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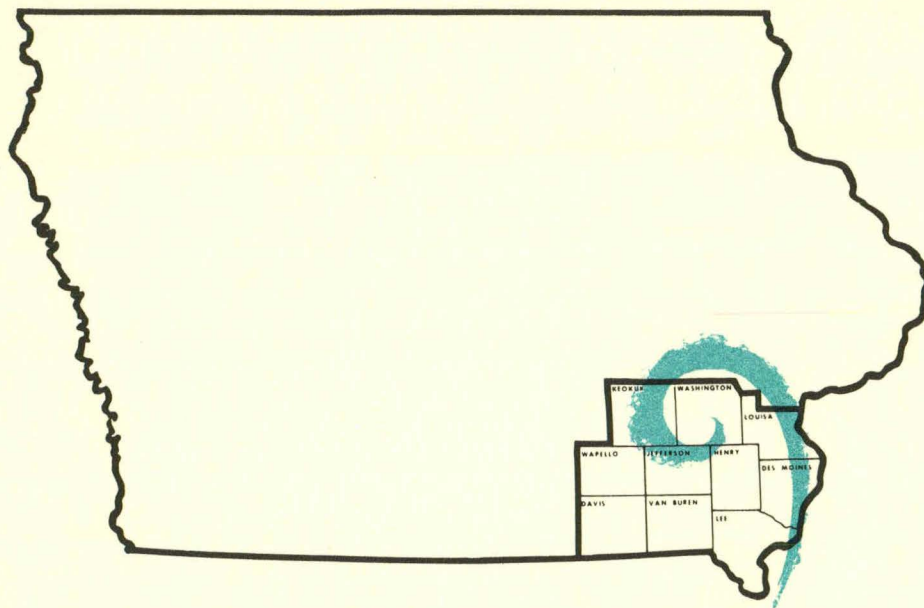
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AN ECONOMIC BASE REPORT OF



Washington County

PART 2

COMMUNITY DEVELOPMENT PROGRAM

IOWA EMPLOYMENT SECURITY COMMISSION
IOWA STATE EMPLOYMENT SERVICE

AUGUST 1965

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INTRODUCTION

The overall purpose of the Community Development Program of the Iowa Employment Security Commission is to provide communities with assistance in planning and carrying out their economic self-improvement programs. Of course, the ultimate success of the program depends on the community and its efforts to help itself. However, through the cooperation and participation of various agencies and organizations, the community can receive comprehensive assistance.

As its part in achieving the overall goal, the Iowa Employment Security Commission offers a broad range of services geared to meet the needs of the particular community. These services are designed to aid the community by

1. Determining the current and potential manpower resources of the area.
2. Assisting in evaluating the overall economic resources of the area.
3. Assisting in developing a program of economic development.
4. Providing individuals with employment counseling and placement on jobs within and outside the area as well as making information on training opportunities and labor market facts available.

The IESC believes that the future of our Nation and our State depends on the best utilization of all our resources. The community and each one of its residents are a vital part of our complex, changing economy. Their economic security now and in the future is important not only to them but to all of us.

The Iowa Employment Security Commission and its Iowa State Employment Service welcome the opportunity and challenge of working with communities and their people as they chart their future.

TWO NEW STATE LAWS AID IN IOWA ECONOMIC GROWTH

The Iowa Revenue Bond Law, passed by the 1963 General Assembly, allows cities and towns to construct and lease buildings for industrial firms and to pay for these facilities by issuing revenue bonds. Its purpose is to aid economic development of communities where local investment capital is lacking and to help provide employment opportunity in areas of declining population.

The constitutionality of this new law was questioned because of the use of public funds for private industry. A friendly test case was brought. The Iowa Supreme Court unanimously held that the new law "does not violate the constitutional prohibition against giving or loaning the credit of the state," and that no loss of tax revenue is permitted. "The weight of the authority is that a public use is served and public welfare promoted."

In 1965 the General Assembly passed another law that enabled municipalities to equip as well as build facilities for leasing to industry.

These two new laws and the decision of the Iowa Supreme Court is upholding the Revenue Bond Law is having and should continue to have a stimulating effect on Iowa's economy in the future. Top-caliber manufacturing firms will now have tangible evidence of community interest in their operations. Progressive Iowa cities and towns seeking growth, a healthier economy, and more job opportunities for their residents can use the provisions of these laws to their advantage.

Washington County Development Program

Civic leaders of Washington County requested the services of the Iowa Employment Security Commission's Smaller Communities Program during May, 1964. The sponsorship of the mobile team's activities was later shared by the Washington Industrial Development Corporation and the Washington Chamber of Commerce.

Iowa's mobile team moved into Washington in September 1964. The team consisted of a rural area representative and two counselors who were responsible for application taking, testing, counseling and placement. Temporary clerical help was secured from within the area.

The team operated in Washington County from September 8, 1964 through February 26, 1965. A total of 2,658 persons from Washington County and the surrounding area participated in the program. The General Aptitude Test Battery was given to 1,110 persons, and 375 persons were counseled.

Application files used in compiling the tabulations included in this document are located in the Fairfield Office of the Iowa State Employment Service.

This publication is Part II of the Community Development Program, the Economic Base Report.

Highlights of Washington County
Manpower Occupational Potential Inventory

Employment Status: During the survey period, a total of 1,344 workers--921 women and 423 men--were not employed.

Earnings: At the time of the study, 156 women and 255 men of the employed workers had earnings of \$1.25 an hour or less. Of those who were not employed at the time of the survey, 744 women and 334 men had earned \$1.25 an hour or less on their last job. However a large percentage of the unemployed were homemakers who hadn't worked for a number of years or were new entrants into the labor market.

Versatile Work Force: The mobile team processed 2,658 persons or 36.7 percent of the Washington County labor force. Applicants averaged 4.7 occupational fields of work for which they were qualified either through experience or aptitudes which were measured by the administration of the General Aptitude Test Battery.

Educational Level: Among the survey participants, 512 persons had an education beyond the high school level while 1,735 had finished the 11th or 12th years of high school. Another 118 had completed the 9th or 10th year of high school and 293 had an 8th grade education or less.

Applicants' Occupational Potential for Employment in Selected Industries:

<u>INDUSTRY</u>	<u>TOTAL</u>	<u>MEN</u>	<u>WOMEN</u>
Metal Working	1,948	1,095	853
Wood Working	1,791	954	837
Stone and Glass Working	1,898	1,086	812
Plastic and Paint Working	1,737	908	829
Fabric, Leather & Related Materials Working	1,652	812	840
Paper Working	1,543	759	784
Food Working	1,152	329	823
Electrical Working	1,187	430	757

See Tabulations 1 and 2

Part I Manpower Occupational Potential Inventory

ACKNOWLEDGEMENTS

The success of the Washington County Manpower Study depended upon the cooperation of many groups and individuals. The Iowa Employment Security Commission wishes to express its appreciation to all those who helped make the Manpower Study possible.

Sponsorship of the mobile team in Washington County was shared by the Washington County Industrial Development Corporation and the Washington Chamber of Commerces. Many other organizations gave their endorsement and support to the Washington County Study:

Rotary Club
Kiwanis Club
Junior Chamber of Commerce
Washington County Ministerial Association
Washington County Farm Bureau
A.S.C. Committee
Mid-Prairie Ministerial Association
Washington County Extension Office
Washington County Nurses Association
Washington County Educational Staff
Jaycee-Ettes
Various service clubs and veterans organizations in the smaller communities of the County.
Various firms including: Iowa Southern Utilities
Advance Ross Electronics
McCleery-Cumming Company
Washington Manufacturing Company

Iowa Government Agencies Providing Economic Base Study Data

Iowa State University
Ames, Iowa

University of Iowa
Iowa City, Iowa

Dr. Ray Finn
Forestry Department
Iowa State University
Ames, Iowa

Dr. H. G. Hershey
Director and State Geologist
Geological Survey Building
Iowa City, Iowa

Iowa Natural Resources Council

Iowa State Mining Board

Iowa Development Commission

Glenn Bondesson
Iowa Inspection Bureau
414 Insurance Exchange Building
Des Moines, Iowa

S. W. Wiitala
District Engineer
U. S. Department of Interior
Iowa City, Iowa

MORE THAN \$2,200,000 IN NEW CONSTRUCTION
IN 1965 IN WASHINGTON, IOWA

The construction cost figure of \$2,200,000 for 1965 in Washington, Iowa, includes completed construction, construction presently underway and projects for which bond issues were approved this year.

The projects include:

A new hospital at a cost of \$1,425,000. . .

40 blocks of paved streets, sewers and drainage
at a cost of \$289,350. . .

YMCA expansion at a cost of \$170,000. . .

Airport runway paving, apron and taxi ways and airport road
at a cost of \$181,800. . .

An additional 11 blocks of sewer construction
at a cost of \$25,300. . .

A new county jail, being built near the courthouse,
at a cost of \$110,000.

Passage of bond issues, successful fund drives for the YMCA and the new hospital plus the airport improvements--these are the result of team efforts and are evidence of a progressive community.

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Chapter I - SUMMARY DESCRIPTION OF WASHINGTON COUNTY AND ITS ECONOMY

AREA DEFINITION AND LOCATION

Washington County is the second county west of the Mississippi River in the third tier of counties north of the Missouri line. It is bounded on the south by parts of Jefferson and Henry Counties, on the east by parts of Louisa and Johnson Counties, on the north by parts of Iowa and Johnson Counties and on the west by Keokuk County.

Rectangular in shape, Washington County extends 24 miles from north to south and 23 and 2/3 miles from east to west. It is divided into 15 civil townships, five of which coincide with United States townships. The total land area covers 568 square miles or 363,520 acres.

Washington, the county seat, is located in the approximate center of the county, 31 miles southwest of Iowa City, Iowa, the nearest city of importance. Washington is 113 miles southeast of Des Moines, the capital of Iowa.

U. S. Highway 218, a north-south route, passes through the extreme eastern part of Washington County and connects with Iowa City, Cedar Rapids and Waterloo, Iowa, and other points north and on into the Minneapolis-St. Paul area, and with Keokuk, Iowa, to the south and on into the St. Louis, Missouri, area.

Iowa Highway 92 passes through Washington County in an east-west direction and connects on the east with Columbus Junction, Iowa, and quint-cities and on into Chicago, Illinois, and on the west, Sigourney, Oskaloosa and Knoxville, Iowa, and into Omaha, Nebraska. Highway 92 is the most direct route from Chicago to Omaha.

The town of Washington is 769 feet above sea level.

The approximate air and road miles to major metropolitan areas are:

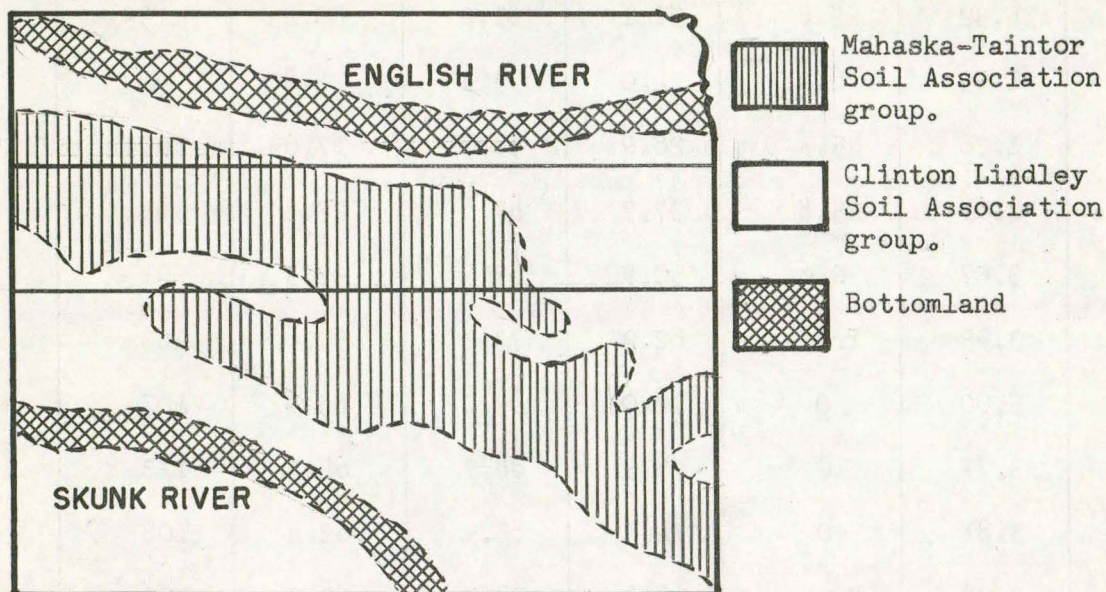
	<u>By Air</u>	<u>By Road</u>
Chicago, Illinois	225	250
Des Moines, Iowa	105	113
Kansas City, Missouri	240	250
Minneapolis-St. Paul, Minnesota	270	325
St. Louis, Missouri	210	250
Omaha, Nebraska	225	250

TOPOGRAPHY

The land in Washington County varies from gently rolling to rolling and is hilly along large streams. Broad level areas lie between rivers. An extensive level area runs diagonally southeast through the county with rather poor natural drainage.

The English River flows from west to east across the northern part of the county. The Skunk River follows a course of 15 miles from the northwest to the southeast across the southwest corner of the county.

This map shows the location of the two major rivers and of the major soil types:



The Mahaska-Taintor Soil Association is one of the best soils to be found in Iowa. It is level to nearly level, rich in organic matter. The Clinton Lindley is lighter, more subject to erosion and must be handled more carefully. However, under good management and average weather conditions, it produces excellent crops.

Table 1
CLIMATOLOGICAL DATA - WASHINGTON COUNTY
1931 - 1952

Month	Precipitation		Temperature				
	Total Inches	Snowfall Inches	Mean	Mean Maximum	Mean Minimum	Highest	Lowest
Annual Average	34.32	25.8	51.1	61.9	40.2	113*	-25*
January	1.53	6.3	24.0	33.1	14.8	62	-22
February	1.26	5.3	26.9	36.3	17.6	69	-25
March	2.69	5.8	37.7	47.8	27.6	84	- 8
April	3.07	0.6	50.9	62.9	39.3	91	12
May	3.95	Trace	62.2	73.7	50.6	103	26
June	5.00	0	72.0	83.0	60.9	107	37
July	3.77	0	76.5	88.7	64.3	113	45
August	3.81	0	74.1	85.9	62.4	108	40
September	3.08	Trace	66.3	78.7	53.9	102	23
October	2.11	Trace	55.4	67.7	43.1	96	16
November	2.41	1.6	39.2	49.0	29.3	79	- 2
December	1.64	6.2	27.7	36.3	19.1	67	-16

* Extreme for period covered.

Source: Iowa Department of Agriculture; Weather Division, cooperating with the U. S. Department of Commerce, Weather Bureau.

CLIMATOLOGY 1/

The average annual temperature was 52.5 degrees between 1931 and 1952. Average annual precipitation was 34.32 inches. During this 21 year period, the highest temperature was 113 degrees while the lowest temperature was 25 degrees below zero. The snowfall averaged 25.8 inches a year. The highest monthly average snowfall of 6.3 inches occurred in January.

October 10 is the average date of the first 32 degree freeze in Washington County, while April 30 is the average date of the last 32 degree freeze. The frost-free season is 160 to 165 days.

Probability of Spring 32° Freeze Dates 2/

Washington County

	<u>In 10 years</u>
After April 20	8 years or more
April 25	6 years to less than 8 years
April 30	4 years to less than 6 years
May 5	2 years to less than 4 years
May 10	Less than 2 years
May 15	Less than 1 year
May 20	Less than 1 year

Probability of Fall 32° Freeze Dates 2/

Washington County

	<u>In 10 years</u>
By September 25	Less than 2 years
September 30	2 years to less than 4 years
October 5	2 years to less than 4 years
October 10	4 years to less than 6 years
October 15	4 years to less than 6 years
October 20	6 years to less than 8 years

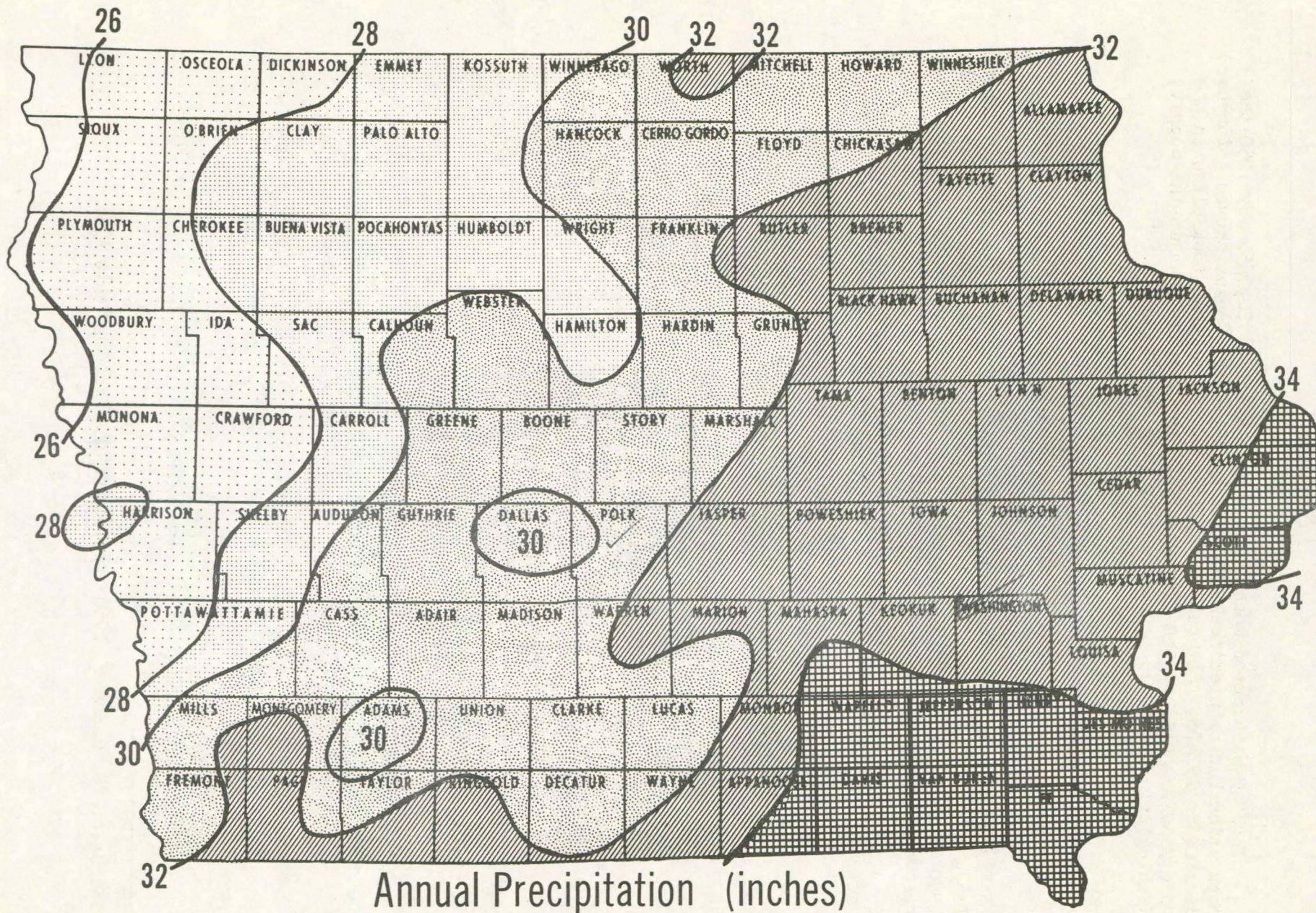
Source:

1/ Iowa Department of Agriculture, Weather Division, and U. S. Department of Commerce, Weather Bureau.

2/ Iowa Crop and Livestock Reporting Service and Iowa Department of Agriculture, Weather Division.

Crops rarely fail to mature due to late spring planting or an early fall freeze. The distribution of precipitation is normally more important to crop production than the total precipitation in Washington County. Fortunately, the precipitation is highest throughout the growing season. June usually is the wettest month. Mid-summer droughts lasting three or more weeks are not uncommon. However, complete crop failures due to droughts are rare. While snowfall averages 20 inches, the ground usually is not covered with snow all winter. The alternate periods of freezing and thawing cause some damage to vegetation.

The Climate of Iowa



- 7 -

POPULATION

In 1940 Washington County had a population of 20,055. By 1950 the population had dropped to 19,557 and by 1960, the Census showed a further decline to 19,406. Although a net loss of 151 persons took place in the county as a whole between 1950 and 1960, the largest town in the county, Washington, gained 135 persons during this period.

LABOR FORCE

According to the 1960 Census, Washington County had a civilian labor force of 7,507, a drop of about one percent from the total recorded in the 1950 Census. Decreased agricultural employment between 1950 and 1960 was responsible for the largest part of this change.

Table 2

AGE AND SEX DISTRIBUTION OF THE LABOR FORCE 1960

<u>AGE</u>	<u>TOTAL</u>	<u>MEN</u>	<u>WOMEN</u>
14-17	465	383	82
18-24	914	520	394
25-34	1,280	949	331
35-44	1,506	1,098	408
45-64	2,513	1,821	692
65 and Over	643	497	146

Source: U.S. Census: 1960 Population, PC(1)-17C, Table 83.

Chapter II - WASHINGTON COUNTY'S PEOPLE

POPULATION OF WASHINGTON COUNTY

Washington, like many counties in eastern Iowa, was one of the first settled and reached its peak population during the late 19th and early 20th centuries. Primarily dependent on agriculture, Washington, like many other Iowa counties, has been affected by the development of agricultural technology. A steady drop has occurred in its population since the early 1900's, and by 1950 its population was 19,557. Between 1950 and 1960, an additional loss of 151 persons, or 0.8 percent of the population, resulted in a total population of 19,406 by 1960.

As a whole, this population loss pattern is also shown in a population breakdown of the townships or civil divisions of Washington County. With the exception of Crawford, English River, Franklin, Lime Creek and Washington, some of which show very small gains, all townships had population losses between 1950 and 1960.

