit state officials in this area. Thus, the question arises as to what type of land use information data is needed by state agencies, given the respective agencies' end goals or objectives.

The end goal of a state agency is to perform the function(s) for which it was created. The objectives of a state agency are to perform and provide required services. The services provided by an agency are related to the functions for which it was created. An agency would not be able to provide a particular service unless it was encompassed under its primary function in the statutory provisions.

Most statutory provisions outline the functions of a particular agency. These functions are usually stated in broad terms. Thus, it is difficult for one to readily see the relationship between the functions of an agency and the data needed to execute a particular function. The services provided by an agency define more specifically the functions of that agency. The land

use data needs that are required to perform a particular service can be said to be a more direct indicator of information that is actually needed by an agency. Thus, the problem to which this project is addressed is the identification of the land use information needed by state agencies in Kansas to perform their services. Specifically, the objectives of this non-thesis project may be stated as follows: (1) to determine the primary land use data needs of various state agencies in Kansas; (2) to show how the needs relate to the services performed by the state agencies; and (3) to develop a land use information matrix that relates the needs to the services provided by these state agencies.

This project is limited to a survey of ten (10) state agencies in Kansas. Originally, eleven (11) agencies were to be surveyed. However, one of the agencies, the Department of Public Instruction, was discontinued and is now the Board of Education. Thus, ten (10) agencies instead of eleven (11) were used for this study. They are:

- ( 1) Office of Economic Analysis
- ( 2) Kansas Department of Economic Development
- ( 3) State Board of Health
- ( 4) State Board of Agriculture
- ( 5) Water Resources Board
- ( 6) Department of Labor

- ( 7) Department of Social Welfare
- ( 8) Department of Revenue
- ( 9) State Highway Commission
- (10) Department of Education

This project should not be viewed as an all-encompassing one. It should be perceived in the context of one that is attempting to establish a preliminary base of land use data needs as related to the services provided by state agencies in Kansas. In this context, it is only one of several techniques used to identify and define land use data needs.

## Chapter 2

### METHODOLOGY

The methodology consists of three major stages. These three major stages are: a review of related literature; a survey of agencies within the State of Kansas; and the consolidation of a list of information needs that are related to the services performed by state agencies into a land-use information matrix.

The first stage consists of the review of related literature in the area under study. This includes books, periodicals, available related material and contemporary practice. The purpose of the review of literature is: (1) to determine if similar studies or surveys have been done which are related to land use data needs in Kansas and, (2) to obtain land use data thought to be needed by most state agencies. Five publications were found to be of major significance to this study. Darwin G. Stuart in his article, "Information Systems in Urban Planning: A Review" attempts to show how computerized information systems may be applied in urban planning.<sup>10</sup> "Four specific interagency urban information systems are reviewed, several different types of use for planning purposes are described, potential planning data



requirements are outlined, and the basic phases in information system design and operation are discussed."<sup>11</sup>

In another of his articles, "The Systems Approach in Urban Planning," Darwin G. Stuart attempts to show how the systems approach may be applied in urban planning.<sup>12</sup> Through a review and analysis of specific examples, he outlines a framework or strategy for utilizing the systems approach, identifies the steps or phases of analysis that are fundamental to the systems approach, and develops guidelines that stress the operational problems involved.<sup>13</sup>

Marion Clawson and Charles L. Stewart attempted to present a system for handling data about Land which was flexible enough to fit all land uses, and to be usable in all areas or parts of the United States in their book Land Use Information.<sup>14</sup> The book presents information and ideas, and develops a system for handling land use data. Also, it suggests in a general way that a continuing organization is necessary.<sup>15</sup>

Two publications made significant contributions to the area of land use data needs that were of special importance to this study. The first of these publications was a "Feasibility and Pre-Design Study" done by Barton-Aschman Associates, Inc.<sup>16</sup> "It records initial conclusions regarding the design and implementation requirements for providing a statewide land-use information system, based on data stored for discrete geographic areas."<sup>17</sup>

The second publication, A Design Study of a Planning Information System for Kansas was conducted by Langston, Kitch and Associates, Inc.<sup>18</sup> It was an analysis and recommendation for the development of a computer based planning information system for the State of Kansas. In this study, a survey of all state agencies was conducted to determine the source and needs for information. Primary emphasis was placed on four categories of information: demographic, recreation, land use and economic.<sup>19</sup> Conclusions regarding data deficiencies, commonality of data needs, and data sources were presented.

Correspondence was made with other state planning agencies and universities outside of Kansas to obtain information on the data needs that they have identified in the area of land-use. These agencies and universities are listed in Appendix A. They were picked at random from the suggestions of professors at Kansas State University and other professionals in the State of Kansas. Replies were received from all but two of the agencies and universities contacted. The replies included many publications and various material related to land use needs and planning information systems. From these replies and from the review of related literature, a consolidated list of data needs was established. This list of data needs plus other data items were contained in one publication sent from correspondence with the

Madison, Wisconsin Bureau of State Planning.<sup>20</sup> It was decided that since this list of data needs contained all of the data items obtained from other sources, it should be used as the preliminary list of data items thought to be needed by most state agencies. This preliminary list of data items is as follows:

1. Geology
2. Topography
3. Soils
4. Water
5. Climate
6. Vegetation
7. Wildlife
8. Land Capability
9. Agriculture
10. Recreation Land Use
11. Residential Land Use
12. Commercial Land Use
13. Industrial Land Use
14. Institutional Land Use
15. Conservation Land Use
16. Transportation/Communication/Utilities Land Use
17. Population/Employment/Income Characteristics

18. Land Use

19. Zoning

The objective of the second stage of methodology was to determine what type of land use data was needed to perform the services provided by state agencies in Kansas. In reaching this objective, a survey of ten (10) state agencies in Kansas was undertaken.

There were many critical areas involved in the survey. The first was to define the scope. This was done by relying on a previously mentioned publication, A Design Study of a Planning Information System for Kansas. As mentioned earlier, in this design study a survey of all state agencies in Kansas was conducted to determine the source and needs for information. "Primary emphasis was placed on four categories of information, i.e., demographic, recreation, land use and economic. Analysis revealed that approximately seventy percent of agency data requirements were confined to eleven (11) of the state's sources."<sup>21</sup> These selected state sources are presented in Appendix B. Since seventy percent (70%) of data requirements were confined to these ten (10) agencies, and primary emphasis was placed on four categories, one of which was land use, it was decided that this would be an adequate sample for the survey.

The publication, Technical Assistance Available to Local Governments in Kansas, prepared by the Kansas League of Municipalities,<sup>22</sup> was used to determine what services were provided by the divisions within these ten agencies. The Kansas League of Municipalities was contacted to verify certain aspects of the publication. It was discovered that there was about a 98% return from the study done for the service manual. Also, it was confirmed that the divisions of certain agencies were not listed because they provided no direct services or conducted internal activities that did not relate to local government. Each division of the ten agencies listed in the service publication was used for the final scope of this survey. The final scope is presented in Appendix C.

Originally, the survey was to be conducted by a questionnaire. However, many publications that were reviewed stated that a questionnaire was not the best method to use in conducting a survey. To offset this, the questionnaires were sent out but personally collected. This provided an opportunity to talk with the individuals who had completed the questionnaire. From this brief interview, it was possible to determine if the questionnaire was understood, and if it had been completed correctly. Great care was taken in the design of the questionnaire to insure that it was explicit and to the point. The questionnaire was not

pretested. It was, however, circulated to many faculty members of the Department of Regional and Community Planning and the Department of Sociology at Kansas State University to be checked for clarity, grammar, simplicity, and many other points of concern. It was then completely revised. The sample questionnaire is included as Appendix D. It consisted of open and closed ended questions. The services performed by each division of the ten (10) agencies listed in the service manual were attached to the questionnaire so that each questionnaire was designed to allow for any additional services not listed in the manual: Technical Assistance Available to Local Governments in Kansas to be listed. Estimates were asked to be made for the percentages of time that were devoted to each service. In this way, the services that were given the highest percentages would serve as indicators of the data needs that were most utilized by the division. This data was to be analyzed by simple mathematical calculations and by calculating the mean of the percentage of time used to perform these services. To discover if any new services had been added or changed since the service manual was published, it was asked if any major organizational changes had occurred in the last five months - the length of time that had elapsed since the publication of the service manual.

### Chapter 3

#### LAND-USE SERVICE INFORMATION NEEDS: A SURVEY OF AGENCIES IN KANSAS

Of the fifty-four (54) questionnaires sent out, forty-one (41) were returned. This constitutes 75% of the population surveyed. The high percentage of returns may be attributed to the fact that the questionnaires were collected in person.

Picking the questionnaires up in person also provided an opportunity to talk with the people who had filled them out. From this conversation, various problems and difficulties with the survey were identified. A number of individuals said that the questionnaire was not applicable to their particular division, adding that their services were primarily those of review. Numerous divisions expressed difficulty in answering question number II of the questionnaire. Question number II asked how much of the division's time was involved in performing each of the services that were listed on the questionnaire. A number of the services entailed so many different components in order to perform them that an accurate estimate of the amount of time was said to be almost impossible. For this reason, a large majority

of the questionnaires returned did not have a complete answer to question number II. Thus, picking the questionnaires up enabled the obtainment of information on the previously mentioned problem areas that assisted in getting a truer perspective of the results and analysis of the survey.

The results of the questionnaires revealed that there were one-hundred and twenty-three (123) services that were listed as being performed by the divisions of the ten (10) agencies surveyed. From these one-hundred and twenty-three services, two major types of services were identified: (1) The two major types of services were those that required land use data to be performed, and (2) those services that did not require land use data in order to be performed.

Eighty-eight services were identified by the agencies surveyed as not requiring land use data. This was 72% of the one-hundred and twenty-three that were listed. The mean percentage of the division's time that was allocated to the performance of these services was 24%. A list of these services that did not require land use data is provided in Appendix E.

