

THE INFLUENCE OF DISTANCE FROM A MAJOR
LAKE (GRAND) ON LAND PRICES IN
DELAWARE COUNTY

By

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CHAPTER I

INTRODUCTION

Delaware County, situated in Northeastern Oklahoma, has within its boundaries parts or all of three lakes: Grand Lake of the Cherokees (Grand); Spavinaw; and, Lake Bucka. These three lakes represent two different kinds of development, namely; state owned and controlled (Grand Lake), and municipal owned and controlled (lower Spavinaw and Bucka). The lakes cover 47,200 acres of land within the county.

This is a study of land sales in an area surrounding Grand Lake, which was built under the auspices of the Grand River Dam Authority and was completed in 1940. Three main purposes encouraged the building of the lake: (a) flood control; (b) generation of hydroelectric power; and, (c) recreation. The Grand River Dam Authority has the right to dispose of property originally acquired for the construction of the lake. Therefore, it has been easy for those wishing to buy land up to the shoreline to do so.

The weather in this part of Oklahoma allows year-round operation of the recreation facilities on Grand Lake. Most of the lake businesses operate ten to twelve months and are in operation as many as seventy hours a week, both winter and summer.

The automobile is the principal means of transportation to and from the lake and the most rapidly developed areas on the lake are those easily accessible by improved roads. There are 1,037 homes

and cabins built along the lake shores for permanent and week-end homes in Delaware County. There are 268 homes occupied seasonally and 769 held for occasional use, most of these are on Grand Lake because of the city controlled shoreline of the other two lakes.

There are approximately 75 resorts of several combinations around the shoreline of Grand Lake, which have facilities available for any tourist that visits the lake. These facilities include; boat stalls, boat rentals, fishing docks, restaurants, motels and other types of recreational facilities.

The part of Grand Lake which is the least developed is the southern shoreline northwest of Jay, Oklahoma, in Delaware County. This is due to the rough terrain and the limited mileage of improved roads in this area.

Statement of the Problem

Recreational development of all the areas in Oklahoma that are near large lakes, already built or under construction, is important to the economy of the area. There is always some discussion as to the decrease in assessed valuation of the area due to the water covering productive land. These areas need to consider this loss in assessed valuation as compared to the gain from increase value of land adjacent to the lake. Grand Lake is one of the older lakes in the state and a definite trend in valuation can be studied from reports made on this area.

Purpose of the Study

The purpose of this study is the following:

1. The relationship of land prices to distance from a major lake. How distance to shoreline influences the value of land without improvements and roads being considered.
2. How distance from the lake and improvements now on the property influence the property value.
3. The influence of quality of land and distance from the lake on per acre price.
4. The influence of improved roads and distance from the lake on per acre price.

CHAPTER II

REVIEW OF LITERATURE

There are several factors to be considered in determining the value of land, one of which is the quality of the land. This has been considered by many as the only factor to be considered in determining the selling price of tract of land. This statement would be true if all agriculture lands were located in the same surroundings. In Delaware County and several other areas in the United States, recreation facilities are fast developing which in return will have some influence on land prices in the area.

Dr. L. A. Parcher (3) page 5 states: "While the quality of farmland is usually the basic determinant of its value, the location of a farm is an important factor in the price for which it sells. A farm located on a good road usually sells for more than one on a poor road. Likewise, a farm only a short distance from market usually is worth more than one farther away."

The strength of the recreational influence in an area is reflected by amount of income this brings into a community. Delaware County R. A. B. Council (5) page 30 reports: "That the average party visiting the lakes is four, and the average visitor made 16 trips to lakes in 1959-60. Average total expenses were \$15.00 a person for each trip or a yearly total of \$240.00. Family income of the average lake visitor was very much above the average family income in Oklahoma.

Forty per cent of the visitors have annual incomes of \$7,500.00 or above." A large number of lake property sales are for people retiring or preparing for retirement in the near future. This demand can be expected to cause land prices to increase.

Back and Burns (1) page 5 reports: "Nonresidents reported an average of about nine visits to the lake in Roger Mills County annually, and an average of about 25 hours per visit. Residents reported an average of about 15 visits to the lakes annually, and an average of about five hours per visit. The nonresidents indicated that 59 per cent of their visits were for one day or more, while residents indicated that 96 per cent of their visits were for less than one day."