Table 1

WASHINGTON COUNTY TOTAL POPULATION, BY SEX

Population	Total				Percent			
	1930	1940	1950	1960	1930	1940	1950	1960
Total Population	19,822	20,055	19,557	19,406	100.0	100.0	100.0	100.0
Men	10,175	10,059	9,730	9,492	51.3	50.2	49.8	48.9
Women	9,647	9,996	9,827	9,914	48.7	49.8	50.2	51.1

Source: 1930 - 1940: U. S. Census: 1940. Characteristics of the Population, Table 22.

1950: U. S. Census: 1950. Population, Vol. II, Part 15, Table 43.

1960: U. S. Census: 1960. Population, PC(1)-17B, Table 27.

The People: The population of Washington County has changed only slightly since 1880. The population for each Census since 1880 follows:

<u>1880</u>	<u>1890</u>	<u>1900</u>	<u>1910</u>	<u>1920</u>	<u>1930</u>	<u>1940</u>	<u>1950</u>	<u>1960</u>
20,374	18,468	20,718	19,925	20,421	19,822	20,055	19,557	19,406

The present trend would probably indicate a continued slight decline for the next ten years.

Table 2

WASHINGTON COUNTY COMPONENT POPULATION

1930 - 1960

County and Minor Civil Divisions	1930	1940	1950	1960	Percent Change	
					1950	1960
Washington County	19,822	20,055	19,557	19,406	- 0.8	
Brighton Township	462	1,211	1,094	1,025	- 6.3	
Cedar Township	647	592	553	466	-15.7	
Clay Township	611	533	442	394	-10.9	
Crawford Township	963	907	839	843	+ 0.5	
Dutch Creek Township	583	603	509	438	-13.9	
English River Township	1,715	1,838	1,990	2,281	+14.6	
Franklin Township	789	785	729	731	+ 0.3	
Highland Township	507	477	454	414	- 8.8	
Iowa Township	1,351	1,344	1,266	1,260	- 0.5	
Jackson Township	639	600	580	562	- 3.1	
Lime Creek Township	1,957	2,213	2,130	2,135	+ 0.2	
Marion Township	757	757	703	648	- 7.8	
Oregon Township	1,090	1,085	1,002	904	- 9.8	
Seventy-six Township	555	576	536	476	-11.2	
Washington Township	7,196	6,514	6,750	6,829	+ 1.2	

Source: 1930, 1940, and 1950 Data: U.S. Census: 1950. Population, Vol. II, Part 15, Table 6.

1960 Data: U.S. Census: 1960. Population, PC(1)-17B, Table 25.

Table 3
WASHINGTON COUNTY COMPONENT POPULATION OF MAJOR TOWNS

TOWN	1930 - 1960				Percentage Change 1950 - 1960
	1930	1940	1950	1960	
Ainsworth	359	415	396	371	- 6.3
Brighton	800	791	705	724	+ 2.7
Crawfordsville	291	316	286	317	+10.8
Kalona	704	765	947	1,235	+30.4
Riverside	638	633	631	656	+ 4.0
Washington	4,814	5,227	5,902	6,037	+ 2.3
Wellman	853	1,129	1,071	1,085	+ 1.3
West Chester	223	213	218	253	+16.1

Source: 1930, 1940, and
 1950 Data:

U. S. Census: 1950. Vol. II, Part 15, Table 6.

1960 Data:

Census of Iowa for the Year 1960, Table 2, Page 33,
 State of Iowa Publication.

RURAL-FARM AND NONFARM CHANGES 1/

With the exception of the town of Washington, Iowa, the population of Washington County is classified as rural by the U. S. Census Bureau. This rural population is divided into rural-nonfarm and rural-farm. The 1960 rural-farm population was 7,127 compared with 8,509 in 1950. The rural-nonfarm segment in 1960 totaled 6,242; in 1950 the figure was 5,146. In 1960 rural-nonfarm population comprised 32.2 percent of the total population while rural-farm population was 36.7 percent and 31.1 percent lived in Washington, Iowa.

A further breakdown of population distribution, considering other towns and rural-nonfarm as being under the nonfarm heading, are:

<u>Year</u>	<u>1930</u>	<u>1940</u>	<u>1950</u>	<u>1960</u>
Rural-farm population	10,608	10,089	8,509	7,127
Washington	4,814	5,227	5,902	6,037
Other towns	3,848	4,268	4,254	4,641
Rural-nonfarm	552	471	892	1,601
Total	<u>19,822</u>	<u>20,055</u>	<u>19,557</u>	<u>19,406</u>

A sharp increase in the rural-nonfarm segment is evident in the past 10 to 15 years, while the change in the cities and towns is rather small. The town populations appear in the next chart:

<u>TOWN</u>	<u>1900</u>	<u>1910</u>	<u>1920</u>	<u>1930</u>	<u>1940</u>	<u>1950</u>	<u>1960</u>
Washington	4255	4380	4697	4814	5227	5902	6037
Crawfordsville	268	322	337	291	316	286	317
Ainsworth	404	408	391	359	415	396	371
West Chester	209	222	225	223	213	218	253
Brighton	807	776	1014	800	791	705	724
Riverside	690	652	667	638	633	631	656
Wellman	654	724	875	853	1129	1071	1085
Kalona	530	466	632	704	765	947	1235

Kalona, Wellman, and Riverside are within commuting distance to Iowa City where many residents are employed in industry and at the State University of Iowa.

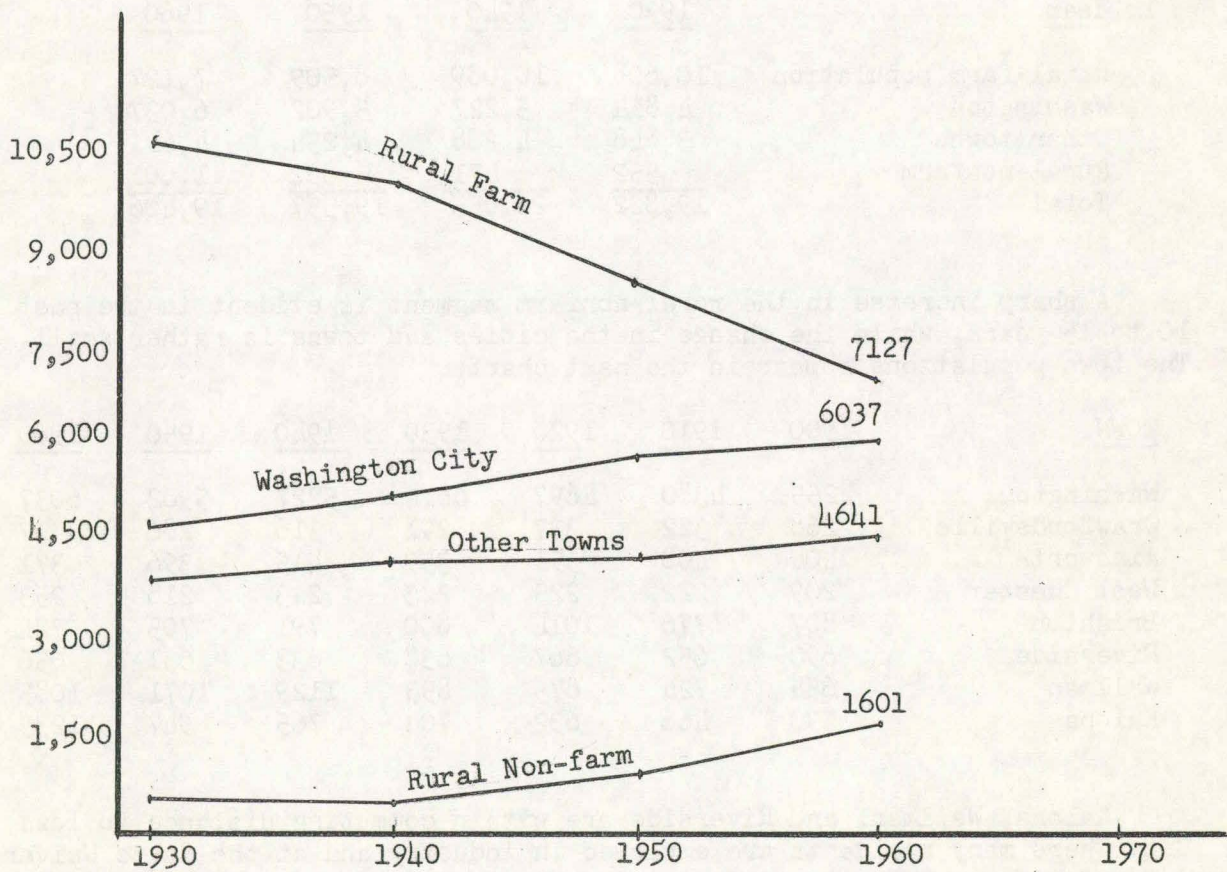
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Source: Migration and Changes in Population in Iowa, 1960, Iowa State University.

The sharp decline in the rural-farm population is evident from the following chart:

Population Trends 1930 - 1960

Washington County



Source: Migration and Changes in Population in Iowa, 1960, Iowa State University.

AGE DISTRIBUTION OF THE POPULATION

The age composition of the Washington County population is affected by out-migration. The age groups that are gaining or losing in an area are shown through percentage age distribution.

In 1950 the age group of those 14 years and under made up 27.8 percent of the population in Washington County, while it was 22.9 percent in Washington, Iowa. At the same time both the Iowa and U. S. figures were 26.9 percent. This age group increased to 31.0 percent in Washington County by 1960 and to 27.4 percent in Washington, Iowa, as compared to 31.1 percent in both Iowa and the United States.

The 15-to-24 year age group was 11.7 percent of the Washington County population in 1960, and 10.0 percent of the Washington, Iowa, population according to 1960 U. S. Census. At the same time the Iowa figure was 13.0 percent and the U. S. figure was 13.4 percent. Out-migration seems to be occurring in this age group.

The age group between 25 and 34 years of age also seems to be affected by migration. This age group made up 10.5 percent of Washington County and 10.3 percent of the Washington, Iowa, population in 1960, while it made up 11.5 percent of the Iowa population and 12.7 percent of the United States population.

Following the usual pattern of areas where younger age groups are migrating, the age group of those 65 years and over is well above the State and National average. In 1960 this age group made up 14.5 percent of the Washington County population and 20.3 percent of the Washington, Iowa, population in comparison to the Iowa average of 11.8 percent and the United States average of 9.3 percent. (See Table 4, Page 16.)

Table 4

PERCENTAGE AGE DISTRIBUTION

1950 - 1960

Age Range	Conterminous* U.S.		Iowa		Washington County		Washington Iowa	
	1950	1960	1950	1960	1950	1960	1950	1960
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
14 years & under	26.9	31.1	26.9	31.1	27.8	31.0	22.9	27.4
15-24 years	14.7	13.4	14.2	13.0	12.9	11.7	11.6	10.0
25-34 years	15.7	12.7	14.3	11.5	13.3	10.5	13.7	10.3
35-44 years	14.3	13.4	12.8	12.2	12.1	11.9	11.6	11.5
45-54 years	11.5	11.4	11.4	11.0	11.0	10.7	10.8	10.3
55-64 years	8.8	8.7	9.9	9.4	10.0	9.7	11.6	10.2
65 years & over	8.2	9.3	10.4	11.8	12.9	14.5	17.8	20.3

* Conterminous United States, the United States excluding the newly admitted states of Alaska and Hawaii.

Source: 1950 and 1960 U. S. Data: U.S. Census: 1950 and 1960. Population, United States Summary.

1950 Iowa Data: U. S. Census: 1950, Population, Vol. II, Part 15, Table 15.

1960 Iowa Data: U. S. Census: 1960, Population, PC(1)-17C, Table 37.

1950 County Data: U. S. Census: 1950, Population, Vol. II, Part 15, Table 41.

1960 County Data: U. S. Census: 1960, Population, PC(1)-17B, Table 27.

1950 City Data: U. S. Census: 1950, Population, Vol. II, Part 15, Table 38.

1960 City Data: U. S. Census: 1960, Population, PC(1)-17B, Table 22.

Table 5

POPULATION CHANGE, RURAL-FARM POPULATION COMPOSITION & NET MIGRATION

1950 - 1960

Population	Conterminous U. S. <u>1/</u>	Iowa	Washington County	Washington Iowa
Population 1950	150,697,361	2,662,073	19,557	5,902
Population 1960	178,464,236	2,757,537	19,406	6,037
% Change in Population 1950-1960	+18.42	+5.21	-0.8	+2.3
Rural-Farm Population as % of total population 1950	15.3	29.9	43.5	NA
Rural-Farm Population as % of total population 1960	7.5	24.0	36.7	NA
Net Migration 1950-1960 <u>2/</u>	2,619,371	-229,721	-2,419	NA
Net Migration 1950-1960 as % of 1950 population	+1.74	-8.76	-12.4	NA

NA - Not Available

1/ - Conterminous U. S.: The United States excluding Alaska and Hawaii.2/ - Computed by subtracting the net increase of births over deaths from the net increase in population. Data on births and deaths were obtained from the Bureau of Vital Statistics, Iowa Department of Health.

Source: 1950-1960 U.S. Data: U.S. Census: 1960 Population, U.S. Summary, PC(1)-1A, Table 1.

1950-1960 Iowa Data: U.S. Census: 1960 Population, PC(1)-17A, Iowa, Table 1.

1950 Washington County Data: U.S. Census: 1950. Population, Iowa, Vol. II, Part 15, Table 12.

1960 Washington County Data: U.S. Census: 1960. Population, PC(1)-17C, Table 35.

1950 City Data: U.S. Census: 1950, Population, Iowa, Vol. II, Part 15, Table 38.

1960 City Data: U.S. Census: 1960. Population, Iowa, PC(1)-17B, Table 22.

POPULATION

One of the most significant changes to be noted in the population of the county, however, is the distribution of the various age groups:

<u>Age</u>	<u>1930</u>	<u>1940</u>	<u>1950</u>	<u>1960</u>	<u>% Change</u> <u>1950-1960</u>
0-9	3480	3357	3869	4124	+ 6.6
10-19	3650	3440	2920	3263	+11.7
20-29	2789	3038	2483	1845	-26.0
30-34	1272	1321	1303	1087	-16.5
35-44	2592	2456	2373	2311	- 2.6
45-54	2323	2297	2145	2079	- 3.6
55-64	1849	1910	1949	1892	- 2.9
65-74	1252	1487	1561	1629	+ 4.4
75+	605	749	954	1176	+23.2

Sharp declines occurred in the 20-29 and 30-34 age groups in the past 10 years. This is due in part for two reasons: (1) Rapid out-migration of young persons after high school seeking jobs elsewhere, due either to lack of local job opportunity or higher wages in more industrial communities and (2) Fewer persons born in 1930-1939 period who would then be in the 20-29 age group.

On the other hand, both the number of young persons under 19 and the number of persons over 65 increased. The continued increase in the number of older people will be a factor which will affect future attitudes of the community.

The present trend indicates a slight decline in the total county population is likely. The small towns will decline, but Kalona and the town of Washington will grow. The major decline will be in the number of farm people. More nonfarm people will live in rural areas.

Source: Migration and Changes in Population in Iowa, 1960, Iowa State University.

Table 6

WASHINGTON COUNTY POPULATION BY AGE GROUPS

1940 - 1960

	1940 1/			1950 2/			1960 3/		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
TOTAL	20,055	10,059	9,996	19,557	9,730	9,827	19,406	9,492	9,914
Under 5 years	1,739	912	827	2,127	1,070	1,057	2,064	1,054	1,010
5 - 9 "	1,618	825	793	1,742	920	822	2,060	1,049	1,011
10 - 14 "	1,659	853	806	1,577	826	751	1,899	965	934
15 - 19 "	1,781	896	885	1,343	687	656	1,364	723	641
20 - 24 "	1,609	833	776	1,187	583	604	902	450	452
25 - 29 "	1,429	700	729	1,296	624	672	943	445	498
30 - 34 "	1,321	688	633	1,303	640	663	1,087	535	552
35 - 39 "	1,253	643	610	1,239	629	610	1,137	531	606
40 - 44 "	1,203	582	621	1,134	576	558	1,174	587	587
45 - 49 "	1,171	569	602	1,068	537	531	1,047	526	521
50 - 54 "	1,126	568	558	1,077	527	550	1,032	510	522
55 - 59 "	1,023	479	544	1,001	481	520	935	447	488
60 - 64 "	887	431	456	948	457	491	957	458	499
65 - 69 "	818	391	427	855	398	457	869	411	458
70 - 74 "	669	336	333	706	339	367	760	341	419
75 years and Over	749	353	396	954	436	518	1,176	460	716
Under 1 Year	351	174	177	416	209	207	401	193	208
21 years & over	12,918	6,405	6,513	12,531	6,111	6,420	11,839	5,608	6,231
Median Age	NA	NA	NA	NA	NA	NA	32.2	30.6	33.7

NA - Not Available

1/ - U.S. Census: 1940. Population, Characteristics of the Population, Table 22.

2/ - U.S. Census: 1950. Population, Vol. II, Part 15, Table 41.

3/ - U.S. Census: 1960. Population, PC(1)-17B, Table 27.

EDUCATIONAL ATTAINMENT IN WASHINGTON COUNTY

According to the 1960 Census, the Washington County School enrollment of 4,834 had this distribution:

Kindergarten	388
Elementary	3,238
High School	1,167
College	41 <u>1/</u>

The median number of school years completed by the population 25 years of age and older was 10.5 years for men and 11.7 years for women. The median is a middle value in a series of ranked data. In other words, one half of the population had fewer years of education than the median and one half had more years of school.

Table 7 shows the number of school years completed by persons 25 years of age and older. The greater emphasis on education has contributed to the increase between 1950 and 1960. The number of school years completed should continue to rise as younger people move up into this group.

Table 7

YEARS OF SCHOOL COMPLETED 1950-1960

(Persons 25 years of age and over)

Years Completed		1950	1960
Elementary	1 to 4 years	285	218
	5 to 6 years	600	500
	7 years	705	715
	8 years	3,885	3,097
High School	1 to 3 years	1,520	1,450
	4 years	2,900	3,451
College	1 to 3 years	1,035	1,103
	4 years or more	510	616
Median years completed		9.7	11.1

Source: 1950 Data: U. S. Census: 1950. Population, Vol. II, Part 15, Table 42.

1960 Data: U. S. Census: 1960. Population, PC(1)-17C, Table 83.

1/ It should be noted that for Census purposes college students in 1960 were enumerated where they lived while attending college rather than in their home community. The count for a given county does not show how many permanent residents of the particular county are in college.

MANPOWER RESOURCES 1/

A total of 2,658 persons participated in the Washington County Manpower study conducted between September 1964 and June 1965. Participants included 1,314 employed workers and 1,344 unemployed workers. Among the employed 363 were women; and among the unemployed there were 921 women.

The 2,658 participants showed a potential for an average of 4.7 occupational fields of work. Available workers in Washington County could easily staff a medium-size plant in numerous fields that use 100 to 200 production workers. Since they possess the necessary native ability, workers could be quickly trained in all of these industries and their productivity should be high.

<u>Industry</u>	<u>Total</u>	<u>Men</u>	<u>Women</u>
Metal Working	1,948	1,095	853
Wood Working	1,791	954	837
Stone & Glass Working	1,898	1,086	812
Plastics, Paint Working	1,737	908	829
Fabric, Leather & Related	1,652	812	840
Paper Working	1,543	759	784
Food Working	1,152	329	823
Electrical Working	1,187	430	757

1/ See Manpower Occupational Potential Inventory for complete tabulations of Manpower Resources.

Chapter III - WASHINGTON COUNTY'S LABOR FORCE

EMPLOYMENT TRENDS

In 1940 Washington County had a population count of 20,055, of which 15,368 were 14 years of age or over. Its labor force totaled 7,361 or 36.7 percent of the people. The labor force is defined as the civilian labor force excluding members of the armed forces.

Since they are the potential members of the labor force, people in the 14 years old or older age group are the labor supply source for an area. The percentage of the people in this age group in the labor force is called the labor force participation rate. This rate may be used as a rough measure to estimate how many additional persons could reasonably be expected to work if suitable jobs were available.

Persons who are 14 years of age or older who are not in the labor market include (1) unpaid family members working less than 15 hours a week; (2) students; (3) inmates of institutions, and (4) people with other long-term disabilities or retired persons.

Washington County had 14,416 persons 14 years of age and older. Its civilian labor force was 7,447 in the 1950 U. S. Census. Its 51.7 percent labor force participation rate indicates that a larger percentage of the population 14 years of age and over was in the labor force than in 1940, and that a greater utilization of the county's labor force was taking place.

By 1960, Washington County had 13,697 persons 14 years of age or older. Its civilian labor force numbered 7,504, and the labor force participation rate was 54.8 percent.

To estimate how many additional people could be expected to join the labor force, the Washington County labor force participation rate may be compared with the overall United States labor force participation rate. Since the United States rate of 54 percent is 0.8 percent lower, and the Iowa rate of 54.3 percent is 0.5 percent lower, this similarity in rates indicates that Washington County's labor force participation rate would probably not change greatly.

Another factor in estimating how many additional people could be added to the labor force is the size of the age group 14 years old and over. In 1950, this age group made up 73.7 percent of the population; in 1960, 70.6 percent of the population was in this age group. The small decrease between 1950 and 1960 can probably be attributed to out-migration resulting from the scarcity of job opportunities.

Table 1

SUMMARY POPULATION AND LABOR FORCE DATA

1950 - 1960

POPULATION	APRIL 1950			(Total Net) Change Between 1950 and 1960	APRIL 1960		
	TOTAL	Men	Women		TOTAL	Men	Women
Total Population	19,557	9,730	9,827	151 Less	19,406	9,492	9,914
Civilian Population	19,557	9,730	9,827	154 Less	19,403	9,489	9,914
Civilian Population 14 years & over	14,416	7,078	7,338	719 Less	13,697	6,569	7,128
Percent of Civilian Population	73.7%	72.7%	74.7%	xxx	70.6%	69.2%	71.9%
Civilian Labor Force	7,449	5,760	1,689	55 More	7,504	5,265	2,239
Percent of Population 14 years & over	51.7%	81.4%	23.0%	xxx	54.8%	80.1%	31.4%
Employed	7,363	5,702	1,661	56 Less	7,307	5,188	2,119
Unemployed	84	56	28	109 More	193	77	116

SOURCE: 1950 Data: U.S. Census: 1950. Population, Vol. II, Part 15, Table 43.

