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# Elk Garden, West Virginia : a reconnaissance survey of a problem town

Ward F. Porter

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ELK GARDEN, WEST VIRGINIA  
A RECONNAISSANCE SURVEY  
of  
A PROBLEM TOWN

by

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Study Sponsored by the  
West Virginia State Planning Board  
State Capitol  
Charleston, W. Va.



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## SUMMARY

This survey has attempted the collection and presentation of factual information on the human and natural resources and potentials of Elk Garden, Mineral County, West Virginia. At present unemployment is high and industrial activity, particularly coal mining, is very depressed.

Economic activity in this area has been closely associated, historically, with the exploitation of originally abundant coal resources. With the gradual depletion of these resources, the population has declined from approximately 581 in 1900 to 318 in 1950. The closing of one of the largest mines in the area (April, 1950) climaxed the postwar decline in coal production and employment that had prevailed throughout the area.

The population of the survey area is almost entirely native-born, with the majority native to the town. In comparison with the State as a whole, the town's population contains proportionately more dependents (aged and young), and proportionately fewer persons in the productive-age group (15-59). This age distribution indicates some migration, presumably in response to the declining trend in economic activity.

As of August, 1950, approximately 42 per cent of the 167 families reported no one working for pay or profit. While only three out of every ten employable males 15-59 were unemployed during August, 1950, over one-third of the employed were working only part time.

Only 51.3 per cent of the employable males described their "main or usual occupation" as mining. Trucking, store work, lumbering, farming, and railroading comprised the other occupations. At the time of interview, only 38.6 per cent of all employed males 15-59 years of age were actually engaged in mining. Many of the jobs held had been recently acquired.

Family income was limited in most cases. One-third of all nonfarm families reported receiving \$50 income or less from all sources during August, with one-third of these reporting no income. Incomes were relatively low for 1949 and 1950. Many families received public assistance during both years.

A high rate of home-ownership was one of the outstanding features of the level of living of the residents; three-fourths of the dwellings were owned by their occupants. Property valuations, however, are low, owing to present conditions and type of construction. Most families produced some food for home consumption; and many of them preserved considerable quantities. As for material conveniences, most homes are supplied with electricity, radios, and washing machines. Few, however, have running water, inside toilets, or central heating.

Water supply is one of the more serious problems facing the townspeople. The town has no central water or sewage disposal system. Some of the water used by the residents has been reported unsafe. In addition, a drought seriously affected many sources of supply during 1950.

With the exception of coal, the natural resources of this area have not been utilized or developed to any great extent. The coal deposits, however, have been extensively exploited. As a result, with competition from other more productive coal fields and the postwar reduction in demand--partly occasioned by the increasing utilization of other fuels--the chief means of support for the residents of this area seems now to be threatened. As for forest resources, although the potentials are great, few people are currently engaged in their exploitation. There is some possibility that a small wood utilization plant might be



feasible under the proper circumstances. Other resources, such as limestone, clay, sand, and gravel, have been utilized to a minor degree throughout most of the county, and conceivably could become sources of some employment in the future.

## INTRODUCTION

This study was initiated at the request of the West Virginia State Planning Board. It was designed to provide the Board with information on the human and natural resources, current and potential, of the town of Elk Garden, Mineral County, West Virginia.

The southwestern section of Mineral County has been undergoing a noticeable decline in employment and population during the last thirty years or more. This trend was accentuated recently when one of the areas' largest mines was closed. Since most of the employable males in the town have been miners, and inasmuch as the rich coal deposits have been extensively exploited, a critical situation has developed.

The project was started in September, 1950, although some preliminary work was done during the previous month. Time limitations have necessitated some restrictions on the scope of the survey, but every effort has been made to make the study as comprehensive as possible. The project has been generally limited to Elk Garden and its immediate vicinity. The corporate limits of the town were considered too restrictive; therefore the study also includes outlying territory locally considered a part of Elk Garden.

The report may be divided into three phases: (1) historical and contemporary background information; (2) the present population and its characteristics; and (3) the natural resources.

The first phase is presented in an abbreviated form. It gives certain general information essential to an understanding of the current situation in Elk Garden and Mineral County.

The second phase describes the present population of the town and the adjacent area. This phase has received more attention than either of the other phases. The population data were collected by personal interviews, using a fairly comprehensive questionnaire. Every family in the area was asked to provide information; most families responded. To save time, usually one person in the family provided information for all members of the household. This created some gaps in the over-all picture, but it usually gave sufficient information for the entire family. All families were contacted by the writer.

The questionnaire covered most of the population aspects that were deemed relevant to the problem. Because of its length, detail, and personal nature, every effort was made, prior to and during the interviewing, to elicit cooperation from the residents. To this end, an explanatory statement regarding the study was issued and publicized; leading officials of the town were contacted and informed of the purposes of the study; and a letter of introduction bearing the Mayor's signature was used in all interviews. In addition, respondents were assured that all information was to be confidential.

The third phase of the project relates to natural resources. The geographic area covered includes considerably more territory than in the previous section. Generally speaking, employment can no longer be treated strictly as a community matter because of improved transportation and communication systems. For adequate analysis, therefore, certain data have been presented for the entire county, and in the case of timber resources, for three counties (Garrett County, Maryland, and Mineral and Grant counties, West Virginia).

Unfortunately, this section of the report, although basic to any full appraisal of the situation, is limited in scope and detail. Up-to-date information was often lacking or limited in value. The two major exceptions involved timber resources and lime supplies. Richard O. Gustafson, Associate Forester, West Virginia University Agricultural Experiment Station, provided an up-to-date, comprehensive appraisal of the forest resources in the three counties noted above. On limestone, the writer made use of some recent materials published by the Agricultural Experiment Station and the West Virginia Geological Survey.

For the other natural resources involved, including coal, current information at the county and district levels was incomplete. The writer had to rely upon some obsolete written sources, such as the Geological Survey's County Reports of 1924, general statements by authorities relative to the current situation, and individual comments by interested parties, particularly those engaged in the exploitation of existing resources. Limitations of time, personnel, and other factors made an adequate field survey inadvisable. Under these circumstances, therefore, any conclusions must be derived largely by indirection and should be treated as tentative.

It seems expedient to emphasize the relevance of the present world situation for any adequate appraisal of these data. The events of the next few months may necessitate some reevaluation of the findings of this study.

## SITUATION--PAST AND PRESENT

Mineral County is located in the Eastern Panhandle of West Virginia. It is bordered on the north and west by the North Branch of the Potomac River, and Garrett and Allegany counties, Maryland; on the east by Allegany County, Maryland, and Hampshire County, West Virginia; and on the south by Hampshire, Hardy, and Grant counties, West Virginia. It was formed from the western portion of Hampshire County in 1866. The division line was altered in 1868 and again in 1872 when the present boundaries were permanently established.<sup>1</sup> Some of the earliest mining operations in the State were located here. Mineral County has an area of 330 square miles and includes six magisterial districts. The county varies considerably in elevation and topography in both a north-south and east-west direction. Elevations range from 545 to 3,250 feet above sea level, with an elevation differential of 2,705 feet. In the eastern section--east of Allegheny Front--are found the high ridges of the Allegheny Range interspersed with relatively fertile valleys. West of the Front is located the so-called Allegheny Plateau that includes the western half of the county. The Plateau includes terrain that is tough and gently rolling to steep in slope (10). Relatively level areas are limited. The drainage of the Plateau region, in a westerly and north-westerly direction, but that of the Allegheny Ridge area is parallel to the mountain ranges and runs in a northeasterly direction. The topography of the latter section also is diversified but consists of proportionately more rolling land. Despite the presence of mountain ranges, there is considerable level valley land (10). This includes the valleys of New Creek, and Patterson Creek.

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<sup>1</sup> David B. Reger; County Reports, Mineral and Grant Counties, W. Va. Geological Survey, 1924, p. 8. See the accompanying maps of West Virginia and Mineral County.