In appraising land value, several adjustments to value must be made to determine the proper selling price. Crouse and Everett (1) page 11 states: "The effect of location is like the effect of dropping a rock into the middle of a lake. There are large ripples near where the rock hits the water. Further away from this point they get smaller and smaller and gradually flatten out to nothing. Similarly, the impact of a large city is great on adjacent farms and gradually diminishes as the distance from the city increases."

McMichael's (2) page 7 states: "An appraiser cannot always contend that the worth of a property is based solely on the value at which it may be capitalized through rentals that an ideally developed property will sometimes develop. Occasionally even that fails to hit the true mark of a property's worth. Nor do comparable sales of similarly located property rule. It must be borne in mind that every piece of real estate is an entity unto itself and in some peculiar way is different from every other parcel of property, even in the immediate neighborhood."

Consequently, all elements creating and influencing value must be carefully considered in rendering a final opinion."

The location factor in determining land value is one of the major factors used in appraising the worth of a piece of property. Farther (3) page 6: "Findings in this study bear out those made in other states. In all studies examined, road type and distance to market have been found to influence the value of land. As in this study, most investigators of location-value relationships have found variations from area to area. In most instances, such variations have been attributed to differences in type of farming, frequency of road use, or certain natural conditions such as soil type and rainfall."

Climate and recreation are complementary of each other, the more pleasant the climate the more used will be the recreational facilities. The average annual rainfall in Delaware County is 42.19 inches and the average annual temperature is 56.3° F., which are ideal for recreational trade.

In all respects, Delaware County appears to fit into a category one might term recreational. However, other studies while pointing to the value of location of land with respect to roads, cities and trading centers have never examined whether recreational facilities influence land values. This study proposes to examine this aspect of location.

CHAPTER III

PROCEDURE USED IN STUDY

The objective of this problem was to establish the influence of location upon land prices near a large lake. In order to obtain the information needed for this study the following procedure was used:

1. A map of the Grand Lake area was studied and a zone system was drawn at increasing distances from the lake shoreline to pick up representative sales.

Zone 1 starts one-half mile from the shoreline and is one section wide.

Zone 2 is the second section back or from one and one-half to two and one-half miles from the shoreline.

Zone 3 is the third section back or from two and one-half to three and one-half miles from the shoreline.

Zone 4 is the fourth section back or from three and one-half to four and one-half miles from the shoreline.

Zone 5 is the fifth section back or from four and one-half to five and one-half miles from the shoreline.

The reason for starting one-half mile from shoreline was to get away from the small tract sales to lake business and cabin sites.

2. A Farm Land Market Survey card was used to gather the needed information on each sale. The information gathered from 101

sales was as follows:

- (a) Kind of Deed
- (b) Date of Sale
- (c) Buyer and Seller
- (d) Legal Description and Acres
- (e) Internal Revenue Stamps
- (f) Miles from Pavement or Blacktop
- (g) Assessed Valuation of Land and Improvements
- (h) Price adjusted to 1962

3. These farm market surveys were taken on 101 sales during 1962 and 1963 with all zones being as well represented in the sample as possible.
4. Each sale was to be at least ten acres of size or larger with assessment on buildings taken on each sale so that the land price would be shown on each sale.
5. The kind of deeds used were Warranty Deed sales only, as no Quit Claim Deeds or Tax sales were used.
6. The Internal Revenue Stamp was used in determining the total selling price, counting \$500.00 of value for each fifty-five cents in Internal Revenue Stamps.
 In determining the proportion of the selling price attributable to improvements, the assessed valuation of the improvements was used. The county assessor suggested that the assessed value was about one-fourth of the total market value of the improvements.
7. The quality of land was determined by the soil types in the various areas surveyed.

- (a) Good land - The soil areas represented in this classification are: (1) Bottomland; (2) Cherokee Prairie; and, (3) Ozark Highland Prairie soils which are the most productive soils in the county.
- (b) Fair land - The soil area represented in this classification are: (1) Ozark Highland; and, (2) Ozark Highland Plateau, which are on gentle slopes and are deep, light-colored, cherty and stony soils with loamy subsoils. Most of these areas are partly covered with timber and are being developed into pastures by land clearing. The largest amount of sales are in the Ozark Highland soils.
- (c) Poor land - The soil areas represented in this classification are: (1) Ozark Highland; and, (2) Ozark Highland Plateau, which are deep, light-colored, cherty and stony soils with loamy subsoils. On level slopes they are wet soils and most are timber covered. Clearing timber and planting pastures are not feasible in these areas. The largest amount of sales are in the Ozark Highland Plateau soils.