1960 Data: U.S. Census: 1960. Population, PC(1)-17B, Tables 83, 84 and 85.

Table 2

WASHINGTON COUNTY EMPLOYMENT BY INDUSTRY

1940 - 1960

INDUSTRY	1940	1950	1960
TOTAL EMPLOYED <u>1/</u>	6,824	7,363	7,307
Agriculture	3,225	3,183	2,466
Forestry and Fisheries	0	1	0
Mining	5	23	3
Construction	263	406	408
Manufacturing	529	470	813
Railroad and railroad express	88	66	49
Trucking service and warehousing	103	124	166
Other transportation	22	17	23
Communications	53	76	66
Utilities and sanitary services	65	91	61
Trade	1,021	1,359	1,470
Finance, insurance & real estate	115	118	150
Service (including schools)	1,096	1,072	1,367
Public Administration	136	160	156
Not reported	103	197	109

1/ Excludes those on public emergency work.

Source: 1940 Data: U.S. Census: 1940. Characteristics of Population, Table 23.

1950 Data: U.S. Census: 1950. Population, Vol. II, Part 15, Table 43.

1960 Data: U.S. Census: 1960. Population, PC(1)-17C, Table 85.

INDUSTRY

The major industries of Washington County are as follows:

Nonagricultural:

Calendar Manufacturing
Steel Products
Steel Fabricator and Boilermaker
Electronics Assembly
Pearl Button Manufacturing
Printing - Tally Cards, Misc.

Agricultural Oriented:

Seed Corn Production and Processing
Soybean Processing
Livestock Feed Manufacturing
Turkey Processing
Dairy Processing

In addition many jobs are provided by firms that supply and service agriculture in the area.

In a report dated September 1, 1964, two companies had come to the area recently. One had 15 employees and the other employed 4. The first firm was in livestock products and the second firm produced plastic forms.

EMPLOYMENT BY INDUSTRY AND OCCUPATION

As people move from the farm to the cities and towns, Washington, like other Iowa counties, has seen a downward trend in agricultural employment.

In 1940 Washington County had 3,225 persons in agricultural employment. Agricultural employment had decreased 1.1 percent to 3,183 by 1950; and by 1960 agricultural employment was 2,466, a drop of 22.5 percent in the 10 year period.

The number of farm laborers and foremen dropped from 961 in 1950 to 621 in 1960. During the same period, the number of farmers and farm managers declined from 2,152 to 1,792.

Total nonagricultural employment increased from, 3,599 in 1940 to 4,180 in 1950, a gain of 16 percent in one decade. Between 1950 and 1960, nonfarm employment rose to 4,841 persons, a gain of 15.8 percent.

Table 3

WASHINGTON COUNTY EMPLOYMENT BY OCCUPATION AND EXPERIENCED UNEMPLOYED

1950 - 1960

OCCUPATION	1950		1960	
	Total Employed	Total Experienced Unemployed	Total Employed	Total Experienced Unemployed
TOTAL	7,363	84	7,307	193
Professional, technical & kindred	463	3	532	3
Farmers-farm amangers	2,152	4	1,792	-
Managers, except farm	586	2	525	4
Clerical & kindred	466	3	548	-
Sales workers	516	3	593	-
Craftsmen, foremen & kindred	683	12	707	18
Operative & kindred	590	11	895	92
Private household workers	167	1	198	12
Service workers	341	2	582	22
Farm Laborers & foreman	961	6	621	23
Other laborers	273	8	187	15
Occupation not given	165	29	127	4

Source: 1950 Data: U.S. Census: 1950. Population, Vol. II, Part 15, Table 43.

1960 Data: U.S. Census: 1960. Population, PC(1)-17C, Tables 84 and 85.

Expansion of local industrial opportunities will continue. Active industrial promotion will work to attract new industry. Community facilities and attitudes will make the town of Washington a desirable place to raise a family.

Manufacturing and agriculture are the most important basic industries to the economy of Washington County. In recent years, about 30 new jobs have been needed outside of farming to provide jobs for farmers seeking full-time employment off the farm.

Employment:

The total number of persons employed in Washington County dropped slightly from 1950 to 1960. A closer look at employment figures indicated some significant trends. The total number of employed men declined 9 percent or a total of 514. At the same time, the number of women employed increased about 25 percent with a total increase of 458. The trends since 1940 are as follows:

	<u>1940</u>	<u>1950</u>	<u>1960</u>
Men	5,590	5,702	5,188
Women	<u>1,234</u>	<u>1,661</u>	<u>2,119</u>
Total	6,824	7,363	7,307

A closer look at the occupation groups shows that the largest change was in the total number of farmers and farm laborers which declined 717 or 22 percent in the past decade. Manufacturing workers increased 343 or 43 percent.

EMPLOYMENT OUTLOOK

According to employment forecast estimates furnished by the area the 1970 employment level may be as much as 240 higher than the 1960 count. It is anticipated that the expansion of local industrial opportunities will continue.

UNEMPLOYMENT STATISTICS

The U. S. Census of Population defines the labor force as "all persons employed or unemployed. . ."

"Employed persons comprised all civilians 14 years old and over who were (a) "at work"--Those who did any work for pay or profit, or those who worked without pay for 15 hours or more on a family farm or in a family business; or (b) were "with a job or not at work"--Those who did not work and were not looking for work but had a job or business from which they were temporarily absent because of bad weather, industrial dispute, vacations, illness or other personal reasons."

"Persons classified as unemployed are those 14 years old and over who are not at work but are looking for work. A person is considered looking for work not only if he actually tries to find work during the reference week but also if he made such efforts within the past 60 days and is awaiting the results of these efforts."

"Persons waiting to be called back to a job from which they have been laid off or furloughed are also counted as unemployed. Unemployed persons with previous work experience are classified as the experienced unemployed."

In 1950 Washington County had 84 experienced unemployed and in 1960 it had 193 experienced unemployed according to the U. S. Census.

WAGE AND HOUR SURVEY

WASHINGTON, IOWA, LABOR MARKET AREA (WASHINGTON COUNTY)

November, 1964

The survey was based on 416 firms whose employment totaled 3,496 during November, 1964. The hourly data were received for 3,070 workers and wage data were noted for 3,043 workers. Wage and hour data in this survey are not directly comparable to similar data published by the Bureau of Labor Statistics because our data included all workers while the BLS data are limited to only production workers.

According to BLS, the average weekly earning in Iowa manufacturing in November, 1964, was \$113.27. In our survey, the average weekly earnings in manufacturing were \$77.86 in November 1964, in the Washington, Iowa, labor market area. The average weekly hours in manufacturing in November, 1964, were 41.1 hours for Iowa and 44.1 for the Washington, Iowa, labor market area.

Data from the wage and hour survey were tabulated by sex, occupational group and industry. However, data based on less than 50 workers were not included.

Table 4

WASHINGTON, IOWA, LABOR MARKET AREA (WASHINGTON COUNTY)

WAGE & HOUR SURVEY BY SEX, INDUSTRY & OCCUPATION

November, 1964

GROUP	TOTAL		MEN		WOMEN	
	Average Weekly Hours	Average Weekly Earnings	Average Weekly Hours	Average Weekly Earnings	Average Weekly Hours	Average Weekly Earnings
<u>INDUSTRY</u>						
Agriculture, Forestry, and Fishing	25.9	\$ 37.21	25.7	\$ 38.86	*	*
Mining	*	*	*	*	*	*
Contract Construction	50.6	\$109.43	51.0	\$110.82	*	*
Manufacturing	44.1	\$ 77.86	45.2	\$ 87.06	43.4	\$ 71.20
Transportation, Communication and Public Utilities	42.2	\$100.06	44.1	\$109.60	*	*
Wholesale & Retail Trade	43.6	\$ 68.42	46.0	\$ 77.58	38.5	\$ 47.71
Finance, Insurance & Real Est.	39.1	\$ 77.36	*	*	37.0	\$ 57.98
Service	32.8	\$ 47.49	41.3	\$ 70.22	27.7	\$ 33.45
Government	36.3	\$ 81.07	36.2	\$ 82.94	36.3	\$ 79.44
<u>OCCUPATION</u>						
Professional & Managerial	43.8	\$105.80	47.8	\$115.88	39.2	\$ 94.15
Clerical & Sales	37.5	\$ 66.73	42.2	\$ 90.36	35.4	\$ 52.71
Service	28.4	\$ 35.41	29.5	\$ 46.30	27.9	\$ 29.78
Agriculture, Forestry, & Fishing	45.6	\$ 57.91	41.5	\$ 53.57	*	*
Skilled	46.2	\$ 93.88	46.6	\$ 95.46	*	*
Semi-skilled	43.4	\$ 78.20	41.9	\$ 79.33	45.0	\$ 76.98
Unskilled	42.1	\$ 64.83	44.3	\$ 71.33	36.1	\$ 44.81
Total	40.8	\$ 74.69	43.3	\$ 84.42	37.9	\$ 63.66

* Less than 50 Employees with data reported.

Chapter IV - WASHINGTON COUNTY AS A MARKET

FAMILY AND SELECTED OCCUPATIONAL INCOME DATA

According to the 1960 U. S. Census of Population, the median income for all families in Washington County for 1959 was \$4,233. For the same period the comparable figure for Iowa was \$5,069. The median is a statistical measure that gives the value of the middle item when the items are arranged according to size.

The median family income data are also available for urban families, rural families and rural-farm families. In these three instances the figures for Washington County are less than the comparable figures for the State. These data plus a distribution of family income by amount of income in Washington County are shown in Table 1.

The 1960 U. S. Census of Population published the median earnings in 1959 of selected occupational groups. Table 2 lists the median wage in Iowa and the median wage in Washington County for selected occupational groups by sex. This comparison reveals that except for the occupational classification of "farmers and farm managers" the earnings in the selected occupations are approximately 9 percent under the comparable State rate.

Table 1

INCOME OF WASHINGTON COUNTY FAMILIES FOR 1959

Dollar Income Bracket	Washington County Total Families		Total Urban Families	Total Rural Families	Total Rural-Farm Families
	Number	Percent			
All Families	5,081	100.0	1,639	3,442	1,813
Under \$1,000	388	7.6	61	327	223
1,000 to 1,999	586	11.5	114	472	291
2,000 to 2,999	621	12.2	140	481	311
3,000 to 3,999	790	15.6	199	591	313
4,000 to 4,999	668	13.2	241	427	186
5,000 to 5,999	603	11.9	225	378	188
6,000 to 6,999	444	8.4	183	261	79
7,000 to 7,999	244	4.8	113	131	72
8,000 to 8,999	171	3.4	80	91	33
9,000 to 9,999	139	2.7	56	83	48
\$10,000 and over	427	8.4	227	200	69
Median Income	All Families		Urban	Rural	Rural-Farm Families
Washington County	\$4,233		\$5,287	\$3,746	\$3,260
Iowa	\$5,069		\$5,955	\$3,985	\$3,352

Source: U. S. Census: 1960, Iowa PC(1)-17C, Tables 65, 66, 81, 86, 91 and 93.

Table 2

WASHINGTON COUNTY

1959 MEDIAN EARNINGS OF SELECTED OCCUPATIONAL GROUPS

OCCUPATIONAL GROUP	Iowa	Washington County	Difference	Percent of Iowa Average
TOTAL MEN	\$4,167	\$3,275	\$ -892	78.5
Professional, technical & kindred workers	\$6,034	\$5,268	-766	87.3
Farmers & Farm Managers	\$2,643	\$2,628	- 15	99.4
Craftsmen, foremen & kindred workers	\$4,796	\$4,000	-796	83.4
Operative & kindred workers	\$4,415	\$3,597	-818	81.5
Farm laborers, except unpaid & farm foremen	\$1,215	\$ 988	-227	81.3
Laborers, except farm & mine workers	\$3,292	NA	xxx	xxxx
TOTAL WOMEN	\$1,745	\$1,285	-460	73.6
Clerical & kindred workers	\$2,385	\$2,147	-238	90.0
Operatives & Kindred workers	\$2,080	\$1,887	-193	90.7

NA - Not available

Source: U.S. Census: 1960 Population, Iowa PC(1)-17C, Tables 68 and 86.

BANKING & SALES STATISTICS

According to data furnished by the Washington, Iowa, Chamber of Commerce, bank deposits in Washington County in 1951 were \$18,413,776; in 1957 they rose to \$21,505,622; and in 1963 they increased to \$26,347,323. More details on banks can be found in Chapter VII, FINANCIAL INSTITUTIONS IN WASHINGTON COUNTY.

RETAIL SALES

Of the seven counties that border Washington County, only Johnson County has a larger amount of retail sales. These counties include Henry, Louisa, Jefferson, Keokuk, Cedar, Iowa and Johnson.

The retail sales for Washington County rose 3.2 percent in 1963 over the previous year. The 1964 sales increased 3.8 percent over 1963. The town of Washington had sales in 1964 amounting to 62 percent of the total retail sales in Washington County.

Retail sales in 1963 in the town of Washington were 2.5 percent higher than 1962 figures and, in turn, the 1964 figures increased 3.8 percent above the 1963 figures.

The 1964 annual tabulation of retail sales tax collections for the fiscal year ending June 30, 1964, follows:

<u>Year</u>	<u>Washington County</u>	<u>Town of Washington, Iowa</u>
1964	\$493,121	\$307,204
1963	474,966	292,633
1962	460,407	285,383
1961	454,644	282,523
1958	179,600	129,000*

* Figures are rounded.

UTILITY USAGE

The telephone service for the town of Washington and vicinity is supplied by the General Telephone Company. Capacity of this system is only 83 percent in use. A local telegraph office in Washington offers 24 hour service.

WATER

The Washington municipal water works furnishes water to residents. Four wells with a total volume capacity of 1,700,000 gallons, can furnish 918,000 gallons of raw or filtered water. The average daily consumption is 650,000 gallons. Peak consumption is 1,500,000 gallons per day.

Water Rates in Washington, Iowa

Minimum- - - - -					\$2.40
900 Cu. Ft.- - - - -					\$4.08
First 15,000 gals. or less	@	60¢	- \$	9.00	
Next 30,000 " or (45,000)	@	45¢	-	22.50	
Next 120,000 " or (165,000)	@	40¢	-	70.50	
Next 235,000 " or (400,000)	@	30¢	-	141.00	

A chemical analysis of the water was made in February, 1963:

500,000	H - Hardness as CaCO ₃	456 PPM
1,000,000	H (ca) Hardness as Ca	280 N
	M - Hardness as M	254
2,000,000	Na Cl	152
	Dissolved Solids	1300
5,000,000	pH	8.5
	tot. unfilt. PO ₄	2.1
10,000,000	Cl ₂	1.0
	Bacterially Safe	
	Total Iron Each Well	0.3

Sewage: Washington has a three sprinkler filter plant with a daily capacity of 1.5 million gallons. The average load is 600,000 gallons with a peak of 980,000 gallons. The discharge is into a creek. Ninety-five percent of the community is served by the sewer system and the industrial area is served by a 12 inch line. The static pressure is 50 lbs. and residual pressure is 40 pounds. The sewerage charge is 60 percent of the water bill before tax is added. The residential garbage and trash collection is made weekly for a charge of \$1.25 each month. This cost is added to the water bill. The city dump is a land-fill type facility.

IOWA SOUTHERN UTILITIES COMPANY

Electric power is supplied to the town of Washington and in the county by Iowa Southern Utilities Company, a private firm. The potential supply is unlimited. Power is supplied by local dual fuel diesel plants and there are 69,000 volt transmission lines. With advance notice, ample power is available for 100 KW and over. Current demand is 40,000 KWH daily.

Iowa Southern Utilities Company had 5,592 customers in the county in 1962, an increase from the 4,409 users in 1952. Now the average consumption of KWH per customer is 2,888; ten years ago it was 1,834. Forty all-electric homes are serviced by this firm in Washington County.

TRENDS IN ELECTRICAL CONSUMPTION IN WASHINGTON COUNTY

Electrical Appliances: A ten year comparison of the number of electrical appliances in use in Washington County:

	<u>1952</u>	<u>1962</u>
Water Heaters	30%	31%
Ranges	28%	33%
Deep Freezers	23%	52%
Television Sets	35%	90%
Washing Machines - Wringer	10%	-
Automatic	85%	86%
Dryers	5%	48%
Water Pumps	40%	79%

Iowa Southern Utilities Co. Rate (July 6, 1964)

Town of Washington, Iowa

ELECTRICAL POWER

RATE SCHEDULES

COMMERCIAL SERVICE

First 12 KWH	@ \$1.00
Next 38	6.1¢
Next 150	5.7¢
Next 800	4.3¢
Next 1,000	3.4¢
Next 4,000	3.0¢
Balance KWH	2.5¢
Minimum Bill	\$1.00

RESIDENTIAL

First 12 KWH	@ \$1.00
Next 38	5.1¢
Next 50	4.0¢
Next 100	3.4¢
Next 600	2.2¢
Balance KWH	2.0¢
Minimum Bill	\$1.00

Full-time water heating may be included in the above schedule with a block of 250 KWH at 1.5¢ per KWH inserted after the 3.4¢ block.

Controlled water heating may be included in the above schedule with a block of 250 KWH at 1.25¢ per KWH inserted after the 3.4¢ block.

GENERAL SERVICE RATE

Demand Charge:

First 50 KW of billing demand @ \$2.60 per KW
Balance " " " @ \$2.10 per KW

Energy Charge:

First 10,000 KWH @ 1.9¢ per KWH
Next 10,000 KWH @ 1.4¢ " "
Next 20,000 KWH @ 1.2¢ " "
Balance KWH @ 1.0¢ " "

Billing Demand:

The billing demand will be the maximum 15 minute demand in kilowatts registered that month but not less than 10 KW.

Industrial Primary Power

Demand Charge:

First 50 KW of billing demand @ \$1.80 per KW
Next 150 KW of billing demand @ \$1.50 per KW
Excess @ \$1.30 per KW

Plus Energy Charge:

First 50 hrs. use of billing demand @ 1.6¢ per KWH
Next 100 " " " " " @ 1.2¢ per KWH
Next 150 " " " " " @ 1.0¢ per KWH
Excess " " " " " @ .7¢ per KWH

Industrial Power

First 100 KW of maximum 30 min. demand \$2.50 per KW
Next 400 KW of maximum 30 min. demand \$2.25 " "
Excess above 500 KW of maximum 30 min. demand \$2.00 per KW

Energy Charge

First 50 hrs. use of billing demand @ 1.15¢ per KW
Next 100 " " " " " @ 1.05¢ per KW
Next 150 " " " " " @ .95¢ per KW
Excess @ .09¢ per KW

This is the normal large industrial rate up to 1,000 KW. Above this amount a contract can be negotiated with the Iowa Southern Utilities Company.

Gas: Natural gas in the town of Washington is supplied by the Iowa Southern Utilities Company, a privately owned firm.

Natural Gas Rates (Sept. 1, 1964)

Residential and Small Commercial

First 1500 cu. ft. used per month at \$2.40 per M.C.F.
Next 2000 cu. ft. used per month at \$1.80 per M.C.F.
Excess @ .70¢ per M.C.F.

Interruptible gas service negotiable

Minimum gas bill --- \$1.25 per month

The above rates are based on 1000 B.T.U.

Large Industrial and Commercial

All natural gas for this use may be negotiated directly through the Iowa Southern Utilities Company offices at Centerville, Iowa, or through the Washington Office stating definite requirements.

The Iowa Southern Utilities Company has assured the Washington Industrial Corporation that it can furnish nearly an unlimited amount of natural gas for processing purposes on a straight basis, noninterruptible. Heating gas, however, would be on an interruptible basis.

Heating load not exceeding 1,500,000 B.T.U. input will be served on a firm basis.

ADVERTISING MEDIA

Newspapers: The Washington, Iowa, Evening Journal is a daily newspaper, circulation of 4,539, with 476 copies going outside of the county and 4,063 copies distributed to the retail trading area within the county.

Two other daily newspapers available to residents are the Des Moines Register, Des Moines, Iowa, and the Davenport Democrat, Davenport, Iowa.

Newspaper circulation in the town of Washington and in the county is:

<u>Newspaper</u>		<u>Local</u>	<u>Out of Town</u>	<u>Circulation</u>
Des Moines Tribune	(evening)	165	100	265
Des Moines Register	(morning)	1,060	746	1,806
Davenport Democrat	(morning)	568	NA*	NA*
Washington Journal	(evening)	3,970	569	4,539

NA* - Not Available

Advertising rates for the Washington Evening Journal are:

<u>CLASSIFIED RATES</u>	<u>COLUMN ADV.</u>
One day, per word 6¢	93¢ per column
Two days, per word 10¢	inch. Quantity
Three days, per word 13¢	discounts are
Each succeeding day 3¢	given.
Thirteen days 15% discount	
Twenty-six days 25% discount	

RADIO AND TELEVISION STATIONS

Washington County has a radio station located in the town of Washington with a power of 500 watts. The local station is affiliated with a mutual network. The two other most listened to radio stations received in the county are WMT, Cedar Rapids, Iowa, which is a CBS affiliate with power of 50,000 watts and WHO, Des Moines, Iowa, an NBC affiliate, with power of 100,000 watts.

The three most popular television stations represent the three major networks. Two of the TV stations are located in Cedar Rapids, Iowa. They are WMT-TV, Channel 2, CBS affiliate, and KCRG-TV, Channel 9, an ABC affiliate. The NBC affiliate is WOC-TV, Davenport, Iowa, Channel 6. Four other TV stations received are: Ottumwa, KTVO, Channel 3; Waterloo, KWWL, Channel 7; Rock Island, Ill., WHBF, Channel 4 and Moline, Illinois, WQAD, Channel 8.