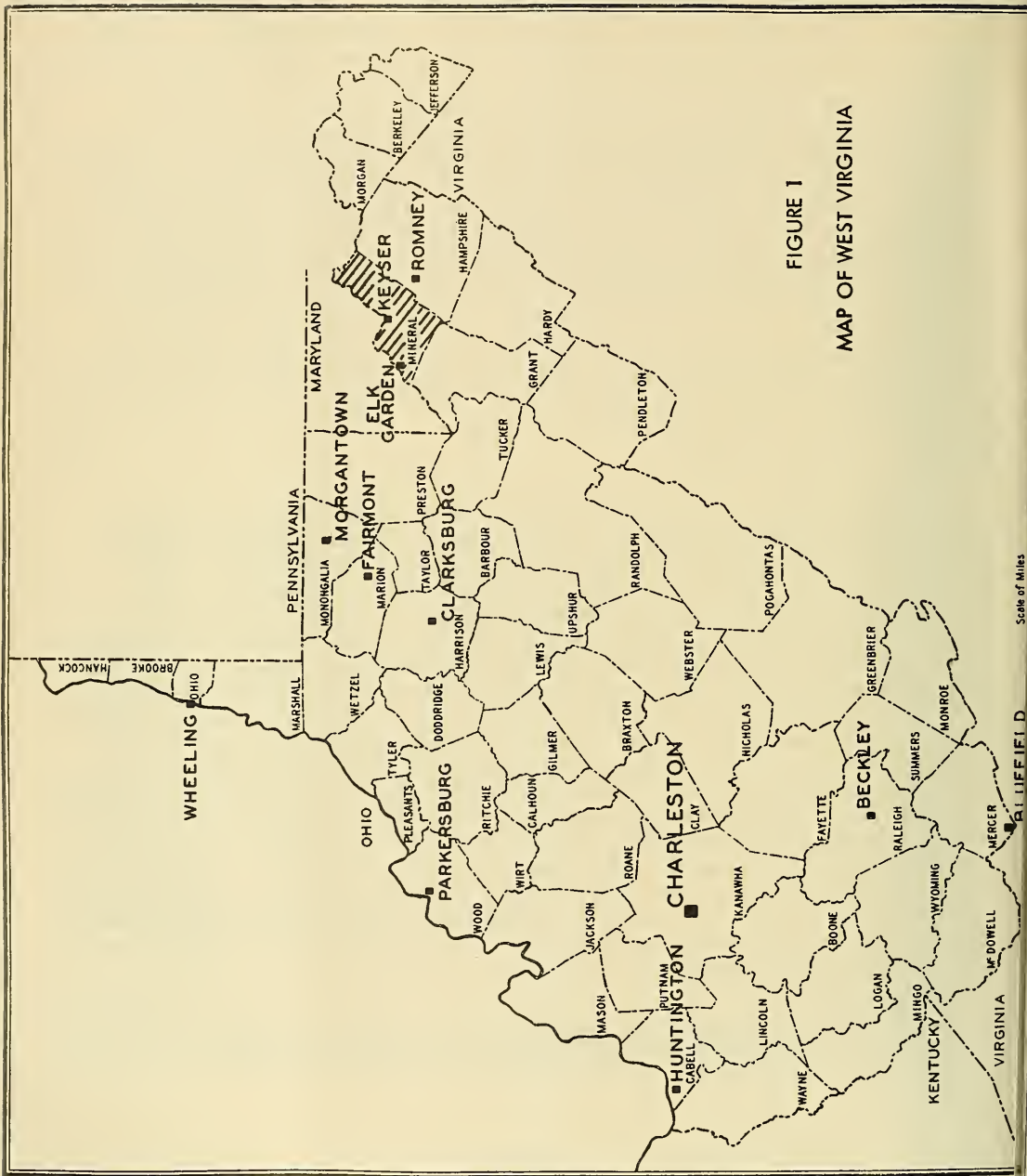
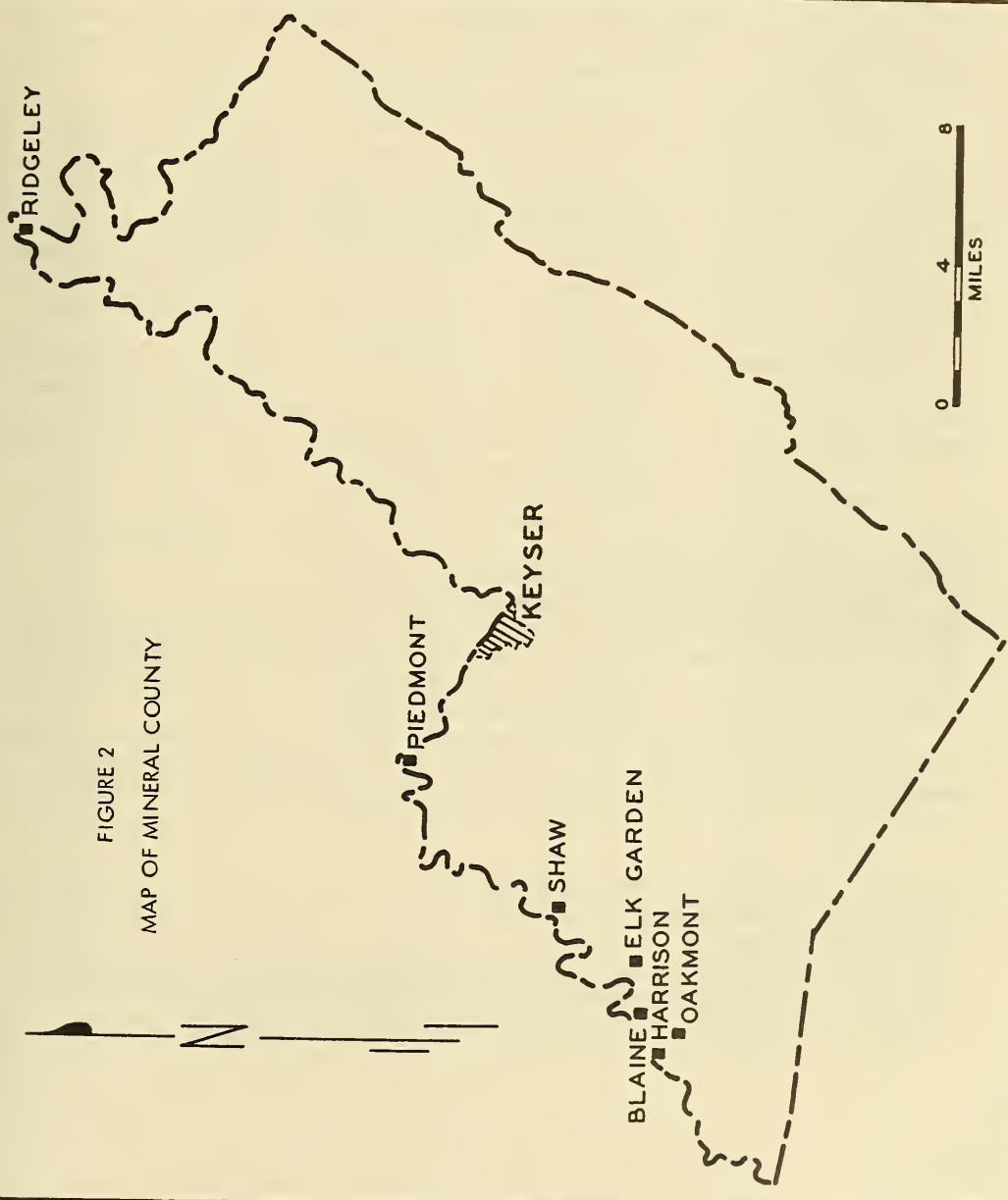


FIGURE 1  
MAP OF WEST VIRGINIA

Scale of Miles

VIRGINIA DEPARTMENT OF MINES AND REFINING DIVISION OF MINES

FIGURE 2  
MAP OF MINERAL COUNTY





Slope is one of the most important factors from the standpoint of land use. Others are depth and type of soil. Most of the land in Mineral County may be called marginal in terms of agricultural production. A small portion of the area is classified as "good crop land" or better. Most of this is located in the Patterson Creek Valley, a narrow belt of land extending the full length of the county along its eastern boundary. Because of limiting factors, there is little land classified as "average pasture land" (inferior cropland) or "good pasture land" (below average cropland) (10).

