**ECONOMIC ASPECTS OF RECREATION
IN THE
LAKE OF THE OZARKS AREA**

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CHAPTER I

THE GEOGRAPHY OF RECREATION IN THE LAKE OF THE OZARKS AREA

Recreation has been defined as the creative use of
leisure time.¹ Although there are many forms of recreation, this study is primarily concerned with the form of recreation that takes place in the natural environment. The natural environment consists of the physical features of the landscape, the flora and fauna associated with the landscape, and the climate of the region--in essence, the natural environment is basic and apart from man-made improvements. Recreational geography is concerned with an analysis of the natural environment as to its suitability for recreational utilization. Important recreational areas are dependent upon a suitable natural environment for their acceptance by the public.

To determine just what constitutes a suitable natural environment for recreational purposes is somewhat difficult. However, the following quotation taken from the National Park Service's report to the National Resources Board does outline factors basic to the recreational utilization of a region.

-
1. National Park Service. The Recreational Use of Land in the United States, Part XI of the Report on Land Planning, p.2.

Variety of elevation is an important factor in the recreational value of lands--the mountains are always eagerly sought. Water resources--lakes, streams, waterfalls, bays, and oceans--are a factor of the utmost significance in the recreation scheme, both because they constitute such a great part of the beauty of the outdoor scene, and are highly valuable for active recreation. On almost every recreation area the greatest concentration of use occurs in the immediate vicinity of the water....

It is axiomatic that pleasurable outdoor recreational experiences require favorable climatic conditions. Rainfall, sunshine, humidity, and temperature all have their effect upon the pattern of recreational geography.

Flora and fauna provide the living interest, without which no recreational area is complete. Forested areas, of course, rank high in the order of preference, and natural abundance of plant life of many kinds is always an asset. In the geography of recreation, the variety, abundance, and the distribution of fauna are important factors. The smaller forms of wildlife, particularly the birds, add materially to the value of the smallest recreational areas, such as downtown parks and residence gardens. Hunting and fishing are among the leading, if not the greatest, of American outdoor recreational activities. They are factors which exert a great "pull" on population.²

Location and Description. Missouri's Lake of the Ozarks is located somewhat south and west of the geographical center of the State in the rugged hill country of the northern Ozark Highlands. The Lake was formed in 1931 after the completion of Bagnell Dam across the Osage River. The impounded waters of this river and its tributaries now extend some 122 miles above the dam into several counties.

The Osage River valley meanders through some of the most rugged hill country of the Ozark Highlands of Missouri.

2. National Park Service, Op. Cit., p. 7-9.

Much of this deeply incised river valley has been filled with the lake water forming an extremely irregular shoreline. The shoreline is often marked with irregular coves extending back into wooded hills on the one side, and a precipitous limestone bluff on the opposite shore. Many of the tributary stream valleys have been inundated and closely resemble the main stream valley. As one goes farther above the dam, the lake takes on the appearance of a large river but finally dwindles into an ordinary river some 120 miles by water above the dam.

Change of Environment as a Factor in the Use of a Recreational Area. One of the most important factors in making the Lake of the Ozarks a suitable recreational area is the environment, which here is in decided contrast to the environment of the nearby agricultural regions. Change of environment is in itself one of the greatest ³ pulls a recreational area may exert on a population. People from the level agricultural regions of the Midwest and the nearby cities find real enjoyment in spending a few days or longer in the rugged environment of the Ozark Highlands. The location of a beautiful lake in this rugged setting is indeed an anomaly, for few lakes are found in the non-glaciated regions of the United States. It was the formation of the lake and its use by fishermen that really started the recreational industry in

this part of the Ozarks and introduced outsiders to the charms of this region.

Although the lake shore is the center of recreational development, the surrounding hill country offers the recreationist an abundance of scenic beauty. Until the National Park Service acquired some 16,500 acres of rugged hill country, surrounding the Grand Glaize Arm of the Lake, and constructed roads and scenic trails throughout the tract, the back country was largely inaccessible to the nature lover. These improvements give the vacationist an opportunity to observe the interesting flora and its associated fauna. The rapidly increasing use of the National Park Service's Recreational Area is a certain indication that the vacationist appreciates this opportunity to enjoy the amenities of the natural environment.

Climate as a Determinant in the Use of a Recreational Area

The climate of a recreational area has much to do with the public's acceptance and use of that area for pleasurable outdoor recreational activities. Climatic elements such as: temperature, precipitation, sunshine, relative humidity, and wind movement are important factors in determining the vacation season of any resort area and the volume of use of that area during the vacation season. "Climates have still a more positive place in
the

recreational picture for the reason that the principal motive of many recreational outings is the search for a pleasurable climate."

The Humid Continental Climate of the Lake Area. The climate of this region is of the humid continental type of intermediate latitudes. This climatic type is characterized by large ranges of temperatures and variations in the amount of precipitation from season to season and year to year. In essence, this is a climatic type of many changes--a climate that cannot be understood by studying average conditions. About all that one may reasonably expect is that the four seasons will differ from one another chiefly in temperature. One realizes that as spring approaches the days get warm gradually and that summer will bring two or three months of warm weather and as autumn approaches the days get cooler and that winter will bring some snow and colder weather. But other than temperature differences there is no certainty about the type of weather any one season will bring.

Some winters in Missouri begin early in December, continue until late in March and bring much cold, disagreeable weather; some winters begin late in December, are dry and mild, with only a few days of cold weather; some of the longer winters are dry and mild, and some of the shorter ones are cold and disagreeable. Some springs are cold and wet, others are warm and dry; some summers are rainy, others approach

4. National Park Service, Op. Cit., p. 44.

drouth conditions with several days above one hundred degrees, and with occasional hot winds. Some autumns are rainy and disagreeable, others bring fine bright days for several weeks.⁵

Temperature. Temperature is an important climatic element in determining the rate of utilization of a recreational area. High temperatures in summer and low temperatures in winter curtail the use of certain regions for recreational purposes during those seasons. People living in regions that are subject to disagreeable summer or winter temperatures travel thousands of miles every year to spend their vacations in regions of more pleasurable climates.⁶

In the winter the average temperatures experienced in the Ozarks are unfavorable for pleasurable outdoor activity, and there is little use of the Ozarks for recreational purposes during this season. Although severe cold waves are the exception rather than the rule, there are few periods of any duration when the average temperatures are high enough or their occurrence dependable enough to permit recreational activities such as those enjoyed in the southern states in the winter months. On the other hand, ice and snow are too undependable to permit winter sports like those enjoyed in the northern states.

5. Bratton, E. T. Humid Continental Climate. (Details versus General notions).

6. National Park Service, Op. Cit., p. 44.

Spring usually brings pleasant temperature conditions for outdoor activity in the Ozarks. There is a general rise in temperature late in March and the resulting warmth and plant growth makes outdoor activity particularly appealing after the cold and bleakness of the winter months. Although the general public is not as free to vacation and travel in the spring months--children are in school and the yearly vacations usually come in summer--it is possible for a number of people living nearby to get away for weekend trips at this season. The Ozarks with its early spring and interesting spring flora, however, offers the people residing in northern states an excellent early season vacation area.

In recent years, 1940 and 1941, the Conservation Commission has adopted a new fish management policy for the Lake of the Ozarks and Lake Taneycomo which permits fishing several months earlier than in the past. Under this management policy these lakes are open to all fishing on March 15, in 1941, outside of the areas marked as spawning territory. Since fishing is a major attraction in this area, the early opening of the fishing season under a management policy designed to protect the fish population and yet allow the sportsman more fishing, should do much to encourage the use of this area during the spring season.

An average Missouri summer is characterized by rather high average temperatures; however, this does not necessarily mean that the majority of the summer days are going to be hot and unpleasant. The real limiting factor as far as temperatures are concerned is the fact that this region does experience periods of hot, unpleasant weather during which the daily maximum temperatures may rise above 100° for several consecutive days. Perhaps the high temperatures experienced in the lake area are not as great a handicap in the recreational utilization of this area as might be supposed when it is considered that most of the people visiting the lake come from regions having similar temperature conditions. The presence of the water and its use for swimming and boating provide an excellent means of combating the unfavorable effects of high temperatures.

The maximum temperatures recorded in the lake area during heat waves are often much like the maximums recorded in Kansas City, but they are often higher than those recorded in St. Louis. The minimum temperatures recorded in the lake area are frequently five to ten degrees below those recorded in either city. (Figure 1) The rugged topography of this area permits air drainage, resulting in cooling nocturnal breezes which are practically unknown in the cities and bordering prairie country.

Yet there are a number of people living in Missouri and other states who feel that the average temperatures

Figure 1a. Daily Range of Temperatures, Bagnell Dam and St. Louis, June 15 Through August 15, 1939.

Figure 1b. Daily Range of Temperatures, Bagnell Dam and Kansas City, June 15 Through August 15, 1939.

recorded in Missouri are too high for pleasurable outdoor activity. These people travel to regions of cooler climates and cannot be considered as prospective vacationists in Missouri. Those interested in increasing recreational travel in Missouri must realize that one of the most important factors limiting the use of the State's recreational areas is the comparatively high average temperatures of the summer months when vacation travel is at its peak.

Temperature conditions are usually most favorable for the recreational utilization of this area in autumn. The minimum temperatures at night gradually drop lower and lower until the coolness of the night is felt throughout the following day. Weather conditions are normally most settled during autumn, and crisp, clear weather often prevails for several weeks at a time--this is Indian Summer. The coolness of autumn suspends plant growth and brings radiant colors to autumn foliage. In many ways the autumn season is the most favorable for outdoor activity in the Ozarks: fishing improves after the passing of the summer heat; hunting is added to the outdoor activities; and the whole of the natural environment invites outdoor recreation.

Figure 2 shows the daily ranges of temperature at Bagnell Dam during an five year period. These data indicate how temperatures vary from year to year and how one vacation season may be longer than another as determined

Figure 2.

BAGNELL DAM
DAILY MAXIMUM & MINIMUM TEMPERATURES
1935-1940

by the daily range of temperatures. In general, temperature conditions are favorable for outdoor recreation in the Ozarks from early April until late in November.

Precipitation. Normally the amount and seasonal distribution of precipitation is not a limiting factor in the utilization of this area for recreational purposes during the vacation season. However, abnormalities in the amounts and seasonal distribution of precipitation may affect the use of this area for outdoor recreational activity. Since the Ozark region lies somewhat south of the main continental storm paths, long periods of stormy, cloudy, weather are infrequent especially during the vacation season. Precipitation is mainly derived from local thunderstorms in the summer which normally provide adequate rainfall with a minimum of cloudiness. (See Figure 3.) "Precipitation is most frequent in the period centering around May, which averages 12 days, and least frequent in autumn, with November averaging 7 days."⁷ The percentages of the total possible sunshine for the months from April through November averages well above 60 per cent and are highest in the summer when the average percentage of the possible sunshine is about 70 per cent. These percentages are, of course, subject to wide variations during any particular season, but fair weather predominates over stormy weather

7. U. S. Weather Bureau. Climatic Summary of the United States, Section 54, Southwest Missouri, p. 3.

Figure 3. Total Precipitation and Days With .01 Inch or More of Precipitation, Bagnell Dam 1932-1940.

in this area during the vacation season.

An excess or deficiency in the amounts of seasonal precipitation will have unfavorable effects on the suitability of the natural environment for recreational use. An excess of precipitation most probably means an increase in the number of cloudy, rainy days that are unfavorable for outdoor activity. Such weather is especially inimical to the resort business if it occurs during successive weekends. Furthermore, heavy precipitation means an increased run-off from the watershed which fills the lake with silt-laden waters. Months may be required for the lake to clear up after such periods and, needless to say, muddy water does not have the same recreational appeal as clear water. Fishing also is adversely affected, swimming is less desirable, and even boating is less enjoyable when the lake is muddy.

Deficiencies in the amounts of seasonal precipitation are about as harmful to the recreational interest as excesses. Extended periods of dry weather are usually accompanied by hot, drying winds and high temperatures. A parched landscape loses much of its beauty and the dried summer foliage means a less colorful autumn landscape.

Deficiencies in precipitation also have an adverse effect on the lake levels. If the water drops too low, many acres of unsightly shore line are left above the water line especially toward the upper end of the lake.

Low water levels also make it more difficult for aquatic organisms to survive. Long period droughts, as in the summers of 1934 and 1936, are particularly unfavorable from the recreational viewpoint.

The Importance of Flora and Fauna in the Lake Area

"Flora and fauna provide the living interest without which no area is recreationally complete. Assume an area--if such a thing were possible--which is recreationally complete as to topography, water resources, and climatic factors, but which is without plant and animal life, and then judge the value of this area as a recreation ground. The mental picture created gives the plain answer to the question implied."

Forest. The forest is the most conspicuous form of plant life in the lake area. This area is one of poor soils and rugged topography and almost all the land is covered with some kind of forest growth. Although there are a few red cedars along the bluffs and ridges, the predominant forest type is that of the upland hardwood. This forest type is composed almost exclusively of oaks--white oak, post oak, black oak, and black jack are the main varieties. The rate of growth of the upland forest is slow and most of the trees are comparatively small even where

cutting hasn't taken place.

Although the forest is one of the most valuable assets of this area, it has been allowed to deteriorate to a point that has endangered its esthetic value. Annual fires that run through these wooded hills have left the forest filled with inferior trees--ghost trees--and in many places a dense entanglement of inferior undergrowth is all that remains where fine open stands of hardwoods once prevailed. Much, if not most, of the abused forest lands are held by non-resident owners who quite apparently have little interest in good forestry practices. Some of this land is chronically tax delinquent and would certainly revert to the state if a tax reversion law were in existence. Perhaps public ownership will be needed to abate the destructive forces that are at present ruining the forests.

In any event, an adequate fire protection plan is urgently needed for the lake area. Such a plan would protect and encourage improvement of the existing forest and mitigate pollution of the lake waters during heavy rains. Some observers believe that potash and charcoal washed into the lake after fires is harmful to aquatic organisms. Fire protection is also urgently needed to protect the owners of summer homes and resorts in the more remote wooded sections of the lake area. Every year thousands of

9. Sauer, Carl O. The Geography of the Ozark Highland of Missouri. University of Chicago Press, 1920, p. 58.

dollars worth of recreational property is destroyed or endangered by fires.

Shrubs and Small Plants. The smaller shrubs and plant life of this region add materially to its charm and are entitled to the benefits that a forest conservation plan would certainly bring to them. The Redbud, Dogwood, Wild Crab, and other flowering trees are one of the early spring charms of the Ozark hills. Many visitors come into this region at this season to observe and appreciate these aspects of natural beauty. There is an abundance of flowering plants and other interesting plants hidden in the Ozark hills that invite the admiration of the nature lover from early spring until late fall.

Fauna. "In the geography of recreation, the variety,¹⁰ abundance, and distribution of fauna are important factors? Indeed, the continued use of the lake by the recreationist is largely dependent upon the restoration and conservation of the area's wildlife resources. There is little doubt that more people have been attracted to the lake because of good fishing than for any other reason. Others come to the lake and surrounding area to hunt quail, waterfowl, and other small game in season. Still others, especially organized groups, who visit the Regional Recreational Area, have taken advantage of the opportunity

10. National Park Service. Op. Cit., p. 47.

to study birds and other native fauna in their natural habitat.