The remaining thirty-five (35) services identified by the agencies surveyed required land use data before they could be performed. These thirty-five services accounted for 29% of the



one-hundred and twenty-three that were listed. The mean percentage of the divisions' time that was allocated to the performance of these thirty-five services was 31%. A list of these services and their data needs are presented in the matrix on the following page.

#### Data Categories and Specific Data Needs

##### Geology

1. Subsurface Geology (oil wells)
2. Groundwater
3. Bedrock
4. Depth to Bedrock
5. Minerals
6. Underground Formations
7. Information on Valley Fill
8. Lithology and Hydrologic Data

##### Topography

1. Ground Contours
2. Field Measurement
3. Cultural Features
4. Maps (topographical)

Services That Needed Land Use Data		Percentage Of Time Used Per Service	GEOLOGY	TOPOGRAPHY	SOILS	WATER	CLIMATE	VEGETATION	WILDLIFE	LAND- CAPABILITIES	AGRICULTURE	RECREATIONAL LAND-USE	RESIDENTIAL LAND-USE	COMMERCIAL LAND-USE	INDUSTRIAL LAND-USE	INSTITUTIONAL LAND-USE	CONSERVATION LAND-USE	TRANS./COMM.- UTIL. LAND-USE	POP./INCOME CHARACTERIST	LAND-USE	ZONING	CROP- RESPONSE	CITY USE	COUNTY USE
1. Directs development of preliminary highway design.			X <sub>123</sub>	X <sub>23</sub>	X <sub>12</sub>	X <sub>123</sub>	X <sub>123</sub>	X <sub>12</sub>	X <sub>123</sub>	X <sub>12</sub>	X <sub>123</sub>	X <sub>123</sub>	X <sub>123</sub>	X <sub>123</sub>	X <sub>123</sub>	X <sub>123</sub>	X <sub>123</sub>	X <sub>123</sub>	X <sub>123</sub>	X <sub>123</sub>	X <sub>123</sub>			
2. Air Quality Analysis.				X <sub>23</sub>																				
3. Noise Analysis.				X <sub>23</sub>																				
4. Conducts soils and geological investigations.			X <sub>123</sub>		X <sub>12</sub>	X <sub>123</sub>				X <sub>12</sub>														
5. New work source review and approval	10%													X <sub>3</sub>	X <sub>3</sub>			X <sub>345</sub>	X <sub>123</sub>					
6. Program Planning(including meetings for changing Federal requirements.)	9%													X <sub>3</sub>	X <sub>3</sub>			X <sub>345</sub>	X <sub>123</sub>		X <sub>3</sub>			
7. Assist law enforcement officers investigation of commercial treatment, testing and licensing businessmen for controlling pests.	27%				X <sub>12</sub>		X <sub>12</sub>	X <sub>12</sub>	X <sub>12</sub>	X <sub>12</sub>	X <sub>12</sub>	X <sub>12</sub>												
8. Consultation on community nursing service.	55%																		X <sub>35</sub>	X <sub>123</sub>		X <sub>12</sub>		
9. Nursing staff conferences with local boards of health etc.	25%																		X <sub>35</sub>	X <sub>123</sub>		X <sub>12</sub>		
10. Advises and consels community groups on industrial development.	20%		X <sub>2</sub>		X <sub>2</sub>	X <sub>1</sub>																		
11. Maintains information on available industrial sites and facilities.	5%			X <sub>2</sub>																				
12. Assists industrial prospects in gathering information to make decision on state as a possible site for location.	60%									X <sub>2</sub>					X <sub>123</sub>			X <sub>34</sub>	X <sub>34</sub>					
13. Assists in preparation and review of county sanitary codes.			X <sub>2345</sub>																	X <sub>1</sub>	X			
14. Review and advice on solid wastes collection.			X <sub>123</sub>																					
15. Review local governments sanitation policies.					X <sub>23</sub>																			
16. Responsible for hospital programs.	30%			X <sub>1</sub>	X <sub>23</sub>	X <sub>45</sub>				X <sub>23</sub>	X <sub>5</sub>					X <sub>1</sub>		X <sub>1789</sub>	X <sub>67</sub>					
17. Responsible for Adult Care Home Programs	45%			X <sub>1</sub>	X <sub>23</sub>	X <sub>45</sub>				X <sub>23</sub>	X <sub>5</sub>					X <sub>1</sub>		X <sub>1789</sub>	X <sub>67</sub>					
18. Administer financial funds to health care facilities(Hill-Burton Programs)	25%			X <sub>4</sub>		X <sub>356</sub>	X <sub>456</sub>			X <sub>4</sub>	X <sub>67</sub>	X <sub>3</sub>	X <sub>3</sub>	X <sub>23</sub>	X <sub>23</sub>	X <sub>2</sub>		X <sub>101112</sub>	X <sub>123</sub>	X	X <sub>123</sub>			
19. Provide information and technical assistance concerning sewage problems	51%			X <sub>2</sub>		X <sub>5</sub>	X <sub>1</sub>			X <sub>12</sub>	X <sub>12</sub>	X <sub>3</sub>	X <sub>3</sub>	X <sub>23</sub>	X <sub>23</sub>	X <sub>23</sub>		X <sub>101112</sub>	X <sub>123</sub>	X	X <sub>123</sub>			
20. Conducts statewide water quality monitoring program	17%			X <sub>4</sub>		X <sub>3</sub>	X <sub>2</sub>			X <sub>3</sub>	X <sub>2</sub>							X <sub>101112</sub>	X <sub>123</sub>	X	X <sub>123</sub>			
21. Preliminary geologic evaluation of sanitary land fill sites	23%			X <sub>4</sub>	X <sub>3-4</sub>	X <sub>2</sub>				X <sub>4</sub>	X <sub>67</sub>	X <sub>3</sub>	X <sub>3</sub>	X <sub>23</sub>	X <sub>23</sub>	X <sub>2</sub>		X <sub>101112</sub>	X <sub>123</sub>	X	X <sub>123</sub>			
22. Water Quality Control Management Planning.	9%			X <sub>4</sub>	X <sub>2</sub>	X <sub>3-4</sub>	X <sub>56</sub>	X <sub>456</sub>	X <sub>3</sub>	X <sub>12</sub>	X <sub>67</sub>	X <sub>3</sub>	X <sub>3</sub>	X <sub>23</sub>	X <sub>23</sub>	X <sub>23</sub>		X <sub>101112</sub>	X <sub>123</sub>	X	X <sub>123</sub>			
23. Assessment of property, including utility property.	30%		X <sub>45</sub>	X <sub>5</sub>	X <sub>3</sub>	X <sub>7</sub>	X <sub>6</sub>	X <sub>4</sub>		X <sub>5</sub>	X <sub>8</sub>	X <sub>4</sub>	X <sub>3</sub>	X <sub>3</sub>	X <sub>3</sub>	X <sub>23</sub>		X <sub>101112</sub>	X <sub>123</sub>	X	X <sub>123</sub>			
24. Assess motor carriers and collects the taxes.	60%		X <sub>45</sub>	X <sub>5</sub>	X <sub>3</sub>	X <sub>7</sub>	X <sub>6</sub>	X <sub>4</sub>		X <sub>5</sub>	X <sub>8</sub>	X <sub>4</sub>	X <sub>3</sub>	X <sub>3</sub>	X <sub>3</sub>	X <sub>23</sub>		X <sub>101112</sub>	X <sub>123</sub>	X	X <sub>123</sub>			
25. Administer plans for construction on Federal Aid Urban Systems. *note (two other services listed, but they come under number 25.)	30%											X <sub>3</sub>	X <sub>3</sub>	X <sub>3</sub>	X <sub>3</sub>	X <sub>3</sub>								
28. Issue burial removal permits.					X <sub>5</sub>		X <sub>5</sub>												X <sub>2</sub>					
29. Control and eradication of noxious weeds.	50%				X <sub>5</sub>		X <sub>5</sub>																	
30. Technical assistance for weed and pesticide control.	50%		X <sub>6</sub>		X <sub>5</sub>		X <sub>5</sub>				X <sub>34</sub>			X <sub>23</sub>	X <sub>23</sub>			X <sub>123</sub>						
31. Research(reports economic analysis of state to Governor)			X <sub>37</sub>	X <sub>15</sub>	X <sub>3</sub>		X <sub>7</sub>	X <sub>3</sub>					X <sub>4</sub>	X <sub>23</sub>	X <sub>23</sub>			X <sub>123</sub>						
32. Administers state law relating to water resources.	18%		X <sub>348</sub>	X <sub>6</sub>	X <sub>3</sub>		X <sub>8</sub>	X <sub>4</sub>					X <sub>4</sub>	X <sub>23</sub>	X <sub>23</sub>			X <sub>123</sub>						
33. Cooperative groundwater program with Kansas Geological Survey( Administers)	8%		X <sub>3</sub>	X <sub>1</sub>	X <sub>6</sub>	X <sub>23</sub>	X <sub>4</sub>	X <sub>1</sub>					X <sub>5</sub>	X <sub>5</sub>	X <sub>4</sub>						X <sub>23</sub>	X	X <sub>12</sub>	
34. Assist local governments in National Flood Insurance Program.	6%			X <sub>15</sub>	X <sub>4</sub>	X <sub>389</sub>	X <sub>45</sub>	X <sub>1</sub>											X <sub>123</sub>					
35. Administration of the Water Appropriation Act.	68%		X <sub>12</sub>	X <sub>2</sub>	X <sub>389</sub>	X <sub>45</sub>	X <sub>1</sub>												X <sub>123</sub>					

"X" means information  
on geology is needed to  
perform the service at  
the right.

refers to specific data  
required under geology on the  
following page.

refers to level information  
on geology is needed:

- 1.State Level
- 2.County Level
- 3.City Level

Geology

5. Slope; drainage patterns and specific elevations on quadrangle sheets
6. Elevations and Well Locations

#### Soils

1. Subsurface Soils
2. Soil Capability Classification
3. Type and Composition
4. Depths
5. Sensibility to Herbicides
6. Alluvial Soil Map
7. Adaptability to Irrigation
8. Chemical Characteristics

