

THE OKLAHOMA RECREATION INFORMATION
MANAGEMENT SYSTEM

BY

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THE OKLAHOMA RECREATION INFORMATION
MANAGEMENT SYSTEM

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PREFACE

This research report is the culmination of two-and-a-half years of work on the Research Staff of the Oklahoma Tourism and Recreation Department. As Statistical Analyst for the Department, I was acutely aware of the need for timely and accurate information to be able to be in the hands of management so that decisions could be based on hard data rather than perception or speculation. The Oklahoma Recreation Information Management System is the product of many hours of labor trying to figure out how I could present all the varied effects of the tourism and recreation industry in the many different formats required by different Divisions within the Department.

Special thanks go to Dr. Richard Hecock, my adviser, for his help in focusing and refining my ideas. Also, to Mr. G.D. "Chino" Ferrer, Assistant Director of the Division of Planning and Development for his help, confidence, and for allowing this project to proceed to its present status.

I am also indebted to Dr. Steven Walsh for his input into geographic information systems, and for hiring me as his research assistant while at O.S.U. My sincere thanks also goes to Dr. John Rooney and Mr. James H. Stine for being a part of my graduate committee and to Mary Porter for typing this report.

This work is dedicated to my wife, who never failed to encourage and support me, and without her help, this never would have been possible.

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Introduction

New devices to aid rational decision-making are necessary within the field of recreation as recreation planners and managers are being held more accountable for their planning, programs, and budgets. In 1961, the Outdoor Recreation Resource Review Commission (ORRRC) observed that "....we need new tools not only to cope with the problems, but especially to expand and deepen our understanding of outdoor recreation as a systematic form of behavior in our society....." In 1969, the National Academy of Sciences recommended that research be conducted in "....arranging for the collection storage and use of information on outdoor recreation, and developing the necessary means to improve the usefulness of this information to users, planners and managers" (Hodges and Van Doren, 1972). Because of these expressed needs, computer-based geographic information systems are attracting increased attention among recreation planners and managers.

A geographic information system (GIS) is a computer-based data entry, storage, manipulation, and display software system for use with geographically referenced data

(Blanchard, 1982). A GIS offers a way of efficiently storing and retrieving large quantities of spatial data for facility, program, and natural resource planning (Arbour, 1979; Seladones, 1981; Siderelis, 1980; Sudia, 1979; and Titzer, 1982). The GIS approach has been used in applications ranging in scale from site specific to worldwide, in subject matter from archeological to zoological, and may have singular or multiple objectives.

Although the geographic information system approach to problem solving can and has been done without the assistance of computers, the incorporation of many variables, with complex patterns is facilitated by the use of automation; this has led to computer-based geographic information systems. The concepts are the same in problem solving with or without a computerized GIS. A computer-assisted GIS approach is simply faster and more convenient, and as such is a much more powerful tool for planners and managers. A computer-assisted GIS approach brings nothing new to recreation planning and management conceptually, but it does permit research problems to be more expeditiously examined. As such, this approach may encourage a more careful systematization of data collection and maintenance, and allows for more monitoring of changes and trends. A number of recreation-oriented applications of such systems have been reported, and it is the purpose of this paper to review and summarize the use of GIS technology in the recreation planning process, and document the development

and utilization of one such system; the Oklahoma Recreation Information Management System.

Geographic Information Systems

A geographic information system can best be conceptualized as a base map of an area which has been placed under a number of overlays depicting different variables (Figure 1). Thus, for any area or point on the base map, pertinent data on a number of subjects can be identified, overlapped, combined, and then analyzed and converted into information useful for decision making. For example, decisions can be made by asking the system to identify all points with certain specific attributes or combination of attributes.

The quality that makes a computer-assisted GIS invaluable is the ability for the researcher to overlay variables to create new information regarding the co-occurrence of phenomena (Figure 2). This new information may result in the intersection, union, or exclusion of the overlaid variables. For example, attendance and expenditure rates could be overlaid to produce a total economic impact variable. Lack of ad response and high income areas could be identified as "potential targets" for marketing campaigns.

The components of a geographic information system include the data to be analyzed, a means of storing the data, computer hardware and software that perform the

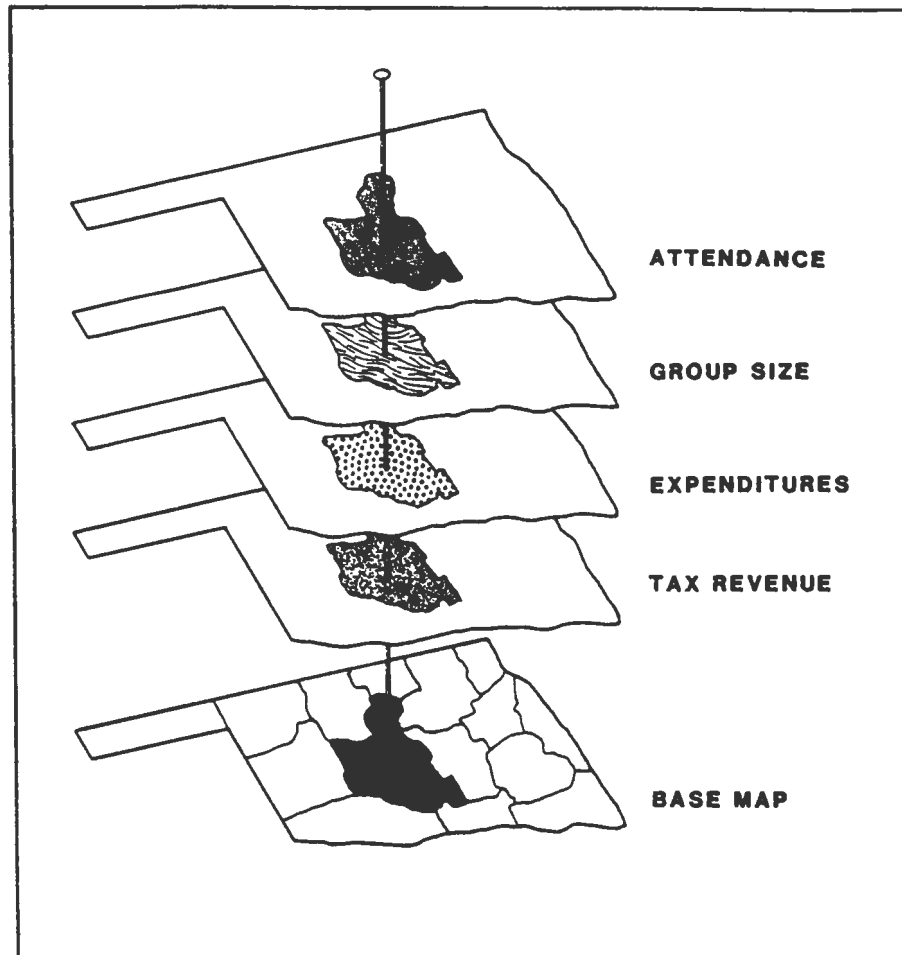
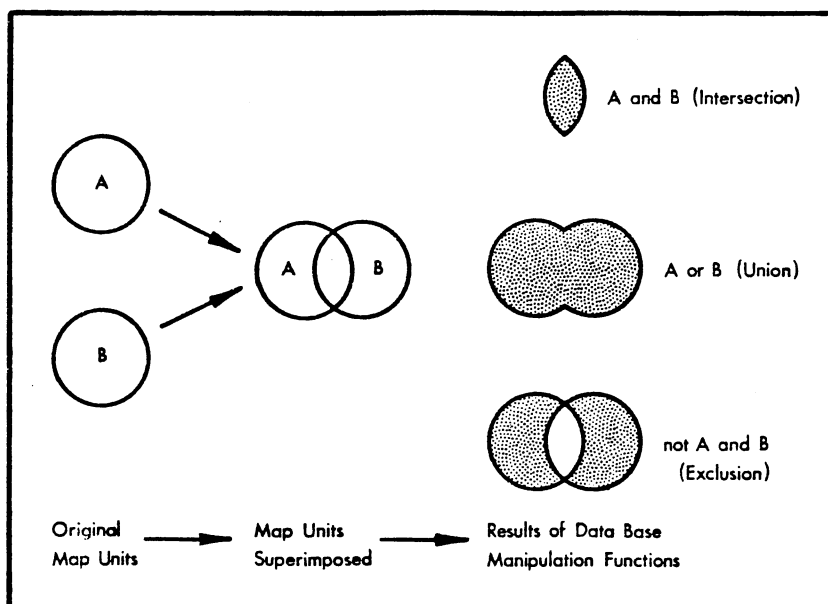


