RECREATIONAL GEOGRAPHY

OF THE LAKE TEXOMA

FEGION

By

DAVID T. W. STEVENS "," Bachelor of Science Southeastern State College

Durant, Oklahoma

1932

Submitted to the faculty of the Graduate School of the Oklahoma Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE May, 1953

OKLAHOMA AGRICULTURAL & MECHANICAL COLLEGE LIBRARY

DEC 10 1953

RECREATIONAL GEOGRAPHY OF THE LAKE TEXOMA

RT GI ON

Thesis Approved:

Edward Res Thesis Adviser Robert Cozite

Dean of the Graduate School

PFF FACE

The impoundment of Lake Texoma during World War II introduced many people of Oklahoma and Texas to their first experiences with an expansive body of water. An increasing demand for its development as a recreational area led to a study from which a master plan was evolved and later set in motion. Since the inception of this plan the popularity of Lake Texoma has grown until it reached a peak of over four million visitors in 1950. The writer, residing near the lake, became keenly interested in the changes brought about by this intensive recreational usage.

The purpose of this study is to determine the origin of these visitors, their reasons for coming, the geographical influences involved and some of the resultant economic impacts upon a region consisting of the counties contingent to the lake.

In the collection of materials for this study over three hundred interviews were conducted. Only those quoted, or of particular significance, are included in the bibliography. For other interviews, the writer owes thanks to many people not mentioned including concessioners, chamber of commerce officials, county and city officials, newspaper editors and reporters, utility officials, owners or operators of cafes, tourist courts, theaters, service stations and other businesses, sportsmen and visitors in this region.

The writer is especially grateful to Mr. J. F. Wilson, Feservoir Manager of Lake Texoma, who gave generously of his time in interviews and literally opened his files for examination; to Dr. J. Stanley Clark, who made the facilities of the Oklahoma Planning and Pesources Board available to the writer; and to Dr. John W. Morris of the University of Oklahoma for valuable suggestions and personally collected data.

The writer owes an incalculable debt to the staff members of the Geography Department of Oklahoma A. and M. College, who gave invaluable assistance and by their own industry set an example for the writer; to Dr. Edward E. Keso, Head of the Department, under whose direction this study was prepared, for his council and guidance, as well as, his patience with the writer; and to his wife, Madeline Stevens, secretary and inspiration for this study.

iv

TABLE OF CONTENTS

Chapter		Page
Ι.	INTRODUCTION	1
	Origin of the Lake Texoma Project	1
	Construction of Denison Dam and Auxiliary Dikes	3
11.	LAKE TEXOMA AND THE LAKE TEXOMA FEGION	9
	The Reservoir	9
	Location and Accessibility	11
	Tonography, Soils, and Drainage	16
	Climate of the Region	20
	HISTOFICAL FEATURES OF THE LAKE TEXOMA REGION	24
	Forly Inhobitants and Evalorers	21
	Md Preston	26
	Band Weshidts	20
	Fort Washita	29
	Other Historical Features of the Region	31
IV.	FACTORS INFLUENCING FECFF ATIONAL DEVELOPMENT	33
	People and Recreation	33
	Population	35
	Other Factors Influencing Development	41
v.	RECREATIONAL USAGE	45
	Recreational Areas	45
	Fishing, Hunting, Boating and Other Fecreational	
	Activities	61
VT.	SOME ECONOMIC IMPACTS AND CONCLUSIONS	70
	COME RECORDERED ING HOLD AND CONCLUCTIONS	10
	Economic Impacts	70
	Conclusions	82
APPENDI	x	87
	A. Number of Visitors to Specific Areas as Indicated by	
	Traffic Counters with Opinion as to Origin	87
	B. Visitors to the Lake Texame Powerhouse during 1950	88
	C. Private Boat Registrations on Lake Texoma as of	00
	July 1, 1951	89

D.	Summary of Register Count-Burn's Run Resort	90
E.	Summary of Register Count-Willow Springs Resort	91
F.	Summary of Register Count-Catfish Bay Resort	92
G.	Origin of Cars Requesting Information at Denison	
	Highway Information Office	93

vi

Page

LIST OF TABLES

Table		Page
і.	Preliminary and Final Specifications of Denison Dam Project	5
п.	Ten Greatest Reservoirs of the United States	11
ш.	Average and Extreme Climatic Conditions, 1935-1952	22
IV.	Population Changes in the Lake Texoma Region	36
۷.	Population Distribution, 1950	39
VI.	Changes in Rural-Urban Population Since 1890	40
VII.	Population Characteristics1940 Census	42
VIII.	Sale of Hunting and Fishing Licenses from 1943, to 1949, in Bryan, Johnston, Marshall and Love Counties of	
	Oklahoma	66
IX.	Theaters of the Texoma Region	69
x.	Lake Texoma Attendance in Visitor Days	71
XI.	Number and Origin of Cars Visiting Specified Recreational Areas in 1950	73
XII.	Summary of Boat Registrations and Register Counts with Respect to Distance from Lake of Owner or Visitor	74
XIII.	Regional and Seasonal Distribution of Out-of-State Cars Stopping at the Texas Highway Department Information Office	76
XIV.	Lake Texoma Region Eating and Drinking Places and Service Stations-1939 and 1948	78
xv.	Beer Licenses in Lake Texoma Region from 1940 to 1950 by Counties	79
XVI.	Lodging Places of the Lake Texoma Region	81

LIST OF ILLUSTRATIONS

Fi	gure		Page
	1.	The Lake Texoma Region Showing Location and Other	
		Existing and Proposed Lakes	4
	2.	Lake Texoma RegionTransportation	14
	3.	Population Distribution	38
	4.	Lake Texoma RegionTraffic Flow	44
	5.	Lake TexomaLocation of Recreational Areas	47
	6.	Pecreational AreasEastern Part	50
	7.	Recreational AreasWestern Part	52
	8.	Recreational AreasNorthern Part	54

CHAPTER I

INTRODUCTION

Origin of the Lake Texoma Project

Many persons, prior to 1938, gave enthusiastic support to a government project to control the devastating floods of the Red River in the four state area of Oklahoma, Texas, Arkansas, and Louisiana. To this end the Red River Improvement Association, composed of many prominent citizens of these states was organized and became active in seeking approval of such a project. However, it is generally agreed that the one person largely responsible for bringing about the realization of what often seemed a dream, was the Honorable Sam Rayburn, Speaker of the National House of Representatives and a resident of Bonham, Texas.

The project was authorized by the Flood Control Act of June 28, 1938 (52 Statute 1215), which provides in part as follows:

Section 4-The Denison Reservoir on Red River in Texas and Oklahoma for flood control and other purposes as described in House Document 541, Seventy-fifth Congress, third session, with such modifications thereof as in the discretion of the Secretary of War and the Chief of Engineers may be advisable, is adopted and authorized at an estimated cost of \$54,000,000.

Although flood control and water storage for the creation of hydroelectric power are the primary purposes of the project it was realized, of course, that valuable recreational facilities would be created by the reservoir. A preliminary survey, conducted by the National Park Service at the request of the Honorable Sam Rayburn in 1941, revealed that the recreational possibilities of the reservoir, then in the process of construction, were of sufficient importance to justify a detailed survey and plan. Subsequently, a special appropriation made under the authority of the Park, Parkway, and Recreation Study Act of June 23, 1936, enabled the National Park Service to initiate the survey. Experienced technical and clerical personnel with headquarters established at Denison, Texas, worked from January of 1942 to October of 1943 in making a detailed survey of the recreational resources. From this survey was evolved a master plan which, though very complete, had many faults.¹ Future revisions corrected most of the faults.

After Pearl Harbor and the entrance of the United States into World War II, it was not practicable to undertake the full development of the recreational facilities of the lake, nor was private enterprise interested in developing recreational resources at that time. One thing, though, was settled during the war when Congress passed a resolution on September 23, 1944, making Texoma the official name of the new lake. This was suggested locally by combining the first three letters of the name Texas with the last three of Oklahoma.²

A cooperative agreement was made between the National Park Service, Department of Interior, and the Corps of Engineers, Department of the Army, effective April, 1946, by which the development and administration were transferred to the National Park Service. This agreement was cancelled, effective July 1, 1949, and the administration of the project reverted back to the Corps of Engineers.³ It was during these three years that

¹ United States Department of Interior, National Park Service, <u>Recreational Resources of the Denison Dam and Reservoir Project</u>, (Washington, Government Printing Office, 1943), pp. 49-98.

² Durant Daily Democrat, September 24, 1944, p. 1.

³ United States Army, Corps of Engineers, <u>Lake Texoma Recreational</u> <u>Area, Preliminary Plan of Improvement for Public Use Facilities</u>, (Tulsa, July, 1949), p. 2. (Mimeographed.)

most of the development of private concessions on the lake took place. The first public use of the lake, however, was recognized in 1945 by the initial advertising and leasing of seven concession areas on short-time leases, private homesites, and private club areas.⁴

Construction of Denison Dem and Auxiliary Dikes

Demison Dam is located on the Red River just below its point of confluence with the Washita River at a location which lies 630 miles by water (345 miles airline) from the mouth of the Red River at the Mississippi in Louisiana, and which is 435 miles by water (330 miles airline) from the source of the Red located near the New Mexico border in the Texas Panhandle. From the northern end of the dam, Durant, Oklahoma, is 14 miles airline distance and bears almost due northeast. Demison, Texas, is located four miles south of the dam and the city limits of Dallas are 66 airline miles away, in a south by west direction.

The construction of Demison Dam was begun in the early part of 1940 after plans, specifications, and estimated costs, totaling approximately \$50,000,000 were filed with and approved by the War Department. These plans included the construction of the main dam embankment, a powerhouse, outlet works, and a spillway. In addition, the cost included the installation of a hydroelectric power plant, the purchase of about 187,000 acres of land, removal of timber from the reservoir area, relocation of thirty miles of railroad, forty miles of highways, nineteen miles of communication lines, twenty-four miles of transmission lines, erection of a railway bridge 4070 feet in length across the Washita Arm and a highway traffic bridge on U. S. Highway 70 between Durant and Kingston over the Washita Arm. The cost also involved the removal of many farm homes and improvements,

4 Ibid., p. 1.



Fig. 1

the removal of five towns (Aylesworth, Woodville, Powell, and Ison Springs in Oklahoma, and Hagerman in Texas), and the relocation of over two thousand graves in forty-nine cemeteries into eleven new cemeteries.⁵

A preliminary survey by the Corps of Engineers, decided upon a flood control pool or spillway level of 660 feet above mean sea level. In the final plans this was lowered to 640 feet in order to prevent the partial inundation of Tishomingo and the site of the old Chickasaw Capitol.

A comparison between the preliminary and final plans follows:

TABLE I

165 ft.
1 = 200 01
15,200 IT.
40 ft.
640 ft.
2,000 ft.
17,500,000 cu. yds.
1.1 mi.
5 power 3 flood
5,825,000 acre ft.
617 ft.
1/5 500 serves

PRELIMINARY AND FINAL SPECIFICATIONS OF DENISON DAM PROJECT

⁵ Henry MacCreary, <u>Queen of Three Valleys-A Story of Durant</u>, (Durant Democrat Printing Co., Durant, Oklahoma, 1945) p. 108.

⁶ <u>Demison Herald</u>, June 29, 1944, p. 18.

The project was designed by and constructed under the direction of the Corps of Engineers, Denison, Texas District. Contracts for the various features of the project were awarded after competitive bidding. The Schutt Construction Company of Genca, Wisconsin, was given notice to proceed on the initial contract of clearing 630 acres of land at the dam site on August 22, 1939. The next contract was for escavation for the outlet works and was awarded to the George W. Donden Company and John Kerns Construction Company. The third contract was awarded to the C. F. Lytle Construction Company and provided for construction of outlet works consisting of a paved approach channel, the intake structure, service bridge and eight reinforced concrete conduits, five of which were steel-lined power conduits. The fourth contract was awarded to the Guy F. Atkinson Company of San Francisco, California, for the construction of the rolled earth-fill embankment and excavation of the spillway. The C. F. Lytle Company of Sioux City, Iowa, completed the spillway and constructed the power house with one generating unit. The turbine was supplied by the S. Morgan Smith Company and the generator by the Westinghouse Electric Corporation. The Denison Dam was essentially completed and in operation for flood control in 1944. Shortly thereafter the reservoir thus created was by Act of Congress officially designated as Lake Texoma. The cost of the dam, dikes, powerhouse and appurtenant structures, lands and relocations has been \$55,496,789 to December 31, 1947.

During the construction over 3000 separate contracts and 27,788 purchase orders were issued. At the peak of the work, 5,219 men were employed and an estimated twenty-three million man hours of labor were expended. The excavation of the spillways alone called for the removal of eleven million cubic yards of earth and approximately one and one-half million pounds of dynamite were used in the construction of the dam, spillway and reservoir.⁸

The Missouri, Kansas and Texas Railroad on a three mile spur built from the main rails to the dam site shipped 19,509 cars of freight,⁹

North of the dam and immediately south of the town of Platter a 5,800 foot levee or dike extension was built across an area of low relief to prevent water at high stages from by-passing the spillway and cutting a

⁷ U. S. Army, Corps of Engineers, <u>Denison Dan and Lake Texoma</u>, March 1948, p. 2. (Mimeographed.)

⁸ Denison Herald, June 29, 1944, p. 4.

⁹ Ibid., p. 5.

channel.¹⁰ This protective levee has become known as the Platter Dike.

An unforseen problem involving the building of another set of levees developed after the construction of the original project was begun. This was caused by the discovery of a valuable oil field in the vicinity of the village of Cumberland, Oklahoma, by the Pure Oil Company. From their first test well, drilled in May of 1940, a field of about seventy producing wells had, by April 1943, developed along the Washita River for a distance of about three miles.¹¹

Since the cost of acquiring oil lands for reservoir purposes was prohibitive, it was decided by the Corps of Engineers, after a series of conferences with Pure Oil Company officials to divert the flow of the Washita to the east by means of dikes and new channel cuts.

After an appropriation for this purpose was authorized by Congress, a contract was entered into for the construction of this additional reservoir project. The work was begun in April, 1943, and completed in May, 1944, at a total cost of \$5,200,000. This work consisted of cutting two new channels extending in a northwest-southeast direction, the upper one being 3000 feet long and six hundred feet wide, and the lower one six thousand feet long with a base width of three hundred fifty feet and an average depth of seventy feet. Two dikes or levees were built astride the Washita channel, which dammed the river and guided the water to the new channels. The upper dike is seventeen thousand feet in length and the lower one measures six thousand three hundred feet. Both rise eighty-six

10 McCreary, op. cit., p. 100.

U. S. Department of Interior, National Park Service, <u>Recreational</u> <u>Resources of the Denison Dam and Reservoir Project</u>, (Washington, Government Printing Office, 1943), p. 4.

feet above the old river channel and inter-connect strategically with natural ridges.¹²

The earthen material removed in making the two river channels was used in building the two dikes, and the work involved handling about 8,000,000 cubic yards, almost half as much as used in the embankment of the Denison Dam.¹³

These Cumberland Dikes, as they are now named, effectively divided the northern part of Lake Texoma into two sections, known as the Upper and Lower Washita Arms, and reduced the size of the reservoir by about seven thousand four hundred acres (eleven and one-half square miles).

With the completion of the work described above, impoundment of the waters began. Contrary to many local estimates, the lake was virtually filled to the power pool level by the end of 1945.

This study will be of the recreational usage of this new body of water. It will survey the recreational facilities of the lake. It will attempt to determine the origin of the many visitors to the lake and their reasons for coming. It will try to point out the geographical influences involved and to measure some of the resultant economic impacts upon a region consisting of the six counties contingent to the lake; namely, Grayson and Cooke Counties in Texas; and Bryan, Marshal, Love, and Johnston Counties in Oklahoma. These counties, collectively, will be referred to throughout this study as the <u>Lake Texoma Region</u>.

- 12 MacGreary, op. cit., p. 112.
- 13 MacCreary, op. cit., p. 113.

CHAPTER II

LAKE TEXOMA AND THE LAKE TEXOMA REGION

The Reservoir

Lake Texoma, created by the Denison Dam and shaped by the accessory dikes, is an irregular body of water sprawling along the Red River border of Texas and Oklahoma with one arm extending northward through the Washita River Valley and another large arm reaching southward through a cut made by Big Mineral Creek.

Virtually all of the construction work, except for the Cumberland Dikes and some relocations, were completed by early 1944. On February 21, 1944, the intake and flood gates were closed and the lake began to form.¹

The reservoir was designed for a full power-pool level of six hundred and seventeen feet and a maximum flood control pool of six hundred and forty feet. Studies conducted by the Army Engineers have shown that during the last fifty years rainfall in the basin area above the dam has been great enough only one time to fill the lake to its spillway crest. This was during the severe spring floods of the year 1908.² Originally the Army Engineers had planned to purchase only the lands up to the six hundred twenty foot contour and to obtain flowing easements up to six

Durant Daily Democrat, February 21, 1944, p. 1.

² United States Department of Interior, National Park Service, <u>Recreational Resources of the Demison Dam and Reservoir Project</u>, (Washington: Government Printing Office, 1943) p. 5.

3 Ibid., pp. 7-8.

The final recognition of the area as a valuable recreational resource \checkmark greatly influenced a later decision to purchase all lands up to the six hundred forty foot contour line. Consequently, a total of 194,775 acres of land were acquired by the Corps of Engineers.⁴ It is estimated that when the lake reaches the six hundred forty foot level it will have an area of approximately 146,000 acres (105,000 acres, or 72 per cent, of which will be in Oklahoma and 41,000, or 28 per cent, in Texas).⁵ Normally the level of the lake will be maintained by the Chief of Engineers at the power pool level of six hundred and seventeen feet or lower. It is estimated by the Engineers that at the power pool level the lake occupies about minety-five thousand acres, 65 per cent in Oklahoma and 35 per cent in Texas.⁶ The lake length measured along the Red River bed is about seventy-eight miles and the width measured along the beds of the Washita River and Big Mineral Creek totals sixty-two miles.

Denison Dam is, according to the Engineers, the largest rolled earth-fill dam in the world, a point much advertised locally. It is also claimed locally to be the "fourth largest artificial lake in the United States," though actually its size, in flood pool area, ranks seventh and its capacity in acre feet ranks fifth among completed reservoirs, according to figures from the Department of Interior, Bureau of Reclamation.