The Importance of Fishing. Shortly after the formation of the Lake a number of sportsmen were attracted to it by the fishing which, was, at that time, universally considered very good. As fishing continued to draw large numbers of sportsmen into this area, a resort industry grew up around the demand for services by the fishermen. The resorts that were built around the lake depended almost entirely on the fisherman for their business and little effort was made by these resorts to cater to vacation groups other than fishermen. In 1940, approximately four out of every five resort businesses in the lake area¹¹ were dependent on the fishermen for the bulk of their business. Approximately 42 per cent of the resorts interviewed in 1940, reported a decline in trade since 1936, and all were in agreement that this decline was because of the poorer fishing of the more recent years. Resorts that have escaped the general decline in business reported the bulk of their guests as coming for vacation purposes and as not primarily interested in fishing.

Although it is difficult to measure fishing conditions with any degree of exactness, there is a general agreement that the average catch and the total number of fish caught has decreased since 1937. A number of reasons have been

11. See Table I.

offered to explain this decline, but there is no general agreement on this problem. It is believed that the better fishing prevailing in the lake before 1936 was largely due to the abundance of food available for fish immediately after the lake was first formed. Much organic matter was covered up by the high waters and this, it is said, was the basis for abundant fish food. Fish apparently grew rapidly and good catches were indeed common shortly after the lake formed.

The Lake of the Ozarks was created primarily as a power reservoir, and the fluctuations of the water levels are much greater here than in natural lakes due to the use of water for power production. These greater fluctuations in water levels have made the natural establishment of aquatic plants almost impossible. It is probably true that the lack of such plants needed for food and cover by fish is basic in explaining the decline in fishing of the more recent years.

The recreation interests would like to see the lake held at a fairly constant level which would permit the establishment of a permanent aquatic vegetation important to sustained fish production. But the power company, although an important vested interest in the recreation industry, continues to use the water in strict adherence to the demand curve for power.

The Osage Hydro-Electric Station (at Bagnell Dam) is one of the six major electric power sources operated by the Union Electric System; and the Osage Station is joined with the others by transmission lines to form a unified system of electric power serving some one and one half million people. The amount of water used at the Osage plant for the generation of power is controlled primarily by system power requirements. The power company has an investment in this hydro-electric plant of well over thirty million dollars and is definitely within its rights to consider the use of the water for the generation of electrical energy as a paramount consideration. However, recreation as a use of the water is now an important consideration and the power company should cooperate with the recreation interests when such cooperation is economically feasible.

Perhaps some agreement might be worked out that would make it possible to hold the lake at a fairly high and constant level during the spawning season and most of the growing season for aquatic plants. This would mean that during the season when the watershed normally supplies the greatest flow of water, the power company would have to adjust the power production at the Osage plant to the supply of water and not to the demand for power. In the late fall and winter when the demand for power is greatest the power company would use the water as system power

requirements demanded. This would necessarily mean that the lake would drop considerably in the late fall and winter when the supply of water is less. Research would be needed to determine how the lower water levels in winter would affect aquatic organisms, the kind of plants that could survive low water levels, and what plants should be planted annually to assure plentiful vegetation. It should be remembered, however, that such a plan would be largely dependent on normal run-off as the watershed would have to refill the lake in spring in order to assure a constant high water level for summer. Although such a plan is subject to limitations that might sometimes result in lesser benefits than anticipated, it certainly would be of benefit to those concerned if fishing conditions could be improved and maintained at a higher level than of recent years.

In light of the data collected in this study it is entirely probable that the Lake of the Ozarks would become a recreational area of far greater importance if an increased supply of fish were available to the fishermen of Missouri and surrounding states. Good fishing alone would insure a continued investment in recreational lands and improvements which would result in benefits of importance to the power company as well as the recreation industry.

Hunting. Although the fishermen greatly outnumber the hunters using this area, this country does offer some

very good shooting for birds, waterfowl, and small game in season. Since the area is practically all in forest and rather sparsely populated, hunting might well become a more important recreational activity if the wildlife population could be restored and conserved. A number of resorts remain open through the hunting season to accommodate hunters. Quail hunting is quite good in the fall and a number of city people as well as local residents have reported good shooting in recent years.

The lake has never been a popular waterfowl refuge as might be expected. Although a number of migratory waterfowl visit this area during the fall, their stay here is comparatively short and largely confined to the upper reaches of the lake where food and cover are more plentiful. Undoubtedly the lack of aquatic vegetation in much of the lake prevents the waterfowl from using it for longer periods of time. At any rate the waterfowl shooting is largely considered limited to periods of migration when the birds drop in on the lake for a brief rest on their way southward.

CHAPTER II

CLASSIFICATION OF RECREATIONAL FACILITIES

The foregoing section of this discussion has described the natural environment of the lake area and commented on the suitability of that environment for recreational utilization. We turn now to a consideration of the developments that man has constructed here to further the recreational utilization of this area. The classification of recreational facilities is necessary so that we may know quantitatively what facilities we now have, the type and quality of these facilities, and the problems arising from their existence. These data are pertinent as a basis for further planning for the recreational utilization of the area.

Overall Aspects of Classification

The formation of the Lake of the Ozarks in 1931 with its 65,000 acres of lake surface and 1,378 miles of shoreline opened up a new area for recreational development in parts of Miller, Camden, Morgan, and Benton counties. Bagnell Dam which impounds the lake is located 167 miles from St. Louis and 151 miles from Kansas City. Camden County is the principal center of resort development. In 1939, approximately 4,600 acres of the 9,000 acres of land in private recreational ownership in the four lake counties

were assessed in Camden County.

The area selected for study (Figure 4) includes some 237,000 acres of predominantly rough Ozark Highland in which the lake and its recreational lands lie.¹² In order to obtain a complete inventory of all recreational facilities in this area, all real estate entries for the lands inside the boundary shown on the map were copied from the 1939 tax books of the various counties and classified into three broad classes: (1) recreational lands now in use, (2) undeveloped recreational lands, and (3) non-recreational lands.¹³ County officials and local residents aided in making the initial classification, but intensive field work was undertaken before the survey was refined and completed.

Since this study was undertaken primarily to obtain data on the recreational developments, further study of the lands outside of the lake area boundary was necessary in order to make the inventory of all recreational properties in this vicinity complete. This phase of the study was particularly important in the economic benefit area

12. The area enclosed in these boundaries is termed the Lake Area throughout this study.

13. This classification scheme closely resembles the one used by Dr. George S. Wehrwein and Kenneth Parsons, Recreation as a Use of Land, Wisconsin Agricultural Experiment Station, Bulletin 422, April 1932.

LAKE OF THE OZARKS

Figure 4. Lake of the Ozarks and Vicinity Showing the Area Selected for Study.

along the main highways leading to the lake.¹⁴ A number of businesses primarily dependent on the tourist traffic to the lake area have been included in this inventory although they are located at some distance from the lake on the primary highways and in the principal resort towns of Camdenon, Linn Creek, Eldon, Gravois Mills, and Warsaw. Such a method of study has made possible a complete inventory of all recreational facilities.

Since the recreational lands are largely confined to a discontinuous narrow fringe of lakeshore and highway frontage, over three-fourths of the land entries inside the lake boundary were classified as undeveloped recreational lands and non-recreational lands. The undeveloped recreational lands and much of the non-recreational lands form an area of approximately 111,000 acres of sparsely populated forest lands that encloses much of the lake in a virtual wilderness zone. Toward the upper reaches of the lake where the stream valley is less subject to inundation, much of the lakeshore is used for farming and the forest lands are confined to the rough lands surrounding the stream valleys.¹⁵

14. For a discussion of economic benefit areas see Robert M. Howes, Recreational Opportunities Arising from Reservoir Construction Economic Geography, Vol. 15, No. 3, July 1939.

15. An outline of the land classification system used in this study is presented on page 27.

**Systematic Classification of Recreational
Real Estate and Other Lands Studied in the Lake
of the Ozarks Area**

**I. Real Estate Actually Developed or Used for Recreational
Purposes.**

1. Commercial recreational real estate

- a. Summer resorts
- b. Fishing resorts
- c. Cabin camps
- d. Hotels
- e. Recreational businesses
 - 1. restaurants
 - 2. groceries
 - 3. gas stations
 - 4. souvenir stands
 - 5. taverns
 - 6. miscellaneous

2. Non-commercial recreational real estate

- a. Summer residences
- b. Recreational clubs
- c. Public recreational areas

II. Undeveloped Recreational Land

Land with recreational possibilities now being
held or assessed for future recreational use.

III. Non-recreational Real Estate in this Area

- 1. Farm real estate
- 2. Rough forest land or wild land absentee
owned.
- 3. Miscellaneous non-recreational real estate

**IV. Submerged lands of the Power Reservoir (The Lake of
the Ozarks) and Bagnell Dam.**

Commercial Recreational Real Estate

There are some 297 business enterprises in the lake area that are primarily dependent upon the expenditures of visiting recreationists. . (Table I) These business establishments are the recreational industry of this region; and the tourist expenditures made with this industry have become the important source of income for an area which was predominantly rural before the formation of the lake. An analysis of these expenditures will be attempted in a subsequent chapter of this study (Chapter IV)

Most of these business establishments have been classified as fishing or summer resorts and are located in the immediate vicinity of the lake. In general, the other business establishments are located along the main travel arteries leading to the lake and in the small resort towns in the vicinity of the lake. Much of the discussion presented below under the various classifications of business types is descriptive; however, some of the more important problems confronting certain types of business are also discussed.

Summer Resort. A summer resort, of which there are 27 in the lake area, is a recreational development of a high type. In general, the better resort developments around the lake are classified as summer resorts. The usual summer resort consists of several acres of lake shore

✓ SUMMER RESORTS ✓

Table I
Commercial Recreational Facilities
in the Lake Region, 1940

Classification	Camden	Morgan	Benton	Miller	Total For Lake Region
Summer Resorts	21	4	0	2	27
Fishing Resorts	62	27	18	6	113
Cabin Camps	28	3	1	11	43
Resort Hotels	11	2	1	2	16
Recreational Businesses	<u>64</u>	<u>7</u>	<u>8</u>	<u>29</u>	<u>98</u>
All Commercial Recreational Facilities	176	43	28	50	297

on which attractive housekeeping cottages have been constructed in harmony with the natural environment. The better private beaches are usually provided by the summer resorts.

Although a resort does not have to be modern to be classed as a summer resort, a majority of the summer resorts are well equipped with modern conveniences that include: electricity and electrical appliances, running water, modern plumbing, cooking gas, excellent beds, and complete kitchen utilities. Most of the summer resorts have a general store in connection with the resort and it is possible to buy groceries, meats, and miscellaneous supplies from the resort.

Summer resorts have a development plan that provides diversified recreational opportunities for the guest of the resort. Usually there are attractive surroundings which invite rest and relaxation for those who do not care to enter programs of active recreation. Since most of the summer resorts are located in the immediate vicinity of the lake, they are equipped to offer boats and other equipment needed for water sports. Equipment and facilities for bowling, tennis, horseshoes, badminton, table tennis, shuffle board, and archery may be had at a number of summer resorts.

The quality of the furnishings and the recreational opportunities available enables such resorts to cater to

the vacationist who usually remains at the resort for a week or longer. Some well established summer resorts in the lake area will not accept reservations for less than a week during the summer vacation season.

Fishing Resorts. Since most of the early recreational development around the lake was built to accommodate the fisherman, the fishing resort, of which there are now 113 in the lake area, is the predominant resort type found around the lake. Many sportsmen were attracted to the shores of the lake by the excellent fishing conditions that prevailed here shortly after the lake formed. These sportsmen created a demand for services that was met by a number of investors who built small resorts along the shores of the lake. Since the majority of the people using these accommodations were fishermen, such resorts specialized in serving the fisherman, and it is in recognition of this fact that these resorts are so classified in this inventory.

The typical fishing resort consists of several acres of lake frontage on which a small group of housekeeping cottages have been constructed. In addition to the cottages one usually finds a general store and a gas pump in connection with the manager's office and living quarters. The activity of the resort centers around the boat dock and fishing. Few good beaches or swimming docks are found at the fishing resorts. Even the surrounding countryside is

FISHING RESORTS

too rough or impenetrable in many places to permit the guests to explore the environs of the resort. In general, the fishing resort does not have the comfortable accommodations of the summer resort, the attractive surroundings, or the diversified recreational opportunities. However, the lack of these will not be a handicap to a resort owner if his accommodations are neat and clean and his guests can enjoy reasonable fishing luck during their stay at the lake.

During recent years there has been a decline in fishing conditions in the lake as compared with the fishing conditions enjoyed here during the first five or six years after the formation of the lake. The better fishing during the early years of the lake is not uncommon in artificial lakes, and in the case of the Lake of the Ozarks Area represented a boom period for fishing resorts. The numbers of fishing resorts multiplied to satisfy a demand based upon a much larger fish supply than the lake is apparently now able to supply. The surplus of fishing resorts can be remedied in two ways. First, a great improvement in fishing, or second, the adaptation of these resorts for use as summer resorts or vacation camps and the like with far lesser emphasis on fishing. Perhaps something will be accomplished in both directions; though, since forthright plans to rejuvenate fishing are hardly yet in a preliminary stage, the chief direction of adjustment must be of the

second variety.

Cabin Camps. Unlike the summer resorts or the fishing resorts, most of the 43 cabin camps found in the lake vicinity are located on the main highways at varying distances from the lake. The cabin camp caters to all travelers of the highway and competes with both the summer resort and the fishing resort for the tourist trade. Some of the better cabin camps with pleasant surroundings are able to hold their guest for a week or longer and effectively compete with the summer resorts. Often the fisherman prefers the accommodations offered by the cabin camp and makes his headquarters at such camps and commutes back and forth to his favorite fishing spots on the lake. However, on the whole, the cabin camp usually serves the transient tourist or the week-ender, and the average stay of all guests at cabin camps is somewhat below the average stay at the fishing resort and definitely lower than the average stay at the summer resort.

Some of the best developments in the lake area have been classed as cabin camps in this inventory. On the other hand, some of the least attractive developments have also been classed as cabin camps and these, unfortunately, are grouped along the highways where they are most conspicuous to the visiting public. Usually the cabin camp is found in one of the small resort towns. Too often these camps consist of groups of small cottages closely crowded

CABIN CAMPS

together without any development plan or outward evidence of beauty or harmony with the environment. In the main, the cabin camps offer modern accommodations, for lodging and meals but seldom are they equipped to cater seriously to the recreational interests of their guests.

Resort Hotels. The 16 small hotels in the lake area that were built after the formation of the lake have been classified in this inventory as resort hotels. Such a classification assumes that these hotels were built primarily to accommodate tourists visiting the lake area. However, some of these hotels have been forced to make strenuous bids for other types of business since the tourist trade has not provided a full demand for the available accommodations except during holidays and busy summer week ends. The majority of the resort hotels are located in the small resort towns. However, others are found along the highways or on the lake shore. With the exception of the few hotels located on the lake shore, the resort hotels do not cater especially to recreational travel. Rather they appear to be dependent on the resort area as a whole to provide recreational facilities for their guests.

The accommodations available at the resort hotels are good, but, perhaps because they do not make a direct bid for the recreational trade, the average length of stay of guests at these hotels is short. It is indeed a type of business more dependent on the transient tourist than the

RESORT HOTELS

vacationist trade.

