SUBDIVISION TRENDS IN SOUTHWESTERN MICHIGAN

Thesis for the Degree of M. S. MICHIGAN STATE UNIVERSITY John E. Hostetler 1957

8357

•

# SUBDIVISIONS TRENDS

IN SOUTHWESTERN MICHIGAN

By

JOHN E. HOSTETLER

## AN ABSTRACT

Submitted to the College of Agriculture of Michigan State University of Agriculture and Applied Science in partial fulfillment of the requirements for the degree of

## MASTER OF SCIENCE

Department of Agricultural Economics

1957

· / : . . .

Barlowe Approved by al

#### ABSTRACT

This study deals with the effects of the subdivision boom which followed World War II on agriculture in a six county area in southwestern Michigan. Building booms have touched off epidemics of excess subdividing on frequent occasions in the past history of the United States. This study considers the extent to which this has happened during the past decade.

Data were collected and analyzed for 689 subdivisions platted in Allegan, Berrien, Cass, Kalamazoo, St. Joseph, and Van Buren counties between 1946 and 1956. Of the 689 subdivisions, 280 may be characterized as prematurely platted. They were layed out in response to intense demands for building lots, and in many instances, they show little or no planning on the part of the land developers. However, most of the more recent subdivisions are in better locations and are building up rapidly — an indication of better planning. Subdivision trends in each of the six counties is steady to upward. Current trends in population growth and demand for building sites suggest that the peak of the boom has not as yet been reached.

The 689 subdivisions studied account for a total of 11,476 acres, an average of 16.65 acres per subdivision. When classified according to type of farm land before platting, it was found that 1,607 acres were never farmed, 4,070 acres were idle or poor farm land, 5,097 acres were fair farm land and 702 acres were good farm land. Much of the land classified as idle or poor is fair to good land yet for one reason or another had been left idle.

There has been an upward trend in the amount of small tract development within the area. Many farms have been split up to make 5-, 10-, and 20-acre part-time farm units. Although proposed new highways are expected to take only 5,840 acres in the area, they will contribute to further subdivision and small tract development. These developments leave many farmers with isolated holdings of uneconomic size. Some of these areas will be purchased by subdividers and speculators and then contribute further to the declining importance of agriculture in the area.

If agriculture is to be retained in these six counties, an educational program indicating the benefits from land use planning, zoning, new systems of taxation and subdivision regulation must be presented to the people. A revision of the Plat Law is needed which will clarify certain details in the law and spell out the specific duties of the local officials who administer the law. A test case should be taken through the courts so that all concerned will know where they stand. Perhaps appointed county officials might better be able to execute the duties of office than elected officials.

Agriculture has and will be moving northward in Michigan. Some funds should be channeled into research on new technology developing the strains and varieties needed to produce most efficiently in the changing environment.

## SUBDIVISION TRENDS

IN SOUTHWESTERN MICHIGAN

By

## JOHN E. HOSTETLER

## A THESIS

Submitted to the College of Agriculture of Michigan State University of Agriculture and Applied Science in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Department of Agricultural Economics

6/24 57

#### ACKNOWLEDGEMENTS

The author wishes to express his gratitude to the many people who helped with the development and completion of this study and the preparation of the manuscript.

Special thanks are expressed by the author to Dr. Raleigh Barlowe for providing much of the incentive and inspiration necessary in completing the study and for the supervision and interest which he has given to this study.

The author wishes to thank his fellow graduate students for the many helpful suggestions made during the preparation of this thesis.

Financial assistance provided by Dr. L. L. Boger, Head of the Agricultural Economics Department, made it possible for the author to complete this study.

Thanks are expressed to Mrs. Dorothy Hart, of the secretarial staff of the Department of Agricultural Economics, for the typing of the final manuscript.

The author's deepest appreciation is expressed to his wife, Beverly, whose helpful suggestions, constructive criticisms, and encouragement made the completion of this work a reality.

Full responsibility remains with the author for any omissions or mistakes that are found in the manuscript.

## TABLE OF CONTENTS

Chapter		Page
I	INTRODUCTION	1
	Reason for This Study	3
	Previous Studies and Investigations	3
	Objectives of This Study	11
II	COLLECTION OF THE DATA	12
	Introduction	12
	Nature and Source of Data	12
	Characteristics of the Area Studied	14
	Processing of the Data	19
	Methods of Analysis	20
	Limitations of the Study	20
III	SUBDIVISION TRENDS	22
	Introduction	22
	Growth From 1946 to 1956	22
	Premature Subdivision	27
	Poor Type Subdivisions	36
	The Plat Law How it Operates in the Area Under Study	38
	Agricultural Importance of the Area	41
IV	TYPE OF LAND SUBDIVIDED	45
	Introduction	45
	Estimated Acreage Subdivided	45
	Classification of Land Subdivided	48

# Chapter

	Land Quality of the Area 60
Ţ	FACTORS CONTRIBUTING TO DEVELOPMENT OF SUBDIVISIONS 69
	Small Tracts and Highways
	Population
	Work Off-Farms and Age of Farmers
V.	SUMMARY, CONCLUSIONS AND RECOMMENDATIONS 84
	Summary and Conclusions
	Recommendations
	APPENDIX
	BIBLIOGRAPHY

# Page

## LIST OF TABLES

Tab <b>le</b>		Page
I	Number of Lots Subdivided in the Six County Area by Month and Year for the Period 1946 to 1956	24
II	Number of Subdivisions in the Six County Area by Month and Year for the Period 1946 to 1956	26
III	Percentage Build-Up of Subdivisions by County, Year and Township in Which Subdivided	29-34
IV	Agricultural Importance of the Six Counties Under Study in the United States and Michigan over the ten Year Period 1946 to 1956	43
V	Classification of the Types of Land Subdivided, in Acres, for the Six County Area of Michigan during the Period 1946 to 1956	50
VI	Changes in the Acreage for Kalamazoo County and the Six County Area as a Result of Comparing the Unclassified Acreage with the County as a Whole	5 <b>2</b>
VII	Changes in the Acreage for Kalamazoo County and the Six County Area as a Result of Comparing the Unclassified Acreage with the Four Surrounding Townships	53
VIII	Classification of the Types of Land Subdivided, in Percentages of the Acreage Subdivided, for the Six County Area of Michigan during the Period 1946 to 1956.	56
IX	Estimated County Land Area in Acres as a Result of Subtracting Estimated Lake and Stream Acreages From County Total Areas	63
x	Agricultural Land Classes in Michigan by Counties	65
XI	Estimated Acreages of the Four Classes of Land in the Six Counties Under Study	66
XII	Percentages of Each of Three Land Classes Subdivided by County for the ten Year 1946 to 1956, in the Area Under Study	67
XIII	Percentage Change in Population by Five Year Periods From 1940-1955 with Projections From 1955-1970	75

# Table

-

XIV	Number and Percentage of Michigan Farm Operators Having Off-Farm Work during 1940, 1950, and 1954, by Economic Area
XV	Number and Percentage of Farm Operators Either Working on or off the Farm by Age Group and Making Over \$2500 From Farming in 1956
XVI	Number and Percentage of Farm Operators Either Born on or Buying Present Farm by Age Group and Making Over \$2500 From Farming in 1956
XVII	Number of Lots Subdivided in Allegan County by Month and Year for the Period 1946 to 1956
XVIII	Number of Lots Subdivided in Berrien County by Month and Year for the Period 1946 to 1956
XIX	Number of Lots Subdivided in Cass County by Month and Year for the Period 1946 to 1956
XX	Number of Lots Subdivided in Kalamazoo County by Month and Year for the Period 1946 to 1956
XXI	Number of Lots Subdivided St. Joseph County by Month and Year for the Period 1946 to 1956
IIXX	Number of Lots Subdivided in Van Buren County by Month and Year for the Period 1946 to 1956
XXIII	Number of Subdivisions in Allegan County by Month and Year for the Period 1946 to 1956
XXIV	Number of Subdivisions in Berrien County by Month and Year for the Period 1946 to 1956
XXV	Number of Subdivisions in Cass County by Month and Year for the Period 1946 to 1956
XXVI	Number of Subdivisions in Kalamazoo County by Month and Year for the Period 1946 to 1956
XXVII	Number of Subdivisions in St. Joseph County by Month and Year for the Period 1946 to 1956
XXVIII	Number of Subdivisions in Van Buren County by Month and Year for the Period 1946 to 1956

## LIST OF FIGURES

•

.

Figure		Page
1	Six County Area Location with Respect to the Remainder of the State	17
2	Enlargement of the Six County Area Showing County Seats and Major Towns and Cities	18
3	Number of Lots Subdivided in the Six County Area by Year for the Period 1946 to 1956	24
4	Number of Subdivisions in the Six County Area by Year for the Period 1946 to 1956	26
5	Population Estimates 1939-1955, Six County Area	74
6 ·	Population Estimates 1940-1955, Projections to 1970 by Five Year Periods for the Six County Area	76
7	Percentage Change in Population by Five Year Periods 1940-1970, Projections from 1955	78
8	Number of Lots Subdivided in Allegan County by Year for the Period 1946 to 1956	91
9	Number of Lots Subdivided in Berrien County by Year for the Period 1946 to 1956	91
10	Number of Lots Subdivided in Cass County by Year for the Period 1946 to 1956	93
11	Number of Lots Subdivided in Kalamazoo County by Year for the Period 1946 to 1956	9 <b>3</b>
12	Number of Lots Subdivided in St. Joseph County by Year for the Period 1946 to 1956	95
13	Number of Lots Subdivided in Van Buren County by Year for the Period 1946 to 1956	95
14	Number of Subdivisions in Allegan County by Month and Year for the Period 1946 to 1956	9 <b>7</b>
15	Number of Subdivisions in Berrien County by Month and Year for the Period 1946 to 1956	9 <b>7</b>

## Figure

16

17

18

Numb <b>er</b> Ye <b>ar</b>	of Subdivisions in Cass County by Month and for the Period 1946 to 1956	99
Number Year	of Subdivisions in Kalamazoo County by Month and for the Period 1946 to 1956	99
Number Year	of Subdivisions in St. Joseph County by Month and for the Period 1946 to 1956	, 101

Number of Subdivisions in Van Buren County by Month and 19 

Page

#### CHAPTER I

#### INTRODUCTION

Everyone in the United States has an interest in land. This interest may have been built up over many generations of farming or through the ownership of residential or business property in some metropolitan area. Since most European countries are much more dependent upon agriculture than the United States, those people who have emigrated from these countries also have a love for the land.

Those who own their own homes are keenly aware of the area bounded by their lot lines. Similarly, farmers run line fences or place markers to establish their boundries. Every day, arguments over boundry lines are settled by engineers and surveyors. The reason for the interest in land and the arguments over it stem from the land tenure system of the United States. This tenure system, which is characterized by a desire of individuals to own their own land, has developed in this country ever since its discovery.

In a tribal society such as that which the colonial settlers found in America, problems of land ownership did not exist as we know them today. There were some arguments between tribes when one would encroach on the hunting grounds of another. But the arguments were not over the ownership of specific land areas as much as they were over the game which roamed these areas. As the society progresses in complexity and the population increases, the problem of subdivision of the available land presents itself. First in the form of land divided into areas suitable to crops, pasture, and forest; later following a division of labor the use of land is required for a wide and growing variety of purposes.

In a dynamic society, however, the correct solution of the problem of what constitutes at a certain time the highest and best use of a given piece of land is never a permanent solution. As population increases or declines, as new methods and forms of production and transportation evolve, and as standards of living change, additional variables are introduced into the complex formula which determines the highest and best use. Certain lands now located within the larger cities have passed by rapid stages from forestry through general farming, specialized farming, suburban residence, and urban residence, to intensive retail, office and banking uses. In some of our larger cities office buildings, warehouses, and multiple type housing units which, formerly were considered as the highest and best use, are now being torn down to make way for a new higher and better use; in the form of parks and recreational areas, limited access super highways, and multi-level parking garages.

Throughout the history of the United States there has been an abundance of land for all uses. Every major war has been followed, however, by an inflationary period characterized by high prices and expanded business activity which has contributed to the growth and expansion of towns and cities. These periods have been accompanied in many instances by terrific booms and busts. Many people have speculated on the future value of land and many have been ruined, losing large fortunes as the peak of the boom passed.

These early periods of growth were of no great consequence to the rural segment of America since there was still much good farm land

undeveloped. Of late, however, with the almost complete disappearance of the frontier there remains much less land to be converted into cropland. Since the land with the lowest development cost, assuming equal accessibility, was converted to use first, that which remains requires a much larger investment to bring it into cultivation.

#### Reason for This Study

The need for building and other raw materials during World War II was so great that it necessitated the refusal of building priorities to almost everyone. Only the most urgent building needs were met and for the most part these did not include residential housing. It is not surprising then that we find a growing need for new housing as we approach the end of the War.

With 1946, came a building boom, touched off by the end of World War II and the release of building controls. Suburbs around our large cities expanded rapidly and our small towns grew. The need for this growth was implemented by the increased birth rate, earlier marriages, backlog of unfilled demands from the 1930s, and the curtailment of normal expansion during the War period.

The availability of credit coupled with the capital reserves accumulated by factory workers and salaried employees, during the War period added to the ever increasing rate of building. Only recently, with the onset of the "tight money" policy in Washington, has there been any real check in the rate of new home building. Yet this has not seemed to decrease the amount of new subdivisions as land developers anticipate continued high demand for building lots.

A direct result of this building boom has been the removal of farm land from agricultural uses. Such growth as that experienced between 1946 and 1956, has created real problems. Some counties in Michigan, whose agricultural importance was recognized throughout the United States, have declined in importance with the sale of farm land to residential subdividers or speculators who have no intention of continuing the farm as a producing enterprise. Some areas are affected more than others. Those feeling the greatest impact are areas near industrial locations, large cities, and lakes. They are now becoming known as resort areas and industrial centers rather than important agricultural regions.

Rising property taxes and new and improved highways which allow rapid movement to and from work are giving urban people the incentive to relocate in rural areas or at least on the suburban fringe. Farm incomes are down and the average age of farmers is increasing. This situation adds to the subdivision of farms and the future problems of agriculture as well as the indirect implications that it holds for the whole economy.

As urban people move into the farming areas the farmers are forced to pay higher taxes to provide school facilities for the new children and police and fire protection for the new and scattered properties. Is it any wonder that the older farmers, who have no sons interested in continuing the farm, sell out to some subdivider or speculator for more money than the farm is worth? Farmers in southern Michigan, who are in favorable locations are being attracted by the possibilities that subdividing offer over and above farming.

#### Previous Studies and Investigations

There is no available information of recent nature which is concerned with the area under study. That which is available deals with the rise and fall of subdividing usually following all the major wars. In most cases there has been an overabundance of subdividing relative to the available demand of the period. However, the eventual population expansion, though not expected, has overcome these problems.

Cornick, in a study of New York State, indicates what transpired in New York City during the "Big Boom of 1836."<sup>1</sup> The Erie Canal was opened in 1825, and this event provided the incentive to premature subdivision; lots began to grow in numbers faster than the population. Cornick estimates that eighty per cent of the population of New York State lived on a relatively narrow strip of land running beside the Canal from one end to the other in 1838.<sup>2</sup>

Following are accounts from the diary of Philip Hone, a distinguished businessman of the time. In January, 1835, he reports the sale of a country place in the form of lots for \$225,000, which was purchased two years before for between \$50,000 and \$60,000. In August, 1835, he comments surprisedly that the prices are still holding up. Two pieces of property on the banks of the Hudson River -- six miles from the City -sold for \$688,310 which wouldn't have brought \$40,000 fifteen years before. In April of 1837, Hone reports on the collapse.

Cornick, Premature Subdivision and its Consequences, Columbia University Press, New York, 1938, p. 6.

"All the local bank stocks have fallen below par. Railroads and canals will not bring, in many instances, more than half their value of a year ago. . . As to lots which have been the medium of enormous speculations, the following fact will tell their story: lots at Bloomingdale, somewhere about One Hundredth Street (for the whole island was laid out in town lots) which cost last September \$480 a lot, have been sold within a few days at \$50. The immense fortunes which we heard so much about in the days of the speculation have melted away like the snows before our April sun."<sup>3</sup>

It can be seen from the above that great fortunes were both made and shortly lost in this city. However, New York was not the only spot in the State which experienced this weird phenomena. Auburn and Buffalo were caught in the same grip which, Cornick, chooses to call an epidemic. Abundant evidence is available to show that the same "epidemic" extended far beyond the limits of the State. Since the Great Lakes formed the western extension of the great trade route of which the Erie Canal was only one link, existing townsites along the shores were greatly expanded. Among these townsites which experienced booms like those in New York were Cleveland, Toledo, Detroit, and Chicago.