#### Water

1. Surface Water (includes detention dams)
2. Levels
3. Ground Water and Ground Water Depth
4. Flood Plain Location
5. Surface Drainage and Water Use Projections
6. Streamflow Characteristics
7. Availability
8. Water Level Maps; river flow and quality; aquifer hydrologic characteristics, reservoir data (storage, release, etc.)
9. Saturated Thickness; occurrence of groundwater; magnitude and frequency of flows; chemical quality

Climate

1. Wind Nose (direction and speed)
2. Weekly Weather Records
3. Temperature
4. Precipitation, average and normal
5. Evaporation
6. Growing Season
7. Rainfall Data

Vegetation

1. Trees Planted on Right of Way
2. Average of Crops, including posture and range
3. Wooded Acreage
4. Crop Response
5. Reaction to Pesticides

Wildlife

1. Existing and Potential Wildlife
2. Habitat
3. Population and Distribution

Land Capability

1. Surface and Subsurface Structure
2. Suitability for Construction
3. Vehicle Parking
4. Irrigable Land Data
5. Classing

Agriculture

1. Location of Agricultural Lands (photos)
2. Location of Agricultural Land (field)
3. Statistics on Price of and from Commodities
4. Production Estimates
5. Allocation to Land-Use for Animal Husbandry
6. Crop and Livestock Data
7. Fertilizer and Pesticide Use
8. Crop Response

Recreation-Land Use

1. Existing and Proposed Land-Use
2. Information on Recreational and Vehicle Movement
3. Number and Type of Facilities
4. Location and Size

Residential Land-Use

1. Existing and Proposed Land-Use
2. Drainage Patterns and Locations
3. Location and Size
4. Population Density
5. Floodplain and Floodway Maps

Commercial Land-Use

1. Existing and Proposed Land-Use
2. Numbers and Types
3. Location and Size
4. Density
5. Floodplain and Floodway Maps

Industrial Land-Use

1. Existing and Proposed Land-Use
2. Numbers and Types
3. Location and Size
4. Density

Institutional Land-Use

1. Existing and Proposed Land-Use
2. Numbers and Types
3. Location and Size
4. Special Flood Hazard Area Map

Conservation Land-Use

1. Existing and Proposed Land-Use
2. Conservation Structural Measures
3. Land Treatment Data
4. Farmland Conservation Data
5. Location and Size

Transportation/Communication/Utilities Land-Use

1. Existing and Proposed Land-Use
2. Location of Lines
3. Proposed Traffic Improvements
4. Airport and New Power Plants Location
5. Traffic Information (present and projected)
6. Natural Gas and Electrical Services
7. Fire Control and Portable Water Supply
8. Location of Storm Sewers
9. Water Collection System Data
10. Water Distribution System Data
11. Storm Collection System Data
12. Location and Size

Population/Employment/Income Characteristics

1. The Population
2. Trends and Projections
3. Total Earnings
4. Manufacturing Earnings
5. Population Characteristics, marital status, education, employer, illness history
6. Institutional Consumers Characteristics and Origins
7. Staff Availability
8. Population Densities

Land-Use

1. Water Supply and Sewage Factors
2. Burial Grounds Data; drainage degree and direction, aesthetic considerations
3. Classification of Urban and Rural Land
4. Area Covered by Water

Zoning

1. Existing and Proposed Boundaries
2. Child and Adult Care Services-Clinics
3. Zoning Projections
4. Floodplain and Floodway Maps

Crop Response

1. Typical Yield by Soil Capacity Class and Location (general)

City Use

1. Land Ownership
2. Corporate Limit Special Flood Hazard Area Map

County Use

1. Unincorporated Area Special Flood Hazard Area Map

As can be seen from the matrix the numbers of services on the above pages, that did not need land use data, 88, were greater than the number of services that did, 35. The mean percentage of the divisions' time that was devoted to performing the 88 services was less than the percentage of time devoted to performing the



35 services that needed land use data. However, because of the number of divisions that did not answer question number II, we can not make an accurate time estimate.

Some of the services that did not need land use data in their performance appeared as though they should have used some form of land use data. For example, one of the services that was listed by one of the agencies surveyed as not needing land use data was the preparation of Environmental Impact Statements. In performing such a service it would appear that one would need to know the location of a particular project to a residential area, recreational area, or traffic flow data, information about existing and proposed structures in a particular area, and other such land use related information. All of this land use information would appear to greatly effect the impact that a project would have on the environment and surrounding vicinity. Another service that appeared as if it would need some land use related data was in the area of disease control. If a particular epidemic were to strike in a certain section of Kansas, it would seem that information related to the density of an area, hospital availability, the number and location of schools and public facilities, and other such land use information would be a critical factor in controlling the disease. This would seem to suggest that in the performance of this service on an everyday

basis no land use data would be needed. Given a particular situation such as an outbreak of an epidemic, however, specific land use information would be required. This could also suggest that in performing the above mentioned service of disease control, more consideration is given to preventive measures rather than the avenues to pursue if an epidemic really did arise.

In examining the services that needed land use information, many agencies listed the specific types of land use information that were needed to perform a service under the wrong land use category. For example, one division needed to know the location of flood plains and information on floodway maps in order to perform its services. This information need was listed under the land use category of residential land use. Ideally, this specific information need should have been listed under the land use category of zoning. If the person who requested this information on the location of flood plains had been familiar with zoning, he would have known that this specific data need would have come under the category of zoning rather than under residential land use.

From the above observations, it might be assumed that:

(1) the descriptions of some services by most state agencies do not reflect the true services that are performed; (2) many of the services that are performed are not performed properly, (if they

were they would require certain types of land use information); (3) there was not a clear understanding of what was meant by some of the land use data categories listed or what specific data needs should have been encompassed under these categories.

An analysis of the organizational structure of the agencies surveyed revealed that they had remained consistent. Only one division surveyed had undergone any major organizational changes in the last five months. However, this change did not affect the services of this division. Three of the sources surveyed said that although no major organizational changes had occurred as of yet, some were anticipated in the near future.

The agencies surveyed did not adequately list their primary sources of land use information. This occurred because a large percentage of the divisions gathered the information that was needed to perform their services from sources within their own agency or division. In picking up the questionnaires, these agencies and divisions said that they thought the "primary sources" of the land use data categories referred to in the questionnaire meant those other than the sources located within their agency. This perhaps should have been specified more clearly in the design of the questionnaire. Thus, it was concluded that a high percentage of the divisions and agencies surveyed gather or collected their own information needs from within their agency.

It was established from the sample that there were one-hundred and seventy-four (174) pieces of information that were listed as being needed to perform the services provided by the divisions surveyed. Of these one-hundred and seventy-four (174) pieces of information that were needed, eighty-nine (89) were needed on a state basis and eighty-nine (89) pieces were needed on a county basis. Sixty-seven (67) pieces of information were required on a city basis. This suggests that in dealing with a state information data base of land use needs, the levels that are the largest in scope are the ones that will contain the most needed information for the development of the data base.

From the results of the survey, a list of specific and general land use needs was established. This listing of data needs could be used as part of a primary or initial base if a data system is to be designed for Kansas. This listing would not define the entire scope of the data base, yet it would identify a segment of the data needs, those dictated by the services performed. This listing of service related land use information data needs will be called system parameters. By system parameters we mean all of the possible data variables that would go into a land use information system if it were developed. Thus, when we refer to our system parameters in this study, we

refer to all of the possible land use service related data categories and their specific land use data needs. A listing of our system parameters, the levels at which the information is needed, and the potential users are listed on the following pages.

# SYSTEM PARAMETERS

## GEOLOGY

<i>state</i>	<i>county</i>	<i>city</i>
(1) Subsurface Geology: oil wells (2) Ground Water (3) Bedrock (4) Depth to Bedrock (5) Minerals (6) Underground Formations	(1) Subsurface Geology: oil wells (2) Ground Water (3) Bedrock (4) Depth to Bedrock (5) Minerals (6) Underground Formations	(1) Subsurface Geology: oil wells (2) Ground Water (3) Bedrock (4) Depth to Bedrock (5) Minerals (6) Underground Formations (7) Information on Land Fills (8) Lithology and Hydrologic Data

Primary Source: Kansas Geological Survey

Potential Users: State Highway Commission  
 Department of Health  
 Department of Revenue  
 State Board of Agriculture

# SYSTEM PARAMETERS

## TOPOLOGY

<i>state</i>	<i>county</i>	<i>city</i>
(1) Ground Contours (2) Field Measurements (3) Cultural Features (4) Slope, Drainage Patterns Specific Elevations on Quadrangle Sheets (5) Elevations and Well Locations	(1) Ground Contours (2) Field Measurements (3) Cultural Features (4) Topographical Maps (5) Slope, Drainage Patterns on Quadrangle Sheets	(1) Ground Contours (2) Field Measurements (3) Cultural Features

Primary Source: Kansas Geological Survey  
 U. S. Geological Survey  
 Gathered Within Agency

Potential Users: State Highway Commission  
 Kansas Dept. of Economic Development  
 Department of Health  
 Department of Revenue  
 State Board of Agriculture

# SYSTEM PARAMETERS

## SOILS

<i>state</i>	<i>county</i>	<i>city</i>
(1) Subsurface Soils (2) Type and Composition (3) Soil Capability Classifications	(1) Subsurface Soils (2) Type and Composition (3) Soil Capability Classifications (4) Depth (5) Alluvial Soil Map	(1) Soil Capability Classification (2) Type and Composition (3) Alluvial Soil Map

Primary Source: U. S. Soil Conservation Service

Potential Users:

- State Highway Commission
- State Board of Agriculture
- Kansas Dept. of Economic Development
- Department of Health
- Department of Revenue
- State Board of Agriculture'