The past studies made in Oklahoma in various counties have indicated that location has a great amount of influence on the price of land. According to Farcher (3) page 5: "Farms on pavement sold for 50 per cent more than farms located on improved dirt roads. Farms on unimproved dirt roads sold for about 1/3 per cent less than farms on all weather roads. Farms within a half-mile of an all weather road sold for roughly

50 per cent more than those two to four miles off such a road. Farms within a mile of market sold for about one-third more than those three to five miles away. Farms within five miles of a principal city sold for about 30 per cent more than farms ten to fifteen miles away."

These statements tend to point out the importance of location in farm selling price. It is expected in this study to point out the influence that a large lake (Grand) has on the value of agricultural land adjacent to the lake. Also the relationship of distance to the lake and quality of land to the price of land. These two factors will have a plus value to lands around major lakes now existing and proposed lakes in all areas of Oklahoma. Recreational activities around Grand Lake have caused many small tracts of land along the shoreline to be sold for summer cabins and permanent residences for some people of retirement age. These small tract sales are not included in this survey because the objective of the survey is to measure the influence on land prices on ten acre tracts or more; presumably those tracts which are more likely used for agricultural purposes. Most of the small tracts are between one-fourth of an acre and ten acres but some are even smaller than a quarter of an acre.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Data presented in this chapter were obtained by compiling information on 101 farm sales in 1962 and 1963 in the five zones mentioned earlier around Grand Lake in Delaware County, (see Figure I). The selling price if not given was determined from the value of Internal Revenue Stamps on each deed. If necessary, the values were supported by the assessed valuation of each tract of land in the sale. That is, if the assessed valuation was such that it appeared obvious the Internal Revenue Stamps could not possibly reflect the true consideration, then the sale was not used. All improvement values were subtracted from each selling price in order to have each sale represent the value of the land only.

Table I presents the relationship of distance from the lake frontage to the land prices on the survey sales by zones. Table II presents the relationship of Good, Fair and Poor quality land to distance from the lake by zones. Table III presents the relationship of price paid to the land sales with improvements to distance from the lake by zones. Table IV presents the relationship of land prices to miles from improved roads by distance from the lake by zones. Table V presents the land and building prices per acre according to census information from 1940 to 1960. The lake was built in 1940, therefore, this table shows the effect of the entire county.

TABLE I
 LAND PRICES BY DISTANCE FROM LAKE FRONTAGE, 1962-63
 DELAWARE COUNTY, OKLAHOMA

Distance to Lake Frontage *	Number Sales	Acres	Average Size	Total Price ** Dollars	Average Per Acre (Dollars)	Percent of Average
Zone 1, Under 1 mile	37	5683	153	213,510.00	37.57	92
Zone 2, 1.0-1.9 miles	23	2854	124	143,465.00	50.27	123
Zone 3, 2.0-2.9 miles	16	1984	124	103,140.00	51.89	125
Zone 4, 3.0-3.9 miles	13	1047	80	32,020.00	30.58	75
Zone 5, 4.0-6.0 miles	12	1463	122	39,674.00	27.12	67
ALL	101	13,031	129	531,809.00	40.80	100

* Lake Frontage starting $\frac{1}{2}$ mile from shoreline

**Land prices only with improvements excluded

The data in Table I reveal that land prices per acre in Zones 1, 2 and 3 are very close to the same, varying from \$37.57 to \$51.89 per acre. In zones 4 and 5, which are three miles to six miles from the lake, land prices per acre were \$30.58 to \$27.12. This indicates that the lake has very little influence on land prices from three miles and farther back from the lake and that the influence is nearly equal from one-half mile back to three miles back from the shoreline. Sales prices in the first three zones, 1, 2 and 3 which are from one-half mile to three miles from the shoreline averaged 118 per cent of the overall average sales value, whereas sales prices in zones 4 and 5 which are three miles to six miles back from the lake averaged 70 per cent of overall sales value. One may see, therefore, that on the average land located three miles or less from the lake shoreline sells for about 60 per cent more per acre than land three miles to six miles from the shoreline. This assumes the distribution of land qualities was about the same in all zones. The average size of sales in the five zones varied from 80 acres to 153 acres in the 101 farm sales surveyed.