Often land, which is unsuited, is subdivided in areas where no demand exists, until through false advertising and misrepresentation the land development scheme is perpetrated on the public. Data assembled through land utilization studies in New Jersey indicate that there have been at least 400 land development schemes in the New Jersey Pine area. Lee states that no less than 200,000 of the States 4,804,570 acres have been involved in these schemes.<sup>4</sup> Lee's bulletin was concerned with one

<sup>&</sup>lt;sup>3</sup><u>Ibid</u>, p. 7.

<sup>&</sup>lt;sup>4</sup>Alvin T. M. Lee, <u>A Land Development Scheme in the New Jersey Pine</u> <u>Area, New Jersey Experiment Station, New Brunswick, New Jersey. Bul. 665,</u> 1939, p. 7.

of these development schemes which took place in the late 1800's.

Paisley, "The Magic City," was composed of 1,400 acres in the heart of the New Jersey Pines.

"Only about six per cent of the land within the boundaries of Paisley was adapted to the growing of general farm crops. An additional six per cent of the area, comprised of low swampy land, was adapted to the growing of cranberries. Fully eightyeight per cent of the land in Paisley was too sandy and infertile for the growing of any agricultural crops or for the maintenance of decent lawns and gardens."<sup>5</sup>

Yet, newspapers of the day carried advertisements indicating that the finest farming land in Central New Jersey was at Paisley.

As a further inducement to people they were told that their neighbors were army officers, great artists, authors, composers, medical men, lawyers, etc. The promoter even advertised that he would buy back as many lots as possible sold the first year, 1887. However, selling of Paisley lots did not start until June 24, 1888.<sup>6</sup> Despite the fact that there were 3,122 known purchasers of lots and farm plots in Paisley, by 1890, the peak of its development, "The Magic City" had only twelve dwellings and one small one-story factory building.<sup>7</sup>

Once a boom gets under way it is quite difficult to bring it under control. The end results while good for a few, "who got out while the getting was good," are disasterous to many and wasteful for society in general. From 1909 to 1931 the city of Grand Rapids had a ratio of

<sup>5</sup><u>Ibid</u>, p. 11. <sup>6</sup><u>Ibid</u>, p. 14. <sup>7</sup><u>Ibid</u>, p. 18. vacant lots to total lots ranging from 38.7 per cent (1922) to 45.8 (1928); in 1931 the ratio was 43.9 per cent.<sup>8</sup> In 1909 Grand Rapids had 21,320 vacant lots and an additional 44,124 lots were subdivided through 1931, making a total of 65,444 available for development. Actually only 25,304 lots were put into use during this period — about 4,000 more than the surplus in 1909. Practically all subdividing activity in Grand Rapids between 1909 and 1931 was superfluous.

A study reported by Colean,<sup>9</sup> and conducted under the direction of the Michigan Planning Commission, indicates that during the 1920's and 1930's the outskirts of Detroit were subdivided in part as far as Pontiac and Flint, twenty to fifty miles away. A sample study of the Detroit metropolitan area in 1938 revealed that four near-by townships contained 124,485 platted lots, of which only 5,412, or 4.3 per cent, were utilized.

In a second study by the Commission the state was covered in general and eight counties were analyzed in detail. A good deal of difference was noted between the two areas of the state. The two areas were broken up by a line extending across the state at about the level of Bay City so that 47 counties were in the northern area and 36 counties in the southern area. On November 3, 1939, all the land acquired in the 1938 Tax Sale reverted to the state. This brought the total state-owned rural and forest lands in the northern area to 4,649,584 acres, 2,217,161 acres or 47.6 per cent of which reverted to the state as of that date.

<sup>&</sup>lt;sup>8</sup>E. M. Fisher and Raymond F. Smith, "Land Subdividing and the Rate of Utilization," <u>Michigan Business Studies</u>, University of Michigan, Ann Arbor, 1932, Vol. IV, No. 5, p. 471.

<sup>&</sup>lt;sup>9</sup>Miles L. Colean, <u>American Housing</u>, The Twentieth Century Fund, New York, 1949, p. 15.

Similarly, 59.2 per cent or 97,433 out of 164,529 platted lots and urban parcels reverted also as a result of the 1938 Tax Sale.<sup>10</sup>

The volume of all state-owned lands in the southern area prior to November 3, 1939, was practically negligible. However, on that date in these 36 counties there reverted to the state, 520,890 property descriptions, 439,320, or 84.3 per cent of which were in the urban counties of Wayne, Oakland, and Macomb. At the time the report was published a break down of rural acreage and platted lots was not available for the entire southern area. However, in the eight counties covered in detail by the report,<sup>11</sup> 68,210 unplatted rural acres, and 432,128 platted lots and urban parcels reverted to the state as a result of the 1938 Tax Sale. In the three counties of Wayne, Oakland, and Macomb alone, 335,977 platted lots and urban parcels reverted. These figures are exclusive of the city of Detroit, and municipalities within its borders.<sup>12</sup>

The land pattern surrounding the periphery of every American City varies according to local conditions, but regardless of locality, certain characteristics remain in common. Nearly every state in the union has the problem of premature subdivisions. Thousands of acres of farms and woodlands cut up in the decade ending in 1929 and in earlier land booms, lie vacant and unused, in weeds and brush, a broken sidewalk, a run-down

12 Tex Reverted Lands, op. cit., p. 14.

<sup>&</sup>lt;sup>10</sup>Tax Reverted Lands, Michigan Planning Commission, Lansing, Michigan, 1941, p. 12.

<sup>11</sup> Wayne, Oakland, Macomb, Genessee, Muskegon, Washtenaw, St. Clair, and Livingston.

curb, the only evidence of someone's wasted effort.

Hundreds and thousands of these lots have been virtually abandoned. Their owners are either unable or unwilling to bother about retaining clear title to a piece of land for which there is no prospect of either satisfactory use or future sale. As a result, the debt on these lands in the form of unpaid assessments -- special, city, county and state -must be shouldered by the municipality. The financial cost of uncontrolled subdividing has been enormous. Not only has money been spent for the installation of unused facilities such as streets, sewers, and water mains, but in addition more money has been uselessly expended because of high tax delinquency, the need for police and fire protection for widely scattered residences and for the upkeep of the utilities.

It is obvious from the above that premature subdivisions could be condemned on grounds of municipal finance alone. In addition, the private losses are immeasurable, for every one of these delinquent lots means the loss of the downpayment by the purchaser at the very least; while many of them include the payment of installments, interest, and taxes over a period of years before all hope in the future of the development was finally given up.

The past decade has been characterized by a rapid building rate and the development of a considerable number of new subdivisions. One can not help but notice this trend while driving to and from work or with the family out for a drive in the country on some sunny Sunday. The question is, can we expect continuous subdividing after the demand has been met? Will the same ruinous conditions prevail, both for agriculture and the rest of the economy, in the near future as they did

following most of the major wars in the past? What are the trends --has the demand already been met? Will land be subdivided, roads and sewer and water systems put in only to stand idle and unused for ten, fifteen, or twenty years?

### Objectives of This Study

Due to the nature of the problem of trying to provide answers for these questions it is beyond the scope of this study to cover an area as large as the State of Michigan. This is the reason why a small compact six county area in southwestern Michigan was chosen for the study. The objectives of this study are: (1) to provide information on current subdivision trends in southwestern Michigan; (2) to analyze the probable impact of these trends on the future of agriculture in this area; and (3) to suggest possible steps for a more orderly and beneficial growth which may help to solve the problem of the declining availability of farm land.

#### CHAPTER II

### COLLECTION OF THE DATA

#### Introduction

This study was prompted in part by our need for more information concerning the impact of the post-World War II subdivision boom on Michigan agriculture. Information was also desired relative to the possible excess subdividing of land. A research project was accordingly initiated in the spring of 1956, the field work to be done that same summer.

### Nature and Source of Data

A small six county area was chosen in southwestern Michigan in which to conduct the study. The area is composed of the following counties: Allegan; Berrien; Cass; Kalamazoo; St. Joseph; and Van Buren. Originally the study area was to be composed of only four counties; Allegan, Berrien, Ottawa, and Van Buren but, for reasons to be discussed later in this chapter, the change was made.

Considerable time was spent collecting information on every subdivision platted during the period 1946 to 1956. In doing so the records in the Register of Deeds office for each county was relied upon quite heavily. After assembling this information all county officers were interviewed to determine the type of subdividing that had taken place in the past ten years within each county. Each was asked his personal opinion of the Plat Law and how it was working in his county.

Following the interviews with the county officials, all township supervisors with, in most cases, three or more subdivisions in their township during the past ten years were questioned. Each subdivision was gone over carefully in the interview to determine the kind of land platted, the type and number of homes that had been erected since its beginning, and to see if there was anything unusual about the subdivision. After the subdivisions were covered, each supervisor was asked general questions about his townships agriculture, type of land, number of farm operators working off the farm, and the presence of residential building other than subdivisions within the township.

In some of the counties the health officer, who is not a member of the Plat Board, was interviewed to get his impression of the type of subdividing going on within the county. He was also asked about problems developing from the subdivisions and his opinion of the Plat Law and other subdivision restrictions was sought.

Each county agent was visited and asked general questions about the type of agriculture dominant in the area and any problems arising from the subdivision of farm land. The agents aided the author in finding many of the supervisors and with other pertinent information. Special help in familiarizing the author with the county area and providing him with much related data was given by almost everyone he met. Reference will be made to the many interviews throughout the body of this thesis. However, since much of the information was given in confidence no indication will be made to the exact township or individual from which the information was derived.

### Characteristics of The Area Studied

There are a total of 3,577 square miles in the area under study: 833 in Allegan, 569 in Berrien, 493 in Cass, 562 in Kalamazoo, 503 in St. Joseph and 617 in Van Buren county. This area, like most others in Michigan, has been left with a varied assortment of soil types and topography. Some of the land still grows the virgin forest that once covered most of the state.

A lowland area exists on the west side of the state bordering Lake Michigan and extends from Muskegon county southward to the Indiana line. It is from 3 or 4 to 15 to 25 miles in width and extends up the valleys of the Muskegon, Grand and St. Joseph rivers. The surface consists of flat, pitted, wet, and dry, sandy plains, flat clay plains, low clay ridges, and lake shore dunes. The elevation of most of these lands is probably no more than 150 feet above Lake Michigan, although some of the higher dunes along the shore may exceed 200 feet. These dunes comprise a narrow strip of land occurring directly along the shores of Lake Michigan and represent sand heaped by wind into ridges, knolls, and peaks. Most of the land is forested. The nature of the topography, the looseness of the soil, and its tendency to blow, preclude any extensive agricultural use. The dunes are found in Berrien, Van Buren and Allegan counties.

As we go inland from the dune area in Berrien county we find level sand plains and dry sandy valleys, followed by level to rolling clay upland. Further inland we strike level plains, terraces, old beach ridges, extensive gravelly plains level to pitted and gently rolling.

This area has lakes and muck swamps associated with it and covers the greatest portions of Cass, St. Joseph and Kalamazoo counties.

Moving northward from the lower tier of counties up through Van Buren, ridges and plateau-like upland is encountered and further hilly to smooth rolling upland. Some of the land is very steep in spots but throughout the whole area of these land types are lakes, muck swamps and dry depressions. Further on are level sand plains again as is found along the shore of Berrien, followed by gently rolling upland clay plains, lakes, and muck swamps. The remaining county, Allegan, is almost completely unlike the other five. The land in this county is of the type primarily found in the northern part of the southern peninsula. Level to slightly or hilly upland, locally rough broken topography, in spots still covered by original forest.<sup>13</sup>

The type of farming being carried on in the area under study is somewhat varied between counties. In Allegan county the townships along Lake Michigan are primarily used for fruit and vegetable production. An area in the northwest part of the county is mainly poultry and cash crops and the rest of the area is devoted to general crop and livestock farming. Fruit and vegetable production is of primary importance in Berrien county. However, some general farming and livestock raising is carried on in the eastern and southern most townships. Cass county has some fruit and vegetable production but is primarily general farming and dairy. A large number of swine are farrowed on pasture during the summer in a one litter system, pastured until fall then fattened to

<sup>13</sup> J. O. Veatch, <u>Soils and Lands of Michigan</u>, Michigan State College Press, East Lansing, 1953, pp. 2-24.

hit the market between the regular spring and fall pig crops.

A cash grain area exists in the southern townships of Kalamazoo county but the rest of the area is comprised of general farming and dairy with some fruit and livestock feeding also being done. St. Joseph county is nearly the same as Kalamazoo with maybe less cash grain raising. Nearly every type of farming is being carried on to some degree in Van Buren county. On the muck areas are mint, wormwood, celery and onions, corn, and bulb production. Tree and small fruit production is abundant. Vegetables are grown centrally around Paw Paw, and dairy, small grain, livestock and general farming are carried on throughout the rest of the county.

The latest population estimates, 1955, for Michigan show these six counties ranked in the following manner: Kalamazoo 145,650; Berrien 144,500; Allegan 55,470; Van Buren 51,050; St. Joseph 41,570; and Cass 34,000. An analysis of the population of this area will be developed in a later chapter.

The location of the area studied and the principal cities and villages within the six counties are shown in Figures 1 and 2.

Originally the study was to include only four counties; Allegan, Berrien, Ottawa, and Van Buren. This was due to the opinion that the extent of the subdividing being done was limited to the area along Lake Michigan and around the many lakes of these four counties. In order to make a more compact area and provide a needed contrast to the counties bordering Lake Michigan, Ottawa was dropped from the study and Cass, Kalamazoo, and St. Joseph counties were added. It was believed that the greater portion of the subdivisions were going to



Figure 1. Six county area location with respect to the remainder of the state.



Figure 2. Enlargement of the six county area showing county seats<sup>\*</sup> and major towns and cities.

provide summer residences, however, this did not prove to be true.

## Processing of the Data

Following the collection of any data, there necessarily must be a careful study made to determine just which data is complete and which is not. There may be other reasons why some of the data should not be included in the analysis. All such data which is incomplete or in any way faulty is therefore removed in this pre-analysis study.

Data were collected on 758 subdivisions; but the records on 69 of these were discarded in the processing stage. This leaves records for 689 subdivisions. Some of the discarded records were dropped because the subdivisions were annexed by contiguous municipalities, while others were discarded because of incomplete interviews. For the most part supervisors of townships having only one or two subdivisions were not visited and so these subdivisions were not included in the analysis.

Another source of information which the author relied upon quite heavily was the Agricultural Census data for the years 1940, 1945, 1950, and 1954. Extensive data was derived concerning the agricultural importance of the six counties in the study.

The author drew upon the data collected for another study in the same area in which farm operators were interviewed. Considerable information was assembled on the age of farm operators, off-farm work, and how long it had been since the farms had last changed hands. Two townships from each of three counties were chosen and the farm operators in every third section were interviewed. The townships were chosen for a purpose other than subdivisions and consequently these six only have had 14 areas subdivided in the past ten years. There were a total of 237 schedules taken in the six townships, of interest in this study, and seven of these were incomplete leaving 230 to be used in the analyses to follow.

### Methods of Analysis

When analyzing data, it is important to consider the purpose of the study and the use that is to be made of the results. With respect to the present study, the analysis should furnish figures of use to officials of local, county, and state government, land use planners, and county agricultural agents.

This is a descriptive and informative study to determine the type and extent of subdividing in southwestern Michigan and as such considerable emphasis will be placed on comparisons between the six counties under study. Due to the short period of time covered by the study the use of percentages will be employed wherever possible. It is felt that in this way a much truer picture of what is occuring will be presented. Other methods of analysis will be described as they are introduced throughout the thesis.

## Limitations of the Study

The author realizes the difficulty of presenting a truly objective picture unadorned with personal biases and without overemphasizing certain data to indicate his point of view. However, in every way possible the data has been screened to remove exceptional data of limited quantity to enable a representative presentation. Whenever an assumption is made it is always open to adverse criticism, many times well founded. Throughout the body of this paper several assumptions have been drawn upon to enable the explaination of certain points under discussion. Wherever possible these assumptions have been based upon a maximum of fact and a minimum of supposition.

A considerable amount of data used in this thesis has been derived through personal interview of many people of different type and temperment. The author knows that considerable differences exist between individuals and has tried to keep the data as objective as possible. It is therefore felt that considerable good can be derived from the use of the information here presented if these limitations are known and understood.

### CHAPTER III

### SUBDIVISION TRENDS

#### Introduction

An idea will be given here of the potential demand that faced the new housing market at the end of World War II. Considering only population pressure, on the one hand, and existing badly deteriorated housing, on the other, 820,000 non-farm units a year is a minimum estimate of the potential demand for new housing during the postwar decade by Colean.<sup>11</sup> However, when considering that only about half of the demand for new housing was met during the thirties, and the present depreciation of existing housing, there are still the replacements necessary to catch up with past deterioration. Therefore, Colean feels no strain is required to build up an estimate of potential new housing demand amounting to 1,300,000, or even more, non-farm units a year during the first decade after the war.<sup>15</sup>

## Growth From 1946 to 1956

With this tremendous backlog of demand for new housing many new subdivisions had to be laid out and platted. Following the Second World War and the release of controls the building boom was on, accompanied by land deals in which speculators and subdividers bid for

Miles L. Colean, <u>American Housing</u>, The Twentieth Century Fund, New York, 1949, p. 6.