Owing to topographic variations, seasons and temperatures are not uniform over the county. Summers are relatively long and the winters reasonably mild along the North Branch of the Potomac below Piedmont. On the other hand, short and cool summers, late springs, early fall frosts, and severe winters are common west and southwest of Piedmont. This affects the length of the growing season. The season is significantly shorter for the higher altitudes. The growing season in Burlington is 149 days. In Piedmont (on the North Branch) it is 163 days (9). Precipitation probably is varied equally. The two official weather stations at Burlington and Piedmont report about 35 inches (20); but the average rainfall in the mountainous areas is approximately 48 inches (9).

The 1950 Census shows Mineral County had a population of 22,333 (15). This represents an 0.5 per cent increase over the decade. Most of the other counties in the Eastern Panhandle either lost or gained very little in population, a fact that may have some significance in a complete appraisal of the situation. The per cent change in Mineral County's population during the last decade was less than in any other decade since 1900.

Compared to the State as a whole, the area is not densely populated, having a density of only 67.7 per square mile in 1950.<sup>2</sup> Moreover, there has not been any great increase in density of population since 1920 when it was approximately 60 (12). The State had a density of approximately 83 in 1950<sup>3</sup> and 79 in 1940 (19).

All but one of the six magisterial districts increased in population between 1900 and 1950, two of the increases being very substantial. Table 1 shows Elk District lost in population between 1910 and 1930, most of the over-all loss being accounted for in the decade following 1920.<sup>4</sup> Its peak year was 1910. Since it has been one of the two leading coal-mining districts of the county, this trend is very significant. (See also Table 2).

Other aspects of population that are important in this study include residence, nationality, and occupation. Relevant 1950 census data were not available at the time of this writing; consequently, the writer has depended almost entirely on the 1940 Census and the 1945 Agricultural Census.

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<sup>2</sup> Computed on the basis of the 1950 population.

<sup>3</sup> Computed on the basis of the 1950 population as reported in the "Advance Reports," 1950 Census of Population, 1951.

<sup>4</sup> The 1950 figures came from the "Advance Reports," 1950 Census of Population, op. cit. The 1920, 1930, and 1940 information came from the 16th Census of the U. S., 1940. The data for the years 1900 and 1910 were based on the 14th Census of the U. S., 1920.

TABLE 1. --Population of Mineral County, West Virginia, Including Magisterial Districts and Specified Towns, 1900-1950<sup>1</sup>

Area	YEAR							Increase 1900-1950
	1950	1940	1930	1920	1910	1900		
County Total	22,333	22,215	20,084	19,849	16,674	12,883	9,450	
<b>Magisterial Districts</b>								
Cabin Run	1,262	1,019	904	900	884	827	435	
Elk	1,954	2,484	2,229	3,539	3,825	2,597	-643	
Frankfort	5,821	5,669	4,914	3,486	2,538	1,807	4,014	
New Creek	8,909	8,546	8,108	7,484	6,040	4,038	4,871	
Piedmont	3,315	3,449	3,004	3,602	2,635	2,814	501	
Welton	1,072	1,048	920	838	752	800	272	
<b>Major Towns</b>								
Elk Garden	318	342	299	422	438	581	-263	
Keyser	6,347	6,177	6,248	6,003	3,705	2,536	3,811	
Piedmont	2,565	2,677	2,241	2,835	2,054	2,115	450	
Ridgeley <sup>2</sup>	1,754	1,907	1,972	1,709	---	---	45 <sup>3</sup>	

<sup>1</sup> Source: Bureau of the Census.

<sup>2</sup> Information not available for the years 1900 and 1910.

<sup>3</sup> Covers 1920-1950 period.



TABLE 2.--Population of Mineral County, West Virginia, Including Magisterial Districts and Specified Towns, 1900-1950, by Per cent of Change for Decades and Total Period<sup>1</sup>

Area	YEAR						Increase 1900-1950
	1950	1940	1930	1920	1910		
County Total	0.5	10.6	1.2	19.0	29.4		73.4
<b>Magisterial Districts</b>							
Cabin Run	23.8	12.7	0.4	1.8	6.9		52.6
Elk	-21.3	11.4	-37.0	-7.5	47.3		-24.8
Frankfort	2.7	15.4	41.0	37.4	40.5		222.1
New Creek	4.2	5.4	8.3	23.9	49.6		120.6
Piedmont	-3.9	14.8	-16.6	36.7	-6.4		17.8
Welton	2.3	13.9	9.8	11.4	-6.0		34.0
<b>Major Towns</b>							
Elk Garden	-7.0	14.4	-29.1	-3.7	-24.6		-45.3
Keyser	2.8	-1.1	4.1	62.0	46.1		150.3
Piedmont	-4.2	19.5	-21.0	38.0	-2.9		21.3
Ridgeley <sup>2</sup>	-8.0	-3.3	15.4	--	--		2.63

<sup>1</sup> Source: Bureau of the Census.

<sup>2</sup> Information not available for 1910 and 1920.

<sup>3</sup> Covers 1920-1950 period.

Unlike most of the other six counties in the Eastern Panhandle, much of Mineral County's population resides in urban centers.<sup>5</sup> Tables 3 and 4 indicate that 8,854 persons, or 39.8 per cent of the total population can be classified urban. Those living on farms, without regard to occupation, comprise 23.7 per cent of the population and 36.5 per cent of the people reside in rural areas but do not live on farms (18). The corresponding percentages for the State as a whole are 28.1 per cent urban, 27.9 per cent rural-farm, and 44 per cent rural-nonfarm (18).

Most of the county's population (95.5 per cent) consists of native-born whites. This compares closely with the State's native white population (91.6 per cent) (18).

Most of the county's employed labor force in 1940 was engaged in nonagricultural industries. The railroads, chemical, and paper manufacturing industries employed more workers than did others. Table 4 indicates agriculture employed 16.9 per cent of the employed males. The chemical and railroad industries employed 30.2 per cent.<sup>6</sup> A large number of persons are classified in Table 4 as being engaged in many unidentified industries in both 1930 and 1940. The number of persons working in any one of these industries was rather small. This also is true for some of the industries listed in Table 4. In these cases, the small percentage of the labor force so employed is quite significant to this discussion. For example, much of the area is forested, yet only twenty-nine males were engaged in the logging and forestry industries in 1940. The county also has abundant deposits of limestone, clay, and shale, but few persons were employed in these industries. A surprisingly small percentage of the labor force worked in coal mining. A downward trend was seen between 1930 and 1940.

Mineral County communication and transportation facilities are reasonably satisfactory. Two federal highways cross the county, U. S. 220, north and south, and U. S. 50 extending from the eastern border at Burlington to the center of the county where it joins U. S. 220. State Route 46 bisects the county in an east-west direction, connecting Piedmont with Fort Ashby. State Route 28 extends southward from Cumberland to Springfield, then to Romney, Hampshire County. Route 42 runs from the North Branch at Blaine through Elk Garden to the intersection with U. S. 50 on Allegheny Front. Various secondary roads, some paved, serve other sections of the county. Approximately 90 miles of secondary road were unimproved in 1949. (25).

The Baltimore and Ohio Railway and the Western Maryland Railway provide freight and passenger service for certain sections. The Baltimore and Ohio has some 15 miles of main-line tracks in the county, and considerably more immediately adjacent to the boundary lines southeast and southwest of Cumberland (12). The Western Maryland Railway an important commercial carrier, roughly parallels the North Branch of the Potomac along the western border, running partly in West Virginia and Maryland. A branch of the Western Maryland entered Elk Garden in 1888 (1), but service was discontinued in 1934 when the supply of "Big Vein" and "Tyson" coal was almost exhausted. Service is still maintained between Harrison and Oakmont, a town three miles from Elk Garden.