# SYSTEM PARAMETERS

## WATER

<i>state</i>	<i>county</i>	<i>city</i>
(1) Subsurface Water (includes Detention Dams) (2) Levees (3) Ground Water and Depth (4) Flood Plain Location (5) Streamflow Characteristics (6) Surface Drainage and Water Use Projection (7) Availability (8) Water Level Maps River Flow and Quality, Aquifer Thickness, Aquifer Hydrologic Characteristics, Reservoir Data (storage release, etc.) (9) Saturated Thick- ness, Occurrence of Ground Water Magnitude and Frequency of Flows Chemical Quality	(1) Subsurface Water (includes Detention Dams) (2) Levees (3) Ground Water and Depth (4) Flood Plain Location (5) Streamflow Characteristics (6) Surface Drainage and Water Use Projection (7) Water Level Maps River Flow and Quality, Aquifer Thickness, Aquifer Hydrologic Characteristics, Reservoir Data (storage release, etc.)	(1) Subsurface Water (includes Detention Dams) (2) Levees (3) Ground Water and Depth (4) Flood Plain Location

Primary Source: Kansas Geological Survey  
 U. S. Geological Survey

Potential Users: State Highway Commission  
 Kansas Dept. of Economic Development  
 Department of Health  
 Department of Revenue  
 State Board of Agriculture

# SYSTEM PARAMETERS

## CLIMATE

<i>state</i>	<i>county</i>	<i>city</i>
(1) Wind Rose (direction and speed) (2) Weekly Weather Records (3) Temperature (4) Precipitation (average and normal) (5) Evaporation (6) Growing Season	(1) Wind Rose (direction and speed) (2) Weekly Weather Records	(1) Wind Rose (direction and speed) (2) Rainfall Data

Primary Source: National Weather Service

Potential Users:

- State Highway Commission
- State Board of Agriculture
- Kansas Dept. of Economic Development
- Department of Health
- Department of Revenue

# SYSTEM PARAMETERS

## VEGETATION

<i>state</i>	<i>county</i>	<i>city</i>
(1) Trees Planted on Right-of-Way (2) Average of Crops including posture and range (3) Crop Response	(1) Trees Planted on Right-of-Way (2) Average of Crops including posture and range (3) Wooded Acreage	

Primary Source:

U. S. Soil Conservation Service  
 State Board of Agriculture  
 Kansas Agricultural Experiment Station  
 Kansas Crop Reporting Service

Potential Users:

State Highway Commission  
 State Board of Agriculture  
 Department of Health  
 Department of Revenue

# ***SYSTEM      PARAMETERS***

## WILDLIFE

<b><i>state</i></b>	<b><i>county</i></b>	<b><i>city</i></b>
(1) Existing and Proposed (2) Habitat (3) Population and Distribution	(1) Existing and Proposed (2) Habitat (3) Population and Distribution	(1) Existing and Proposed (2) Habitat

**Primary Source:** Forestry, Fish and Game Commission

**Potential Users:** State Highway Commission  
State Board of Agriculture

# SYSTEM PARAMETERS

## LAND-CAPABILITIES

<i>state</i>	<i>county</i>	<i>city</i>
(1) Surface and Subsurface Structure (2) Irrigable Land- Data (3) Classing	(1) Surface and Subsurface Structure (2) Irrigable Land- Data	

Primary Source: U. S. Soil Conservation Service

Potential Users: State Highway Commission  
Kansas Dept. of Economic Development  
Department of Health

# SYSTEM PARAMETERS

## AGRICULTURE

<i>state</i>	<i>county</i>	<i>city</i>
(1) Location of Agricultural Lands (photos) (2) Location of Agricultural Lands (field) (3) Statistics on Price of and on Income from Commodity (4) Crop and Live-stock Data (5) Crop Response (6) Production Estimates	(1) Location of Agricultural Lands (photos) (2) Location of Agricultural Lands (field) (3) Statistics on Price of and on Income from Commodity (4) Crop and Live-stock Data (5) Production Estimates	(1) Location of Agricultural Lands (photos) (2) Location of Agricultural Lands (field)

Primary Source: U. S. Soil Conservation Service  
 Board of Agriculture  
 U. S. Department of Agriculture

Potential Users: State Highway Commission  
 State Board of Agriculture  
 Department of Health  
 Department of Revenue  
 Office of Economic Analysis

# SYSTEM PARAMETERS

## RECREATIONAL LAND-USE

<i>state</i>	<i>county</i>	<i>city</i>
(1) Existing and Proposed (2) Recreational Vehicle Movement (3) Number and Type of Facilities (4) Location and Size	(1) Existing and Proposed (2) Recreational Vehicle Movement (3) Number and Type of Facilities	(1) Existing and Proposed

Primary Source: Kansas Park and Resources Authority

Potential Users:

- State Highway Commission
- State Board of Agriculture
- Department of Health
- Department of Revenue

# **SYSTEM      PARAMETERS**

## RESIDENTIAL LAND-USE

<b><i>state</i></b>	<b><i>county</i></b>	<b><i>city</i></b>
(1) Existing and Proposed (2) Drainage Patterns and Locations (3) Location and Size (4) Population Density	(1) Existing and Proposed (2) Floodplains and Floodway Maps	(1) Existing and Proposed (2) Drainage Patterns and Locations (3) Floodplains and Floodway Maps

Primary Source: Local Planning Agency

Potential Users:

- State Highway Commission
- Department of Health
- Department of Revenue
- State Board of Agriculture



# SYSTEM PARAMETERS

## COMMERCIAL LAND-USE

<i>state</i>	<i>county</i>	<i>city</i>
(1) Existing and Proposed (2) Location and Size (3) Numbers and Type and Location (4) Location and Size	(1) Existing and Proposed (2) Numbers and Type (3) Location and Size (4) Population Density (5) Floodplain and Floodway Maps	(1) Existing and Proposed (2) Numbers and Type (3) Location and Size (4) Population Density (5) Floodplain and Floodway Maps

Primary Source: Local Planning Agency

Potential Users:

- State Highway Commission
- Department of Health
- Department of Revenue
- Office of Economic Analysis
- State Board of Agriculture

# SYSTEM PARAMETERS

## INDUSTRIAL LAND-USE

<i>state</i>	<i>county</i>	<i>city</i>
(1) Existing and Proposed (2) Numbers and Types (3) Location and Size (4) Density	(1) Existing and Proposed (2) Numbers and Types (3) Location and Size	(1) Existing and Proposed (2) Numbers and Types

Primary Source: Local Planning Agency

Potential Users:

- State Highway Commission
- Department of Health
- Kansas Dept. of Economic Development
- Department of Revenue
- Office of Economic Analysis
- State Board of Agriculture

# SYSTEM PARAMETERS

## INSTITUTIONAL LAND-USE

<i>state</i>	<i>county</i>	<i>city</i>
(1) Existing and Proposed (2) Numbers and Type (3) Location and Size (4) Special Flood Hazard Area Maps	(1) Existing and Proposed (2) Numbers and Type	(1) Existing and Proposed (2) Numbers and Type

Primary Source: Local Planning Agency

Potential Users: State Highway Commission  
 Department of Health  
 Department of Revenue  
 State Board of Agriculture

# SYSTEM PARAMETERS

## CONSERVATION LAND-USE

<i>state</i>	<i>county</i>	<i>city</i>
(1) Existing and Proposed (2) Conservation Structure Measure (3) Land Treatment Data (4) Farmland Conservation Data (5) Location and Size	(1) Existing and Proposed (2) Conservation Structure Measure (3) Land Treatment Data (4) Farmland Conservation Data	(1) Existing and Proposed (2) Conservation Structure Measure

Primary Source: U. S. Soil Conservation Service

Potential Users: State Highway Commission  
 Department of Health  
 Department of Revenue

# SYSTEM PARAMETERS

TRANSPORTATION/COMMUNICATION/UTILITIES LAND-USE

<i>state</i>	<i>county</i>	<i>city</i>
(1) Existing and Proposed (2) Location of Lines (3) Proposed Traffic Improvements	(1) Existing and Proposed (2) Location of Lines (3) Airport and New Power Plant Location (4) Proposed Traffic Improvements (5) Traffic Information Proposed and Projected	(1) Existing and Proposed (2) Location of Lines (3) Airport and New Power Plant Location (4) Proposed Traffic Improvements (5) Traffic Information Proposed and Projected (6) Wastewater System Collection Data (7) Water Distribution System Data (8) Storm System Collection Data

Primary Source: U. S. Soil Conservation Service

Potential Users:

- State Highway Commission
- Department of Health
- Kansas Dept. of Economic Development
- Department of Revenue
- Office of Economic Analysis

# SYSTEM PARAMETERS

## POPULATION/EMPLOYMENT/INCOME-CHARACTERISTICS

<i>state</i>	<i>county</i>	<i>city</i>
(1) Population (2) Trends and Projections (3) Total Earnings (4) Population Characteristics - Marital Characteristics, Education, Employer, Illness History (5) Population Density	(1) Population (2) Total Earnings (3) Population Characteristics - Marital Characteristics, Education, Employer, Illness History (4) Trends and Projections (5) Population Density	(1) Population (2) Total Earnings (3) Population Characteristics - Marital Characteristics, Education, Employer, Illness History (4) Trends and Projections (5) Population Density

Primary Source: U. S. Bureau of the Census

Potential Users:

- State Highway Commission
- Department of Health
- Kansas Dept. of Economic Development
- Department of Revenue
- State Board of Agriculture

# SYSTEM PARAMETERS

## LAND-USE

<i>state</i>	<i>county</i>	<i>city</i>
(1) Classification of Urban and Rural Land (2) Area Covered by Water	(1) Water Supply and Sewage Factors (2) Burial Ground Data: Drainage Degree and Direction, Aesthetic Considerations (3) Area Covered by Water (4) Classification of Urban and Rural Land	(1) Water Supply and Sewage Factors (2) Classification of Urban and Rural Land (3) Area Covered by Water