⁴ J. E. Wilson, Reservoir Manager of Lake Texoma. <u>Personal Interview</u>, July 15, 1951.

⁵ Henry MacCreary, <u>Queen of Three Valleys-A Story of Durant</u>, (Durant: Democrat Printing Company, 1945) p. 110.

⁶ United States Army Corps of Engineers, Lake Texoma Recreational Area, <u>General Information for Visitors</u>, (Mimeographed - 1952).

TABLE II

TEN GREATEST RESERVOIRS OF THE UNITED STATES

A. Area at Highest Controlled Stage

Name	State	River	Area in Acres
Lake Okeechobee	Florida	Caloosahatchee	463,400
Garrison	N. Dakota	Missouri	390,000*
Oahe	S. Dakota	Missouri	298,000*
Kentucky	Ky-Tenn.	Tennessee	261,000
Fort Peck	Montana	Missouri	245,000
Rainy Lake	Minnesota	Rainy	221,000
Leech Lake	Minnesota	Leech	160,540
Lake Mead	ArizNev.	Colorado	157,740
Lake Texoma	OklaTexas	Red	146,000
Flathead Lake	Montana	Flathead	120,880
			-

*Under construction-subject to revision.

B. Capacity

Name	State	River	Acre-feet	
Lake Mead	ArizNev.	Colorado	31,142,000	
Garrison	N. Dakota	Missouri	23,000,000*	
Oahe	S. Dakota	Missouri	21,801,000*	
Ft. Peck	Montana	Missouri	19,417,000	
Roosevelt Lake	Wash.	Columbia	9,517,000	
Ft. Randall	S. Dakota	Missouri	6,281,000*	
Wolf Creek	Kentucky	Cumberland	6,089,000*	
Kentucky	KyTenn.	Tennessee	6,003,000	
Lake Texoma	OklaTexas	Red	5,825,000	
Bull Shoals	Arkansas	White	5,407,000	

*Under Construction-Subject to revision.

Location and Accessibility

The entire region of Lake Texoma lies within the "cross timbers," an area of thick woods and sandy soil that was well known to early visitors of this section. The "cross timbers" extend from southern Kansas across the central part of the entire state of Oklahoma and extend into Texas several miles south of Dallas. Post oak and black jack were the characteristic trees of the "cross timbers," but in the Red River bottoms and along the Washita and other streams, tributary to the Red River, are many other types of trees, principally elm, hackberry, cottonwood, walnut, hickory, pecan, ash, redbud, willow, and bois d'arc. The bois d'arc, known also as Osage orange, attains its greatest size in America in the Red River Valley.⁷

On the Texas side, notably on the Preston Peninsula, are many junipers, which evidently have been called "cedars" by the people of the area since pioneer days, as witness the fact that there are two Cedar Creeks in the area. (Cedar Bayou is one of the recreational sites). In Cooke County may be seen mesquite, which is more prevalent further west. Though this area was heavily timbered in the early days, most of the land except for hills, slopes, and creek bottoms has been cleared, and the merchantable timber, mostly hard wood, removed. Of late years, the native pecan has been the chief forest product of the region and was a valuable source of income. One of the chief complaints of farmers in regard to appraisal of their lands by the Federal Government, prior to purchase, was the failure to consider the value of the native pecan trees.

At one time, bison, black bear, deer, cougar, red wolf, and wild turkey were prevalent in the region. All have now disappeared, except the red wolf and a few deer. The Texas side of the lake has been inhabited and developed for over a century. Consequently, game disappeared earlier there than on the Oklahoma side, which had a much later development.

⁷United States Department of Interior, National Park Service, <u>Recreational Resources of the Demison Dam and Reservoir Project</u>, (Washington: Government Printing Office, 1943) p. 15.

Typical small animal life, such as the cottontail rabbit, jack rabbit, gray squirrel, opossum, striped skunk, and fox still abound. The area also lies within the Central Flyway, which is a major waterfowl migration route.

The reservoir area is directly served by five major highways--U. S. 69, 70, 75, 77, and 82, and several state highways as shown in Figure 2. All of the Federal highways are paved and are used by four major motor bus transportation companies and three minor companies. Grayson County, between the dam and the Big Mineral arm of the lake, has more miles of black topped, or all weather, roads than any other section. Love County in Oklahoma and Cooke County in Texas, vie with each other for the poorest roads of the area. The road leading north from Pottsboro toward the Preston Peninsula has recently been widened and black topped for about five miles. Future plans call for improvement of this road all the way to the end of the peninsula. Another future development, which may come about soon, is the building of a north-south bridge in the vicinity of Willis, Oklahoma, which would connect with the newly created Federal Highway 377, which at this time has its northern terminal at Whitesboro, Texas.⁸ A report by the Corps of Engineers, made in February of 1952, advised against the granting of funds by the Government for this purpose, but a strong appeal is being made by the people of the area to the Government through their Congressmen and Senators.9

Access by rail to the larger towns of the vicinity is provided by major trunk line railroads. The Missouri, Kansas and Texas Line ("Katy"), serves Sherman, Denison, and Durant. The St. Louis and San Francisco Line ("Frisco") serves the above-named towns and also Kingston, Madill, and

⁸ Durant Daily Democrat, April 9, 1952, p. 1.

⁹ Daily Oklahoma, Oklahoma City, March 16, 1952, p. B-3.



Fig. 2

Ravia. The Gulf, Colorado and Santa Fe Line serves Marietta and Gainesville and the Kansas, Oklahoma and Gulf serves Durant and Denison. In addition to these three, is a branch line of the "Katy" from Denison, through Pottsboro and Whitesboro, to Gainsville and freight lines of the Southern Pacific and the Texas and Pacific that serve Denison and Sherman. The last two tranship over the Kansas, Oklahoma and Gulf into Oklahoma. Tishomingo formerly was served by a branch of the Rock Island Railroad', but this was abandoned several years before the construction of the reservoir. Thus it is the only city without rail service and must use the "Frisco" at Ravia, which fortunately is only four miles away. The Texas Electric Railroad formerly gave hourly service between Denison and Dallas, but it was abandoned in 1948.

The Lake Texoma Region is intensively served by the Central Airlines, which makes regular four-a-day landings, at Gainesville, Durant, and Sherman-Denison. The Central Airline planes connect with major airlines at Dallas, Ft. Worth, Tulsa, Oklahoma City, Wichita, and Amarillo. Recently they have received certification from the Civil Aeronautics Board to extend their service to Lawton, Little Rock, Shreveport, and Memphis.¹⁰

Durant has the best airport, hangar, and servicing facilities of any of the regional cities; but Gainesville, too, has more than adequate facilities, being able to handle anything smaller than a B-29. These two cities fell heir to installations developed during World War II. Durant's airport was constructed by the Navy and used as a training base while Gainesville now has the former Gainsville Army Airfield. Sherman and Denison use the same airport, a one hundred and sixty acre tract just

10 Durant Daily Democrat, March 30, 1952, p. 1.

outside of Sherman. Denison also has a smaller field east of the city limits. Practically all of the towns of the area have landing strips and numerous auxiliary landing strips are scattered throughout the area for use by the cadets at Perrin Air Force Base, located southwest of Denison. Perrin Field also operates a twenty-four foot, ninety-five horse power crash boat equipped with radio and emergency equipment to rescue pilots that are downed in the lake. Ardmore, Oklahoma, which is in Carter County just outside our Lake Texoma Region, but within fifteen miles of the lake, has recently been approved by the House Armed Services Committee for a government-built airport to cost \$14,000,000.¹¹

Topography, Soils, and Drainage

Elevations in the vicinity of the reservoir, range from five hundred feet above mean sea level at the base of the dam, to about eight hundred fifty feet in the central part of Marshall County near Madill, Oklahoma. Altitudes of above one thousand feet are found in the six-county region in northwestern Johnson County and in southwestern Cooke County. For the seventy-eight miles of river now included in the reservoir the decline of altitude was about one hundred twenty-five feet, or a gradient of 1.6 feet per mile.¹² Surface formations throughout the region slope generally east and south toward the Gulf of Mexico. The overall topography of the region could be described as rolling to hilly. The Texas shore of the lake is much steeper than the Oklahoma side and, thus, rising waters inundate more of Oklahoma, while changing very little the portion of Texas that becomes inundated. It is interesting to note here that a famous

11 Daily Oklahoman, Oklahoma City, July 13, 1951, p. 1.

¹² United States Department of Interior National Park Service, <u>Recreational Resources of the Denison Dam and Reservoir</u>, (Washington: Government Printing Office, 1943), p. 28.

court decision was once made over the Texas-Oklahoma boundary in respect to the Red River. The exact boundary was disputed between the two states due to oil having been discovered under the river bed. In making a final decision, the courts compiled nine volumes of evidence and record and finally awarded Oklahoma all lands and waters to the original south cut bank of the Red River.¹³ Technically, therefore, the Denison Dam lies almost entirely within the state of Oklahoma, but this writer finds that most authorities give its location erroneously as Texas.

The dominant soils of the region are the Black Prairie soils, the Timberbelt soils and soils derived from the Trinity sand.¹⁴ The Black Prairie soils, derived from the weathering of limestone are found in a large area covering most of Bryan, Marshall, and Grayson counties. Northern Johnston county and an area surrounding Marietta in Love county are other smaller regions. These soils vary in color from dark brown to black and have proved very good for such crops as cotton, corn, and small grains. The Timberbelt soils, including the Kirvin-Durant and Kirvin-Norfolk types found in Bryan, Grayson, and Cooke counties are non-calcerous, sandy, and gravelly. They predominate in the rolling to hilly land that was formerly covered with scrub oak and blackjack. Cotton, corn, peanuts, and popcorn are raised on these soils. The Trinity sand type found extensively

¹³ Grant Foreman, "Red River and the Spanish Boundaries in the Supreme Court," <u>Chronicles of Oklahoma</u>, Vol. II, No. 3, (September, 1924) pp. 305-310.

¹⁴ John Stogner, County Agent of Bryan County, Oklahoma. <u>Personal</u> <u>Interview</u>, February 20, 1952. Mr. Stogner furnished several personal maps and papers and obtained loans of materials from other county agents for the writer. Most helpful were a descriptive map published by The Samuel Roberts Noble Foundation of <u>Soil Areas in South Central Oklahoma</u> (Ardmore, Oklahoma: Undated) and W. T. Carter, <u>The Soils of Texas</u>, Texas Experiment Station Bulletin, Number 431 (College Station, Texas: Undated).

in Love County is rather poor and ill-adapted to the raising of cultivated crops. This area, as well as a large area of Marshall County, has suffered greatly from the effects of sheet and gully erosion. Although varied crops are still raised, most of the land is devoted to grazing. The Grand Prairie soils of Cooke County are also extensively devoted to grass lands.

In many places upstream from Denison Dam, in both the Red River and Washita basins, sheet and gully erosion are very severe.¹⁵ In the red plains sections of the Texas Panhandle and western Oklahoma, canyons, gullies, and bad lands are extensive due to the finely textured nature of the soils. Palo Duro Canyon in the Upper Red River basin represents the most eroded region. Siltation from these waters flowing into the reservoir constitutes one of the major problems. It is especially severe in the Upper Washita Arm and at the western end of the lake, although fine silt is being deposited generally throughout the entire reservoir. An early estimate gave the rate of siltation at 20,000 acre feet per year.¹⁶ The probable life of the reservoir before any serious encroachment by siltation would be about fifty years.

The Red River Basin above the Denison Dam contains about 30,500 square miles of which 21,700 are in Texas, 8,750 in Oklahoma, and 50 in New Mexico. The basin of Washita River contains 7,800 square miles of which 7,336 are in Oklahoma and 464 in Texas.¹⁷ The Red-Washita Basin,

¹⁵ United States Department of Agriculture, Soil Conservation Service, <u>Erosion Survey of the United States</u>. (Washington: Government Printing Office, March, 1935) Map, p. 22.

¹⁶ United States Department of the Interior, National Park Service. <u>Recreational Resources of the Denison Dam and Reservoir Project</u> (Washington: Government Printing Office, 1943) p. 4.

17 United States National Resources Committee, <u>Drainage Basin</u> <u>Problems and Programs</u>, (Washington: Government Printing Office, 1937) pp. 412-419. hence, drains 38,300 square miles representing forty-two per cent of the total basin area of the Red River. Prior to the building of the dam, a study by the Corps of Engineers over a period of eleven years, indicates an average annual run-off of 3,538,000 acre-feet in the Upper Red Basin exclusive of the Washita. This is more than half of the six million acre feet, which the engineers estimate the lake to hold when full (640-foot level).¹⁸ It exceeds the estimated 3,240,000 acre-feet that the lake holds at the power pool level (617 feet).¹⁹

Physiographically the Red and Washita Rivers flow from their sources on the Great Plains, and cross the southern extension of the Central Plains before they come together near Denison in the western limits of the Gulf Coastal Plain. The Washita also cuts across the Arbuckle Mountains of the Interior Highland province. The Denison Dam and Lake Texoma are both within the extreme outer limits of the Gulf Coastal Plain. The amount of rainfall in the basin varies from semi-arid at the source in the Texas Panhandle to humid at the Denison Dam.

Many local streams of the various counties drain directly into the lake. Due probably to poor communication that existed in the region up to only a relatively few years ago, these streams often have identical names; for example, this observer has found six different Rock Creeks (one in each of the contingent counties). Also there are three Sand, or Sandy Creeks, and two creeks each named Walnut, Hickory, Cedar, Sycamore, Briar (one of these is spelled "Brier"), Salt, Oil, and Mill.

¹⁸ Denison Herald. June 29, 1944, p. 12.

¹⁹ Writer's estimate.

Beginning in Central Texas at the 100th meridian and latitude 33° North, the January isotherm of 43° extends east-north-east across extreme southern Arkansas and thence across the northern portions of Mississippi. . . The area south of this line constitutes the humid sub-tropical region of the United States. . . .²¹

The Lake Texoma Region is located on the northwestern boundary of this climatic region, and has the general climatic characteristics of the region as a whole.

The mean yearly temperature for the region is about 64° F., comparable to that for the months of April and October. Mean temperatures for both July and August are approximately 83.5° F., while that for January, the coldest month, is 42° F., thus all months average at least 10° above freezing. January is the only month with the mean minimum temperature below freezing-Durant, Sherman, and Tishomingo recording averages below that point. Madill has a mean minimum of 32° for January, while Marietta and Gainesville experience mean minimum temperatures slightly above the freezing point. The lowest temperature observed at any of the six stations was on February 2, 1951, when -8° F. was recorded at Tishomingo (See Table III). Below freezing temperatures have characterized each year in January and/or February, but usually the length of the cold period is short. High summer temperatures in excess of 100° F. may be expected for brief periods from June to as late as September. The highest temperature observed in the area was 120° F. at Tishomingo on July 26, 1943. All six stations have recorded temperatures of 110° F. or higher.

²⁰ United States Weather Bureau, <u>Climatalogical Data</u>, Oklahoma Section (Oklahoma City), Texas Section (Houston, Texas). All figures cited are from Annual and/or Monthly Summaries for place and time indicated.

²¹ Thomas A. Blair, <u>Climatology</u> (New York: The Prentice Hall Co., Inc., 1942), p. 191. Skies in the region are usually clear, the average number of clear days for all stations being 190, while 94 are classified as partly cloudy and 31 as cloudy.

The growing season averages from 220 to 235 days in length, with the longer period of time being in the southeastern part of the region. Killing frosts may come as late as the middle of April or as early as the latter part of October. (See Table III)

The average annual rainfall of the Lake Texoma region during the period 1935-1952 was approximately 39 inches. Its large variation from year to year and month to month, however, is of constant concern. On the average, more rain falls in April and May than in any other months. Winter and summer are periods of least rainfall. Mean minimum rainfall varies from nothing for each station in August to 14.0 inches in April. The greatest yearly precipitation observed was 62 inches at Tishomingo in 1944, while the least recorded was 21.8 inches at Gainesville in 1943. The heaviest monthly rainfall was also at Gainesville in April, 1942, when 16.4 inches of rain fell in one month. It is not at all uncommon for a place to be without rainfall for longer than 30 days.

Climatic factors have considerable influence upon ground and surface water supply. The amount of water evaporated from the ground and water surfaces and transpired by vegetation increases in varying amounts with increases in temperature, amount of sunshine and wind movement. Evaporation is therefore greatest during the warmer months, April to October inclusive. During that period the amount of evaporation of water from a free surface may vary from 45 to 60 inches, depending upon prevailing weather conditions. An early estimate by the engineers placed the yearly evaporation from Lake Texoma at approximately 200,000 acre feet.²² This figure, however,

22 Denison Herald, June 29, 1944, p. 8.

TABLE III

AVERAGE AND EXTREME CLIMATIC CONDITIONS - 1935-1952

	Durant	Madill	Marietta	Tishomingo	Gainesville	Sherman
Lowest Temperature	-4° Feb. 2, 1951	1° Feb. 2 1951	-3° Jan. 7, 1947	-8º Feb. 2, 1951	-2° Jan. 4, 1947	2° Feb. 2, 1951
Highest Temperature	118° Aug. 10, 1936	110° July 21, 1939	111° Aug. 16, 1943	120° July 26, 1943	114° Aug. 10, 1936	113º Aug. 10, 1936
Average Yearly Temp.	63.8°	63 . 80	64.0°	62.90	64.3°	64.1°
Last killing frost in Spring	Apr. 12, 1940	Apr. 10, 1938	Apr. 6, 1950	Apr. 12, 1940	Apr. 17, 1947	Apr. 13, 1940
First killing frost in Fall	Oct. 23, 1937	Oct. 24, 1938	Oct. 31, 1949	Oct. 23, 1937	Oct. 18, 1948	Oct. 18, 1948
Least Rainfall	27.69 - 1936	27.85 - 1939	23.29 - 1939	26.06 - 1948	21.81 - 1943	29.75 - 1948
Most Rainfall	64.73 - 1945	59.93 - 1945	50.26 - 1945	62.00 - 1945	50.85 - 1935	57.19 - 1946
Average Yearly Rainfall	38.85	39.49	37.26	39.85	35.81	40.46
Prevailing Wind direction	South	South	South	South	South	South

Source: United States Weather Bureau, <u>Climatalogical Data</u>, (Monthly and Annual Summaries) Oklahoma Section (Oklahoma City: 1935-1952 Inclusive), Texas Section (Houston: 1935-1952 Inclusive). seems a bit conservative -- probably twice this much has been evaporated from the lake during the hotter, drier years.