HOME OWNERSHIP

There were 2,236 houses in the town of Washington in 1959 according to the 1960 United States Census. Owners occupied 1,495 houses. The medium price of these homes was \$9,600. Over half of the houses were built before 1939.

New Home Construction: The new house construction averaged 26 homes a year in the last six years.

<u>Year</u>	1959	1960	1961	1962	1963	1964
<u>No. of Homes Built</u>	26	24	18	21	30	37

The new homes are usually one story frame, full basement with attached garage. It is estimated that 20 percent of the new homes are brick.

The average cost of new home construction is \$12 to \$14 per square foot. Average new and old house purchase prices are:

2 bedroom home:	Old, \$ 8,000 - \$10,000;	New \$14,000 - \$16,000
3 bedroom home:	Old, \$ 8,500 - \$10,500;	New \$14,000 - \$25,000
4 bedroom home:	Old, \$11,000 - \$14,000;	New \$16,000 - \$25,000

The average residential lot sizes are 65' x 132' price \$1,200, and 75' x 150', for \$2,000. At present there are 20 to 30 homes for sale.

The town of Washington, Iowa, has a master plan and all utilities are required in new residential areas. The community is served 100 percent by water, natural gas and sewer. At present 90 percent of the residential areas have paved streets. However, paved streets are not required in new residential areas. There are three new housing developments in town with more housing planned for the future. There are no slum areas in the town.

The median rent for homes in 1960 was \$67 per month. At present there are 10 to 15 homes for rent. The rent ranges are:

- 2 bedroom home: Old, \$65 - \$80; New \$85 - \$100.
- 3 bedroom home: Old, \$70 - \$80; New \$90 - \$115.
- 4 bedroom home: Old, \$75 - \$85; New \$90 - \$125.

For the number of all electric homes in Washington County and the trends in electrical appliances usage, see pages 37 and 38.

Motor Vehicle Registration:

The trend in motor vehicle registrations in Washington County for the last six years shows steady increases:

Table 3

WASHINGTON COUNTY MOTOR VEHICLE REGISTRATION

Motor Vehicle	1959	1960	1961	1962	1963	1964
Passenger Type	7,726	7,742	7,895	8,036	8,278	8,405
Trucks all types	2,773	2,335	2,381	2,431	2,508	2,605
Total License funds received by county (includes trailers)	\$344,981	\$343,558	\$347,967	\$356,071	\$361,297	\$374,775

Source: "Motor Vehicle Registrations" by Iowa Motor Vehicle Division.

Chapter V - WASHINGTON COUNTY AS A PRODUCTION SITE

MANPOWER RESOURCES

Additional information on labor data will be found in Chapter III, WASHINGTON COUNTY'S LABOR FORCE. The following table by industry breaks down the size of firms located in Washington County in mid-March 1962.

The Bureau of Old-Age and Survivors Insurance provides the information on the size of firms located in Iowa counties. The latest figures we have are for March, 1962. Records for this period indicate a total of 461 reporting units with 2,114 employees. There were 300 firms with less than 3 employees, 101 with 4 to 7 employees, 45 with 8-19 employees and 15 with 20-49 employees. It should be noted that the figures are only from those firms who reported.

Table 1

REPORTING UNITS AND EMPLOYMENT BY INDUSTRY GROUP BY COUNTY

THE FEDERAL INSURANCE CONTRIBUTIONS ACT

WASHINGTON COUNTY, IOWA

Mid-March, 1962

INDUSTRY GROUP	NUMBER OF		REPORTING UNITS BY			
	WORKERS	REPORTING UNITS	NUMBER OF WORKERS			
			3 or Less	4-7	8-19	20 or More
TOTAL	2,114	461	300	101	45	15
Construction	110	30	22	5	2	1
Manufacturing	287	23	10	4	4	5
Transportation & Public Utilities	136	28	19	5	3	1
Wholesale Trade	106	24	12	9	3	0
Retail Trade	836	208	131	52	22	3
Finance, Insurance, and Real Estate	213	31	23	3	4	1
Services	302	96	69	19	7	1
All Other	124	21	14	4	0	3

Source: County Business Patterns, U. S. Department of Commerce.

EMPLOYMENT BY INDUSTRY, OCCUPATION AND SEX

A special U. S. Census tabulation for 1960 by county showed the total labor force by sex, industry and occupation, 14 years and older. Persons making up the labor total were counted at their home address not their place of employment. For example, persons living in Washington County but working in another county would be counted as part of the labor force of Washington County. This study should give a close picture of the present day labor situation. The total employed number was 7,307 of which 5,188 were men and 2,119 were women. A narrative summary of the tabulation follows:

The construction industry employed a total of 391 men with 4 listed as civil engineers, 7 surveyors, 16 salaried managers and 29 self-employed officials and proprietors, 7 clerical and kindred workers, 3 cabinetmakers and patternmakers, 97 carpenters, 4 cranemen and construction machine operators, 6 electricians, 24 mechanics and repairmen, 15 plumbers and pipe fitters, 4 tinsmiths, cooper smiths and sheet metal workers, and 105 other craftsmen and kindred workers. Of the 17 women in construction 4 were self-employed, 5 were clerical and other kindred workers, and 4 were other craftsmen and kindred workers.

In manufacturing there were 509 men and 304 women employed. The manufacture of fabricated metal products required a total of 35 workers (57 men and 8 women). The men included 4 designers and draftsmen, 5 self-employed managers or officials and proprietors, 16 other operatives and kindred workers and 3 janitors. The women were other operatives and kindred workers.

In the machinery including electrical manufacturing there was a total of 100 employees including 78 men and 22 women. All 22 women were employed in the electrical machinery manufacturing which breaks down as 4 foremen, 7 assemblers, 4 checkers, examiners and inspectors and 7 other operatives and kindred workers. Of the men, 3 were clerical and kindred workers, 8 were sales workers, 8 were foremen, 4 mechanics and repairmen, 14 were assemblers, 17 welders and flame cutters, 9 janitors and porters, and 11 were laborers including farm laborers. In other durable goods there were 128 employed, 61 men and 67 women.

In the food and kindred product industry there was a total of 240 employees of which 182 were men, and 58 were women. The men workers included 4 public relations men and publicity writers, 4 technicians (N.E.C.), 7 salaried and 8 self-employed managers, officials and proprietors including farm, 25 sales workers, 3 foremen; 8 mechanics and repairmen; 43 truck drivers and deliverymen, 61 other operatives and kindred workers; 4 men service workers including household; 12 men laborers including farm and 3 occupations not reported. Four women were technicians other than medical and dental, 11 bookkeepers, 4 secretaries, 4 stenographers, 4 typists, and 11 other clerical and kindred workers, 4 operatives and kindred workers and 4 women or service workers including private household.

The last major manufacturing segment was printing and publishing and allied industries. This type employed 189 and of this number 109 were men and 80 were women. Seven males were professional, technical and kindred workers, 29 were salaried or self-employed professional, technical and kindred workers, 3 were shipping and receiving clerks, 7 were other clerical and kindred workers, 20 were sales workers, 24 were printing craftsmen, 7 were operatives and kindred workers, 12 are janitors and porters. Of the women, 17 were professional, technical and kindred workers, 4 bookkeepers, 4 secretaries, 8 stenographers and 21 clerical and kindred workers. Four women were in the sales field, 3 are craftsmen, and kindred workers, 7 assemblers and 12 other operatives and kindred workers.

In the chemicals and allied products manufacturing a total of 29 workers were employed, 26 men and 3 women. Other than 4 men officials, managers, and proprietors including farm, there were 3 sales workers, 4 electricians and the balance of the workers in the industry were general operatives and kindred workers. In other nondurable goods, 4 men and 35 women were employed.

In transportation, communication, and utilities there was a total of 365 employed, with 305 men and 60 women. Among the men there were 3 accountants and auditors, 13 salaried and self-employed managers, officials, and proprietors, 16 clerical and kindred workers, 3 sales workers in utilities, 4 electricians, 4 foremen, 13 mechanics and repairmen and 46 other craftsmen and kindred workers, 134 truck drivers and deliverymen, 41 other operatives and kindred workers and 28 laborers including farm. Of the 60 women, 48 were clerical and kindred workers, 8 were operatives and kindred workers and 4 were laborers.

The wholesale trade employed 161 men and 12 women. Occupations for the men included 31 salaried and self-employed managers, officials and proprietors, 8 bookkeepers, 4 stock clerks and storekeepers, 7 clerks and kindred workers; 37 sales workers, 3 mechanics and repairmen, 4 craftsmen and kindred workers, 47 truck drivers and deliverymen, 8 other operative and kindred workers, 12 laborers including farm. Of the 12 women employed there were 4 bookkeepers, 4 secretaries, and 4 self-employed managers, officials and proprietors including farm employees.

Food and dairy product stores and milk retailing employed 189, men numbered 127 and 62 were women. Of the men, 48 were salaried or self-employed managers, officials and proprietors including farm, 8 cashiers, 32 sales workers, 16 other operatives and kindred workers and 23 laborers including farm workers. Of the women employed in this segment, 4 were bookkeepers, 14 cashiers, 27 sales workers, 4 other craftsmen and kindred workers and 13 other operatives and kindred workers. In the eating and drinking places there were 59 men and 124 women employed.

In the retail trade there were 1,008 employed or 735 men and 373 women. Among the men 13 were professional, technical and kindred workers, 167 were salaried or self-employed managers, officials and proprietors including farm; 21 bookkeepers, 7 clerical and kindred workers, 160 sales workers, 12 carpenters, 4 foremen, 113 mechanics and repairmen, 8 plumbers and pipe fitters

and 11 other craftsmen and kindred workers, 4 assemblers, 85 truck drivers and deliverymen, and 67 other operatives and kindred workers, 11 janitors and porters, 32 other service workers, and 19 laborers including farm laborers. The women included 34 self-employed managers, officials and proprietors including those owning farms, 13 secretaries, 28 bookkeepers, 4 stenographers, 8 clerical and kindred workers, 5 cashiers and 180 sales workers, and 102 other service workers.

Finance, insurance and real estate employed 97 men and 53 women. Twenty-five men were salaried or self-employed managers, officials and proprietors including owners of farms, 7 clerical and kindred workers, 62 sales workers and 3 farm laborers. The women were distributed as 4 self-employed managers, officials and proprietors, 4 secretaries, 21 other clerical and kindred workers and 4 charwomen, janitors and porters.

All services including schools and government employed 508 men and 859 women. Occupations held by men: 28 lawyers and judges, 4 surveyors, 31 salaried and self-employed managers, officials and proprietors including farmers, 14 other clerical and kindred workers, 11 sales workers, 8 carpenters, 4 electricians, 8 foremen, 82 mechanics and repairmen, 4 plumbers and pipe fitters, 12 other craftsmen and kindred workers, 4 filers, grinders and polishers of metal, 4 truck drivers and deliverymen, 7 welders and flame cutters and 7 other operatives and kindred workers, 54 janitors and porters, 42 other service workers and 17 laborers including farm. Among the women there were 5 social and welfare workers, except group; 4 technicians except medical and dental; 220 other professional, technical and kindred workers; 12 salaried, self-employed managers, officials and proprietors including farm; 20 bookkeepers; 45 secretaries; 12 other clerical and kindred workers; 12 sales workers; 56 other operatives and kindred workers; 29 charwomen, janitors and porters; 437 other service workers and 7 occupations not reported.

Public administration employed 123 men and 33 women of whom 4 men were accountants and auditors, 4 designers and draftsmen, 4 civil engineers, 5 surveyors, 5 as other professional, technical and kindred workers, 28 salaried managers, officials and proprietors including farm, 4 bookkeepers, 13 janitors and porters and 10 other service workers. Among the women the county had 4 social and welfare workers except group, 8 salaried managers, officials and proprietors including farm, 4 bookkeepers, 7 secretaries and 10 other clerical and kindred workers.

And there were 53 men and 59 women in industries not reported.

Agriculture, forestry and fisheries employed a total of 2,466 including 2,179 men and 287 women. The vast majority were engaged in farming and three-quarters of the total were self-employed.

Facts about labor in Washington County collected by the local Chamber of Commerce September 1, 1964: Of the total employed laborforce 14 years of age and over, 3,466 were employed in agriculture, 813 in manufacturing of whom 509 were men and 304 were women. These from the trade industry numbered 1,207 in retail, 173 in wholesale, 1,901 in non-agriculture and other and 657 in government which included county, state, and federal. Of

those employed in manufacturing 68 percent lived in town and 32 percent traveled from within a 20 mile radius.

These industries in the Washington, Iowa area do have some seasonal work. In the fall season approximately 63 men and 155 women are generally hired. Thirty men are hired for from six to eight weeks, and 25 men and 155 women who are hired in the fall will work through the fall and winter.

Table 2 shows basically the wage scale and industrial occupations among the production employees in Washington, Iowa, during 1964.

All four leading manufacturers in Washington, Iowa, pay time-and-a-half for overtime. These firms pay shift differential. Three firms pay 10 cents per hour for second shift and one pays 5 cents per hour. For third shift work, one firm pays 12 cents and two employers pay 10 cents additional per hour. Of the 3 leading manufacturers the turnover rate of production workers is: Co. A. approximately 10 percent, Co. B. 2 percent, and Co. C. 3 percent. Of the same 3 firms, the absentee rate experience for two of the firms is negligible and the third firm indicates 5 percent.

In general, labor problems are at a minimum. The community is not dominated by one union nor is any union leadership active in industrial development work. There have been no labor strikes within the past five years. One plant has some A.F.L. production employees and some of the local printers belong to a union. In October 1963 one manufacturing plant had an organizational election and there were 68 percent nonunion and 32 percent union members.

The Washington Chamber of Commerce would conduct a comprehensive labor availability survey for a manufacturer who was seriously considering locating in their town. Also Washington would make available school facilities for vocational training suggested by new and existing industry.

Table 2

Town WASHINGTON, IOWA
Date SEPTEMBER 1, 1964
LABOR PRODUCTION EMPLOYEES

<u>JOB TITLE</u>	<u>HOURLY WAGE</u>	
	<u>Min.</u>	<u>Max.</u>
Engine Lathe Operator		
Fork Lift Truck Operator		\$1.45
Grinder, Tool & Cutter		
Grinder, Tool & Cutter-Precision		
Helper Trades & Crafts		
Janitor	1.45	2.23
Laborer, Common	1.25	2.23
Maintenance Carpenter		
Maintenance Electrician	2.00	2.71
Maintenance Machinist		1.70
Milling Machine Operator		
Millwright		
Overhead Crane Operator		
Drill Press Operator		1.35
Receiving Clerk	1.55	2.55
Shear Operator, Heavy		
Shear Operator, Light		
Sheet Metal Worker		
Shipping Clerk	1.55	2.55
Welder	1.50	2.71
Painter, Spray		
Painter, Hand		
Stockroom Attendant	1.25	2.55
Storekeeper		
Tool & Die Maker	1.70	3.15
Tool Grinder		
Truck Driver	1.40	1.80
Turret Lathe Operator		1.55
Welder		
Worker, Prod. Line-Elec. Assembly	1.25	2.30
Worker, Prod. Line-Heavy Assembly		
Worker, Prod. Line-Light Assembly		

<u>JOB TITLE</u>	<u>OFFICE EMPLOYEES</u>		<u>MEN</u>		<u>WOMEN</u>	
	<u>Min.</u>	<u>Max.</u>	<u>Min.</u>	<u>Max.</u>	<u>Min.</u>	<u>Max.</u>
Accounting Clerk			1.60	2.00	1.25	2.00
Billing Clerk						
Calculating Machine Operator						
Clerk, General			1.25	2.00	1.25	1.75
Draftsmen						
Guard						
Key Punch Machine Operator					1.25	1.60
Messenger/Main Clerk						
Methods Man						
Payroll Clerk					1.25	1.60
Stenographer					1.25	1.60
Telephone Operator					1.25	1.60
Typist					1.25	1.60
IBM Operator			1.60	2.00	1.50	2.00

GEOLOGY AND GENERAL GROUND WATER CONDITIONS

IN WASHINGTON COUNTY

Special Report, March 18, 1965

by

H. G. Hershey

State Geologist, State of Iowa

The following commentary represents an interpretation of the available geologic and hydrologic data in the files of the Iowa and U. S. Geological Surveys.

Washington County is located in the third row of counties north of the Missouri State line embracing T. 74-77N., and R. 6-9W. in southeastern Iowa. The terrain consists of a nearly level glacial plain dissected by streams to a depth of about 175 feet. Maximum relief of the county is about 275 feet with the highest elevation about 825 feet above sea level on the uplands near Keota and Lexington and the lowest elevation about 550 feet above sea level along the Iowa River at the northeast boundary of the county.

The main drainage lines are the Iowa-English River system in the northeastern half of the county and the Skunk River system in the southwestern half. Flow records of the English River at Kalona indicate an average discharge of about 316 cfs and of the Skunk River at Coppock about 1,382 cfs. Although Washington County is amply supplied with surface water, practically the entire public consumption is obtained from wells. A generalized log of the stratigraphic units encountered in wells in Washington County down through the St. Lawrence Dolomite is outlined in tabular form as follows:

<u>Formation</u>	<u>Thickness (Feet)</u>
Quaternary System	
Recent and Pleistocene deposits (alluvium, soil, and loess, underlain by glacial drift, locally contains appreciable sand and gravel material)	0-300
Pennsylvanian System	
Des Moines Series (mostly shale, some thin sandstone)	0-40
Mississippian System	
Ste. Genevieve Formation (limestone and shale)	
St. Louis-Spergen Formations (limestone, dolomite, and sandstone, some chert)	0-70
Warsaw Formation (shale, some dolomite, minor chert)	0-40
Keokuk-Burlington Formations (limestone and dolomite with considerable chert)	0-125
Wassonville Formation (dolomite, some chert)	0-35
North Hill Limestone, Locally oolitic	0-25
Prospect Hill Siltstone	0-5
McCraney Limestone	0-5
English River Siltstone	0-30
Maple Mill Shale	265-315

Devonian System	
Lime Creek Formation (shale and dolomite)	5-85
Cedar Valley Formation (limestone and dolomite)	70-160
Wapsipinicon Formation (dolomite, containing gypsum in southwestern part of County)	5-110
Silurian System	
Niagaran Series (dolomite)	0-80
Ordovician System	
Maquoketa Formation (shale, dolomitic, some dolomite)	100-240
Galena Formation (limestone and dolomite, contains chert in lower part)	175-220.
Decorah-Platteville Formations (mostly limestone, some dolomite, some shale; Glenwood Shale at base)	75-95
St. Peter Sandstone	35-180
Prairie du Chien Formation (dolomite, very sandy in upper half, no sand, but considerable chert in lower half)	395-520 ₊
Cambrian System	
Jordan Sandstone, dolomitic	50-125
St. Lawrence Dolomite, contains greensand in lower part	170-215

As indicated on the thickness scale, all of these geologic units are not spread uniformly across the county. Erosion and structural features have resulted in the local thinning and thickening of these beds as well as complete removal in some places. The depth to any unit will depend on the starting elevation of the well and variations in structure and thickness of the formations.

The principal sources of water for large capacity wells in this area are alluvial sands and gravels underlying the flood plains of the larger streams and the deep-lying Jordan Sandstone reservoir. Minor water supplies adequate for domestic and stock wells are available from the limestone and dolomites of Mississippian and Devonian age and perhaps also from the Galena-Platteville and St. Peter Formations. However, because of the highly mineralized character of the water from the Devonian and underlying strata through the St. Peter Sandstone, few wells penetrate below the Maple Mill Shale unless drilling continues through the Jordan-St. Lawrence sequence at great depths. Highly successful wells have been completed in the Jordan Sandstone at Washington and Wellman and many other communities in southeastern Iowa. In general, upwards of several hundred gallons a minute usually can be obtained with a specific capacity of about 5-10 gallons per foot of drawdown. For example, the Washington city well No. 6 (1956) reportedly produced 882 gpm with 105 feet of drawdown from an original static head of 172 feet. Wellman obtained 300 gpm with only 15 feet of drawdown indicating that a much larger output probably could be developed there. In both these wells casing is set from the surface into the middle of the Prairie du Chien Dolomite to obtain a complete shut-out of the highly mineralized water zones in the overlying rocks. Grouting the annular space between the casing and the walls of the well with neat cement will help to protect the pipe from corrosion and prolong the life of the well. Mineral analyses indicate the water from the Jordan-St. Lawrence reservoir to be acceptable for drinking

and other domestic uses with a concentration of dissolved solids of about 1,200 parts per million and a temperature range of about 68-76° F. A number of mineral analyses are tabulated on a separate sheet appended to this report.

The aquifer potential of the alluvial materials is not very well known. Municipal and industrial wells at Kalona reportedly are capable of yielding at least 100 gpm from this source. However, with favorable conditions a properly constructed well might produce much larger supplies. Exploratory drilling will be necessary to locate the most suitable gravel formation. Since the alluvial deposits are confined to the valleys their use will be rather restricted unless pipelines can be laid to carry the water to upland sites.

Another possibility for moderate yields is the glacial sand and gravel deposits filling deep bedrock channels that traverse the county along old drainage lines. Riverside reportedly develops its water from channel sand and gravel at a depth of 250 feet. The location of these channels is variously interpreted in these reports entitled "Subdrift Valleys of Southeastern Iowa" (1947) by T. R. Beveridge and "The Geology and Ground-Water Resources of Washington County" (1956) by C. O. Morgan. Both theses are available on a loan basis from the Geology Department Library at the University of Iowa, Iowa City.

In summary, the Jordan-St. Lawrence reservoir at a depth range of about 1,700 to 1,900 feet seems to be the most promising source for large capacity wells suitable for industrial use in Washington County. Other sources of uncertain potential are shallow alluvial sands and gravels in the valleys of the principal streams and glacial sands and gravels occupying ancient bedrock valleys. Actual drilling and test pumping will provide the most reliable information.