In the preceding paragraph, it was shown that land prices in the zones nearer the lake were higher than in the zones farther away. However, Table II indicates the influence of land quality and distance from the lake on land prices. It will be noted that a high proportion of the good land sales in the survey were on the better farming areas nearer the lake. These farms are those located on more productive type soils, such as Bottomland, Cherokee Prairie and Ozark Highland prairie soils. These soils are Class I, II and III in capability. The fair land sales were on the shallow to deep soils located in the Ozark Highland and Ozark Highland Plateau soils which are cherty and stony

TABLE II
 LAND PRICE BY GOOD, FAIR AND POOR LAND,
 DELAWARE COUNTY

Zone	Number	Acres	Total Price (Dollars)	Average per Acre (Dollars)	Percent of Average
GOOD LAND					
1	18	2145	132,410	61.20	150
2	9	1244	103,660	83.32	204
3	4	584	61,100	104.60	257
4	3	350	18,900	54.00	132
5	2	100	7,500	75.00	184
ALL	36	4423	323,570	73.15	179
FAIR LAND					
1	12	1527	44,640	29.23	72
2	8	735	16,825	23.10	57
3	6	710	29,260	41.21	101
4	5	400	7,660	19.15	47
5	4	434	7,676	17.68	43
ALL	35	3806	106,061	27.86	68
POOR LAND					
1	7	2010	36,460	18.14	45
2	6	875	22,980	26.28	65
3	6	690	12,780	18.52	45
4	5	297	6,460	21.75	54
5	6	930	18,748	20.16	49
ALL	30	4802	97,428	20.29	49

with loamy subsoil structure. These soils are Class II and IV and VI in capability. The poor land sales were on the Ozark Highland and Ozark Highland Plateau soils, which are cherty and stony soils with loamy subsoils. They are usually on gentle to steep slopes and are in the Classes of II, IV and VI in capability. In all the zones from one-half mile to six miles from shoreline the average good quality land price per acre was \$73.15 compared to \$27.86 on the fair land and \$20.29 on the poor land. The land quality has a great and perhaps is the predominant influence on price in the five zones in the study. The land in Zones 1, 2 and 3 is much closer to the lake, but also the terrain is flatter and has deeper soils. When you get to Zones 4 and 5 you get into the more rugged terrain and shallower, stony soils. This is true on practically all of the sales in the survey. In each of the three qualities of land, there was very little difference in price for the Zone 1, 2 and 3 sales as compared to the Zone 4 and 5 sales.

On the Good land, the average of Zones 1, 2 and 3 was 204 per cent of the overall average per acre. Zone 4 and 5 was 156 per cent of the overall average.

On Fair land zones 1, 2 and 3 were 83 per cent of the overall average and Zone 4 and 5 were 45 per cent of the overall average.

On Poor land Zone 2 was 65 per cent of the average compared to 48 per cent of the other four zones.

This table shows that good land located one-half mile to three miles from the lake sold for 316 per cent of the selling price of fair and poor quality land in the five zones. Good land three miles to six miles from the lake sold for nearly two and one-half times as much as fair or poor quality land in the five zones.

A comparison of sale prices by zones in which the quality of land is held constant, the average price per acre in Zones 1, 2 and 3 was \$30.23 compared to the average price per acre in Zones 4 and 5 of \$18.39. Therefore, by holding quality of land constant, the sales in Zones 1, 2 and 3 located less than three miles from the lake shoreline was 63 per cent higher than sales in Zones 4 and 5, which are located from three to six miles from the lake. This indicates that location in distance from a lake shoreline appears to have a plus influence on land prices if the quality of land is constant although there is no constant pattern of price decrease as the distance increases.