Convectional type thunderstorms sometimes occur during the summer months, but most storms are of the frontal types. The prevailing direction of the wind is south or southwest during the summer with terrain having practically no diverting influence. Wind direction during the fall, winter, and spring, is more variable and more dependent upon the prevailing air mass movement.

A vary rare phenomenon, at least for this region, occurred recently when an earthquake described as "violent" was reported in an area extending from Omaha, Nebraska, to Austin, Texas, north and south and from Amarillo, Texas, to Fayetteville, Arkansas, east and west. The epicenter was in Oklahoma approximately 150 miles north of Lake Texoma.

CHAPTER III

HISTORICAL FEATURES OF THE LAKE TEXOMA REGION

Early Inhabitants and Explorers

Saveral archaelogical finds have been made in the Lake Texoma Region which seem to indicate that the confluence of the Red and Washita Rivers has long been the crossing of north-south and east-west trade routes among the early inhabitants. Such finds have been accidental since surface indications have been obliterated either by erosion or hidden by vegetation.¹

The first white persons to come into the region, found two tribes living in the vicinity of what is now Lake Texoma. The Wichita tribe inhabited both sides of Red River from Grayson County west to the Panhandle of Texas and the Caddo tribe, which was related linquistically to the Wichitas, lived in an area from Bryan County east to Louisiana and Arkansas. Both tribes were rather far advanced culturally, living in permanent homes and cultivating the soil. It is interesting to note that the name "Texas" is of Caddoan derivation, but a similar word was used by Coronado, who applied the name "Teyas" to the tribes that he met in northwest Texas. Both Coronado in 1540, and De Soto in 1541, (who between them almost bridged the present United States) were within 200 miles of the Lake Texoma region.

The first white man known to have come this far up the Red River was the French explorer La Harpe. Starting from Natchitoches, established by

¹ U. S. Department of Interior, National Park Service, <u>Recreational</u> <u>Resources of Denison Dam and Reservoir Project</u>, (Washington, Government Printing Office, 1943), pp. 22-23.

St. Denis in 1713, La Harpe traveled up the Red River and in 1719 made a treaty with the Indians (probably Caddoes) near the mouth of Blue River (40 miles airline distance below Denison Dam).² La Harpe found the Indians already possessing horses and expert in their use.³

Following on the heels of La Harpe several French traders and explorers came up the Red River as far as the present Lake Texoma. Moreover, frequent Indian parties from tribes having closer contact with the white man came from the eastern timbered areas to hunt the bison which ranged the region.⁴ Hence by the time of the Louisiana Purchase in 1803, the Indians already possessed numerous articles of trade goods, such as beads, utensils, knives and guns.

In 1805, General Henry Dearborn, the Secretary of War, wrote a letter containing accurate description of the Red River up to the mouth of the Faux Ouachita (The Washita), based on reports by French Traders.⁵ This letter, sent to Dr. John Sibley, the Indian Agent for tribes of the Red River Valley, and the desire of the government for closer examination of lands acquired through the Louisiana Purchase led to the Sparks, Custis, Freeman expedition, the first official American party to explore the Upper Red River. In 1806, this party, a small military group, ascended the river

⁴ A battle between the Caddoes and Choctaws, called the Battle of Caddo Hills was fought east of the present Caddo as a result of one hunting invasion. The Choctaws, thus, were already quite familiar with the area into which they were later to be removed.

⁵ J. B. Thoburn, <u>History of Oklahoma</u>, (New York, American Historical Society, 1916), pp. 28-33.

² Anna Lewis, "French Interests and Activities in Oklahoma," Chronicles of Oklahoma, Vol. II, No. 3, (Sept. 1924), pp. 305-310.

³ Note: This is one of the earliest references to the possession of horses by Indians. Both Coronado and DeSoto are known to have lost horses during their expeditions. According to Webb (Walter Prescott Webb, <u>The Great Plains</u>, 1931, p. 57) the Kiowas and Missouris were mounted by 1682, the Pawnees by 1700, and the Commanches by 1714.

for a distance of 635 miles above the mouth (approximately the location of Denison Dam) before they were met by a Spanish armed force and turned back.⁶

Old Preston

The institution of the Texas Republic in 1836, and the removal of the Choctaws and Chickasaws, completed by 1840, was the beginning of a permanently established population in the region of the present Lake Texoma.

In the early 1830's, Colonel Holland Coffee established an indian trading post, inn and plantation on the south bank of the river at Freston Bend (then known as Coffee's Bend) eight miles northwest of the present Denison at a point below the present Preston Pennisula. About 1837, a mansion named Glen Eden, was built for Coffee by immigrant Mormon carpenters in exchange for supplies. Glen Eden stood until the dam was being constructed. It was dismantled by Judge Randolph Bryant of Sherman, a descendant of Colonel Coffee who intended to rebuild it on higher ground. However, a group of soldiers bivouaced in the vicinity, found the stacked lumber convenient as fire wood and thus a considerable historical loss to the region was suffered.⁷ Colonel Coffee and his wife entertained such personages as General Robert E. Lee, General U. S. Grant, Fitzhugh Lee, Sam Houston, James Bourland and many others.⁸ General Albert Sydney

⁶ Emma Estill Herbour, "A Brief History of the Red River Country Since 1803," <u>Chronicles of Oklahoma</u>, Vol. XVI, No. 1 (March 1938), p. 64.

⁷ Carl McLynn, cousin of Judge Bryant, Denison, Texas. <u>Personal</u> <u>Interview</u>, August 8, 1951.

⁸ U. S. Department of Interior, National Park Service, <u>Recreational</u> <u>Resources of the Denison Dam and Reservoir Project</u>, (Washington, Government Printing Office, 1943), p. 16.

Johnston brought Mrs. Coffee plantings of Catalpa trees from California, the start of the numerous catalpas seen on farms and in towns of the region.⁹

In 1840, a stockade, the northernmost of a long line of forts, was established by the Republic of Texas at Coffee's Trading Post. Garrisoned by Texas Rangers under the command of William Preston, this fort became known as Fort Preston and the community as Preston. Preston became the head of navigation on the Red River with regular steamboat traffic to Fulton, Arkansas, and to the Mississippi when the Great Raft and season permitted.¹⁰ Freston, due to its geographical position, became a very important depot during the pre-Civil War period and remained so until the coming of the railroad. From Preston the Snively Expedition set out for New Mexico on April 25, 1843, to end up captive in the hands of the U. S. Army in southwest Kanses.¹¹

During the Civil War, Coffee's Inn served as a rendezvous for Quantrill's Guerrillas of which the James boys, Jessie and Frank, were members. At least two of Quantrill's men settled permanently in the area.¹²

9 Ibid., p. 17.

¹⁰ Note: The Great Raft of the Red River was a constant impediment to river traffic during most of the nineteenth century. It consisted of great masses of tangled logs, snags and tree trunks that extended above Alexandria, Louisiana, for a distance of approximately 150 miles. Captain Henry Shreve (for whom Shreveport is named) succeeded in removing most of the jam during the 1830's, but the river constantly needed clearing, even after this date. See Norman W. Caldwell, "The Red River Raft," <u>Chronicles</u> of Oklahoma, Vol. XIX, No. 3, (September 1941), pp. 253-268.

11 U. S. Department of Interior, National Park Service, <u>Recreational</u> <u>Resources of the Denison Dam and Reservoir Project</u>, (Washington, Government Printing Office, 1943), pp. 16-17.

12 W. B. Morrison, "Colbert Ferry on Red River, Chickasaw Nation Indian Territory," <u>Chronicles of Oklahoma</u>, Vol. XVI, No. 3, (September 1938), pp. 308-310.

Sam Bass, who herded cattle in nearby Denton County, was a visitor at a later date.

Several ferrys were operated at and near Preston, but Colbert's Ferry and the Rock Bluff Ferry were the best known. Rock Bluff, three miles below Preston, was favored as a cattle crossing because of a natural chutelike formation of rock that assisted in forcing the cattle across the river north. One herd of nearly 8,000 cattle crossed here as late as 1870.¹³ Colbert's Ferry, one mile below Denison Dam was a favored wagon and carriage crossing operated by a prominent Chickasaw, B. H. Colbert, a member of the family that operated the ferry on the Tennessee River at the Natchez Trace crossing before the Chickasaw removal.

Preston was the northern terminus of the Preston Road established in 1836, the first year of Texas Independence. A modern road follows fairly closely the original survey entering Dallas on a street still named Preston Road. Preston was also the terminus of the Chihuahua Trail, and the Connelly Trail as well as a station on the famed Butterfield Stage Route and the Emmigrant Road following the Red River out of Arkansas.¹⁴ It was also a haven for hard-drinking cattle drivers on the old Shawnee and West Shawnee Cattle Trails before entering the whiskey-outlawed Indian country.¹⁵

One very interesting sidelight that bears insertion here is the fact that the idea of a dam across the Red River in this vicinity is over one hundred years old. An early editor writing in the Northern Standard of Clarksville, Texas, in 1847, stated:¹⁶

16 James D. Morrison, "Notes from the Northern Standard," <u>Chronicles</u> of <u>Oklahoma</u>, Vol. XIX, No. 3, (September 1941), p. 274.

¹³ Ibid., p. 304.

¹⁴ Texas Almanac, (Dallas, Texas, A. H. Belo Corp., 1947), p. 289.

¹⁵ Ibid., p. 244.
"The News [Galveston] recommends that a canal be cut from Red River to the head of the Trinity and the volume of water west of the head of the Trinity be turned into that river...."

Such a plan would certainly be feasible, as Beaver, Mustang and South Mineral Creeks (all short tributaries of the Red River) come within a few hundred yards in an area of low relief to the head waters of the Trinity. A dam on Red River would be a necessary part of such a project and perhaps that is why rumors still persisted in this area that the Trinity was to be made navigable when Denison Dam was first projected.¹⁷

Fort Washita

The site of old Fort Washita is in northwestern Bryan County, ten miles from Durant and about one half mile from the bridge across the lower Cumberland cut. The fort was established as a western outpost in 1843, to safeguard the Chickasaws and Choctaws from marauding plains tribes. This was a Federal government obligation according to the removal treaties.¹⁸ General Zachary Taylor selected the site and named the fort, thus making it one of the few forts to be named by a President of the United States. The fort was built on high ground one mile from the Washita River of native shell rock.¹⁹ Physical remains of the old fort include rock walls of several of the structures, the oven, the well, several chimneys, foundations and other miscellaneous ruins. Traces of the first paved road in the state of Oklahoma may still be seen.

Many names famous in history are associated with activities at Fort Washita. Robert E. Lee, U. S. Grant, Fitzhugh Lee, W. G. Harney,

18 Virginia Downs Rice, "History of Bryan County" (Unpublished Master Thesis, Dept. of History, University of Oklahoma, 1932), p. 73.

19 Ibid., p. 77.

¹⁷ Ibid., p. 275.

Braxton Bragg are the better known of many others stationed here as young army officers, prior to the Civil War.

Captain Marcy is famed in Oklahoma History for his scientific exploration of the Red River, which discovered valuable information on fauna, flora, geology and geography.²⁰ He made Fort Washita his operating base when he founded Fort Arbuckle, near the present site of Purcell.²¹ Assisting him was his son-in-law, George B. McClellan, later general of the Army of the Potomac during the Civil War. General William D. Belknap, ranking officer in the southwest, died at Fort Washita in 1851. A large tombstone bearing his name is still located there, but the body was removed to Fort Gibson several years ago. He was the father of William W. Belknap, Secretary of War during the Grant Administration.

Fort Washita was continuously occupied by Federal troops until 1861. It was evacuated during the Civil War and occupied by Confederate troops who held it for the duration of the conflict. On July 1, 1870, the post was officially abandoned by the War Department and turned over to the Department of Interior to be administered along with Indian lands.²² Later, when the Chickasaw Territory was allotted, Fort Washita became the property of Charles Colbert, a brother to the owner of Colbert's Ferry.

Since the original site of Preston has been innundated, Fort Washita remains as the only important historical site of the region. Highway 199 which runs by the site, has recently been improved and gives easy access from either the west or east sides of the Washita Arm. In addition to this, a new recreational area on nearby Kansas Creek was leased during the summer

²⁰ Randolph B. Marcy, <u>Exploration of the Red Piver of Louisiana</u>, (Washington, A.O.P. Nicholson, Public Printer, 1854).

²¹ Rice, op. cit., pp. 82-83.

22 Ibid., p. 89.

of 1952. This will, of course, bring more people into the immediate area of the site. But it yet remains for some individual, group, or agency to become interested enough in the history of the site to place appropriate markers and identifications, to restore, to landscape and to provide a caretaker. If this were done, it would create an attraction appealing to a new segment of people, since at present no museums or historical areas are preserved in the region.

Other Historical Features of the Region

The city of Tishomingo and the old Chickasaw capitol building are of considerable historical importance. Tishomingo served as the capitol of the Chickasaw Nation from 1856, to 1907. The original log capitol building is still standing on a hill which overlooks the city. A second building built of brick was destroyed by fire and a third of native granite was erected adjacent to the old log capitol. This third granite building serves Johnston County as a courthouse and is being very poorly maintained.

The site of old Camp Washita has been innundated. It was located on low ground across from Preston at the mouth of the Washita River. This camp site was occupied as a temporary base by the ill-fated Dragoon expedition led by General Henry Leavenworth and Colonel Henry Dodge. Probably more than one hundred of the dashing Dragoon died and were buried in unmarked graves in this region.²³ Their deaths were attributed by the regimental surgeon to heat, exposure and intemperance. George Catlin, the famed lawyer-artist, accompanied this expedition as did Jefferson Davis, later President of the Confederate States.²⁴

²³ U. S. Department of Interior, National Park Service, <u>Recreational</u> <u>Resources of the Denison Dam and Reservoir Project</u>, (Washington, Government Printing Office, 1943), p. 20.

²⁴ Theburn, op. cit., pp. 122-123.

Also in the near vicinity of the lake is the site of two former Chickasaw Indian Schools: Bloomfield Academy and Burney Institute. Bloomfield Academy was built in 1852, at a location five miles East of Colbert, by the Methodist Church as a mission school for the Chickasaws. It was in operation until 1914, when the buildings were destroyed by fire and the school consequently removed to Ardmore.²⁵ Burney Institute was established in 1854, by the Chickasaw Council while Daughtery Colbert was chief.²⁶ It was located about one mile east of Lebanon and existed until about the turn of the century. Little evidence of either the Bloomfield or Burney Schools remains today.

25 Susan J. Carr, "Bloomfield Academy and Its Founder," <u>Chronicles of</u> <u>Oklahoma</u>, Vol. II, No. 3, (March 1924), pp. 366-379.

26 Oklahoma Historical Society Highway Marker at the site.

CHAPTER IV

FACTORS INFLUENCING RECEFATIONAL DEVELOPMENT

People and Recreation

People are distributed without any orderly relationship to recreational resources. Therefore recreational planning must take into account the distribution of population. Likewise the factors of climate, topography, vegetative cover, wildlife, and the presence of a large body of water are to be considered in providing for outdoor recreation. On almost every recreation area the greatest concentration of use occurs in the immediate vicinity of water. It is a happy circumstance that 45 per cent of the total population of the United States lives within 55 miles of the sea coasts and the Great Lakes.¹

The desire of the American people for various types of recreation has amply justified the public agencies, Federal, state, and local in assigning lands to recreational use.

This need was early recognized in the bowling greens of Dutch New Amsterdam, the squares of old Philadelphia and Savannah, the Commons of Boston and other New England cities and the plazas of Spanish colonial towns. New York City took the initiative in the first purposely planned recreational area in the United States by the establishment of Central Park in 1852.²

² Ibid., p. 30.

¹ U. S. Department of Interior, National Park Service, <u>Recreational</u> <u>Use of Land in the United States</u>. Part XI of the Report on Land Planning, (Washington, D. C., Supt. of Documents, 1934), p. 7.

The establishment of Yellowstone National Park in 1872, marked the entrance of the Federal Government into the field of conservation of natural resources for recreation.³

Social and economic trends indicate a greater need for recreation today than formerly. This is especially true in the interior regions of the United States away from the coast lines where even the smallest water areas are sought after by those desiring recreation. Some of these socialeconomic trends are: (1) the change from a rural to an urban society;⁴ (2) the increase in amount of leisure time; (3) creation of a mobile society by automobiles and improved highways; (4) decrease in child labor; (5) modern tendency toward staggering vacation periods throughout the year, rather than having them during the summer months; (6) increased interest and improved cheaper equipment in fishing, hunting, camping, boating, etc.; (7) increased interest, through education, in history, archaeology, bird lore, wild flowers, etc.

Along with the increased desire for recreation has come a broader concept that includes mental and spiritual expression as well as the pure physical activity concept. This is well expressed by Lovejoy.⁵

....the backbone of "outdoor recreation" is the production and direct or indirect utilization of "wild life." In the past this has usually meant hunting or fishing facilities, but in the modern and wider sense includes the aesthetic as well; the chance to see a deer as well as the chance to shoot one; the chance to photograph a beaver lodge as well as to wear a fur collar;the chance to wander down aisles carpeted with soft brown pine needles and to listen to the sighing of the zephyrs in the boughs, as well as to buy lumber.

Thus some people may find congenial recreation in the inspection of nature, other people may be equally enthralled by a great work of man such

⁵ P. S. Lovejoy, "Concepts and Contours in Land Utilization," <u>Journal</u> of <u>Forestry</u>, Vol. 31, No. 4, (April 1933), p. 388.

³ Ibid., p. 31.

⁴ See Table IV.

as a powerhouse, a huge dam or a fortress, while still others must pursue the game, plunge in the water or bask in the sun for their best pleasure.