Figure 1. Conceptualization of a Geographic Information System



Source: Courtesy of Dr. Steven J. Walsh

Figure 2. Overlaying Variables Within a Geographic Information System.

analytical functions, and some form of output device. The type of data to be input into the system depends upon the needs or requirements of the user. In recreation planning and management, socioeconomic and natural resource data are both required (James et.al., 1972).

Data format within a GIS has three essential components: 1) the value of the phenomenon or characteristic, 2) the location in space, and 3) the date of the observation (Dangermond, 1983). The variable of interest is assigned a value according to interval, nominal, ordinal, or ratio scale. The location may be represented using one or more of the three basic locational notations: points, lines or polygons (Dangermond, (1983). Most variables used in geographic information systems change with time, especially socioeconomic variables. A GIS achieves its greatest value when it is used to monitor such changes.

Examples of GISs Used In Recreation Planning

The British used early GIS technology for recreational planning as evidenced by the 1974 CRRAG Conference. The conference was held to demonstrate the progress that had been made in utilizing GIS technology in recreation planning, and highlighted the Countryside Recreation Statistics System (CRESS) and the Tourism and Recreation Information Package (TRIP) systems (TRRU, 1975). CRESS was developed to provide statistical information on supply and use of facilities for counties in Britain. The TRIP system

was created to portray distributions and patterns of single phenomena or combinations of variables. Variables included economic and demographic characteristics, settlement patterns, accessibility indices and environmental variables, and were set up on a 5 km x 5 km grid system. The TRIP system has been used in connection with identifying potential park sites in Scotland, measuring and analyzing a tourist market segment, and in identifying regions possessing underused facilities.

In Mississippi, a GIS helped in two phases of a park planning project (Miller and Carter, 1979). The initial phase utilized the system first for identifying large tracts of land suitable for park development, and secondly for narrowing the choices of sites by analyzing the tracts of land based on prioritized site suitability criteria. The second phase utilized the system on a larger scale; optimum placement of buildings and recreation facilities within the selected park area were determined by devising and prioritizing land suitability criteria for each of the sites. Variables used in this study were elevation, slope, topographic position (e.g. upland ridge, terrace, swamp), soils, forest stand composition and condition, and proximity to existing facilities and activities.

The state of Indiana employs a GIS called Recreation Management Information System (RMIS) (Titzer, 1982). RMIS was created to handle survey information and provide a centralized data base for facility and participation

surveys. It is employed in studies on the economic impact of recreation upon the State of Indiana, Statewide Comprehensive Outdoor Recreation Plans (SCORPs) where it is utilized in demand/needs analysis of recreational facilities, and specific and regional studies. The areal units in this system are counties, townships, and survey sections.

A relatively large portion of the reported recreation applications have been developed in the context of general purpose GIS's. These systems have been used for such diverse purposes as inventoring landuse in order to identify suitable sites for potential parkland development, inventoring parkland for purposes of locating sites and structures, and for providing social and economic information for recreation demand and needs analysis. Two such systems are the Texas Natural Resources Information System (TNRIS) and the Minnesota Land Management Information System (MLMIS). Both of these systems are large statewide natural resource information systems and contain multiple data bases with many different areal units (natural resource, cultural, and political) and levels of generalization (acre, section, township, county, etc.). They have been used by both public and private agencies for recreation planning. TNRIS has been used in the development of park master plans (Reference Manual..., 1974), and MLMIS utilizes SCORP data, including: administrative units for parks, forests, and wildlife management areas; and

recreation facilities such as resorts, campgrounds, marinas, beaches, water access points, playgrounds, and swimming pools. TNRIS and MLMIS also utilize GBF/DIME Files created and maintained by the U.S. Bureau of the Census. These files are on-line at both the Texas and Minnesota facilities to input demographic data into the system (TNRIS, 1981, LMIC overview, 1982). Many other types of data of possible significance to recreation planning, such as water quality measurements, property ownership, and land use, are also available.

Although TNRIS and MLMIS are probably the best known general purpose systems, other systems also have been used for various applications of recreation planning and management. The Florida Geographic Information System (Siderelis, 1980), Canada Geographic System (Arbour, 1979), CALUP in Mississippi (Miller and Carter, 1979), and one used by the National Park Service in conjunction with NASA (Sudia and Dinkel, 1979) are examples of such systems.

The Development Of The Oklahoma Recreation Information Management System

The Oklahoma Recreation Information Management System (ORIMS) was developed for two major reasons: 1) to monitor trends in outdoor recreation activity and facilities across the State of Oklahoma, and 2) to assist in the marketing of the State's recreational opportunities. ORIMS was developed within the Research Section of the Division of Planning and

Development which is within the State's Tourism and Recreation Department; a department which has dual responsibilities for park management and planning, and promoting the State's tourism and resort industries.

Development of ORIMS began as managers and planners expressed the need to keep abreast of recreational trends within the State, including expenditures, participation rates, facility inventories, economic issues, and marketing effectiveness. The ability to quickly manipulate and summarize data according to different geographic areas and over time were qualities deemed essential. These pointed to the desirability of a geographic information system approach.

ORIMS was initiated in 1984 as a reporting system for the Division of State Resorts. It was developed to help track visitation rates by state and ZIP Code areas of origin for the five state-owned resorts. Initial programming and consultation in the development of the reporting system began at Oklahoma State University and utilized seasonal graduate student help under the guidance of the Department of Geography, and with the use of the University's computer system. Later developments and refinements of the system were reviewed and critiqued by the University of Oklahoma's Center for Economic and Management Research. This cooperative effort between the two major universities and the Department of Tourism and Recreation facilitated both development and exposure of the system. The exposure helped

ensure the system's use for both "real world" planning applications and also for academic research.