Table 3
 IOWA GEOLOGICAL SURVEY
 TABULATION OF WATER ANALYSIS
 (Dissolved constituents in parts per million)

TOWN - WELL NO. OWNER	Date of coll.	Depth (ft.)	Geol. Source	° F	Diss. solids	Fe	Mn	Ca	Mg	K	Na	CO ₃	HCO ₃	SO ₄	Cl	F	NO ₃	Hardness Cal. as CaCO ₃			pH	Cond.
																		tot.	carb.	non carb.		
Kalona town	8/3/55	70	Alluvial sd. & gr.	52	312	2.7	0.1	53	27	1.4	12	0	210	62	18	0.2	0	243	172	71	76	504
Riverside town	10/11/61	260	Pleist. sd. & gr.	52	443	.96	.08	55	20	3.1	84	0	511	5.3	2.5	.3	<	220	220	0	7.8	660
Wellman town	11/7/57	1715	Pr. du.Ch. Jordan		1180	3.6	<	93	43	19	210	0	288	560	54	1.4	1.3	409	236	173	7.4	1590
Washington city No. 6	2/1/61	1900	Pr. du.Ch. Jordan St. Law.	69	1221	.64	<	107	44	22	198	10	285	548	59	1.2	0.4	448	234	214	7.5	1640

< = Less than

Table 4

WASHINGTON COUNTY

North Fork English River at Mouth

Location.--NE $\frac{1}{4}$ Sec. 6. T.77 N., R9 W.

Drainage area.-- $\frac{3}{4}$ sq. mi.

Discharge in cubic feet per second for selected duration percentages

Water years	Percent of time							
	2	10	28	70	80	90	95	98
1934-53	1,190	415	160	15	8.1	3.9	2.5	1.7

English River below confluence North & South Forks

Location.--NE $\frac{1}{4}$ Sec. 6 T.77 N., R9 W.

Drainage area.--442 sq. mi.

Discharge in cubic feet per second for selected duration percentages

Water years	Percent of time							
	2	10	28	70	80	90	95	98
1934-53	1,650	600	166	20	9.0	4.4	2.8	1.9

54

Table 5

5-4555. English River at Kalona, Iowa
(gaging station)

Location.--Lat. $41^{\circ}28'10''$, Long. $91^{\circ}43'00''$, in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T. 77 N., R. 8 W., on right bank, 30 ft. upstream from bridge on State Highway 1, 1 mile south of Kalona, 4.5 miles downstream from Smith Creek, and 14.5 miles upstream from mouth.

Miles above mouth of Iowa River.--67

Drainage area.-- 573 sq. mi.

Records available.--Sept. 1939 to Sept. 1964

Extremes.--Maximum discharge, daily 16,500 Mar. 31, 1960; peak 18,500 cfs Mar. 31, 1960, (gage height) 19.89 ft); Minimum daily, 1.1 cfs Jan. 20-27, 1956.

Water Years	Duration of flow															
	Percent of time															
	1	2	5	10	20	30	40	50	60	70	80	84	90	95	98	99
1940-63	3,850	2,640	1,380	730	363	216	135	79	49	29	15	11	6.5	3.7	2.5	2.1
Apr.-Sept. 1940-63	3,700	2,700	1,480	810	425	255	156	100	66	42	24	18	11	6.0	3.2	2.6
1953-63	3,700	2,350	1,130	600	295	176	100	59	35	21	11	8.3	4.5	2.7	2.1	1.7
Min. 36 mo.*	775	494	200	101	58	34	22	15	9.6	5.6	3.1	2.8	2.3	1.9	1.5	1.4
Min. 12 mo.*	270	190	60	22	12	8.3	5.3	3.5	2.8	2.5	2.1	2.0	1.7	1.5	1.2	a

* Beginning 7/01/55.

a Daily discharge was 1.1 cfs or greater 100% of time

* Beginning 7/01/55.

Table 6

5-4555. English River at Kalona, Iowa--Continued

Minimum discharges

Period of consecutive days	1	7	30	60	120	183
cfs	1.1	1.1	1.65	1.94	2.16	2.85
Starting date	1/20/56	1/20/56	1/11/56	12/10/55	10/16/55	8/14/55

Low-flow frequency

Period of days	Recurrence interval, years			
	2	5	10	20
7	9.7	2.8	1.7	1.3
30	12	3.7	2.4	1.8
60	23	5.9	3.0	2.1
120	43	10	4.1	2.4

Table 7

LOW-FLOW PARTIAL-RECORD STATIONS
South Fork English River near Kinross, Iowa

Location.--NW $\frac{1}{4}$ Sec. 7, T.77 N., R.9 W., at bridge, 3 miles northeast of Kinross.

Drainage area.--125 sq. mi.

Measurements

<u>Date</u>	<u>Discharge (cfs)</u>
9-25-57	5.68
4-22-58	7.20
10-3-58	1.64
10-22-59	11.0
9-6-60	3.23
9-7-61	5.76
4-16-63	15.3
6-26-63	4.34
7-01-63	4.05
11-06-63	2.13

Table 8

LOW-FLOW PARTIAL-RECORD STATIONS, CONTINUED
Long Creek near Ainsworth, Iowa

Location.--SE $\frac{1}{4}$ sec. 26 T. 75N., R. 6W., at bridge, 2 $\frac{1}{2}$ miles southeast of Ainsworth.

Drainage area.--68.4 sq. mi.

Measurements

Date	<u>Discharge (cfs)</u>
9-24-57	0
4-28-58	1.76
10-2-58	1.12
10-22-59	15.9
9-6-60	.02
8-31-61	.12
11-4-63	.22
10-29-64	.18

Crooked Creek near Coppock, Iowa

Location.--NE $\frac{1}{4}$ Sec. 30, T. 74N. R. 7W, at bridge, 2 miles northeast of Coppock.

Drainage area.--259 sq. mi.

Measurements

Date	<u>Discharge (cfs)</u>
9-24-57	2.30
3-25-58	24.5
10-27-58	11.2
10-20-59	76.5
9-6-60	2.36
9-5-61	3.26
11-4-63	.80
10-13-64	.27

Table 9

Low-Flow Supplemental Sites
English River below South Fork English River near Kinross, Iowa

Location.--W $\frac{1}{2}$ sec. 5, T.77N., R. 9W., at bridge, 4.5 miles northeast of Kinross.

Drainage area.--449 sq. mi.

Measurements

<u>Date</u>	<u>Discharge (cfs)</u>
4-16-63	58.3
6-26-63	17.1
7-01-63	16.1
11-06-63	9.58

English River near Wellman, Iowa

Location.--S $\frac{1}{2}$ Sec. 8, T.77N., R.8W., at bridge, 2 miles northeast of Wellman.

Drainage area.--472 sq. mi.

Measurements

<u>Date</u>	<u>Discharge (cfs)</u>
4-16-63	62.4
7-01-63	18.9
11-06-63	9.37

Table 10

Low-Flow Supplemental Sites, Continued
Smith Creek near Kalona, Iowa

Location.--NE $\frac{1}{4}$ sec. 16, T. 77N., R. 8W., at bridge 3.5 miles west of Kalona

Drainage area.--40.4 sq. mi.

Measurements

<u>Date</u>	<u>Discharge (cfs)</u>
4-16-63	5.33
7-01-63	.42
11-06-63	.27

Deer Creek near Kalona

Location.--NW $\frac{1}{4}$ sec. 10, T. 77N., R. 8W., at bridge, 3 miles northwest of Kalona

Drainage area.--39.2 sq. mi.

Measurements

<u>Date</u>	<u>Discharge (cfs)</u>
4-16-63	6.63
7-01-63	1.14
11-06-63	.05

Table 11

(About 1/8 mile south of Washington-Jefferson County line)

5-4730. SKUNK RIVER AT COPPOCK, IOWA

Location.--Lat 41°09'50", Long 91°43'05", in NE¹/₄NE¹/₄ Sec. 1, T. 73N., R. 8W., at bridge on State Highway 78, 1/2 mile west of Coppock, three quarters of a mile upstream from Crooked Creek.

Drainage area.--2,916 sq. mi.

Records available.--October 1913 to September 1944 (discontinued)

Average discharge.--30 years 1,382 cfs

Extremes of discharge.--

Minimum Flow for Period of Record:

Period of Consecutive days	1 days	7 day	30 day	60 day	120 day	183 day
Discharge, in cfs	8.0	8.7	11.2	21.2	45.8	65.8
Starting date	1-27-40	1-23-40	1-9-40	12-28-39	11-2-39	9-2-39

Maximum flow for period of record

Daily, 38,700 cfs May 24, 1944; peak, 41,500 cfs May 24, 1944.

Discharge, in cubic feet per second, for selected duration percentages

Water year	Percent of time														
	1	2	5	10	20	30	40	50	60	70	80	90	95	98	99
1916-44	10,000	8,050	5,100	3,300	1,900	1,250	890	620	445	320	200	103	62	35	25

MINERAL RESOURCES OF WASHINGTON COUNTY

Sand, Gravel and Limestone:

As far as sand and gravel are concerned the probability of finding economically workable deposits in the county is very slight. Small pockets of glacial gravel occur in the till but they are usually clayey and of such size as not to be commercially important.

Washington County, on the other hand, has a better than average distribution of limestone.

Limestone, Mississippian in age, is exposed in all except Oregon and Crawford townships. Across the northern tier of townships the limestone belongs to the formations known as Burlington and Hampton (Wassonville member). In this north part of the county dolomitization of the limestone has been so severe that it has left the stone rather soft and not durable as it is in other areas of the county. Quarries such as that north of Wellman or the old one south of Riverside are representative of the limestone of this area. The stone is desirable for agricultural limestone but has limited use in road construction.

Farther to the south, near West Chester, Keota and Washington these same units (Burlington and Wassonville) are quarried. Here they are normal sections that have not undergone the more severe dolomitization and are, therefore, harder and more durable. These quarries supply not only agricultural lime but a large demand for road materials of various qualities. Typical of the area are the quarries northwest of West Chester, south of Keota or the mine at Young America.

Younger Mississippian limestones (St. Louis and Ste. Genevieve) are worked in the southwest part of the county. These limestones, like those around West Chester and Washington, supply not only agricultural lime but also most of the road building requirements. Here, as in the West Chester-Keota-Washington Area it requires selective quarrying to obtain stone that will meet the higher type specifications in road construction.

The development of new quarry areas in Washington County can be accomplished, but to do it economically will require a well-planned exploration program directed by someone who is familiar with the geology of the county and the requirements of the market.

Underground Storage of Natural Gas and Oil Exploration:

An underground gas storage facility is being developed in western Washington County adjacent to the Washington-Keokuk County line. The structure has been named after the town of Keota in eastern Keokuk County.

The Keota Dome was discovered as a result of routine subsurface geological studies by the Iowa Geological Survey. An exploratory drilling program and geologic investigation was undertaken by the Natural Gas Pipeline Company of America in order to confirm the presence of a structure. The structure is a domal anticlinal fold. Approximately one hundred twenty feet of closure is indicated within an area of 2,458 surface acres.

The St. Peter Sandstone which occurs at an average depth of 1,025 feet is a porous and permeable sandstone suitable for a reservoir. The shales and impervious carbonates above the sandstone provide the necessary caprock which will protect against possible vertical migration of storage gas.

The estimated capacity of the reservoir is 8-10 billion cubic feet of storage gas. Injection of gas began in November 1963. On November 30, 1964 395,319 MCF (thousand cubic feet) of gas were in storage.

During the exploratory drilling by Natural Gas Pipeline Company of America on the Keota Dome, oil was discovered in the Pecatonica member of the Platteville formation. Announcement of the discovery was made March 8, 1963.

The discovery well, W. F. Flynn P-1, is located in section 20, T. 76N., R. 9W Washington County. This well is situated near the crest of the anticlinal dome. Initially the well produced approximately 15 bbls. of oil per day. However, the production decreased and at the present time the well has been taken out of production.

Subsequent to the discovery well, four oil tests drilled in the vicinity of Keota had shows of oil. Two additional tests did not.

Oil staining has been noted throughout portions of the rocks of Ordovician Age in southeastern Iowa. A strong petroliferous odor is also noted during the drilling of this section. The oil encountered in the tests has been a low grade crude and does not appear to be driven by either gas or water pressure.

Washington County is crossed by two major anticlinal features which trend in a northwest-southeast direction. Indications of other domal structures along these anticlines are shown on the accompanying map. Further drilling will indicate the suitability of these structures for either gas storage, or the possible production of oil.

NATURAL RESOURCES (RAW MATERIALS) OF WASHINGTON COUNTY

TIMBER

Ten percent of the land area or 37,000 acres of Washington County are in timberland. This is all the specific information about Washington County. The following information is an average for southeast Iowa:

Commercial forest area (in percent) by stand size:

Large Sawtimber	19.9
Small Sawtimber	8.8
Pole Timber	35.1
Seedling & Sapling	17.0
Nonstocked	19.2
	<u>100.0</u>

Commercial forest area (in percent) by forest type:

Oak - hickory	50.3
Northern hardwoods	0.5
Elm - ash - cottonwood	44.6
Hardwood - red cedar	1.3
Bur Oak	3.3
	<u>100.0</u>

Average board feet per acre:

Oak - hickory	627
Northern hardwoods	36
Elm - ash - cottonwood	726
Bur Oak	53
	<u>1,442</u>

Percentage of sawlog timber by tree diameter class:

12" - 14"	32.4
16 - 18	29.7
20 - 22	16.6
24 - 26	10.0
28 plus	11.3
	<u>100.0</u>

Hardwood sawtimber volume (in percent) by log grade (quality):

Grade 1	10
Grade 2	19
Grade 3	31
Tie & Timber grade	40
	<u>100</u>

By taking the average board feet for acre for southeast Iowa and multiplying it by the acreage of timber in Washington County, the resulting figures are:

Oak - hickory	23,199,000 Board feet
Northern hardwoods	1,332,000
Elm - ash - cottonwoods	26,862,000
Bur Oak	1,961,000
Total	<u>53,354,000</u>

At the time this survey was made there was no pulpwood industry in Iowa, so no figures were gathered on the volume of pulpwood available. Board feet figures were taken on trees 12" DBH and above. At the present time pulpwood is being cut and shipped to Ft. Madison, Iowa, from areas in southeastern Iowa.

Most of the timber in Washington County is accessible. Average stumpage value is hard to determine, but a guess would be:

Soft Maple	\$30.00 per 1,000 board feet
White Oak	20.00
Other	10.00 - 15.00 (not including walnut)

The timber is about 99 percent in farm woodlots. Availability would depend upon each individual owner; however, most owners are willing to sell timber if they are offered a fair price from a reliable logger.

If there would be serious thought toward encouraging a forest products industry to locate in Washington County, then more up-to-date information should be made available. In order to interest a prospective forest products industry, figures from the surrounding counties would be required:

<u>County</u>	<u>Acres in Timberland</u>
Henry County	36,000
Jefferson	37,000
Keokuk	35,000
Iowa	30,000
Johnson	41,000
Muscatine	30,000
Louisa	41,000

Most industries of this nature are interested in the timber resources for at least a fifty mile radius. A special survey may be necessary.

Source: State Conservation Commission, "The Forest Resources of Iowa," published by U. S. Department of Agriculture, Central State Forest Experiment Station, Columbus, Ohio

SUPPORTING INDUSTRIAL AND SERVICE RESOURCES

Below are the larger industries in Washington County and several of the leading service industries:

WASHINGTON, IOWA

Advance-Ross Electronics Co. - manufacturers deflection yokes, electronic components

American Pearl Button Co. - manufactures pearl and plastic buttons

Cargill, Inc. - processors of bean meal and soya oil

Curran Co. - manufactures plastic blisters used in packaging

Hanson Concrete Co. - construction, general contractor

McCleery-Cumming Co. - manufactures wall calendars

Nixon & Co. - feed processing

Northrup-King & Co. - feeds and seed corn

Richards Construction, Inc. - road oil and construction

Sitler Electric Supply - wholesale electric supplies

U. S. Vacuum Pak Corp. - plastic molders

Washington Concrete Co. - manufactures concrete sewer pipes and pre-cast concrete bridges

Washington Manufacturing Co. - manufactures bolts, studs, rods, and wire

KALONA, IOWA

Maplecrest Turkey Plant - turkey process plant

WELLMAN, IOWA

Kaser Construction Co. - quarry limestone

Service Industries in Washington, Iowa

Bowen Corporation - contractors, suppliers

Miller Welding - welding

Levy Mose Company - structural steel

Keating Boiler Refactory & Welding

Waggoner Welding and Machine Shop

Lemke Electric Motor Shop

Farrel's Printing - Evening Journal

Chapter VI - WASHINGTON COUNTY'S TRADE AND TOURIST POTENTIAL

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WHOLESALE TRADE

According to the U. S. Department of Commerce publication, "County Business Patterns," 24 reporting units of establishments in the wholesale trade industry in Washington County were covered by the Federal Insurance Contribution Act during the first quarter of 1962. Twelve of these firms had from 1 to 3 employees, 9 firms had from 4 to 7 employees and 3 firms had from 8 to 19 employees. No wholesale firm had more than 19 employees.

Washington had few wholesalers other than petroleum and oil jobbers. Among several other wholesalers the town has two automotive parts jobbers, one electrical supply, two feed and three livestock buying stations. Large numbers of finished hogs, cattle, and sheep are trucked to market from Washington, Iowa.

RETAIL TRADE

Based on the Iowa State Tax Commission report of the number of sales tax returns there are approximately 556 retail firms in Washington County. The county had an estimated retail sales volume of \$24,656,000 in the fiscal year ending June 30, 1964. The town of Washington, Iowa, reported 62 percent of the gross county sales or an estimated figure of \$15,286,720 during the same period. There are approximately 208 retail outlets in this county seat town.

There is room for 1,100 automobiles to park on the streets around the square and one block beyond the square in all directions. Wide downtown streets offer double parking in the middle of the streets as well as diagonal parking at the curbs.

The trend of retail sales tax collected since 1961 is as follows:

<u>Year</u>	<u>Washington County</u>	<u>Washington, Iowa</u>	<u>Wellman</u>
1961	\$454,643	\$282,523	\$47,861
1962	460,407	285,382	46,778
1963	474,965	292,633	45,566
1964	493,120	307,204	44,554

The reversal in amounts of gross sales is apparent in comparing the towns of Washington and Wellman. Washington, the largest town in the county, is the county seat. Washington is growing consistently while Wellman has consistently lost approximately \$55,000 in gross sales a year over the last four years. The loss of population and gross sales in the smallest towns in Iowa is a statewide trend.

Table 1

TREND OF RETAIL SALES TAX COLLECTED

IN WASHINGTON AND SURROUNDING COUNTIES

1962 - 1964

<u>Counties</u>	<u>1962</u>	<u>% Increase</u>	<u>1963</u>	<u>% Increase or Decrease</u>	<u>1964</u>
Washington	\$460,400	+3.2	\$475,000	+3.8	\$493,121
Henry	389,300	6.0	412,600	5.8	436,743
Louisa	177,300	7.4	188,000	6.5	200,235
Jefferson	360,500	10.6	398,100	6.6	424,390
Keokuk	253,000	4.0	263,600	9.4	288,251
Cedar	320,800	6.0	339,400	-3.9	328,746
Iowa	330,338	9.3	361,156	3.1	372,457
Johnson	1,254,770	7.1	1,343,000	6.9	1,435,524

Washington County sales exceeded surrounding counties for the past three years with the exception of Johnson County, site of the University of Iowa. Johnson has a larger population. The retail trading area population for Washington, Iowa is approximately 29,000.

The retail sales tax rate for the State of Iowa is 2 percent. Therefore gross retail sales estimates can be figured by multiplying the amount of sales tax collected by 50.

Table 2

SALES TAX COLLECTED BY TOWN IN WASHINGTON COUNTY

FOR YEAR ENDING JUNE 30, 1964

<u>TOWN</u>	<u>Number of Quarterly Returns</u>	<u>Amount of Tax</u>
Washington	864	\$307,204
Kalona	358	70,125
Brighton	128	15,876
Riverside	105	14,763
Wellman	266	44,554
Under 500	232	19,405
Nonpermit	123	1,288
Rural	191	19,901
Total	2,267	\$493,120

Table 3

SALES TAX COLLECTED BY TYPE OF BUSINESS
FOR YEAR ENDING JUNE 30, 1964

<u>Washington County</u>	<u>Number of Quarterly Returns</u>	<u>Amount of Tax</u>
Food	402	\$124,337
Apparel	55	18,901
General Merchandise	452	122,742
Furniture & Equipment	54	7,228
Motor Vehicle	443	54,875
Lumber & Materials	126	49,530
Vending Machines	0	0
Service	122	7,583
Public Utilities	84	52,461
Miscellaneous	529	55,463
	<u>2,267</u>	<u>\$493,120</u>

Both retail sales tax collections from Washington County and Washington, Iowa, indicate a steady growth in the last four years. Additional information on retail sales will be found in Chapter IV.

In the first quarter of 1962 there were 208 reporting firms in Washington County according to "County Business Patterns" published by the U. S. Department of Commerce, under the Federal Insurance Contributions Act. One hundred and thirty-one firms in the retail trade industry had from 1 to 3 employees, 52 firms had from 4 to 7 employees, 22 firms had from 8 to 19 employees, and 3 firms had 20 or more employees. Table 4 lists establishments and the number of employees.

Table 4
REPORTING UNITS AND EMPLOYMENT SIZE CLASS REPORTED UNDER
THE FEDERAL INSURANCE CONTRIBUTIONS ACT
FIRST QUARTER 1962
WASHINGTON COUNTY

Industry	Total Reporting Units	Units by Employment Size Class			
		1 to 3	4 to 7	8 to 19	20 to 49
Wholesale Trade	24	12	9	3	0
Retail Trade	208	131	52	22	3
Building Materials & Farm Equipment	32	20	4	7	1
Hardware & Farm Equipment	21	16	2	3	0
Food	20	13	5	1	1
Grocery	16	9	5	1	1
Auto Dealers & Service Stations	44	31	9	4	0
Service Stations	31	3	0	0	0
Eating & Drinking Places	33	23	8	2	0
Miscellaneous Retail Stores	43	25	14	4	0

Source: County Business Patterns, U. S. Department of Commerce.

SERVICE

Washington, Iowa, has lodging facilities with 115 rooms. There are 3 hotels with 85 rooms. Rates start at \$4.00 for single and \$6.00 for a double room. The leading hotel has meeting and banquet facilities available with a capacity of 250. The two motels have 30 rooms. Their single rates start at \$6.00 per night. Motel rooms are equipped with air conditioning, TV, and connecting units for families.