The value of improvements on the sales, which had improvements, have some influence on the differences in the average price per acre of some of the zones in the survey. Table III indicates that 54 per cent of the farm sales in the survey had some type of improvements on the farm. The average per acre value of improvements on Zone 3 was \$48.81 as compared to \$35.81 average per acre value for Zone 1, therefore some of the difference in the overall average land price between the two zones was due to improvements. The overall average price per acre for improvements was \$41.53 compared to \$40.80 overall average per acre value of land. The value of improvements are based on the assessed valuation on the farm sales used in the survey. Zones 1, 2 and 3 had an average of 108 per cent of the average per acre sales with improvements, compared to 67.5 per cent of the overall average for Zones 4 and 5. This indicates that the average per acre value of land and improvements in the Zones 1, 2 and 3, which are one-half mile to three miles from lake shoreline were 20.5 per cent more than the average per acre value in Zones 4 and 5, located from three to six miles from the lake shoreline. This

TABLE III

PRICE PAID, AVERAGE ACRE VALUE OF LAND AND IMPROVEMENTS OF
FARMS WITH IMPROVEMENTS, DELAWARE COUNTY

Zone	Number	Percent of Total Sales	Acres	Total Price (Dollars)	Total Average Per Acre (Dollars)	Average Per Acre Imp. (Dollars)	Percent of Average
1	19	53	2865	210,260	73.38	35.81	89
2	13	56	1818	168,470	92.70	42.43	111
3	8	50	1074	108,340	100.90	48.81	123
4	8	62	835	59,920	71.76	41.18	87
5	6	50	450	32,790	72.87	45.77	88
ALL	54	54	7042	579,780	82.33	41.53	100

reflects that the value of improvements have some influence on sales near a lake, because some of the sales are made to semi-retired or retirement age people moving into the area.

A locational factor which has been found to influence land values, is the quality or type of roads leading to the farm. Table IV records the prices paid for land in the various zones according to its location with respect to a hard surface road. The distinct relationships to a hard surface road are not as apparent in this as in some other studies in some areas around the lake gravel roads are quite good.

The pattern of the relationship of distance to a hard surfaced road is obscure when analyzed by zones, (Table IV). There is little doubt but that the small number of sales in each category tends to make averages unreliable. It can be observed that in most instances, land located on or within three miles of a hard surfaced road sold for more than did land which was less favorably located. This tended to be true in all zones.

Table V, however, points up the relationship of land price to road type more sharply. Here the zonal influence is disregarded.

These data indicate that when other value influences are disregarded, the relationship of distance to a hard surfaced road and price is as distinct as shown in other studies. It would appear, however, that something on the order of three miles is about as far as the distance-price relationship extends. Many more sales would have been required before one could separate them into categories which would have held quality, zones and improvements constant and still have enough in each category that averages would have been meaningful.

Table VI indicates the value of land and buildings in Delaware

TABLE IV
 LAND PRICES IN ZONES BY DISTANCE FROM BLACKTOP OR PAVEMENT, 1962-63,
 DELAWARE COUNTY

Distance to Blacktop or Pavement (Miles)	Number	Acres	Total Price (Dollars)	Average Per Acre (Dollars)	Percent of Average
ZONE I					
0- .9	11	1148	67,995	47.00	114
1.0-2.9	13	2797	93,090	33.28	81
3.0-4.9	6	340	25,355	74.57	182
5.0-over	7	1000	21,900	20.35	50
ZONE II					
0- .9	9	1107	72,985	65.93	160
1.0-2.9	4	637	46,700	73.31	179
3.0-4.9	6	680	18,280	29.80	51
5.0-over	2	230	5,500	23.91	58
ZONE III					
0- .9	3	494	48,060	97.28	237
1.0-2.9	6	360	20,380	56.61	138
3.0-4.9	3	320	6,900	21.81	53
5.0-over	4	810	27,720	34.22	83
ZONE IV AND V					
0- .9	8	949	19,073	20.10	50
1.0-2.9	6	282	9,535	33.81	82
3.0-4.9	6	1250	20,060	16.05	39
5.0-over	5	389	14,026	36.05	88

TABLE V
 LAND PRICES BY DISTANCE FROM A HARD SURFACED ROAD
 DELAWARE COUNTY, 1962-63

Distance to Blacktop or Pavement (Miles)	Number of Sales	Acres	Total Price (Dollars)	Average Per Acre (Dollars)	Percent of Average
0- .9	31	3998	208,113	52.05	127
1.0-2.9	29	4376	169,705	41.65	102
3.0-4.9	23	2790	70,675	25.33	62
5.0-over	15	2509	69,226	27.59	68