Results of this project resulted in an in-house report titled "ZIP Code Reporting System for the State Resort System, 1984 Study" and identified primary and secondary market areas by season of use. In 1985, the reporting system was expanded to produce quarterly reports in an effort to keep management aware of visitation trends and to track marketing efforts. A year-end summary was again produced.

As the effectiveness of this reporting system became known, new ideas for its applications began to surface in other Divisions of the Tourism and Recreation Department. The SCORP staff recognized its ability to manipulate large amounts of data geographically and sought to apply it to their inventory process and demand/needs analysis, where analysis is done on local and regional levels within the State. The Research Staff wanted to expand the reporting process of the system to include the sixteen major State Parks in order to better understand the relative composition of park visitor patterns and lodge clientele. In addition, the Research Staff sought to merge the results of the 1985 Summer Park User Survey and Visitor Information Center Surveys with visitation rates at the parks to determine economic impact on local and regional levels, and to determine pass-through traveler impact on the State's economy. The Division of Marketing Services desired to

profile the State's visitors in order to improve their advertising campaigns, by analyzing the geographic distribution of ad responses and matching these responses to the known demographics of the ad response origin.

It is noteworthy that these varied interests called not only for large numbers of variables and large amounts of data, but that the desired areal units for collecting and reporting purposes were quite different as well. Resort managers wanted the ability to analyze their customers by their ZIP Code origins; the SCORP staff needed participation and attendance data for the state and sub-state planning regions; Marketing Services desired counties, tourism regions, and statewide. The Research Staff needed all of the above plus legislative districts and park service areas. The Oklahoma Recreation Information Management System emerged from these varied and complex data needs.

Program Description

The basic concepts and techniques of ORIMS do not contain any outstanding advances in computer based geographic information system technologies. Important criteria for the design and use of ORIMS were high flexibility and low cost. The host system is the Tourism and Recreation Department's IBM 4331 mainframe with DOS VSE operating system. Data entry utilizes the computer system's ICCF editing features. Manipulative and display features of ORIMS utilize the Statistical Analysis System (SAS) software

package which is licensed to the Department. ORIMS is not particularly "user-friendly" since a knowledge of SAS is necessary to carry out any analysis. In fact, the ease of use and utility of the system is in direct proportion to the amount of SAS programming skills of the user. SAS was chosen because of its packaged procedures which make data arrangement and display as well as statistical analysis of information very simple. In addition to these features, the SAS package could also be used for other management activities by Department personnel, therefore making the acquisition of SAS much more cost effective than acquiring a dedicated information system.

Data entry was originally accomplished by entering in data to new data sets which were then transferred to disc storage and subsequently accessed by ORIMS. More recently, ORIMS has employed an interactive screen editing process which allows freedom in updating, adding, and deleting information. Data are organized in numerous ways, but all are geographically referenced. The majority of data are either facility referenced or county referenced data. Facility referenced data are based on a specific facility's location in the state, such as attendance at a specific attraction or state park's income from cabin rentals. A large amount of county referenced data such as sales tax, unemployment rates, or demographics are incorporated into the data base. The county and facility referenced format were chosen because of the Department's need to present the

information in county or county - combination forms (e.g. sub-state planning regions, tourism "countries" (e.g. Green Country, Lake Country, Red Carpet Country), legislative districts, park administrative regions, statewide).

Data sets are stored on magnetic disc files each having a specific thematic content (Figure 3). Each data set is titled after the major theme of the data it contains. Basically, six themes represent the bulk of the data: 1) facility inventories, 2) attendance rates, 3) income produced, 4) county economic and tourism indicators, 5) county static information, and 6) survey files. Upon access to ORIMS, the user has access to any of these files and can then manipulate, sort, summarize, and output the information.

Data output is done in tabular or graphic form with computer mapping the future goal. Output in ORIMS utilizes the CHART and PLOT procedures in SAS for pie, line, and bar charts, and the TABULATE, FREQ, and PRINT procedures for tabular output. Future expansion in the system will be the addition of SAS/GRAPH, a computer mapping and charting software system that was designed to complement the SAS software system.

Applications of ORIMS

The applications of ORIMS grew as each Division of the Tourism and Recreation Department became acquainted with its capabilities and powers. As stated, the effort began with