Of the 12 restaurants listed in Washington, the 3 larger ones have a total capacity of 267.

Washington County has seven professional associations with the number of members listed below:

<u>Name</u>	<u>Number</u>
Bar Association	18
Medical Association	11
Teachers' Association	217
Nurses' Association	51
Ministerial Association	10
Dental Association	8
Veterninary Association	14

The Washington, Iowa, telephone book lists 11 insurance agencies and at least 20 insurance agents. There are five real estate firms.

RECREATIONAL FACILITIES

Lake Darling, in Lake Darling State Park, is located approximately 14 miles southwest of Washington in the extreme southwest portion of the county. The park has 500 acres and offers camping facilities, boating, swimming, and fishing. During the summer the YMCA sponsors the Lake Darling Youth Center offering a variety of activities to youngsters in the state park near Brighton, Iowa.

Sockum Ridge Park, an 80 acre tract, lies seven miles southeast of Washington and its attractions are picnic tables, hiking trails and a new small lake. Marr Park and Highway Rest Area is located one mile west of Ainsworth on Highway 92 and contains 40 acres, with auto trails, fishing pond, toilets and water. Other recreational areas in Washington County are Wassonville Area near Wellman, Walnut School, 7 miles southwest of Washington, Hayes Timber Area in Washington; Iowa Township Park, north of Riverside, and Fern Cliff, 10 miles southwest of Washington, Iowa.

The Skunk River, English River, and the Iowa River flow through Washington County. Fishermen load their stringers with a variety of fish from these three rivers. On the Skunk River, McKain's bridge river access area provides boating, fishing, and a picnic area.

Rabbits, squirrels, deer, quail, pheasant, geese, ducks, coon, and fox are among the numerous game hunted in the county.

Washington, Iowa, has three city parks: Sunset Park, Central Square, and Townsley Park. They include three modern shelter houses and playground equipment. All are well wooded, laid out and beautifully maintained. The municipal swimming pool near Sunset Park is convenient, modern, well supervised and thronged with activity through the summer months. The pool will accommodate 450 swimmers and a wading pool is attached. Central Square Park has an area of 1.6 acres and is located in the center of the business district and serves as an ornamental park. The park is attractively landscaped and contains a band shell for summer concerts.

On the west side Townsley Park adjoins Washington. This park is the site of the annual Washington County Fair and other activities. The National Guard armory adjoins this site and its facilities are often used for civic and county events.

There are four golf courses in Washington County, one each at Kalona, Keota, Wellman, and Washington. The Washington Course is a sharp 9 holed (bent grass greens). The Washington Golf and Country Club provides family activities as well as golf. The course is public and the greens fees are \$2.00 and membership dues for the club range from \$50 to \$100. The organization also offers its club room on a rental basis.

There are two movie theaters, one downtown and one convenient drive-in, which furnish up-to-date motion pictures. The city has a local community playhouse group which generally has one play or musical a year. The 1964 performance was "Music Man." The community also has a lecture series on travel. Discussion groups are held for newcomers and there is a series of "Economic Discussion Breakfasts."

Additional recreational activities are archery, miniature golf, bowling, shuffleboard and swimming in indoor and outdoor pools.

The Washington Community YM-YWCA are housed in their own \$225,000 building in the center of town. Washington is the smallest community in the nation to have a YMCA with these fine facilities. In addition to the indoor swimming pool, the building also houses a gymnasium, hobbies and game rooms and a much used community banquet room. Recently the city of Washington, Iowa had a drive for an expansion program of the YM-YWCA facilities and the goal of \$170,000, was surpassed by \$55,818. It was described by the president of the YMCA board as being the greatest team effort in the history of the community. A preliminary survey of the campaign revealed that a total of 2,317 persons have shared in the "Y" improvement project during the drive.

Little League baseball is sponsored by the Men's Club of the YMCA and by Kiwanis. Together they have at least six Little League teams annually.

General cultural activities include the Washington Art Guild with 56 members and the fortnightly Art Guild. The State University of Iowa, located about 30 miles north, offers complete annual programs in all arts including a symphony orchestra.

Within 54 miles of Washington, minor league baseball is played and less than 30 miles away is the Mississippi River. The river offers boating and fishing and beautiful seasonal scenery. The University of Iowa at Iowa City offers Big Ten football, basketball, wrestling, track, swimming and tennis plus many cultural activities.

The town of Washington has several proposed plans for additional park facilities. Plans will include two additional municipal parks, expansion of some present parks and expansion of park areas near present schools. When completely developed, the park system would place recreation facilities within a convenient reach of practically all the residents of Washington.

The above information is for the use of the recipient only and should not be disseminated to other personnel. This information is classified "Secret" and is to be controlled in accordance with the provisions of Executive Order 11652, dated August 14, 1950, and the provisions of Executive Order 11652, dated August 14, 1950, and the provisions of Executive Order 11652, dated August 14, 1950.

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Chapter VII - FINANCIAL INSTITUTIONS IN WASHINGTON COUNTY

BANKS

Washington County has ten banks. These banks range in deposits from a low of \$1,355,000 to a high of \$5,782,000. The above banks in 1963 had a combined total of \$26,347,323 on deposit and a combined total of \$11,292,277 out on loans and discounts. The two largest banks are located in Washington, Iowa.

Table 1

WASHINGTON COUNTY BANKS 1951-1963

<u>Year</u>	<u>Cash Reserves</u>	<u>Deposits</u>	<u>Loans & Discounts</u>	<u>Ratio</u>
1951	\$4,672,981	\$18,400,000	\$5,011,662	27%
1957	4,634,004	21,500,000	7,593,284	35%
1963	5,219,461	26,347,323	11,292,277	43%

The trend over the last twelve years indicates banking growth in all the above areas.

The two banks in Washington, Iowa, the National Bank of Washington and the Washington State Bank as of September 1, 1964, had a total of \$11,446,109 assets, \$220,000 capital, \$10,362,941 deposits, and \$380,000 in surplus.

The only other town in Washington County that has two banks is Kalona. Washington has a population of 6,037 and Kalona, the second largest town in the county has a population 1/5 that of Washington or 1,235. Yet the banks in Kalona have a combined total of \$5,938,244 in deposits compared to \$10,362,941 on deposit in the Washington banks.

Management of the banks are civic minded and have assisted in the growth of Washington County. The banks stand ready to loan money for industrial and business enterprises and to make real estate loans where investigation proves the borrower has reputable credit.

FINANCIAL INSTITUTIONS OTHER THAN BANKS

SAVINGS AND LOAN ASSOCIATION

Washington Federal Savings and Loan Association is another financial institution serving Washington County and is located in Washington, Iowa. It has assets of \$3,122,146, surplus of \$317,349 and deposits of \$2,777,450.

The prevailing interest rates for the Washington banks are 2 percent short term, 3 percent 6 months and 4 percent for one year. The Savings and Loan Association is 4 percent. FHA mortgage loans are available from a local source at the rate of 5 3/4 percent plus insurance of 1/2 percent.

Table 2

WASHINGTON COUNTY BANKS IN 1963

Bank and Location	Deposits in 1963	Ratio	Loans and Discounts
Ainsworth State Bank Ainsworth, Iowa	\$1,817,383	46%	\$843,707
Brighton Rubio Savings Brighton, Iowa	1,623,871	53	855,223
Crawfordsville Peoples Savings Bank Crawfordsville, Iowa	1,456,000	29	423,000
Kalona Savings Bank Kalona, Iowa	2,678,254	44	1,186,738
Kalona Farmers Savings Bank Kalona, Iowa	3,249,990	53	1,718,653
Riverside Peoples Trust & Savings Riverside, Iowa	1,507,512	42	634,900
Wellman Savings Bank Wellman, Iowa	2,388,160	47	1,118,790
West Chester Savings West Chester, Iowa	1,354,782	47	637,195
National Bank of Washington Washington, Iowa	4,489,524	35	1,577,333
Washington State Bank Washington, Iowa	5,781,847	40	2,297,138
TOTALS	<u>\$26,347,323</u>	Average <u>43%</u>	<u>\$11,292,277</u>

INSURANCE

There are ten insurance agencies in Washington, Iowa and over twenty agents serving the area. The government also has a Federal Crop Insurance Corporation office located in Washington, Iowa.

GENERAL

The general trend of growth of financial institutions has been a steady increase through the years.

Chapter VIII - AGRICULTURE IN WASHINGTON COUNTY

AGRICULTURE

Farming is a major industry of Washington County. In 1959 over \$25 million worth of farm products were marketed. Noted for its leadership in swine production, Washington County generally ranks second in Iowa in the number of pigs raised. In 1962 Washington County ranked fourth in national swine production.

Washington County occupies 363,520 acres with 350,000 acres in farmland. Corn and soybeans are the two major crops.

Turkey production is a leading industry in this county, ranking second to Hamilton County in the number of turkeys raised annually. Washington County produced some 532,200 turkeys in 1963.

The 385,000 hogs produced in this county in 1962 could have provided over one million people, or 40 percent of the population of Iowa, with their annual pork supply, basing pork consumption on an average of 65 pounds per person.

The above agricultural information is supplied from reports made by Jim Frier, Washington County Extension Director.

TREND IN ACREAGE AND FARM SIZE

In 1953, according to the Iowa Annual Farm Census, Iowa had 196,251 farms, with an average size of 177 acres. By 1963 the number of Iowa farms had decreased to 170,030 and the average size had increased to 203 acres.

The Washington County trend in number of farms, average size, and value per acre between 1950 and 1963.

<u>ITEM</u>	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1963</u>	<u>1964</u>
Average size acres	165	173	183	195	201
Number of farms	2147	2048	1908	1785	1,725
Average value per acre	\$188	\$202	\$263	N.A.	N.A.

Since 1950 an average of 28 farms each year were eliminated by combining with other farms. Consequently the average acreage per farm has increased annually as shown:

1950-55	Average farm acreage increased 8 acres
1955-60	Average farm acreage increased 10 acres
1960-64	Average farm acreage increased 18 acres

The major pressure to enlarge farms comes from farmers who have adequate machinery and labor. Due to technological innovations farmers can handle additional acreage. Whenever a farmer retires or leaves the farm, several neighbors will seek to rent or buy this land to operate along with their own farms. Leading farmers expect the county average farm size to be about 240 acres by 1975.

The value of land and buildings averaged \$48,620 for each farm in 1959 compared with \$34,632 in 1954. This represented an actual dollar gain in value of reporting farms since the values were \$188 per acre in 1950, \$202 in 1955 and \$263 in 1960.

LAND TENURE

The farm operator owned 51.4 percent of the land in Iowa in 1963, and 48.6 percent of this land was rented by the farm operator.

In 1963 the Washington County farm operators owned 51.2 percent of farm land and 48.8 percent of this land was rented by farm operators. When comparing the land owned and rented by the operators, Washington County figures are nearly identical with the general State average for 1963.

The trend of land tenure in Washington County since 1950:

<u>Item</u>	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1963</u>
Percent owned	50.7	49.1	50.5	51.2
Percent rented	49.3	50.9	49.5	48.8

AGRICULTURAL PRODUCTION

LIVESTOCK

All livestock and livestock products in Washington County represent over 86 percent of the \$25,417,600 total value of all farm products sold in 1959. Cattle, hogs and turkeys made up the bulk of livestock produced. In 1959, the sale of 337,399 hogs brought \$10,121,970, while 37,408 cattle and calves brought \$7,532,669. Sale of 532,199 turkeys, ducks, geese, other poultry and eggs totaled \$2,974,789.

The sources of cash income in 1959 were:

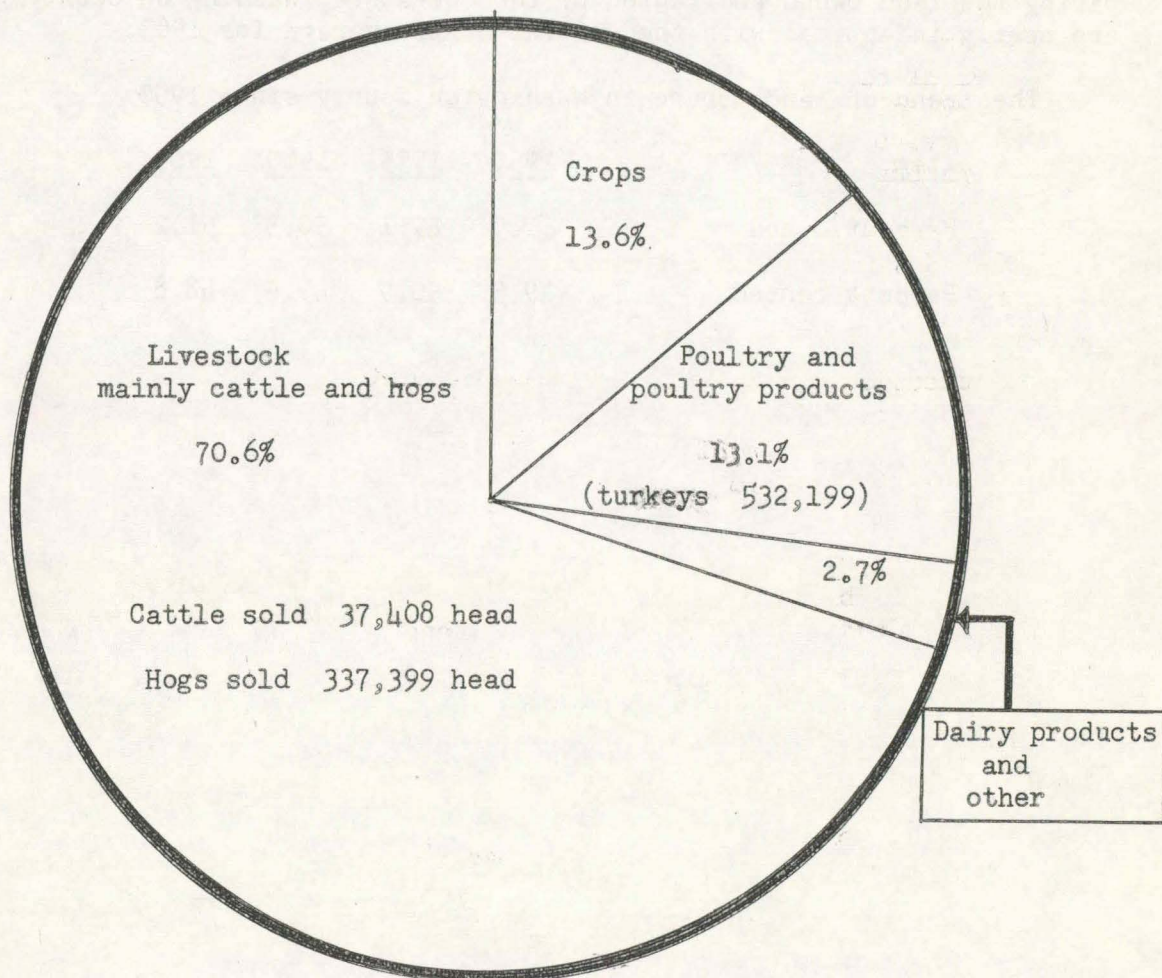


Table 1

VALUE OF AGRICULTURAL PRODUCTS SOLD BY

SOURCE IN WASHINGTON COUNTY 1/

<u>Item</u>	<u>Total Dollars 1954</u>	<u>Total Dollars 1959</u>
All Farm Products Sold	\$22,511,557	\$25,417,629
Average per farm	10,787	13,441
All Crops Sold	3,579,101	3,493,752
Field crops other than vegetables, fruits, and nuts sold	3,533,314	3,457,877
Forest Products Sold	28,052	28,880
All Livestock and Livestock Products Sold	18,932,547	21,923,877
Dairy products sold	748,462	637,485
Poultry and poultry products sold	2,322,659	3,333,403

The average annual farm gross income increased nearly \$3,000 between 1954 and 1959.

1/ Source: U.S. Census: 1959, Agriculture, Iowa, Chapter B, Table 4.

TREND OF LIVESTOCK PRODUCED SINCE 1950

(Figures rounded to nearest 100)

<u>Item</u>	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1963</u>	<u>1964</u>
Grainfed Cattle Sold	14,100	20,400	25,700	22,500	24,500
Sows Farrowed		47,200	50,600	51,200	NA
Dairy Cows	7,700	6,400	4,500	3,300	NA
Beef Cows		9,100	8,300	10,000	NA
Laying Hens	189,000	149,300	108,000	65,000	NA
Turkeys	222,000	356,000	653,000	532,200	NA

In 1959 Washington County was the eleventh largest turkey producer in the United States. Dairy products and poultry, especially laying hens, are becoming less important while cattle feeding has increased.

FARM CROPS

In Washington County the main field crops are corn, soybeans, and oats. Corn and soybeans are the two major crops produced. Sales of these three field crops produced in 1959 totaled \$3,457,251. In 1963, 116,100 acres were in corn production, and the corn crop averaged 85 bushels to the acre.

CROP ACRES AND YIELD PER ACRE TREND SINCE 1950

<u>Item</u>	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1963</u>	<u>1964</u>
Corn Acres	102,200	115,200	126,400	116,100	112,000
yield per acre	50.5	52.4	55.7	85.4	82.4
Bean Acres	13,600	16,000	23,200	32,600	37,000
yield per acre	25.3	26.8	25.7	33.7	31.9
Oats Acres	57,000	54,000	38,000	29,000	25,000
yield per acre	39.2	45.3	35.0	45.1	43.0

Corn acreages have varied with the types of farm programs in effect in recent years. However, there has been an increase in the tendency of cropping the better land in the county. Soybean acreage has been doubled in the past ten years, while production of oats as a major crop has declined.

Corn yields have increased rapidly in recent years due to two major factors: first, extremely favorable weather from 1961-63, and, second increased use of technological advances including fertilizers, insecticides, and new varieties of hybrid seed corn.

One method to increase crop yields is to use fertilizers and the trend in recent years has been toward increased use of fertilizers.

LIME AND FERTILIZER USAGE TRENDS SINCE 1950

<u>Year</u>	<u>Tons Lime</u>	<u>Tons Fertilizer</u>
1950	46,821	2,698
1957	33,187	3,044
1959	13,105	3,939
1961	13,148	4,852
1963	22,958	7,479
1964	32,000	8,700

FARM MACHINERY AND EQUIPMENT

Changes in the last 13 years are shown in the following items:

<u>Machinery</u>	<u>No. in</u> <u>1950</u>	<u>No. in</u> <u>1955</u>	<u>No. in</u> <u>1960</u>	<u>No. in</u> <u>1963</u>
Tractors	2,593	3,255	3,132	3,057
Combines	773	969	943	838
Corn Pickers	1,052	1,250	1,075	936
Hay Balers	230	367	441	421
Farm Trucks	743	1,047	1,044	1,030

Since 1955, due to the trend toward fewer and larger farms, the number of tractors, combines and corn pickers used in the county has decreased. Most larger farmers have adequate machinery to handle up to 100 additional acres with little help and little, if any, additional machinery. This factor helps spread fixed machinery costs.

FARM OPERATORS BY AGE 2/

<u>Age</u>	<u>No. in 1959</u>
Operators Reporting Age	1,846
Under 25 years	61
25-34 years	271
35-44 years	470
45-54 years	463
55-64 years	352
65 or more years	229
Average age 47.8 years	

2/ Source: U. S. Census: 1959, Agriculture, Iowa, Chapter B, Table 5.

OFF-FARM EMPLOYMENT

Farmers in Washington County are looking for additional employment off the farm. In 1959 some 14.4 percent of these farmers were working off the farm 100 or more days annually. The following chart illustrates the increasing trend of working more than 100 days a year off the farm:

<u>Farmers Working Off Farm</u>	<u>No. in 1954</u>	<u>No. in 1959</u>
100 days or more annually	215	273
1 to 100 days	<u>405</u>	<u>299</u>
Total	<u>620</u>	<u>572</u>

AGRICULTURAL SUMMARY

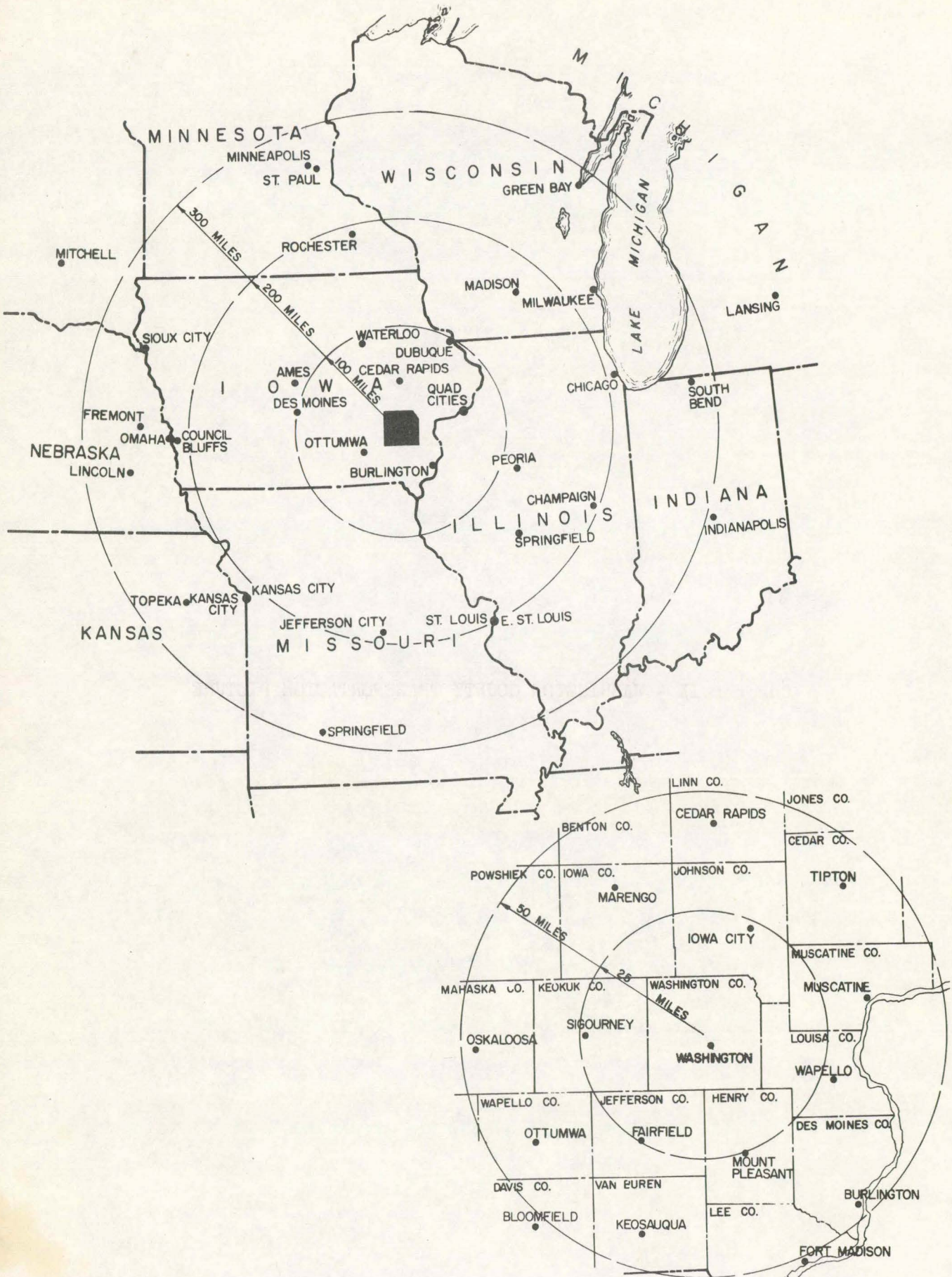
Some farmers will continue to enlarge their farms and the number of farms in Washington County will decline correspondingly. Specialization of farm crops probably will increase as will the production of livestock. The cost-price squeeze on the farmers may continue. Land prices should remain high. Production efficiency should increase.