<sup>5</sup> In this discussion of population characteristics, the writer has employed the 1940 definitions of the Bureau of the Census. The urban population generally consists of persons living in incorporated centers of 2,500 or more population. Rural-farm is the term applied to those living on farms without regard to occupation, and the rural-nonfarm category includes all others in the rural population not living on farms. See Bureau of the Census, "Characteristics of the Population, West Virginia," 16th Census of the United States, 1940, Second Series, pp. 2-3.

<sup>6</sup> The 1930 figures come from the 15th Census of the United States, and those for 1940 from the 16th Census of the United States.



TABLE 4. --Per Cent Distribution of Population of Mineral County, West Virginia, by Place of Residence and Type of Employment, 1930 and 1940<sup>1</sup>

Classification	1930			1940		
	Male	Female	Total	Male	Female	Total
Population	100.0	100.0	100.0	100.0	100.0	100.0
Residence composition						
Urban	29.7	32.6	31.1	38.1	41.7	39.8
Rural--farm	21.6	20.0	20.8	25.0	22.3	23.7
Rural--nonfarm	48.7	47.4	48.1	36.9	36.0	36.5
Employment by industry						
Employed workers <sup>2</sup>	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture	20.6	3.8	18.1	16.9	1.5	13.9
Coal mines	9.5	0.2	8.2	7.3	0.2	5.9
Logging and forestry	0.6	0.0	0.5	0.6	0.0	0.4
Sawmill and planing	1.2	0.2	1.1	1.5	0.0	1.2
Paper and allied products <sup>3</sup>	5.7	5.1	5.6	8.6	5.9	8.0
Chemicals and allied products <sup>3</sup>	0.4	0.1	0.3	14.7	19.2	15.6
Other mines and quarries	0.1	0.0	0.1	0.1	0.0	0.1
Stone, clay and glass products <sup>3</sup>	0.4	0.6	0.5	0.6	0.2	0.5
Railroads	20.3	2.1	17.5	15.5	0.2	12.5
Wholesale and retail trade	6.4	11.0	7.1	9.7	17.6	11.3
Professional <sup>4</sup>	2.5	19.7	5.0	4.0	15.4	6.3
Other	32.2	57.2	36.0	20.5	39.8	24.3

<sup>1</sup> Source: Bureau of the Census.

<sup>2</sup> 1940 figures include persons 14 years old and older, while 1930 figures include persons 10 years old and older.

<sup>3</sup> Manufacturers.

<sup>4</sup> Includes related services.

Elk Garden is located on the western border of the county, about two miles from Blaine and the Maryland line.<sup>7</sup> It is situated on some level tableland at an altitude of 2,275 feet. The elevation drops off very sharply to the west toward the North Branch of the Potomac. The town apparently derived its name from the fact that it was the site of a pond or salt lick frequented by elk (4).

There is little published material pertaining to the town's history. It is probable that its origin and development were closely connected with the coal-mining industry. Incorporated in 1890 (8), its busiest period seems to have been prior to the turn of the century. The Elk Garden Branch of the Western Maryland Railway was completed in 1888 and was built to afford an outlet for the "Pittsburgh Coal" for which the area was renowned. It was still listed as an "important mining town" in the 1920's (9), but if population is any criterion, its importance in this respect was on the wane. With a population of 581 in 1900, the town included 438 persons in 1910; 422 in 1920; 299 in 1930; 342 in 1940; and 318 in 1950.<sup>8</sup>

These figures involve only the incorporated area of the town. A portion of the town is located outside this area. The figures do not represent the total resident population. The trend, however, reflects that of the town as a whole. Since this report includes a considerable area outside of the corporate limits, some of the data are not strictly comparable with that of the census.

Elk Garden was a "company town" in one important respect. Although many of the homes were privately built and owned, the lots were rented from the Davis Coal and Coke Company, now of Thomas, West Virginia. The company also built some of the houses, particularly those along what is locally referred to as the "Tram-road," but such houses were in the minority.

The Davis Coal and Coke Company was originally the biggest coal producer in the Elk Garden area. As the "minable coal" resources, particularly those of "Big Vein"<sup>9</sup> or "Pittsburgh Coal," decreased in quantity and quality, this company withdrew from the area. It eventually sold most of its holdings in the town to the occupants. Other companies continued to work some of the mines that had been operated by the Davis Company; but the time eventually came when the "Big Vein" coal seam--which formerly outcropped in and around Elk Garden--was virtually exhausted. With the advent of strip mining, the remnants of this seam have been stripped, leaving the area practically devoid of Pittsburgh Coal.

With this vein gone and the depletion of the "Tyson" (Sewickley) vein, the town's economy became dependent on the exploitation of other coal seams. In most cases, these were not as profitably mined as the Pittsburgh Coal because the seams were not of comparable thickness and purity. Consequently, more and more of the town's miners were forced to seek employment elsewhere. Although many found work near Elk Garden, census figures show a 29 per cent loss in the town's population between 1920 and 1930. Other

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<sup>7</sup> See accompanying map of Elk Garden and vicinity.

<sup>8</sup> See Table 1, p. 9.

<sup>9</sup> The term "Big Vein" coal was used locally to identify what the Geological Survey refers to as Pittsburgh coal. The name seems to have been derived from the thickness of the seam. Some of the older male residents of the town reported to the writer that thicknesses of twenty feet or more were not uncommon.