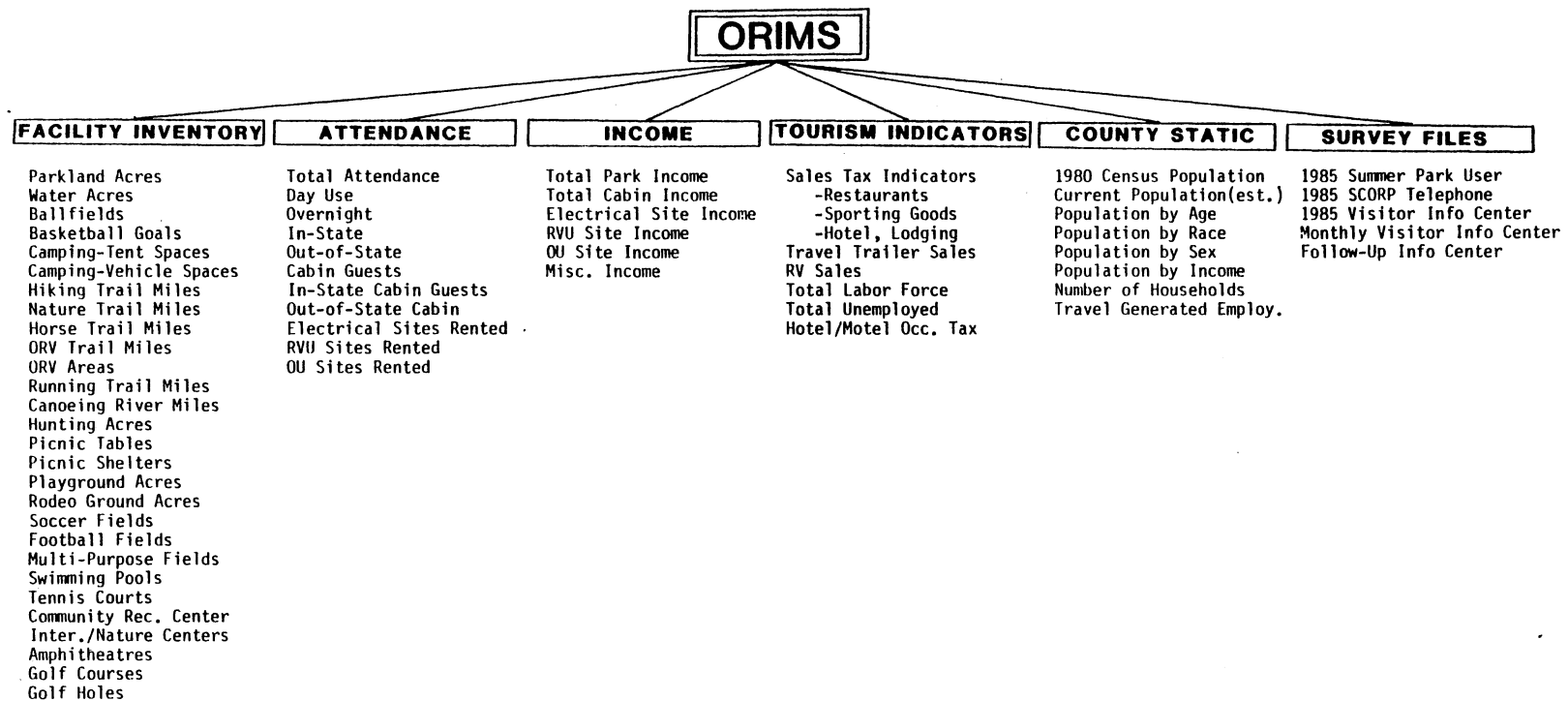


Figure 3. Data Sets Within ORIMS and the Variables They Contain

the development of a reporting system for the state resorts to help identify primary and secondary markets. Since that time, the true development and evolution of ORIMS has taken place with the building of a broader data base and structuring of the program. Recently, ORIMS has been used to analyze specific problems, and two examples will be offered to show its abilities.

Estimating Tourism Impacts on a Local Economy

As the petroleum and agricultural components of Oklahoma's economy deteriorated in the middle 1980's, the tourism and recreation industry was called upon to help "pick-up the slack." Tourism, as the third largest industry in the State (U.S.T.D.C., 1984), was seen as having great potential to generate greater tourism expenditures and create more jobs as a result due to the decline of fuel and gasoline prices coupled with apprehension of overseas travel due to terrorism. Nationally, nights away from home on vacations were expected to be at their highest levels ever in 1986 with vacation travel predicted to rise a full five percent over 1985 levels (U.S.T.D.C., 1986). A directive came to the Research Section to produce a profile of the economic impact of tourism and recreation activities by sub-state planning regions and tourism "countries," in an attempt to inform the local communities on the importance that this industry has to their economic well-being.

The Research Staff utilized ORIMS to generate many of the answers to this directive and then looked to outside sources for the remaining answers. While the procedures were the same for each geographical area, the Kiamichi Economic Development District of Oklahoma (KEDDO), a sub-state planning region, will be used as a representative example to demonstrate one aspect of the ORIMS process.

Initially, a profile of recreation/tourism attractions in each county within the region was developed (Table 1). Notice was taken as to whether or not the Department had attendance rates for them, and whether or not 1985 Park User Surveys had been completed at the facilities. To assess the economic impact that recreation and tourism has had upon the KEDDO area, visitor expenditures were chosen as being the best indicator of economic activity and impact. The 1985 park user surveys had asked public park and private attraction visitors "where", "on what", and "how much" money they spent on their total trip. Average expenditures per person per day were computed for all persons surveyed within the KEDDO region (473). Coupling these expenditures with attendance rates permitted the Research staff to estimate the total dollar expenditures by visitors both during their trip and while within the KEDDO area.

Data were extracted from ORIMS files for 1983-85 attendance, length of stay, size of group, and expenditure rates. Plots of the three year-attendance rates were developed to analyze trends and group expenditures were

TABLE I
KIAMICHI ECONOMIC DEVELOPMENT DISTRICT OF OKLAHOMA
COUNTY/FACILITY PROFILE

<u>COUNTY</u>		<u>FACILITY</u>
CHOCTAW		Raymond Gary Recreation Area Boswell Recreation Area Hugo Lake - Corps of Engineers * Goodland Presbyterian Children's Home * Fort Townson Historic Site * Choctaw Chief's House
HASKELL		Robert S. Kerr Reservoir - Corps of Engineers
LATIMER	(X)	Robber's Cave State Park * Lotie Coalminer's Museum * Veteran's Museum
LEFLORE	(X)	Lake Wister State Park Talimena State Park Spiro Mounds State Park Heavener-Runestone Recreation Area Ouachita National Forest Wister Reservoir - Corps of Engineers * Kerr Museum * Peter Conser Historic House Site
MCCURTAIN	(X) (X)	Beavers Bend State Park Hochatown State Park Pine Creek Lake - Corps of Engineers Broken Bow Reservoir Corps of Engineers Museum of the Red River
PITTSBURG	(X) (X)	Arrowhead State Park Eufaula - Corps of Engineers * Old Choate House * Old Choctaw Indian Courthouse
PUSHMATAHA	(X)	Pine Creek State Park Clayton Lake Recreation Area Sardis Lake - Corps of Engineers

* No attendance data at present time
(X) Park User Survey of 1985

Source: ORIMS

mapped and analyzed in comparison to the state and to other sub-state planning regions (Figure 4 and Figure 5).

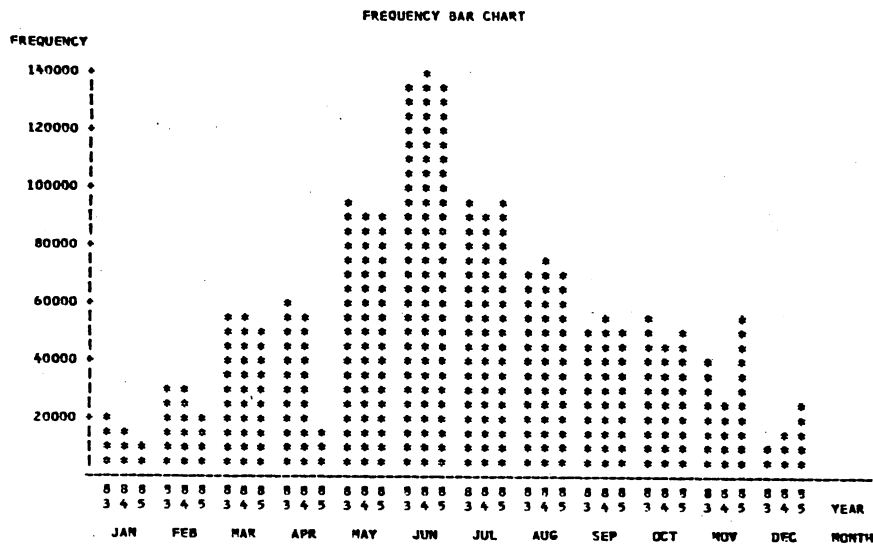
Expenditures were analyzed in three ways: 1) total expenditures by visitors, 2) where these expenditures were spent, and 3) how these expenditures were spent (Table 2). Table 3 shows the resulting economic impact of park users within KEDDO as compared to the state in whole. Figure 6 shows how and where these dollars were spent.

Based on park visitor expenditures alone in 1985, KEDDO experienced over \$126 million in economic benefit to the areas within a 25 mile radius of the various facilities. Figure 5 shows that 58 percent of each recreational dollar is spent in the local areas. The remaining 42 percent is spent on the trip getting to the parks and on the way home. This comes to more than \$90.4 million spent on the trip for a total outlay of over \$216 million spent by park visitors visiting the KEDDO region in 1985.