<sup>15</sup> <u>Ibid</u>, p. 7.

a large portion of the land contiguous to large cities and areas expected to expand. By 1946, the area under study had begun to develop as can be seen from Table I and Figure 3.

The large number of lots in June of 1946 is a result of one extremely large subdivision which has 766 lots. We will notice that the months preceeding June 1946 and following June 1956 have not been recorded. The reason for this is that the study began and ended in June. Therefore, the low figures for 1946 and 1956 are not true representations of what actually has taken place. For the most part the figures of 1946 are much closer to being right than are those from 1956, since in 1946 the subdividing boom had not yet really gotten under way. Another reason is that the figures of 1946 represent the last half of the year and seven months while the figures of 1956 are for the first half of the year and represent only six months. Another observation which can be made is that for the most part in these six counties the greatest amount of lots subdivided have been in the last half of each year.<sup>16</sup> For this reason the figures of 1946 and 1956 will be doubled and projected for only half a year to indicate the trend more clearly.

Over the ten year period the number of lots subdivided in the first four months has been relatively stable with 1,223 in January, 1,057 in February, 1,239 in March, and 1,685 in April. For the most part the remaining months have a considerably larger number of lots. Beginning with 2,621 in May, we find 3,763 in June, the month with the largest

<sup>16</sup> The Tables and Figures for each of the six counties can be found in the Appendix.
m.	A D	TT	т
11	ŁD	تعد	1

NUMBER OF LOTS SUBDIVIDED IN THE SIX COUNTY AREA BY MONTH AND YEAR FOR THE PERIOD 1946 TO 1956

Month	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
J		107	75	32	192	18	210	299	69	98	123
F		0	122	64	118	0	163	160	244	25	261
M		133	120	<b>2</b> 22	106	306	41	173	110	193	35
A		49	41	299	107	232	<b>3</b> 20	83	163	147	244
M		56	105	191	346	287	422	237	194	<b>3</b> 98	387
J	895	369	<b>2</b> 20	197	130	245	255	445	515	422	260
J	99	110	246	765	360	53	346	112	376	195	
A	222	176	163	136	111	331	174	398	319	401	
S	166	373	302	81	42	43	221	178	468	254	
0	101	38	144	29	278	148	429	84	124	157	
N	150	314	153	231	147	309	196	172	78	188	
D.	151	134	107	106	127	182	560	<b>9</b> 5	393	346	
Totals	1784	1859	1798	2353	2064	2154	3337	2436	3043	2824	1310



county area by year for the period 1946 to 1956.

number, 2,662 in July, 2,431 in August, 2,128 in September, 1,532 in October, 1,938 in November, and 2,201 in December. When graphed by year these lots show a decided upward trend for the ten year period and if the figures for the full year of 1956 were shown it is believed that the trend would still be continued.

Allegan county's figures on the number of lots subdivided indicate an erratic fluctuation with a downward trend until 1953 when the trend turned upward and continued in this way. For Berrien county the peak was reached in 1947 with 937 lots and the low point of 155 in 1948, from there the trend was upward to 742 lots and from this point it continued steady.

The trend for the subdivided lots in Cass county is quite steady at between 200 and 300 with radical yearly fluctuations. Kalamazoo county shows the most decided upward trend of all the counties. After a large increase in 1948 the number of lots subdivided continued at a high and increasing rate throughout the whole period. The trend for St. Joseph county is quite even and moderately upward continuing throughout the period. For Van Buren county the trend of subdivided lots is steadily upward until 1952 when it took a down turn to 1955 and gives evidence of beginning an upward turn again.

Though the number of lots presents a good picture of the area being subdivided it is not as representative of the subdividing activity as is the number of subdivisions laid out and platted each year. Table II and Figure 4 show the number of subdivisions in the six county area by month and year for the ten year period.

NUMBER OF SUBDIVISIONS IN THE SIX COUNTY AREA BY MONTH AND YEAR FOR THE PERIOD 1946 TO 1956

Month	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
 J		4	3	2	5	1	9	7	3	8	4
F		О	6	3	3	0	4	4	6	3	10
M		4	2	5	4	7	2	5	6	7	2
A		2	1	3	2	6	6	4	4	6	12
M		2	2	5	7	10	5	7	6	13	14
J	10	6	5	3	4	8	8	4	14	15	9
J	3	3	8	5	9	4	10	6	9	7	
A	5	3	6	6	4	5	5	8	13	13	
S	5	8	5	2	2	2	8	7	10	11	
0	3	2	4	1	5	6	9	3	5	7	
N	3	9	5	6	5	6	6	6	3	6	
D	4	5	3	4	5	4	14	4	15	11	
Totals	<b>3</b> 3	48	50	45	55	59	86	65	94	107	51



Figure 4. Number of subdivisions in the six county area by year for the period 1946 to 1956.

As with the number of lots subdivided each month of the year the number of subdivisions are low for the first four months then from May until December they remain high. For the most part the number of subdivisions each year for the six county area shows an increase or a decided upward trend.

A look at the six counties making up the area under study reveals that Allegan, which showed a decided downward trend in lot numbers, shows a steady to upward trend after 1953 in the number of subdivisions. All the other counties show upward trends of varying degrees and no indication of leveling off or declining. These trends indicate that those doing the subdividing in the six county area under study believe that the demand for building lots still exists or, in fact, may be stronger now than at the end of World War II.

# Premature Subdivision

In order that we may more fully understand the significance of the trends presented in the preceding section a look at how rapidly these subdivisions are building up is now necessary. For if the subd-ivisions are not being built upon, this indicates that the subdividers were premature in their land development projects which can only result in social and economic waste.

Subdividers are businessmen and as such they seek to make a moderate profit on their efforts. Farm land has a quite low per acre assessment when compared with city property and justly so. However, as soon as farm land has been subdivided into lots the value of the land rises and so does the assessment. In fact, one township supervisor

indicated that he automatically set the assessment on all unimproved lots at \$50 no matter if the whole subdivision before platting had only been assessed at \$50.

It is obvious then that the subdividers will try to sell their lots as soon as possible since they have to pay the taxes on the lots until they are sold. The slower they sell the lots the more taxes they have to pay, hence the less profit will be made on their investment and the longer their money will be tied-up in the subdivisions. Most subdividers try to have their lots sold within about three years. They may let a remaining few go for as long as six years, but the prices on these last few will be made as attractive as possible to enable their sale.

Since information on the number of lots sold in each one of the subdivisions is not available, let us assume that if a subdivision were located where there was a reasonable need for one, it should be builtup at the end of ten years. Correspondingly, at the end of six years we will assume that it should be at least one half built-up. Since there are people who desire a larger yard or extra room for a garden and buy two lots instead of one, we will expect that 90 per cent of the lots in subdividions ten years old will be built upon and 45 per cent of the lots in those six years old. It is felt that the percentages set up for this analysis are quite liberal and that any subdivisions falling much below them should be classified as prematurely subdivided.

Table III provides us with a very complete picture of how rapidly the subdivisions are being built-up within each county and township of the area under study. Of the 689 subdivisions, 280 or 40.6 per cent are classified as premature. However, the greatest incidence of

TABLE III

PERCENTAGE BUILD-UP OF SUBDIVISIONS BY COUNTY, YEAR AND TOWNSHIP IN WHICH SUBDIVIDED\*

County and year	ld-up certed du-bl		Build-I in per ce	up of each ant of lots	townshi p occupied	
Allegan	oni ber Fyt	Allegan	Gunplains	I.ee	Trowbridge	Wayland
1946	8	,	ı	0.5	ı	70.7
1947	80	5.3	53.1	ı	ı	54.7
1948	20	4 <b>1.</b> 5	ł	2•5	ı	0
1949	60	20.7	ı	0	28.5	76.0
1950	ß	ı	ı	ł	ı	60.0
1951	<del>ل</del> رً	20.0	55.2	2.1	18.1	57.8
1952	õ	17.7	•	I	ı	5.2
1953	20	16.7	12.5	I	ı	1
1954	p	1.5	t	ı	I	ı
1955	Ś	10.4	20 <b>.</b> 6	5.8	0	22.2
1956	0	8.3	<b>6.</b> 8	ı	0	6 <b>.</b> 2
Number of sub- divisions		17	ę	7	У	ħ

\* Townships with less than five subdivisions are not included.

71
~
•
- <b>a</b>
-
<b>C</b>
_
***
فس
-
5
<b>N</b>
~
<b>C</b> 3
-
н
님
H
III
LE III
ILE III
BLE III
ABLE III
ABLE III

County	dn qu pə	Buî ld	-up of eac	h township :	in per ce	nt of lots	occupied
and year	-p 90			•			-
Berrien	Expe ber ber	Benton	Coloma	Li ncoln	Niles	<b>Or</b> onoko	St. Joseph
1946	<u> </u>	96•6	50.0	50.0	27.2	I	63 <b>.</b> 4
1947	80	96.1	I	36.2	39.0	0	85.7
1948	20	50.0	I	I	146.0	ł	I
1949	8	77.4	ı	I	33.5	ı	83.3
1950	20	70.0	1	24.3	33.5	I	90.3
1951	45	52.7	22.3	100	12.9	I	67.2
1952	õ	73.5	25.8	18.1	32.1	ı	68.0
1953	20	37.2	14.6	ı	38.2	ı	43.0
1954	10	76.8	11.7	0	43.1	0.74	80.7
1955	м	29.9	1	0	6.3	24.4	28.1
1956	0	0	0	ı	ł	ı	22.5
Number of subdivisions		टग	ដ	6	33	Ŋ	36

County and year	ld-up trent du-bf		Bui ld	l-up of eac	h township	in per	cent of	f lots o	c cupi ed	
Cass	bui Per Exp	Howard	Jefferson	LaGrange	Marcellus	Ontwa	Penn	Porter	Silver Creek	Wayne
1946	8	63.8	I	26.1	36.6	31.3	37.1	I	•	14.2
1947	80	ı	ł	I	45.1	28.4	0•11	ı	19.5	I
1948	02	26.6	1	ı	I	9.0	0°0†	I	ı	ı
1949	8	29.4	148.0	I	I	1	I	ס•נק	0	ı
1950	ጽ	<b>6.</b> 3	1	48.0	70 <b>.</b> 0	83.3	<b>41.</b> 8	36.3	90.2	I
195 <b>1</b>	45	22.2	I	13.6	I	I	I	I	I	34.6
1952	g	19.2	0	12.5	3.4	25 <b>.</b> 8	I	30.6	ı	16.0
1953	20	I	5.1	11.5	0	33.3	I	ı	ı	21.2
1954	10	7.4	ı	23.0	I	2.6	0	10.7	20.0	0
1955	м	ı	5.0	9.0	ı	ۍ •ر	0	I	ı	I
1956	0	0	0	26.6	0	Э	0	22.2	0	ı
Number of subdivisions		18	У	11	ý	ਸ	6	6	Ø	8

TABLE III Continued

TABLE III Continued

Brady [Comstock [Cooper] Kalamazoo [Oshtemo] Pavilion [Portage Richland Ross] Schoolcraft [Texas -82.0 97.8 87.5 --12.0 12.0 0 I 2 I 1 ω Build-up of each township in per cent of lots occupied - 83.3 - 66.6 - 20.8 20.8 t 0 1 9 50.0 -5<sup>1</sup>4.5 -14.8 13.7 1 1 1 1 9 -58.4 51.2 27.1 61.3 34.3 34.3 24.2 24.2 24.2 20.2 I ί ----55.0 37.8 37.8 37.8 27.4 51.4 I ង - - 81.8 81.8 81.8 71.4 73.4 13.7 5.5 5.5 35.5 I I 9 -20.5 92.4 40.0 71.5 71.5 51.5 70.9 57.6 25.7 1.0 8 53**.**8 34.7 -61.5 12.5 12.5 37.3 37.3 37.3 40.4 40.4 10.4 --13.6 13.6 23 2 12.0 35.3 53.6 29.4 27.3 I t 1 0 I 9 ber cent Expected мo Kalamazoo di visions Number of and year sub-County 1956 1946 1947 1948 1949 1950 1951 **1952** 1953 1954 1955

Continued
H
TABLE

White Pigeon 1.9 28.5 52.0 13.9 13.9 12.8 1.5 2 Build-up of each township in per cent of lots occupied Sherman 27.1 42.8 0 37.5 37.5 17.5 19.2 9.6 6 Park 66**.**6 39**.**1 -14.2 23.0 1 1 ŧ ł ω Nottawa -29.7 -12.1 1 1 1 ł 9 Lockport ង Fabi us 32.5 - - -- -- -- -- -3.3 2.0 9 Constantine -50.0 -69.5 17.3 36.1 -16.2 1 ហ Colon -35.2 6.6 ---11.7 11.7 20.4 I 9 build-up per cent Expected o ~ F St. Joseph Subdi vi si ons and year County Number of 1946 1947 1948 1949 1950 1952 1952 1953 1955 1956

•
Ð
a
5
+2
c
~
0
C
_
_
н
H
H
III
III
III 2
R III
III III
BLE III
BLE III
ABLE III
LABLE III

· cent	Porter	I	I	ł	40.9	26.0	65.2	ı	30.7	I	8.0	I	7
mship in per scupied	Paw Paw	J	I	38.8	ı	I	88.8	12.0	35.7	22.6	1	,	ß
Build-up of each ton of lots o	Bangor	ł	ı	ı	5.0	ı	I	58.8	ı	I	ı	4.8	м
	Arlington	I	23.8	12.5	38.9	ı	53.9	0•11	ı	25.5	ı	I	IO
du-p tues du-b	pni ] ber Expe	90	80	70	ő	S S	45	30	20	10	м	0	
County and year	Van Bu <b>re</b> n	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	Number of Subdivisions

premature subdividing has come in the earlier years of the period under study and there is a great deal of evidence that the subdivisions less than four or five years old are building up more rapidly than would be expected.

For the most part the townships near or contiguous to the larger towns and cities have built-up more rapidly than the other townships. Nevertheless, there are some problem areas: all of Allegan county, Niles township in Berrien county, several of the townships in Cass county, one or two in St. Joseph and Van Buren counties, and only one real problem area in Kalamazoo county -- Schoolcraft township where a large portion of the best land in the county lies. But as was mentioned earlier these problems vanished in the younger subdivisions which are building up rapidly.

It would seem from the foregoing that, in their hurry to be the first to profit from the expected building boom, the early subdividers chose their sites unwisely. These sites began to build-up since there were no other available subdivisions upon which to build. However, as new and more properly located subdivisions were platted the earlier ones ceased to grow as rapidly and the newer subdivisions prospered as they began to fill the demand. The rapidity with which these newer subdivisions are filling up would indicate that the land developers now subdividing land in these six counties have correctly foreseen the demand.

The trends indicated in the preceding section give no cause for alarm at this time; however, subdividers who incorrectly estimate where the demand lies will create again the situation existing in the early

part of the period under study.

### Poor Type Subdivisions

Throughout the whole ten years from 1946 to 1956, there have been those who subdivided land unsuited to residential use, areas that have and will go tax delinquent, creating subdividions with little or no restriction over the type and character of the buildings to be erected, resulting in devaluation of surrounding property and a loss to society in general. Often these subdivisions ironically prevent any further occurrence of another of their character by driving the people of the township to adopt building codes or zoning ordinances.

Following are parts of interviews with township supervisors concerning poor type subdivision. One supervisor, talking about a 37 lot premature subdivision said; "It was on land that had never been farmed because it was too low and wet. Yet they platted it without any drainage." Another subdivision of eleven long narrow lots was not classified as premature because of five homes worth about \$1,000 apiece. "These are the reason for a zoning ordinance. Three of the families are continually on welfare." "Here is a real problem, 60 acres and 350 lots most of which are only 40 feet wide; and there are only about five cottages, if you can call them that, worth \$200 to \$600." Another supervisor said about a 234 lot subdivision; "We created zoning in the township because of this plat -- its a cheap development."

While in the Allegan county Register of Deeds office the author encountered a Chicago woman who was quite disturbed over some property she and her husband owned in the county. It seems that they had been buying lots sight unseen for some fifteen or twenty years as an investment since oil had been found in the area. The woman found that they had been paying taxes on subdivided land which was practically inaccessable. There were no roads since they had grown up to trees and brush. One of the lots was under Lake Michigan. The proprietor of the plat had been selling the lots for years to people who had not bothered to investigate their purchases. As the lots went on sale for tax delinguence the proprietor bought them up for resale to others.