County, 1940 to 1960. The average value per acre was \$22.47 in 1940; \$29.83 average value per acre in 1945; \$40.82 average value per acre in 1950 and \$73.87 average value per acre in 1960 according to United States Census information. This table is used to show the increased value of land in Delaware County since the Grand Lake was developed in the late 1940's and early 1950's. It reveals the land and building average per acre value increased 31 per cent from 1940 to 1950 and it increased 32 per cent from 1950 to 1960. The increase for Oklahoma was 115 per cent from 1940 to 1950 and 65 per cent from 1950 to 1960. The increase from 1940 to 1960 was 229 per cent on value of land and buildings per acre average and Oklahoma was 254 per cent for the same period. The increase in prices from 1940 to 1950 in Delaware County probably was due mainly to the influence of agriculture during the war years, whereas the prices from 1950 to 1960 have also the influence of recreational facilities since this development took place after the war in the late 1940's and early 1950's. It was during this period that the per acre value increased more in Delaware County than in the state as a whole. However, the per farm increase in value was lower in Delaware County, indicating that the size of unit was not increasing as much in Delaware County as in the state as a whole. This apparently was because people were looking for small units for retirement, semi-retirement in this area and to the purchase by part-time operators.

TABLE VI

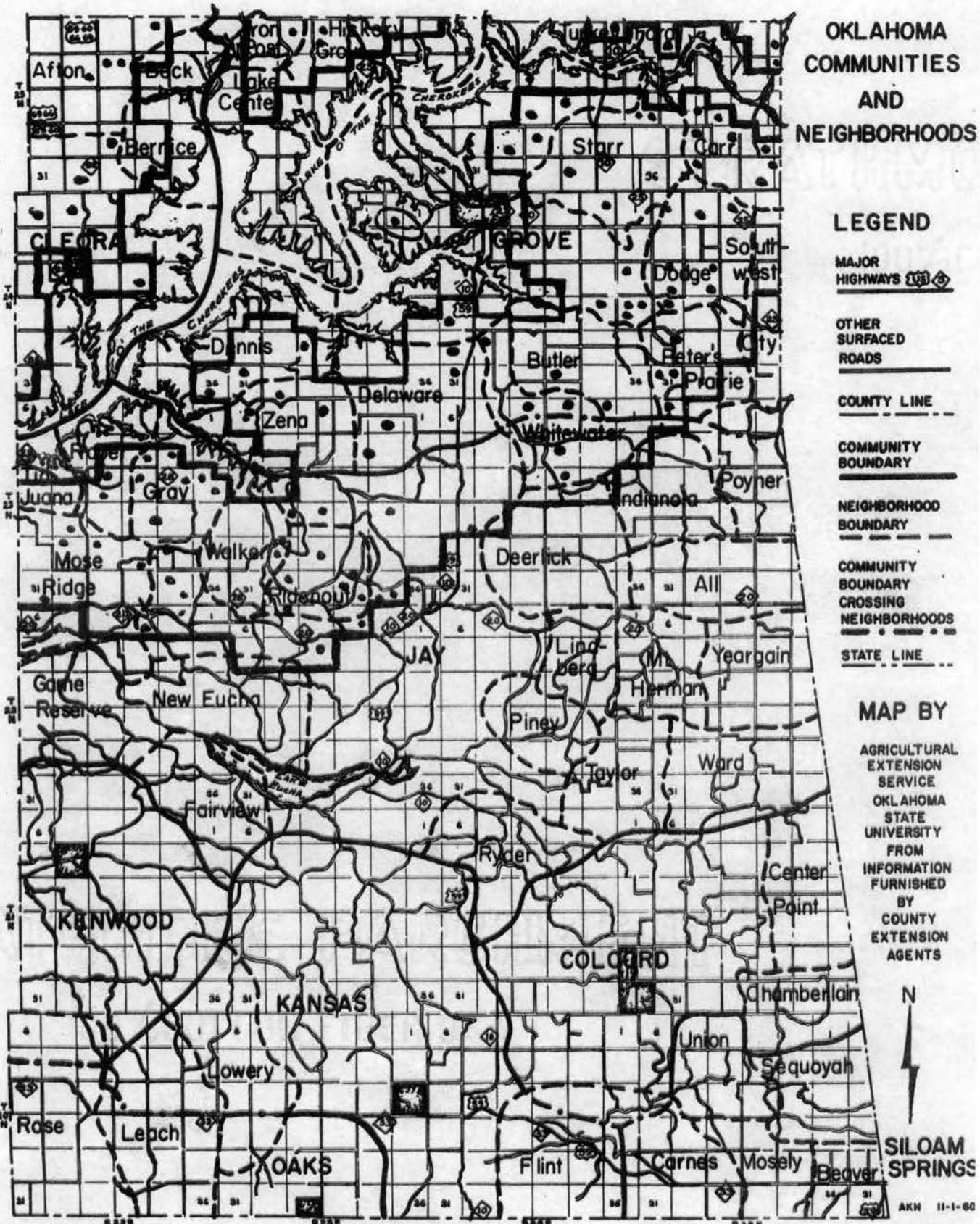
VALUE OF LAND AND BUILDING, 1940-60

	1940 Dollars	1945 Dollars	1950 Dollars	Per Cent of Increase 1940-50	1960 Dollars	Per Cent of Increase 1950-60
DELAWARE COUNTY						
Average per Farm Land and Buildings	2,166.00	2,750.00	5,151.00	138	12,163.00	136
Average per Acre Land and Buildings	22.47	20.83	40.62	81	73.87	82
OKLAHOMA						
Average per Farm Land and Buildings	4,625.00		13,045.00	182	31,157.00	139
Average per Acre Land and Buildings	23.88		51.42	115	84.65	65

Source: Department of Commerce, Bureau of the Census

Figure 1.

DELAWARE COUNTY



• Farm Sales in Survey
 — Boundary of Area in Survey

CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of this study was to attempt to determine the following: (1) the influence of distance from a major lake (Grand) on land prices according to recent sales in the area; (2) how distance from the lake and improvements on the property influence the property value; (3) the influence of quality of land and distance from the lake on land price; and, (4) the influence of improved roads and distance from the lake on land price.