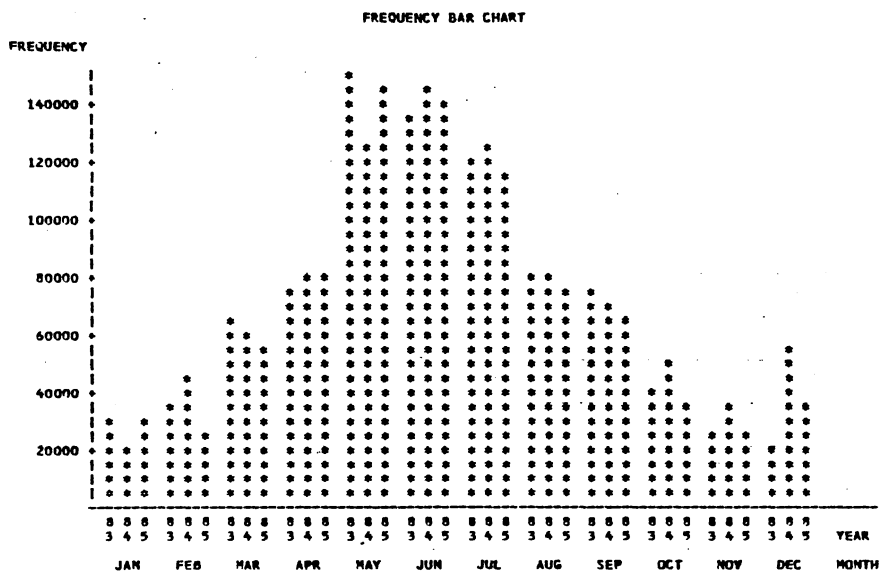
This \$216 million represents over 8.6 percent of all tourism expenditures in the state (based on \$2.5 billion total expenditures reported by the U.S. Travel Data Center) and produced 28.0 percent of all park visitor expenditures in the state with only 22.6 percent of the visitation.

Utilization of ORIMS helped show how the KEDDO region benefited greatly from the influx of visitors to their area and their subsequent spending, and how the State also benefited from expenditures by travelers as they made their way to and from their points of destination in KEDDO. ORIMS

OKLAHOMA TOURISM AND RECREATION DEPARTMENT
OKLAHOMA RECREATION INFORMATION MANAGEMENT SYSTEM
ESTIMATED NUMBER OF VISITORS - BEAVERS BEND STATE PARK

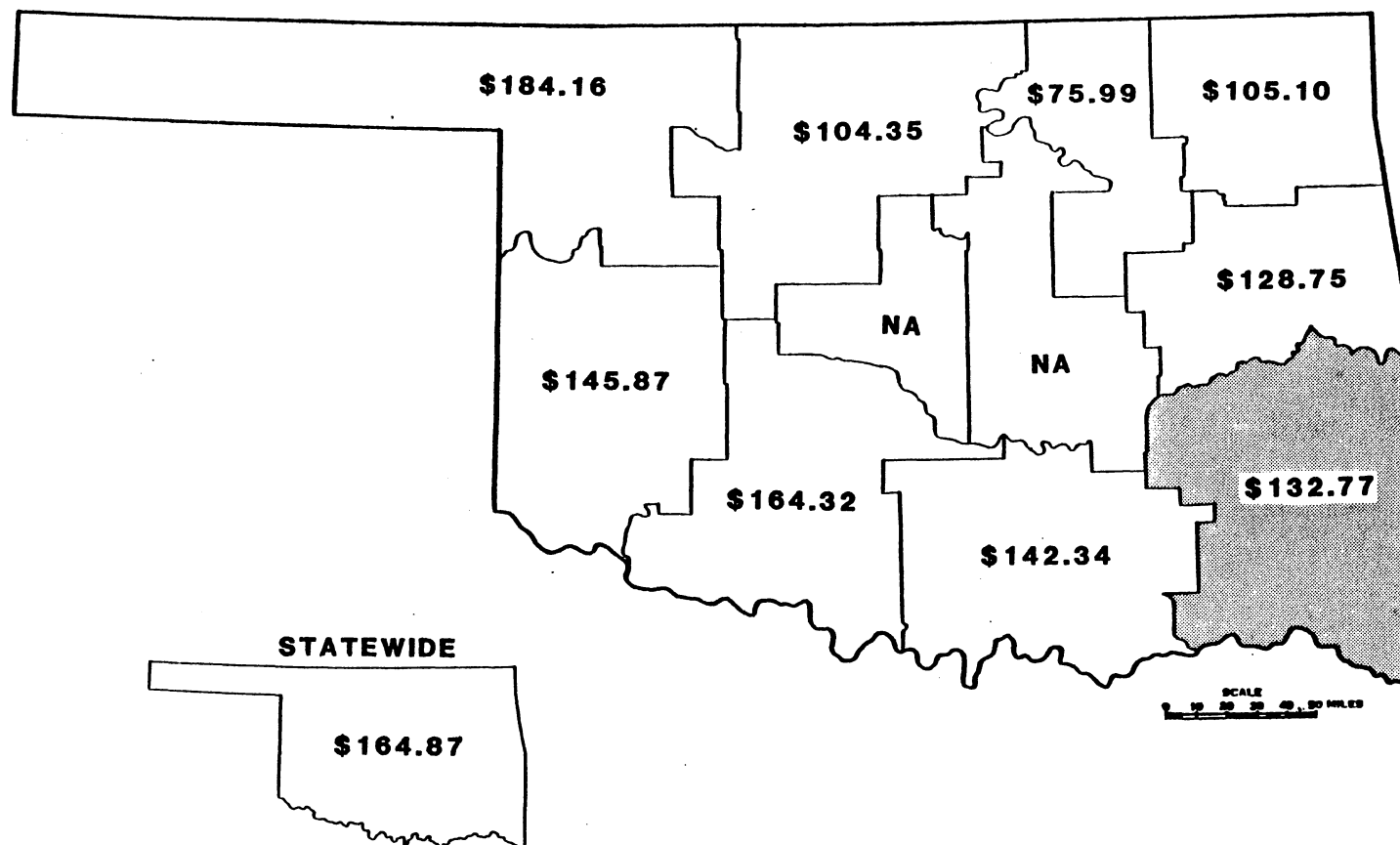


OKLAHOMA TOURISM AND RECREATION DEPARTMENT
OKLAHOMA RECREATION INFORMATION MANAGEMENT SYSTEM
ESTIMATED NUMBER OF VISITORS - LAKE VISTER STATE PARK



Source: Oklahoma Recreation Information
Management System Files

Figure 4. Three-Year Attendance Trends



Source: Drafted from ORIMS generated data

Figure 5. Total Group Expenditures Per Trip by Park Visitors
By Sub-State Planning Region