Several livestock enterprises, including raising of hogs and beef cattle, should become more important while poultry raising and prime cattle feeding will probably decline. Crop yields will possibly reach higher levels than in 1963.

More skills in management, use of technological improvements, marketing, and more credit will be needed. Fewer young people will start farming. Transfer of farm property will become more complicated as units enlarge. There will be a lack of skilled labor to operate highly specialized pieces of farm equipment. Most Washington County farms will continue to be family operations. It is anticipated that governmental programs for agriculture will continue.

2/ Source: U.S. Census: 1959, Agriculture, Iowa, Chapter B, Table 5.

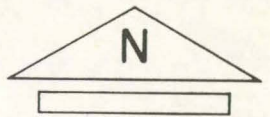
Chapter IX - WASHINGTON COUNTY TRANSPORTATION PICTURE



SOURCE: Powers & Associates,
planners, engineers and architects,
Iowa City, Iowa

LOCATION MAP

WASHINGTON COUNTY, IOWA



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who*

HIGHWAYS

Washington is the county seat of Washington County and is located in southeastern Iowa, approximately 25 miles from the Mississippi River. Paved highways extend in all four directions from Washington, Iowa. U.S. Interstate No. 80 is located only 31 miles to the north. U.S. Highway No. 218 runs north and south through the eastern portion of the county. State Highways No. 1 and No. 2 intersect Washington, east, west, north, and southwest. Three other paved roads lead into and from Washington. One hard surfaced road from the northeast continues due south and another runs straight west of the town.

✓ Washington County has 165 miles of hard surfaced and 700 miles of gravel roads. The county also maintains 5 roadside parks.

The approximate distances from Washington to the mid-western major markets are: Chicago, Illinois, 250 miles; St. Louis, Missouri, 250 miles; Kansas City, Missouri, 240 miles; Omaha, Nebraska, 250 miles; Minneapolis, Minnesota, 325 miles; Milwaukee, Wisconsin, 325 miles and Des Moines, Iowa, 113 miles.

Washington, Iowa, is considered to be mid-way between Chicago, Illinois, and Omaha, Nebraska, on Highway 92, the most direct route.

Seventy-five percent of the streets are hard surfaced in the town of Washington with gravel on the remaining streets. Forty blocks of streets were paved in 1965 at a cost of \$250,000.

MOTOR FREIGHT COMMON CARRIERS

Washington, Iowa, has five common carriers serving the area. Three are inter-state carriers; one is an contract carrier and two are local carriers including an intra-state carrier. Lines serving Washington are Brinton Truck Line; Havel, Roy and Sons; Kien Brothers; Rock Island Motor Transit Company and Washington Transfer and Storage. Washington has a motor carrier terminal.

Shipping time to principal cities on truck basis are:

Chicago - Overnight	St. Louis - 2nd day	New York - 5th day
Minneapolis - 2nd day	Houston - 4th day	Boston - 5th day
Denver - 3rd or 4th day	Los Angeles - 5th day	Detroit - 3rd day

BUS SERVICE

Continental Trailways bus service makes two arrivals and two departures from Washington daily. From the Trailways Depot in Washington connections can be made to all points in the United States served by the bus lines.

RAILROADS

Washington County is served by three railroads, the Chicago, Burlington and Quincy Railway Co., the Chicago, Milwaukee, St. Paul and Pacific Railway and the Chicago Rock Island and Pacific Railway. All three lines serve Washington, Iowa, and each railway has a terminal in the town. These railroads furnish four freight trains daily and one daily passenger train to and from Washington, Iowa.

There is reciprocal freight switching service in this county seat town. Railway freight service is available for any connection in the country.

Shipping time to principal cities on the carload basis is:

Chicago - overnight	Denver - 3rd Day
Minneapolis - 2nd day	St. Louis - 2nd day

Wellman, Kalona and Riverside in the northern part of the county are served by the Chicago, Rock Island and Pacific Railway Company. Ainsworth, Brighton and West Chester are also served by this line. Crawfordsville is on the C.B. & Q. Ry. line. Brighton is served by all three lines.

AIR TRANSPORTATION

The Washington municipal airport serves the county with a well-equipped airport. It was designed basically for private flying of small and larger twin engine private planes. The 2,700' x 50' paved NW to SE runway has been completed, at a total cost of \$138,000. Other recent improvements included a paved apron 150' x 100' and a taxi way 825' x 20'. The airport can handle small non-scheduled transports and charter flights. The lighted runway is 2,700' x 50'. There are no obstructions in the area. The airport has a manager. High octane gasoline is available at the airport which is located one and a quarter miles southeast of Washington on a newly paved road.

Washington, Iowa, is located 31 miles south of Iowa City, which is served by Ozark Airlines with four flights daily to Des Moines and Clinton. Commercial scheduled flight service to any major city in the country is only a short driving distance away from Washington. Four airports located within 50 miles of Washington are in Ottumwa, Iowa City, Cedar Rapids, and Burlington. These four airports offer approximately 25 scheduled commercial flights daily.

LOCAL TRANSIT SERVICE

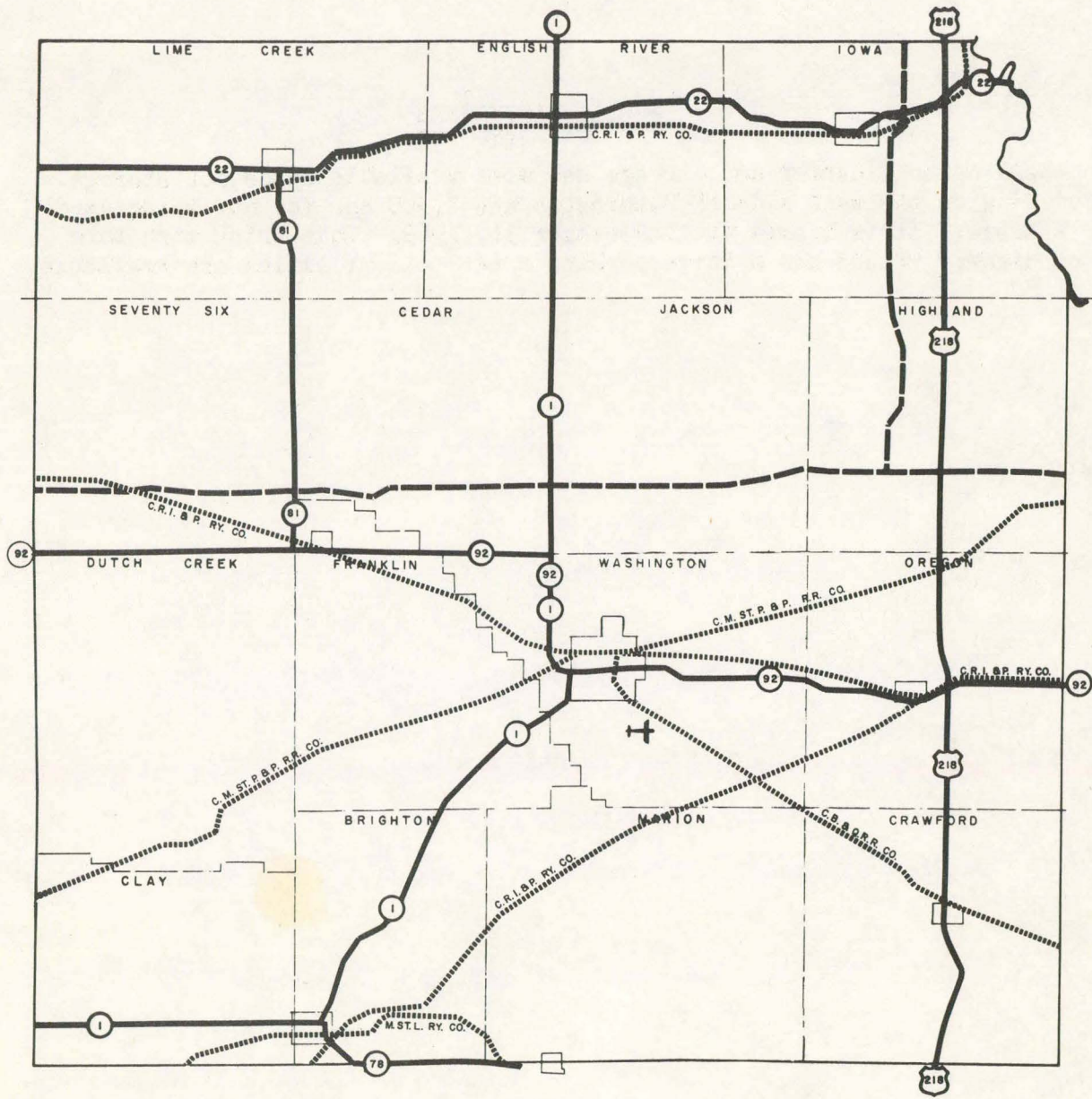
Washington, Iowa, has one taxi company operating two radio-equipped cabs.

PIPELINES

One of two pipelines in the county is the Natural Pipe and Gas Line, a main line into Chicago, Illinois.

PUBLIC WAREHOUSES

Washington Transfer and Storage has some available space for storage. A building on the west side of Washington has 7,500 sq. ft. now being used for storage. It is leased until December 31, 1965. This brick structure is on Highway 92 and has a large parking area. All utilities are available.

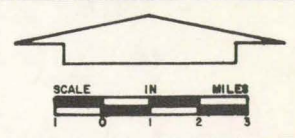


- RAILROADS ···········
- PIPELINES - - - - -
- AIRPORTS ✈
- HIGHWAYS, STATE —○—
- HIGHWAYS, U.S. —◡—

SOURCE: Powers & Associates,
planners, engineers and architects,
Iowa City, Iowa

**EXISTING TRANSPORTATION
FACILITIES**

WASHINGTON COUNTY



Chapter X - PRIME BUSINESS SITES IN WASHINGTON COUNTY

INDUSTRIAL OUTLOOK

Because Washington County is predominately a farming county, a number of choice locations could be purchased on the outskirts of any town.

Light industry finds a congenial location, a good labor pool, and a central location in Washington. In the last few years several new plants have been built by existing manufacturers: McCleery-Cumming Co. (calendars); Washington Manufacturing Co. (steel rod and wire goods); Advance-Ross Electronics (television yokes); Cargill (soybean processing); Northrup-King (seed corn) and Curran Co. (cards and tallies).

TWO NEW STATE LAWS AID IOWA ECONOMY

The 1963 Iowa General Assembly passed a law to aid economic development of communities where local investment capital is lacking and to help employment in areas of declining population that have few job opportunities.

The state law allows cities and towns to construct and lease buildings for industrial firms, paying for these facilities by issuing revenue bonds.

The 1965 Legislature passed a law that enables municipalities to equip as well as build industrial facilities for leasing to companies.

Iowa cities and towns are finding the enabling legislation to be major assets to the economy as well as effective aids for new industry searching for new locations in which to expand.

INDUSTRIAL SITES

The Washington, Iowa, Development Corporation was established in 1956 and has the cooperation of 396 pledges, a cash balance of \$7,000 with other funds available. Arrangements have been made for lease-purchase plans for industries. The industrial development organization, Profit Corporation, Incorporated, has established two industrial sites opposite each other at the east edge of the town of Washington. Building sites are well located and on a total of 80 acres of land. Options are held on all the land except the areas that have been sold and individual options given as indicated on Table 2.

A 40 acre tract is located west of North 12th Avenue and the second industrial tract of 40 additional acres, known as the Livingston Tract, is located directly across North 12th Avenue, to the east. Advance-Ross Electronics Company is now located on approximately 10 acres of the west 40-acre tract and holds options for additional space. The Washington Manufacturing Company has purchased 10 acres of this initial 40-acre industrial site. Therefore, 20 acres of this west side tract have been sold, options are held on 10 acres and only 10 acres are currently for sale.

The west 40-acre site has a 12" sanitary sewer running from west to east, nearly in the center of the plat. A 12" water main with 55 to 60 pound pressure and a 3" high pressure (60 pound) gas line are located in the street to the south.

Electric power is readily available since both 69,000 volt and 13,200 volt lines are installed along the east and south sides of the tract. This site is surrounded by town streets. The price per acre has been set at \$1,000. The Chicago, Milwaukee, and St. Paul Railroad runs within one block of the southeast corner of the site. North 12th Avenue is hard surfaced south of both industrial sites to Highway 92 and East 7th is newly paved to North 12th Avenue.

The 40 acre Livingston Tract, located on the east side of North 12th Avenue, has electric power and a 4 inch natural gas line (60 pound pressure) available on the west side of the plot. The town has plans for sewer and water lines to be installed in the very near future. This site has an all-weather road on the south and is bounded by North 12th Avenue on the west, which, is hard surfaced. Price per acre has also been set at \$1,000.

Soil tests have been made on both industrial sites. The Chicago, Milwaukee and St. Paul Railroad borders the southeast edge of the site. Both industrial tracts are three blocks from the Chicago, Rock Island and Pacific Railroad, 7 blocks from Highway 92 and less than 1.5 miles from the municipal airport.

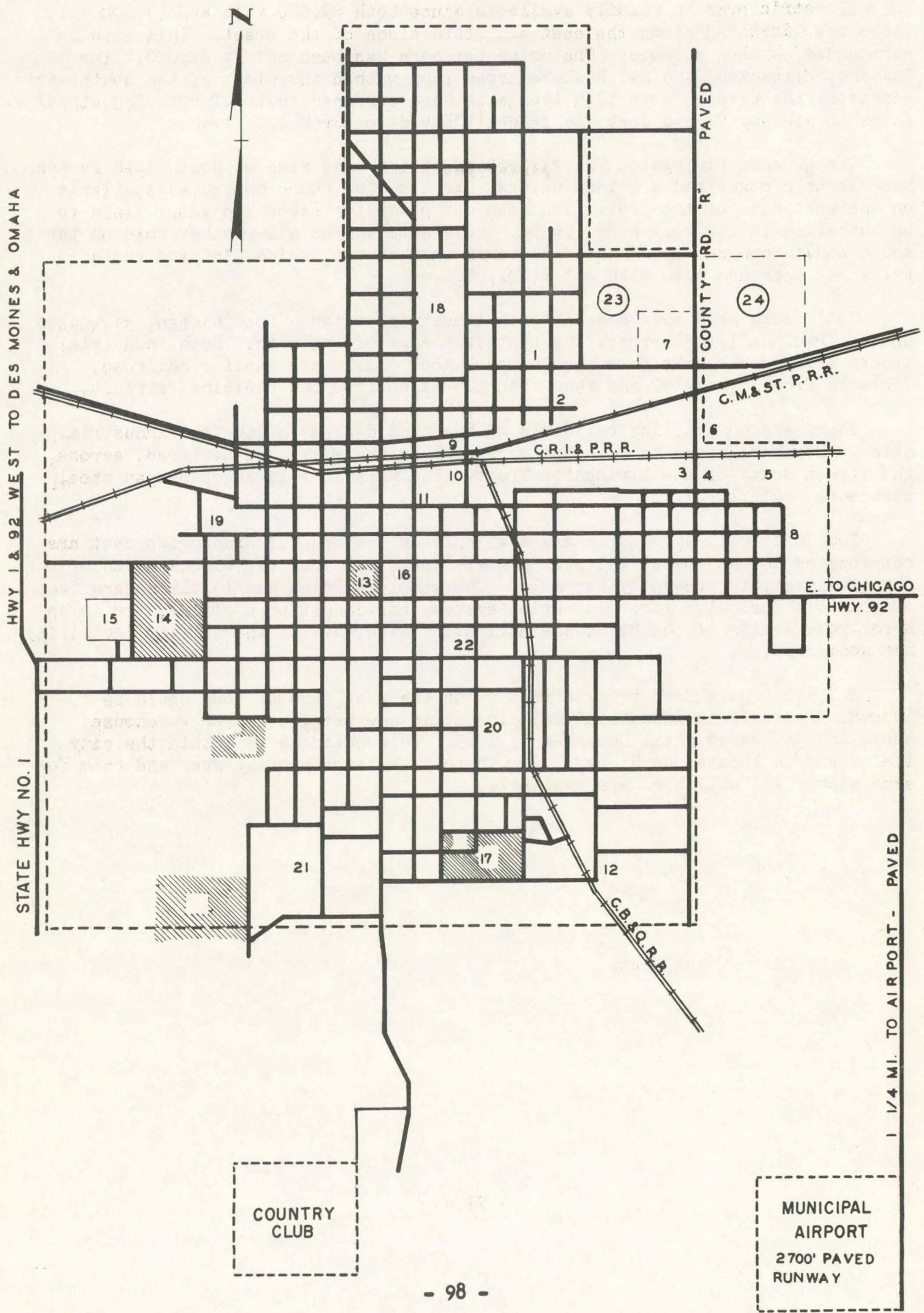
There are no existing buildings on the unsold areas of the two industrial sites. However, there is a vacant warehouse on the Milwaukee Railroad, across the street south of the Livingston Tract. The warehouse is an open span steel structure, 66' x 140'.

Two industrial structures are available in the town of Washington that are not located in the industrial park areas. One structure, two blocks north of the downtown area, is presently for sale. The steel building has 13,819 square feet of space, a sprinkler fire protection system, air-conditioned office, and is on a railroad siding of the Milwaukee Railroad. Also, all of the utility facilities are available.

A 7,500 square foot brick structure on the west side of town could be leased. Formerly an industrial building it is now being used for warehouse space and is leased until December 1, 1965. This building is within the city limits and is located on Highway 92. There is a large parking area and room for expansion. All utilities are available.

Table I

CITY OF WASHINGTON, IOWA



KEY TO POINTS OF INTEREST

IN WASHINGTON, IOWA

1. American Pearl Button Co.
2. Curran Co.
3. Washington Concrete Co.
4. Nixon & Co.
5. Cargill, Inc.
6. Northrup-King & Co.
7. Advance-Ross Electronics Co.
8. Keating Welding & Boiler Works
9. Washington Manufacturing Co.
10. U.S. Vacuum Pak Corp.
11. Iowa Southern Utilities Plant
12. McCleery - Cumming Co.
13. The Square
14. Sunset Park
15. Municipal Swimming Pool
16. Washington County Hospital
17. YMCA - YWCA
18. Stewart School
19. St. James Parochial School
20. Lincoln School
21. Junior High School
22. Senior High School
23. Industrial tract - 40 acres
24. Industrial tract - 40 acres

For information relating to utilities, including gas, water, electricity rates, availability and capacity, see Chapter IV. For all types of transportation available in Washington County and the town of Washington, refer to Chapter IX.