Recreational Businesses. There are some 98 small businesses in the lake area that are primarily dependent on the tourist trade. In general, these businesses are found along the main arteries of tourist travel and in the nearby towns. The main business types represented in this classification are: restaurants, groceries, filling stations, souvenir stands, taverns, and miscellaneous businesses which include such unrelated establishments as beauty parlors and lumber yards. In making this classification, it was rather difficult to determine just what businesses in the area were to be counted as dependent on the tourist trade. In general, only those businesses were included that appeared to derive the bulk of their income from the recreational traffic. Many resorts have small stores and service stations in connection with the resort itself and these have been included as a part of that particular resort and not as independent business types as recognized by this classification.

Recreational businesses are dependent on the flow of tourist traffic into the lake area, and are subject to fluctuations in business that are largely controlled by the volumes of tourist travel. These enterprises must do a good volume of business during the vacation season if they are to be at all successful. Some of these are, indeed, seasonal businesses operated only during spring, summer,

RECREATIONAL BUSINESSES

and fall. Many of their owners have other sources of income, and interviews with their owners disclosed the fact that a majority of them have experienced difficult times in recent years.

Non-Commercial Recreational Real Estate

There are some 579 separate non-commercial recreational developments in the lake area. (Table II) Approximately 7,200 acres of land are assessed to the owners of the 557 summer homes and 18 recreational clubs included in this category. These facilities have been planned and constructed by individuals and groups primarily interested in providing recreational facilities for themselves and not for commercialization.

Also included in this category are some 17,000 acres of publicly owned and developed recreational lands. By far the most important in this category is the Lake of the Ozarks Recreational Area which was acquired, planned, and developed by the National Park Service. The State Highway Commission has also provided three waysides, or small roadside park areas, designed primarily for the use of the highway travelers.

Summer Residences. Approximately 4,000 acres of recreational lands are held by the owners of summer residences. The majority of the summer residences have been constructed in platted subdivisions, but the greatest

Table II

Non-Commercial Recreational Facilities
in the Lake Region, 1940

Classification	Candlen	Morgan	Benton	Miller	Total For Lake Region
Summer Homes	244	117	164	32	557
Recreational Clubs	9	4	4	1	18
Waysides	1	0	0	2	3
Public Recreational Areas*	<u>1</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>1</u>
Total Non-Commercial Real Estate	255	121	168	36	579

* Lake of the Ozarks Recreational Area is located in Candlen and Miller Counties.

number of acres of land is held by those who have constructed developments outside of plats. The term summer residence necessarily includes a number of developments of varying types and values. Small lake shore cottages valued at approximately a hundred dollars and lakeside estates valued in the thousands of dollars are all included as summer residence types.

The classification of summer residence is based mainly on the way the development is used. All developments included in this classification are used almost entirely as seasonal residences by their owners. However, there are several cases where the owners of lakeshore homes have retired from active life and have chosen such sites for their permanent homes--such developments are included in the summer residence type in spite of the fact that this may be a more or less permanent home for the owner. If a residence site is not in the immediate environs of the lake, or is not used for recreational purposes, it has been classified as a non-recreational land use in this inventory.

Summer Residences on Platted Subdivisions. Shortly after the formation of the lake a number of acres of lakeshore lands were surveyed and platted into lots for future recreational development. Most of the platted subdivisions were given attractive names and their promoters made vigorous campaigns to sell lots in these subdivisions to

SUMMER RESIDENCES

prospective builders of summer residences. (Table XIII App.)

The investment in summer residence real estate is considerable and varies greatly from subdivision to subdivision. In general, the largest investments have been made in subdivisions that offered the best development plans on desirable sites. The well-planned subdivision provides good roads of access, running water piped to the lots, electric connections on the lot, and deed restrictions regulating and protecting the type of developments constructed.

Other subdivisions were laid out on less desirable sites. Some were laid out on high bluffs overlooking the lake where most of the lots are without water frontage or

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16. The following 14 items of restriction represent those more commonly encountered in the recorded subdivision plats.
1. Improvements constructed on the Plat must be used for residential purposes unless approved for commercial uses.
 2. All building plans must be approved by owners of Plat.
 3. No further subdivisions of the plat.
 4. Set back lines must be observed.
 5. Improvements must be in harmony with the environment.
 6. No billboards or advertising.
 7. No sale of liquors.
 8. No cabins under \$300.
 9. No livestock.
 10. That all sewage be disposed of through septic tanks as prescribed by the State Sanitation Department.
 11. Restrictions are binding 25 years.
 12. Property owners may sue violators for damages.
 13. Agreement necessary to continue deed restrictions.
 14. That all buildings must be faced with not less than 30 per cent of the exterior elevation with stone.

an easy access to the lake. Others are located some distance from good all weather roads. In some cases lots sold well when the lake was first formed, and the general development of recreational lands was in progress. But in recent years there has been little further development on the less well located and planned subdivisions. In fact, it is not uncommon for the promoter of poorer subdivisions to have gone broke or to have lost interest in his development. In such cases, any deed restrictions put on the lots at the time of the sale are seldom enforced and the entire subdivisions deteriorates with unsightly developments outnumbering the better developments. Further development is unlikely on such subdivisions, and the lack of interest in them is reflected by the number of lots in such subdivisions that appear on the county collector's tax delinquency lists.

Summer Residences in Acreage. Approximately one-fourth of the summer residences in the lake area are found outside of subdivisions. These developments are found on acreage tracts that range in size from one acre to several hundred acres. In general, most of these developments are more costly than those found on plats because the cost of land, the building of roads, and the provision of utilities runs the investment cost up.

In choosing a site for development, the prospective builder has almost an unlimited choice of sites as there

are thousands of acres of desirable undeveloped recreational lands to choose from. However, some desirable sites are so far away from roads of access that the cost of building roads is almost prohibitive. It is often possible to buy a large tract of land in a more remote location for practically the same cost as a small tract of riparian land in a desirable location.

The more valuable summer residences in the lake area are located on sizeable tracts of land that include considerable lake frontage and large holdings of rough lands running back from the lake. Such land holdings insure privacy for the owner and protect him from infringement by inferior development types. The land holdings of such summer residences, account for the large number of acres of lands assessed to the summer residence types outside of subdivisions. These lands are mostly held by owners who can well afford the modest taxes assessed to them and consequently tax delinquency is rare on such lands. Furthermore, this type of ownership encourages fire protection and conservation on these lands as the land owner is desirous of protecting his investment and preserving the natural beauty of the environment.

Recreational Clubs. There are some 18 private recreational clubs scattered along the shores of the Lake of the Ozarks. Although most of these clubs differ as to organization, they were formed as a method of providing recrea-

tional opportunity for groups with common interests in the recreational utilization of the natural environment. In some cases the developments of such clubs are owned by individuals, or the developments may be owned collectively by the club members. However, there is always some form of organization and the club has a common name and membership is restricted to approved members.

While the recreational clubs have been formed by groups interested primarily in hunting and fishing, several of the larger clubs were evolved primarily as vacation centers for club members. Ordinarily the recreational club consists of several buildings used for housing and a club house used as a dining hall and a social center. The land holdings of such clubs range from a lot or two in a subdivision to large acreage tracts with approximately a section of land.

Windemere Club on the Waugus Arm of the Lake, is an instance of this class of developments. This club was planned by a large mid-western company as a vacation center for its employees and their families. Since this company has branches in some 20 mid-western states, the Lake of the Ozarks is a centrally located vacation center for the majority of those connected with this concern. The employees are encouraged to use the club for vacation purposes, and all the accommodations of the club are available without charge to them.

The land holdings of Windemere Club consist of some 617 acres of rough Ozark hill land running back from the Hiangua Arm of the Lake of the Ozarks. The improvements of the club are built around one of the coves of the lake and include some 42 modern buildings that are used for housing, social centers, and maintenance. The cabins are built of rustic materials and are modern throughout while the club house is a modern building designed for the social activities of the club's guests. The following recreational opportunities are provided at Windemere Club: trap shooting, horseshoes, horseback riding, archery, rifle shooting, soft ball, golf, tennis, swimming, nature trails for hiking, boating, and fishing.

Windemere Club is an outstanding example of how large tracts of land in the lake area can be used for recreational purposes. The resident manager carries out the policy of the club in conserving and using the natural environment as a background for creating wholesome recreational opportunities for the company's employees.

Public Recreational Areas

Lake of the Ozarks Recreational Area. The National Park Service has acquired some 16,500 acres of rugged forest land ¹⁷ adjacent to 4,000 acres of water surface on the Grand Glaize Arm of the Lake of the Ozarks. Nearly

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17. The acquisition and development of these lands were made possible from Emergency Relief Administration and Civilian Conservation Corps funds and workers.

all the lands acquired were not only unsuited to cultivation but had been subjected to serious deterioration of soil and forest cover. These lands are now being protected from fire and further exploitation and marked improvement has been made in restoring this area to conditions of natural beauty.

In many ways this area is one of the most scenic in the whole State. There are some eighty-nine miles of rugged shore line embodying all the scenic characteristics of the Lake of the Ozarks, yet there are frequent sites suitable for beaches and recreational development. The terrain lying back from the lake shore is particularly rugged and marked with bluffs, ravines, creeks, caves, and springs. Many species of native flora and fauna are found in this area and their protection is assured under Park Service policy.

This area has been developed according to the high standards prescribed by the National Park Service. Apart from the Park Administration Area there are two principal areas of development. These developments include: (1) General Use Area (2) Organized Group Area.

The General Use Area was planned for the use of the general public and includes facilities for picnicing, fishing, boating, hiking, and camping. These facilities are available to individuals and families who want to spend a day out-of-doors. Sites are also provided for those who

LAKE of the OZARKS RECREATIONAL AREA

wish to camp overnight or over a weekend, as well as other groups who wish to camp out for longer periods of time.

In the Organized Group Camp area several camps have been constructed for the use of groups unable to finance the purchase of land and construction of their own facilities. These camps are available for use by permit to public, semi-public, and non-profit organizations on a seasonal or short term basis. The fees charged for the use of these camps are based on the equipment used and the cost of maintenance--these camps are not run for profit.
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18. An outline of the General Development Plan of Lake of the Ozarks Recreational Area is given below.

1. Park Administration Area includes: Administration offices, contact station, warehouse, fire control headquarters, maintenance-machine shops, garages, superintendent-staff residences.
2. General Use Area--Picnic and Camping Area includes: Ten miles of scenic park road from entrance on State Route "D" and U. S. Highway 54, Picnic area with tables and ovens, parking areas, bathhouse, bathing beaches, boathouse, 20 miles hiking and nature trails, horse trails, stable, picnic shelters, trail shelters, drinking fountains, concession and comfort stations, tent camp and trailer camp grounds, typical farm group restoration and museum, located on Grand An Glaize basin with 4,000 acres of water surface for recreation.
3. Organized Group Camp Area includes: Six group camps, permanent structures incorporating basic facilities now provided in Camp Pin Oak, Hawthorn and G-C; trail lodges, pioneer camps, 20 miles nature trails, trail shelters, horse trails, and 20 miles truck trails.

National Park Service, Lake of the Ozarks Recreational Demonstration Area, Printed Leaflet, Kaiser, Missouri. 1940.

Waysides. The State Highway Commission has acquired lands for three small waysides in the lake area. Two of these waysides are located off U. S. Highway 34 near Bagnell Dam and the other is off Missouri Highway 5 eight miles north of Camdenton. "State waysides are small areas situated along or near highways and designed to provide highway travelers with places where they may stop to rest, picnic,...or enjoy a view...."¹⁹

Undeveloped Recreational Lands

Over four-fifths of the desirable recreational lands in the lake area are undeveloped after ten years of recreational development dating from the formation of the lake. Most of the recreational construction has taken place in discontinuous narrow fringes along the lake and near the main highways. Development on sites some distance from the main travel routes is sporadic and relatively unimportant.

Approximately 42,360 acres of land have been classed in this inventory as undeveloped recreational lands. Most of this land has some desirable water frontage and, while the suitability of this land for future recreational development is not necessarily implied, it is apparently being offered for sale as sites for future recreational development. Much of this land is practically inaccessible for

19. Missouri State Planning Board, A State Plan for Missouri, Summary Park Plan, 1939 p. 5.

recreational utilization at this time. Most of it probably never will be developed and utilized at all intensively for recreation. In fact, the 9,000 acres of land now classed as recreational is used so extensively in many places that much of the future recreational development will most probably be made on it rather than the lands classified under the heading undeveloped recreational lands.

The bulk of the land so classified is owned by the Union Electric Land and Development Company. It was acquired when the Union Electric Company purchased lands for the reservoir site. Most valley farms had holdings of rough forest lands in addition to the crop lands in the river valleys, and the power company usually bought the entire farm where the crop lands were to be inundated. In some cases, however, the owners of the farm retained the rough forest lands and went into the recreational business or retained such lands for speculative purposes.

Many acres of the undeveloped recreational lands have been divided up into tracts of land with some desirable water frontage and a large hinterland of rough lands. The policy carried out in disposing of these lands is one which encourages the ownership of larger land holdings. That is, in some, if not most, cases it is difficult to purchase a small tract of desirable riparian land without also taking a number of acres of adjoining rough lands.

Much of the undeveloped recreational land is of considerable importance to the recreational environment. This land includes many acres of wooded shoreline and precipitous bluffs overlooking the lake. The way this land is conserved now and developed when needed is of considerable importance to the recreational industry of this area. Exploitation or unregulated development of these lands would most certainly bring about a lesser interest in the lake as a recreational area.

Other undeveloped recreational lands are owned by a number of individuals, but their combined land holdings are relatively unimportant as compared with the holdings of the Union Electric Land and Development Company. These other land holdings include scattered tracts of riparian property, small tracts of highway frontage, and a considerable number of unsold lots in platted subdivisions.

Non-Recreational Lands

There are approximately 117,000 acres of non-recreational lands included in the boundaries of the lake area (Figure 4). These lands have necessarily been included in the boundaries of this study because they are parts of the sections of land in which the lake and recreational lands are found. All real estate entries in such sections were copied from the tax books and classified mostly in the field in an effort to locate all recreational real

estate in the vicinity of the lake. Some 68,614 acres of non-recreational lands have been classified as rough forest lands. Although most of the more valuable farm lands were inundated by the lake, there are still some 47,609 acres of land in farms in the boundaries of this study. Some 786 acres of land in various types of non-recreational land use have been grouped together in a miscellaneous classification.

Rough Forest Lands or Wild Lands in Absentee Ownership. Of the 181,471 acres surrounding the Lake of the Ozarks inside of the boundaries of this study (see Figure 4), more than 133,862 acres are predominantly forest lands. Over 50,000 acres of forest land lying near the lake have already been classified as recreational and undeveloped recreational lands. Some 68,615 additional acres of the more inaccessible and rougher lands lying back from the lake have been classified as rough forest lands or wild lands. Few owners of such lands reside near them. Most of this land has been cut over two or three times and many subsequent fires have brought about a marked deterioration in the quality of the present forest stands. Tax delinquency runs high on these lands and many acres would undoubtedly revert to the State if a tax reversion law were in existence.

Although most of these rough forest lands are of only modest value from a forest production standpoint, they

should be kept in forest under some type of ownership and management that would enhance rather than detract from the recreational desirability of the lake area as a whole. Outside of the boundaries of this study there are thousands of acres of this rough forest land that could be effectively combined with the forest lands of the lake area into a National Forest. (Figure 5) Proposals have already been made for the acquisition of much of this land for a National Forest to be known as the Lake of the Ozarks National Forest.