Primary Source: County Engineers

Potential Users: Department of Health  
State Board of Agriculture

# SYSTEM PARAMETERS

## ZONING

<i>state</i>	<i>county</i>	<i>city</i>
(1) Existing and Proposed	(1) Existing and Proposed (2) Child and Adult Care Services Clinics (3) Zoning Projections (4) Floodplain and Floodway Maps	(1) Existing and Proposed (2) Child and Adult Care Services Clinics (3) Zoning Projections (4) Floodplain and Floodway Maps

Primary Source: Local Planning Agencies

Potential Users:

- Kansas Dept. of Economic Development
- Department of Revenue
- Department of Health
- Kansas State Board of Agriculture
- State Highway Commission of Kansas



# **SYSTEM      PARAMETERS**

## CROP RESPONSE

<b><i>state</i></b>	<b><i>county</i></b>	<b><i>city</i></b>
(1) Typical Yield by Soil Capacity Class and Location	(1) Typical Yield by Soil Capacity Class and Location	(1) Typical Yield by Soil Capacity Class and Location

Primary Source: U. S. Soil Conservation Service

Potential Users: Department of Revenue

# ***SYSTEM      PARAMETERS***

CITY-USE

<b><i>state</i></b>	<b><i>county</i></b>	<b><i>city</i></b>
		(1) Land- Ownership (2) Corporate Limit Special Flood Hazard Area Map

Primary Source: H.U.D. - Federal Insurance Administration

Potential Users: State Board of Agriculture

# **SYSTEM      PARAMETERS**

## COUNTY-USE

<b><i>state</i></b>	<b><i>county</i></b>	<b><i>city</i></b>
	(1)    Unincorporated Area, Special Flood Hazard Area Map	

Primary    Source:    H.U.D. - Federal Insurance Administration

Potential   Users:    State Board of Agriculture

There are twenty-two (22) data categories in our system parameters. Under each land use category, the specific data items are defined and the services which they are used to perform are listed. The primary sources for obtaining the information on the land use categories are also specified. Many sources were listed an equal number of times as being the primary source. In such a case, both of the sources were listed as the "primary source."

## Chapter 4

### CONCLUSION

The previous study has achieved its two purposes. It has determined the primary land use data needs of various state agencies in Kansas as they relate to the services performed by that agency and a land use information matrix has been developed that relates the needs to the services provided by those agencies. The study has also exceeded this sphere of obtainment in that it also identified the level at which this land use data was needed, identified the primary sources for obtaining this information, and identified those services which were performed that did not require land use data. There are many significant implications that can be inferred by examining the results of this study.

The land use data needs that were developed from this survey indicate that the services performed by state agencies in Kansas are not good predictors of unique land-use data needs.

The original list of land use data categories utilized in the questionnaire were expanded by the addition of three new categories. These three new data categories were the need to

know information about land used for city purposes, land used for county purposes, and information on crop response. Two of these new categories could have been eliminated by placing them under the data category of information needed for "land use" in the questionnaire. The third category, crop response, could have come under the category of "vegetation" or "agriculture". Thus we see that the three additional data categories could have been eliminated.

The land-use data categories and their specific data needs defined from the survey are listed in the system parameters. Also the services and the primary sources of the land use information are listed. They are as follows:

#### Listing of System Parameters

##### Geology:

###### Specific Data Needs

- ( 1)    Subsurface Geology (oil wells)
- ( 2)    Ground Water
- ( 3)    Bedrock
- ( 4)    Depth to Bedrock
- ( 5)    Minerals
- ( 6)    Underground Formations
- ( 7)    Information on Valley Fill
- ( 8)    Lithology and Hydrologic Data

###### Services Used to Perform

- ( a)    Direct development of preliminary highway design
- ( b)    Soils and geological investigation

- ( c) Review and advice on solid waste collection
- ( d) Assess motor carriers and collect the taxes
- ( e) Give technical assistance on weed and pesticides
- ( f) Administration of state laws relating to water resources
- ( g) Administer cooperative ground water programs with Kansas State Geological Survey

#### Primary Source

Kansas Geological Survey

#### Specific Data Needs

- ( 1) Ground Contours
- ( 2) Field Measurement
- ( 3) Cultural Features
- ( 4) Maps (topographical)
- ( 5) Slope, drainage patterns and specific elevations on quadrangle sheets
- ( 6) Elevations and Well Locations

#### Services Used to Perform

- ( a) Direct development of preliminary highway design
- ( b) Air Quality Analysis
- ( c) Noise Analysis
- ( d) Advise and counsels community groups on industrial development
- ( e) Responsible for hospital programs
- ( f) Responsible for adult care home programs
- ( g) Administer financial funds to health care facilities

#### Primary Sources

Kansas Geological Survey  
U. S. Geological Survey  
Gathered Within Agency

**Soils:**Specific Data Needs

- ( 1)    Subsurface Soils
- ( 2)    Soil Capability Classification
- ( 3)    Type and Composition
- ( 4)    Depths
- ( 5)    Effects of Herbicides on Soil
- ( 6)    Alluvial Soil Map
- ( 7)    Adaptability to Irrigation; chemical characteristics

Services Used to Perform

- ( a)    Direct development of preliminary highway design
- ( b)    Soils and Geological Investigations
- ( c)    Assist law-enforcement officers investigation of commercial treatment
- ( d)    Maintain information on available industrial sites and facilities
- ( e)    Reviews local governments sanitation policies
- ( f)    Responsible for hospital programs
- ( g)    Responsible for adult care home programs
- ( h)    Administer funds to health care facilities
- ( i)    Water Quality Control Management Planning
- ( j)    Assess motor carriers and collect the taxes
- ( k)    Control and eradication of noxious weeds
- ( l)    Technical assistance for weed and pesticides control
- ( m)    Administer state laws relating to water resources
- ( n)    Assist local governments in National Flood Insurance Program
- ( o)    Administration of the Water Appropriation Act

Primary Source

U. S. Soil Conservation Service

**Water:**Specific Data Needs

- ( 1)    Surface Water (including detention dams)
- ( 2)    Levees
- ( 3)    Ground Water, ground water depth



- ( 4) Flood Plain Location
- ( 5) Surface Drainage and Water Use Projections
- ( 6) Streamflow Characteristics
- ( 7) Availability
- ( 8) Water Level Maps, river flow and quality, aquifer thickness, aquifer hydrologic characteristics, reservoir data (storage, release, etc.)
- ( 9) Saturated Thickness, occurrence of ground water magnitude and frequency of flows, chemical quality

#### Services Used to Perform

- ( a) Direct development of preliminary highway design
- ( b) Soil and Geological Investigations
- ( c) Advise and counsels community groups on industrial development
- ( d) Responsible for hospital programs
- ( e) Responsible for adult care home programs
- ( f) Administer financial funds to health care facilities
- ( g) Provide information and technical assistance concerning sewage problems
- ( h) Conducts statewide water quality monitoring program
- ( i) Preliminary geologic evaluations of sanitary land fill sites
- ( j) Water Quality Control Management Planning
- ( k) Assess motor carriers and collects the taxes
- ( l) Administer cooperative ground water program with Kansas State Geological Survey
- ( m) Assist local governments in National Flood Insurance Program
- ( n) Administration of the Water Appropriation Act

#### Primary Sources

Kansas Geological Survey  
U. S. Geological Survey

Climate:

#### Specific Data Needs

- ( 1) Wind Rise (direction and speed)
- ( 2) Weekly Weather Records
- ( 3) Temperature

- ( 4)    Precipitation (average and normal)
- ( 5)    Evaporation
- ( 6)    Growing Season
- ( 7)    Rainfall Data

#### Services Used to Perform

- ( a)    Direct development of preliminary highway design
- ( b)    Assist law enforcement officers investigation of commercial treatment
- ( c)    Advises and counsels community groups on industrial development
- ( d)    Provides information and technical assistance concerning sewage problems
- ( e)    Water quality control planning
- ( f)    Assess motor carriers and collects the taxes
- ( g)    Control and eradication of noxious weeds
- ( h)    Technical assistance for control of weeds and pesticides
- ( i)    Administer state laws relation to water resources
- ( j)    Cooperative ground water program with Kansas State Geological Survey
- ( k)    Administration of the Water Appropriation Act

#### Primary Source

National Weather Service

#### Vegetation:

#### Specific Data Needs

- ( 1)    Trees Planted on Right-Of-Way
- ( 2)    Average of Crops including pasture and range
- ( 3)    Wooded Acreage
- ( 4)    Crop Response
- ( 5)    Reaction to Pesticides

#### Services Used to Perform

- ( a)    Direct development of preliminary highway design
- ( b)    Assist law enforcement officers in investigation of commercial treatment
- ( c)    Water Quality control management planning

- ( d)    Assess motor carriers and collects the taxes
- ( e)    Control and eradication of noxious weeds
- ( f)    Technical assistance for weed and pesticide control

Primary Sources

U. S. Soil Conservation Service  
Board of Agriculture  
Kansas Agricultural Experiment Station  
Kansas Crop Reporting Service

Wildlife:

Specific Data Needs

- ( 1)    Existing and Potential Wildlife
- ( 2)    Habitat
- ( 3)    Population and Distribution

Services Used to Perform

- ( a)    Directs development of preliminary highway design
- ( b)    Assist law enforcement officers in investigation  
         of commercial treatment

Primary Source

Forestry, Fish and Game Commission

Land-Capability:

Specific Data Needs

- ( 1)    Surface and Subsurface Structure
- ( 2)    Suitability for Construction
- ( 3)    Vehicle Parking
- ( 4)    Irrigable Land Data
- ( 5)    Classing

Services Used to Perform

- ( a)    Direct development of preliminary highway design
- ( b)    Soils and geological investigations

- ( c) Assist industrial prospects in gathering information to make decisions on state
- ( d) Responsible for hospital programs
- ( e) Responsible for adult care home programs
- ( f) Financial funds to health care facilities
- ( g) Provide information and technical assistance concerning sewage problems
- ( h) Water quality control management planning
- ( i) Assess motor carriers and collect the taxes