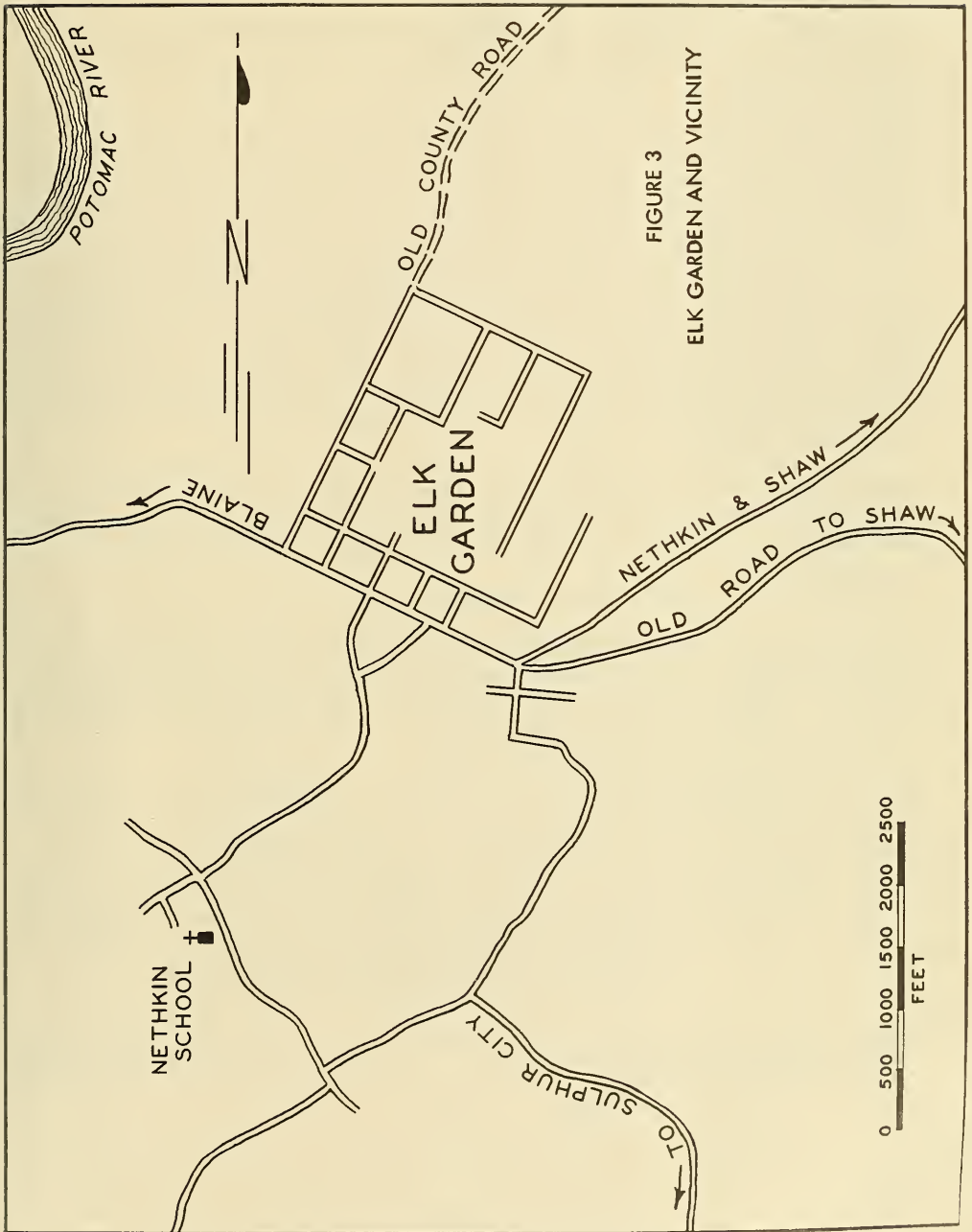


FIGURE 3  
ELK GARDEN AND VICINITY



towns and villages in the area also felt the impact of this turn of events. Wabash, for example, gradually developed into a "ghost" settlement.

Except for the World War II period, when the demand for coal was high, it appears that Elk Garden and its vicinity have been undergoing a steady decline in economic activity for the past three decades. Strip mining, the relatively recent development of "fire-coal" mining, and expansion or continuation of deep mining in other areas within commuting distance of Elk Garden probably prevented a more rapid depletion of the town's population. The cushioning effect of these developments, however, has been somewhat limited. Strip mining, for example, requires a small labor force and has provided rather small employment. "Fire-coal" mining also involves only a small segment of the mining population. Most of these mines are operated on a small scale without much, if any, equipment. Their operators are essentially marginal producers because production is limited and labor returns comparatively small.

Elk Garden is somewhat isolated from the major towns and industries of the county. State Route 42, on which the town is situated, provides access to U. S. 50 south of the town, and to Maryland Route 38 west of the town; but the town has no direct connection with Keyser, and poor connections with Piedmont. To the west, on the other hand, road communication is more satisfactory, although the distances to economically important centers are rather substantial from a commuting standpoint. Table 5 indicates the relative isolation of Elk Garden from centers of some importance.<sup>10</sup>

Bus transportation is available to residents of the town, but it is probable that schedule changes would be required to provide more satisfactory service to Keyser and other points. Rail transportation for freight and passengers is available at Blaine and Oakmont, both approximately two and one-half miles from Elk Garden, and at Shaw, some four miles away.

#### THE PEOPLE OF ELK GARDEN - Population Characteristics

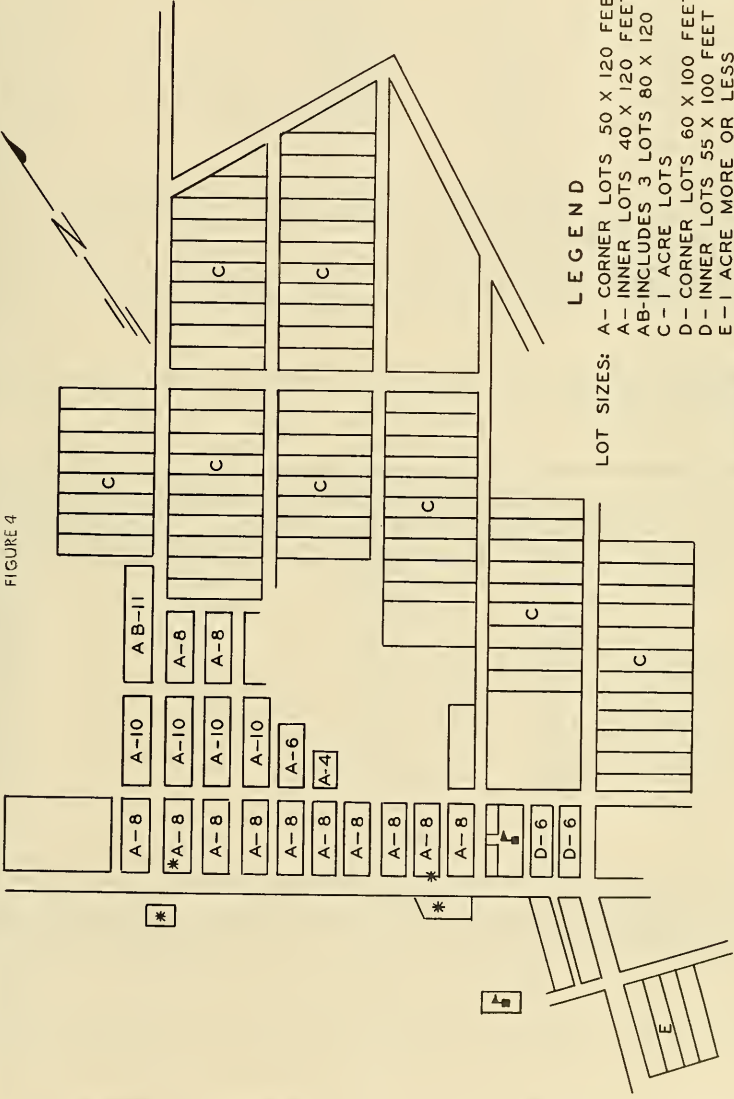
The survey was designed to include virtually all families that were considered to be resident in Elk Garden. This accounts for the inclusion of several farm families whose source of livelihood is primarily nonindustrial and, consequently, somewhat beyond the scope of this report. The area included by the study extends approximately one mile north, east, and south of the town proper, and less than one-half mile west.

The physical features of the town are presented on the accompanying map. With a few additions this map was reproduced from the original official plat map of the town. The additions were made without the use of surveying techniques and, consequently, are none too accurately presented in terms of physical location. The vacant area in the center of the town represents a knoll, the top of which lies at an elevation of about 2,350 feet--75 feet above the town. This area is not being used at the present time. Its soil is apparently unproductive for agriculture. Finally, the lot lines are those of the original settlement. They probably represent the manner in which the terrain was subdivided by the coal company.

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<sup>10</sup> Road mileages on Table 5 are only approximate and are derived from the Official Highway Map of West Virginia, 1950.

FIGURE 4



**LEGEND**

- LOT SIZES: A- CORNER LOTS 50 X 120 FEET  
 A- INNER LOTS 40 X 120 FEET  
 AB- INCLUDES 3 LOTS 80 X 120 FEET  
 C- 1 ACRE LOTS  
 D- CORNER LOTS 60 X 100 FEET (APPX.)  
 D- INNER LOTS 55 X 100 FEET (APPX.)  
 E- 1 ACRE MORE OR LESS

- NUMBER OF LOTS INDICATED BY NUMBER IN BLOCK  
 \*- INDICATES STORES  
 ▣ - INDICATES SCHOOLS

TABLE 5.--Approximate Distances from Elk Garden to Specified Points<sup>1</sup>

Place	Miles	Place	Miles
Blaine <sup>2</sup>	2.5	Gormania	20
Kitzmiller, Md.	2.5	Mt. Lake Park, Md.	22
Oakmont	2.5	Oakland, Md.	23
Shaw <sup>2</sup>	4	Piedmont	23 <sup>3</sup>
Shallmar	4.5	Western Port, Md.	23 <sup>3</sup>
Vindex, Md.	8	Romney	31
Mt. Storm	13	Cumberland, Md.	39
Deer Park, Md.	16	Frostburg, Md.	39 <sup>3</sup>
Keyser	18		

<sup>1</sup> Distances taken from State Road Commission's Highway Map of West Virginia.

<sup>2</sup> On main line of Western Maryland Railway.

<sup>3</sup> Via hard surface highway. There is a shorter route, the major part of which is unimproved and relatively hazardous. This would reduce the distance about 9 miles.