Population

Population tendency has fluctuated both up and down in the Lake Texoma Region during the past thirty years. The overall result, however, has been a decrease in population from 187,764 in 1920, to 147,578 in 1950, or a decline of 21.4 per cent. The decline among the Oklahoma Counties has been much more pronounced with a total decrease of 38 per cent. One county, Johnston, decreased 50 per cent during the period.⁶

Crop failures, land erosion, conversion to cattle grazing, and migration to larger urban areas have been the principal reasons for this population decline in the Oklahoma counties. The Texas counties have remained more constant in population due to a more stable, prosperous people and more urbanization. In fact, the population changes in the two Texas counties has been more of a rural to urban shift, rather than a migration from the region.

Despite the fact that the region itself shows a decrease in population, it is believed that areas within fifty miles shoreline distance of the lake are increasing. This would include such urban centers as Ardmore and Ada in Oklahoma and Denton, Bonham and McKinney in Texas. Over 450,000 people live within this fifty mile shoreline distance circle and many of them are week day users of recreational facilities on the lake. At distances of 100 to 200 miles of the lake is the group from which weekend and vacation visitors to the lake migrate. Metropolitan areas such as Dallas-Ft. Worth, Waco, Wichita Falls, Tyler-Longview-Marshall, Texarkana, Shreveport,

6 See Table IV.

TABLE IV

Country	1020	1030	Per Cent	19/0	Per Cent	1050	Per Cent
Country	1720		onange	1740	Onches		Oncontro
<u>Texas</u> Grayson	74,165	65,843	-11.2	69,499	#7. 2	70,467	+1.5
Cooke	25,667	24,136	-5.9	24,909	+3.2	22,146	-11.1
<u>Oklahoma</u> Bryan	40 ,7 00	32,277	-20.7	38,138	4 18.1	28,999	-23.9
Johnston	20,125	13,082	-35.0	15,960	\$22.0	10,068	-36.8
Marshall	14,674	11,026	-24.9	12,384	+12.3	8,177	-34.0
Love	10 /22	9,639	-22.5	11,433	+18.6	7,721	-32.4
Love	14,13						
Love	187,764	156,003	-17.0	172,323	+10.4	147,578	-14.4
Love	187,764 B. P	156,003	-17.0	172,323	+10.4	147,578	-14.4
Love	187,764 B. P. 1920	156,003 opulation 1930	-17.0 1920-1950- Per Cent <u>Change</u>	172,323 -Lake Tex 1940	+10.4 coma Cities Per Cent <u>Change</u>	147,578 1950	-14.4 Per Cent
Love <u>City</u> <u>Texas</u> Sherman	12,455 187,764 B. P. <u>1920</u> 15,031	156,003 opulation <u>1930</u> 15,713	-17.0 1920-1950- Per Cent <u>Change</u> +4.5	172,323 -Lake Tex 1940 17,156	+10.4 coma Cities Per Cent <u>Change</u> +9.2	147,578 <u>1950</u> 20,150	-14.4 Per Cent <u>Change</u> +17.5
Love <u>City</u> <u>Texas</u> Sherman Denison	12,455 187,764 B. P. <u>1920</u> 15,031 17,065	156,003 opulation <u>1930</u> 15,713 13,850	-17.0 1920-1950- Per Cent <u>Change</u> +4.5 -18.9	172,323 -Lake Tex <u>1940</u> 17,156 15,581	+10.4 coma Cities Per Cent <u>Change</u> +9.2 +13.3	147,578 <u>1950</u> 20,150 17,504	-14.4 Per Cent Change +17.5 +12.3
Love <u>City</u> <u>Texas</u> Sherman Denison Gainesvill	187,764 B. P. 1920 15,031 17,065 e 8,643	156,003 opulation <u>1930</u> 15,713 13,850 8,915	-17.0 1920-1950- Per Cent <u>Change</u> +4.5 -18.9 +3.1	172,323 -Lake Tex 1940 17,156 15,581 9,651	+10.4 coma Cities Per Cent <u>Change</u> +9.2 +13.3 +8.2	147,578 <u>1950</u> 20,150 17,504 11,246	-14.4 Per Cent f17.5 f12.3 f16.5
Love <u>City</u> <u>Texas</u> Sherman Denison Gainesvill Whitesboro	12,455 187,764 B. Po <u>1920</u> 15,031 17,065 e 8,643 1,810	156,003 opulation <u>1930</u> 15,713 13,850 8,915	-17.0 1920-1950- Per Cent <u>Change</u> +4.5 -18.9 +3.1	172,323 -Lake Tex 1940 17,156 15,581 9,651 2,092	+10.4 coma Cities Per Cent <u>Change</u> +9.2 +13.3 +8.2 +15.5	147,578 <u>1950</u> 20,150 17,504 11,246 2,512	-14.4 Per Cent f17.5 f12.3 f16.5 f20.1
Love <u>City</u> <u>Texas</u> Sherman Denison Gainesvill Whitesboro <u>Oklahoma</u> Durant	12,455 187,764 B. Po 1920 15,031 17,065 e 8,643 1,810 7,340	156,003 opulation <u>1930</u> 15,713 13,850 8,915 7,463	-17.0 1920-1950- Per Cent Change +4.5 -18.9 +3.1 +3.1	172,323 -Lake Tex 1940 17,156 15,581 9,651 2,092 10,027	+10.4 coma Cities Per Cent <u>Change</u> +9.2 +13.3 +8.2 +15.5 +34.2	147,578 <u>1950</u> 20,150 17,504 11,246 2,512 10,541	-14.4 Per Cent f17.5 f12.3 f16.5 f20.1 f5.1

POPULATION CHANGES IN THE LAKE TEXOMA REGION

Sources: World Almanac, Texas Almanac, and Oklahoma Almanac for selected dates.

Ft. Smith, Tulsa and Oklahoma City are all within a 100-200 mile radius. According to 1950 census preliminary figures approximately 6,200,000 people live within 200 miles of the lake (see figure 3).

A National Park Service survey gave figures based on the 1940 census of about 5,650,000 people for nearly the same area indicating that there is definitely an increasing population within the region that the lake will serve most intensively as a recreational area.⁷

The region is changing toward a more urban population as shown in Table VI. However, the change is slower than that being made by the nation as a whole or by either of the two states. In the 1950 census the population was still 56.1 per cent rural. The National Park Service states that cities of over 10,000 need one acre of recreational area for every 100 persons. Cities of 5,000 to 10,000 need one acre for every 75 persons, while cities of 2500 to 5000 need one acre for every 50 persons and rural areas need about one acre for every 40 persons.⁸

Thus rural areas require two and one-half times as much recreational space as an equal population located in cities of 10,000 or more. Within the Lake Texoma Region this would mean that approximately 2,150 acres would be needed for the rural people and 750 for the urban population---a total of 2,900 acres. Since Lake Texoma Recreational area comprises about 162,000 acres and the maximum reservoir area is 146,000 acres, this would leave 16,000 acres, or only about six times as much land area as is needed locally.

⁷ U. S. Dept. of Interior, National Park Service, <u>Recreational Resources</u> of the Denison Dam and <u>Reservoir Project</u>, (Washington, Government Printing Office, 1943), p. 40.

U. S. Dept. of Interior, National Park Service, <u>Recreational Use of</u> <u>Land in the United States</u>, Part XI of the Report on Land Planning, (Washington, D. C., Supt. of Documents, 1934), pp. 102-105.



TABLE V

POPULATION DISTRIBUTION, 1950

Population (1950) at various a	noreline dista	nces from Lake Texom	a.
By States	Within 50 miles	Within 100 miles	Within 150 miles	Within 200 miles
Oklahoma Texas Arkansas Louisiana Kansas	207,612 248,594	1,023,003 1,873,497	1,798,941 2,667,610 154,646	2,161,798 3,311,462 411,847 253,920 59,656
Totals	456,206	2,8%,500	4,621,197	6,198,683
Principle Popula	ation Agglomera	ations		
Within 50 miles				
Texas			Oklahoma	1 40
Sherman	20,150		Tulsa	182,740
Denton	21,372		Muskogee	37.289
Denison	17,504		Stillwater	20,238
Oklahoma			Arkansas	
Ardmore	17,890		Ft. Smith	47,942
Ada	15,995		Texarkana	15,875
Within 100 miles	1		Within 200 miles	
Texas			Texas	
Dallas	1.31.162		Abilene	15-570
Ft. Worth	278.778		Temple	25.167
Wichita Falls	68.0/2	and the second second	Brownwood	20,181
Paris	21.643			,,
		A contract of the second se	Oklahoma	
Oklahoma			Enid	36.017
Oklahoma City	243.504		Ponca City	20,180
Lawton	34.757		Bartlesville	19,228
Norman	27.006			
Shawnee	22,984		Louisiana	1.1
			Shreveport	127,206
Within 150 miles	3		Arkansas	
Texas			Hot Springs	29.307
Waco	84,706			
Tyler	38,968			
Longview	24,502			
Marshall	22, 327			
Vernon	12,651	Source:	World Almanac for 1	952
Texarkana	24,753			

TABLE VI

		Per Cent Rural	Per Cent Urban	Total Population
1890	United States	64.6	35.4	62,947,714
	Oklahoma ^A	96.3	3.7	258,657
	Texas	84.4	15.6	2,235,527
	Lake Texoma Region	B	B	B
1910	United States	54.2	45.8	91,972,266
	Oklahoma	80.8	19.2	1,657,155
	Texas	75.9	24.1	3,896,542
	Lake Texoma Region	77.9	22.1	176,730
1930	United States	43.8	56.2	122,775,046
	Oklahoma	65.7	34.3	2,396,040
	Texas	59.0	41.0	5,824,715
	Lake Texoma Region	69.2	30.8	156,003
1950	United States	36.3	63.7	150,697,361
	Oklahoma	50.4	49.60	2,233,351
	Texas	40.2	59.80	7,711,194
	Lake Texoma Region	56.1	43.9	147,578

CHANGES IN RURAL-URBAN POPULATION SINCE 1890

A Based on combined figures for Oklahoma and Indian Territories.

B Not available; first Oklahoma census in 1907.

C Old urban definition; New: Oklahoma 51%, Texas 62.7%.

Sources: World Almanac, Texas Almanac, Oklahoma Almanac, for selected years.

The immense water area is also usable but its use cannot be as intensive or as utilitarian as land areas. If, on the other hand, we apply our estimate to the 456,000 people who live within 50 miles of the lake shore and are therefore weekday users of the lake's recreational aspects we arrive at estimates of 5,625 acres required for these rural people and 2,445 for the urban population.

The existing land area for this group would be only twice that needed. This does not, of course, take into account local recreational areas which are for the most part very inadequate throughout the 50 mile zone. Neither does it include the existing state parks at Lake Murray in Oklahoma and Bonham State Park in Texas, nor Platt National Park at Sulphur, Oklahoma, all of which are quite intensively used.

The negro problem also deserves special consideration in recreational planning for the region and area beyond, because of the predominant "Jim Crowism" that exists. This has the effect of actually increasing the amount of recreational space needed in proportion to population since segregation must be practiced. Within the Lake Texoma Region the proportion of negroes is small, being only 10,000 in number or less than 6 per cent of the total population, but within a 200 mile radius there are nearly 900,000 negroes comprising about 16 per cent of the total population.⁹

Other Factors Influencing Development

It is axiomatic that pleasurable outdoor recreational experiences require favorable climatic conditions and that temperate conditions with moderate rainfall, heat, cold weather, humidity and temperature are favored by most people. During most of the year such conditions prevail in the Lake Texoma region. Most resort owners, when interviewed, agreed that their seasons lasted from February to December. January brings the severest winter weather while the other winter months spasmodically produce cold spells and spring-like periods. From the middle of July to the middle of August is the other extreme, a period of high heat and little precipitation.

Variety of topography is a feature in which Lake Texoma is somewhat deficient when compared with some of our national parks. Yet there is

9 See Table VI.

TABLE VII

POPULATION CHARACTERISTICS-1940 CENSUS

Total Population	Negro <u>Population</u>	Per Cent Negro Population	Farm Population	Per Cent Farm <u>Population</u>
94,408	7,817	8.3	37,921	39.1
77,915	2,425	3.1	46,827	60.0
172,323	10,242	5.9	84,748	49.0
B. 200 1	mile radius fi	rom Denison D	em	
2,768,521	506,899	14.7	1,117,300	40.0
2,076,160	164,407	7.9	811,035	39.0
522,980	96,693	18.5	289,142	53.4
279,573	128,929	46.1	106,209	38.0
5,647,234	8%,928	15.9	2,323,686	41.1
	Total Population 94,408 77,915 172,323 B. 200 1 2,768,521 2,076,160 522,980 279,573 5,647,234	Total PopulationNegro Population94,4087,81777,9152,425172,32310,242B. 200 mile radius for 2,768,521506,8992,076,160164,407522,98096,693279,573128,9295,647,234896,928	Total PopulationNegro PopulationPer Cent Negro Population94,4087,8178.377,9152,4253.1172,32310,2425.9B. 200 mile radius from Denison D2,768,521506,89914.72,076,160164,4077.9522,98096,69318.5279,573128,92946.15,647,234896,92815.9	Total PopulationNegro PopulationPer Cent Negro PopulationFarm Population94,4087,8178.337,92177,9152,4253.146,827172,32310,2425.984,748B. 200 mile radius from Denison Dam2,768,521506,89914.72,768,521506,89914.71,117,3002,076,160164,4077.9811,035522,98096,69318.5289,142279,573128,92946.1106,2095,647,234896,92815.92,323,686

A. Six counties adjoining Lake Texoma

Source: Department of the Interior, National Park Service, <u>Recreational Resources of the Demison Dam and Reservoir</u>, (Washington, D. C.: Government Printing Office, 1943) p. 40.

enough contrast in land relief and in flora and fauna to keep the scene from becoming monotonous. The rolling land tapering gently down to the lake from the Oklahoma side is somewhat reminiscent of Ireland's "Emerald Lakes," while the bluffs and heavier wooded areas of the Texas shore give adequate contrast.

From the standpoint of "big water" recreation, Lake Texoma at the present time has moderate competition from other lakes in the surrounding

area. None of these lakes, however, compare in size and only Possum Kingdom Lake, 65 miles west of Ft. Worth and Grand Lake (also called Lake of the Cherokees) 60 miles northeast of Tulsa, compare in intensity of recreational development. Several new reservoirs are either being built or authorized within a 200 mile zone. (see figure 1). In addition to the lakes and reservoirs within the 200 mile zone, are: one national park (Platt--at Sulphur, Oklahoma), twenty-four state parks (the one at Bonham, Texas is nearest) and several metropolitan parks.

Traffic flow is another important factor; especially arteries widely used by vacation travelers in inter-state traffic. Only four major highways (62, 81, 77, and 69-75) cross the Red River between Oklahoma and Texas, and Lake Texoma lies between two of them. These two are probably the most traveled since they are direct connections between the largest population centers. Fort Worth and Dallas are linked to Oklahoma City by Highway 77 and to Tulsa and Kansas City by Highway 69-75. Traffic flow over these highways and their linkage with Lake Texoma are shown in figure 4.

Lake Texoma, when compared with other famed National Parks, is deficient in such features as interesting flora or fauna and unusual land formations. However, its location within an area which has few big lakes to serve large population concentrations is favorable, at least for the present. Topography, though lacking outstanding features, is advantageous in that it permits easy access to most parts of the lake. Good climatic conditions for outdoor recreation are of longer duration than for most lakes of the Central United States. The two major highways of the region bring many people to the vicinity along traditional routes for vacation travel.



CHAPTER V

FECHEATIONAL USAGE

Recreational Areas

Facilities for recreation on Lake Texoma may be divided into five types: (1) commercial concessions on land leased from the government, (2) commercial establishments on private land, (3) non-commercial groupsponsored concessions, (4) private homesites on land in special areas leased from the government, (5) State and Federal Government supported areas.

The Army Engineers have set aside certain areas of varying size that are suitable for commercial concessions. These are awarded to the groups or individuals making successful sealed bids. Contracts call for the payment of a fixed annual rental of \$200 or more, depending on desirability and size, plus a percent of the annual gross income. Awarding of contracts is based upon the best percentage of gross income, the facilities which the bidder proposes to build and the integrity and responsibility of the bidder. Leases usually run for fifteen years.

During the summer of 1952, twenty-five commercial concessions were in operation on land leased from the government and one new concession was being developed. These concessioners have constructed buildings, utilities and recreational devices to attract the visiting public to their particular area as a source of income. Under the policy of the government the public is not subject to any charge for the use of swimming beaches, camping and picnicking facilities and boat launching ramps.

The government, therefore, has constructed and maintained access roads, trails, parking areas, signs and markers, garbage disposal units, fireplaces, tables and benches, public toilets, public drinking water units, boat launching ramps and bathing beaches, besides landscaping the areas. The Concessioners, on the other hand, have provided restaurants, supply stores, cabins and dormitories, boat repair and service, rental boats and motors, and in some cases, boat houses, dance pavilions, excursion and charter boats and other amusement devices.

Larger concession areas that are suitable for many recreational users are classified by the Engineers as primary areas, while the term secondary areas denotes those of smaller size and more or less specialized interest, especially fishing and boating. Due, however, to the individual enterprise of particular concessioners some secondary areas have become more highly developed than a few of the original primary areas. Grandpappy Point and Preston Bend Peninsula in Texas, and Burn's Fun in Oklahoma were set up as a major developments, only Burn's Run, however, has fulfilled its role. Grandpappy Point has become specialized in boat storage and repair and Preston Pennisula has remained undeveloped at its northern extremity. From the standpoint of natural beauty and setting, Preston Penninsula is undoubtedly the finest site on the lake for a major resort. It was the region of first white habitation and in the first recreational plan for Lake Texoma devised by the National Park Service, it was considered the outstanding area for recreational development. 1 Failure of this area to materialize has been due to several reasons, most important of which are isolation and inaccessibility. Until recently the only access road was

¹ U. S. Department of Interior, National Park Service, <u>Recreational</u> <u>Resources of the Denison Dam and Reservoir Project</u>, (Washington, Government Printing Office, 1943), pp. 54-62.



FIG. 5

poorly maintained, dusty and badly aligned. Then, too, the government did not acquire all of the property on the peninsula which would be necessary for its development. Island View and Highport (see figure 6) farther south on the peninsula have become two of the better resorts on the lake.