O.P.P. LIBRARY COPY

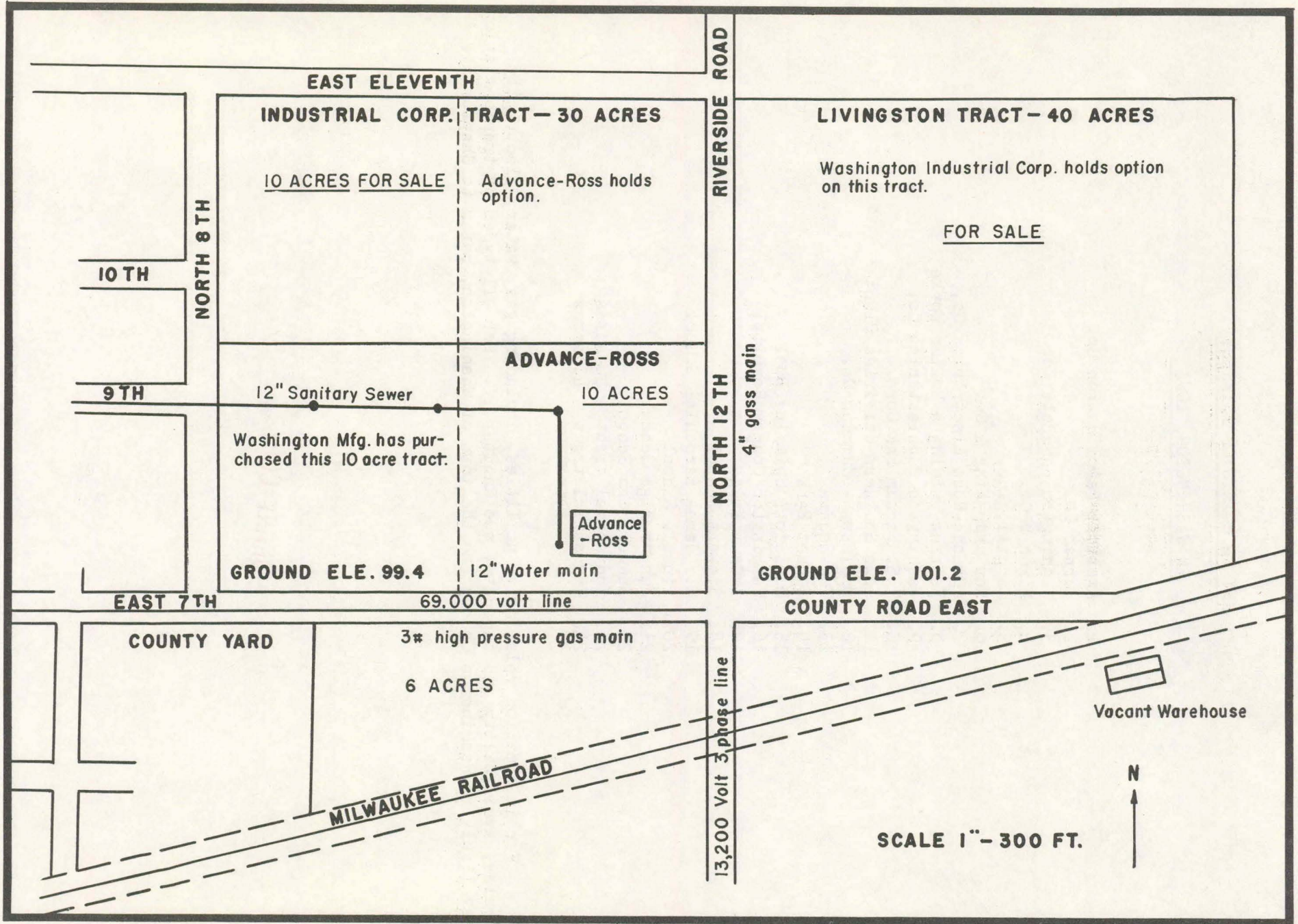


Table 2

SCALE 1" = 300 FT.

Chapter XI - GOVERNMENT IN WASHINGTON COUNTY

FORM OF GOVERNMENT

Washington, Iowa, has a mayor-council form of government with six councilmen. The mayor's term of office is four years while the councilmen also serve four year terms with staggered expiration dates. The mayor presides over the municipal court.

The city and county governments are cooperative with existing industry and look favorably toward the establishment of new industry.

Washington, Iowa, has a joint Municipal Planning Commission established by Ordinance No. 392, passed October 1, 1955. A planning and zoning study was made in 1957 by Harland Bartholomew and Associates. Washington has a city building code controlled by a commission appointed by the council. Each commissioner serves five years. Expiration dates of terms are staggered to provide continuity of the commission.

A progress report on major work items for Washington County for the month ending May 31, 1965, indicates five projects, started in 1964, are now completed or will be completed in 1965. These include: subdivision policy, park and recreation plan, background, land use, etc., economics and population and base maps.

POLICE PROTECTION

Washington, Iowa, has 8 police officers on duty to give 24-hour protection. Two police cars are equipped with two-way radio and two full-time operators. There is a radar timer to control traffic. The annual police department budget is \$30,000. The crime rate, including juvenile delinquency, is very low.

The Washington County Sheriff has two outside deputies and one inside alternate deputy. Three cars are equipped with two-way radios. The sheriff's office is in contact with the Highway Patrol.

Under construction this year is a new county jail at a cost of \$110,000. The modern structure is 70' x 40' with a capacity of 16 men and 16 women and juveniles.

TAX AND FINANCIAL DATA

The general property tax levied by Washington, Iowa, is 30 percent of the actual value. The assessment on actual value of manufacturing plants is also approximately 30 percent with adjustments on new industry. General tax information as to the tax balance ranges from 76 percent for residential, 19 percent for commercial and 5 percent for industrial. The local tax revenue per capita is \$40.29 and taxes are the major source of revenue.

The town of Washington tax and bond information appears in Table 1. The law firm of Bannister, Carpenter, Ahlers and Cooley, Des Moines, Iowa, recently made a study of assessments. The financial tax statements are issued September 30, the end of the town business year.

Table 1

WASHINGTON, IOWA, TAX AND BOND INFORMATION

<u>Assessment</u>	<u>1951</u>	<u>1956</u>	<u>1961</u>
Real & Personal Property	\$4,417,226	\$4,666,189	\$7,203,333
R. R., Telephone, telegraph	780,238	85,000	87,232
Public Utility	421,032	540,477	606,187
	<u>\$5,618,496</u>	<u>\$5,291,666</u>	<u>\$7,892,752</u>
 Tax Levy (in mills)	 21.320	 26.073	 24.398
 Outstanding Bonds			
General Obligation	\$ 96,311	\$ 47,311	\$ 374,000
Revenue	100,000	71,000	224,000
Other Special	- -	- -	- -
	<u>\$ 196,311</u>	<u>\$ 118,311</u>	<u>\$ 598,000</u>
 Legal Bonding Capacity	 \$ 600,000	 \$ 600,000	 \$ 986,554
 Unused	 \$455,554		

TAX MILLAGE for 1959 - 1963:

	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>
City	25.898	25.863	24.398	29.386	28.789
School	30.174	37.818	37.928	39.736	44.765
County	7.486	11.791	12.266	12.266	13.104
State	.520	.520	.450	.400	3.602
Total	<u>64.078</u>	<u>75.992</u>	<u>75.042</u>	<u>81.788</u>	<u>90.260</u>

The total valuation of land and buildings in the town of Washington for tax purposes is \$8,008,353, and the actual corporate tax is \$62,732. The per capita debt is \$1,255.59. There are no new bond issues contemplated at the present time. The school has bonded indebtedness of \$1,136,000, with \$208,000 in revenue bonds and \$591,000 in general obligation bonds.

The state of Iowa retail sales tax is 2 percent. Iowa has a favorable Insured Unemployment Rate, one of the four lowest state rates in the nation. The national average rate was 2.6 percent for the week ending September 12, 1964. Iowa's rate was an even 1 percent. Only two other states had the lower rates of .9 percent.

POSTAL INFORMATION

Washington, Iowa, has a first class Post Office with recent annual receipts of \$175,885. This office serves approximately 6,500 patrons excluding rural routes. The rural routes originate in Washington and cover 240 miles to serve 2,738 patrons.

Mail Schedule from Washington

North	4:10 P.M.; 6:15 P.M.; 7:15 P.M.; 9:15 P.M.
South	3:30 A.M. 4:30 P.M.; 6:15 P.M.; 7:15 P.M.; 9:15 P.M.
West	3:30 A.M.; 6:35 A.M.; 6:50 A.M.; 6:15 P.M.; 7:15 P.M. 9:15 P.M.
East	4:10 P.M.; 4:30 P.M.; 7:15 P.M.; 9:15 P.M.

The maximum range for one-day postal service from the Washington Post Office is approximately 300 miles for regular surface mail.

FIRE INSURANCE CLASSIFICATION

Iowa cities and towns are classified in accordance with the National Board of Fire Underwriters' Standard Schedule for Grading Cities and Towns of the United States with Reference to their Fire Defense and Physical Conditions.

A relative classification from 1 to 10 is given. Class 1 is the best possible rating. The fire insurance classifications of communities in Washington County are:

<u>Town</u>	<u>Class</u>
Ainsworth	8
Brighton	7
Crawfordsville	8
Kalona	7
Lone Tree	8
Richmond	10
Riverside	8
Rubio	10
Washington	6
Wellman	7
West Chester	9

According to the Iowa Inspection Bureau, these classifications are about average for towns of their size.

The town of Washington has a volunteer fire department consisting of 30 fire fighters including three full-time, paid employees. The annual fire department budget is \$15,000. Equipment consists of three fire trucks, two for the town and one for farm fires. One of the town trucks has a 750 gallon tank and 150 pound pressure system; the other has a 350 gallon capacity and 180 pounds of pressure. The farm fire truck has a 60 gallon tank and

850 pound minimum pressure system. The fire station has an alarm system of a siren and phone with siren located on the town square. Fire losses in the last two years have been valued at \$18,000. The local fire department inspects industrial facilities.

PUBLIC HEALTH AND WELFARE SERVICES

The Washington County Department of Social Welfare determines eligibility, provides services and administers all of these programs:

1. Old Age Assistance (OAA)
2. Aid to Dependent Children (ADC)
3. Aid to Blind (AB)
4. Aid to Disabled (AD)
5. Medical Aid to the Aged (MAA)
6. Child welfare services (to dependent, neglected and delinquent children, to handicapped children, protective services, foster home care, adoption services, services to unmarried parents and their children and services to children in their own homes.)
7. Surplus food distribution.
8. General assistance (county funds for needy persons not eligible for above programs).
9. Services in addition to money payments are given persons on above programs and to penal institutions, mental health facilities, schools for mentally retarded and hospitals.

As of June, 1964, Washington County had these caseloads:

<u>Program</u>	<u>Caseload</u>
Old Age Assistance	168 persons
Aid to Dependent Children	48 persons
Aid to the Blind	6 persons
Aid to the Disabled	11 persons
Medical Assistance to Aged	33 persons
Child Welfare	29 children
General Relief	40 families

The programs are supported by federal, state and county governments.

MILITARY

Washington, Iowa, has two military training units. Each unit has its own building. The Washington Memorial Army Reserve Training Center was constructed in 1961. Located on the north edge of town it is the home of the 872nd Ordnance Company. The National Guard Armory is located on the west side of town and houses the 113th Anti-Aircraft Company.

Chapter XII - LIVING IN WASHINGTON COUNTY

HOUSING

Washington, Iowa

As in any progressive community, rental properties are at a premium. The demand for houses to rent is high. However, from 10 to 15 houses are presently for rent and approximately 25 homes are for sale.

In 1964 there were thirty-seven new homes built, more than were built in any one of the last six years. Average rental figures range from \$65 to \$100 a month for 2-bedroom houses; \$70-\$115 for 3-bedroom houses and \$75-\$125 a month for 4-bedroom houses.

Average purchase price for older houses ranges from \$8,000 for a 2-bedroom house to \$14,000 for a 4-bedroom house. New house prices range from \$14,000 for a 2-bedroom house to \$25,000 for the 4-bedroom houses. Average lot sizes are 65' x 132', priced at \$1,200, to 75' x 150' for \$2,000.

There are three new housing developments presently under way and additional housing developments are being planned. On the following pages photographs of the types of homes and floor plans that are presently being built have been included.

Additional information on home ownership and the building of new homes in Washington, Iowa, can be found in Chapter IV, under the heading of Home Ownership.

Washington, Iowa, has one mobile home park.

This county seat town has 12 home building contractors and 45 carpenters.

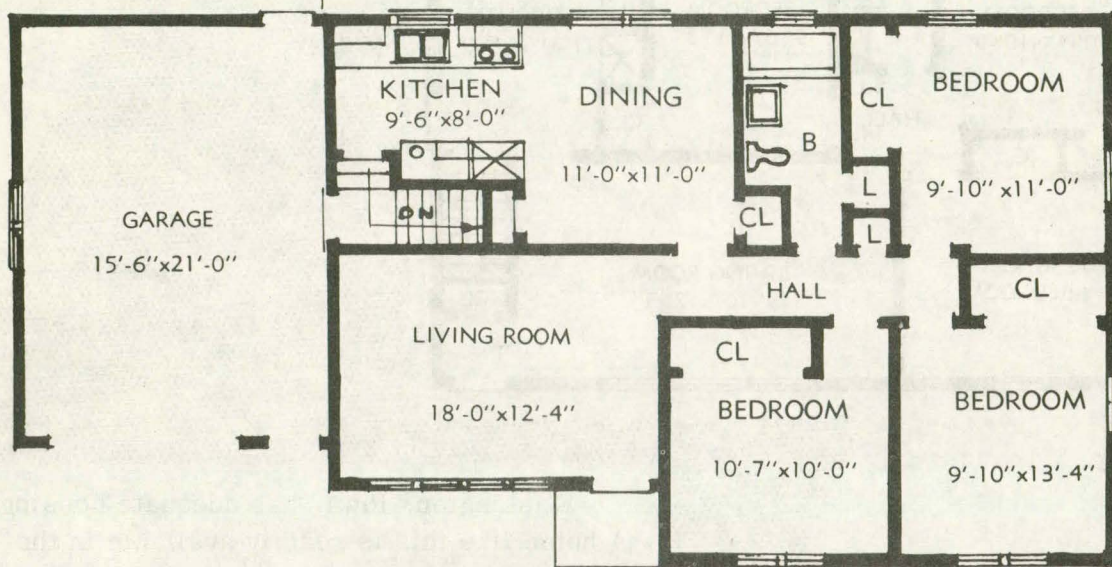
For the number of all electric homes in Washington County and the trends in electrical appliance usage, see pages 37 and 38 in Chapter IV.

SCHOOLS

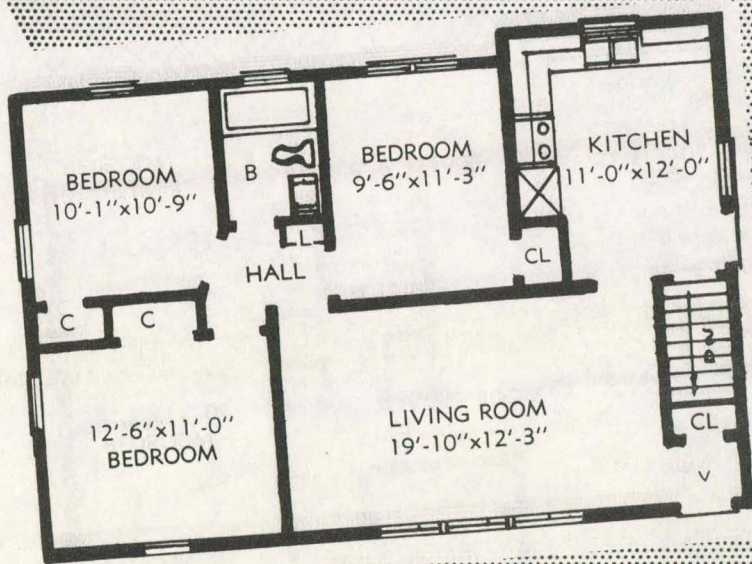
The Washington, Iowa, community public schools have an enrollment of 1,930 with 81 teachers. There are two other high schools in this county: one is Mid-Prairie which includes the towns of Wellman, Kalona and West Chester, with a high school enrollment of 260. The third high school, Highland, includes the towns of Riverside and Ainsworth with the enrollment of the top four classes totaling 200. Highland's new building will be used this fall. In addition, two other districts, out of the county, serve Washington County pupils. These schools are WACO (Wayland, Crawfordsville, and Olds) and Keota. Both high schools have enrollments of about 240 students.

Washington, Iowa, has a parochial school with a grade school enrollment of 200. A new grade school was completed this year.

The consolidation of county schools was completed in 1959. The entire new district is served by school transportation. The school building program has been completed, at least for the next five years.



Modern, long term, low down payment housing finance is offered! A new home of this type in an all new section is in the \$17,500 bracket including the lot. Property taxes would be approximately \$384. Home owners investment in Washington, Iowa, is well protected by rigid zoning laws and building codes.



Washington, Iowa, has adequate housing. A home like this is readily available in the Washington area at \$13,500 including lot. The annual tax would be \$271. This is a typical floor plan for this home. Washington has many well-planned building lots priced from \$1,200 to \$2,000.

During the past five years the building program in Washington, Iowa, included a bus garage, two elementary additions, a new junior high school addition and remodeling of the present Washington High School.

Present teacher certification requirements specify a Bachelor of Arts degree. The pay scale for teachers is:

Bachelor's degree,	\$4,600	minimum	to	\$6,450	maximum
Master's degree,	\$5,000	"	to	\$7,250	"
Master's degree,					
plus 15 hours,	\$5,000	"	to	\$7,350	"

The following programs are included in the Washington, Iowa, school system: kindergarten, child guidance, physical education, vocational training, business education, PTA, adult evening classes and classes for mentally retarded children.

One of their vocational training programs for high school students is a cooperative education program with manufacturers and retail stores. The program started five years ago. The school averages from 25 to 30 participating students. Within the last few years the school has received national recognition for this excellent retail program.

The estimated cost of education per pupil in Washington, Iowa, was \$391.23 in the 1962-1963 school year. The cost of high school training in Washington in 1964 was \$532.98 per pupil. The average cost per pupil in Iowa was \$442.38 per year in 1964-1965. The average over the state for each high school pupil last year was \$633.62.

The State Board of Public Instruction states that the last year's high cost per high school student was \$1,259.91 in the smaller school under 100 pupils. Schools with high school enrollment over 600 averaged \$534.40 per pupil. High school enrollment in Washington, Iowa, was 518 last year. The school debt per capita was \$138.

COLLEGES

Considerable interest has been shown on the part of citizens in the reestablishment of the Junior College that was closed in 1952. At the present time studies and planning are being made by different groups on the feasibility of establishing a Junior College or a Trade School.

Washington, Iowa, is fortunate to be located within commuting distance of three four-year colleges: The State University of Iowa, Iowa City, is located about 30 miles north, and Iowa Wesleyan, a Methodist College, is in Mt. Pleasant 31 miles south. Parsons College, a Presbyterian school, is located in Fairfield, Iowa, 31 miles southwest. The colleges grant Bachelor of Arts and Science degrees. The University grants all types of advanced degrees. All of the above mentioned have evening courses.

LIBRARIES

In 1959 the town of Washington, Iowa, constructed a new \$100,000 library building housing 30,000 volumes. At the present time there are no branch libraries nor bookmobiles serving the town.

CHURCHES

More than 50 churches serve Washington County. Many of these are small rural churches. Some of the smaller churches have combined with others, but this is not a rapid trend. In most cases, the programs offered by the rural churches are rather limited. Continued decline of the farm population will probably force some churches into reorganization or abandonment.

The ten denominations in the county include the Methodist, Roman Catholic, United Presbyterian, First Presbyterian, Lutheran, Baptist, Christian, United Church of Christ, Assembly of God and Christian Tabernacle. The three principal faiths are the Methodist, Roman Catholic and Presbyterian. Of the three major faiths, only the Catholics have undertaken building construction within the last few years. The Catholics built a church and a grade school.

All churches have cooperated in the attempt by the civic leaders to secure new industry in Washington.

CIVIC, SOCIAL, SERVICE AND FRATERNAL ORGANIZATIONS

The major service clubs are represented in Washington by active units. The lodges, service clubs and fraternal societies represented include the Kiwanis, V.F.W., Jaycees, Fortnightly, Rotary, American Legion, Odd Fellows, Isaac Walton, "Y" Men, Marine Corps League, Moose Lodge and Toastmasters' Club.

Washington offers a diversified social life to its residents. There is the opportunity to enter into almost any activities that one might choose. In addition to the numerous clubs and organizations, cultural and educational programs are presented at the University of Iowa and Iowa Wesleyan College to which the general public is invited. Both of these schools are only about 30 miles distant.

The Golf and Country Club, lodge halls and Churches accommodate many gatherings.

NETWORK RADIO AND TV AVAILABILITY

In addition to the local radio station in Washington, all major radio and TV national networks are received in this area (ABC, CBS, and NBC). (See Chapter IV, page 41 for additional information of radio and TV stations.)

LIVING COSTS

Retail sales and bank deposits have shown a steady gain in the last few years as well as other areas such as the number of cars and trucks licensed.

Aggressive and competitive merchants assure the trade area of high values and moderate cost. Like other smaller towns in Iowa, Washington costs less to live in than it would in a city.

All utility costs, housing rent and purchase price breakdowns will be found in Chapter IV.

Washington taxes are average for Iowa and utilities are comparable with most inland communities.

All of these combined factors make Washington a pleasant moderately priced mid-West community in which to live.

HOSPITAL AND MEDICAL FACILITIES

In June 1965, Washington County voters approved a \$750,000 bond issue by a 67.2 percent majority for construction of a new county hospital.

The Washington Hospital board chairman felt that the result of the election was not only a victory for the hospital but for Washington County as well. He said that the election was conclusive proof of the progressive attitude now present in this county.

The entire cost of the hospital will be \$1,425,000 with the county planning to use \$200,000, already in its building fund and the remainder coming from a federal grant under the Hill Burton Act. The federal government will pay approximately one-third of the cost.

The hospital will have rooms and equipment for 60 bed patients with these facilities: complete surgical department and central medical supply, complete obstetrical department and nursery, fully equipped x-ray department, fully equipped laboratory, new emergency room facilities, modern physical therapy department, one central nurses station, modern offices, new kitchen and dining room, completely new laundry facilities, complete new boiler room and equipment and a central air-conditioning system.

The present hospital which has 45 beds was constructed in 1912 and will be used as a care center for long-term patients.

The town of Washington has seven general practitioner medical doctors and one surgeon. Four dentists serve the area. Washington has one private medical clinic and local ambulance service is available.

Washington, Iowa, has a crippled children's home, which is quite unusual for a town of its size. There are two private nursing homes and one home for the elderly. One nursing home is sponsored by the Presbyterian Church and houses 100 persons and has 15 employees. The home has 45 rented rooms and 39 one-bedroom houses. The houses are sold to elderly people who in turn donate the property to the home upon the death of the owner. However, nearly all personal expenses are taken care of for the elderly while they live in their own homes.

The County Home, owned by Washington County, is a 170 acre farm, housing 70 inmates with a capacity of 71. The trend has been for county homes to be more of a home for the mentally incompetent than a home for the poor and elderly. The annual cost is \$976.57 per inmate. In 1964 total expenses for the County Home were \$87,294.

The State University of Iowa Medical Center is located in Iowa City, Iowa, about thirty miles north of Washington, Iowa. The S.U.I. hospital has 1,200 beds and has developed into a ranking medical center in the mid-West. In addition, a 500-bed Veterans Administration Hospital is located in Iowa City.

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