TABLE 6.--Households in Mineral County, 1940, and Elk Garden, West Virginia, 1950, by Number of Persons<sup>1</sup>

Persons in household	Number of households			
	County		Elk Garden	
	Number	Percent	Number	Percent
1	300	5.5	24	14.3
2	1,110	20.3	37	22.0
3	1,183	21.6	27	16.1
4	987	18.0	26	15.5
5	749	13.7	20	11.9
6	501	9.2	9	5.4
7	269	4.9	11	6.5
8 and over	370	6.8	14	8.3
Total	5,469	100.0	168	100.0

<sup>1</sup> The county data are derived from the Bureau of the Census, 1940 Census of Population. Elk Garden data are based on this survey.

As of September, 1950, the population of the area was 640. This included 168 families with an average of 3.8 persons.<sup>1</sup> This is less than the State average per household of 4.3 but equals the national average (19). When family members living away from home are included, the average increases to 5.5. This indicates the extent to which former residents have migrated from Elk Garden, many in search of employment. Some of the families included a few persons who were not related by blood to the head of the household. Table 6 shows the distribution of families in terms of size.

The age composition of any population is important. It affects employment and has a direct relationship to the vital statistics of the community as well as the levels of living of the residents. Table 7 indicates that a high proportion of the town's inhabitants may be classified as dependents. Approximately 52 per cent is in this category, as compared with 39.4 per cent in the State's population. This includes all persons under 15 as well as those over 59 years of age. Some of those 60 years of age and over are willing and able to work; but it seemed more realistic to include them in the "over-age" bracket since persons of this age are often not employed by certain industries and in many different occupations.

A low proportion of the population is in the so-called "productive-age" group. This reflects the extent to which persons in this age group have sought employment elsewhere.

Marital status also is important since it acts directly as a determinant of the birth rate. Another related and equally significant relationship is that of mobility in the marital status of members of the group. In this case, the association is negative, since marriage and family living tend to restrict the mobility of those involved. Single persons usually migrate more than do married persons or families with children; consequently, if a situation develops in any community involving increased unemployment and a general decline in economic activity, single persons will tend to migrate in search of new jobs, while those with families frequently remain behind.

Marriage ties represent only one of the many factors that tend to restrict occupational mobility. Mining towns are notoriously impermanent because coal deposits are limited. As a result, economists consider mobility of population essential to the mining industry.<sup>2</sup> Unfortunately, however, the elements of immobility frequently dominate the situation and result in considerable hardship and distress for those involved.

Approximately 70 per cent of all males and 70 per cent of all females 15 years of age and older are married. Table 8 reveals that these percentages are somewhat higher than those for the State. On the other hand, single males and single females are proportionately less well represented in the town's population than in the State's population. Table 8 also indicates the proportions of each population group (State and local) which may be classified as widowed, divorced, and separated. In the latter cases, there seem to be no very marked differences between the two populations.

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<sup>1</sup> For the purposes of this report, a family has been defined as any person or group of persons living as a separate and distinct unit, regardless of kinship. This corresponds closely to the Bureau of Census definition, and explains the presence of one-person families. The term may be considered practically synonymous with "household." Due to lack of information, one of these families--consisting of one person--has been excluded from most of the tabulations in this report.

<sup>2</sup> For an interesting discussion of this point, see Kenneth E. Boulding, Economic Analysis, New York, Harper and Brothers, 1940, p. 209.

TABLE 7.--Population of the State, 1940, and Elk Garden, West Virginia, 1950, by Age Group and Sex<sup>1</sup>

Age group (in years)	West Virginia <sup>2</sup>				Elk Garden <sup>2</sup>						
	Male		Female		Male		Female		Total		
	Percent	Number	Percent	Number	Percent	Number	Percent	Number			
4 and under	10.3	47	10.4	39	10.3	47	14.3	39	12.6	86	13.5
5 to 14	20.8	86	21.0	80	20.9	86	26.1	80	25.8	166	26.0
15 to 59	60.4	149	60.7	158	60.6	149	45.3	158	51.0	307	48.0
60 and over	8.5	47	7.9	33	8.2	47	14.3	33	10.6	80	12.5
Total	100.0	329	100.0	310	100.0	329	100.0	310	100.0	639	100.0

<sup>1</sup> Source of information for the state: Bureau of the Census, 1940 Census of Population, Elk Garden data are based on this survey.

<sup>2</sup> Excludes one person not reporting.



TABLE 8.--Marital Status of the Population 15 Years Old and Over, by Sex, for the State, 1940, and Elk Garden, West Virginia, 1950<sup>1</sup>

Status	West Virginia		Elk Garden			
	Male	Female	Male		Female	
	Percent	Percent	Number	Percent	Number	Percent
Single	33.9	25.8	42	21.8	32	16.5
Married	61.4	63.4	135	69.9	136	70.1
Widowed	3.7	9.5	9	4.7	20	10.3
Divorced	1.0	1.3	5	2.6	4	2.1
Separated	---	---	2	1.0	2	1.0
Total	100.0	100.0	193	100.0	194	100.0

<sup>1</sup> Source of information for the state: Bureau of Census, 1940 Census of Population. Data for Elk Garden are based on this survey.

TABLE 9.--Nativity of the Parents of Heads of Households and Their Wives, Elk Garden, West Virginia, 1950<sup>1</sup>

Birthplaces of parents	Number	Percent
West Virginia	367	66.7
Maryland	96	17.4
Pennsylvania	26	4.7
Virginia	12	2.2
Ohio	4	0.7
Other	10	1.8
Foreign lands	36	6.5
Total <sup>2</sup>	551	100.0

<sup>1</sup> Data are based on survey of Elk Garden area.

<sup>2</sup> Includes mothers and fathers of heads and/or wives. This excludes 91 parents whose places of birth were not reported.



"Of all the traits that distinguish one population from another, race and nativity are among the most obvious and important. Race, a biological concept, is based upon physical traits such as texture of the hair, cephalic index, pigmentation. . . whereas national origins, although somewhat correlated with race, are an index of the cultural heritage of a people, of the background of folkways, mores, and other customs characterizing particular locality groups."<sup>3</sup> A knowledge of these elements contributes to an understanding of any population group.

From the standpoint of nativity and racial composition, the population of Elk Garden is relatively similar to that of the State. All but two of the town's citizens are native-born. All of the residents are white. To analyze the nationality factor adequately, however, previous generations must be considered. In this connection, Table 9 shows 6.5 per cent of the parents of the heads of families and of the wives of family heads were foreign-born. Most of these foreign-born came from the British Isles, settling in or near Mineral County relatively early. On a family basis, 14.4 per cent of the families reported that one or more of their immediate ancestors came from foreign lands. This indicates that most of the residents are native-born of native-born parents.

Eighty-seven per cent of all those reporting were born in West Virginia, with 335 native to Elk Garden. Of the 554 residents who were born within the State, 60.5 per cent were born in Elk Garden. In addition, 21.8 per cent were born in Mineral County outside of Elk Garden. The remainder, 17.7 per cent, were born elsewhere in the State. As for those born outside West Virginia, 10 per cent came from Maryland. Table 10 shows that other states are hardly represented in the town's population.

Although there has been some decline in the population of Elk Garden over the last fifty years, the population as a whole has been fairly stable considering economic conditions. About 52.6 per cent of the people who now reside in Elk Garden were born there. In addition, 304 of these have lived there all their lives. This includes a large number of children whose mobility would normally be limited. When this group is eliminated, the results indicate that 36.5 per cent of those persons 20 years of age and over were born in the town.

The relative stability of the population may be expressed in another way. In the age group 20-39 one normally expects to find high rates of mobility. This group consists of many persons who have not yet acquired, or are in the process of acquiring, such hindrances to mobility as real estate and families. This group includes 24.4 per cent of Elk Garden's population. This is below the state percentage (32.3 per cent) for the native-white, rural-nonfarm population. Although there has been some movement from Elk Garden by members of this age group, it is probably not so marked as might be expected in view of the declining trend in economic activity in the last 20 years.