#### Primary Source

U. S. Soil Conservation Service

#### Agriculture:

#### Specific Data Needs

- ( 1) Location of Agricultural Lands (photos)
- ( 2) Location of Agricultural Land (field)
- ( 3) Statistics on Price of and on Income from Commodity
- ( 4) Production Estimates
- ( 5) Relation to Land-Use for Animal Husbandry
- ( 6) Crop and Livestock Data
- ( 7) Fertilizer and Pesticide Use
- ( 8) Crop Response

#### Services Used to Perform

- ( a) Directs development of a preliminary highway design
- ( b) Assist law enforcement officers in investigation of commercial treatment
- ( c) Responsible for hospital programs
- ( d) Responsible for adult care home programs
- ( e) Financial funds to health care facilities
- ( f) Provide information and technical assistance concerning sewage problems
- ( g) Water quality control management planning
- ( h) Assess motor carriers and collect the taxes
- ( i) Economic reports

#### Primary Sources

U. S. Soil Conservation Service  
 Board of Agriculture  
 U. S. Department of Agriculture

## Recreational Land-Use:

### Specific Data Needs

- ( 1) Existing and Proposed Land-Use Information
- ( 2) Recreational Vehicle Movement
- ( 3) Number and Type of Facilities
- ( 4) Location and Size

### Services Used to Perform

- ( a) Direct development of preliminary highway design
- ( b) Assist law enforcement officers in the investigation of commercial treatment
- ( c) Provide information and technical assistance concerning sewage problems
- ( d) Conduct statewide water quality monitoring program
- ( e) Water quality control management planning
- ( f) Assess motor carriers and collect the taxes
- ( g) Administers plans for construction on Federal Aid Urban Systems

### Primary Source

Kansas Park and Resources Authority

## Residential Land-Use:

### Specific Data Needs

- ( 1) Existing and Proposed Land-Use
- ( 2) Drainage Patterns and Locations
- ( 3) Location and Size
- ( 4) Population Density
- ( 5) Floodplain and Floodway Maps

### Services Used to Perform

- ( a) Directs development of preliminary highway design
- ( b) Provide information and technical assistance concerning sewage problems
- ( c) Water quality control management planning
- ( d) Assess motor carriers and collect the taxes
- ( e) Administer plans for construction on Federal Aid Urban Systems

- ( f) Administer state laws relating to water resources
- ( g) Assist local governments in National Flood Insurance Program

Primary Source

Local Planning Agency

Commercial Land-Use:

Specific Data Needs

- ( 1) Existing and Proposed Land-Use
- ( 2) Numbers and Types
- ( 3) Location and Size
- ( 4) Density
- ( 5) Floodplain and Floodway Maps

Services Used to Perform

- ( a) Directs the development of preliminary highway design
- ( b) Responsible for new work source review and approval
- ( c) Responsible for health program planning
- ( d) Provide information and technical assistance concerning sewage control
- ( e) Water quality control management planning
- ( f) Assess motor carriers and collect the taxes
- ( g) Administer plans for construction of Federal Aid Urban Systems
- ( h) Research and report on economy of state
- ( i) Administer state laws relating to water resources
- ( j) Assist local government in National Flood Insurance Program

Primary Source

Local Planning Agency

Industrial Land-Use:

Specific Data Needs

- ( 1) Existing and Proposed Land-Use
- ( 2) Numbers and Types

- ( 3) Location and Size
- ( 4) Density

Services Used to Perform

- ( a) Directs development of preliminary highway design
- ( b) New work source review and approval
- ( c) Health program planning
- ( d) Assist industrial prospects in gathering information to make decision on state as possible site for locating
- ( e) Provide information and technical assistance concerning sewage problems
- ( f) Water quality control management planning
- ( g) Assess motor carriers and collect the taxes
- ( h) Administer plans for construction on Federal Aid Urban Systems
- ( i) Research and economic analysis report on state
- ( j) Administer state laws relating to water resources

Primary Source

Local Planning Agency

Institutional Land-Use:

Specific Data Needs

- ( 1) Existing and Proposed Land-Use
- ( 2) Number and Types
- ( 3) Location and Size
- ( 4) Special Flood Hazard Area Maps

Service Used to Perform

- ( a) Directs development of preliminary highway design
- ( b) Responsible for hospital programs
- ( c) Responsible for adult care home programs
- ( d) Administer financial funds to health care facilities
- ( e) Provide information and technical assistance concerning sewage problems
- ( f) Water quality control management planning
- ( g) Assess motor carriers and collect the taxes

- ( h) Administer plans for construction on Federal Aid Urban Systems
- ( i) Assist local governments in National Flood Insurance Program

Primary Source

Local Planning Agency

Conservation Land-Use:

Specific Data Needs

- ( 1) Existing and Proposed Land-Use
- ( 2) Conservation Structural Measures
- ( 3) Land Treatment Data
- ( 4) Farmland Conservation Data
- ( 5) Location and Size

Service Used to Perform

- ( a) Directs development of preliminary highway design
- ( b) Water quality control management planning
- ( c) Assess motor carriers and collect the taxes
- ( d) Administer plans for construction on Federal Aid Urban Systems

Primary Source

U. S. Soil Conservation Service

Transportation-Communication-Utilities Land-Use:

Specific Data Needs

- ( 1) Existing and Proposed Land-Use
- ( 2) Location of Lines
- ( 3) Proposed Traffic Improvements
- ( 4) Airport and New Power Plant Location
- ( 5) Traffic Information (present and projected)
- ( 6) Natural Gas and Electrical Services
- ( 7) Fire Control and Portable Water Supply
- ( 8) Location of Storm Sewers



- ( 9) Waste Water Collection System Data
- (10) Water Distribution System Data
- (11) Storm Collection System Data
- (12) Location and Size

#### Services Used to Perform

- ( a) Directs development of preliminary highway design
- ( b) New work source review and approval
- ( c) Assists industrial prospects in gathering information to make decision on state as a possible location site
- ( d) Responsible for hospital programs
- ( e) Responsible for adult care home programs
- ( f) Administer financial funds to health care facilities
- ( g) Provide information and technical assistance concerning sewage problems
- ( h) Assess motor carriers and collects the taxes
- ( i) Research and report on economic analysis of the state

#### Primary Source

U. S. Soil Conservation Service

#### Population-Employment-Income Characteristics:

#### Specific Data Needs

- ( 1) The Population
- ( 2) Trends and Projections
- ( 3) Total Earnings
- ( 4) Manufacturing Earnings
- ( 5) Population Characteristics - marital status, education, employer, illness history
- ( 6) Institutional Consumers Characteristics and Origins
- ( 7) Staff Availability
- ( 8) Population Densities

#### Services Used to Perform

- ( a) Directs development of preliminary highway design
- ( b) Health program planning

- ( c) Consultation on community nursing service
- ( d) Nursing staff conferences with local boards of Health, etc.
- ( e) Assists industrial prospects in gathering information to make decisions on state as a possible location site
- ( f) Responsible for hospital programs
- ( g) Responsible for adult care home programs
- ( h) Financial fund to health care facilities (responsible)
- ( i) Provide information and technical assistance concerning sewage problems
- ( j) Water quality control management planning
- ( k) Administration of the Water Appropriation Act

#### Primary Source

U. S. Bureau of the Census

#### Land-Use:

#### Specific Data Needs

- ( 1) Water Supply and Sewage Factors
- ( 2) Burial Grounds Data; drainage degree and direction, aesthetic considerations
- ( 3) Classification of Urban and Rural Land
- ( 4) Area Covered by Water

#### Services Used to Perform

- ( a) Assist in preparation and review of county sanitary codes
- ( b) Provide information and technical assistance concerning sewage problems
- ( c) Water quality control management planning
- ( d) Issue burial removal permits
- ( e) Administer state laws relating to water resources

#### Primary Source

County Engineer

## Zoning:

### Specific Data Needs

- ( 1) Existing and Proposed Boundaries
- ( 2) Child and Adult Care Services; Clinics
- ( 3) Zoning Projections
- ( 4) Floodplain and Floodway Maps

### Services Used to Perform

- ( a) Direct development of preliminary highway design
- ( b) Health program planning
- ( c) Consultation on community nursing service
- ( d) Nursing staff conferences with local boards of Health, etc.
- ( e) Assist in the preparation and review of county sanitary codes
- ( f) Provide information and technical assistance concerning sewage problems
- ( g) Water quality control management planning
- ( h) Assess motor carriers and collects the taxes
- ( i) Assist local governments in National Flood Insurance Programs

### Primary Source

Local Planning Agency

## Crop Response:

### Specific Data Needs

- ( 1) Typical Yield by Soil Capacity Class and Location (general)

### Services Used to Perform

- ( a) Assess motor carriers and collects the taxes
- ( b) Assist in assessment of personal property

### Primary Source

U. S. Soil Conservation Service

### City-Use:

#### Specific Data Needs

- ( 1) Land-Ownership
- ( 2) Corporate Limit Special Flood Hazard Area Map

#### Services Used to Perform

- ( a) Assist local governments in National Flood Insurance Programs

#### Primary Source

H.U.D. - Federal Insurance Administration

### County-Use:

#### Specific Data Needs

- ( 1) Unincorporated Area Special Flood Hazard Area Map

#### Services Used to Perform

- ( a) Assist local governments in National Flood Insurance Programs

#### Primary Source

H.U.D. - Federal Insurance Administration

The specific data needs that were listed under the data categories did not contain any unique characteristics. For example, under the category of wildlife, the specific types of information that were needed were existing and potential wildlife, habitat, population and distribution. These are types of information that someone knowledgeable of planning or land-use would have included under the category of wildlife. No special

types of specific data needs were listed that could not have been identified by someone fairly familiar with the category area. There were about six (6) or seven (7) exceptions to the previously mentioned conclusion. One of these exceptions was under the category of land use. There were specific needs for information on Indian burial grounds. The number of these exceptions were so few that they would not serve as justification for a study of this type. Thus, if a preliminary land use data base were to be established for the State of Kansas, the data needs that would be defined by the services performed could be established by talking with individuals who were knowledgeable of the land use data category. This could include scholars and professors of planning schools. They could also be defined by listing the types of information that have traditionally been known to be associated with the land use data categories by those persons who have been associated with the subject area on a working basis. This could include planning professors, state officials, and professionals in planning and other vocations.