Many other subdivisions were cited as examples of poor developments. A large number of subdivisions have been platted with what is called a roadside plan. This type is nothing more than a number of lots laid out one deep along an existing roadway. The reason this type of subdivision is so popular is because of its low expense of development. No roads are required and all the land can be sold. However, this type is one of the biggest offenders as far as poor subdivision standards are concerned. Most of the lots are one hundred feet wide. There is no complaint with this; but many developers sell fifteen to thirty lots without reserving access for a road which can be built later to serve the remaining land behind the subdivision when and if this area later ripens for development.

These developments may also be characterized as poor because of the excessive depth of the lots. In their effort to avoid building roads, some developers have laid out lots which are from 500 to 1,500 feet deep. These are a disadvantage to the purchaser and a waste of land in general since the back part of the lots are often left idle and grow up to weeds and brush.

# How it Operates in the Area Under Study

Now it is important to note what type of control there is over the subdividing that is being done in the six county area. According to the most recent amendments of the Plat  $Act^{17}$  the governing body of the township in which the subdivision has been platted is required to inspect the area. The governing body shall determine whether the lands are suitable for platting purposes and has the right to require that all streets and private roads be graveled or cindered, be properly drained, and that bridges and culverts be installed where necessary. The proprietor of any lands desiring to have a plat approved may be required to provide for the expense of inspection, but not to exceed the sum of \$60.00.

In such cases where the proprietor of any land has sold five or more lots by metes and bounds description, and has failed or neglected to have a plat made of the area and recorded, the governing body can authorize the assessing officer, in most cases the township supervisor, to make an assessors plat of the area. The assessor's or supervisor's plat when recorded is treated the same as if it were made by the proprietor.

Section 77 states:

"Any person, firm or corporation who shall hereafter sell any lot, piece or parcel of land, without first having recorded a plat thereof when required by the provisions of this Act, shall be deemed quilty of a misdemeanor and upon conviction shall be

<sup>17</sup> Act 186, Public Acts of 1954 which amends Act 172, Public Acts of 1954 (The Plat Act).

punished by a fine of not more than 25 per cent of the consideration involved or \$500, whichever is the greater amount, for each lot, piece or parcel of land so sold. It shall be the duty of the prosecuting attorneys of this state to prosecute all such violations."18

The duties of the County Plat Board, which consists of the register of deeds as chairman, county clerk, county treasurer, and county drain commissioner, are to examine all plats to see that they conform with the rules of the Plat Act and any rules that the Board may have enacted and that the streets, alleys, and names do not conflict with any other plat in the county. Lots may be 50 feet wide at the building line only where public sewage and water facilities are installed. Otherwise they must be no less than 60 feet at the building line.

How do the various county officials react to and work under the Plat Law? All individuals concerned were interviewed separately and considerable contradictions were found in some counties. In one of these the register of deeds said the Plat Board did not inspect plats since no money was made available for this expense. The clerk of the same Board agreed stating that money would be made available if asked for but it never had been requested. He felt that the whole process was haphazard duplication since the work had already been done by the township concerned. He added quite sincerely that he had no idea what the Plat Board's function really was and that he did not see why he had to be a member of it.

<sup>&</sup>lt;sup>18</sup>This means that everyone who sells five or more lots, less than ten acres in size, without first making and recording a plat thereof, is subject to prosecution and fine for each lot sold over four. However, there has been no such case recorded in the history of Michigan even though every day in open violation of this law such action is being carried on.

In another county the register was quite animated and vocal in his defense of an individuals rights, feeling that no one had the power to direct an individuals actions. When the author entered the treasurers office in this same county he found an elderly man and his granddaughter talking to the treasurer about subdividing. He was telling them how they could evade the Plat Law. The treasurer continued by overemphasizing what might happen to them if they failed to subdivide. He later admitted that he had been bluffing people in this manner in order to keep the plats and subdivisions in the county as good as possible. However, he wonders how far the Board should go in saving people from themselves.

One of the more progressive registers of deeds observed that:

"Platting, as I see it, is for one purpose only -- the correct measurement of land for tax purposes and transfers. Since the legislature has taken the power of determining the suitability of an area for platting and given it to the township concerned, the Plat Board of this county no longer concerns itself with such matters. It does not believe that a health officer should be one of its members but does think that the health officer should be called in at the township level. The health department should be interested in the people from a zoning point of view rather than from the platting angle. The way to stop the platting of unsuitable areas is by zoning.

"The greatest problem facing the Plat Board is lack of platting. There is one simple sure way of correcting this but it is so revolutionary that it will not be accepted in the near future. It is just this; take every ten acre square tract and when there has been ten divisions upon it anywhere, compel it to be platted. For example, a farmer sells lots on the corner of his farm along a road, as soon as he has sold nine lots on the road he is compeled to plat the whole ten acres in this manner; the nine lots are surveyed and numbered one through nine and the unsold area as lot ten. Lots one through nine will be assessed as subdivision property and lot ten as it was previously. The cost of platting will be assessed over time to the land platted and not charged to the township."

Two county officials reported problems arising from faulty surveys. An example was given of a church that owned land upon which a house had been built because of a faulty survey. As a result the church had to give an area thirty by four hundred feet to the home owner. Consequently, the members of the Plat Board feel that the surveyors should be responsible for their own work. One member feels that they should be made to post a bond which in case of poor work will go to pay the expense of "undoing the wrong." The question of the county surveyor as a member of the Plat Board was then raised. It was felt that this would be a good thing if he was not a practicing surveyor for if he was he could make it hard on his competitors.

It was felt in all but one of the counties that the Plat Law needed its teeth sharpened to the extent that the duties of all concerned be spelled out. The one county that seemed to be having little trouble was operated in a slightly different manner than the others. The officials of this county felt that the people would obey the laws if they had an understanding of them and so the Plat Law has been described in the local paper. The results have been quite satisfactory according to the officials of this county.

# Agricultural Importance of the Area

At this time an analysis of the agricultural importance of the six counties under study may reveal what influence the amount of subdividing has had upon the agriculture of the area. Prior to the field work in this study it was hypothesized that a large part of the subdividing occurring was due to the platting of areas along Lake Michigan and

around the inland lakes. This was later disproven. It was understood that some of the productive orchards of the area were being subdivided. This was found to be true.

In Table IV we see at the bottom that Berrien county ranks first in the state in total value of all farm products sold in 1954. Allegan county was next most important in the six county area, followed by Van Buren, Kalamazoo, St. Joseph, and Cass in that order. Each of these counties has moved upward in rank except Allegan which has remained in seventh place. More revealing still is a look at the remainder of the Table which shows how the six counties under study rank with the top one hundred counties of the United States.

In small fruits, Allegan and Berrien have remained steady while Van Euren has moved up sixteen places. Berrien dropped from sixt to tenth in apples while Allegan increased four and Van Buren remained steady. In peaches, Berrien, first in the county ten years ago, dropped to sixth, Van Buren remained steady and Allegan climbed five places. All three of these counties climbed in plumb and prune production, Berrien by five, Allegan by nine, and Van Buren by fifteen places. In cherry production Berrien remained in sixth place while Allegan and Van Buren climbed three and nine places respectively and Cass and Kalamazoo entered the top one hundred counties for the first time in ten years. All six were active in grape production, St. Joseph entering the top one hundred in 1954, the others remained steady or climbed. Finally, in strawberry production Allegan dropped, Van Buren rose, Berrien remained steady while Cass entered in 1954.

It is important to note that Allegan and Van Buren counties have in almost every case improved their position in the top one hundred counties of the United States while at the same time Berrien county,

# TABLE IV

# AGRICULTURAL IMPORTANCE OF THE SIX COUNTIES UNDER STUDY IN THE UNITED STATES AND MICHIGAN OVER THE TEN YEAR PERIOD 1946 to 1956

	egan	rien	Ø	amaz o(	Josepł	Buren
Years		Ber	Cas	Kal	St.	Vanl
1954		13				
1949 1941		30	~~			
1944	81	$\frac{44}{20}$				
1949	89	22				30 38
1944	83	21				<u>1</u> 6
1954	33	10				18
1949	35 27	6			-	15
1954						$\frac{17}{28}$
1949	26	3				20 25
1944	35	ī				28
1954	52	22				45
1949	55	20		-		47
1951	- 22	- 21				
1949	24	6		10		10
1944	25	6				12
1954	13	11				23
1949	14	10				22
1944	<u> </u>	8				23
19/19	78	10 18	00 76	35	98	15
1944	67	18	76	٥ <u>ر</u> ۱،۱		15
1954	66	4	93			
1949	86	6				16
1944	42	3				23
1954		26		89		
1949 1944		23		98		
1954	14	<u> </u>				
1949	27					
1944	30					-
1954	15					
1949	25					
1954	55					
1949	57					
1944	78					
1954	7	1	34	27	27	10
· · · ·	Years 1954 1949 1944 1954 1954 1949 1944 1954 1954 1954 1949 1944	Years       I $1954$ $1949$ $1949$ $1954$ $84$ $1949$ $89$ $1949$ $89$ $1949$ $89$ $1949$ $89$ $1949$ $33$ $1954$ $33$ $1949$ $26$ $1949$ $26$ $1949$ $26$ $1949$ $26$ $1949$ $26$ $1949$ $26$ $1949$ $26$ $1949$ $26$ $1949$ $26$ $1949$ $26$ $1949$ $26$ $1949$ $26$ $1949$ $26$ $1949$ $21$ $1949$ $21$ $1949$ $21$ $1949$ $63$ $1949$ $66$ $1949$ $66$ $1949$ $$ $1949$ $$ $1949$ $27$ $1949$ </td <td>Years         Years         Years           1954          13           1949          30           1949          44           1954         84         20           1949         89         22           1949         89         22           1949         89         22           1949         33         10           1954         33         10           1954         30         6           1949         26         3           1954         52         22           1949         26         3           1954         52         20           1949         24         6           1949         24         6           1949         24         6           1949         14         10           1949         14         10           1949         14         10           1949         14         10           1949         14         10           1949         10         14           1949         7         18</td> <td>Years         Years         <t< td=""><td>Years         Years         <t< td=""><td>Years         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         <thi< th="">         I         <thi< th=""> <thi< th=""></thi<></thi<></thi<></td></t<></td></t<></td>	Years         Years         Years           1954          13           1949          30           1949          44           1954         84         20           1949         89         22           1949         89         22           1949         89         22           1949         33         10           1954         33         10           1954         30         6           1949         26         3           1954         52         22           1949         26         3           1954         52         20           1949         24         6           1949         24         6           1949         24         6           1949         14         10           1949         14         10           1949         14         10           1949         14         10           1949         14         10           1949         10         14           1949         7         18	Years         Years <t< td=""><td>Years         Years         <t< td=""><td>Years         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         <thi< th="">         I         <thi< th=""> <thi< th=""></thi<></thi<></thi<></td></t<></td></t<>	Years         Years <t< td=""><td>Years         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         <thi< th="">         I         <thi< th=""> <thi< th=""></thi<></thi<></thi<></td></t<>	Years         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I         S         I <thi< th="">         I         <thi< th=""> <thi< th=""></thi<></thi<></thi<>

Source: Agricultural Census for the years 1945, 1950 and 1954.

once one of the most important of all, has been slipping in importance. Cass, Kalamazoo, and St. Joseph counties entered the top counties for the first time in ten years in some of the categories. Therefore, it would appear that as Berrien county became subdivided and more populated the surrounding counties which had a smaller amount of subdividing began to produce more and more of the fruit in this area.

#### CHAPTER IV

#### TYPE OF LAND SUBDIVIDED

#### Introduction

After estimating the total number of acres transferred from nonresidential subdivision uses into residential use during the ten year period June 1946, to June 1956, the total acreage was broken into four parts. In talking with the various township supervisors each subdivision was classified as to the type of land it had been previous to being laid out. The classification consisted of four major divisions, namely: good farm land; fair farm land; idle or poor land; and land which had never been farmed. Once the estimated acreage was broken down into four categories it still afforded little indication of its significance. Not until a classification of all the land within each of the counties was found was it possible to really see the trends.

# Estimated Acreage Subdivided

The estimates for the acreages of the different subdivisions have been arrived at by comparisons of each subdivision with the appropriate township plat map wherever possible. When it was not possible to determine the exact acreage from the maps reliance was then placed upon the detailed description of each subdivision and the acreages estimated in this manner. For the most part lots in the subdivisions under study are approximately one half acre in area. Whenever the lots in any <sup>s</sup>ubdividion varied significantly from this average the exact dimensions

of the lots were recorded.

In most instances the average sized lots were slightly in excess of one half acre, however, those under this size are easily brought up to one half acre since roads and easements were not included in the calculations. An example will illustrate the point. Assuming a sixty lot subdivision of one half acre lots, there would be thirty acres of lots plus six acres of streets and slightly more than two acres for utility easements or nearly forty acres. But, this hypothetical subdivision which is actually thirty-eight acres in area would only be included at thirty acres. Such a system of calculating the acreages more than makes up for any over-estimation that may have crept in and leaves us with very conservative figures.

For the six county area the acreage of the 689 subdivisions was calculated as being 11,476 acres.<sup>19</sup> This acreage consisted of cropland, lake frontage, woodland, and pasture that was removed from these uses and transformed into a higher and better use.<sup>20</sup> The average sized subdivision for the total area was 16.65 acres with four of the six counties having averages less than this figure.

<sup>19</sup> This does not comprise the total number of subdivisions for the period 1946 to 1956, since many of the subdivisions were annexed by bordering municipalities and were not counted. Other records were in-Complete and necessarily were left out of the study. Still others were laid-out within corporate limits and these were disregarded also.

<sup>20</sup> In some instances this is not the case since some of the subdivisions are expected by local people never to develop. In these instances the subdivisions are definately premature and represent an Obvious waste to society.

Allegan county with 174 subdivisions and 896 acres had an average subdivision size of 12.11 acres. Cass county with 106 subdivisions and 1,516 acres had an average of 14.3 per subdivision. Kalamazoo county had the largest number of subdivisions, 230 and the greatest acreage subdivided with 3,729 acres for an 11.87 acre average, while St. Joseph county with 75 subdivisions and 1,235 acres had a 16.34 acre average. It is quite interesting to note that the two remaining counties, which characteristically have small sized high value fruit and vegetable farms, have the largest average sized subdivisions. Berrien county has 151 subdivisions, 2,810 acres and an average size of 18.61 acres while Van Buren county has only 53 subdivisions, 1,290 acres and an average size of 24.34 acres per subdivision.

Although there was no first hand information collected in this study in connection with specific subdivisions in Berrien and Van Buren counties, there are indications that will lead us to a conclusion on the matter. Fruit and vegetable raising are highly labor intensive enterprises requiring a great deal of managerial ability to handle the large labor force. As these farmers grow older they would like to ease-up on the intensity of their operations and maybe even get out of farming altogether.<sup>21</sup> Especially if the farm is near areas being

<sup>21</sup> Quite often when interviewing county officials and township supervisors, the author has been told the same thing in connection with older farmers selling productive farms to subdividers. "Why shouldn't old man X sell out, he's been workin' hard and he's got a right to take it easy the rest of his life. It would be different if he had someone who was going to take over for him and had some interest in the place but the oldest boy has a good job in Chicago and the other isn't interested in farming. Why should he break his back to clear \$50 to \$100 an acre when he can sell the place for \$1000 an acre and sit back and rock on the front porch." Almost always it is stated in an apologetic

subdivided, the farmers may be influenced by offers of \$1500 to \$2000 per acre which would even look good to a young farmer with a long and bright agricultural future ahead of him. On the other hand the younger and smaller farmers, many of whom are working part time off their farms, have wives and children at home to do much of the work. The ten, fifteen or twenty acre farm is their home and a place to raise the "kids", not a potential subdivision site as is the larger farm belonging to the older farmers.

Of course, all subdivisions do not fall into the above class. Another reason why many of these larger subdivisions occur is found in the relative frequency in which farms are "tied-up" in an estate. Quite often the heirs are scattered over a large area with none of them wanting the farm as such. If the farm is located in an area favorable to subdividing the heirs will no doubt receive an offer in excess of what the farm would bring for agricultural purposes. However, this type of subdividing is characteristic of all six counties not just Berrien and Van Buren.

# Classification of Land Subdivided

Following the estimation of the number of acres subdivided in the six county area an attempt was made to categorize the subdivided acreage according to four different types of land. In so far as the author knows, this type of classification has not been duplicated and any resemblance between it and any official classification is purely coincidental.

or rationalizing way as if it were felt that the farm should not be subdivided but there was nothing to be done about it.