Burn's Run (see figure 6), which is the most diversified resort on the lake, has had several important advantages. It lies nearest the area of greatest traffic flow and is adjacent to highway 75-A and thus easily accessible. Furthermore its position close by the dam causes it to be attractive and easily visited by people in inter-state transit, who wish to have a more or less quick look at Lake Texoma. Its swimming beach is more widely used than any other on the lake. People from Durant, Oklahoma, (which has no swimming pool) and from Denison and Sherman, Texas, find it convenient.

The intense use of this resort is shown by the fact that a count made on the Fourth of July weekend in 1949, recorded 50,000 visitors.²

Burn's Run is operated by a corporation of five major stockholders of Ada, Oklahoma. This group has sub-leased several concessions including the cafe, dance pavilion and several amusement devices. Twenty-one modern cabin units have a maximum capacity of sixty people, and more are needed. The Marine Grill, a cafe, has a capacity of thirty-six and the Chatterbox (sandwiches, refreshments and dancing) has a capacity of one hundred. In addition there is an open air dance pavilion, miniature golf, penny arcade, merry-go-round, ferris wheel, airplane ride, miniature train, miniature automobiles, riding stables and two refreshment stands. Facilities for minor boat repair and boat storage are available as well as rental boats

² U. S. Army Corps of Engineers, Tulsa District, <u>Lake Texoma Recrea-</u> <u>tional Area</u>: <u>Preliminary Plan of Improvement for Public Use Facilities</u>, July 1949, p. 6.

and motors. Another attractive feature is the "Idletime," a 65 foot all steel, two deck, diesel powered excursion boat with a Coast Guard rated capacity of 160 persons. This boat was brought from the Lake of the Ozarks and replaced an earlier excursion boat, the "Wanderer," which burned in 1949. The "Wanderer," incidentally, was a 90 foot stern wheeler that navigated Fed Fiver from the Mississippi to Denison Dam, a feat that had not been accomplished in many years.

Grandpappy Point (see figure 6) located in a protected cove and flanked by a wooded promontory that juts out into the lake and towers more than one hundred feet above its normal level, is easily accessible directly from Denison on a concrete highway that is now innundated. This submerged highway forms the best boat launching ramp on the lake.

Extensive boat docks and boat service is the specialization of this concession. A marine railway handles cruisers up to 50 feet in length and the shop is well equipped with boat and motor parts. Covered boat storage for 75 boats is available and open slips will accomodate three times that number. A cafe seating 25 persons is maintained. No overnight quarters are available, although the top of the promontory would provide an excellent place for cabins, a lodge and a cafe. Very little swimming, camping or picnicking is done here.

Highport Resort (see figure 6) rates next to Burn's Fun in diversity. It is the only concession on the lake with its own airstrip--a 2100 by 150 foot North-South sod strip with windsock and aviation gasoline service (30-91 octane). An application for a C. A. A. beacon for the field has recently been approved. Highport stores about 200 boats in boat houses, including practically all Lake Texoma boats over 40 feet in length (an investment in boats of over one million dollars). Another unique feature is a Marine radio transmitter and receiver, one of the few inland radios outside



of the Great Lakes. This radio (Station KKP) is licensed by the F. C. C. to operate at 2738 KC on a power of 10 watts. It has proved valuable in aiding the larger cruisers equipped with ship to shore radio, and in rescue operations. Highport also operates an inter-communication system with fourteen stations scattered throughout the concession and makes use of an amplified paging system with strategically located speakers to cover the area. A well stocked marine and sporting goods store (the largest on the lake), an electric marine shop to handle 50 foot cruisers and a splendid beach with supervised swimming are other outstanding features. No overnight quarters are available, but immediate plans call for the construction of twenty modern units. A cafe, with a capacity for 48 persons, is subleased.

On the Oklahoma side, Willow Springs Fesort (see figure 8) constitutes a major recreational site. The largest lodge and cafe on the lake is located here. The cafe, seating normally eighty-five persons, frequently serves twice that number at banquets and parties, or can be cleared for large dances. A fine sloping sandy beach, with supervised swimming, rates second in popularity to the beach at Burn's Run. Bedrooms in the main lodge building and separate cabin units have a total capacity of 44 persons. Camping and picnicking resources are intensively used. Boat and motor rental and boat storage are available. Advertising, energetic managership and good accessibility have contributed to the development of Willow Springs.

Island View, on the Texas side (see figure 6), and Hickory Creek, on the Oklahoma side (see figure 7), are outstanding for their cabins, each being probably the best on their respective sides of the lake. Both also have well appointed cafes, and Island View features a game room in a combination lodge and cafe building. Hickory Creek is unique in providing excellent free playground facilities for small children.



Little Glasses (see figure 8) is one of the best locations on the lake, and is easily accessible out of Madill over the old Madill-Durant highway. Originally leased by a corporation, it went bankrupt. The present lessee is making extensive improvements, and it promises to be a major area in the near future. The largest boat on the lake is berthed here. The "Pirate," a 75 foot cruiser, sleeping 22 persons and powered by twin 180 HP Diesels, was formerly in the United States Lighthouse Service at New Orleans.

Sunset Resort (see figure 6) is one of the newest developments and answers a felt need of the negro people in a region of segregation. During the summer of 1952, a cafe-lodge in the modern style, was completed and in operation, together with a refreshment concession and four trailer type cabin units.

Mill Creek Resort (see figure 7) in Texas and Soldier Creek Camp in Oklahoma (see figure 6) are similar in that each is located adjacent to a home site area and serves as a source of supply and recreation for their respective areas. Both concessions have a nice, but small, combination store and cafe; both also have modern overnight accommodations.

Nock Creek Camp and Cedar Bayou (see figure 7), on the Texas side and Cumberland Cove Camp (see figure 8), in Oklahoma, are primarily fishing camps with cabins and dormitories or bunk houses. Cedar Bayou is the only one of the three without a cafe. Cumberland Cove, in addition, has one large dormitory that will accommodate 35 people. Walnut Creek Camp and Big Mineral (see figure 7) located in Texas, together with Butcher Pen and Pennington Creek Camp (see figure 8), located on the Washita arm, are fishing camps without sleeping quarters. Platter Flats (see figure 6) in Bryan County, Paradise Cove and Flowing Wells (see figure 7) on the Big Mineral arm and Preston Fishing Camp (see figure 6) on the Preston Peninsula, cater to fishermen as their chief business and have from three



to eight cabins each. Platter Flats was originally located one mile south of its present location. Removal was necessary due to the lowness of the land at the old site.

Little Mineral Dock located adjacent to the Preston Fishing Camp, has no purpose except to store and service small craft, mostly of the out board motor type. The Dam Site Concession consists only of a refreshment stand and small supplies store for fishermen.

Another concession, Pleasure Bay, bears special mention, for although it is located mostly on private property, it operates under the Corps of Engineers by permit. Pleasure Bay is located two miles west of the south end of the dam on the spillway road. Thus, it has a convenient and readily accessible location. It has a total cabin capacity of sixty persons, including one large cabin for twelve. The cabins, as well as the snack barstore, are located on a bluff overlooking a cove. Swimming is very popular here and the swimming area is equipped with a diving tower, slide, swings, and see-saw.

These twenty-six resorts represent an investment of approximately \$1,500,000.³ In summary, the following total facts were obtained by personal survey conducted by this writer during the summer of 1952:

1.	Number of resorts having bathing beaches	. 1	6
2.	Number having seasonal life guard surveillance		4
3.	Number of resorts with sleeping accommodations	. 1	9
4.	Total number of cabins or sleeping rooms	. 12	2
5.	Total capacity of cabins, sleeping rooms, dormitories	. 72	4
6.	Number of resorts having cafes	. 1	8
7.	Total seating capacity of cafes	. 67	14
8.	Number of resorts having rental boats	. 2	25
9.	Total number of rental boats	. 89	0
10.	Number of resorts having rental motors	. 2	25
11.	Total number of rental motors	. 15	52
12.	Number of resorts with camping or trailer park facilities	. 2	1

³ <u>The Daily Oklahoman</u>, Magazine Section (Oklahoma City), February 10, 1952, p. 13.

Of the nearby commercial establishments on private land, only Pleasure Bay, which has been previously discussed, offers a wide variety of recreation. Numerous tourist courts, many serving as fishing camps; some with cafes or "snack bars"; some with rental boats and motors; and some with stores selling minnows, bait, tackle, groceries, ice, fuel, etc., are to be found. Only a few will be specifically mentioned.

On Preston Peninsula two places are worth noting. Hi-land Lodge, located one mile below Island View on a breezy knoll that affords a view of the lake, both to the east and the west, has twenty excellent cabins and a two story lodge with cafe, game room and sleeping rooms. Small supplies for fishermen are sold at the lodge. Preston Courts, located at the northeast tip of the peninsula, where the old road to Preston Community dips into the lake, is noteworthy for its ninety foot observation tower from which the best view of the lake can be obtained.

McBride's Skyline Ranch, located one mile north of the site of old Woodville, Oklahoma, (now submerged) is conducted as a combined dude ranch and fishermen's camp. Fiding horses are available here, as well as, rental boats, motors and fifteen-man Navy landing barges. Formerly the only golf course on the lake was operated here, but recently it was abandoned.

Beer taverns, with their strident juke boxes and shuffleboard games, will be considered recreation by some and should be mentioned. Both Grayson and Cooke counties prohibit the sale of beer under the Texas countyoption plan. Within two miles of Denison Dam there are, as a result, no less than thirty establishments whose principle business is the sale of

beer. At the western extremity of the lake, on the Oklahoma side of the Red River bridge, a similar group is to be found. Most of these are housed in wooden shacks, dirty in appearance and presenting a serious fire hazard.

The Corps of Engineers is especially anxious to lease land at very low rentals to organized groups. The Boy Scouts have thus acquired a 640 acre tract on an inlet south of Mill Creek Resort and have improved it with a lodge, mess hall and athletic fields. The Ardmore Council of Boy Scouts are in the process of developing a 175 acre plot located two miles south of Cat Fish Bay, for which application was recently approved. The Girl Scouts (Dallas Council) have lately acquired an easily accessible area lying eastward across the old highway from Grandpappy Point. One well equipped area, a 175 acre plot located five miles northeast of Gordonville; has been developed by the 70 F. F. A. groups located in eight North Texas counties. An administration building, large (30' x 80') mess hall, and several barracks, as well as utilities and athletic fields, have been built. The Boles Orphan Home of Quinlan, Texas and the Presbyterian Church of Denison, have recently acquired adjacent 30 acre tracts below Preston Fishing Camp on the east side of Preston Peninsula. In Oklahoma the Presbyterian Synod is developing a 30 acre area just north of Willow Springs and the First Christian Church has a similar sized plot due east across the lake from Cumberland Cove Camp.

In 1951 the Corps of Engineers designated three club site areas, one on the northwestern tip of Preston Peninsula, another on a cove north of Soldier Creek Camp, and a third for negroes south of Sunset Pesort. These areas were divided into plots varying in size from about fifteen to thirty acres. The V. F. W. and the V. F. W. Auxiliary of Denison leased two adjoining plots on Preston Peninsula. At the Soldier Creek Club site, plots were leased to the Public Service Company, Employees Club and to Pine Lodges,

Incorporated, employees of a Pampa, Texas, drilling company. Prior to the designation of club sites, the employees of the Warren Petroleum Company had leased twenty acres immediately east of Cumberland Cove and had erected a large recreation hall and kitchen and two big cabins for 12 persons each. The Southwestern Stone Company of Stringtown, Oklahoma, also has a leased area located east of the Warren site.

A number of recreational properties have been developed on private property that lies near the lake. Employees of Mrs. Tucker's Foods, Inc. have a well equipped area near Mill Creek. It consists of a 45 by 45 foot recreation hall and kitchen, six bedrooms for 24 persons and good boating and swimming facilities. The Army Air Force at Perrin Field, similarly, has developed a site on private property in the Mill Creek area. On the Oklahoma side, Camp Jack Little, formerly a camp for deaf children, was recently purchased by a corporation formed by several Christian Churches of southern Oklahoma.⁴ This camp is a major development, consisting of 34 buildings, capable of accommodating 200 persons at a time. The main lodge measures 40 by 80 feet with a 30 by 30 foot wing. It also has a hospital, an amphitheater, stables and athletic fields.

Another important aspect of recreation on Lake Texoma is the development of the homesite areas. At the present time, homesites are available for 25 year lease in four designated areas, with five other areas earmarked by the Engineers for future demand. In early 1952, 120 home lots had been leased and about 80 cottages or homes erected.⁵

At the Caney Creek Homesite Area (see figure 6) there are several homes or cabins built on a luxurious scale. One Oklahoma Citian has a

⁴ Durant Daily Democrat, July 11, 1952, p. 1.

⁵ <u>The Daily Oklahoman</u>, Magazine Section (Oklahoma City), February 10, 1952, p. 13.

large house, a cruiser and a speed boat and additional facilities representing a \$75,000 investment. Another richly landscaped and equipped home, belonging to a citizen of Ada, Oklahoma, is valued at \$50,000; and an imposing seven room brick lodge was completed in 1952, by a Healdton, Oklahoma, doctor at a cost of \$30,000. Remaining homes are more modest and concrete block construction predominates. On private property adjoining Caney Creek thirty-one cabins were counted during the summer of 1952.

The Mill Creek Homesite Area (see figure 7) and Sand Point Homesites (see figure 8) contain cabins of both frame and concrete block construction and at Mill Creek is another group of perhaps twenty homes built on private property. The Flm Pidge Homesite Area (see figure 6) was opened after the other three. Several cabins were being constructed in 1952.

There are several homesite areas on private property near the lake. These are attractive to people who wish to own their property rather than to lease from the government. Some have been mentioned above and one other that should be mentioned is Paradise Acres adjoining Paradise Cove. Although several fine homes are located here, the overall picture is very unsightly as compared with the well spaced homes making use of the natural beauty of woods and lake found in the government homesites. A count, made recently by the Engineers, found a total of 354 such homes on private property adjoining the lake with an estimated value of two million dollars.⁶

The Federal Government, through its controlling agency the U.S. Army Corps of Engineers, has acted cooperatively in all instances so far mentioned in helping to develop the concessions and in providing certain utilities that make the concessions more attractive to the public. In other words, commercial concessions up to the present time have been developed by individual enterprise aided by the government.

⁶ Ibid., p. 13.

In the early part of 1951, the legislature of the State of Oklahoma, realizing the value of recreational resources on Lake Texoma, appointed committees in both the House and Senate to investigate the feasibility of establishing a state park on Lake Texoma. 7 As a result of their findings the legislature empowered the State Planning and Pesources Board to formulate plans for development and to issue self-liquidating bonds in the amount of \$2,500,000 for the purchase of land and improvements. The site selected was a 2,000 acre tract, nearly half of which was private land and which included the former Catfish Bay Resort. The necessary government property had been leased, the Catfish Bay Resort had been purchased and condemnation suits against private lands were in the courts at the end of 1952.8 The architect's plans have been drawn and construction schedule calls for the completion of the main lodge and luxury type cabins by April 1954.9 The plans call for complete facilities for almost all types of recreational usage associated with a lake and will have accommodations for both those who like luxury and those who like to rough it. Two omissions. however, might be noted: first, a fishing pier to replace the present hazardous practice of fishing from the Roosevelt Bridge; and second, dormitories of very low rental rates, with living and recreational facilities for visiting student, church, and underprivileged groups.

The Texas State Board, following the lead of Oklahoma, has authorized the construction of a million dollar lodge on a 400 acre tract leased from the Engineers.¹⁰ The location of this park, to be known as Eisenhower Park,

- Durant Daily Democrat, Jan. 17, 1951, p. 1.
- ⁸ Durant Daily Democrat, Aug. 21, 1952, p. 1.
- ⁹ <u>The Daily Oklahoman</u>, (Oklahoma City) Aug. 24, 1952, Sec. B., p. 1.
 ¹⁰ <u>Durant Daily Democrat</u>, August 21, 1951, p. 1.

is in the Elm Ridge Area and will include lands originally intended for a negro concession lying immediately west of Pleasure Bay.

Fishing, Hunting, Boating and Other Recreational Activities

Lake Texoma is utilized to a greater degree for the sport of fishing than for all other forms of active recreation combined. As has been seen, many of the concessions make the accommodation of fishermen their chief business. Climatic conditions at the lake make fishing a year around sport, with perhaps, the greatest intensity in the early fall.

When first opened in 1945, Lake Texoma yielded astounding strings of black bass--the favorite of many lake fishermen. Almost anyone with any type of lure could get a quick string almost any place and any time he chose to cast. The new lake impounded over land rich in vegetation had a high fertility. A gradual decline from this ideal condition evolved as the fertility of the lake was reduced and as larger numbers of the faster multiplying rough fish began to appear and to compete with the game fish for food and existence. Dr. Eschmeyer, a noted authority on fish, pointed out that, "An acre of water, like an acre of land, will produce only limited quantities of livestock," and that a two inch bass and a ten inch bass could be the same age, depending upon conditions of growth.¹¹ Hence, today the game fish have become fewer and smaller and although fishing is still good, it is not and probably will never be what it was when the lake was new.

Fishing at Lake Texoma exists in all forms, from cane pole fishing to casting and trolling, and practically all areas of the lake are fished. The

¹¹ R. W. Eschmeyer, "Where Are We Going in Fish Conservation?" <u>Oklahoma</u> <u>Game and Fish News</u>, April 1951, p. 3.

most intensive fishing occurs in two places: at the Poosevelt Bridge and at the outlet tubes just below the dam.

It is not uncommon to see five hundred or more persons engaged in fishing from the Roosevelt Bridge on a warm summer evening. On the better fishing days, people will be found here at any hour-- portable light plants illuminating the bridge if the hour is after dark. Though many of the people are elderly and probably not able to pursue their sport in a more vigorous fashion, many young people are also to be found. It is not unusual even to see very small children crawling on the pavement as cars whiz by. Fishing was originally prohibited from the bridge, but public clamor and political pressure brought about the change. A ten mile-per-hour speed zone has been created for traffic over the bridge, but it is seldom observed.

Crappie and white bass are plentiful in the region of the bridge. They are pulled up to a height of thirty to forty feet, depending upon the water level.

The second most popular place is below the dam at the tail race. When a large volume of water is being released for the purpose of lowering the flood pool, this region becomes especially popular. Camepole fishing, or casting from the bank, results in a wide variety of catch.