Once under proper protection from fire and exploitation, these forest lands could become more important from a recreational standpoint. Not only is the forest restored to conditions of natural beauty, but its productivity of multiple benefits is increased. One of the most important of these benefits is the restoration and conservation of wildlife resources. Once this region can be depended upon to produce a surplus of wildlife, public shooting areas could be established in these forest lands. As wildlife resources become exhausted on private lands, the need for well stocked public shooting grounds, such as those now in use in Pennsylvania, becomes more apparent. This region near the center of the State in a rugged country of sparse population is an excellent location for

LAKE OF THE OZARKS

Figure 5. Suggested Area of Public Ownership for Forest Lands in the Vicinity of the Lake of the Ozarks.

such public shooting grounds.

Farm Lands. Most of the better farms in the immediate vicinity of the Osage River in Camden and Morgan Counties, the western parts of Miller County, and the east and central part of Benton County were inundated by the formation of the Lake. However, this inventory showed that approximately 47,808 acres of land are still used for farming in the lake area.

Most of the better farms are found in the west central and western part of Benton County where the lake has not covered appreciable acreages of the valley crop lands. Other farms in the lake area are largely confined to tributary stream valleys of the main Osage River valley that have escaped inundation and to the higher terrace lands lying above water level in the main valley of the Osage River. There are a number of other farms in the hill country with limited crop lands that carry on an extensive type of farming that apparently provides little more than a mere subsistence. These farms could perhaps be purchased along with the rough forest lands for the formation of a public forest area.

Other Non-Recreational Land Uses. In order to make a classification for all taxable lands in the lake area, it was necessary to include a number of different non-recrea-

21. For a discussion on the desirability of purchasing such farms see J. Alfred Hall, Bright Young Men, Land Policy Review, November 1940, p. 17.

tional businesses, and other land uses that are apart from and independent of the recreational industry and its influences. These miscellaneous non-recreational land uses found inside the boundaries of the lake area include: saw mills, mines, residence sites, and nonrecreational businesses.

Submerged Lands of the Power Reservoir (The Lake of the Osarks) and Bagnell Dam. Approximately 30,000 acres of land owned by the Union Electric Company of Missouri are submerged by the waters of the Lake of the Osarks in Benton, Camden, Morgan, and Miller counties. These submerged lands are taxable and are assessed at approximately \$35 an acre by the counties in which they lie. Bagnell Dam and other more valuable improvements of the Union Electric Company in this area are assessed and taxed in Miller County. (See Chapter IV for the assessed valuations of this real estate.)

CHAPTER III

THE UTILIZATION OF THE LAKE AREA FOR RECREATIONAL PURPOSES

The discussion turns now from the description of the natural environment and the types of recreational facilities found in this area to the actual utilization of the natural environment and recreational facilities for recreational purposes. In studying the recreational utilization of this area, it is necessary to make a classification of the recreationists. The classification used here is based mainly on the recreational habits of the recreationists. Such a classification recognizes three recreational groups: vacationist, summer residents, and transient visitors.

Data are then presented to show where these visitors come from and the importance of such travel during the various seasons. The study of utilization is concluded with an examination of the trends in utilization of this area since the formation of the lake in 1931.

Classification of Recreationists

The Vacationist. The vacationist group is the most desirable type of recreationist visiting the lake area from the resort owners standpoint. It is the vacationist

that patronizes the better resorts and spends more for accommodations and services. Such groups remain in the area for a week or more as compared to the average stay of three days for all groups visiting the lake area. Resort owners also find that this group may be expected to return year after year if the accommodations and services offered are satisfactory. Furthermore, a satisfied vacationist often goes back home and sends his friends to the resort that made his vacation an enjoyable one.

Although the vacationist group is apparently a better spender and remains in the area for longer periods of time; the importance of this group is somewhat minimized by the comparatively small number of vacationists coming into this area. Less than 10 per cent of the resort owners interviewed reported any significant volumes of vacation business. Usually the vacation business runs about 50 to 60 per cent of the gross business of the summer resorts and considerably less among the other types of resorts. In the resort area as a whole probably less than 20 per cent of all business could be considered as vacation trade, i. e. groups spending a week or more in the lake area for vacation purposes.

The vacationist is a discriminating consumer of recreational services, and the resort and resort areas that cater to this type of recreationists, must be able to give such groups the kind of accommodations and

services they demand. Accommodations and services demanded by the vacationist group will vary widely, but the prosperous resort area is able to meet these varied demands. One vacation group comes to the lake primarily to fish. This group places much emphasis on fishing and the length of its stay and probability of its return is largely dependent on fishing conditions. Others come here to vacation in quiet restful surroundings and demand few recreational diversions. Still other vacationist groups, which consist of younger people, prefer a program of active recreational and social activities. Although one resort may successfully serve all these types of vacationists, such a task is one that requires a well-planned resort under a skillful management policy.

The summer resorts in the lake area are well-equipped to accommodate the family type of vacationist. The accommodations offered at these resorts are very good and the scenery inherent in the wooded hills and the lake can, apparently, be counted on to provide a delightful change of environment. The recreational opportunity offered at most resorts centers around fishing, but ample recreational opportunities are provided for others as well.

However, resorts in the lake area cannot successfully compete with the resorts in the Rocky Mountains, the Lake States, and New England if the vacationist is seeking a cool summer climate, pretentious resort hotels, excellent

golf courses, and prominent social and sporting events. Many Missourians go to other states to enjoy vacation opportunities and accommodations that are not available in their own state. Although it is impossible for the lake area to compete with the resorts of other states on some of the points mentioned above, it is possible for the area to make improvements that would undoubtedly improve its ability to serve certain vacation groups. Public golf courses, tennis courts, riding trails, beaches, and community centers are perhaps the most urgently needed additions to improve the recreational and social life of this resort area. The sponsoring of sporting events of state-wide interest would be an excellent means of advertising the recreational opportunities available in the lake area.

Summer Residents. This class of recreationists includes the owners and renters of lakeshore property who spend the greater part of the vacation season in the lake area. The majority of the summer residents are family groups who are desirous of getting away from the cities during the summer months. In some cases, the head of the family works in the city and joins his family at the lake over the week-end. Other summer residents who have retired from active business have built comfortable summer residences on the lake shore where they spend the greater share of the warm season. A number of summer residents come here to operate recreational businesses during the

tourist season.

During much of the vacation season the average resident population of the resort area is about double due to the influx of the summer residences. This increased population is an important customer of the small recreational businesses in the lake area. In a number of cases the owners of summer residents entertain frequently and their orders for food and other household supplies are considerable. The summer resident also spends considerable on maintenance and the operation of his boats and summer residence. In addition to the usual expenditures of summer visitors, this group also pays taxes on its property and thereby contributes to the schools and local governments of the resort community.

The Transient Visitor. Since the Lake of the Ozarks is within easy driving distance of several million people, this area is visited frequently by a number of people for short periods of time--especially week-ends. This group seldom spends over two days in the resort area and a stay of only one day or less is common. Although the majority of the transient visitors come here to fish, there are others who are interested in picnicing, hiking, boating, and swimming. Some just drive through the area on Sunday and may stop for several hours or a meal before returning to their homes.

The majority of the resorts in the lake area are

seldom filled during the week days of the vacation season, but there are many weekends and holidays when these resorts hang out the "no vacancy" sign. The weekend travel to the lake area usually begins on Friday evening and continues through Sunday when the high point of travel for the whole week is reached. (Figure 6) When a holiday and a weekend occur in sequence travel is particularly heavy. This fact explains why the Labor Day weekend is normally the period of heaviest travel during the vacation season. The type of weather experienced on any weekend is also an important factor influencing the volume of travel by this group.

Although the transient visitor seldom remains in the lake area for over two days, most resort owners report that the bulk of their gross business is of this type. In fact, the weekend business is about the only business a number of resorts receive during the vacation season and such business is vital to their continued operation.

During the course of the summer, a number of out-of-State tourist pass through the lake area. Although the Lake is not on the main transcontinental highways, this region is of sufficient scenic interest to draw interstate tourist travel from the heavily traveled transcontinental routes such as U. S. 66 and U. S. 40. Many of these visitors pass through the area during the week and are an important element in the total volume of weekday business.

Figure 6. Total Flow of Traffic on U. S. Highway 54 Near Bagnell Dam, Summer Months 1938-1940. (From State Highway Department's Automatic Traffic Recorder Records)

The out-of-State visitors who remain in the area for longer periods are included in one of the other groups, but those mentioned here seldom stay over two days. Many evidences of their visits are encountered on the guest books of Bagnell Dam and other points of scenic interest. Most of these visitors are probably seeing the lake for the first time and their impressions of this area are largely gained from what they see from our highways--often times such impressions may not be favorable.

Origin and Seasonal Volumes of Recreational Travel

This section of the study presents data showing where visitors to the lake area come from and the seasons in which they come. The data on which these determinations are based were secured from the following sources: (1) manual tourist counts made under the direction of the National Park Service in the Regional Recreational Area on the Grand Glaize Arm of the Lake, (2) resort registers, (3) public tourist registers, (4) State Highway Department's traffic flow records, (5) county clerk's records of sale of non-resident fishing permits, and (6) personal interviews with owners of recreational businesses in this area.

Use of the Area by Missourians. Figures obtained on the origin of all recreational travel in the lake area show that approximately 80 per cent of those visiting the lake

area live in Missouri. The figures obtained from a manual count of all visitors stopping at the Lake of the Ozarks Recreational area from March 1 to September 30, 1940, show that out of the 29,876 visitors 24,947 were from Missouri and 4,929 were from other states. In 1937, the United States Forest Service estimated that approximately one-fifth of all cars in the neighborhood of the Lake came from other states. Interviews with resort owners and samples taken from public tourist registers further indicate that Missourians outnumber the out-of-State visitors in the lake area approximately 5 to 1. The figures given here are about what should be expected when one takes into consideration that approximately two and one-half million people live within a radius of 150 miles of the Lake and almost all of the territory included within such a radius is in Missouri.

The proximity of certain resort areas on the lake to densely populated areas of tourist origin is a most important factor in determining the volume of travel to certain resorts in the vicinity of the lake. The bulk of the recreational business out of St. Louis goes to the resorts located near U. S. Highway 54 in Camden and Miller Counties. The majority of the resorts in this vicinity reported that approximately two-thirds of their instate business originates in St. Louis and environs. The resorts off Missouri Highway 5 in Camden and Morgan Counties and the

resorts in Benton County receive the bulk of their instate business from the Kansas City area. Although Kansas City is somewhat closer to the whole lake area, the greater volumes of recreational business come from St. Louis.

Further examination of tourist registers showed that a relatively important volume of business to most resort owners comes from scattered population centers in the state. These are mainly: Jefferson City, Springfield, St. Joseph, Joplin, Columbia, Sedalia, Hannibal, Moberly, and Boonville. Other small cities, towns, and rural areas, especially those north of the Missouri River, augment the pleasure travel from the larger population centers and complete the total instate recreational travel to the Lake area.

Use of the Area by Out-of-State Recreationist. . . The ²² bulk of all tourist travel in Missouri comes from nearby states. Illinois contributes the largest percentage of out-of-State travel in Missouri. Kansas, Oklahoma, Texas, and Iowa are other states contributing important percentages, while comparatively unimportant percentages of foreign travel are credited to other individual states and Canada. (Table III) Although these data are for all tourist travel in Missouri, they are not greatly different

22. The term "tourist" as used here is not limited to those traveling for recreation, and includes those making business trips.

Table III

Percentage of Foreign Traffic
in Missouri by States*

State	Percent	State	Percent
Illinois.....	23.31	Dist. Columbia.....	0.57
Kansas.....	13.22	South Dakota.....	0.44
Oklahoma.....	9.02	Washington.....	0.38
Texas.....	9.02	West Virginia.....	0.38
Iowa.....	6.51	Alabama.....	0.32
California.....	4.31	Georgia.....	0.32
Michigan.....	3.66	N. Carolina.....	0.32
Indiana.....	3.48	Virginia.....	0.25
Ohio.....	3.43	Connecticut.....	0.19
Arkansas.....	2.85	Utah.....	0.19
Nebraska.....	2.34	Wyoming.....	0.19
New York.....	2.21	Canada.....	0.19
Tennessee.....	1.52	Idaho.....	0.13
Colorado.....	1.45	Maine.....	0.13
Pennsylvania.....	1.39	Maryland.....	0.13
Kentucky.....	1.14	New Hampshire.....	0.13
Louisiana.....	1.01	Oregon.....	0.13
New Jersey.....	0.89	South Carolina.....	0.06
Massachusetts.....	0.76	Delaware.....	0.02
Mississippi.....	0.70	Montana.....	0.02
Wisconsin.....	0.70	Nevada.....	0.02
Arizona.....	0.63	North Dakota.....	0.02
Florida.....	0.63	Rhode Island.....	0.02
New Mexico.....	0.63	Vermont.....	0.02
Minnesota.....	0.57	Total	100.00

* Missouri Traffic Survey, 1934, page 161.

from the data obtained on recreational travel in the lake area.

Most out-of-State vacationists stopping at the Lake for over a day purchase a non-resident trip fishing permit. The records kept by the county clerks on the sale of these permits provide an excellent means of determining where many of the non-resident vacationists come from. Residents of Kansas, Illinois, Iowa, and Nebraska purchase some 92.7 per cent of non-resident fishing permits sold in four counties in which the lake lies. (Table IV) The importance of the lake as a fishing center for out-of-State visitors is shown by the fact that 40 per cent of all non-resident fishing permits sold in Missouri during the last five years have been sold in the lake area.

Vacationists from Illinois are apparently more numerous in the lake area in spite of the fact that Kansans purchase more non-resident fishing permits. Manual counts of visitors stopping at the Lake of the Ozarks Recreational Area show that 39 per cent of out-of-State visitors are from Illinois and 15 per cent from Kansas. (Table V) These data indicate that the bulk of the Illinois visitors stop in the more intensively developed resort areas of Camden and Miller Counties where a greater share of all resort accommodations are located. Furthermore, the majority of resorts visited in the whole lake area reported that their most important volume of out-of-State business

Table IV

Number and Per Cent of Total Non-Resident Fishing Permits
Issued in the Lake of the Ozark Region, 1937 Thru 1939

State	Number	Per Cent	State	Number	Per Cent
Kansas	9,574	40.04	Minnesota	12	.05
Illinois	7,566	31.64	Wyoming	12	.05
Oklahoma	2,281	9.54	Louisiana	11	.045
Iowa	1,914	8.01	Virginia	10	.04
Nebraska	785	3.28	Florida	7	.03
Indiana	513	2.15	Washington D. C.	7	.03
Texas	278	1.16	Mississippi	7	.03
Ohio	209	.87	Oregon	6	.03
Arkansas	161	.67	North Carolina	6	.03
California	131	.55	Montana	6	.03
Colorado	63	.26	Georgia	5	.02
Kentucky	58	.24	Maryland	4	.02
Michigan	57	.24	Utah	4	.02
New York	38	.16	Washington	4	.02
Tennessee	27	.11	Alabama	3	.01
New Mexico	26	.11	Idaho	2	.01
Pennsylvania	24	.10	Delaware	1	.005
South Dakota	21	.09	Nevada	1	.005
Wisconsin	17	.07	Connecticut	1	.005
Massachusetts	15	.06	New Hampshire	1	.005
Arizona	14	.06	Maine	1	.005
West Virginia	13	.05			
New Jersey	13	.05	Total	23,909	100.000

Table V

Number and Per Cent of the Total Number of Out-of-State Automobiles Visiting the Lake of the Ozarks Recreational Area for the Period of March 1 to September 30, 1940* **

State	Number	Per Cent
Illinois	344	39.18
Kansas	139	15.83
Iowa	118	13.44
Oklahoma	89	10.14
Nebraska	30	3.41
Texas	29	3.30
Ohio	26	2.96
Louisiana	16	1.82
Colorado	14	1.59
Michigan	12	1.37
Pennsylvania	10	1.14
Maryland	10	1.14
Indiana	9	1.03
Arkansas	5	.57
New York	5	.57
District of Columbia	4	.46
Connecticut	4	.46
South Carolina	3	.34
Mississippi	3	.34
California	2	.23
New Jersey	2	.23
Georgia	2	.23
Kentucky	1	.11
West Virginia	1	.11
Totals	878	100.00

* For the period March 1 to September 30, 1940 a total of 4,736 automobiles visited the area and carried 29,876 passengers. The total number of passengers included 24,947 instate and 4,929 out-of-state passengers.