The classification was conceived after interviewing all township supervisors in the six county area who had a significant number of subdivisions within their townships.<sup>22</sup> Every supervisor was asked to evaluate each subdivision with reference to the type of land it had been prior to platting.<sup>23</sup> Following this, each subdivision was classified according to whether it had been regarded as: good farm land; fair farm land; idle or poor farm land; and land that had never been farmed.<sup>24</sup> A special "not classified" category applies for Kalamazoo township in Kalamazoo county. No information was obtained concerning land types within this township.

Table V shows how the subdivided land within the six county area was classified. Allegan county has more land that has never been farmed than in any other category. The next largest class is idle or poor land with 322 acres. Allegan is the largest of the six counties,

22

<sup>23</sup>For the most part the supervisors are lifetime residents of the area and have been in office for a considerable length of time. They have come to know each farm and its history within their jurisdiction as well as its productivity. Being farmers themselves, the supervisors are easily able to compare subdivisions and farms within their township.

<sup>24</sup> The highest value farm land in each township is classified as good and the rest of the land being farmed, which is returning a satisfactory living to its operator and which should not be retired, as fair. Any land being farmed which is not suited to farming because it is worn out or of poor quality along with any land which has been idle for the past ten years, no matter if it is the best land in the township, is classified idle or poor. The land classified as never farmed comprises woods, swamps, marshes, lake frontage, steep hills and rocky gravelly areas.

In most instances no attempt was made to contact supervisors in whose townships there were only one or two subdivisions unless there was something decidedly different about the township or the subdivision.

#### TABLE V

County	Never farmed	Idle or poor	Fair farm land	Good farm land	Not classified	Total	
			;	acres -			
Allegan	330	<b>3</b> 22	209	35	0	8 <b>96</b>	
Berrien	65	1,157	1,496	92	0	2,810	
Cass	554	442	7月2	78	0	1,516	•
Kalamazoo	194	744	1,138	268	1,385	3,729	
St. Joseph	172	455	516	92	0	1,235	
Van Buren	191	443	597	59	0	1,290	
Totals	1,506	3,563	4,398	624	1,385	11,476	

CLASSIFICATION OF THE TYPES OF LAND SUBDIVIDED, IN ACRES, FOR THE SIX COUNTY AREA OF MICHIGAN DURING THE PERIOD 1946 to 1956

standing mineteenth out of eighty-three in the state, yet the 35 acres of subdivided good farm land is the smallest of the six counties for this class.

Berrien county, third in size of the six, has the smallest amount of subdivided land classed as never farmed, only 65 acres. Almost three times as much good land was subdivided in Berrien as in Allegan, 92 acres. However, the bulk of the subdividing in Berrien comprised land in the middle two classifications with the greatest amount of idle or poor farm land, 1,157 acres, being in this county.

Cass county, smallest of the six, has the largest acreage subdivided in the never farmed class, 554 acres, and an equal amount in both the idle or poor and fair farm land classes, 442 acres. St. Joseph county, like Berrien, has the largest amount of subdivided land in the middle two classes, 455 acres idle or poor and 516 acres of fair farm land. Both Cass and St. Joseph have a fair amount of good farm land subdivided, 78 and 92 acres respectively.

The second largest of the six counties, Van Buren, has a moderate amount of land in each class except good farm land with 59 acres. Fair farm land comprises 597 acres, idle or poor 443 acres, and 191 acres have never been farmed.

Kalamazoo county, fourth in size, has the largest number of acres subdivided and only 194 acres never farmed which is quite low considering the number of acres subdivided. For the classification idle or poor farm land there are 744 acres which is second only to Berrien county. Fair farm land with 1,138 acres is again second to Berrien however, the fourth category, good farm land, is first with 268 acres. There remains 1,385 acres which are not classified in Kalamazoo county because of the lack of information about Kalamazoo township's 66 subdivisions.

The largest number of acres were subdivided in Kalamazoo county 3,729, next 2,810 acres in Berrien, 1,516 acres in Cass, 1,290 acres in Van Buren, 1,235 acres in St. Joseph, and the smallest number of acres 896 were subdivided in Allegan county, the largest of the six. So the totals for the six county area are 1,506 acres never farmed, 3,563 acres idle or poor, 4,398 acres of fair farm land, 624 acres of good farm land, and 1,385 acres not classified for a total of 11,476 acres.

Now the problem facing us is to determine just what kind of land the unclassified 1,385 acres is from Kalamazoo township in the county of the same name. So by removing the unclassified acreage from the total for the county we have 2,344 acres left not including Kalamazoo

township. Then by determining what percentages the remaining classifications are of the 2,344 acres and applying these percentages to the unclassified 1,385 acres we arrive at an answer based on the county as a whole. The results show that 116 acres were never farmed, 439 acres were idle or poor, 672 acres are fair farm land, and 158 acres fall in the good farm land classification. This changes Kalamazoo county's acreage figures drastically and also alters the six county areas figures somewhat, as can be seen from Table VI.

#### TABLE VI

CHANGES IN THE ACREAGE FOR KALAMAZOO COUNTY AND THE SIX COUNTY AREA AS A RESULT OF COMPARING THE UNCLASSIFIED ACREAGE WITH THE COUNTY AS A WHOLE

County	Never farmed	Idle or poor	Fair farm land	Good farm land	Not classified	Total	
Kalamazoo	194	744	1,138	268	1,385	3,729	
Kalamazoo after	310	1,183	1,810	426	0	3,729	
Area totals Area totals after	1,506 1,622	3,563 4,002	4 <b>,</b> 398 5 <b>,</b> 070	624 782	1,385 0	1 <b>1,</b> 476 11,476	

The change gives good farm land a decided jump until now, by this analysis, Kalamazoo county has over half of the acreage in this category. Previously the county contributed only about a third. Fair farm land and idle or poor land have also made sizable increases but nothing compared to good farm land. Before we accept the results of this analysis one further attempt will be made at arriving at the character of the subdivided land in Kalamazoo township. This time the area of comparison will be narrowed to the four surrounding townships of Cooper, Comstock, Oshtemo, and Portage. In this manner it is believed that a truer picture of the actual character of the land will be presented.

Since the four townships used in the comparison comprise a goodly sized portion of the area subdivided in the county, we can not expect a large variation from the preceding analysis. The four townships are composed of 1,627 subdivided acres broken down in the following manner: 118 acres never farmed; 595 acres idle or poor; 822 acres fair farm land; and only 92 acres of good farm land. The results of the comparison can be observed from Table VII.

#### TABLE VII

CHANGES	IN	THE	ACF	LEAGE	FOR	KALAMAZOO	COUN	TI	AND	THE	SIX
COUNTY	ARE	LA AS	5 A	RESUI	T OF	COMPARING	; THE	UN	ICLAS	SIFI	ED
	CRE	AGE	WI	TH THE	FOU	R SURROUNI	DING	TOW	NSHI	PS	

County	Never farmed	Idle or poor	Idle Fair Good Not or farm farm classif poor land land classif		Not classified	Total
			ac:	res		
Kalamazoo	194	744	1 <b>,1</b> 38	268	1,385	3,729
Kalamazoo after	295	1,251	1,837	346	0	3,729
Area totals	1,506	3,563	4,398	624	1,385	11,476
Area totals after	1,607	4,070	5,097	702	0	11,476
Difference between the two analyses	- 15	68	27	- 80	0	0

Now the questions are, what is the reason for the differences between the two analyses, and how, if so, is the second any superior to the first? It is believed that these questions can best be answered by a short history of land development patterns in the United States and Michigan.

The early settlers of this country came from Europe where they were used to the village system of farming where everyone lived in a village in which all the farm buildings were located and the livestock kept at night. During the day farmers went out to their fields, of all shapes and sizes, which were often scattered on all sides of the village. However, in this country aided by the rectangular survey system the settlers were able to lay out farms of reasonable size and shape being all in the same unit.

When the settlers came to Michigan it was impossible to know where the best farm land lay since the whole state was covered by forests, swamps, and lakes. The flat land along the banks of streams, rivers, and lakes was cleared first. A report of the finding of good farm land was nearly the same as the news of a gold strike. New settlers would pour into the areas reputed to have good farm land, large areas would be cleared and soon a town would spring up to meet the needs of the new settlement.

This observation has been verified for the six county area, at least, by some of the older township supervisors who were born on these early farms and observed the development as it took place. It is now easier to understand why there is less land classified as good farm land under the second analysis than the first. As the towns grew in area with increasing populations they necessarily had to expand over the surrounding good farm land. Thus, it is obvious that for any area with a limited amount of top grade land, and top grade land is not overly abundant anywhere. And if much of this land was already built upon before 1946, less remains to be subdivided later.

The city and township of Kalamazoo and the four surrounding townships comprise just such an area as compared to the whole county. That is why the analysis using a contiguous area to Kalamazoo township represents a much truer picture. For the same reason we expect to find an increase in the amount of fair farm land if it is true that towns were originally located in areas favorable to farming. There still remains to be answered the question of considerable increase in the acreage of idle or poor farm land.

It is true that poor farm land is not as easily sold as good farm land but in an area such as this there should not be an overabundance of this type of land. Such an area, as close as it is to the city, has a large number of commuters who live outside the city, some on small acreages and some on large, who drive back and forth to work. Some of these commuters try to keep up their farms in the evenings after work and on weekends and holidays. On the other hand many let their fields lie idle growing nothing but weeds which blow over into their neighbors crops or lawns. Another and probably the most important reason why there should be an abundance of idle land contiguous to metropolitan areas lies in the competition between land uses.

On the death of a farmer near a metropolitan area the farm, if not willed to someone specifically, becomes the joint property of all the heirs to the estate. The estate may take anywhere from a few months to several years to settle during which time the farm usually remains idle. Assuming an agreement is reached to sell the farm, in a short time offers are received from farmers, industrial site seekers, speculators, subdividers and others. The farmers can not economically afford

to offer as much for the farm as the others due to the low per acre income received in a general agricultural use. The others are therefore able to out bid the farmers. Quite often they are in no hurry to develop the land and this is the reason it is not unnatural to find an increased amount of idle land near cities, towns, and metropolitan areas.

Now that the subdivided acreage of Kalamazoo township has been analysed and classified, we will see from Table VIII the changes, percentagewise, which have occurred as a result of the new classification. The percentage breakdown of the other counties under study can also be seen and easily compared.

#### TABLE VIII

County	Never farmed	Id <b>le</b> or poor	Fair farm land	Good farm land	Not classified	Total acreage subdivided	
			- perce	nt			
Allegan	36.8	35.9	23.3	3.9	0	896	
Berrien	2.3	41.2	53.2	3.3	0	2,810	
Cass	36.5	22.5	22.5	5.1	0	1,516	
Kalamazoo*	7.9	33.6	49.3	9.4	0	3,729	
St. Joseph	13.9	46.8	41.8	7.5	0	1,235	
Van Bu <b>re</b> n	14.9	34.3	46.3	4.6	0	1,290	
Totals <sup>*</sup>	14.0	35.5	կկ.կ	6.1	0	11,476	

CLASSIFICATION OF THE TYPES OF LAND SUBDIVIDED, IN PERCENTAGES<sup>≠</sup> OF THE ACREAGE SUBDIVIDED, FOR THE SIX COUNTY AREA OF MICHIGAN DURING THE PERIOD 1946 TO 1956

Percentages may not equal 100 due to rounding off at one decimal place.

\* Results after the analysis and classification of the 1,385 acres from Kalamazoo township. Only a slight increase in land never farmed and good farm land, 2.7 per cent and 2.1 per cent respectively, is observed. While a big change of 18.8 per cent results in fair farm land, a 13.7 per cent increase in idle or poor land occurs. We now can begin to see the importance of Kalamazoo township, for it contributes 37.1 per cent of the county total and amounts to 12.1 per cent of the whole six county subdivided area.

In four of the six counties the greatest proportion of land falls in the classification of fair farm land while in the other two, Allegan and Cass, more has never been farmed than any other category. It is well to note that a sizeable percentage of the land in every county is found in the idle or poor class. In order that we may more fully understand this situation, reference is here made to some of the many interviews with township supervisors.<sup>25</sup>

In Allegan county one supervisor in telling about a 21 lot subdivision built along M-40 said, "There's only one house worth about \$6,000 on it. The land was bought with the idea of making it into an airfield, after that failed they tried this. I don't think it will ever be developed. The land is sandy and hasn't been farmed in sixty years." In another township the supervisor, talking about a 32 lot subdivision on M-89, said, "This is a bad mess — there are 17 houses if you can call them that, not a one worth over \$1,500. The land is light sand and has not been farmed for the last twenty years." Here we have a

<sup>&</sup>lt;sup>25</sup>Since those who were interviewed were led to believe that their information would be held in the strictest confidence, no reference will here be made to the supervisor or township from which the information was drawn.
good indication of the type of land classed as idle or poor in Allegan county. It is light sandy soil which has been farmed until it stopped producing and then left idle to grow brush or "oak grubs" -- small oak trees so named by the people of the area.

The idle land in Berrien county that has been subdivided is quite different from that in Allegan as can be seen from the following descriptions of several plats. "They had been farming the rest of the place but this area was fenced off." "This was an old orchard that had not been kept up." "A cheap subdividion on idle land that used to be a nice grape vineyard." "The last time they farmed this place was in 1952 then it got tied up in the estate. Now they have seven or eight \$25,000 to \$30,000 homes going up and all the lots are sold to contractors." These statements typify much of the idle land in Berrien county. However, some worn out and poor land has been subdivided here also.

Cass county follows more closely the type of idle land subdivided in Berrien. Following are a few statements by supervisors in this county. "This used to be a farm but the land was hilly and when they subdivided it was idle." "This was farm land but it had been idle mostly pastured." "Idle farm land." "Now here is a farm that once had been good land but they wore it out." It can be seen from Table VII that in this county there is as much idle or poor land subdivided as fair farm land. It is the authors belief that a large portion of the idle land could easily be placed in the fair farm land class.

In Kalamazoo county 33.6 per cent of the subdivided land has been classified idle or poor, a few statements about this land will help us to understand more fully the situation in this county. "It used to be an eight to ten acre orchard but was not kept up." "Nothing here but twenty acres of run down farm land." "Once this was a good farm but now it is idle." Almost every supervisor interviewed had several subdividions about which he said, "It was farm land that had been left idle."

An idea of the idle land in St. Joseph county is given from the following statements. One supervisor talking about a 71 lot subdivision said, "This is idle farm land that was not too good." Another said, "The land had been furmed but was idle before they subdivided." "That thirty acres has not been farmed in the last twenty years." "That was expensive land but it had not been farmed for fifteen years." "This subdivision has the cheapest homes in the township. It was built on farm land that was left idle." A large portion of the land classified idle or poor in this county was originally fairly good farm land but for one reason or another it had been left idle until it was again put to another use.

Van Buren has 34.3 per cent of its subdivided acreage in idle or poor land. Three subdivisions in a township with ten were platted on land that was, at the time, being farmed although it was not very good land. In another township the supervisor states: "This farm was used for pasture mostly but it was idle when subdivided." Another said, "There are sixty-five or seventy acres in this plat, the center of which is low. Most of the land was run down and in grapes, some of it was swampy."

A good share of the idle subdivided land in Van Buren like Allegan was poor, run down, light, low or hilly land. This type of land, under its present condition is not too well suited for intensive farming. However, in the other four counties a large percentage of the idle land could easily be classified as fair farm land. With the use of accepted farming methods, the land could once again be made to yield a satisfactory income. It is the author's considered opinion that for the six county area as a whole, more than one half of the subdivided idle land could well be classified as fair farm land.

### Land Quality of the Area

Now we know approximately how many acres of each type of land was subdivided in the six counties during the period 1946 to 1956. However, knowing only this does not give us a clear indication of the true trends primarily because each county is different. We can not expect all six of the counties to have the same amount of good farm land nor the same amounts of land in the other classifications. Each county has a different land area, topography, soil type, and surface water area. What is needed now is a classification for each county indicating the various proportions of different land types found in that county.

Such a classification has been made and may be easily adapted to our use in further analyzing the subdivided acreage in the six counties under study. The classification was developed in 1933, and was made public in a special Experiment Station Bulletin by J. O. Veatch.<sup>26</sup>

<sup>26</sup> J. O. Veatch, Agricultural Land Classification and Land Types of Michigan, Agricultural Experiment Station Bull. 231, East Lansing, 1933.

A portion of the authors foreward is here presented as an indication, in the author's own words, of the scope and limitations of the classification.

"This publication is a contribution to the agricultural geography of Michigan. It is designed to have an educational value inasmuch as it constitutes a reference, in a single publication, for definitions and appraisals of all of the soil types to date which have been officially recognized in surveys of the state, and which are coming into more and more general use by name as a convenience for referring to different kinds of land. The economic classification of the land on an agricultural basis. which is shown on the included map is, not, merely the personal opinion of the author, but in a sense is a resume of the experience of land users. However, since basic inferences have also been drawn from the natural character of soil and land types, doubtless, in some locations, the author's estimates of the quality of land will run counter to local opinion and further may not everywhere be in harmony with local assessed values and may not be in complete agreement with the land values given by the U.S. Census. This classification, although necessarily emperical and subjective to a degree, should have a value in land planning work and in the formulation of broad land policies by governmental administrators."