Johnson's Fishing Barge, located in a cove only a few hundred yards north of the west end of Poosevelt Bridge, is a recent innovation. It consists of a covered, circular, floating pier, one hundred feet in diameter, for the purpose of fishing. Revenue is obtained by an admission charge, and from a small store carrying refreshments, bait and small supplies.

The Oklahoma University Biological Station (located near Willis, Oklahoma) is of great importance to the future of fishing at Lake Texoma. This station, established by the University with the cooperation of the Corps of Engineers and the Oklahoma Game and Fish Commission, has as its purpose the training of students in fishery management, the study of the physical, chemical and biological conditions of Lake Texoma and the study of the life, habits, abundance and utilization of the fish of the lake. The plant consists of laboratories, a cafeteria, a recreation room, dormitory housing for eighty persons, and cabin units for fifty. Summer classes are held for an eight weeks' period and field trips to the station are made throughout the year.

The work of the director, Dr. Carl Riggs, and his students, has resulted in some important findings, a few of which are summarized as follows:¹²

1. The age and growth of Lake Texoma Fish are apparently as good, or better than fish from similar impoundments in other parts of the United States.

2. Fishing, despite a slacking of results, is better at Lake Texoma than most places.

3. There is a detrimental over-abundance of rough fish (carp, buffalo, shad, gar, etc.).

4. Forage fish, which serve as food for the larger predaceous fish, are abundant.

5. It is almost impossible to overfish a lake the size of Lake Texoma.

6. Fish may be caught in the hottest weather if the fisherman knows where to find cool water.

7. The Gold Eye, the second most abundant fish in the lake, and other rough fish, such as, carp, carp sucker and buffalo, are good nourishing food, but are not being properly harvested by fishermen.

8. The harvesting of more rough fish would improve fishing for game fish.

9. Commercial fishing for rough fish needs to be developed further. a market must be created before this is feasible, and a statute preventing rough fish from being sent out of the state, must be amended.

(The following facts were determined by the work of the University laboratory in 1952).¹³

¹² Dr. Carl D. Figgs, personal interview, July 12, 1951.

13 The Daily Oklahoman, Section D (Oklahoma City), Aug. 16, 1952, p. 4.

10. Rough fish population outnumber game fish 30 to 1.

11. Black bass, white bass and crappie were outnumbered by other species 120 to 1.

12. Black bass are decreasing; crappie and white bass are maintaining their balance.

The extent of fishing in Lake Texoma can be shown by the Corps of Engineers' estimate for 1949, of 3,868,000 pounds of sport fish harvested, and by the sale of fishing licenses shown in Table VIII.¹⁴

Commercial fishing on Lake Texoma is conducted in two ways; trot lines (used chiefly around Tishomingo and below the Dam), and seining, either by hoop nets or by large mesh gill nets. Hoop nets and trot lines are used by the smaller operator. Commercial fishermen are closely regulated by law and must be bonded. Nylon nets, with a minimum mesh of four inches as required by law, are used to catch only the larger species of buffalo, carp, gar and catfish. An Engineer estimate for 1949, gave a commercial harvest of 600,000 lbs.¹⁵ A statement by the lake's largest commercial fisherman, writing in 1952, was as follows:¹⁶

"In one year we caught 250,000 pounds of buffalo. In three years, we caught 500,000 pounds of carp. We take at least 10,000 pounds of gar per year."

Hunting on Lake Texoma is, for the most part, confined to migratory waterfowl; although in the uplands away from the lake, quail and squirrel are sought. During the years 1950 and 1951, Texas and Oklahoma, open

14 Mr. J. E. Wilson, Beservoir Manager, Lake Texoma. <u>Personal Inter-</u> view, July 15, 1951.

15 Mr. J. E. Wilson, Beservoir Manager, Lake Texoma. <u>Personal Inter-</u> <u>view</u>, July 15, 1951.

¹⁶ Alden Kimsey, "A Commercial Fisherman at Lake Texoma," <u>Oklahoma</u> <u>Game and Fish News</u>, July--August 1952, p. 11.
seasons on ducks and geese were identical, except that Oklahoma's season lasted one day longer. Both seasons included four weeks in November and the first two weeks in December. Lake Texoma is the largest body of water on the Central Flyway, with the exception of the Great Lakes, and waterfowl are, of course, numerous. Water plants (eg. pond weed, naiad, muskgrass, water milfoil, etc.) usually grow profusely to provide food, but of late, such plants have been diminished by the fluctuating water level.

The Biological Station, mentioned above, does intensive work in the study of water fowl, similar to their work in regards to fish. In addition, both states maintain ranger stations on the lake to aid and to supervise the hunters and fishermen. The Oklahoma station is at the east end of the Roosevelt Bridge, while the local headquarters for the Texas Game, Fish and Oyster Commission, is located south of Little Mineral Docks on the Preston Peninsula.

Both hunting and fishing are prohibited at the two National Wildlife Refuges found on the lake (see figure 2). In Oklahoma the Tishomingo Refuge occupies the northern part of the Washita Arm, and in Texas the Hagerman Refuge includes the southern half of the Big Mineral Arm. The Engineers made the following estimates of migratory waterfowl during the year 1949:¹⁷

1. Number of migratory waterfowl using the reservoir ---- 358,000.

2. Maximum total observed in one day: Geese--12,000; ducks--143,000.

3. Number of migratory waterfowl taken in the reservoir: Geese--600; ducks--4,900.

In explanation of the table on the following page, it should be stated that figures past 1949, can not be reliably used for comparison due

17 Mr. J. E. Wilson, Reservoir Manager, Lake Texoma, <u>Personal Interview</u>, July 15, 1951.

to the setting up of a mutual Texas-Oklahoma Fish and Game law which created a special Lake Texoma license (both annual and 10-day duration). Oklahoma derived 70 per cent and Texas 30 per cent of the income from the sale of this license. The agreement was not renewed when it expired on January 31st, 1952. The higher figures for the year 1948, were due to special interest shown in a "fishing derby" of one week duration. This derby, sponsored by The Daily Oklahoman newspaper and numerous merchants and manufacturers, offered many valuable prizes end attracted several hundred thousand visitors.

TABLE VIII

SALE OF HUNTING AND FISHING LICENSES FROM 1943, TO 1949, IN BFYAN, JOHNSTON, MARSHALL AND LOVE COUNTIES OF OKLAHOMA (Data for Grayson and Cooke Counties of Texas unavailable)

Year	Resident Fishing	Non-resident Fishing	Ten-day Fishing	Resident Hunting	Non-resident Hunting
1943	2869	42	143	1560	10
1944	7028	87	761	2567	23
1945	18572	248	2190	3962	55
1946	16745	254	1996	5770	53
1947	17831	154	3591	5188	75
1948	21822	1379	8458	5394	606
1949	20837	846	7689	5147	62

(Table compiled by writer from official records at the Oklahoma State Game and Fish Department, Capitol Building, Oklahoma City, Courtesy of Mr. Kelley DeBusk, Chairman).

Most of the boating on Lake Texoma is for the specific purpose of fishing, but many of the cruisers are maintained primarily for boating as a sport. Sail boating, too, is advancing in popularity and about thirty sailboats were on the lake during the summer of 1952. Sail boating, though foreign to the skill of most local people, should advance in popularity, due to good conditions of wind and sufficient width of the lake in most areas to make tacking into the wind feasible. At Highport Resort several luxury cruisers, valued up to \$75,000, are maintained. Several of these are air-conditioned, radio equipped and very resplendent in furnishings and workmanship. The United States Coast Guard has established a system of eight vari-colored beacons, mounted on forty-foot towers, as navigational aids to boat operators.¹⁸ The Engineers have published a chart, showing hazards to boating, as a further aid. Speed boating has not attained the popularity that a lake the size of Lake Texoma warrants. Probably this is due to the preponderant interest in fishing. Several speed boat races, however, have been held, notably at Catfish Bay, Willow Springs, and Burn's Run. Some water skiing is engaged in, due principally to a water ski school conducted at Burn's Run during the summer of 1949.

Swimming ranks second to fishing in popularity and is, as before noted, especially favored at Burn's Run, Willow Springs, High Port, Island View, Pleasure Bay, Catfish Bay and others. This writer could find no record of a swimming or diving contest being held at any of the resorts, although two English Channel aspirants (Roy Sutter and Shirley Mae France) trained here. Both, subsequently failed in their channel attempt, but Roy Sutter established an unofficial world record on Lake Texoma, with a 30 mile endurance swim on May 20, 1951.¹⁹

Picnicking and camping are extremely popular in places where facilities have been provided by the government. On summer weekends, it is often difficult to find available space in such areas.

¹⁸ Southwest Holiday, July, 1951, (Map, p. 14).
 ¹⁹ Southwest Holiday, June, 1951, p. 20.

Recreation areas, away from the lake in the six-county region, are very few and confined to the principal cities. In the smaller communities, recreational activities are usually centered around the school gymnasium, the town baseball lot, and small local lakes or ponds. (Other than Lake Texoma, only two lakes of more than 100 acres are to be found in the six counties of the region.)

Gainesville, Texas, is better equipped to care for the recreational needs of its people than any other city of the region. A \$100,000 swimming pool was completed in 1950 in one of its four parks. Gainesville is the home of the world famous community circus, a complete three ring circus that has performed one hundred and twenty times since 1930 in more than fifty cities. Gainesville, also sponsors a boys' club in a large modern building and operates a summer camp for diabetic children.

Durant, Oklahoma, has the poorest facilities, being the only major city of the region without a swimming pool or a municipal athletic stadium. Libraries are adequate in all cities except Marietta and Tishomingo. Sherman and Durant both have colleges with libraries and associated student recreational activities. Tishomingo is the home of a junior college with good facilities, and a library which serves both student and civic needs. Sherman, Denison, Gainesville, and Durant have municipal buildings which are often utilized for recreation. Theaters, including those of the Drive-In type, are plentiful, as shown in Table IX.

The outdoor recreational needs of most people of the region are richly enhanced by the presence of the lake. All cities are directly affected; Gainesville, due to its isolation from the best facilities and its own excellent resources, makes less use of the lake than the other cities.

The total facilities of all concessions, clubs, and other agencies described above, are somewhat below the maximum needs of the region. This

TABLE IX20

City	Number of Theaters	Total Capacity	Drive-In Theaters	Capacity in Automobiles
Denison	4	2425	1 @	200
Sherman	5	2134	1	450
Durant	4	2072	2	1000
Gainesville	3	1600	1	150
Madill	2	750	1	150
Tishomingo	2	350		
Marietta	2	540		
Whitesboro	2	630		
Totals	24	10501	6	1950

THE ATERS OF THE TEX OMA REGION

is reflected in the fact that most concession operators are planning expansion, and that the better cabins are usually reserved in advance. Overflow into the cities is noticeable during particular seasons and on special occasions. The creation of the two new state parks will alleviate this condition and may attract more people to the region, although any such increase will depend upon factors named in the next chapter.

 20 Table based on personal and telephone interviews with managers or owners of theaters in towns indicated.

CHAPTER VI

SOME ECONOMIC IMPACTS AND CONCLUSIONS

Economic Impacts

In a study of this scope it is not possible to accurately portray in its true light the economic impacts of this great new lake. This is due to the fact that the reservoir was completed during the war, a condition which had an even greater impact on the social and economic life of people of the region and which caused a period of both growth and atrophy that has had no antecedent in the region. It becomes obvious then that the economic impact can only be determined relatively by using another complete study as a comparison. This study, of course, would have to be of another region similar in culture, socio-economic life and demographic tendencies, but having no reservoir such as Lake Texoma. Some influences, however, can be shown and the most important of these would be a study of the people who, except for the presence of the lake, probably otherwise would not have visited the region.

During 1950 over four million persons are estimated to have visited Lake Texoma, a number far exceeding estimates for Yellowstone National Park, Lake Mead, Lake Kentucky, or any other national park, monument, site, or area.

The following table based on sample counts and daily estimates made by the reservoir management personnel, shows the progressive use of Lake Texoma since 1946.¹

¹Mr. J. E. Wilson, Reservoir manager Lake Texoma, <u>Personal Interview</u>, July 15, 1951.

TABLE X

Year	General Recreation	Fishing	Hunting	Total
			a series and the series of the	
1946	90,000	400,000	10,000	500.00
1947	985,000	500,000	15.000	1.500.000
1948	1,530,000	700,000	20,000	2,250,000
1949	1,970,000	1.000.000	30.000	3.000.000
1950	2,346,000	1,934,000	32,000	4,312,000

LAKE TEXOMA ATTENDANCE IN VISITOR DAYS

It will be noted in the above table that the greatest increase is in "general recreation" indicating greater participation in sightseeing, swimming, picnicking, etc. It points to the fact that Lake Texoma is being used for more varied forms of recreation as it grows older. This can be attributed to two two reasons: first, efforts on the part of the government and the concessioners to provide a wider range of activities; second. increase in number of visitors from other states whose main purpose is sightseeing. This increase in out-of-state visitors is due to the fact that Lake Texoma is becoming much better known on a national scale. The concessioners have been ineffectively organized but, nevertheless, have done much advertising both as a group and separately. This writer, though, in interviewing seventy-eight people in out-of-state cars, found the following reasons given most often for their presence at the lake:² first. "I am visiting relatives who live in this vicinity": second, "I heard of the lake from a relative (or friend)"; third, "I live here--working out of state -just home for a vacation." (Several instances of soldiers home on leave were encountered.) Approximately two persons out of three stated that they had been at the lake previously. These interviews thus suggest a lack of

² These interviews took place at several different times. Most of them occurred at Burn's Run (July 4, 1951) and at Willow Springs (July 4, 1952).

effective national advertising.

A splendid little magazine has grown up with Lake Texoma and has done much to advertise the lake. This magazine, founded at Sherman, Texas, in 1947, was first named "Texoma Holiday." The name was changed to "Southwest Holiday" in 1949 and its scope increased to include other lakes in the Southwest.

Postcards and maps are on sale at most places around the lake, but the postcards are usually of inferior quality and would more effectively advertise the lake if distributed free. Maps, too, are very inferior and not available at filling stations. A good road map, comparable to those published by the United States Army Engineers and showing access to all points on the lake, needs to be published by some agency for free distribution, both at the lake and away from it.

For the purpose of analyzing the regional distribution of visitors to the lake, this writer interviewed the concessioners to obtain their personal estimates as to the origin of their customers. These figures are tabulated in Appendix A. On the basis of these opinions, with corrections where obvious errors existed, and a tabulation of cars visiting the respective areas, as indicated by the engineer's automatic counters, Table XI was evolved.

From Table XI it appears that 54.7 per cent of all visitors are from Texas, 37.6 per cent from Oklahoma, and 7.7 per cent originate from other states. This would mean that of the visitors in 1950, approximately 1,600,000 would be Oklahomans; 2,300,000 would be from Texas; and 325,000 would be from other states. The relationship of the figures for Oklahoma and Texas rather closely resemble the population distribution within the 50-mile circle of the lake (See figure 3). They also coincide very closely to the percentage of boats registered within the fifty mile ring between

TABLE XI

Oklahoma	Oklahoma	Texas	Other States	Total
Burn's Run	64,571	101,470	18,448	184,489
Sunset	4,703	4,703	495	9,901
Platter Flats	9,972	5,817	831	16,620
Sand Point	13,482	425	75	13,982
Willow Springs	35,286	9,510	2,755	47,551
Butcher Pen	18,077	954	50	19,081
Tishomingo Wild Life	10,150	537	65	10,752
Cumberland Cove	16.563	1.765	75	18,403
Little Glasses	5.871	325	45	6,241 24,113
Catfish Bay	20.490	3.017	606	
Soldier Creek	17.104	1.750	150	19.004
Hickory Creek	16,932	9,861	1,410	28,203
Texas			×	
Rock Creek	600	12,409	53	.13,062
Cedar Bayou	900	18,905	95	19,900
Walnut Creek	650	13,468	58	14,176
Big Mineral	910	18,945	95	19,950
Flowing Wells	2.464	25.636	385	28,485
Paradise Cove	844	8.946	150	9.940
Mill Creek	818	17,975	128	18,921
High Port	8,806	24.650	1,761	35,217
Island View	252	19,183	757	20,192
Preston Camp	636	15,106	159	15,001
Grandpappy Point	1,110	16,428	222	17,760
Dam Road	169,978	267,094	48,564	485,636
Powerhouse	108,734	170,879	31,068	310,681
Grand Totals	529,903	769,758	108,500	1,408,161

NUMBER³ AND ORIGIN⁴ OF CARS VISITING SPECIFIED RECREATIONAL AREAS IN 1950

the two states (see Table XII). It can be further deduced that by far the greatest usage of the lake is of the day-by-day type from people living within easy driving range.

³ Compiled from monthly reports of automatic counters made available to this writer by J. E. Wilson, Reservoir Manager, Lake Texoma, July 16, 1951.

⁴ See Appendix A.

Surveys were also conducted by the writer in an attempt to determine origin by distance and by specific state. The guest register at the powerhouse was analyzed as shown in Appendix B; boat registrations were examined with results as shown in Appendix C. In addition, three concessioners granted permission for an analysis of their register book of cabin guests. Results of these last three counts are shown as follows: Burn's Fun in Appendix D; Willow Springs in Appendix E; and Catfish Bay in Appendix F.

The results of these surveys are of interest, even though no general implications can be drawn from them due to their failure to give an overall view (permission to analyze registers is not given to private citizens at most places). A summary of these surveys is given in the following table:

TABLE XII

SUMMARY OF BOAT FEGISTRATIONS AND REGISTER COUNTS, WITH RESPECT TO DISTANCE FROM LAKE OF OWNER OF VISITOR

	Okla	homa	Te	Other	
	Less than 50 miles	More than 50 miles	Less than 50 miles	More than 50 miles	States
Guest Book, Powerhouse ⁵	13.6%	17.4%	19.5%	33.8%	15.7%
Boat Registrationso	28.5%	12.2%	43.9%	15.1%	.3%
Register, Burn's Fun	5.1%	14.4%	6.4%	66.3%	7.8%
Register, Willow Springs	11.1%	65.7%	2.8%	12.8%	7.6%
Register, Catfish Bay?	12.3%	72.4%	1.3%	7.5%	6.5%

- 5 See Appendix B
- 6 See Appendix C
- 7 See Appendix D
- ⁸ See Appendix E
- 9 See Appendix F

It will be noted in the above table that the out-of-state guests at the three resorts, confirm the percentage of out-of-state visitors arrived at in Table XI. Naturally fewer of them would own boats and more of them would be attracted to the powerhouse, which incidentally contains a geological museum and an excellent gallery of enlarged photographic views of the lake.