This survey concluded that a high percentage of the divisions and agencies surveyed gathered or collected their own information needs as part of an in-house service or activity. This is consistent with the results that were obtained from the study done by Langston, Kitch and Associates, Inc. In their

study, it was found that state agencies developed most of their own data needs from in-house reports or gathered it from local agencies.<sup>23</sup>

This project might be used by state officials to assist them in establishing some concepts of the work load that would be imposed on the staff or personnel of a new division or agency. By referring to the services that needed land use data to be performed in this project, they could identify if a similarity existed between these services and their proposed division's services. If a similarity did exist, they would be able to identify the land use information data that would be needed to perform their proposed services and the possible sources of the information. Also, results of this project might be used in establishing a base of land-use data needs for the State of Kansas. This might prove valuable to the Kansas Department of Economic Development since they are presently working on a "Future Needs of Kansas Inventory". It would assist in identifying a few land-use needs that might be overlooked if the area of services performed by agencies were not investigated. To the planning profession, this project offers the knowledge that the services performed by state agencies are indicators of land use information data needs. It also suggests that by relating the land-use needs of state agencies to the services performed

by that agency, a truer picture is perceived of what is actually needed as compared to what is thought to be needed. This concept could also serve as the basis for further investigation.

#### 4.1 Proposed System Considerations

There are many considerations that should be carefully viewed before the land-use data needs gathered from the results of this study can be incorporated as part of a data base in an information system. The following are some recommendations that have been found useful by Barton-Aschman Associates, Inc. in a report to the Wisconsin Bureau of Planning and Budget.<sup>24</sup> It is strongly suggested that they should be considered before attempting the establishment of such a land-use information system:

1. Adopt a Standard Statewide Geographic Reference System. This Reference System should include:
  - a. A recommended Analysis Unit, i.e., state, county, city, etc.
  - b. A recommended Internal Storage System. The latitude-longitude is the system that is suggested. It is the most universally applicable, utilized in federal data and mapping programs, and workable for conversion of other reference systems.
  - c. Base Maps to be utilized - Seven and One-Half Minute U.S.G.S. Quadrangles, where available, or 1:250,000, Series Army Map Service Maps. This is the most widely used and generally accepted topographic and ortho-photo base mapping resource.



2. Assemble, Encode, and Store Data Representative of the Total Environment.
  - a. Obtain statewide aerial photographic coverage.
  - b. Obtain secondary sources of currently mapped information.
  - c. Obtain information directly from aerial photographic interpretation.
3. Utilization of Capture Techniques. The two primary sources of data acquisition would be:
  - a. Aerial photography including remote sensing, for data categories encompassing:
    1. Water
    2. Vegetation
    3. Agricultural Land-Use
    4. Recreational Land-Use
    5. Generalized Urban Land-Use
    6. Transport/Communication/Utilities Land-Use
  - b. The compilation of currently mapped secondary sources for data categories encompassing:
    1. Geology
    2. Topography
    3. Soils
    4. Climate
    5. Wildlife
    6. Conservation Land-Use
    7. Population

8. Land Values

9. Zoning

Other capture techniques that might be considered are Optical Character Reader Input, Digitized Input, and Keypunch Input.

4. Provide Storage Media.

- a. A file, for sale, of secondary source maps.
- b. A file, for sale, of the films available from remote sensing imagery.
- c. A file of tape records, for sale or copy, of the encoded data.

5. Provide Capabilities for Data Manipulation and Output.

- a. Standard tabular report generator, capable of generating tables of numerical information and handling simple arithmetic calculations, such as addition, subtraction, multiplication, and division.
- b. Standard Computer Mapping Program(s), yielding (1) output oriented to printers, and/or (2) output oriented to plotters.
- c. A standard file builder and data edit package.
- d. A geoconversion package capable of handling state plane coordinates and translating latitude-longitude and universal transverse mercator coordinates. This package should also be capable of aggregating common cells into larger units and disaggregating into smaller units.

## FOOTNOTES

<sup>1</sup> Advisory Commission on Intergovernmental Relations, "Land Use Control," Information Interchange System, No. 73, (Washington: Commission on Intergovernmental Relations, 1973), p. 6.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid.

<sup>4</sup> Senate Res. 268, 93d Cong., 1st Session. (1973), p. 10.

<sup>5</sup> Albert L. Massoni, "Land Use Legislation, Planners Action Needed," Planners Roll Call, No. 74-3 (Washington: American Institute of Planners, 1974), p. 2.

<sup>6</sup> Ibid.

<sup>7</sup> Darwin G. Stuart, "Information Systems in Urban Planning: A Review," American Society of Planning Officials, No. 260 (Chicago: A.S.P.O., 1970), p. 1.

<sup>8</sup> Ibid.

<sup>9</sup> Barton-Aschman Associates, Inc., A Statewide Geographic-Based Land-Use Information System for the State of Wisconsin, Phase 2 Report (Chicago: Barton-Aschman, Inc., 1973), p. 4.

<sup>10</sup> Op.Cit., Darwin G. Stuart, p. 1

<sup>11</sup> Ibid.

<sup>12</sup> Darwin G. Stuart, "The Systems Approach in Urban Planning," American Society of Planning Officials, No. 253 (Chicago: A.S.P.O., 1970), p. 1.

<sup>13</sup> Ibid.

<sup>14</sup>Marion Clawson with Charles L. Stewart, Land Use Information, (Baltimore: The John Hopkins Press, 1965).

<sup>15</sup>Ibid., p. x.

<sup>16</sup>Op. Cit., Barton-Aschman Associates, Inc.

<sup>17</sup>Ibid., p. vii.

<sup>18</sup>Langston, Kitch and Associates, Inc., A Design Study of a Planning Information System for Kansas, Kansas Planning for Development Report No. 28, 1968.

<sup>19</sup>Op. Cit., Langston, Kitch and Associates, Inc., Abstract.

<sup>20</sup>Op. Cit., Barton-Aschman Associates, Inc., pp. 57-58.

<sup>21</sup>Op. Cit., Langston, Kitch and Associates, Inc., p. 5.

<sup>22</sup>League of Kansas Municipalities, State Services and Technical Assistance Available to Local Governments in Kansas, (Topeka: League of Kansas Municipalities, 1973).

<sup>23</sup>Op. Cit., Langston, Kitch and Associates, Inc., p. 5.

<sup>24</sup>Op. Cit., Barton-Aschman Associates, Inc., pp. 25-27.

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- League of Kansas Municipalities. State Services and Technical Assistance Available to Local Governments in Kansas. Topeka: League of Kansas Municipalities, 1973.
- Massoni, Albert L. "Land Use Legislation, Planners Action Needed," Planners Roll Call, No. 74-3 (1974), p. 2.
- Stuart, Darwin G. "Information Systems in Urban Planning: A Review," American Society of Planning Officials, No. 260. (1970), p. 1.
- Stuart, Darwin G. "The Systems Approach in Urban Planning," American Society of Planning Officials, No. 253 (1970), p. 1.
- U. S., Congress, Senate. A Bill to Establish a National Land Use Policy. Senate Res. 268, 93d Cong., 1st Session. 1973, p. 10.

APPENDIX A

OTHER STATE PLANNING AGENCIES AND UNIVERSITIES  
THAT WERE CONTACTED

- (1) State Planning Director  
State Planning and Community Affairs Agency  
State House  
Boise, Idaho 83707
- (2) Chief Statewide Planning  
Statewide Planning Program  
123-A State House  
Providence, Rhode Island 02903
- (3) Director  
Bureau of State Planning  
Department of Administration  
Room B-130, State Office Building  
1-West Wilson Street  
Madison, Wisconsin 53702
- (4) Director  
Office for Planning and Programming  
State Capital  
Des Moines, Iowa 50319
- (5) Earl M. Starnes, Director  
Division of State Planning  
Department of Administration  
725 South Bronough Street  
Tallahassee, Florida 32304
- (6) Kenneth J. Dueker, Director  
Institute of Urban and Regional Research  
University of Iowa  
Iowa City, Iowa 52240
- (7) Hugh W. Calkins  
Urban Systems Research Laboratory  
University of Washington  
Seattle, Washington 98105
- (8) Art Schmidt  
Department of Community Affairs  
505 Missouri Boulevard  
Jefferson City, Missouri 65101

**APPENDIX B**  
**SELECTED STATE SOURCES**



1. Office of Economic Analysis
2. Kansas Department of Economic Development
3. State Board of Health (Vital Statistics)
4. State Board of Agriculture (Population Data)
5. Water Resources Board
6. Department of Labor
7. Department of Social Welfare
8. Department of Revenue
9. State Highway Commission
10. Vocational Education (Board of Education)
- (11. Department of Public Instruction - now called Board of Education)

## APPENDIX C

SCOPE OF SURVEY: AGENCY AND DIVISIONS  
INCLUDED IN SURVEY

- (1) State Board of Agriculture
  - (a) Anhydrous Ammonia Safety Division
  - (b) Entomology Division
  - (c) Water Resources Division
  - (d) Weed and Pesticide Division
  - (e) Weights and Measures Division
- (2) Department of Labor
  - (a) Employment Security Division
  - (b) Industrial Safety Division
- (3) Kansas Water Resources Board
  - (a) Executive Director
- (4) State Department of Health
  - (a) Food and Drug Division
  - (b) Office of Administration Services--Business Office; Personnel Office
  - (c) Office of Administration Services--Health Education Division
  - (d) Office of Administration Services--Legal Division
  - (e) Office of Administration Services--Registration and Health Statistics
  - (f) State Office of Comprehensive Health Planning
  - (g) Division of Environmental Health--Air Quality and Occupational Health Section
  - (h) Division of Environmental Health--General Community Sanitation Section
  - (i) Division of Environmental Health--Radiation Control Section
  - (j) Division of Environmental Health--Radiation Control Section
  - (k) Division of Environmental Health--Water Quality Control Programs
  - (l) Epidemiology and Disease Control
  - (m) Laboratories
  - (n) Local Health Services
  - (o) Maternal and Child Health
  - (p) Medical-Dental Health--Dental Health Section