Veatch's classification consists of first, second, third, and fourth class land with the estimated acreages expressed in a percentage of the total acreage of the specific counties. Beginning with an ideal type of land, all the land in the state was given an economic rank according to the way in which it deviated from the ideal in any one or all of the five conditions. These conditions of the ideal type of land are: "(1) relatively high fertility of soil and durability expressed in sustained plant growth or yield; (2) relative uniformity of soil over a considerable area; (3) physical character favorable for good title --a loam in texture in the plow soil and free from large stones; (4) level or but gently undulating topography; (5) intermediate amounts of moisture in the soil -- neither excessively wet nor excessively dry."<sup>27</sup>

27<u>Ibid</u>, p. 57.

First class land includes land types on which the dominant type of agriculture at the time of classification can be carried on as a business, and under ordinary intelligent management will produce a profit during normal times. Second class land includes land slightly inferior to the first due to lower fertility, less durability, or less favorable topography. It was regarded as usable land at the time of classification. The third class land is marginal. At the time of classification it was considered adapted only to a purely subsistence type of farming or no agricultural use at all depending upon its location or other unfavorable factors. The fourth class is generally submarginal and comprises the driest sands, most of the peat swamps, the wet sands of lowest fertility and durability, the steepest slopes, and rock outcrop.<sup>28</sup>

Due to the nature of fourth class land it will not figure in the analysis of the subdivided land since none of the subdivisions have been built on this type land. However, fourth class acreage will be subtracted from the total county areas to determine just how much of the land area is relevant to the study. But before this can be done the lake and stream acreage will have to be removed from each county since it is included in the total county area.

Statistical estimates of the state's lake areas from ten acres on up have been compiled by the Rand McNally Company.<sup>29</sup> However, no estimates are known to be available for the areas of streams and rivers

<sup>28</sup> <u>Ibid</u>, p. 58.

<sup>&</sup>lt;sup>29</sup>Michigan Fishing and Hunting Guide, Rand McNally and Company, Chicago, Illinois, Third Edition, 1955.

or lakes and ponds under ten acres in size. Therefore, it is assumed by the author that there should be approximately as much area in rivers, streams, and lakes and ponds under ten acres as there is in lakes of ten acres or more. It is further assumed that a county with a large number of lakes would necessarily need a proportionately larger number of rivers and streams to drain the area than a county with a few lakes.

The results of subtracting the lake and stream surface area from the area of the respective counties can be seen in Table IX. It is well

#### TABLE IX

ESTIMATED COUNTY LAND AREA IN ACRES AS A RESULT OF SUBTRACTING ESTIMATED LAKE AND STREAM ACREAGES FROM COUNTY TOTAL AREAS

County	Total area*	Estimated water area	Estimated land area	
		acres		
Allegan	533 <b>,1</b> 20	8,416	524,704	
Berrien	364,160	8,790	355 <b>,37</b> 0	
Cass	315,520	27,906	287,614	
Kalamazoo	359,680	16,280	343,400	
St. Joseph	321,920	8,820	313,100	
Van Buren	394,880	18,230	376,650	
Area totals	2,289,280	88,442	2,200,838	

# \*1950 Census of Agriculture.

to note that those counties having the largest estimated acreage of water area are also the leading counties with respect to the amount of subdivided land classified as never farmed. Reference is here made to Table V. Cass with 554 acres never farmed has 27,906 acres of water area, Van Buren 191 acres and 18,230 acres respectively, while Kalamazoo with 194 acres of land never farmed has 16,280 acres of water area. In explanation, it is assumed that a county having more lake and stream area will also have a greater acreage of wooded and low wet acreage contiguous to the water than a county with less lake and stream area. If the assumption is true it explains why more subdivided acreage never farmed is found in counties with greater water areas than in counties with less. Farmers with this type of land on their farms are least likely to develop it since the cost involved in clearing or filling in these areas far outweighs the expected return to be derived from general farming. However, since a residential area is a much higher use of the land, in most cases, than is farming, the subdivider can afford the needed capital to bring the land into use.

One question still remains to be answered with respect to the foregoing assumption. Why is it then, if the assumption is true, that the largest county of the six, Allegan, with the second largest acreage of land never farmed 330 acres, has the least estimated water area 8,416 acres? In order that we might understand the situation more fully two more facts must be mentioned. The first is the presence in Allegan county of the only State Forest this far south in Michigan. The forest covers an area somewhat larger than 43,000 acres of which 32,415 acres is state owned, the remainder is privately owned and primarily the same type of land as the forest. This gives us an indication of the extent of this type of land within Allegan county. The second fact, discussed more fully in Chapter III, is the abundance of this type of land which has been prematurely subdivided in Allegan county. For example, the author knows of a sixty acre tract of sand and trees subdivided into 510 lots in 1949, which today has only one shack on it which is lived

 $\delta 4$ 

in only part of the year.

Now that we have the estimated land area in acres for each of the six counties it is time to use veatch's percentages to determine the number of acres in each classification. Consequently, the six counties are divided into their component parts in Table X and the results obtained are then presented in Table XI.

As was indicated earlier in the chapter, we will disregard the fourth land classification due to its characteristics. This leaves us with three classes of which the first two are the largest and most important. It will be remembered that Veatch placed in his first class all those land types on which the then present, dominant type of agriculture could be carried on as a business, and with a profit during normal times, under ordinary intelligent management. In Veatch's words, "A very considerable amount of land not in use is included in the first

### TABLE X

Classifi-		Percent* o	f estimat	ed land ar	ea in county	
cation	Allegan	Berrien	Cass	Kalamazoo	St. Joseph	VanBuren
First	25	39	26	44	15	22
Second	38	39	35	34	58	42
Third	19	16	27	13	22	27
Fourth	18	6	12	9	5	9
Estimated land area	524,704	355,370	287,614	343,400	313,100	376 <b>,</b> 650
	***************					·····

AGRICULTURAL LAND CLASSES IN MICHIGAN BY COUNTIES

Source: J. O. Veatch, Agricultural Land Classification and Land Types in Michigan, pp. 63-65.

ंड

#### TABLE XI

Classifi-		Esti	mated ac:	reages by c	ounties	
cation	Allegan	Berrien	Cass	Kalamazoo	St. Joseph	VanBuren
First	131,176	138,594	74,779	151,096	46,965	82,863
Second	199,387	138,594	100,665	116,756	181,598	158,193
Third	99,634	56,859	77 <b>,</b> 656	44,642	68,882	101,695
Fourth	94,447	21,323	34,514	30,906	15,655	33,899
Total estimated area	524 <b>,</b> 704	355 <b>,</b> 370	287 <b>,</b> 614	343,400	313,100	376 <b>,</b> 650

ESTIMATED ACREAGES OF THE FOUR CLASSES OF LAND IN THE SIX COUNTIES UNDER STUDY

class on the basis of potentialities."<sup>30</sup>

The second class was considered slightly inferior to the first and regarded as usable land or at least what constituted the best reserve after the exhaustion or complete use of the first class. The third class was marginal, adapted only to a purely subsistence type of farming, or a home and a partial living for the family.

Veatch's classification differs somewhat from the classification developed in this thesis and so to facilitate further analysis the two classifications must be adapted to one another. Such a move, it is realized, may be open to wide and varied criticism. However, it is believed that under the circumstances that such a move is fully justified.

First class land more nearly resembles the subdivided acreage classified as both good and fair farm land. Second class land resembles the subdivided idle or poor farm land since a good share of it could be

30 Veatch, <u>op. cit.</u>, p. 57. classed as fair farm land. The remainder of this type of land through proper management would be fairly productive. The third class land corresponds to the subdivided acreage never farmed which might well provide much more than a subsistence living if cleared, drained or filled in and farmed.

To complete the analysis we will determine just what proportion of these three classes of land have been subdivided in the past ten year period. It is expected that the resulting percentages will be quite low since a ten year period represents such a short span of years when we consider both the length of time since the settlers came to this country and all the years remaining in the future. Table XII shows the results of the computations along with an estimated number of years for each county before all three classes of land will be subdivided.

T	ABIE	XTT
-		

		IN THE AR	ea under si	rudy	
County	Percent	of land su classifica	bdivided tion	Percent of county	Years needed to
	First	Second	Third	totals	.subdivide area*
		per	rcent ·		
Allegan	0.2	0.2	0.3	0.2	500
Berrien	1.2	0.9	0.1	0.6	162
Cass	0.7	0.4	0.7	0.6	162
Kalamazoo	1.5	1.1	0.7	1.2	83
St. Joseph	1.3	0.3	0.3	0.4	250
Van Buren	0.8	0.3	0.3	0.4	250

PERCENTAGES OF EACH OF THREE LAND CLASSES SUBDIVIDED BY COUNTY FOR THE TEN YEAR 1946 TO 1956, IN THE AREA UNDER STUDY

Area refers to acres of first, second, and third class land in each county.

<del>έ</del>7

It should be obvious from Table XII that Kalamazoo county has been subjected to the greatest amount of subdividing in the past ten years. <sup>31</sup> However, it is important to note that Berrien and Cass are next with approximately the same proportion of their area subdivided. St. Joseph and Van Buren are third and Allegan is last due to its large size and the lighter demand for subdividions in this county.

The number of years needed to subdivide the total acreage of first, second, and third class land in each county is based on the assumption that subdividions will continue at the rate of speed developed during the ten year period 1946 to 1956. The estimate is made from the present assuming no existing subdividions, cities, roads or other uses of the land. Since there are such uses existing today it is quite evident that the significance of the subdivided area in the six counties under study is considerably greater than is indicated by Table XII.

í?

<sup>31</sup> Eighteen subdivisions were annexed by the city of Kalamazoo. These were subdivided during the period 1946 to 1956 and annexed after they had begun to build up. The combined area of these eighteen subdivisions amounted to approximately 340 acres which has not been counted in this analysis.

#### CHAPTER V

### FACTORS CONTRIBUTING TO DEVELOPMENT OF SUBDIVISIONS

### Small Tracts and Highways

Subdividing is not the only activity in the six counties that leads to a removal of farm land from agriculture or which contributes to the residential development of farm areas. One need only look at a county plat book for the area, showing the detailed area for each township, to see the numercus groupings of small tracts. Small tracts, as they are called, are residences of from one to five or ten acres that have not been platted or recorded in subdivisions. Since the law states that a proprietor may sell four such parcels without platting, numerous developments of this type have taken place in the six counties since the end of World War II.

In Allegan county quite a few small tracts have been developed in the corners of the county due to the proximity of large cities in other counties. A large part of the small tract growth in Berrien county is due to movement out of the many towns and cities in the county. Many of the southern most townships and areas along the state and federal highways are experiencing growth from sources outside of the state.

One of the supervisors in Cass county indicated that the lakes in the township are pretty well built-up. About one half of the people around these lakes are from Indiana and Illinois, and it is expected that they will begin development along the highways of the township. In another, almost completely rural, township in Cass county the

supervisor stated that there were not many small tracts near the lakes but along the roads it is building up. This year the growth has slowed down but it has caused a school problem and a new \$47,000 school is being built. Another township supervisor reported an increase in small tract areas in his Cass county township. He indicated that most of the buyers are from Chicago, Scuth Bend, and Elkhart and that they drive to work in these cities.

The small tract development in Kalamazoo county is limited mainly to the areas around towns and the townships around the city of Kalamazoo. However, there has been some development in the other townships and it is expected to increase due to the rapid building going on in the already built-up areas. Only slight to moderate small tract development is reported for areas other than those adjacent to cities and villages of St. Joseph county. However, the trend is on the increase with many people coming from outside the state. Small tract development in Van Buren county has not begun to develop rapidly as yet except around the villages and cities. Yet like Berrien, Van Buren has numerous farms of five, ten, fifteen, and twenty acres which are operated on a part time basis while the operator has a full time job off the farm.

The large amount of off-farm work in the state and the area under study will be developed in a later section. Nevertheless, it is quite an important factor in the small tract development which has been occurring in the six counties. Many of the farm operators in the area have been driving considerable distances to work. As a result they have attracted fellow workers who have moved their families from towns and

cities to the area and they also drive these distances to work.

Without an adequate system of roads and highways this development would be almost impossible. About thirty years ago the Michigan State Highway Department undertook a state-wide roadbuilding campaign. The result is the system of roads and highways which Michigan has today. The only difference between then and now, for the most part, exists in repair and expansion of the existing road sites.<sup>32</sup> Today the Highway Department is again beginning construction on a new system of stateroads and highways. Much of the development is still in the planning stages. But for the most part, the new highways are expected to be fourlane, divided, limited access type taking three hundred foot right-ofways.

The result of this type of road building is the removal of approximately thirty-five acres to the mile, not along existing rightof-ways as has been the case, but across land which is now in farms. The new planned highways, which are out of the planning stage and waiting for approval and appropriation of funds before they can be built, call for approximately 5,840 acres to be purchased in the six counties. None of this development is planned for St. Joseph county and only 80 acres will be required from Cass. A large share of the remaining number of acres will be involved in relocating US-12. Though these are not the only highways planned for the area, they represent a small acreage when compared to the total area.

The following analysis was developed after several interviews with members of both the Route Planning and Right-of-Way Divisions of the Michigan State Highway Department in Lansing.

The effect that these highways will have on the agriculture of the area will be much more than the land removed by the highways themselves. Since these highways will, for the most part, be limited access type, the farms which they cross will be seriously obstructed. The Highway Department has found an answer for these farmers. They will buy inaccessable areas and resell them to farmers on the other side of the highway. However, it is conceivable that some of the acreage will not be resold immediately and will remain idle and out of production for some time. Also, some of the farmers will be left with uneconomic units, not being able to purchase additional land, and of a necessity will be forced to sell.

More important than the idled land and uneconomic farming units are the areas made available for development by these highways. With the area already being developed by subdivision and small tract and these trends on the increase, the introduction of these new super highways will further facilitate getting to and from work at greater distances than previously. As a result the areas experiencing very little development will be exposed. The opening of the Indiana Turnpike is expected to have a great deal of influence on the lower townships in all the southern most counties of Michigan. As the population pressures grow in the areas outside the cities due to the development now being experienced, large shopping centers of the type being built around the Detroit metropolitan area will have to be constructed and provided with large parking areas to serve the people.

#### Population

Nothing contributes to an areas growth and development like an increasing and energetic population. The official projections made for the United States back in the 1930's indicated a leveling off of the population in the 1940's. Of course, these projections were made during a period of slow population increase, no one expecting the rapid increases that occurred in the 1940's.

In the six county area population numbers held quite steady for the first half of the 1940's. As can be seen from Figure 5, 1945 was to be the beginning of a period of a steadily increasing population in southwestern Michigan. Each of the six counties experienced steadily increasing populations with Kalamazoo county experiencing a drop from 1949 to 50 followed by another rapid climb. The trends of the six counties fall into three groups, much in the manner that these counties were subdivided. Berrien and Kalamazoo, with the greatest amount of subdividing have nearly the same population. Allegan and Van Buren are nearly the same while Cass and St. Joseph, the remaining two counties have similar populations and trends.