As far as could be determined no checks had been made of out-of-state cars, other than spot checks of short duration. The writer in attempting some spot counts, discovered that many out-of-state tags (especially Michigan and California) were on used cars now owned locally. However, permission was obtained to check the daily reports of the Denison Information Office of the Texas Highway Department, located one mile north of Denison on Highways 69-75. This office keeps a record of all cars requesting information at their station. The complete results are shown in Appendix G. When summarized as shown in the following table some interesting facts are revealed. It should be pointed out that this is not a count of cars visiting the lake, but rather of cars entering the region and passing over Highway 69-75 within one mile of the dam. Probably most of these people did not visit the lake and many were unaware of its existence until informed by the information office staff. It should be further stated that 80 per cent of the cars enumerated were southbound and that nearly all were starting on (rather than returning from) vacations.

The most startling fact in the following table is the great number of visitors to the area from the North Central States, a number that almost doubles that of visitors from the nearby states. When this fact is compared with out-of-state guests staying overnight as shown in Appendixes D, F, and F, it further emphasizes the need for national advertising, for it is obvious that a far greater portion would stay overnight at Lake Texoma if

TABLE XIII10

REGIONAL AND SEASONAL DISTRIBUTION OF OUT-OF-STATE CARS STOPPING AT THE TEXAS HIGHWAY DEPARTMENT INFORMATION OFFICE 1

	10	950	10	951	Total
	July 1- Sep. 30	Oct. 1- Dec. 31	Jan. 1- Mar. 30	Apr. 1- June 30	and Per Cent
States contingent to Okla. & Texas (La., Ark., Mo., Kan., Colo., N. Mex.)	653	484	437	597	2171 27.1%
<u>New England States</u> (Me., N.H., Vt., Mass., Conn., R.I.)	31	29	20	26	106 1.3%
Middle Atlantic States (N.Y., Penn., N.J., Del., Md., Va., W. Va., D.C.)	188	76	80	123	467 5•9%
Southern States (N.C., S.C., Ky., Tenn., Ga., Fla., Ala., Miss.)	80	61	29	68	238 3.0%
North Central States (Ohio, Ind., Mich., Wisc., Ill., Iowa, Minn.)	861	854	1266	951	3932 49•2%
Rocky <u>Mountain-Plains</u> <u>States</u> (N.D., S.D., Neb., Wyo., Mont.)	55	69	91	44	259 3•2%
Western States (Wash., Ore., Ida., Nev., Utah, Calif., Ariz.)	179	171	151	197	698 8.7%
Foreign Countries (Including U. S. Terri- tories)	22	23	4 2	44	130 1.6%
Totals	2069	1767	2115	2050	8001 100%

10 Compiled by writer from daily reports of cars requesting information, through courtesy of Texas Highway Department, July 20-21, 1951.

11 See Appendix G.

they knew in advance of its facilities. At the Information Office of the Texas Highway Department, they earnestly try to sell the public on visiting the lake and probably many at least, visit the dam, but the office is located disadvantageously, being between the two intersections of highway 75-A (the dam road) with the main highway, and thus necessitating a longer trip by the visitors.

Oklahoma maintains no information office, although the game ranger station previously mentioned, serves in that capacity for people already visiting the lake. Its position is off of the road and visitors to the area see the lake before they see the station. The Oklahoma Highway Patrol Headquarters, just north of Durant, has an excellent location to direct southbound visitors to the lake, but no effort is made by these people to do so. Usually only one operator is present to maintain watch on the patrol radio and information is not advertised in a sign on the highway. This writer was much surprised upon inquiring to find no maps, pamphlets or other printed matter concerning the lake to be available.

The economic impact of visitors to the region would be most recognizable in the growth of three types of services; namely, eating and drinking establishments, service stations, and lodging places. The following table is significant in the case of the first two services mentioned above.

Although the information presented in Table XIV is derived from Government documents and demonstrates vividly the increase in sales between 1939 and 1948 nevertheless it is apparently inaccurate as to the total number of some of the establishments. For example, beer taverns which are classed as drinking places are much more numerous on the Oklahoma side than is indicated. The information in Table XV bears this out.

TABLE XIV

LAKE TEXOMA EATING AND DRINKING PLACES AND SERVICE STATIONS-193912-194813

1939 43 63 15 40	1948 75 35 15	1939 315 488 59	1948 1,602 722
43 63 15 40	75 35 15	315 488 59	1,602 722
43 63 15 40	75 35 15	315 488 59	1,602 722
15 40	15	59	7 ~ ~
15 40	15	59	7 ~ ~
	23	189	2 39
16 27	28 17	87 112	309 169
15 23	28 23	76 143	310 229
33 59	30 45	253 616	679 1,497
171 197	98 128	1,227 1,486	2,246 3,453
29 3 409	274 271	1,917 3,303	5,301 6,359
	16 27 15 23 33 59 171 197 293 409	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

12 U.S. Bureau of the Census, <u>Census of Business and Retail Trade</u> (Washington: Government Printing Office, 1942).

13 U. S. Bureau of the Census, <u>County and City Data Book</u> (Washington: Government Printing Office, 1949).

TABLE XV

		and the second second				
Year	Bryan	Johnston	Love	Marshall	Grayson	Cooke
1940	66	10	x	x	51	2
1941	55	14	x	x	30	z
1942	34	5	x	x	28	z
1943	26	2	x	x	y	z
1944	30	1	x	x	y	z
1945	40	7	x	x	y	z
1946	55	7	20	x	У	Z
1947	81	20	21	x	У	Z
1948	112	17	29	x	У	z
1949	122	29	31	x	У	z
1950	137	24	37	x	У	Z

BEER LICENSES IN THE LAKE TEXOMA REGION FROM 1940 TO 1950 BY COUNTIES14

x-Data not existing or not available to writer. y-Beer illegal in Grayson County since 1942. z-Beer illegal in Cooke County since 1919.

The table above includes both retail and package licenses, but in Bryan County only ten were of the package type. In an interview the County Judge of Bryan County said that of the 137 places licensed in 1950, only seven had gone out of business, while three others were closed by the authorities.¹⁵

The greatest growth of service establishments took place in the tourist court trade. Of the seventy-five courts of the region, only about one third existed prior to 1940. Many of these are small affairs to accommodate fishermen and are located as near to the lake as possible, but

¹⁴ Figures compiled from County Court Records made available to the writer through the courtesy of County Judge or County Clerk of county as indicated.

¹⁵ Mr. Ceph Shoemake, County Judge of Bryan County, Oklahoma, <u>Personal</u> <u>Interview</u>, July 1, 1951.

the trend is also reflected in larger and better courts in the cities. Hotels and romming houses, on the other hand, have remained more or less static.

In Table XVI, courts, hotels, and rooming houses are classified into four types: "AA" refers to the highest type, completely modern, new and clean and certified by some agency such as the American Automobile Association; "A" is of high type lacking certification or some feature of modernity; "B" is the average type with lower rates, usually modern, but cleanliness being suspect; "C" is the lowest type, not modern and not recommended as to cleanliness.¹⁶

Other service establishments in addition to the three named, have undoubtedly gained economically by the presence of the lake. This is especially true of sporting goods stores and of other stores handling equipment or supplies used by the visitors to the lake. The most succinct statement this writer has read is quoted as follows:¹⁷

A fishing tackle salesman at the Dallas Sports Show, told us: When I started with my company in the 1930's, we sold \$23,000 worth of equipment in the Southwest. Aside from the Gulf Coast, there were only two places to fish-Lake Kemp near Wichita Falls and Medina Lake near San Antonio. Last year [1949] my company shipped into the same territory \$467,000 worth of fishing tackle.

Although industry in the region and particularly at Sherman, Texas, has increased since the lake was built, there is very little that has been directly influenced by the lake. Two firms were established in Sherman to manufacture lures and at their peak employed thirty-five men between them. The Southwest Associates, publishers of Southwest Holiday, mentioned above,

¹⁶ Table XVI compiled from information gained through actual inspection (in most cases), or personal interviews with owners, managers and tenants. The classification system used is arbitrary and purely the opinion of this writer.

¹⁷ Southwest Holiday, June 1950, p. 12.

TABLE XVI

	<u>A.</u> To	urist Court	s and Ca	abins		
	Bryan	Marshall	Love	Johnston	Grayson	Cooke
No. of AA Courts Capacity	3 129	1 30	1 26	0 0	5 193	4 106
No. of A Courts Capacity	4 128	2 45	1 14	3 118	1 254	3 108
No. of B Courts Capacity	6 126	3 81	2 34	1 14	6 154	3 84
No. of C Courts Capacity	7 90	4 91	2 28	1 10	5 118	3 54
Total Number	20	10	6	5	21	13
Total Capacity	573	247	102	142	689	352
No. built since 1940	12	8	5	4	13	8

LODGING PLACES OF THE LAKE TEXOMA REGION

	<u>B</u> . <u>Ho</u>	tels and Ro	oming H	ouses		
	Bryan	Marshall	Love	Johnston	Grayson	Cooke
No. of AA Hotels Capacity	1 200	0 0	0 0	0 0	2 475	1 150
No. of A Hotels Capacity	1 130	0	0 0	0	1 200	1 60
No. of B Hotels Capacity	1 90	1 30	0 0	1 60	6 370	2 50
No. of C Hotels Capacity	4 52	1 20	3 42	1 28	1 12	0 0
Total Number	7	2	3	2	10	4
Total Capacity	472	50	42	88	1057	260
No. of A Hotels Capacity No. of B Hotels Capacity No. of C Hotels Capacity Total Number Total Capacity	1 130 1 90 4 52 7 472	0 0 1 30 1 20 2 50	0 0 0 3 42 3 42	0 0 1 60 1 28 2 88	1 200 6 370 1 12 10 1057	

normally employs fifteen people. A few other very small firms produce boats, fish bait, naval stores and a weekly paper devoted to fishing news.

The raising of minnows and goldfish for bait has shown considerable development in the region and at several locations immediately outside the region. The biggest producer of minnows is the 7-Springs Bait Farm located at Wapanucka, Oklahoma, in the northeastern corner of Johnston County. This farm produced about 800,000 minnows, 125,000 goldfish, and 125,000 fat-head minnows during 1950 for sale to retailers.¹⁸

Conclusions

Several conclusions, of an economic nature, were drawn in the preceding section. In addition there are four major problems that affect the economic future of the lake. These are the problems of siltation, fluctuating water level, competition from lakes being built or authorized and public versus private ownership of concessions.

Siltation occurs mostly in two general areas-the Upper Washita Arm and the western end of the lake. The greatest siltation occurs at the former, due to the constriction caused by the Cumberland Levees and the excessive muddiness of the Washita River. This area now comprising the Tishomingo Wildlife Refuge, was formerly one of the richest farming areas of the state. People in Tishomingo are bitter about the loss of income from these farms. Several business firms have failed and many have changed hands. Complaints are heard, too, from people living at the western end of the lake. An association, similar to the one responsible for Denison Dam, has been formed in the Washita Valley and plans for upstream dams to prevent siltation, have been drawn, with construction to start soon.¹⁹

¹⁸ Juanita Mahaffey, "Growing Minnows for Profit," Oklahoma Game and Fish News, September, 1950, pp. 6-8.

¹⁹ Daily Oklahoman (Oklahoma City), February 22, 1952, p. 4.

Siltation is admittedly bad in the areas just described, but it will be a great many years before the problem becomes a general one and perhaps preventative measures will be taken before that time.

In March of 1953, the level of the lake dropped to 602 feet--its lowest mark since 1945. Considerable inconvenience and expense were caused to the concessioners, some of whom found their boat docks a half mile from the shore.²⁰ Acres of stump fields and mud flats were bad psychology for those who viewed them. Undoubtedly Lake Texoma permanently lost many good customers. A study of the rainfall over a long period of years before the lake was built, demonstrated that there would be lows--perhaps as low as 590 feet every 50 years. The study also showed that normally the lake could be kept close to the 617-foot level and that once in fifty years the spillway, at 640 feet, would be needed.²¹

Lake Texoma had a fortunate beginning. Its opening coincided with the return of veterans from World War II, and the lifting of restrictions on the manufacture of sporting goods. This, together with the fact that such impoundments in their early life have proved to be very prolific in game fish, caused an immediate popularity with fishermen. Within the next few years, Lake Texoma's prestige will be threatened by several new impoundments (see figure 1). To the south, lying between Texoma and the greatest concentration of population of the area, two large reservoirs are nearing completion: the Garza-Little Elm Project, storing over a million

²⁰ Ibid., Magazine Section, March 1, 1953, p. 5.

²¹ U. S. Department of Interior, National Park Service, <u>Recreational</u> <u>Resources of the Denison Dam and Reservoir Project</u> (Washington: U. S. Government Printing Office, October, 1943), p. 5.

acre feet and the Lavon Project, storing about one-half million acre feet.²² To the east, the Boswell, Hugo, Texarkana, and the large Millwood Projects have all been authorized. While in the north the Eufaula Reservoir, similar in size to Texoma, will lie astride the main north-south highway of the area.

Thus, it can be seen that Texoma will be surrounded in every direction, except to the west, an area of low population density, with new impoundments that are likely to be very popular with fishermen. The new reservoirs, being nearer to population centers, will also provide more accessible general recreation. The conclusion is that Lake Texoma can expect a decline in visitation during the coming years.

A few advantages of Lake Texoma will delay this expected decline. The fact that it has already developed good facilities will place it in a superior position in competition with other lakes that must start from scratch. This factor may make capital a little wary of investing in facilities for the newer lakes. Texoma has had a head start in the building of access roads to the government properties. Such roads must be built over a period of time as funds accumulate for the purpose in contingent counties. A proposed new bridge and highway would have a most salutary effect on some of the more inaccessible regions of the lake.²³ This bridge, to be located at Willis, Oklahoma, is under review by the United States Army Engineers at the present time.

With the decisions of the two states to build Texoma State Park (Oklahoma) and Eisenhower State Park (Texas), a new phase of development

23 Ibid., p. 49

²² U. S. Army, Corps of Engineers, <u>Water Resources Development in</u> <u>Texas</u> (Dallas, Texas, Southwestern Division, Mimeographed, January, 1953), p. 34 (figures quoted are maximums).

is starting, that of state ownership competing with individual enterprise. The opinions of the concessioners vary from radical opposition to co-operative endorsement. The attitude of most would be a policy of 'wait and see.' One concessioner expressed himself as follows:²⁴

We the concessioners pioneered this thing and suffered bad years getting started.....I was planning on building some new cabins next year, but I can't do it now.....It will eventually end up with a state park on either side and private competition driven completely out.

The well-worded statement of another concessioner probably represents the feelings of the majority:²⁵

The new State Park [in Oklahoma] can be a good or bad thing for other concessions, depending upon how it is operated. It will not be subject to sales taxes or ad valorem taxes and can, thus, enter into unfair competition with others if it so desires. A concession is a business and the state is entering into business in competition with private enterprise. It would be the same as if a state grocery store were set up in a town. However, it can also, and will, undoubtedly create more visitors and will, thus, increase the business of other concessions in the same manner that a Kress and a Woolworth store located side by side are mutually competitive and helpful to each other.

One of the most detrimental factors to the fullest realization of the possibilities of the lake, has been the lack of co-operation between the agencies and parties concerned. Jealousy, selfishness, and haggling have existed in many cases to retard progress. A special Lake Texoma fishing license, with proceeds shared by Texas and Oklahoma, was abandoned. A concessioners' organization, with all operators participating, has not been successful. Commercial groups in the cities have often been jealous of commercial concerns on the lake. Individuals, cities, and counties have had differences that have never been resolved. To overcome these difficulties, an organization is sorely needed--one that will represent all

²⁴ <u>Personal Interview</u>. July 23, 1952 (name of concessioner purposely withheld).

²⁵ Mr. Charles Bowlby, manager of Willow Springs Resort, <u>Personal</u> <u>Interview</u>. June 12, 1952. agencies of the lake (concessioners, business men, sportsmen, the Corps of Engineers, cities, counties, states, and others). The writer has constantly heard the opinion expressed that "the lake is of no help to me." In some cases it was even stated that it was detrimental. Probably this is often true; but the situation can certainly be improved by a group working co-operatively on a well-thought-out plan to increase an economic impact, which is much greater than most people of the region seem to realize. APPENDIX

APPENDIX A

NUMBER OF VISITORS TO SPECIFIC AFEAS AS INDICATED BY TEAFFIC COUNTERS--WITH OPINION AS TO OFIGIN (PEFIOD, JAN.1-DEC. 31, 1950).

Area	Number of cars	Statement of Origin
Oklahoma		
Burns Run	184,489	55% Texas, 35% Oklahoma, 10% other.
Sunset	9,901	No data.
Platter Flats	16,620	60% Oklahoma, 40% Texas, and other.
Sand Point	13,982	Homesite, practically all Oklahoma.
Willow Springs	47.551	75% Oklahoma, 20% Texas, 5% other.
Butcher Pen	19.081	95% Oklahoma, 5% other.
Tish. Wild Life	10,752	No data.
Cumberland Cove	18,403	90% Oklahoma, 10% other.
Little Glasses	6.241	Nearly all Oklahoma.
Catfish Bay	24.113	80% Oklahoma, 15% Texas, 5% other.
Soldier Creek	19,004	90% Oklahoma, 10% other.
Hickory Creek	28,203	60% Oklahoma, 40% Texas and other.
Texas		
Rock Creek	13,062	70% Dallas, 25% Texas, 5% other.
Cedar Bayou	19,900	75% Dallas, 20% Texas, 5% other.
Walnut Creek	14,176	75% Dallas, 15% Texas, 10% other.
Big Mineral	19,950	75% Dallas territory, 25% other.
Flowing Wells	28,485	90% Texas, 10% other.
Paradise Cove	9,940	Nearly all Texas.
Mill Creek	18,921	Nearly all Texas.
High Port	35,217	70% Texas, 25% Oklahoma, 5% other.
Island View	20,192	90% Dallas, 5% Texas, 5% Kansas.
Preston Camp	15,901	No data
Grandpappy Pt.	17,760	50% Texas, 50% Oklahoma.
Dam Road	485,636	No data.
Powerhouse Road	310,681	No data.
Total	1,408,161	

Compiled by writer from interviews conducted during the summers of 1951 and 1952.