Table II
EXPENDITURES PER TRIP BY PARK USERS

STATEWIDE				
	TRAVELING TO PARK	WHILE AT THE PARK	TRAVELING FROM THE PARK	TOTAL EXPENDITURES
FUEL	16.54	13.05	12.09	41.68
LODGING	7.54	18.22	7.54	33.30
EATING AT RESTAURANTS	11.16	14.46	6.52	32.14
RECREATION	.67	7.92	.70	9.29
OTHER	1.29	4.93	3.26	9.48
TOTALS	37.46	77.33	17.98	132.77

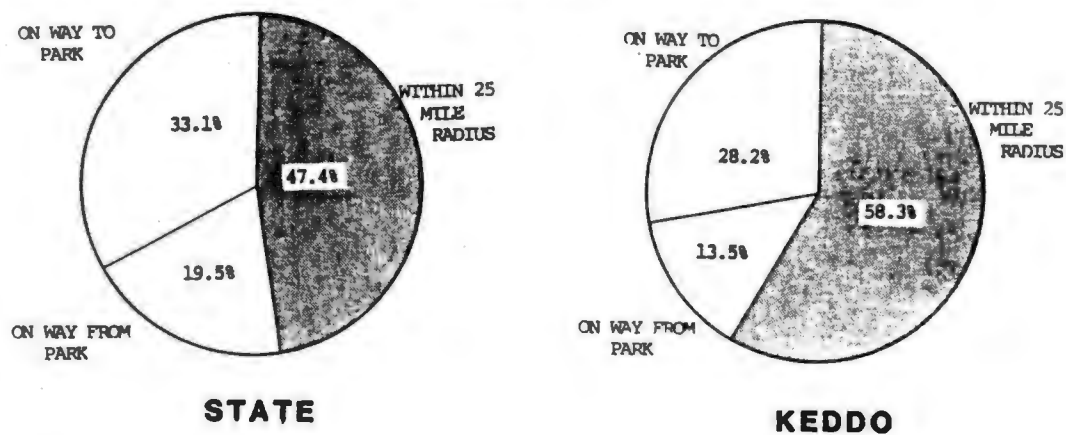
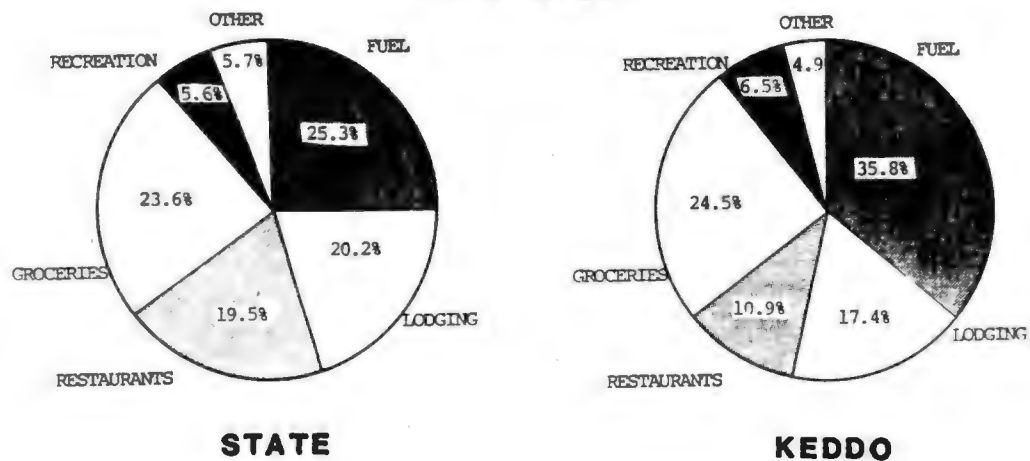
KEDDO				
	TRAVELING TO PARK	WHILE AT THE PARK	TRAVELING FROM THE PARK	TOTAL EXPENDITURES
FUEL	19.22	14.38	13.93	47.53
LODGING	.54	22.30	.20	23.04
EATING AT RESTAURANTS	13.93	18.08	.51	32.52
RECREATION	.08	8.36	.25	8.69
OTHER	1.59	4.55	.37	6.51
TOTALS	37.46	77.33	17.98	132.77

Source: Oklahoma Recreation Information Management System Files

TABLE III
TOURISM AND RECREATION ECONOMIC IMPACT
BY PARK VISITATION IN 1985

<u>STATEWIDE</u>	<u>KEDDO</u>	
56,912,000	12,846,604	Visitor Days, All Parks
X <u>\$6.44</u>	X <u>\$9.92</u>	Daily Expenditures
		Within 25 Mile Radius
\$ 366,513,280	\$126,153,651	Local Economic Impact
25,752,036	6,833,300	Total Trips
X <u>\$15.80</u>	X <u>\$13.23</u>	Total Per Person Trip
		Expenditures
\$ 406,882,000	\$ 90,404,559	Total Trip Impact
366,513,280	126,153,651	Local Economic Impact
+ <u>406,882,000</u>	+ <u>90,404,559</u>	Total Trip Impact
\$ 773,395,280	\$216,558,210	Total Expenditures

Source: Oklahoma Recreation Information Management System

"WHERE SPENT"**"HOW SPENT"**

Source: Oklahoma Recreation Information Management System Files

Figure 6. Expenditures by Visitors, "Where and "How" Spent.

played an intricate role in the development and analysis of this problem, by simplifying and speeding up the process. Most of the data were in one place with access to it by a it took only one SAS command to produce similar data for other regions.