The data for all six counties indicate a continued upward trend for the population of the area. Professor J. F. Thaden of the Department of Sociology and Anthropology at Michigan State University has made population projections for all the counties of Michigan by five year periods from 1955 until 1970. We see these projections for the six counties under study in Table XIII and Figures 6 and 7. It is easy to see from Figure 6 that Thaden expects the counties to continue their



TABLE XIII

PERCENTAGE CHANGE IN POPULATION BY FIVE YEAR PERIODS FROM 1940-1955 WITH PROJECTIONS FROM 1955-1970

	1940	1945	Change	<b>७</b> ९	1945	1950	Change	۶	1950	1955	Change	89
Allegan	41 <b>,</b> 839	36,583	- 5,256	-12.5	36 <b>,</b> 583	47,493	10,910	29.8	47 <b>,</b> 493	51 <b>,</b> 790	4,297	9.0
Berrien	<b>711,</b> 68	93,575	4,458	5.0	93,575	115,702	22,127	23.6	115,702	138,400	22,698	19.5
Cass	21,910	21,766	<b>1</b> 1777 -	- 0.6	21,766	28,185	6119	29.4	28,185	34,670	6,485	23.0
Kalamazoo	100,085	101,763	1,678	1 <b>.</b> 5	101,763	126,707	24,944	214.5	126,707	149,570	22,863	18.0
St. Joseph	31,749	29,084	- 2,665	- 8.3	29,084	35,071	5,987	20.5	35,071	38,940	6,966	19.8
Van Buren	35,111	32,130	- 2,981	- 8.4	32,130	39,184	7,054	21.9	39,184	46,150	6,966	17.7
The State	5,256,106	5,435,092	178,986	3.4	5,435,092	6,371,766	936,674	17.2	6,371,766	7,236,000	864,234	13.5
	וסקל	0901	Change	Pi	1960	<b>19</b> 65	Change	Pi	1965	1970	Chance	6

	1955	1960	Change	૪૧	1960	<b>19</b> 65	Change	be	1965	1970	Change	Þe
Allegan	51,790	55,500	3,710	7.1	55,500	58,600	3,100	5 <b>.</b> 5	58,600	64,900	6,300	7.01
Berrien	138,400	157,200	18,800	13.5	157,200	177,400	20,200	12.8	177,400	207,300	29,900	16.8
Cass	34,670	39,600	4,930	2,4L	39,600	14,300	4,700	11.8	14,300	51,400	7,130	16.0
Kalamazoo	149,570	162,900	13,330	8.9	162,900	178,400	15,500	9•5	178,400	203 <b>,000</b>	24,600	13.7
St. Joseph	38,940	l42 <b>,</b> 200	3,260	8.3	li2,200	45,100	2,900	6.8	145,100	48,500	3,400	7.5
Van Buren	46,150	52,400	6,250	ц.5	52,400	53,800	1,400	2.6	53,800	57,900	4,100	7.6
The State	7,236,000	7,926,000	000*069	9•5	7,926,000	8,616,000	690 <b>°</b> 000	8.7 8	, 616,000 §	9,742,000	1126,000	13.0
Figures for projections	- 1940, 194	5, and 195	50 are Mi	chigan	Departmen	t of Healt	ih estima	tes,	chose from	1955 on £	are Thade	0

.



upward climb in numbers.<sup>33</sup>

Figure 7 indicates that Cass and Berrien are expected to grow somewhat faster than the other four counties. The projected trend slows down in the early 1960's and then increases again between 1965 and 1970 as the large baby crop of the late 1940's marry and have children of their own.

These trends indicate a steady demand for building lots assuming that the people do not change their way of living. The increase in population expected in the late 1960's would lead us to believe that new life would be given to subdividing during this period or maybe another boom might take place as did following the Second World War. It all depends upon the characteristics of the times.

#### Work Off-Farms and Age of Farmers

Now that we know, or think we know, what can be expected of the population in general, it is time that more attention be paid to the agricultural sector of this economy. The area, as was mentioned earlier, has a large number of people living upon small tracts who depend mainly on an off-farm source of income for their livelihood.

During the period 1940 to 1954 there has been a decided increase in the number of operators working off their farms which is indicated in Table XIV. In 1940, only two of the economic areas of the state, those in the Upper Peninsula, had as much as 10 per cent of the farm

<sup>33</sup> Thadens projections start out low for in 1955 there were only 1,150 people more in Kalamazoo than in Berrien county -- yet the projection makes them 11,170 people apart.



TABLE XIV

NUMBER AND PERCENTAGE OF MI CHIGAN FARM OPERATORS HAVING OFF-FARM WORK DURING 1940, 1950, and 1954, BI ECONOMIC AREA

.

Off-farm work	ч	5	٩	ta.	4h	Econc 5a <b>,A</b>	smic Are Sb	a 6a,B,C	6b	7,D,E	8 <b>,F</b>	9a,G	<b>6</b>
1940 Total operators Working off-farm % working off	7,225 3,485 4,8.8	6,662 2,741 44.5	8,742 3,031 36.1	14,302 4,745 35.5	<b>10,</b> 801 3,573 38.0	20,315 5,448 27.4	13,64:2 2,570 18.6	17,044 6,009 36.9	9,672 2,849 29.1	30,128 9,993 31.3	23,618 8,777 37.4	13,488 3,618 27.3	11,436 3,465 30.1
1950 Total operators Working off-farm & working off	4,959 2,575 45.0	5,433 2,561 47.1	6,885 3,246 47.1	11,225 5,195 46.3	9,203 3,881 42.2	17,201 7,367 12.8	12,012 4,162 34.6	13,885 7,169 51.6	8,471 4,311 51.2	25,262 12,162 48.1	18,878 9,529 50.5	11,989 6,454 53.8	9,802 3,852 39.3
1954 Total operators Working off-farm X working off	3,847 2,234 58.1	4,387 2,388 54.4	6,352 3,800 59.8	9,696 5,822 60.0	8,213 4,657 56.7	15,405 8,259 53.6	11,430 کیا 130 دیلیا	12,644 7,441 58.9	8,068 4,331 53.7	22,791 12,517 54.9	16,006 8,571 53.5	10,800 6,361 58.9	8,933 11,292 148.0
Source: Census	of Agr.	icultu	re for	years ]	1940 <b>,</b> 15	950, and	1 1954.						

Allegan county is in Area 6a, Berrien and Van Buren in 6b, Kalamazoo is G, and Cass and St. Joseph counties are in Area 9a.

operators working off the farm. Following World War II, in 1950, four of the areas were above 50 per cent, the two in the Upper Peninsula remained relatively constant and all others increased substantially. In the Census of 1954 only two of the areas had less than 50 per cent of the farm operators working off the farm. Now, two years later with continued low prices for agriculture and general prosperity for the rest of the economy, there is every indication that there has been a continued increase in the percentage of off-farm workers.

The foregoing assumption is based on past information and merely continues the trend. In 1940, there were slightly more than 187 thousand farm operators in the state, 1950, 155 thousand and in 1954, slightly over 138 thousand. While at the same time the number of off-farm employed operators climbed from 60, to 72, to 75 thousand on these respective dates. It is reasonable to assume that even if the number of workers off the farm does not increase, the number of farm operators in the state will continue to decrease just as in the past.

The reason for this last assumption will be obvious when one stops to realize the difficulty a young man faces today when trying to go into farming from "scratch." Moreover, the average age of farm operators increases in Michigan with each Census. This coupled with the difficulty of making a satisfactory living from farming alone seems to substantiate the trend towards increasing off-farm work.

In a special study of six townships, two each from Allegan, Berrien, and Van Buren counties, farm operators were interviewed in every third section. Only those operators making \$2,500 or more from their farms were interviewed. These townships were not chosen for

their excess subdivision or small tract development and consequently show very little of either. Salem and Overisel are from Allegan county, Bainbridge and Oronoko are from Berrien county, and from Van Buren county comes Bangor and Keeler townships. Table XV indicates the number and per cent of farm operators either working on or off their farms by an arbitrary age grouping.

We can see that between 30 and 40 per cent of the farm operators making over \$2,500 from farming, were working part or full time in offfarm jobs. The greater percentage of these operators working off the farm are between the ages of 35 and 54. The younger men under 35 comprise the next larger group. Those working full time on the farm are found to be, for the most part, over 35 with the greater portion 54 and older while those between 35 and 54 form nearly as large a group. This indicates that a much larger portion of the young men feel they must supplement their farm incomes with off-farm jobs. About as many of those in the middle age group work off the farm as on, while only a small portion of those over 54 work in off-farm jobs.

It is important to note that the reason the percentages of off-farm work are as low as they are for these townships, is due to the inclusion of only those farm operators making \$2,500 or more from farming. Had we included all farm operators the percentages would be considerably higher. Many of the township supervisors in the six counties under study have indicated that there were 60, 70, 80 and even 90 per cent of the farm operators working off their farms full or part time.

Let's take one last look at the information from the special six township study. Table XVI gives us information on the rapidity with which the farms are changing hands in these special areas. It will be

### TABLE XV

# NUMBER AND PERCENTAGE OF FARM OPERATORS EITHER WORKING ON OR OFF THE FARM BY AGE GROUP AND MAKING OVER \$2500 FROM FARMING IN 1956

	Num	Wor	king	Num	ber by a	of c age g	pera	tors	9	Per	cent	t of age	opera	atoi	rs
Township	b <b>er</b> in	of: fa	f <b>-</b> rm	Wo of:	rki. f-fa	ng arm	Wo: on	rki) -fa	ng rm	Wo of	rkir f-fa	ıg arm	Woi on-	rki. -fai	ng rm
	sam ple	Num ber	Per cent	Un der 35	35 to 54	54 and up									
Salem	36	13	36	0	11	2	2	8	13	0	31	6	6	22	36
Bangor	39	15	38	5	10	0	2	6	16	13	26	0	5	15	41
Keeler	35	11	31	1	10	0	0	14	10	3	29	0	0	40	29
Bainbridge	80	26	33	5	18	3	4	21	29	6	23	4	5	26	36
Oronoko	36	14	<b>3</b> 9	2	8	4	1	7	14	6	22	11	3	19	39
Overisel	46	18	40	9	8	1	3	17	8	19	17	2	7	37	17

## TABLE XVI

NUMBER AND PERCENTAGE OF FARM OPERATORS EITHER BORN ON OR BUYING PRESENT FARM BY AGE GROUP AND MAKING OVER \$2500 FROM FARMING IN 1956

	Num ber in	Num ber born	Nur box pro fau	nber rn c sen rm t	on at oy	Per cent born	Num b <b>er</b> not	l Fro	Per born ti	rcent ine a 1940-	prese and ag	numb ent : ge gr Fr	er i fari rour	not 1 by 1950-	-on
Township	sam ple	on farm	age Un der	gro 35 to	54 and	on farm	born on farm	Nur Un der	35 to	54 and	Per cent	Nur Un der	35 to	54 and	per cent
Salem	35	6	0	2	4	17	29	2	13	1	55	1	4	0	17
Bangor Keeler	39 35	8 7	1 0	3 5	4	21 20	31 28 52	6 2	10 12	5	68 64	00	3	0	29 14
Bainbridge Oronoko	79 36	22 11	2 0	12 6	8 5	28 31	57 25	7 3	18 3	4 3	51 36	5 2	5 0	2 2	21 16
Overisel	41	13	4	6	3	32	28	6	10	1	61	3	2	0	18

seen that only about 20 to 30 per cent of the operators occupying these farms were born on them. Not only this, but from 1940 on over 50 per cent of the farms have changed hands. During the first half of the 1950's, between 15 and 30 per cent of these farms, not occupied by operators born on them, were sold. If these figures mirror the trends in the whole six county area it is quite obvious that as the demand for building lots increases many of these farms up for sale will be purchased by either subdividers or speculators and thereby taken out of agricultural use.

#### CHAPTER VI

#### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### Summary and Conclusions

Michigan has experienced growth and expansion in the last ten years as have many other states in the union. The small six county area under study in this thesis has shown considerable growth during this period also. However, this small area can not be regarded as being representative of the state or nation as a whole. There have been no other studies of recent origin to indicate whether what has been observed in these six counties is like or different from other areas within the state or United States.

The area under study is composed of Allegan, Berrien, Cass, Kalamazoo, St. Joseph and Van Buren counties. In the early years following the Second World War, subdivision in the six counties was haphazard in nature, many of the lots less than 50 feet wide. With such lots, water problems developed as septic tanks and tile fields were usually located within 50 feet of the source of water. The Plat Law now requires that lots be at least 60 feet wide which helps to solve this problem.

Another problem that developed during the late 1940's was that of premature subdividing. Subdivisions were laid out and platted with no apparent regard for location, suitability or demand and as a result they are as yet only partially built-up while the newer and more properly located subdivisions are enjoying considerably more activity. Indications would lead one to conclude that this early subdividing was the result of intense demands for building lots and little or no planning on the part of the land developers. As a result of this lack of planning there are today 280 premature subdivisions in the six counties which represent 40.6 per cent of the 689 under study. However, the greatest incidence of premature subdividing has come in the earlier years of the period under study and there is a great deal of evidence that the subdivisions less than four or five years old are building up more rapidly than the older ones.

This small six county area in southwestern Michigan has been faced with a rapid population increase in all its larger cities, but the greatest increase has come primarily in the metropolitan areas surrounding these cities. The population trends for each of the six counties are upward and all indications point to continued upward movement. These counties have, since June of 1946, experienced, for the most part, subdivision of ever increasing proportions. The trends in each of these six counties is steady to upward and every indication of potential population and demand would lead one to conclude that the peak of the boom has not as yet been reached.

Farms are increasing in size and decreasing in number while some areas of agricultural land are being removed altogether from farming to provide building lots, recreation sites, areas for industrial and commercial development, and rights-of-way for new highways. The 689 subdivisions accounted for a total of 11,476 acres, an average of 16.65 acres per subdivision. When classified according to type of farm land before platting, it was found that 1,607 acres were never farmed,

4,070 acres were idle or poor farm land, 5,097 acres were fair farm land and 702 acres were good farm land. Much of the land classified idle or poor is fair to good land yet for one reason or another had been left idle.

Subdividers are anticipating continued strong demands for building lots, as is indicated by the population trends, and as a result are platting new lands in better planned layouts. This indicates an upward trend in the planning of subdivision layout and location. This is extremely necessary if premature developments are to be avoided with the resulting idleness of many usable acres.

Not to be discounted is the increasing amount of small tract development prevalent in the area. The new highways built and planned to ease the increasing traffic load are in turn aiding the small tract and subdivision development as they make it easier to travel large distances in less time. Although only 5,840 acres will be taken by the new highways, now definitely planned in this area, considerable more significance should be placed on this development. The development of modern, multi lane, limited access highways will probably leave many farmers with isolated holdings of uneconomic size which may be sold to other farmers, shift into additional small units, or be left idle.

Considerable numbers of farm operators are working part or full time off their farm. This trend is also expanding, not only in the six counties, but for the state as well. As these operators begin working shorter weeks in the shop or factory they can not help but be influenced by the same desires of their fellow workers for more relaxation and recreation. It is conceivable then that some of these farm operators

will sell their farms as a means of attaining more of the supposed "better things of life."

A look at the agricultural importance of the six counties indicates that each has for one reason or another entered the top 100 agricultural counties of the United States during the past ten years. Allegan, Berrien and Van Buren are the most important with Berrien the most significant of the three. However, as Berrien experienced a greater amount of subdivision than all the counties except Kalamazoo, it declined in importance and Allegan and Van Buren climbed considerably. This trend will continue as long as subdivision activity pushes agriculture to less densely populated areas.

### Recommendations

This is the result of progress — an area moving from agricultural superiority to commercial and industrial dependence. Only one sad note is struck by this progress — sad because it would seem uneconomic. That part of Michigan which is experiencing much of this growth and development happens to be one of the most important agriculturally. Several problems are suggested by this situation. Should we try to control the development of these southern counties so as to save the better land for farming? Should we encourage a shift of agriculture to the northern counties of Michigan with their lighter soils, shorter growing periods, and lands of lower potential for higher uses? Should we plan to grow most of agricultural products outside of the state and reserve our southern county-area for residential, industrial, commercial and recreational uses?

 $\mathcal{E7}$ 

Now is the time while we still have agricultural surpluses, to concern ourselves with the future production of these commodities. Every effort should be made to direct non-farm uses of land to sites that are less favorable for farming. Yet it should be kept in mind that it might be more economical and socially more desirable to reclaim new farm land in areas more remote from urban and recreational pressure. Renewed energy must be given to land use planning in these areas so that a more orderly and economic development will occur. Cities have for years been planning and mapping proposed street layouts, alleyways, and easements so that more orderly development will occur. This is now needed on the county level but before it will be accepted the people must be educated to see the benefits from planning.

Most township and county officials in the area under study are quite hesitant to enforce the Plat Law. This is due primarily to fear of public opinion and uncertainty of the law due to the absence of precedent. A revision of the Plat Law, clarifying language and spelling out in detail each ones duties, is needed. A test case should be taken through the courts so that all concerned will know where they stand. Perhaps appointed county officials might better be able to execute the duties of office than elected officials. Only the most intensive agricultural uses will be able to survive in these areas without new systems of zoning, taxation, subdivision regulation and direct subsidy.

For the most part agricultural research now carried on, has or will increase production. Some of the funds for this type of research should be channeled into research on new technology. Such a move would aid the almost inevitable shift of agriculture northward in Michigan to counties

less developed agriculturally. New varieties and strains may be needed to produce most efficiently in this changing environment. So in order that we might still have agricultural abundance in the future something must be done in the present.