APPENDIX B

VISITORS TO THE LAKE TEXOMA POWERHOUSE DUEING 1950

Alabama	7	Canada 9
Arizona	8	Puerto Rico 1
Arkansas	34	Mexico 2
California	30	Canal Zone 1
Colorado	3	Alaska 1
Florida	1	Guatemala 1
Georgia	7	Wales 1
Idaho	2	Australia 1
Illinois	31	Arabia 1
Indiana	39	China 1
Iowa	30	Total 19
Kansas	62	
Kentucky	4	Oklahoma
Louisiana	37	Within 50 miles 488
Michigan	14	Oklahoma City 126
Minnesota	18	Tulsa 85
Mississippi	12	Other over 50 mi. 411
Missouri	48	Total over 50 mi. 622
Montana	2	Total Okla. 1110
Nebraska	18	
New Jersey	1	Texas
New Mexico	18	Within 50 miles 699
New York	8	Dallas 304
North Carolina	3	Houston 53
North Dakota	8	Ft. Worth 47
Ohio	21	Wichita Falls 33
Pennsylvania	16	San Antonio and
Rhode Island	2	Austin 22
South Carolina	5	Beaumont and
South Dakota	9	Port Arthur 20
Tennessee	17	Other over 50 mi. 742
Virginia	6	Total over 50 mi. <u>1221</u>
Washington	4	Total Texas 1920
West Virginia	1	and the second s
Wisconsin	15	No address, or
Dist. of Columb:	ia4	unreadable 66
Total	539	Grand Total 3654

States missing:

Conn., Del., Me., Md., Mass., Nev., N.H., Utah, Vt., Wyo.

Figures compiled by writer from guest book of visitors, Lake Texoma Powerhouse, Courtesy, J. F. Wilson, Feservoir Mgr., July 15-16, 1951.

APPENDIX C

PRIVATE BOAT REGISTRATIONS ON LAKE TEXOMA AS OF JULY 1, 1951

Texas

Denison	419
Sherman	357
Dallas	323
Gainesville	90
Bonham	27
Ft. Worth	12
Wichita Falls	8
Other Texas addresses within 25 miles of lake	225
Other Texas addresses within 50 miles of lake	118
Other Texas addresses within 100 miles of lake	69
Texas addresses more than 100 miles from lake	18
Total	1663

Oklahoma

Durant	233
Oklahoma City	149
Ada	140
Madill	139
Tishomingo	48
Ardmore	14
Marietta	12
Other Oklahoma addresses within 25 miles of lake	148
Other Oklahoma addresses within 50 miles of lake	68
Other Oklahoma addresses within 100 miles of lake	141
Oklahoma addresses more than 100 miles from lake	8
Total	1149

Kansas

Wichita Other Kansas addresses	4
	Total 6
Other States	
Arkansas	1
Missouri	1
New Mexico	1
	Total 3

Compiled by writer from official list, courtesy of J. E. Wilson, Reservoir Manager, Lake Texoma, July 17, 1951.

Grand Total

APPENDIX D

SUMMARY OF FEGISTER COUNT-BUEN'S FUN FESOFT (FROM APFIL 1, 1948 TO MARCH 31, 1950)

Texas

Dallas	666
Ft. Worth	81
Houston, Beaumont and Port Arth	u r 61
Wichita Falls	19
Texas addresses less than 50 mi	les from lake 351
Texas addresses more than 50 mi	les from lake _134
	Total 1312

Oklahoma

Oklahoma Tulsa	City							134
Oklahoma	addresses	less	than	50	miles	from	lake	92
Oklahoma	addresses	more	than	50	miles	from	lake	
							Total	355
Kansas	56			Co	lorado	,		4
Illinois	13			Ne	brasks			4
Ohio	9			Pe	2			
New Mexic	0 8			Co	2			
Missouri	7			Fl	2			
Californi Arkansas	a 6 6			Ne	w Hamp	shire		2
Minnesota	6				Total	other	states	140
Michigan	5							
Iowa	4			Ca	nada			3
Louisiana	4							
					Grand	Total		1810

Compiled by writer from official guest register through courtesy of Mrs. Floyd McBride, Hostess of Burn's Run Resort, June 12, 13, 14, 1952.

APPENDIX E

SUMMARY OF REGISTER COUNT-WILLOW SPEINGS FESCET (FROM APFIL 8th, 1951, TO DECEMBER 11, 1951)

Oklahoma

Oklahoma	City							572
Tulsa								69
Oklahoma	addresses	less	than	50	miles	from	lake	216
Oklahoma	addresses	more	than	50	miles	from	lake	641

Total 1498

Texas

Dalla	S							143
Ft. W	orth							27
Wichi	ta Falls							9
Texas	addresses	less	than	50	miles	from	lake	56
Texas	addresses	more	than	50	miles	from	lake	72

Total 307

Kansas

Wichita			50
Other address	es in Kansas		12
		Total	62
Arkansas	17	New York	2
New Mexico	17	Massachusetts	2
Missouri	12	District of Columbia	1
Illinois	11		
Iowa	7	Total	86
Tennessee	6		
Louisiana	5	No Address	455
Michigan	2		
Pennsylvania	2	Grand Total	2408
California	2		

Compiled by writer from official guest register through courtesy of Mr. Charles Bowlby, Manager, Willow Springs Resort, July 10, 11, 12, 1952.

APPENDIX F

SUMMARY OF REGISTER COUNT-CATFISH BAY FESOPT (FROM MARCH 1, TO JULY 4, 1951)

Origin								Number
Oklahoma								
Within	50	miles	of	the	lake		- 1 e -	74
Beyond	50	miles	of	the	lake			436
Texas								
Within	50	miles	of	the	lake			8
Beyond	50	miles	of	the	lake			46
Kansas								12
Illino	is							8
Califo	rni	a						6
Nebras	ka							5
New Me:	xic	0						4
Missou	ri							2
Louisi	ana							2
							Total	603

Compiled by writer from official guest register, through courtesy of Pete Willis, Superintendent of Texoma State Park, July 5, 1951.

APPENDIX G

ORIGIN OF CARS REQUESTING INFORMATION AT DENISON HIGHWAY INFORMATION OFFICE (JULY 1, 1950, TO JUNE 30, 1951)

	1	950	19	51			19	50	19	51	
	7-1	10-1	1-1	4-1			7-1	10-1	1-1	4-1	
	to	to	to	to			to	to	to	to	
	9-30	12-31	3-30	6-30	Total		9-30	12-31	3-30	6-30	Total
Ala.	7	6	2	5	20	N. C.	4	7	6	9	26
Ariz.	20	9	16	18	63	N. D.	2	15	34	6	57
Ark.	62	44	44	56	206	Ohio	111	74	72	118	375
Calif.	129	131	105	148	513	Oregon	9	14	14	15	52
Colo.	9	8	8	11	36	Penn.	70	28	21	50	169
Conn.	6	6	8	4	24	R. I.	1	1	1	2	5
Del.	1	2	0	0	3	S. C.	4	9	0	4	17
Fla.	21	8	4	10	43	S. D.	5	2	12	4	23
Ga.	13	4	5	9	31	Tenn.	9	12	8	17	46
Idaho	2	3	4	4	13	Utah	3	5	0	1	9
111.	228	214	306	316	1064	Vt.	6	0	0	0	6
Ind.	97	86	80	85	348	Va.	16	3	13	11	43
Iowa	157	188	275	129	749	Wash.	16	8	12	7	43
Kan.	172	154	113	176	615	W. Va.	8	2	2	1	13
Ky.	8	6	2	7	23	Wisc.	86	67	128	78	359
La.	50	23	21	26	120	Wyo.	1	0	3	3	7
Me.	2	6	2	2	12	D. C.	2	0	0	2	4
Md.	8	3	8	8	27						
Mass.	15	14	9	17	55	Other					2723
Mich.	92	99	126	126	443	Alaska	1	0	3	2	6
Minn.	90	126	279	99	594	Canada	16	19	37	35	107
Miss.	14	9	2	7	32	Can. Zone	1	0	0	1	2
Mo.	338	246	243	309	1136	Denmark	1	0	0	0	1
Mont.	7	11	0	8	26	Guatmla.	0	0	0	1	1
Neb.	40	41	42	23	146	Hawaii	0	0	0	1	1
Nev.	0	1	0	4	5	Mexico	2	4	0	4	10
N. H.	1	2	0	1	4	Nwfndld	1	0	0	0	1
N. J.	14	9	5	16	44	Panama	0	0	1	0	1
N. M.	22	9	8	19	58	1					
N. Y.	69	29	31	35	164	TOTALS	2069	1767	2115	2050	
					1				GR AND	TOTAL	8001

Compiled by writer from Daily Reports on cars requesting information at Denison Highway Information Office. Courtest Texas Highway Department, July 20-21, 1951.

SELECTED BIBLI OGRAPHY

SELECTED BIBLIOGRAPHY

Personal Interviews

Black, R. M. Head of Fecreational Development Section, Corps of Engineers, Tulsa District, Tulsa, Oklahoma. <u>Personal Interview</u>. August 3, 1950.

- Bowlby, Charles. Manager-part owner of Willow Springs Resort, Lake Texoma, Oklahoma. <u>Personal Interview</u>. June 12, 1952.
- Clark, Dr. J. Stanley. Director of Hesearch, Oklahoma State Flanning and Resources Board (Since resigned). Oklahoma City, Oklahoma. <u>Personal</u> <u>Interview</u>. August 20, 1951.
- -----. Personal Interview. August 21, 1951.
- Clift, John. Sports and Fishing Editor of Denison Herald, Denison, Texas. Personal Interview. August 5, 1951.
- Debusk, Kelly. Chairman of Oklahoma Game and Fish Commission (Since resigned). Oklahoma City, Oklahoma. <u>Personal Interview</u>. August 16, 1950.
- McBride, Mrs. Floyd. Hostess of Burn's Fun Resort, Cartwright, Oklahoma. Personal Interview. June 16, 1952.
- McLynn, Carl. Cousin to Judge Bryant, Owner of Glen Eden, Denison, Texas. Personal Interview. August 8, 1951.
- Morris, Dr. John W. Professor of Geography, Oklahoma University, Norman, Oklahoma. <u>Personal Interview</u>. August 25, 1949.
- -----. Personal Interview. January 12, 1950.
- Riggs, Dr. Carl D. Director of Oklahoma University Biological Station, Willis, Oklahoma. <u>Personal Interview</u>. July 12, 1951.
- Shoemake, Judge Ceph. County Judge, Bryan County, Durant, Oklahoma. Personal Interview. July 1, 1951.
- Stogner, John. County Agent of Bryan County, Oklahoma. <u>Personal Interview</u>. February 20, 1952.
- Willis, Pete. Superintendent of Texoma State Park, Lake Texoma, Oklahoma. Personal Interview. July 5, 1952.
- Wilson, J. E. Reservoir Manager, Corps of Engineers, Tulsa District, Lake Texoma, Texas. <u>Personal Interview</u>. July 15, 1951.

-----. Personal Interview. July 16, 1951.

-----. Personal Interview. July 6, 1952.

Government Publications

- U. S. Army, Corps of Engineers. <u>Water Resources in Texas</u>. Dallas, Texas: Southwestern Division. January, 1953.
- U. S. Bureau of the Census. <u>County and City Data Book</u>, A Statistical Abstract Supplement. Washington: Government Printing Office, 1949.
- U. S. Bureau of the Census. <u>Statistical Abstract of the United States</u>. Washington: Government Printing Office, 1949.
- U. S. Department of Interior, National Park Service. <u>Recreational</u> <u>Resources of the Denison Dam and Reservoir Project</u>. Washington: Government Printing Office, 1943.
- U. S. Department of Interior, National Park Service. <u>Recreational Use of</u> <u>Land in the U. S.</u> Part XI of the Report on Land Planning. Washington: Supt. of Documents, 1934.
- U. S. National Resources Committee. Harold Ickes, Chairman. <u>Drainage</u> <u>Basin Problems and Programs</u>. Washington: Government Printing Office, 1937.
- U. S. Weather Bureau. <u>Climatological Data</u>. (Monthly and Annual Summaries, 1935-1952 inclusive. Oklahoma Section, Oklahoma City. Texas Section, Houston, Texas.)

State Publications

Carter, W. T. The Soils of Texas, Texas Experiment Station Bulletin, Number 431. College Station, Texas. (Undated)

Books

Blair, Thomas A. Climatology. New York: Prentice Hall, Inc., 1942.

- McCreary, Henry. Queen of Three Valleys -- A Story of Durant. Durant, Oklahoma: Democrat Printing Company, 1945.
- Marcy, Randolph B. <u>Exploration of the Red River of Louisiana</u>. Washington: A.O.P. Nicholson, Public Printer, 1854.

Oklahoma Almanac, Oklahoma City: Harlow Publishing Company, 1933.

Texas Almanac, Dallas: A. H. Bello, Corporation, 1947.

Thoburn, J. B. <u>History of Oklahoma</u>, New York: American Historical Society, 1916. Webb, Walter Prescott. The Great Plains. Boston: Ginn and Company, 1931. World Almanac. New York: New York World-Telegram Publishing Company, 1952.

Periodicals

- Caldwell, Norman W. "The Fed River Raft," <u>Chronicles of Oklahoma</u>, Vol. XIX, No. 3, (Sept., 1941).
- Carr, Mrs. Susan J. "Bloomfield Academy and Its Founder," <u>Chronicles of</u> <u>Oklahoma</u>, Vol. II, No. 3, (March 1924).
- Eschmeyer, R. W. "Where Are We Going in Fish Conservation?" Oklahoma Game and Fish News, April, 1952.
- Foreman, Grant. "Red River and the Spanish Boundaries in the Supreme Court," Chronicles of Oklahoma, Vol. II, No. 3, (September, 1924).
- Kimsey, Alden. "A Commercial Fisherman at Lake Texoma," Oklahoma Game and Fish News, July-August, 1952.
- Lovejoy, P. S. "Concepts and Contours in Land Utilization," Journal of Forestry, Vol. XXI, No. 4, (April, 1933).
- Mahaffey, Juanita. "Growing Minnows for Profit," Oklahoma Game and Fish News, September, 1950.
- Morrison, James D. "Notes From the Northern Standard," <u>Chronicles of</u> <u>Oklahoma</u>, Vol. XIX, No. 3, (September, 1941).
- Morrison, W. B. "Colbert Ferry on Red River, Chickasaw Nation Indian Territory," <u>Chronicles of Oklahoma</u>, Vol. XVI, No. 3, (September, 1938).
- Southwest Holiday. July, 1951.

-----. June, 1951.

-----. June, 1950.

Unpublished Materials

- Rice, Virginia Downs. <u>History of Bryan County</u>. Unpublished Master's Thesis, University of Oklahoma, 1932.
- U. S. Army, Corps of Engineers. <u>General Information for Visitors</u>. Denison, Texas: Office of Reservoir Manager, Lake Texoma Fecreational Area, 1952 (mimeographed).
- U. S. Army, Corps of Engineers. <u>Information Pamphlet</u>, <u>Denison Dam and Lake</u> <u>Texoma</u>. Tulsa: Corps of Engineers, Tulsa Division, March, 1948. (mimeographed)

U. S. Army, Corps of Engineers. <u>Lake Texoma Recreational Area, Preliminary</u> <u>Plan of Improvement for Public Use Facilities</u>. Tulsa: Corps of Engineers, Tulsa Division, July, 1949. (mimeographed)

Newspapers

- Daily Oklahoman. Oklahoma City, July 13, 1951.
- -----. February 10, 1952.
- -----. February 22, 1952.
- -----. March 16, 1952.
- -----. August 24, 1952.
- -----. March 1, 1953.
- Denison Herald. Denison, Texas. Special Lake Inauguration Edition, June 29, 1944.
- Durant Daily Democrat. Durant, Oklahoma, February 21, 1944.
- -----. September 24, 1944.
- -----. January 17, 1951.
- -----. March 30, 1952.
- -----. April 9, 1952.
- -----. July 11, 1952.
- -----. August 21, 1952.

Maps and Charts

- The Samuel Fohert Noble Foundation, Soil Areas in South Central Oklahoma. Ardmore, Oklahoma (Undated).
- U. S. Army, Corps of Engineers. <u>The Master Plan</u>, <u>Lake Texoma Recreational</u> <u>Area</u>. Tulsa: July, 1949.
- U. S. Department of Agriculture, Soil Conservation Service, <u>Erosion Survey</u> of the United States. Washington: Government Printing Office, March, 1935.

David T. W. Stevens candidate for the degree of Master of Science

Thesis: FECHEATIONAL GEOGRAPHY OF THE LAKE TEXOMA REGION

Major: Geography

Biographical:

Born: April 16, 1910, at Mt. Sterling, Kentucky.

Undergraduate Study: Southeastern State College, 1928-1932. Graduate Study: New Mexico Highlands University, 1943; O.A.M.C., 1949.

Experiences: Teacher and athletic coach in Oklahoma high schools, 1932-41; Football coach, Southeastern State College, 1941, to present date; Navigation instructor for U. S. Navy, 1943; Marine officer for U. S. Army Transportation Corps in Atlantic, Mediterranean and Pacific Areas, 1944-46.

Member of Gamma Theta Upsilon, Phi Delta Kappa, Fellow of American Geographical Society.

Date of Final Examination: May 5, 1953.

ATIV
THESIS TITLE: RECFEATIONAL GEOGRAPHY OF THE LAKE TEXONA REGION

AUTHOR: David T. W. Stevens

THESIS ADVISEP: Dr. Edward E. Keso

The content and form have been checked and approved by the author and thesis adviser. The Graduate School Office assumes no responsibility for errors either in form or content. The copies are sent to the bindery just as they are approved by the author and faculty adviser.

TYPIST: Mr. and Mrs. Gordon F. Culver