The survey area was selected one-half mile from the shoreline in five zones, each zone being one section or one mile back from starting point. These five zones were up to six miles back from the lake shore. A 101 land sales were used in the survey of which no smaller than ten acres was considered as a land sale, this was determined so that each sale would represent a sale of agricultural land for agriculture purposes. There was a total of 13,031 acres represented in the sales with an average of 129 acres per sale. As near as possible, each zone was represented by enough sales to attempt to study results in each zone. The limitations of the survey are that the north and west shores of the lake are only two or three miles from the Craig and Ottawa County lines, which limited data on these two areas. The survey included only sales made in Belknap County.

The land sales were all taken from the years 1962 and 1963 and

the selling prices were computed from the Internal Revenue Stamps on the recorded deeds and where any doubt were checked by the 1963 assessed valuation in county records on each sale. The amount of improvements existing on the property was also checked by the assessed value of improvements and was deducted to make all sales reveal the land value only.

It can be concluded from data presented in this study that location adjacent to a large lake does have a plus value to land located near such a lake. The following conclusions were determined from the study:

- (1) Farms located three miles or less from the lake shoreline have a selling price of 60 per cent more than farms located more than three miles from the lake.
- (2) Farms on good quality land located less than three miles from the lake shore sold for 316 per cent of the selling price of fair and poor quality land in the same distance from the lake. Also that farms on good quality land located three to six miles from the lake sold for nearly two and one-half times as much as fair and poor quality land in the same distance from the lake. When holding the quality of land constant, as in the fair quality land, the average price per acre land value in Zones 1, 2 and 3 were 63 per cent higher than the average per acre land value in Zones 4 and 5.
- (3) Farms with improvements located less than three miles from the lake sold for 20.5 per cent more than farms located from three to six miles from the lake.
- (4) In most instances, land located on or within three miles of a hard surfaced road sold for more than did land which was less favorably located. However, when other value influences are

disregarded, the relationship of distance to a hard surfaced road and price is as distinct as shown in other studies. Three miles is about as far as the distance-price relationship extends.

- (5) Many factors influence land price such as: quality of land; size of farm; location to improved roads and community centers; but, due to the few sales that were used in the survey some of the relationships in some of the zones were not as clearly visible as they would have been with many more sales.

This survey shows that there is about the same influence on land prices on agricultural land from one-half mile from the shoreline to three miles from shoreline. The large difference is after you get more than three miles back from the shoreline then the lake influence seems to be decreased.

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