** Above figures furnished by National Park Service, Lake of the Ozarks Recreational Demonstration Area, Mo-8, Kaiser, Missouri.

comes from Illinois. The majority of the Kansans come from the Kansas City, Kansas area and stop at the resorts in Benton and Morgan Counties. This important area of origin in Kansas is comparatively close to the lake and an important volume of this out-of-State business comes on week ends. On the other hand visitors from Illinois come from greater distances and usually remain for longer periods of time.

Many resort owners believe that an increased volume of out-of-State business could be brought into the lake area by state advertising. In fact, there are a number of proposals under consideration at this time to undertake such a program. If such a program is undertaken it should be understood that the determining factors reflected in the volume of recreational business in Missouri are manifold. States such as Illinois, Iowa, Oklahoma, Texas, Kansas, and Nebraska are the states most likely to send vacationists to Missouri and the lake area. (Figure 7) The volume of recreational travel coming from any one of these states is largely dependent on two sets of factors-- one which sends vacationists out from a state and the other which attracts them to a vacation center. The set of factors such as: population densities, spendable per capita income, and automobile registrations determine the number of vacationists any one state may send out of its borders for recreational purposes. The other set of

Spendable Per Capita Income, 1935 (From Sales Management Magazine Vol.38, No. 8.)

Population 1940. (From 1940 Census)

Car Registrations 1939. (From Missouri State Highway Department Records.)

Figure 7. Factors Affecting Flow of Tourists in Missouri's Principal Tourist Area.*

* Dotted line indicates principal tourist area.

factors largely determines how many vacationists the resort area can attract. These factors are: the location and accessibility of the area to recreational travel, suitability of the natural environment for recreational use, and the type and quality of available recreational facilities.²³

Much has been said about the importance of out-of-State travel as a source of income for the State. Indeed, such travel is an important source of income. But in Missouri there appears to be an unfavorable balance of recreational expenditures as Missourians most probably spend more on recreational travel out-of-Missouri than all out-of-State visitors spend on recreational travel in Missouri. In 1934 the State Highway Commission's traffic survey estimated that Missourians traveled 198,258,000 miles on pleasure and 46,708,000 miles on business in other states.²⁴ During the same year all out-of-State automobiles visiting Missouri traveled an estimated 281,973,883 vehicle miles on business and pleasure trips. Traffic flow records show that much of this travel passes directly through the state and passes through St. Louis and Kansas City. The average stay of out-of-

23. Bureau of Public Roads, Tourist Travel in the United States, Vol. 16, No. 6, August 1937, p. 106.

24. Highway Planning Survey estimates indicate that these figures would be higher in recent years due to the increased efficiency of newer automobile models.

State automobiles in Missouri is much less than it is in noted vacation states such as Wisconsin, Colorado, California and Florida.²⁵

The average foreign car spends about six days in Missouri and travels a total of 465 miles a trip. The average expenditure per car per trip was \$46.82.²⁶ Although data are not available to determine how long Missourians stay in other states or how much they spend per trip, the expenditures by Missourians in other states are most likely greater than foreign expenditures in Missouri. Missourians vacationing in western states, the Lake States, and the southern states certainly travel greater distances than out-of-State vacationists traveling in Missouri. Furthermore, Missourians vacationing in fashionable resort areas undoubtedly spend longer periods of time and greater sums of money than out-of-State vacationists spend on vacations in Missouri.²⁷

Further use of Missouri's recreational resources can best be brought about by the establishment of a state re-

25. Bureau of Public Roads, Op. Cit. p. 112.

26. Ibid., p. 160.

27. An effort was made to determine how many Missouri automobiles visited various states. Most states were unable to furnish such information, however, several states answered as listed below.

Oregon. In 1939, a total of 1,570 Missouri vehicles registered in Oregon. (It is estimated that 60% of visitors register.)

creational policy. Such a policy should be broad and include an overall consideration of private as well as public recreational facilities. This policy should make provisions for: (1) research in recreation, (2) regulation of existing recreational facilities, (3) planning of new recreational facilities, and (4) the dissemination of recreational information to the general public. An effective recreational policy can best be determined and administered by a responsible state agency such as the Conservation Commission or the Highway Department. The necessary expense of carrying out such a policy should be financed by State appropriations and need not be any greater than many states now spend for state advertising. The establishment of a recreational policy will do much to insure further development, unification, and utilization of the recreational resources of Missouri.

Seasonal Volumes of Recreational Travel. Travel in the lake area is subject to wide seasonal fluctuations. In order to make some determinations on the volumes of

27. (Continued from page 71.)

South Dakota. The calculations of the State Highway Planning survey indicate the approximately 12,500 Missouri automobiles enter South Dakota annually.

Wyoming. A tourist study conducted by the Wyoming Highway Department disclosed that 6,986 Missouri cars visited Wyoming from June 1 to September 30, 1939.

Montana. One out of every 436 cars registered in Missouri visited Montana in 1940. The total number of cars entering Montana from June 15 to September 15 as reported by the Montana State Highway Department in 1940 was 1,612.

recreational traffic during different seasons the records on tolls paid on Hurrican Deck Bridge on Missouri Highway Number 8 and the records of the automatic traffic recorder just north of Bagnell Dam were consulted. Although these records show the total movements of all traffic, i. e. recreational, local, and commercial, it is possible to make some determinations on recreational traffic by making an allowance for commercial and local traffic. The total volume of travel during the summer largely indicates the importance of recreational travel as much of the increase in volume over the winter traffic volume is due to recreational travel. The relative importance of recreational travel in the spring and autumn is also indicated by comparing the volume of travel during those seasons with that of the summer.

The data of Figure 8 indicate that the greatest volume of traffic occurs during the period from April to November. May, June, July, August and September are the months of maximum travel with a maximum for these months most often in July or August. The volume of travel increases more slowly in April and May than it decreases during September and October which would indicate that the volume of travel in autumn is more important than the travel of the spring months. Another significant fact shown by this figure is the great importance of the weekend travel as shown by the way the average Saturday and

Figure 8. Average Volumes of Traffic on U. S. Highway 54 Near Bagnell Dam on an Average Week-Day, Saturday, and Sunday of Each Month, August 1937, Through August 1940. (From State Highway Department's Automatic Traffic Recorder Annual Records.)

average Sunday travel exceeds the travel on an average weekday during the vacation season.

Manual counts are made of both instate and out-of-State visitors stopping at the Lake of the Ozarks Recreational Area. The data of Table VI indicate that the only important volumes of out-of-State travel come in July

Table VI

Number of Instate and Out-of-State Visitors,
Lake of the Ozarks Recreational Area*

Month	Instate	Out-of-State
April	587	13
May	2,122	181
June	2,692	362
July	7,007	1,657
August	6,919	2,256
September	3,190	471
Total	24,517	4,942

* During January, February, and March, 1940, 430 instate and out-of-State visitors were counted. For the period March 1 to September 30, 1940, a total of 4,794 cars visited the area--3,856 were from Missouri and 936 were from 25 other states.

and August. The instate visitor total is highest during June, July, and August and comparatively high during May and September.

Resort owners report that recreational travel usually begins early in spring when the weather is favorable and continues until late in fall when such travel practically ceases. In the past the opening of fishing season on Memorial Day brought the first large influx of visitors

into this area. But since 1940, the fishing season has opened several months earlier and the volume of recreational travel, which comes mainly on week ends, is largely dependent on the weather. There is little agreement among resort owners as to when their business is best, but in general they are in agreement that June, July, and August bring more week day travel which makes for better business conditions than the week end travel of autumn and spring. One of the more successful resorts reported that the business of June, July, and August runs approximately 100 per cent of capacity, April -- 7 per cent, May -- 25 per cent, and September and October -- 30 and 20 per cent respectively.

Trends in the Recreational Utilization of the Area

Although much has already been said about the general trends in the utilization of this area for recreational purposes, the importance of the subject justifies further comment. The data presented below indicate: (1) the trends in the transfer of land for recreational purposes; (2) the trends in the establishment of recreational businesses; and (3) the trends in the volume of recreational travel.

Trends in the Primary Transfer of Land for Recreational Purposes. Virtually all the land now in recreational use in the lake area was purchased after the

formation of the lake. This land was sold either as lots in platted subdivisions or as acreage tracts. The transfers of such land have been determined by examining the Index to Deeds and recorded deeds in Miller, Morgan, Camden, and Benton counties.

Some 59 subdivisions have been platted into 9,132 lots in the lake area since 1929. Approximately 1,984 lots have been transferred during this period as shown by the 1939 tax books--that is, 21.17 per cent of the lots platted have been transferred at least once. In order to determine the trend of transfers in subdivisions ten of the larger subdivisions platted by 1931 were selected for study. These subdivisions contain 57 per cent of all lots platted in subdivisions in the lake area, and the 371 transfers recorded on these subdivisions comprise the bulk of all transfers made in all subdivisions. Although no records were made on the transfers of lots in subdivisions platted after 1931, a record has been made of the transfer of the acreage tracts on which the subdivisions were platted.

Much of the recreational land in acreage tracts has been sold by the Union Electric Land and Development Company and several individuals. It has been possible to obtain a fairly complete record of the primary transfers of these lands by listing all transfers between the above grantors and their grantees as shown by the deed records

in the four lake counties. Although these records cover primary transfers made by the sellers of the bulk of the recreational lands, other transfers of lesser importance have undoubtedly been made by grantors of other recreational lands.

In platted subdivisions most of the transfers of land involve one or more lots, while in the acreage tracts a transfer may involve a considerable number of acres of land. It is difficult to determine just how much land is involved in the transfer of lots, but it is quite apparent that many more acres of land are involved in the transfer of acreage tracts than in the transfers of lots in platted subdivisions. It was also impractical to attempt to determine the number of acres involved in acreage tract transfers because many of the deed records described the lands transferred by legal descriptions and did not list the total acreages involved.

Shortly after the lake was formed, the bulk of transfers of recreational sites involved lots in platted subdivisions (Figure 9). During this period the subdivision offered the better sites for recreational development as most subdivisions provided roads of access to the site and some utility connections that were largely unavailable without considerable expense outside of subdivisions. Most of the development on acreage tracts during this period took place on acreage tracts that had been purchased

or owned before 1931 so there was little further demand for such lands at that time. After 1933 fewer lots were sold in the larger subdivisions which had been the site of much early development.

By 1934 and 1935 much of the further development of the recreational facilities of the lake area took place

Figure 9. Trends in the Transfers of Recreational Lands.

on acreage tracts. Some of these tracts were purchased and divided into small lakeshore subdivisions and the lots in some of the better developments sold much better than those on the larger subdivisions. Other acreage tracts were purchased for resort development or summer homes. By 1936 the demand for land in acreage tracts, as measured by number of transfers, reached its peak and there has been a rather steady decline since. In more

recent years there has been little demand for any kind of recreational land in the lake area.

Trends in the Establishment of Recreational Businesses

Table VII shows the dates of establishment of 183 commercial recreational developments as compiled from a questionnaire submitted to resort owners. The boom period

Table VII

Dates of Establishment of Commercial
Recreational Developments in the Lake of
the Ozarks Area

Years	Number	Years	Number
1929.....	1	1935.....	19
1930.....	4	1936.....	13
1931.....	16	1937.....	19
1932.....	40	1938.....	16
1933.....	18	1939.....	8
1934.....	24	1940.....	5

in recreational investment came shortly after the formation of the lake. The establishment of additional recreational developments continued at a modest rate up until 1939 when a sharp decline set in which continued through 1940. Although the establishment of additional recreational facilities in this area has practically ceased in recent years there has been considerable investment in the improvement of existing developments.

Trends in the Volumes of Recreational Travel. It is difficult to determine trends for this type of travel

because of the lack of data and the character of the available data. The data available to indicate recreational travel volumes before 1935^{are} both limited and inconclusive. This was the period when the lake was formed, and when the increased volume of travel to this area was first noted. Many came for the first time to see the dam and the lake; others came again and again to fish. Most of the early resort development was concentrated along the important highways or near the dam. Often resort facilities would be overcrowded and new developments were constructed to meet the demand for such services. In general, the period up to 1935 was one of increasing recreational travel in this area in spite of the difficult economic conditions of those years.

The records showing the sale of fishing permits in the lake area since 1935 indicate an increasing use of the lake area by fishermen up until 1938 when a decline was begun that continued through 1939. These records have some pertinence in the indication of the volume of recreational travel during these years as most visitors stopping in this area for over a day or two usually do some fishing. Most of the out-of-State fishermen buy non-resident trip fishing permits in one of the four lake counties and these records certainly indicate the number of non-resident fishermen coming to the lake during the last five years. (Figure 10)

Figure 10. Sales of Non-Resident Trip Fishing Permits in the Four Lake Counties 1935-1940.

It is more difficult to determine how many instate fishermen come to the lake to fish. Some of this group purchase their fishing licenses in their home county while others purchase a fishing license in one of the four lake counties.

Field observation and interviews with resort owners indicate that approximately nine instate fishing permits are issued to every out-of-State permit used by fishermen visiting the lake area. Furthermore, the instate permits are often used time and again while out-of-State permits are perhaps most often used only once. In general, resort owners interviewed reported that a lesser number of fishermen have visited the lake since 1937.

CHAPTER IV

SOME ECONOMIC ASPECTS OF LAND USE AND RECREATION IN THE LAKE AREA

The construction of Bagnell Dam and the formation of the Lake of the Ozarks brought about important changes in the land utilization pattern in this area. All the better farms in this region were located in the valleys of the Osage River and its tributaries, while the bordering rough lands were used mainly for grazing purposes and for wood lots by the valley farmers. The filling of the lake inundated practically all the suitable crop lands for approximately one hundred miles above the dam and the only farming that remains is that upon hilly stony uplands that have often been called submarginal for this purpose. However, in the western part of Benton County, near the upper limits of the reservoir, some land suitable to cropping remained above the normal water level and farm operations have continued unabated. Most of the former valley farm lands are now the site of the power reservoir, the Lake of the Ozarks, and while a modest acreage of the rough bordering lands are used for recreational purposes, the vast share of them lie idle. Virtually all the rough land has some recreational value but only a small portion of it will be used intensively for this purpose and most

of it could well be devoted to some type of forestry that will prevent further deterioration of the forest and preserve the beauty of the back country.