Identifying Market Targets for Resorts

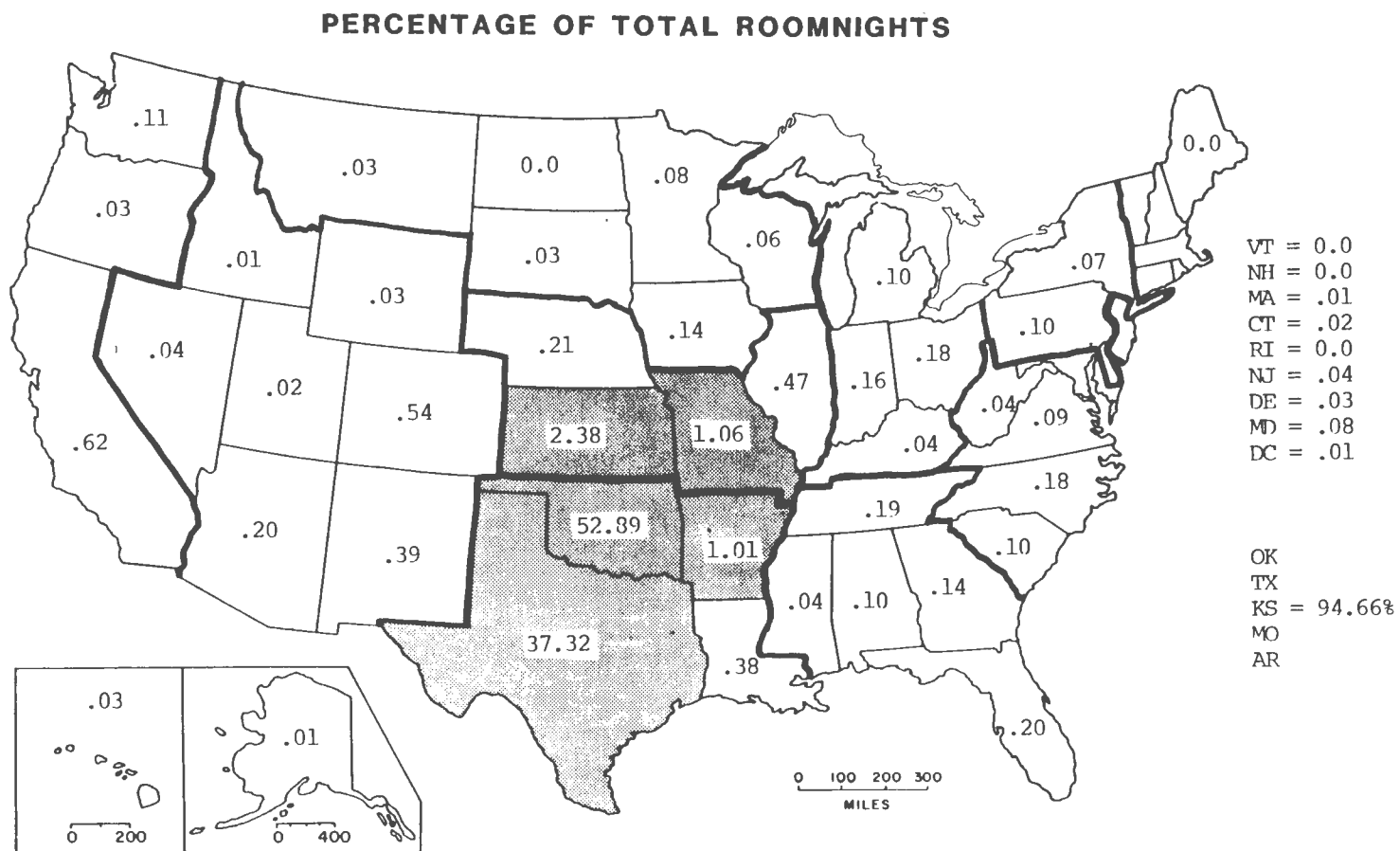
The fields of marketing and market analysis have strong preferences for Zip Codes as a data base, and have used them successfully since the early 1970s. Zip Codes have been used to identify primary market areas, to evaluate sales and marketing effectiveness, and for profiling user or purchaser communities.

The Research Section set out to develop a Zip Code reporting system for the State Resort System which would identify primary market areas, evaluate advertising effectiveness, and trace peaks and slumps in business. From each individual resort's reservation system, number of roomnights by Zip Code for each resort were obtained and encoded in ORIMS. The resort system was analyzed both as individual components and as a complete system. Percentages of roomnights were identified by national, regional and local areas based upon three and five-digit Zip Codes. In 1984, the study identified the primary and secondary markets, and these were then compared to 1985 visitation patterns.

Nationally, the combined resort system drew from 93 to 96 percent of their business from the five state area of Kansas, Missouri, Arkansas, Texas, and Oklahoma, with three-season total of 94.66 percent (Figure 7). This is very close to the 1984's percentages which ranged from 93 - 95 percent with a three-season total of 94.02 percent (Figure 8). For all the lodges combined, there was no other state in the nation that produced over one percent of the roomnights other than those five.

Regionally, the 1985 distribution of roomnights is very similar to the pattern exposed in the 1984 study (Figure 9). Using three-digit Zip Codes to plot visitor origin, Oklahoma, North Texas, Southern Kansas, and the Texas Panhandle were identified as the major producers of visitors to Oklahoma resorts. The primary market areas (those areas producing five percent or better of the total U.S. roomnights) for the combined lodge system was very similar to 1984 with the exception of the Lawton three-digit Zip Code area coming in during the summer season.

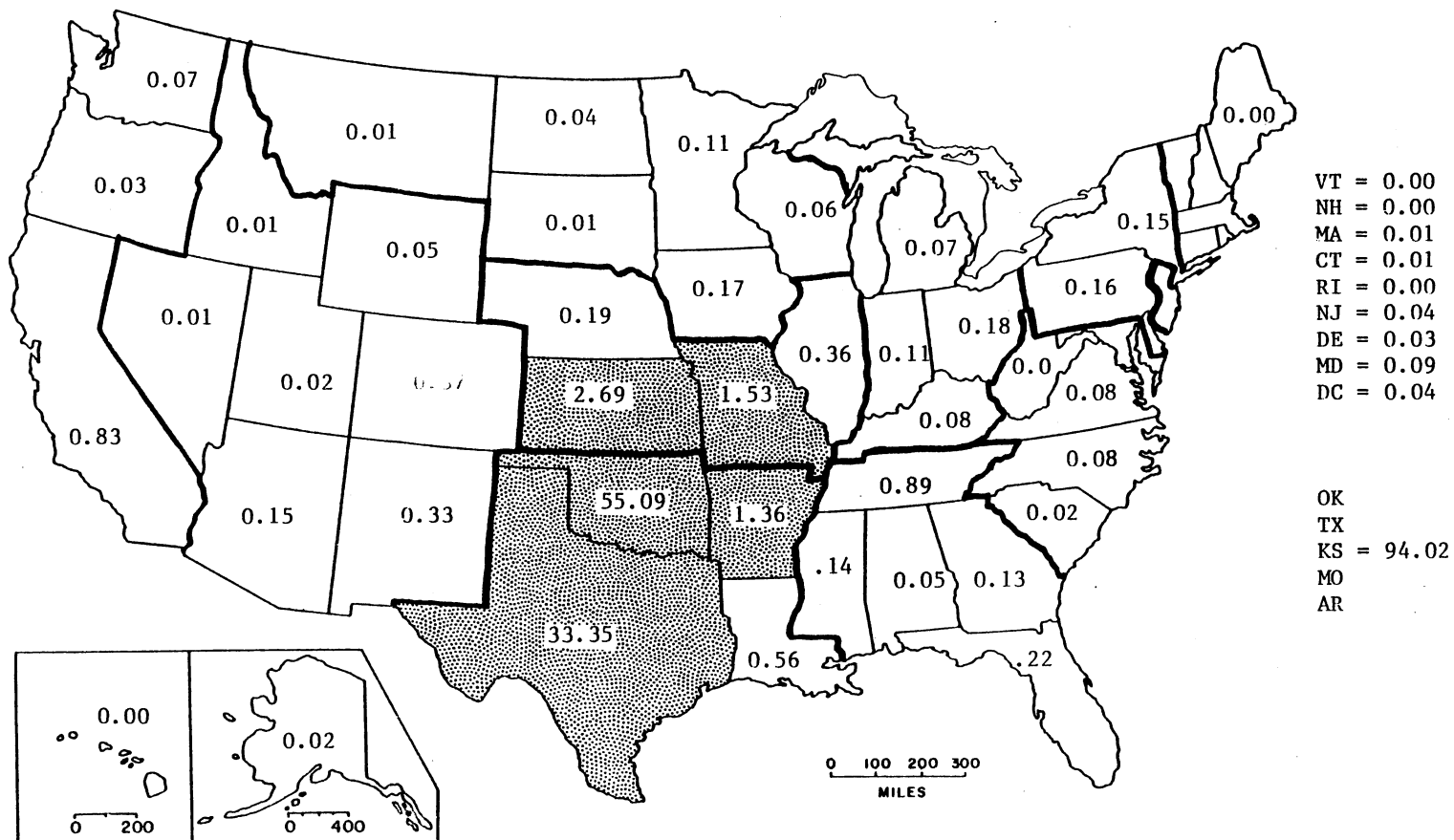
Tracing visitor patterns is relatively easy using Zip Codes as the geographical base and ORIMS as the data manipulator. Valuable marketing information for seasonal, yearly, and individual lodge promotions has been obtained for two full years, and future use and comparisons will begin to identify visitation trends and shifts. Already, management has utilized this data to help place advertising in strategic markets including the North Texas, Amarillo,