### APPENDIX

### TABLE XVII

Month	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
 J		0	10	14	0	0	0	0	0	0	0
F		0	0	24	0	0	0	0	0	0	0
M		0	0	25	0	67	0	30	0	0	29
Å		0	41	0	35	0	0	0	0	11	32
M		35	0	0	0	0	19	0	0	12	12
J	766	5	0	0	0	25	0	0	0	27	12
J	0	32	54	510	0	44	29	0	0	0	
A	18	15	44	54	0	269	81	16	0	19	
S	41	51	178	0	0	0	41	0	63	17	
0	22	15	26	0	0	33	28	0	0	58	
N	13	9	0	0	0	25	0	0	0	63	
D	8	13	0	29	41	0	21	0	17	4	
Totals	868	175	342	656	<b>7</b> 6	463	219	46	80	213	85

NUMBER OF LOTS SUBDIVIDED IN ALLEGAN COUNTY BY MONTH AND YEAR FOR THE PERIOD 1946 TO 1956

# TABLE XVIII

NUMBER OF LOTS SUBDIVIDED IN BERRIEN COUNTY BY MONTH AND YEAR FOR THE PERIOD 1946 TO 1956

Month	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
J		40	40	0	0	0	74	72	69	0	0
F		0	28	0	32	0	109	11	31	14	9
M		20	0	142	37	115	0	102	0	68	6
A		49	0	44	72	33	156	40	56	0	73
M		21	0	32	34	151	0	159	29	57	78
J	28	300	0	0	0	159	50	82	99	67	73
J	32	0	0	149	98	0	in	0	0	82	
A	66	0	0	20	0	39	0	162	34	179	
S	70	276	0	52	0	0	10	79	103	39	
0	0	23	48	0	150	89	106	0	0	55	
N	67	170	39	90	75	89	60	0	0	68	
D	5 <b>5</b>	38	0	13	54	67	58	59	214	70	
Totals	318	937	155	542	552	742	734	766	635	699	239



Figure 9. Number of lots subdivided in Berrien county by year for the period 1946 to 1956.

TA	BL	E	XI	X
TW	בם.		<b>A</b> J	. 🛦

Month	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
J		41	0	18	127	0	8	0	0	6	0
F		0	30	0	Ó	0	0	0	102	11	88
M		113	0	0	0	0	0	0	0	0	0
A		0	0	0	0	9	0	9	7	15	8
M		0	0	43	10	18	20	Ó	13	Ō	29
J	93	64	88	0	26	0	<b>1</b> 46	0	114	51	132
J	67	57	0	50	0	0	68	22	66	38	
Å	8	90	15	22	92	0	32	40	44	18	
S	55	0	Ō	0	13	0	10	6	92	0	
0	20	0	0	20	78	16	27	39	22	0	
N	70	19	22		18	44	Ó	10	27	0	
D	36	Ó	0	25	0	0	100	0	54	19	
Totals	349	384	155	187	364	87	411	126	521	158	257

NUMBER OF LOTS SUBDIVIDED IN CASS COUNTY BY MONTH AND YEAR FOR THE PERIOD 1946 TO 1956

TABLE XX

NUMBER OF LOTS SUBDIVIDED IN KALAMAZOO COUNTY BY MONTH AND YEAR FOR THE PERIOD 1946 TO 1956

Month	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
J		0	25	0	65	18	105	40	0	49	105
F		0	64	40	86	0	54	149	27	0	127
M		0	120	55	18	124	32	31	110	102	0
A		0	0	255	0	190	164	0	<b>10</b> 0	93	72
М		0	41	116	265	<del>9</del> 8	33	39	109	175	193
J	8	0	132	26	12	38	22	0	182	147	43
J	0	0	17	16	178	9	109	77	62	75	
A	0	0	104	0	19	10	61	180	148	164	
S	0	0	124	29	29	16	133	93	0	121	
0	0	0	33	0	50	10	194	45	75	13	
N	0	0	92	80	54	0	115	61	51	37	
D	0	34	46	39	32	97	104	36	65	174	
Totals	8	34	798	656	808	610	1106	751	929	1150	540
		•									


#### TABLE XXI

Month	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
J		26	0	0	0	0	0	112	0	43	18
F		0	0	0	0	0	0	0	24	0	37
М		0	0	0	0	0	9	10	0	0	0
A		0	0	0	0	0	0	34	0	28	38
M		0	0	0	0	0	38	39	0	118	38
J	0	0	0	0	69	0	37	13	120	130	0
J	0	21	115	0	84	0	0	0	51	0	
A	130	71	0	40	0	0	0	0	34	21	
S	0	20	0	0	0	27	27	0	210	0	
0	59	0	37	0	0	0	0	0	27	0	
N	0	40	0	43	0	111	21	59	0	20	
D	52	28	61	0	0	0	98	0	43	<u>і</u> ці	
Totals	241	207	213	83	153	138	221	267	509	404	131

NUMBER OF LOTS SUBDIVIDED IN ST. JOSEPH COUNTY BY MONTH AND YEAR FOR THE PERIOD 1946 TO 1956

#### TABLE XXII

NUMBER OF LOTS SUBDIVIDED IN VAN BUREN COUNTY BY MONTH AND YEAR FOR THE PERIOD 1946 TO 1956

Month	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
J		0	0	0	0	0	23	75	0	0	0
F		0	0	0	0	0	0	0	60	0	0
М		0	0	0	51	0	0	0	0	23	0
A		0	0	0	0	0	0	0	0	0	21
М		0	64	0	37	20	312	0	51	36	37
J	0	0	0	171	23	23	0	350	0	0	0
J	0	0	71	40	0	0	29	13	197	0	
A	0	0	0	0	0	13	0	Ō	59	0	
S	0	25	0	0	0	0	0	0	0	77	
0	0	0	0	0	0	0	74	0	0	31	
N	0	76	0	18	0	40	0	42	0	0	
D	0	21	0	0	0	18	179	0	0	35	
Totals	0	132	135	<b>2</b> 29	111	114	617	480	367	162	58



Figure 13. Number of lots subdivided in Van Buren county by year for the period 1946 to 1956.

# TABLE XXIII

NUMBER	OF	SUBDIV	ЛSIC	DNS ]	[N	ALLEC	IAN	COUNT	ry by
MONTH	AND	YEAR	FOR	THE	PE	RIOD	194	6 <b>T</b> O	1956

Month	1946	194 <b>7</b>	1948	1949	1950	1951	1952	1953	1954	1955	1956
		0		1	0	0	0	0	0	0	
F		õ	ō	2	õ	õ	õ	õ	õ	ŏ	õ
- M		Õ	0	ī	Ō	1	Ō	ì	Ō	0	ī
Å		0	1	0	1	0	0	0	0	1	1
M		1	0	0	0	0	1	0	0	1	1
J	5	1	0	0	0	2	0	0	0	2	l
J	0	1	3	1	0	3	1	0	0	0	
A	1	1	1	3	0	2	3	1	0	2	
S	1	3	3	0	0	0	1	0	2	1	
0	1	1	1	0	0	1	1	0	0	3	
N	1	1	0	0	0	1	0	0	0	2	
D	1	1	0	1	2	0	1	0	2	1	
Totals	10	10	10	9	3	10	8	2	4	13	4

#### TABLE XXIV

# NUMBER OF SUBDIVISIONS IN BERRIEN COUNTY BY MONTH AND YEAR FOR THE PERIOD 1946 TO 1956

1946	194 <b>7</b>	1948	1949	1950	1951	1952	1953	1954	1955	1956
	2	1	0	0	0	2	2	3	0	0
	0	1	0	1	0	3	1	1	2	1
	1	0	2	2	2	0	2	0	3	1
	2	0	1	1	1	3	2	2	0	3
	1	0	1	2	3	0	3	1	2	3
1	4	0	0	0	3	3	2	4	5	1
1	0	0	1	4	Ō	Ū.	0	Ó	2	
2	0	0	1	0	1	Ó	2	1	3	
1	3	0	1	0	0	1	4	2	2	
0	ì	1	0	1	3	2	Ó	0	1	
1	3	1	1	2	2	1	0	0	1	
1	1	0	1	1	2	1	2	6	2	
7	18	4	9	14	17	20	20	20	23	. 9
	1946 1 1 2 1 0 1 1 7	1946 1947   2 0   1 2   1 4   1 0   2 0   1 3   0 1   3 1   1 3   1 3   1 1   7 18	1946 1947 1948   2 1   0 1   1 0   2 0   1 0   2 0   1 0   1 0   2 0   1 0   2 0   1 0   2 0   1 3   1 3   1 1   3 0   0 1   1 3   1 1   1 3   1 1   1 1	1946 1947 1948 1949   2 1 0   0 1 0   1 0 2   2 0 1   1 0 1   1 0 1   1 0 1   1 0 1   1 0 1   2 0 0   1 0 1   2 0 0   1 3 0   1 3 1   1 1 0   1 1 1   1 1 9	1946 1947 1948 1949 1950   2 1 0 0   0 1 0 1   1 0 2 2   2 0 1 1   1 0 1 2   2 0 1 1   1 0 1 2   1 4 0 0 0   1 0 1 4 0 0   1 0 0 1 4 0 0   1 0 0 1 4 0 0 0   1 0 0 1 0 1 4 0 0 1 1 0 1 1 0 1 1 0 1 <td>1946 1947 1948 1949 1950 1951   2 1 0 0 0 0   0 1 0 1 0 0 0   1 0 1 0 1 0 2 2 2   2 0 1</td> <td>1946 1947 1948 1949 1950 1951 1952   2 1 0 0 0 2   0 1 0 1 0 3   1 0 2 2 2 0   2 0 1 1 3 3   1 0 1 2 3 0   1 0 1 2 3 0   1 0 1 2 3 0   1 0 1 4 0 4   2 0 0 1 4 0   1 0 1 0 1 0   1 3 0 1 0 1 0   1 3 1 1 2 2 1   1 1 0 1 1 2 1   1 1 0 1 1 2 1   1 1 0 1 1 2</td> <td>1946 1947 1948 1949 1950 1951 1952 1953   2 1 0 0 0 2 1 3 1 1 1 3 2 1 1 1 3 2 1</td> <td>1946194719481949195019511952195319542100022301010311102220202011132210123031101230311012303110100332410010100200101021130101021131122100131122100110112126718491417202020</td> <td>1946 1947 1948 1949 1950 1951 1952 1953 1954 1955   2 1 0 0 0 2 2 3 0   0 1 0 1 0 3 1 1 2   1 0 2 2 2 0 2 0 3   2 0 1 1 3 2 0 3 1 2   1 0 2 2 2 0 2 0 3   2 0 1 1 3 2 2 0 3   1 0 1 2 3 0 3 1 2   1 0 1 2 3 0 3 1 2   1 0 1 4 0 4 0 0 2   1 3 0 1 0 1 3 2 1 3   1 3 0</td>	1946 1947 1948 1949 1950 1951   2 1 0 0 0 0   0 1 0 1 0 0 0   1 0 1 0 1 0 2 2 2   2 0 1	1946 1947 1948 1949 1950 1951 1952   2 1 0 0 0 2   0 1 0 1 0 3   1 0 2 2 2 0   2 0 1 1 3 3   1 0 1 2 3 0   1 0 1 2 3 0   1 0 1 2 3 0   1 0 1 4 0 4   2 0 0 1 4 0   1 0 1 0 1 0   1 3 0 1 0 1 0   1 3 1 1 2 2 1   1 1 0 1 1 2 1   1 1 0 1 1 2 1   1 1 0 1 1 2	1946 1947 1948 1949 1950 1951 1952 1953   2 1 0 0 0 2 1 3 1 1 1 3 2 1 1 1 3 2 1	1946194719481949195019511952195319542100022301010311102220202011132210123031101230311012303110100332410010100200101021130101021131122100131122100110112126718491417202020	1946 1947 1948 1949 1950 1951 1952 1953 1954 1955   2 1 0 0 0 2 2 3 0   0 1 0 1 0 3 1 1 2   1 0 2 2 2 0 2 0 3   2 0 1 1 3 2 0 3 1 2   1 0 2 2 2 0 2 0 3   2 0 1 1 3 2 2 0 3   1 0 1 2 3 0 3 1 2   1 0 1 2 3 0 3 1 2   1 0 1 4 0 4 0 0 2   1 3 0 1 0 1 3 2 1 3   1 3 0



# TABLE XXV

Month	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
J		1	0	1	2	0	1	0	0	1	0
F		0	1	0	0	0	0	0	2	1	4
M		3	0	0	0	0	0	0	0	0	0
A		0	0	0	0	l	0	1	1	1	1
М		0	0	1	1	1	1	0	1	0	1
J	3	1	1	0	1	0	3	Э	3	1	3
J	2	1	0	1	0	0	2	2	3	2	
A	1	1	1	1	3	0	1	2	2	1	
S	3	0	0	0	1	0	1	1	2	0	
0	1	0	0	1	2	1	1	1	1	0	
N	1	1	1	0	1	1	0	1	1	0	
D	1	0	0	1	0	0	3	0	1	l	
Totals	12	8	4	6	11	4	13	8	17	8	9

### NUMBER OF SUBDIVISIONS IN CASS COUNTY BY MONTH AND YEAR FOR THE PERIOD 1946 TO 1956

#### TABLE XXVI

NUMBER OF SUBDIVISIONS IN KALAMAZOO COUNTY BY MONTH AND YEAR FOR THE PERIOD 1946 TO 1956

Month	19/16	1947	1948	1949	1950	1951	1952	1953	195/	1955	1956
		-/							-//4	_///	
J		0	1	0	3	1	4	1	0	4	3
F		0	4	1	2	0	1	3	1	0	4
M		0	2	2	1	4	1	1	6	3	0
A		0	0	2	0	4	3	0	1	2	4
M		0	1	3	3	5	1	2	3	5	6
J	1	0	4	2	l	2	1	0	5	4	4
J	0	0	1	1	2	l	2	4	3	3	
A	0	0	4	0	1	1	1	3	5	6	
S	0	0	2	1	1	1	3	2	0	5	
0	0	0	2	0	2	1	2	2	3	1	
N	0	0	3	2	2	0	4	3	2	2	
D	0	1	2	1	2	1	3	2	3	4	
Totals	1	1	26	15	20	21	26	23	32	39	21



#### TABLE XXVII

Month	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
J		1	0	0	0	0	0	2	0	3	1
F		0	0	0	0	0	0	0	1	0	1
M		0	0	0	0	0	1	1	0	0	0
A		0	0	0	0	0	0	1	0	2	2
M		0	0	0	0	0	1	2	0	4	2
J	0	0	0	0	1	0	1	1	2	3	0
J	0	1	2	0	3	0	0	0	1	Ō	
Å	1	1	0	1	Ó	0	0	0	3	1	
S	0	1	0	0	0	1	2	0	4	0	
0	1	0	1	0	0	0	0	0	1	0	
N	0	2	0	2	0	1	1	1	0	1	
D	1	1	1	0	0	0	2	0	3	2	
Totals	3	7	4	3	4	2	8	8	15	16	6

NUMBER OF SUBDIVISIONS IN ST. JOSEPH COUNTY BY MONTH AND YEAR FOR THE PERIOD 1946 TO 1956

# TABLE XXVIII

NUMBER OF SUBDIVISIONS IN VAN BUREN COUNTY BY MONTH AND YEAR FOR THE PERIOD 1946 TO 1956

Month	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
J		0	0	0	0	0	2	2	0	0	0
F		0	0	0	0	0	0	0	1	0	0
М		0	0	0	1	0	0	0	0	1	0
A		0	0	0	0	0	0	0	0	0	1
М		0	1	0	1	1	1	0	l	l	1
J	0	0	0	1	1	1	0	1	0	0	0
J	0	0	2	1	0	0	1	1	2	0	
A	0	0	0	0	0	l	0	0	2	0	
S	0	1	0	0	0	0	0	0	0	3	
0	0	0	0	0	0	0	3	0	0	2	
N	0	2	0	1	0	l	Ō	1	0	0	
D	0	1	0	0	0	1	4	0	0	1	
Totals	0	4	3	3	3	5	11	5	6	8	2



#### **BIBLIOGRAPHY**

- Act 186, Public Acts of 1954 which amends Act 172, Public Acts of 1954 (The Plat Act).
- Colean, Miles L., American Housing, The Twentieth Century Fund, New York, 1949.
- Cornick, Premature Subdivision and its Consequences, Columbia University Press, New York, 1938.
- Fisher, E. M. and Raymond F. Smith, "Land Subdividing and the Rate of Utilization," <u>Michigan Business Studies</u>, University of Michigan, Ann Arbor, 1932, Vol. IV, No. 5.
- Lee, Alvin T. M., <u>A Land Development Scheme in the New Jersey Pine Area</u>, New Jersey Experiment Station, New Brunswick, New Jersey, Bul. 665, 1939.
- Michigan Fishing and Hunting Guide, Rand McNally and Company, Chicago, Illinois, Third Edition, 1955.
- Tax Reverted Lands, Michigan Planning Commission, Lansing, Michigan, 1941.
- Veatch, J. O., <u>Agricultural Land Classification and Land Types of</u> <u>Michigan</u>, <u>Agricultural Experiment Station Bul. 231</u>, East Lansing, 1933.
- Veatch, J. O., Soils and Lands of Michigan, Michigan State College Press, East Lansing, 1953.

# 

			<b>**</b> • • • • • • • • • • • • • • • • • •
Demco-293	······································	L	

.