Assessed valuations of all real estate inside the boundaries of the lake area as of 1928, before the formation of the lake, were compared with those of 1939 to determine the changes in the tax base subsequent to the building of the dam and the formation of the lake. The area selected for study, as shown in Figure 4, includes a number of survey sections of land which contain the lake, the riparian lands, and a considerable acreage of rough land lying between the riparian lands and the boundaries of the area studied. All real estate valuation listed on the tax rolls in the sections selected for study were tabulated from the 1928 and 1939 tax books with the listed acreage, assessed valuation, and taxes levied on each taxable entry. Since most of the 1928 real estate consisted of valley farms and their adjoining rough lands, no classification was made for the separate taxable entries on the 1928 book. However, the 1939 real estate entries have been classified in order to show the relative importance of the new types of land use.

Increase in the Tax Base. In the lake area as a whole assessed valuation of real estate increased 206 per cent during the period 1928-1939. Table VIII shows how this increase has been distributed among four counties.

Table VIII

Assessed Valuation and Taxes Levied on Real Estate,
Lake of the Ozarks Area¹ 1928 and 1939²

Counties Affected by Lake	Approximate Acreage of Area in County	Assessed Valuations		Taxes Levied	
		1928	1939	1928	1939
Miller ³	17,077	\$ 207,455	\$3,708,075	\$ 2,938	\$ 57,760
Camden	121,457	1,332,150	3,054,350	21,480	47,583
Benton	58,150	989,820	1,357,350	12,665	14,058
Morgan	41,237	432,960	953,310	7,280	14,058
Total Area	237,971 ⁴	2,962,385	9,073,065	44,358	133,957

1. See map, Figure 4, page 25.
2. Data taken from 1928 and 1939 tax books. Assessments are for 1927 and 1938 while taxes are for 1928 and 1939.
3. Bagnell Dam is located and assessed as Real Estate in Miller County.
4. There are 16,500 acres of land in Camden and Miller Counties which are included in the National Park Service's Lake of the Ozarks Recreational Area and have been removed from the tax rolls since 1938.

Miller County in which Bagnell Dam is located had an increase of 1,687 per cent in assessed valuation, in spite of the fact that 8,055 acres of the 17,077 listed on the tax rolls in the area of study in 1926 have been taken from the tax rolls since 1934 when the National Park Service started acquiring land for the Lake of the Ozarks Recreational Area. Camden County with the largest number of acres of land affected by the reservoir has experienced an increase in real estate assessment amounting to 129 per cent. Camden County also lost over 8,000 acres of taxable lands in this area which have been removed from the tax rolls since 1934 for the National Park Service's Recreational Area. In Morgan County the increase in assessed valuation of real estate in the lake area amounted to 120 per cent. In Benton County, where the lake is smaller and comparatively fewer acres of submerged lands are included, the increase in real estate valuation amounted to 37 per cent.

Such an important increase in the tax base in the lake area is particularly significant in light of the fact that the property tax base in the state as a whole has declined during the same period (see Table IX). This decline in the tax base is even evident in the counties in which the lake lies; yet the increase in the assessed valuation of the real estate of the lake area has helped counteract the general decline in the tax base in the

Table IX

Assessed Valuations, State, 1928-1938

Year	Total	Real	Personal	Utilities	Merch. & Mfgs.
1928	\$4,933,074,349	\$3,553,034,703	\$632,039,033	\$493,707,739	\$249,758,009
1929	4,968,850,691	3,574,081,189	658,913,291	499,955,020	234,858,097
1930	4,788,153,970	3,518,767,447	572,981,732	474,693,654	218,106,329
1931	4,320,685,447	3,189,108,550	497,931,581	475,555,968	154,735,428
1932	3,909,115,389	2,875,978,085	409,654,267	467,452,823	155,169,674
1933	3,825,850,628	2,847,533,414	370,650,342	458,439,991	149,774,110
1934	3,821,563,766	2,839,385,281	368,734,162	461,408,836	149,401,974
1935	3,792,474,498	2,808,618,304	380,659,626	450,032,868	152,711,329
1936	3,797,473,075	2,798,740,071	391,648,038	443,793,764	160,766,047
1937	3,845,691,056	2,803,814,535	431,084,474	434,012,917	173,679,174
1938	3,793,597,137	2,803,411,262	434,284,413	428,142,939	125,040,460

other sections of the county outside of the lake area. However, it was only in Camden and Miller Counties that the increased valuations of the real estate in the lake area were sufficient to off-set the general decline in the tax base of the whole county. Miller County received a substantial increase in valuation from the dam, and Camden County received substantial increases in valuation from the submerged lands and the recreational improvements.

Importance of the Dam and Submerged Lands in the Tax Base. The increase in the assessed valuation of the real estate in the lake area is largely due to the valuations placed on Bagnell Dam and the submerged lands after 1931. Table X compares the assessments levied on the real estate assessed to the Union Electric Company and to all other real estate owners in the lake area. Since the dam is located in Miller County the bulk of the assessment borne by the Power Company in this county includes the assessment on the dam. In the other counties the assessment includes only the submerged lands. It should be noted that the submerged lands comprise approximately a third of the total number of acres in the lake area, but these lands bear over half of the taxes levied on all lands in this area.

Figure 13 shows that Bagnell Dam and the submerged lands comprise 70.91 per cent of the real estate tax base in the lake area. The dam alone accounts for approximately

Table X

The Importance of Bagnell Dam and Power Reservoir
in the Tax Base of the Lake Area¹

	Acres		Valuation		Tax Levied	
	Power Company	All Others ²	Power Company	All Others	Power Company	All Others
Miller ³	2,923	7,262	\$3,533,270	174,805	\$55,113	2,647
Camden	32,265	84,032	1,713,100	1,341,250	26,385	21,198
Morgan	9,872	30,869	550,460	402,850	7,958	6,100
Benton	12,525	45,716	693,720	663,610	7,391	7,165
Total ⁴	57,585	167,879	6,490,550	2,582,515	96,847	37,110

1. Area as delimited in Figure 4.

2. Includes all other owners of real estate in this area.

3. Miller County assesses and taxes Bagnell Dam.

4. Data taken from 1939 real estate books in Miller, Camden, Morgan, and Benton Counties.

Figure 11. Assessed Valuations of all Real Estate in the Lake of the Ozarks Area, 1939*

Classification	Assessed Valuations	Per Cent of Total Valuation
Commercial Recreational Real Estate	\$ 455,425	5.02%
Non-Commercial Recreational Real Estate	496,430	5.47
Undeveloped Recreational Land	610,430	6.73
Non-Recreational Real Estate	1,077,035	11.87
Submerged Land and Bagnell Dam	6,433,745	70.91
Totals	\$9,073,065	100.00

* For delimitation of area analyzed see Figure 4, page 25.

one-half of the assessed valuation of all real estate in the lake area.

An examination of the increase in assessed valuations of real estate by survey sections, as shown in Table XI, disclosed that the most significant increases in real estate assessments have occurred in the sections where the lake has inundated the greatest number of acres of valley land. Increases in real estate assessment have been most significant in Camden and Morgan counties, and these increased assessments have more than made up for the loss of taxes formerly levied on valley farmers. Furthermore, the taxable personal property owned by all resort owners undoubtedly exceeds the taxable personal property lost to the counties when a comparatively small group of farmers were forced out of this area by the inundation of valley farms.

In Benton County the increase in assessed valuation of real estate is less apparent. The reservoir becomes smaller in the upper reaches of the area and the influence correspondingly less. A number of sections included in this study in Benton County have actually decreased in assessed valuation since 1928. However, the sections containing large acreages of submerged lands have shown the expected increases.

As one goes back from the lake the increase in assessed valuation is of lesser moment. Indeed, further

Table XI

Increase of Assessed Valuations of Real Estate
by Sections in Three Counties in the Lake Area *

Location	Assessed Valuation of all Real Estate 1928	1939	Assessment Submerged Land-1939	Net Gain in Assessment 1939
<u>Beaton Co.</u>				
Section				
13-40-20	\$ 8,700	\$ 13,460	\$ 11,260	\$ 7,760
16-40-20	7,560	15,150	10,500	7,590
5-40-21	9,000	18,950	11,950	9,950
4-40-21	11,900	21,250	15,850	9,350
6-40-22	11,400	19,760	13,810	8,360
31-41-22	16,900	21,440	12,290	2,540
1-40-23	11,900	16,500	13,100	4,400
3-40-23	6,000	10,300	5,350	4,300
<u>Morgan Co.</u>				
Section				
7-40-16	6,900	24,420	21,440	17,520
17-40-18	10,640	19,160	15,740	8,520
6-40-19	8,360	12,780	12,660	4,420
10-40-19	8,480	16,700	12,560	3,220
16-41-17	12,100	18,500	14,440	6,400
26-41-17	6,360	17,000	14,440	10,640
35-41-17	7,900	34,360	20,400	26,460
<u>Ozden Co.</u>				
Section				
22-40-16	5,930	23,530	17,230	17,600
33-40-16	15,000	26,940	24,340	11,940
34-40-16	13,070	28,360	6,080	15,290
25-39-17	10,130	17,910	15,420	7,780
27-39-17	7,570	16,020	12,240	8,450
34-39-17	5,020	18,610	15,060	13,790
17-38-17	6,140	14,100	10,060	7,960
3-38-18	7,410	17,430	11,140	10,020
3-39-18	17,070	41,440	33,500	24,370
12-39-18	6,080	16,360	13,050	10,280
1-39-19	16,140	24,550	16,150	6,410
4-39-19	10,350	22,690	14,420	12,340

* The sections selected are typical of sections inundated by the lake, however, the sections listed here do not contain recreational property and all increased valuations are caused by increased valuations of submerged lands after 1931.

study of assessed valuation of real estate outside the limited area selected for study showed that with few exceptions the assessed values of rough lands have declined since 1928.²⁸ Perhaps this decline has been caused by the fact that the increase of assessed valuation on the submerged lands has made it possible to lower the assessment on the rough lands lying some distance back from the lake and still maintain a sufficient tax base to meet the expenditures required by local units of government without raising the tax rates. At any rate a decline in the assessed valuation of wild lands is desirable as most wild lands in the Ozarks are assessed too high in relation to their productivity to permit the payment of taxes from the earnings of the land.²⁹

The Importance of Recreational Lands in the Tax Base.
Since the taxes paid by the power company on the dam and the submerged lands in 1939 are more than double the taxes levied on all real estate in this area before the formation of the lake, the taxes collected on all other types of real estate in this area could be considered as net gains in taxable wealth. Most of the lands outside of the

28. Tabulations of widely scattered sections outside the lake area revealed that the decrease in assessed valuations averaged \$1,955 for 37 sections tabulated. The decrease in taxes levied amounted to \$57.31 per section.

29. Ross J. Silkett, Land and Fiscal Problems in Reynolds County, Missouri, Missouri Agricultural Experiment Station, Res. Bull. 384, Dec. 1940, p. 11-33.

area now included in the power reservoir were undeveloped rough lands before the formation of the lake. Such lands had been cut over several times and were at a very low state of productivity even for forestry after the formation of the lake. Some of these lands became riparian and their use for recreational purposes greatly enhanced their value. In 1939, approximately 9,000 acres of this land in recreational use were together with improvements, valued at \$951,805 on the 1939 tax books. Such a valuation on real estate represents a tremendous increase in valuation over the assessment placed on the rough lands.

The valuations given above include only the assessment placed on recreational real estate in the area delimited for study as shown in Figure 4. However, recreational improvements have been constructed outside this area along the highways in the economic benefit area of the lake. Including these recreational improvements the assessed valuation of all recreational real estate in the lake area and vicinity appearing on the 1939 tax books was \$1,055,695 and the taxes levied on this real estate amounted to \$16,633.53. Figure 14 shows how the assessed valuations are distributed among the different classes of recreational real estate.

Table XII indicates the relative importance of recreation as a land use in the four counties in which the lake lies. Camden County with the greatest number of acres

Figure 12. Assessed Valuations of Recreational Real Estate in the Lake of the Ozarks Area, 1939*

Type	Assessed Valuation	Per Cent of Total Valuation
Summer Resorts	\$ 110,120	10.43%
Fishing Resorts	189,395	17.94
Cabin Camps	81,620	7.73
Resort Hotels	62,280	5.90
Recreational Businesses	115,850	10.97
Summer Homes	307,810	29.16
Recreational Clubs	188,620	17.87
Totals	\$1,055,695	100.00

* The above figures include all recreational real estate in the delimited area of study and other recreational real estate in the economic benefit area of the Lake region.

of lake surface is also the most important recreational county. In 1939, approximately 5,678 acres of land were in recreational ownership in this county, and the assessed valuation of this land and its recreational improvements accounted for 60 per cent of the assessed value of all recreational real estate in the lake area and vicinity. The

Table XII

Aeres, Assessed Valuation, and Taxes
Levied on Recreational Real Estate in
the Counties of the Lake Area*

Counties	Aeres	Assessed Valuation	Taxes Levied
Camden	5,678.34	\$ 628,030	\$10,336.12
Morgan	1,663.40	181,530	2,964.57
Miller	455.48	127,705	1,983.37
Benton	3,061.99	118,430	1,349.47
Total	10,859.21	1,055,695	16,633.53

* Data from 1939 tax books of four counties.

bulk of the recreational development in Camden County is scattered near U. S. Highway 54 from Osage Beach to the Niangua Bridge.

In Morgan County the bulk of the 1,633 acres of land in recreational use are those on the west shore of the Gravois Arm of the Lake. Some 17 per cent of the assessed valuation of all recreational real estate around the lake is found in Morgan County.

Most of 455 acres of recreational lands in use in Miller County are those near Bagnell Dam and those paralleling U. S. Highway 54. The value of all recreational real estate in this county amounts to 12 per cent of the total value placed on recreational real estate around the lake.

In Benton County the majority of the recreational lands in use are those in large tracts and platted subdivisions between the Camden county line and Warsaw. Although some 3,061 acres are in recreational ownership the total assessed valuation of all recreational real estate is only 11 per cent of the total for the entire lake region.

Investment in Recreational Real Estate. Although assessed valuations of recreational real estate often give a fairly good indication of the value of the property at the time of assessment such valuations do not indicate the total investment made in the property.³⁰ Investment is dynamic. The first costs are often highest, but maintenance cost continually adds to the total investment cost of the property. Thus investment as used in this study refers to the total cost of land, construction costs, equipment costs, and maintenance costs of a recreational improvement from the time of original investment to the present, i. e. 1940.

30. Although investment costs have been considerable in some developments, their sales value at present is considerably less than the total investment cost. For instance, one resort owner reported his investment (Continued on page 98)

Table XIII shows the estimated investment on all recreational real estate in the vicinity of the lake. The estimated investments given for the commercial recreational facilities were obtained from personal interviews with investors and the estimates obtained through such interviews were checked by field appraisal and other obtainable investment data on the particular business under study. Thus the investment in each recreational business was estimated separately and individual estimates were combined to give the total for the county. Since it was impossible to obtain individual investment data on all non-commercial recreational real estate, data were obtained on as many developments as possible and the remaining investments were estimated.