Source: Oklahoma Recreation Information Management System Files

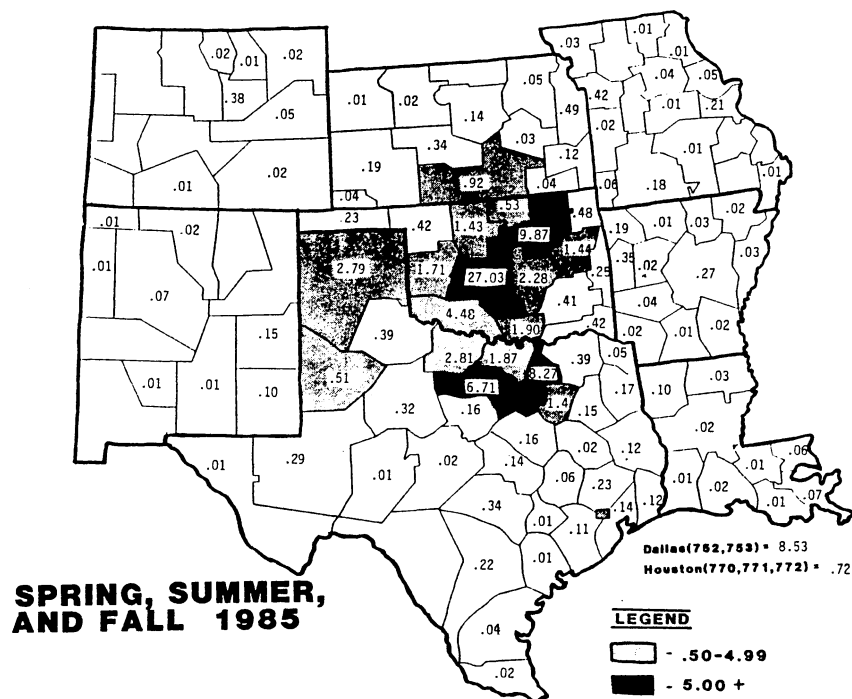
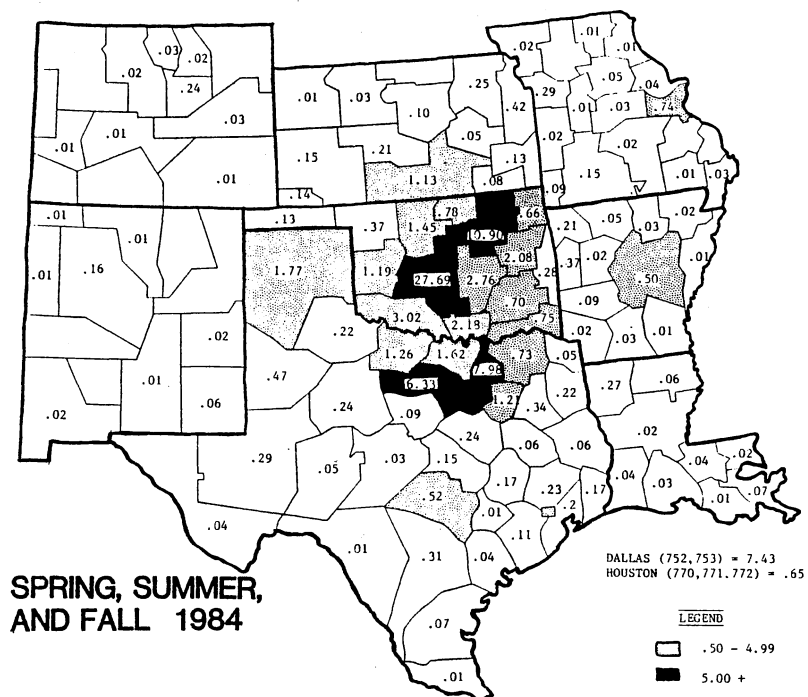
Figure 7. State Resort Visitor Origins; Spring, Summer and Fall, 1985

PERCENTAGE OF TOTAL ROOMNIGHTS



Source: Oklahoma Recreation Information Management System Files

Figure 8. State Resort Visitor Origins; Spring, Summer, and Fall, 1984



Source: ORIMS

Figure 9. Regional Distribution of Resort
Visitation, 1984 and 1985
Percentage of Total Roomnights

and Wichita, Kansas areas. Five-digit Zip Code areas have also been utilized to identify markets within cities, with the future hope of targeting these specific market segments. Future studies will allow the Research Staff to merge demographics with these five-digit Zip Code areas to profile the resort customer. Utilization of ORIMS will allow those responsible for marketing and advertising these facilities to keep abreast of any changes or shifts in visitation patterns which will then allow them to make sound marketing decisions in the future.

Conclusions and Future Directions

The preceding examples are but a few applications of how ORIMS has been utilized. Production of visitor statistical abstracts for facilities across the state, analyzing Marketing Services' Fall 1985 ad campaign, and updating the SCORP facility inventory also have been completed. The future of ORIMS applications looks bright. Studying the effectiveness of the Spring 1986 ad campaign, continued support for the SCORP Program, and monitoring the summer visitation rates across the state as the nation experiences its potentially greatest summer for the tourism industry in years are a few examples of planned studies. Expansion of the program is inevitable as new data sources become available and new applications are devised.

Initial reaction to ORIMS by staff, private attraction operators, and chambers of commerce across the State has

been very positive. Requests for data from the Research Staff and ORIMS come in almost weekly as the word is spreading of the capabilities of the system. Most processing at present is done for in-house projects, but recently requests have come in from private attraction operators and chambers of commerce to provide them with trend information and demographic profiles of visitors.

GIS technology has made the recreation researcher a more valuable asset to the managers and administrators who must make decisions on where to spend the limited dollars within their budgets. It allows the analysis of enormous quantities of data that have been collected in different areal units and at different times, and allows the researcher to identify trends and relationships between variables in a much more useful and faster format than ever before. Decision makers are benefiting by being able to base their decisions on relatively hard data instead of speculation. This benefits the general public in two ways: their tax dollars are better spent, and they are provided better recreational services. GIS applications have found a place in recreational planning as evidenced by the numerous systems around the country and abroad being used, and Oklahoma is now able to take advantage of GIS technology and applications with its own system.

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