This situation is even more pronounced for these 40-59 groups. While 17.8 per cent of Elk Garden's population belong in this group, only 14.9 per cent of the State's native-white rural-nonfarm population are so classified by the 1940 Census. This is true for those 60 and over. In this case, while 12.5 per cent of the town's population are 60 years old and over, only 6 per cent of the comparable population group in the State are of this age.

The above evidence indicates what the future may hold. In other words, unless the situation changes radically, more of the younger element will be forced to leave town, leaving many elderly people behind.

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<sup>3</sup> T. Lynn Smith, *Sociology of Rural Life*, New York, Harper and Brothers, 1947, p. 65.

The age composition of this locally-born element in the population also is of interest from the historical standpoint. Although the three groups above 20 years of age are included in this group of locally-born residents, they are not equally represented. Those in the 40-59 age group comprise 46.1 per cent of the "natives" over 20 years of age; the 60 and over and the 20-39 groups provide 8.6 per cent and 45.3 per cent, respectively. At the same time, those in the 40-59 group comprise only 32.8 per cent of the total population 20 years of age and over. The over-representation of the latter group in the native portion of the population would seem to indicate that those who were born in Elk Garden between 1890 and 1910 have been more immobile than other segments of the population 20 years of age and over. It also might suggest that proportionally fewer non-native persons in this age range have migrated into Elk Garden and remained there.

An explanation might be made in terms of the town's historical and economic development. Coal mining and the population of the town reached a peak sometime between 1890 and 1910. Prior to 1890, the population was small. Comparatively few persons born prior to this date are included in the native population at the present time. This is indicated by the small proportion of the native group (including all persons 20 years old and over) who are now 60 and over. The latter group comprises only 8.6 per cent of the native element and yet provided 22.8 per cent of the total population 20 and over. These older persons apparently came into Elk Garden during its boom period or subsequently.

The educational status of any given population has considerable bearing on employment and occupational potentials as well as other characteristics of the group. Unfortunately, it is based on formal levels of schooling, and consequently does not necessarily indicate the capabilities of the persons involved.

Table 11 indicates that only 1.3 per cent of Elk Garden's population 25 years old and over has completed college. Although approximately 7 per cent have completed high school (12 years), almost one-fifth of the residents 25 years old and over report less than 4 years of schooling. The above group includes many aged persons. In this connection, it should be remembered that the public school system in West Virginia has changed materially in nature, scope, and function in the last fifty years. Consequently, the older people as a rule have less education than the younger members of the group. The presence of many elderly persons in the town's population accounts, in part, for the relatively low proportion completing high school and the high proportion completing 3 years of schooling or less.

## EMPLOYMENT AND OCCUPATION

Elk Garden has been called a distressed or problem area because its major industry has diminished in importance. Yet the resources of an area cannot be thought of solely in material terms. Equally important are the human beings and their skills and capacities.

Much of the information to be presented is based on August, 1950, the month of record. For the sake of comparison, data are sometimes presented for other periods of time including the previous year and the time of interview. Inasmuch as most of the employable males (15-59 inclusive, either working or looking for work) are married and have families, it seemed desirable to express some of the information in terms of family units.<sup>4</sup>

<sup>4</sup> An employable person is any one 15-59 years of age who is working or professes to be looking for work. Because of the age requirements of many industries and occupations, the age group 15-59 has been arbitrarily used in the definition of employability. Using the above definition and approach, however, it is extremely difficult to ascertain the number of

TABLE 10.--Nativity of Population, Elk Garden, West Virginia, 1950<sup>1</sup>

Birthplace	Number	Percent
West Virginia	554	87.0
Elk Garden	335	52.6
Mineral County	121 <sup>2</sup>	19.0
State	93 <sup>3</sup>	15.4
Maryland	62	9.8
Pennsylvania	11	1.7
Virginia	2	0.3
Elsewhere	6	0.9
Foreign	2	0.3
Total	637 <sup>4</sup>	100.0

<sup>1</sup> Data based on survey of the area.

<sup>2</sup> Born outside Elk Garden but within Mineral County.

<sup>3</sup> Born within the State but outside Mineral County.

<sup>4</sup> Three persons did not report.

TABLE 11.--Educational Status of the Population 25 Years and Over, Elk Garden, West Virginia, 1950<sup>1</sup>

Years of school completed	Number	Percent
0 to 3	58	18.2
4 to 5	34	10.6
6 to 7	56	17.6
8	97	30.4
9 to 11	38	11.9
12	22	6.9
13 to 15	10	3.1
16 and over	4	1.3
Total	319 <sup>2</sup>	100.0

<sup>1</sup> Data based on survey of the area.

<sup>2</sup> There were 11 persons not reporting.

As of August, 1950, there were 167 reporting families resident in the area.<sup>5</sup> Of these, seventy (41.9 per cent) indicated that no one in the family was working for pay or profit. Forty-one (58.6 per cent) of these unemployed families might be considered as technically non-employable because of age, disabilities, and other reasons. The remainder of this unemployed group comprised those families with one or more employable males. In other words, of the 114 employable families in the area, 25.4 per cent were without work in August, 1950.

Thirty families reported only part-time employment during this month. This represents 30.9 per cent of all employed families. Most of these part-time workers expressed a willingness and capacity to work full time.

If we analyze the situation in terms of employable males, we find that almost one-third of the male labor force was unemployed during August. It is interesting to note that although only about two-thirds of all reporting families were classified as employable, over four-fifths of all males 15-59 were similarly treated. Table 7 shows the prevalence of many families composed of elderly people, particularly males. Nevertheless, approximately 17 per cent of all males 15-59 were neither working nor looking for work during August.

The proportion of employable males who were working in August, however, does not represent a complete picture of the employment situation in this area. Thus, 65.1 per cent of these employed males were working full time. The earnings of the remainder were generally quite limited, with a considerable degree of uncertainty involved as to working time and remuneration. The vast majority of those on part-time jobs were so employed out of necessity rather than choice, 93.3 per cent of them reporting no other work available.

Many of the residents, particularly males who are now 60 years of age and older, are willing and able to work. In a period when jobs are at a premium, however, relatively few persons in this category can find suitable employment. This seems to be the case in Elk Garden. Of the 47 males in this "over-age" group, some of whom are unable to work, only ten were working during August. When these are included with the number of employed males 15-59 years of age, we find 96 males working during August, about 49.0 per cent of the total male population 15 and over.

Before describing the jobs currently held by those employed, it is appropriate to indicate the occupational status of all employable males. By so doing, it may be possible to indicate the extent to which present employment is in line with the statements of residents as to "main or usual occupation."<sup>6</sup> These statements reflect preferences as well as past experience. It would be quite significant, therefore, if many of the employed residents were engaged in work other than that described as their usual occupations.

<sup>4</sup> women who might work because of the nature of their position in the family. The writer definitely feels that many married women in Elk Garden would work if suitable employment was readily available; but because of difficulties involved in interpreting their answers, very few nonworking women 15-59 have been treated as employable. An employable family is any family that contains one or more members 15-59 years of age working or looking for work during the month of record.

<sup>5</sup> See footnote 1, for the definition of this term. One other family "resided" in the area, but worked and lived away from town, returning only on week-ends.

<sup>6</sup> This refers to certain terminology in one of the questions contained in the interview schedule. The question is worded as follows: "What is the main or usual occupation of all family members who are now at work or who are now seeking reemployment?"



A majority of the employable males indicated mining as their main or usual occupation. It is surprising, however, that only a bare majority (51.3 per cent) so described their occupational status. This may be partly attributed to changed conditions, and may reflect some adjustment to a new situation in which coal mining plays a somewhat less important role. Even when related occupations are included, trucking for example, over 40 per cent of the employable males consider themselves allied to nonmining occupations. Table 12 give the occupational data.

The employment and occupation information is based largely on the month of August. Since the actual interviewing was done during October, an opportunity is provided whereby the employment situation for the latter month can be compared with that of August. Although the "present employment" information is not standardized in terms of a fixed point in time, the period covered by the interviewing was not considered sufficiently great to distort the picture. Such treatment, has at least one important advantage. Memory, frequently faulty, is virtually ruled out as an essential element in answering questions.