Investment in commercial recreational real estate ran well above the investment in non-commercial recreational real estate. (Table XIII) The commercial investor is usually faced with high first cost which includes a desirable business site, construction improvements, and facilities adequate to serve guests. This is especially true where the land is located in a desirable site from a recreational standpoint, but in a location where roads must be constructed and light, water, and

30. (Continued from page 97.) cost at \$18,000, yet he offered the resort for sale in 1940 at \$9,000. The assessment on this property in 1939 was approximately \$4,000.

Table XIII

Assessed Valuation and Estimated Investments
in Recreational Real Estate in the
Lake of the Ozarks Region

	Assessed Valuation	Estimated Investment
<u>Benton County</u>		
Commercial	\$ 40,000	\$114,900
Non-Commercial	78,350	218,564
Total	118,430	333,464
<u>Camden County</u>		
Commercial	333,700	1,471,300
Non-Commercial	294,330	958,530
Total	628,030	2,429,830
<u>Miller County</u>		
Commercial	95,965	402,900
Non-Commercial	31,740	111,090
Total	127,705	513,990
<u>Morgan County</u>		
Commercial	59,520	329,000
Non-Commercial	98,010	374,040
Total	157,530	703,040
<u>Totals for Lake Area</u>		
Commercial	559,265	2,318,100
Non-Commercial	496,430	1,658,224
Total	1,055,695	3,976,324

sanitation facilities must be provided or brought in at a high cost. Building costs, although moderate on the whole, are higher in recreational areas where materials must be transported greater distances and sometimes over difficult roads. The cost of maintenance and continued improvement is considerable on commercial recreation facilities which are used by the general public.

Considerable investment in the lake area occurred during depression years when costs were low. A number of those who invested in the resort business had lost their jobs in the cities and came to the area to seek employment through investment in commercial recreational property. Often the scale of initial investment was quite small, and further investment was made out of subsequent earnings of the business. Other investors brought in considerable capital and made substantial initial investments.

On the whole most investment was on a modest scale and most businesses established during the depression are still owned by the original investor. Up until 1940, only 15.3 per cent of the recreational businesses had changed hands. However, some of those included in the 15.3 per cent have changed hands several times. It appears that some of the smaller roadside businesses change hands most frequently.

The comparatively low rate of primary transfers of recreational businesses does not necessarily indicate that

investment in such businesses has been particularly expedient from a business standpoint. A survey of business conditions in this area in the spring of 1940 disclosed that out of a total of 172 businesses interviewed 42.4 per cent had experienced a decline in business since 1937, 22.1 per cent an increase, 19.6 per cent reported little change, and 15.7 per cent made no comments. Furthermore, 40.2 per cent of the owners of recreational businesses reported that they had sources of income apart from their recreational business. However, in this connection it should be pointed out that a number of investors in recreational businesses did not come into this area for business reasons alone and they are quite willing to accept a low rate of return on their investment in order to remain in the lake area during the vacation season.

The recreational business like all other types of business enterprises has its successes and failures. At best such business has only a short season in which to make profits. Fixed costs for the whole year must, therefore, be covered in a relatively short period of time. Those who are unable to meet their expenses from the earnings of the business either go broke or subsidize the business with capital coming from other sources.

Expenditures by Recreationists

There are no data available to indicate directly the expenditures by recreational groups in the lake vicinity; however, some quantitative measure of these expenditures can be made by estimates based on sales tax data and data indicative of various phases of recreational travel and expenditures. In making expenditure estimates it seemed pertinent to first arrive at an estimate based on the average expenditures of all groups stopping at commercial resorts. Expenditures made by summer residents and transient visitors not using resort accommodations are somewhat different and are estimated separately. The combined total of all recreationists expenditures are then corroborated with sales tax data indicative of recreational expenditures before a final expenditure estimate is approved.

Expenditures by Groups Stopping at Commercial Resorts

Estimates of expenditures by guests of commercial resorts can best be determined by multiplying the average per day expenditures of such groups by an estimate of the number of days such groups spend in the area. By means of a questionnaire submitted to resort businesses and a study

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31. It should be understood that these expenditure estimates are only for expenditures made with the businesses included in this study. No attempt is made to determine the expenditures outside of this area for supplies, transportation, or other commodities purchased for use in the area.

of costs of services and commodities in the area it was estimated that the average group of 3.5 persons³² spends approximately \$31 during a three day³³ stay in the lake area. These expenditures are most probably divided as follows: lodging \$9, food \$11, amusements \$8 and transportation \$3. Thus the average expenditure per individual would be approximately \$2.95 per day.

The per day resort capacity of the resort area is 5,274 individuals. This capacity is largely available from May 1 to October 1 making the total available capacity during this period 796,222 guest days. These guest days are seldom utilized at any one time, and more than one guest day is often utilized by the same guest. It was estimated from the data secured from resort owners that the total capacity of the resort area was utilized approximately 22 per cent of capacity during the period May 1 to October 1. This being the case approximately 175,393 guest days were spent in commercial resorts during this period. At an average expenditure of \$2.95 per guest day \$534,954 were spent by guests of commercial resorts during this period. During April, October, and November the resort capacity was estimated to be 385,770 guest days. This capacity was estimated to have been

32. The average group visiting the lake area is 3.5 persons.

33. The average stay of all groups using commercial resort facilities is three days.

utilized 9.7 per cent of capacity and the occupants who utilized resort facilities during these months spent \$105,459. The total expenditure for all commercial resort occupants is estimated to have been \$640,413 in 1939.

Expenditures by Summer Residents. The owners of the 557 summer residences are mainly considered as summer residents. Expenditures made by these groups are difficult to determine and no data have been gathered to indicate such expenditures. The majority of the summer homes are small and the expenditures of their owners consist mainly of maintenance repairs, expenditures for boats and fishing equipment, and household expenditures. It is estimated that all owners of summer residences and other summer residents spend approximately \$75,000 in the lake area during the vacation season.

Expenditures by Transient Visitors. It is most difficult to determine just how many visitors come to the lake for one day, and it is still more difficult to determine the expenditures by such groups. However, field observation in the area disclosed the fact that there are many visitors using the lake for recreational purposes or driving through the area who do not remain over night. The expenditures of individuals in this group are relatively unimportant, but due to the large number of such transient visitors the total expenditure of this group is considerable during the course of the vacation season.

Souvenir stands, gas stations, restaurants, boat docks, and other small businesses benefit most from this type of recreational business. Data indicative of such travel, such as traffic flow records and manual count of visitors in the Lake of the Ozarks Recreational Area as shown in Chapter III, indicate that approximately 100,000 transient visitors pass through this area during the vacation season. Expenditures of this group probably average about \$1 per person so expenditures of all transient visitors approximate \$100,000 a year.

Sales Tax Data Indicative of Recreational Expenditures. Since most expenditures made by recreationists are subject to a two per cent sales tax in Missouri, the data on the collections of this tax are indicative of recreational expenditures when an allowance is made for local non-recreational expenditures. In Camden County, which is the most important resort center, the sales tax collections on gross sales amounted to \$15,200.³⁴97 in 1939. The collections for Camden County are considerably higher than collections in other rural counties of similar size and population. For instance, Maries County which has practically the same population and resources as Camden County, but no important recreational developments, collected only \$6,473.96 on gross taxable sales in 1939.

34. These sales tax data were secured from the Sales Tax Department, Missouri State Auditors Office.

These comparisons indicate that recreational expenditures in Camden County are largely responsible for the greater volumes of business done. According to these comparisons, recreational expenditures in Camden County approximated \$500,000 in 1939.

Sales tax data for the other lake counties can not be broken down sufficiently to indicate taxable expenditures made by recreationists.³⁵ However, recreational expenditures made in these counties can be estimated from the expenditure figure determined for Camden County. Approximately 60 per cent of the commercial resort facilities are located in Camden County. If the remaining 40 per cent of the resort businesses located in other counties did business in proportion to that done in Camden County their gross business would have amounted to \$200,000 in 1939.

These data indicate that recreational expenditures approximated \$700,000 in the lake area in 1939. This total should be augmented by some \$75,000 to include expenditures made for gasoline which is not subject to the sales tax. Undoubtedly other expenditures made by recreationist which are not taxable would further augment this expenditure total.

35. Sales tax data are broken down into collections from rural areas and principal towns in these counties. Since most of the business done in the rural areas and principal towns of these counties is non-recreational, these data are of little use in the indication of recreational expenditures.

Corroborated Estimates of Recreational Expenditures.

Two separate recreational expenditure estimates have shown that recreationists spent approximately \$500,000 in the lake area in 1939. These estimates are conservative and most probably represent only expenditures most commonly associated with visiting recreationists. It should also be understood that resort owners themselves make considerable expenditures in this area for maintenance of resort property and personal living expenses. Public agencies also spend considerable on projects that mainly benefit the recreationists. It is probably true that over a million dollars a year are spent in this area by recreationists and by those who serve the recreationist in one capacity or another.

SUMMARY AND CONCLUSION

In 1931 the waters of the Osage River were impounded for some 129 miles above Bagnell Dam to form the Lake of the Ozarks. This lake, located somewhat south and west of the geographical center of the State, was planned primarily as a power reservoir. The use of the water for power generation has caused considerable fluctuations in the levels of the lake. In dry years the lake has fluctuated as much as 10 feet, while fluctuations of 10 feet or more have been common during most years. In other years flood waters have polluted the lake with silt and the lake has remained muddy during the greater part of the year. Although the recreational value of this lake was contemplated before it was formed, no comprehensive plans were made at that time to better the conditions for recreational utilization of the lake and its riparian lands.

Since this lake provided Missouri and surrounding states with a water resource heretofore unknown in this part of the country, considerable enthusiasm was aroused concerning its potential recreational utilization. This enthusiasm was accentuated by the excellent fishing conditions prevailing in the lake almost immediately after its formation. Recreational development came mostly in

response to the demand for accommodations and services by the fishermen. Recreational facilities were constructed mainly along the primary highways leading to the lake and on the riparian fringes of the lake where roads of access could be provided at low costs.

In general, most initial investments in recreational properties have been less than \$7500 and few pretentious resort developments are found anywhere about the 1300 mile shoreline of the lake. Some recreational facilities are of splendid quality notwithstanding the modest investment costs, but most resorts are not equipped or so located to cater to groups other than fishermen who seldom demand superior resort accommodations.

Fishing has been the primary recreational attraction drawing people into the area. Almost all resort owners are mainly dependent on the expenditures of fishermen. Up until 1938 fishing conditions were considered very good almost everywhere about the lake. In more recent years fishing conditions have not been as favorable as formerly, and many resorts that cater primarily to fishermen have suffered a considerable loss of trade. At best the fishermen visiting this area seldom stayed longer than a week and the average stay of such groups approximated three days. With fishing no better than it has been during the past two years fewer fishermen have come to the lake and many have spent a lesser amount of time when they did come.

It appears to be true that the Lake of the Ozarks has not, as yet, been accepted by any considerable number of recreationists as a vacation center. Although this area may be used as a vacation area from April up into November, there are comparatively few even in Missouri who spend a week or two week vacation period here. The greater share of all travel coming into this area for recreational purposes comes mainly over the week ends even during the summer months. This area is subject to periods of extremely hot weather as compared to other resort areas, and many vacationist living in Missouri and surrounding states vacation in resort areas where average summer temperatures are lower. Furthermore, recreational diversions, other than fishing and water sports, are quite limited in the lake area.

Approximately 80 per cent of all recreational travel coming into the area originates in Missouri. St. Louis is the most important center of origin for Missourians visiting this area. The neighboring states of Illinois, Kansas, Iowa, Oklahoma, and Nebraska contribute approximately 20 per cent of the out-of-State recreational travel. Illinois is the most important state of origin. However, the total volume of out-of-State business is relatively small and such visitors do not utilize any considerable portion of available resort facilities.

Although the Lake of the Ozarks is not utilized nearly as much as other resort areas in other states, it, nevertheless, is Missouri's best known resort area and is of considerable importance to the State. Nearly four million dollars have been spent in the development and improvement of recreational facilities in the lake area. Over \$16,000 in property taxes were levied on these improvements in 1939. It is estimated that approximately one million dollars a year are spent by those using the area and others who provide recreational facilities for those using this area.

Any plan designed to increase recreational travel in this area must recognize (1) the importance of fishing, (2) the relatively short stays of the preponderant share of the visitors, and (3) the factors limiting the use of this area by vacationists.

Increased recreational use of this area is mainly dependent on the improvement of fishing conditions. Improvement of fishing is a problem of great complexity. The power company owns the reservoir, the Lake of the Ozarks, and has priority in the use of water. If the water is used according to the demand for electrical energy it will be impossible to control fluctuations of the lake level so as to provide optimum conditions for the development of aquatic vegetation. Such vegetation is believed to be a most important factor in maintaining

and increasing fish numbers. This problem is further complicated by silt pollution. In brief, while fishing must be restored, if the lake area is to regain its popularity, no easy means of bringing about this restoration have so far presented themselves. Additional study of ways and means for increasing fish population is an obvious suggestion.

Provisions for zoning laws are urgently needed in this area. Roadside signs and some garish roadside developments have already marred the natural beauty of this area in several places. Since the area is still comparatively undeveloped, state zoning laws especially along the roadsides are needed to direct further development. Retroactive provisions should be attached to such zoning laws to do away with some land uses that are at present injuring the property values of better developments and the esthetic values of the highway. Although zoning in itself is not a measure to greatly increase the utilization of this area, it would do much to improve the quality of the recreational opportunity and provide means whereas positive plans for the future development of this area can be carried out.

Probably the most effective way of controlling land use in this area in a manner favorable to recreation is public acquisition of forest lands in the lake region. Such a public forest should at a minimum include the

nonrecreational lands and some of the undeveloped recreational lands included in this study. Other adjoining forest lands outside the area studied should also be included especially those found on the Clarksville stony loam soil type. (See Figure 5 on page 51.) Such a public forest would do much to regulate undesirable land uses, prevent forest fires, and to restore and conserve wildlife resources. Once wildlife resources are restored public shooting areas could be established which would effectively increase the recreational interest in this region.

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APPENDIX

Table I

Distribution of Taxable Real
Estate in the Lake of the Ozarks Area, 1939

Type	Num- ber	Acres	Assessed Valuations	Taxes Levied
Summer Resorts	26	270	\$ 95,120	\$ 1,288.58
Fishing Resorts	113	2,510	189,395	2,914.07
Cabin Camps	29	380	55,760	857.82
Resort Hotels	9	85	37,380	638.30
Restaurants	9	32	11,700	146.55
Groceries	15	58	19,550	254.56
Gas Stations	6	7	8,650	130.02
Souvenirs Stands	2	..	1,500	23.72
Taverns	3	8	950	14.07
Miscellaneous	24	70	35,420	523.19
Summer Residences	557	1,934	307,810	4,542.68
Recreational Clubs	17	3,295	186,680	3,362.08
All Recreational Real Estate		8,669*	951,855	14,695.84
Undeveloped Recrea- tional Land		42,352	610,430	9,094.43
Farm Lands		47,609	574,740	8,922.99
Rough Forest Lands		68,615	450,135	6,359.20
Other Non-Recreea- tional Lands		786	52,160	754.71
All Non-Recreea- tional Lands		117,010	1,077,035	14,036.90
Submerged Lands and Bagnell Dam		56,535	6,433,745	96,129.58
All Real Estate, 1939		224,566**	9,073,065	133,956.75
All Real Estate, 1928		237,971	2,962,385	44,358.84

* Plat acres are not figured in the acre totals. (1,290--
estimated plat acres.)