- (q) Medical-Dental Health--Medical Facilities Certification
  - (s) Medical-Dental Health--Medical Facilities Licensure
  - (t) Public Health Nursing
- (5) Kansas State Department of Education
- (a) Administration and Finance
  - (b) Community Colleges and Continuing Education
  - (c) Development Division
  - (d) Instruction Division
  - (e) Vocational Education Division
- (6) Kansas Department of Revenue
- (a) Division of Alcoholic Beverage Control
  - (b) Board of Tax Appeals
  - (c) Property Valuation
  - (d) Taxation
  - (e) Vehicles
- (7) State Department of Social and Rehabilitation Services
- (a) Division of Mental Health and Retardation Services
  - (b) Vocational Rehabilitation
  - (c) Social Services
- (8) State Highway Commission
- (a) Design Department
  - (b) Federal Highway Safety Coordinator
  - (c) Location and Design Concepts
  - (d) Maintenance Department
  - (e) Materials Department
  - (f) Planning and Development
  - (g) Safety
  - (h) Secondary Roads Department
  - (i) Urban Highways Department

- ( 9)    Kansas Department of Economic Development
  - (a)    Administration
  - (b)    Aviation Division
  - (c)    Industrial Division
  - (d)    Planning Division
- (10)    Office of Economic Analysis

APPENDIX D

SAMPLE QUESTIONNAIRE

February 27, 1974

State Highway Commission  
Maintenance Department  
State Office Building  
Topeka, Kansas 66612

Dear Sir:

Our Agency is presently working in the area of Land-Use. As a part of this work element, I am in the process of developing a land-use information matrix of land-use needs of agencies in Kansas. As a user of Land-Use information, your input concerning the specific land-use needs of your agency will be essential to this study. This study is attempting to examine your agency or divisions land-use related information needs as they relate to the services provided by the agency or division.

It has been established that your agency is one of eleven (11) for which seventy percent of agency data requirements are defined, therefore, your responses will be a critical factor. Please answer the questions carefully and circulate it to other key staff members to insure that it reflects the entire agency or divisions planning information needs.

The data will be used for statistical reports and no individual agencies response will be reported. The number on the enclosed envelope is used for record keeping purposes to protect the confidentiality of your responses. Since time is an overriding factor in this study, I ask that the questionnaire be completed by March 14, 1974. At such time I will call for the questionnaire at your office. Thank you very much for your cooperation and time.

Sincerely,

Terrence Conrad, Planner  
Planning Division

TC:sls

The following services were listed in the manual State Services and Technical Assistance Available to Local Governments in Kansas, prepared by the League of Kansas Municipalities as being those provided by your agency or division:

I. Division: Maintenance Department.

Services: 1. Technical assistance and advice as to maintenance of streets, highways and equipment. This includes sign standards, equipment rental rates, permit procedures, resurfacing requirements and pavement and structure repairs.

2. Painting of center line and lane lines provided for city connecting links on a force account basis.

3. Emergency assistance in general cleanup of streets and highway connecting links caused by winds, storms, floods, fires and other disasters.

etc.

B. Does your agency or division provide any services that are not listed above? \_\_\_\_\_ If it does, please list them.

5.

6.

7.

8.



II. How much of your agency or divisions time is involved per service? Use the number next to the service to refer to it (Please be as accurate as possible).

Service	Number	% of Time Per Service
---------	--------	-----------------------

- |    |  |  |
|----|--|--|
| 1. |  |  |
| 2. |  |  |
| 3. |  |  |
| 4. |  |  |
| 5. |  |  |
| 6. |  |  |
| 7. |  |  |
| 8. |  |  |

III. Following are examples of land-use data thought to be needed by an agency. Looking at questions I and II, please list the services number next to the data to perform that service. Please attempt to provide a response for specific data items needed; level needed; and primary source.

Land- Use Variable	Service Number	Specific Data Item Needed	Primary Source	Level Needed		
				S	C	C
				t	o	i
				a	u	t
				t	n	y
				e	t	
Example:				y		
Geology	2	Bedrock, depth to	Kansas	x		
		bedrock, minerals	Geological			
			Survey			
Geology						
Topography						
Soils						
Water						
Climate						
Vegetation						
Wildlife						
Land- Capability						
Agriculture						

Land- Use Variable	Function Number	Specific Data Item Needed	Primary Source	Level Needed S C C t o i a u t t n y e t y
Recreation- Land-Use				
Residential Land-Use				
Commercial Land-Use				
Industrial Land-Use				
Institu- tional Land-Use				
Conserva- tion Land-Use				
Transp./- Comm./- Utilities- Land-Use. Pop./Empl. Income/ Charac.				
Land-Use				
Zoning				

IV. Are there any other land use data that are needed to perform a service in your agency? Yes ( ) No ( )  
If so what are the land use data needs, what services are they needed for, what is their primary source; and at what level are they needed?

[illegible]

V. A. Has your agency or division undergone any major  
organizational changes in the last five (5) months?  
Yes ( ) No ( )

B. If so, what changes?

1.

2.

3.

## APPENDIX E

### SERVICES THAT DID NOT REQUIRE LAND-USE DATA

# DATA RESULTS

## Services For Which No Land-Use Data Was Said To Be Needed

	Percentage Of Time Used To Perform Services
0.	
1. Aerial photographic mapping	
2. Make aerial photography on file available to local units	
3. Prepares Environmental Impact Statements	
4. Personnel Office assist local units in establishing and administering personnel programs	50%
5. Assist in securing, administration, accounting for federal grants	
6. Responsibilities for radiation control	
7. Control tuberculosis, venereal disease; responsible for epidemiology and immunization	
8. Scheduled inspections, complaint investigations	43%
9. Air sampling	24%
10. Hazardous Work Situations	8%
11. Community Noise Control	1%
12. Inspecting and testing facilities for materials used in construction and maintenance of highways	
13. State-federal insect survey, detection and quarantine	32%
14. Nursery and greenhouse plant inspection and certification	15%
15. Barberry Eradication program	12%
16. Elevator inspection for certification to permit shipment-corn and sorghum	5%
17. Issue Phy to sanitary certificates	2%
18. Issue permits shipping foreign insects into Kansas	1%
19. State Apairist inspects beehive owners in Kansas	6%

20.	Inservice Education for local nurses	15%
21.	Evaluation of nurses health techniques; certification for local health programs	5%
22.	Provide consultation and advice on program objectives and methods	70%
23.	Controlled flouridation services	15%
24.	Migrants health services	3%
25.	Planning and Coordinating - Childrens Dental health week	3%
26.	Consultation to local health departments	9%
27.	Guides industrial prospects in assessing local potential	15%
28.	Speaking engagements to encourage economic development	
29.	Assist off. in airport development	
30.	Liaison with Federal Aviation Administration on behalf of local governments	
31.	Aviation statistic repository	
32.	Provide statewide aid education assistance	
33.	Assist airport man. in securing federal surplus equipment	
34.	Conduct pilot safety meetings	
35.	Speaker bureau is available on request	
36.	State and Regional defense airlift-state coordinator	
37.	Provide state airport plan	
38.	Provide financial assistance persons suffering from end-state penal failure requiring dialysis	
39.	Assist disabled person in securing training	100%
40.	Does disability determinations for old age and survivors insurance	100%
41.	Assist local units in dealing with rehabilitation	
42.	Provide services to correlate and supervise secondary roads program	95%
43.	Correlate activities of highway matter resulting from federal reservoirs, major disasters and relocation of state highways	2%
44.	Review and approve plans for county benefit district	1%
45.	Review maintenance of completed road projects	1%



46.	Advise counties proper signing, maintenance and construction procedures	1%
47.	Regulate and inspect liquor distributors, assist local officers in liquor law enforcement	
48.	Inspects and evaluates hospitals and day care centers	
49.	Evaluates and advises on control of insects and rodents	
50.	Review public swimming pool plans and specifications	
51.	Consultation and assistance to local units on safety programs	
52.	Design and operations school buses	
53.	Organize school transportation programs	
54.	Organize and present safety training programs	
55.	Provide driver education programs	
56.	Assist with local vehicle safety check programs	
57.	Issue special permits for oversize vehicles on highways	
58.	Check safety requirements regarding anhydrous ammonia safety	50%
59.	Check proposed plants sites	50%
60.	Investigate complaints regarding anhydrous ammonia safety	
61.	Promotes safety within industrial establishments	
62.	Inspects mining operations	
63.	Inspects steam boilers	
64.	Inspects railroad facilities	
65.	Surveys sanitary status of eating and drinking establishments	2%
66.	Aids in identifying drugs, illicit-sales, food poisoning	
67.	Provides advice in administration of ordinances relating to food and drugs	
68.	Assist in establishing local health services	10%
69.	Consultations and referral service to local governments	10%
70.	Administers financial assistance to local health departments	70%
71.	Coordinate service-state and local health units	10%

- 72. Make film and literature on health and safety available to local units
- 73. Workshops on specific health subjects
- 74. Service in health education accident prevention
- 75. Assist local unit in health screening programs
- 76. Assist in conducting health studies
- 77. Conduct classes on various health subjects
- 78. Organize and conduct community wide health education programs
- 79. Assist local units in improving ambulance services
- 80. Legal services relative to property tax questions and law suits 10%
- 81. Coordinate state highway commissions plan with future growth 10%
- 82. Provide technical advice and assistance 60%
- 83. State highway system standard designs
- 84. Prints or microfilm reproductions or plans on state highway systems
- 85. Authorizes insurance emergency warrants and property tax levy increases
- 86. No fund warrants
- 87. Tax protest
- 88. Handles appeals on taxation, and tax grievances