** There are fewer acres listed on the tax rolls in 1939
because of the land in this area that is now in the
publically owned Lake of the Ozarks Recreational Area.

Table II

Distribution of Taxable Real Estate in the Lake
of the Ozarks Area and Its Economic Benefit Area, 1939

Type	Number	Acres	Assessed Valuations	Taxes Levied
Summer Resorts	27	317	\$ 110,120	\$ 1,459.68
Fishing Resorts	113	2,510	189,395	2,914.05
Cabin Camps	42	434	91,620	1,384.95
Resort Hotels	15	65	62,280	1,161.75
Restaurants	18	53	31,400	513.45
Groceries	17	78	19,810	272.84
Gas Stations	14	22	14,670	253.11
Souvenir Stands	7	3	3,700	69.01
Taverns	5	14	1,920	24.61
Miscellaneous	23	186	44,350	675.22
Summer Residences	557	1,914	307,810	4,542.88
Recreational Clubs	17	3,295	182,620	3,362.08
All Recreational Real Estate		9,911*	1,055,695	16,633.53
Undeveloped Recreational Land		42,352	610,430	9,094.43
Farm Lands		48,549	594,360	7,037.85
Rough Forest Lands		70,975	473,595	6,655.00
Other Non-Recreational Lands		786	52,160	754.71
All Non-Recreational Lands		120,310	1,120,105	14,447.56
Submerged Land and Bagnell Dam		57,385	6,490,550	96,847.33
All Real Estate		229,157	9,276,780	137,022.65

* Estimated Acres in Platted Property--1,989.93 not included
in above totals.

Table III

Distribution of Real Estate
in Platted Subdivisions, 1939

Type	Number	Assessed Valuations	Taxes Levied
Summer Resorts	6	\$ 26,350	\$ 383.17
Fishing Resorts	22	41,430	737.75
Cabin Camps	3	2,950	36.47
Resort Hotels	7	25,350	413.30
Restaurants	7	10,600	146.43
Groceries	6	7,500	86.56
Gas Stations	1	900	10.17
Miscellaneous	4	3,400	41.63
Summer Residences	346	159,360	2,157.06
Recreational Clubs	1	24,680	323.64
All Recreational Real Estate		299,490	4,336.18
Undeveloped Recreational Land		61,160	859.10
Non-Recreational Land		4,975	55.53
All Real Estate in Platted Subdivisions		365,625	5,250.81

Table IV

Total Non-Resident Fishing Permits Issued in the Lake
of the Ozarks Area for Period 1935 Thru 1939*

States	Year					Total
	1935	1936	1937	1938	1939	
Alabama	-	1	-	1	2	4
Arizona	1	3	1	8	5	18
Arkansas	37	30	54	49	58	228
California	11	22	36	47	48	164
Colorado	8	9	13	16	34	77
Connecticut	-	-	-	-	1	1
Delaware	1	-	-	1	-	2
Florida	-	1	-	5	2	8
Georgia	1	-	2	1	2	6
Hawaii	1	-	-	-	-	1
Idaho	-	-	1	1	-	2
Illinois	683	1,138	2,872	2,376	2,318	9,387
Indiana	84	117	182	171	160	714
Iowa	292	478	736	660	518	2,684
Kansas	1,772	2,308	3,315	3,366	2,893	13,654
Kentucky	2	6	15	18	25	66
Louisiana	1	3	2	3	6	15
Maine	-	-	1	-	-	1
Maryland	1	-	2	1	1	5
Massachusetts	-	1	2	3	10	16
Michigan	7	13	25	8	24	77
Minnesota	5	2	2	5	5	19
Mississippi	1	3	4	-	3	11
Montana	-	-	4	-	2	6
Nebraska	143	183	281	237	267	1,113
Nevada	1	-	1	-	-	2
New Jersey	1	1	3	6	4	15
New Hampshire	-	-	-	-	1	1
New Mexico	2	3	12	6	8	31
New York	6	10	18	11	9	54
North Carolina	-	-	1	3	2	6
North Dakota	1	-	-	-	-	1
Ohio	30	32	66	70	73	271
Oklahoma	378	625	855	734	672	3,464
Oregon	-	5	2	1	3	11
Pennsylvania	8	6	11	8	5	38
South Dakota	2	4	10	6	5	27
Tennessee	8	11	9	8	10	46
Texas	51	44	89	109	80	373
Utah	-	1	3	-	1	5
Venezuela	1	-	-	-	-	1

(Continued)

Table IV

(Continued)

Total Non-Resident Fishing Permits Issued in the Lake
of the Ozarks Area for Period 1935 Thru 1939*

States	Year					Total
	1935	1936	1937	1938	1939	
Virginia	-	-	3	2	5	10
Washington D. C.	-	5	2	-	3	10
Washington	1	-	-	2	2	5
West Virginia	1	3	3	6	4	17
Wisconsin	2	4	6	6	5	23
Wyoming	1	1	1	3	8	14
Totals	3,744	5,069	8,645	7,978	7,286	32,722
	<u>1,495</u>	<u>1,720</u>				
	5,239	6,789				

* Data for Miller County not broken up for 1935 and 1936.
Totals added in below.

Table V

Per Cent of Real Estate Tax
Base of Counties Included in Lake Study*

	Assessed Valuation of Intire County	Assessed Valuation in Area Studied	Per Cent of Total County Valuation Included in Study
<u>Benton County</u>			
Land	\$7,400,900.00	\$1,278,930.00	17.28
Town Lots	1,256,570.00	78,400.00	6.24
Total Valuation	8,657,470.00	1,357,330.00	15.68
<u>Carden County</u>			
Land	5,498,458.00	2,911,525.00	52.97
Town Lots	491,240.00	142,825.00	29.07
Total Valuation	5,989,698.00	3,054,350.00	51.01
<u>Miller County</u>			
Land	7,778,485.00	3,655,945.00	47.01
Town Lots	1,445,975.00	52,130.00	3.61
Total Valuation	9,224,460.00	3,708,075.00	40.21
<u>Morgan County</u>			
Land	5,971,557.00	861,040.00	14.42
Town Lots	1,115,378.00	92,270.00	8.27
Total Valuation	7,086,935.00	953,310.00	13.45

* Report, State Board of Equalization, 1939.

Table VI

Species of Food and Game Fish Found
in the Lake of the Ozarks*

Larger Game Fish

<u>Common Name</u>	<u>Scientific Name</u>
Large mouth bass, black bass, Oswego Bass, green bass.	<i>Aplites salmoides</i>
Small mouth bass, black bass, Oswego Bass, green bass, yellow bass.	<i>Micropterus dolomieu</i>
Spotted or Kentucky Bass.	<i>Micropterus pseudaplites</i>
Wall-eyed pike, jack salmon.	<i>Stizostedion</i> spp.
White or striped bass.	<i>Morone chrysops</i>

Pan Fish

Common crappie, white crappie, white bass.	<i>Pomoxis annularis</i>
Black crappie, spotted crappie, calico bass.	<i>Pomoxis sparoides</i>
Blue gill, blue sunfish.	<i>Lepomis macrochirus</i>
Long-eared sunfish.	<i>Xenotia megalotis</i>
Green sunfish, black perch.	<i>Ambloplites cyanellus</i>

Cat Fish

Channel cats.	<i>Ictalurus punctatus</i>
Blue cats	<i>Ictalurus furcatus</i>
Yellow cats	<i>Leptopoma</i>
Spoonbill cats	<i>Polyodon spatula</i>

Drum

White Perch or Sheepshead	<i>Sciaenidae</i> spp.
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Roughfish

Carp	<i>Cyprinus</i> spp.
Buffalo	<i>Oreochromis</i> spp.

* This check list was furnished by A. E. Weyer, C. Commis-
sion Biologist, stationed at the Lake of the Ozarks, and
represents the fish most commonly creeled by fishermen
and is not necessarily a complete list of all fish found
in the Lake.

Table VII

Number and Per Cent of Total Non-Resident Fishing
Permits Issued in Benton County, 1935 Thru 1939*

State	Number	Per Cent
Kansas	2,239	72.25
Iowa	285	9.20
Oklahoma	173	5.58
Nebraska	149	4.81
Illinois	100	3.23
Texas	32	1.03
California	32	1.03
Arkansas	19	.61
Indiana	11	.35
Michigan	9	.29
Ohio	7	.23
Colorado	6	.19
New York	6	.19
New Jersey	5	.16
Arizona	3	.10
Pennsylvania	3	.10
South Dakota	3	.10
Wyoming	2	.07
Oregon	2	.07
New Mexico	2	.07
Minnesota	2	.07
Delaware	1	.03
Florida	1	.03
Hawaii	1	.03
Kentucky	1	.03
Mississippi	1	.03
Tennessee	1	.03
Utah	1	.03
Venezuela	1	.03
Wisconsin	1	.03
Totals	3,099	100.00

* Data obtained from County Clerk's records of the sale of non-resident fishing permits.

Table VIII

Number and Per Cent of Total Non-Resident Fishing
Permits Issued in Camden County 1935 Thru 1939*

State	Number	Per Cent
Kansas	6,493	35.18
Illinois	5,997	32.49
Oklahoma	2,708	14.68
Iowa	1,393	7.54
Nebraska	340	2.92
Indiana	353	1.91
Texas	232	1.36
Ohio	169	.92
Arkansas	165	.89
California	66	.36
Colorado	42	.23
Kentucky	40	.22
Michigan	38	.21
Tennessee	32	.17
New York	29	.16
Pennsylvania	21	.11
New Mexico	12	.07
South Dakota	12	.07
Arizona	10	.05
Mississippi	10	.05
West Virginia	10	.05
Louisiana	8	.04
Washington D. C.	7	.04
New Jersey	7	.04
Wyoming	6	.03
Minnesota	6	.03
Oregon	5	.03
Wisconsin	4	.02
North Carolina	3	.02
Alabama	2	.01
Florida	2	.01
Maryland	2	.01
Massachusetts	2	.01
Montana	2	.01
Nevada	2	.01
Washington	2	.01
Utah	1	.005
Virginia	1	.005
Rhode Island	1	.005
North Dakota	1	.005

(Continued)

Table VIII
(Continued)

Number and Per Cent of Total Non-Resident Fishing Permits
Issued in Camden County 1935 Thru 1939*

State	Number	Per Cent
New Hampshire	1	.005
Maine	1	.005
Georgia	1	.005
Delaware	1	.005
Totals	18,459	100.000

* Data obtained from County Clerk's records of the sale of non-resident fishing permits.

Table IX

Number and Per Cent of Total Non-Resident Fishing
Permits Issued in Miller County 1937 Thru 1939*

State	Number	Per Cent
Illinois	2,460	46.18
Kansas	1,371	25.74
Iowa	839	10.12
Oklahoma	394	7.39
Indiana	186	2.36
Nebraska	116	2.17
Texas	52	.97
Ohio	51	.96
California	38	.71
Arkansas	32	.60
Kentucky	19	.36
Colorado	15	.28
Michigan	15	.28
New Mexico	13	.24
Wisconsin	10	.19
New York	10	.19
Tennessee	9	.17
Pennsylvania	7	.13
Virginia	7	.13
South Dakota	6	.11
Montana	4	.08
West Virginia	4	.08
Washington	3	.06
Minnesota	3	.06
Louisiana	3	.06
Georgia	3	.06
Wyoming	2	.04
Oregon	2	.04
North Carolina	2	.04
Maryland	2	.04
Washington D. C.	1	.02
Utah	1	.02
New Jersey	1	.02
Massachusetts	1	.02
Idaho	1	.02
Florida	1	.02
Connecticut	1	.02
Arizona	1	.02
Totals	5,326	100.00

* Data obtained from the County Clerk's records of the sale of non-resident fishing permits.

Table X

Number and Per Cent of Total Non-Resident Fishing
Permits Issued in Morgan County 1936 Thru 1939*

State	Number	Per Cent
Kansas	3,551	60.83
Illinois	830	14.22
Iowa	465	7.97
Nebraska	308	5.28
Indiana	224	3.84
Oklahoma	209	3.58
Ohio	44	.75
Texas	37	.63
California	28	.48
Michigan	15	.26
Colorado	14	.24
Massachusetts	13	.22
Arkansas	12	.21
New York	9	.15
Wisconsin	8	.14
Minnesota	8	.14
Pennsylvania	7	.12
South Dakota	6	.10
Kentucky	6	.10
Arizona	4	.07
Florida	4	.07
Louisiana	4	.07
New Mexico	4	.07
Tennessee	4	.07
Wyoming	4	.07
West Virginia	3	.05
Washington D. C.	2	.03
Virginia	2	.03
Utah	2	.03
Oregon	2	.03
New Jersey	2	.03
Georgia	2	.03
Alabama	2	.03
North Carolina	1	.02
Massachusetts	1	.02
Idaho	1	.02
Totals	5,838	100.00

* Data obtained from County Clerk's records of the sale of non-resident fishing permits.

Table XI

Number of Lots Platted and Sold
in Lake Counties, 1939

County	Lots Platted	Lots Sold	Per Cent Sold
Candlen	4,442	977	22
Benton	2,971	623	20
Miller	327	29	9
Morgan	1,392	305	22
Total	9,132	1,934	21

Table XII

Assessed Valuations, Camden County 1929--1939*

Year	Total	Real Estate		Personal	Merch. & Mfrs.	Railroad and Public Utilities
		Land	Town Lots			
1929	\$5,637,686	\$3,798,380	190,290	\$1,196,814	\$107,886	\$344,316
1930	5,815,931	3,805,190	187,785	1,385,107	108,914	351,215
1931	5,408,427	3,884,730	196,315	832,154	93,139	402,089
1932	5,859,450	4,156,366	313,458	716,469	82,315	588,875
1933	6,609,092	4,768,338	410,670	654,286	80,116	695,682
1934	7,424,618	5,444,991	438,290	772,316	72,005	697,016
1935	7,332,394	5,493,243	395,180	623,198	71,970	748,813
1936	7,447,002	5,504,870	438,240	690,678	79,060	733,954
1937	7,840,503	5,493,390	481,610	699,163	102,616	763,724
1938	7,656,728	5,461,723	485,240	849,423	93,645	766,697
1939	7,599,427	5,496,458	491,240	761,250	94,805	755,674

* Data from Reports of State Board of Equalization.

Table XIII

Number of Plats and Lots

(Registered in Camden, Benton, Miller, and
Morgan Counties, 1930-1939.)

Year	Camden		Benton		Miller		Morgan		Total	
	Plats	Lots	Plats	Lots	Plats	Lots	Plats	Lots	Plats	Lots
1930	1	1,373	2	2,189	..	..	..	..	3	3,562
1931	3	683	3	374	1	174	2	520	9	1,582
1932	7	888	1	32	1	153	2	53	11	1,330
1933	2	65	2	88	..	...	2	104	6	257
1934	1	217	.	...	..	...	1	58	2	275
1935	5	319	1	41	..	...	2	55	8	446
1936	4	521	.	...	..	...	..	...	4	527
1937	5	226	2	247	..	...	3	444	10	919
1938	2	143	.	...	..	...	3	70	5	213
1939	.	...	.	...	..	...	1	27	1	27
Total	50	4,442	11	2,971	2	327	16	1,392	59	9,132