As of August, 1950, approximately 58 per cent of all males 15-59 (including those not employable) were at work. In October, 63.8 per cent of the same age group reported being employed. This shows some improvement in the employment situation between August and October. The same trend also is evidenced in the proportion of employable males 15-59 who reported working. While 70 per cent worked in August, 77.2 per cent of them were working at the time of interview.

A majority of the employable males allied themselves to mining. It is interesting to note that while 51.1 per cent of all males 15-59 employed at time of interview reported mining as their main or usual occupation, only 38.6 per cent of the group was actually engaged in mining when interviewed. This difference between expressed occupational status and employment is attributable to the present inactivity of commercial mines. To partially compensate for this, however, there are probably more employable persons now engaged in "fire-coal" mining than formerly. It is evident that many of the employed group are not working at their customary occupations.

When the total labor force is considered, we find 30 persons employed in addition to the employable males discussed above. A few of these were employed in mining. Almost one-third of the 15 and over group was engaged in mining work at the time of interview.

Table 13 gives the distribution of these employed persons by type of work. It is interesting to note the variety of jobs included in the "other" category. They are:

<u>Type of work</u>	<u>Number of workers</u>
State Road	4
Housework	4
Cooking	3
Taverns	3
Post Office	3
Carpentry	2
Office	2
Machinery	2
Teaching	2
Ministerial	2
Miscellaneous	12

TABLE 12.--Occupational Experience of Employable Males 15-59, Elk Garden, West Virginia, 1950<sup>1</sup>

Occupation	Number	Percent
Mining	63	51.3
Trucking	11	8.9
Working in store	8	6.5
Lumbering	8	6.5
Farming	8	6.5
Railroad	3	2.4
Carpentry	2	1.6
Other	19	15.5
Not reporting	1	.8
Total	123	100.0

<sup>1</sup> Includes all males 15-59, inclusive, who were working or looking for work in August, 1950. Data are based on Elk Garden survey, and refer to "main or usual" occupations. The information does not represent actual employment during August at specified occupations.

TABLE 13.--Current Occupations of Employed Persons 15 Years of Age and Over, Elk Garden, West Virginia, October, 1950<sup>1</sup>

Occupations	Number of Persons	Percent
Mining	39	31.2
Lumbering	16	12.8
Store Work	11	8.8
Farming	7	5.6
Trucking	7	5.6
Railroading	6	4.8
Other	39	31.2
Total	125	100.0

<sup>1</sup> Data are based on Elk Garden survey and represent jobs held at time of interview.



Some of these employed persons worked at locations some distance from town. Approximately three out of every five persons reporting mentioned working in Elk Garden. It is important to note that at least ten residents are directly employed by one mining concern with offices located in the town.

Many of the employable males interviewed had been employed at their current jobs for a short time. Table 14 shows that 52.3 per cent of these males started work sometime between May 1 and the date of the interviews. Four-fifths of the males employed since April 30 began work on their present jobs subsequent to July, 1950. In other words, over two-fifths of all employed males (15-59 years of age) reported that their employment had been initiated after July 31. This may suggest that the employment situation was improving in the last half of the year. Some of these workers, however, were employed only on a part-time basis.

TABLE 14. --Distribution of Employed Nonfarm Males 15-59, by Date and Duration of Employment at Present Job, Elk Garden, West Virginia, October, 1950<sup>1</sup>

Employment period <sup>2</sup>	Duration of employment (months) <sup>3</sup>	Number	Per cent
August (1950) to time of interview	0-3	37	42.1
May-July (1950)	4-6	9	10.2
January-April (1950)	7-10	7	8.0
January-December (1950)	11-22	4	4.5
1948 and earlier	23 and over	31	35.2
Total <sup>4</sup>		88	100.0

<sup>1</sup> Data are based on Elk Garden survey and apply to time of interview.

<sup>2</sup> These are the periods during which certain residents were first employed at jobs held at time of interview. Interviewing began on September 12, and ended on October 26, 1950. Most of the families were interviewed during the latter month.

<sup>3</sup> Figures indicate the number of months during which certain residents were employed at jobs that were initiated in specified employment periods and held up to the time of interview. The time range in each instance represents the number of months between October, 1950, and the last-named and first-named months, respectively, in the employment periods.

<sup>4</sup> Excludes one person not reporting date of employment at present job.

## INCOME

Much of the above information on employment status is prefatory to a discussion of income and financial status. The latter should be presented in terms of type and source of income in order to fully understand the financial standing of Elk Garden families. "Earned" will be that portion of the total income derived from employment. The remainder, if any, will be treated as "unearned" income. The latter also will be subdivided to some extent in terms of source.

As of August, 1950, 11.3 per cent of all nonfarm families reporting indicated no income received for the month. About 21.9 per cent reported incomes of \$50 or less. Less than 20 per cent reported incomes exceeding \$200. Table 15 shows the distribution of families according to total income. One out of every three nonfarm families in the area had a \$50 income or less (including those with no income reported).

The income status of the 109 employable nonfarm families is important. Of these, 12.8 per cent reported no income for the month of August (Table 16). The remainder (87.2 per cent) reported some income, but 11 failed to indicate the exact amount. Over one-fourth of all families reporting, however, had \$50 or less income in August (inclusive of those with no income).

TABLE 15.--Distribution of Nonfarm Families by Total Income, Elk Garden, West Virginia, August, 1950<sup>1</sup>

Income groups (dollars)	Number	Per cent of families with income	Per cent of all nonfarm families
Reporting some income			
\$ 1 to \$ 50	35	24.7	21.9
51 to 100	33	23.2	20.6
101 to 150	24	16.9	15.0
151 to 200	11	7.7	6.9
201 and over	26	18.3	16.2
Undertermined <sup>2</sup>	13	9.2	8.1
Total	142	100.0	88.7
Reporting no income	18		11.3
Total <sup>3</sup>	160		100.0

<sup>1</sup> Data are based on Elk Garden survey.

<sup>2</sup> These families reported having some income but failed to indicate precise amount.

<sup>3</sup> Excludes one family not reporting and seven farm families.

TABLE 16.--Distribution of Employable Nonfarm Families by Total Income, Elk Garden, West Virginia, August, 1950<sup>1</sup>

Income groups (dollars)	Number	Per cent of families with income	Per cent of all employable nonfarm families
Reporting some income			
\$ 1 to \$ 50	16	16.8	14.7
51 to 100	16	16.8	14.7
101 to 150	17	17.9	15.6
151 to 200	10	10.5	9.2
201 to 250	13	13.7	11.9
251 to 300	5	5.3	4.6
301 and over	7	7.4	6.4
Undertermined <sup>2</sup>	11	11.6	10.1
Total	95	100.0	87.2
Reporting no income	14		12.8
Total <sup>3</sup>	109		100.0

<sup>1</sup> Data are based on Elk Garden survey.

<sup>2</sup> There were 11 nonfarm families not reporting amount of income.

<sup>3</sup> Excludes 5 farm families that were classified as employable.

As previously noted, Elk Garden has 109 nonfarm families that have been classified and treated as employable. For 1949, nine out of every ten of these reported some earned income. Table 17 indicates, however, that 43.9 per cent of these families received \$1200 or less in earned income (inclusive of those with no income). Less than one-fifth received more than \$2,400 for the year's work. Strikes and other work stoppages were probably causal factors in this connection. The inclusion of twenty-four families that did not report the amount of their income affects the picture somewhat; but even if these are excluded from the total, only 20 per cent of the families had more than \$2,400 income earned in 1949.

Considering the same group in a different time setting (August, 1950) we can see the extent to which employment declined between 1949 and 1950. Of course, it is realized that August may not represent the typical month for the period beginning April, 1950 and ending in October when most of the interviews were made. Table 18 shows only about seven out of every ten of the employable nonfarm families reported some earned income in August, 1950. This contrasts with a much higher proportion receiving earned income in 1949. Another indication of the change in economic conditions is that three times as many families reported no earned income in August as in 1949.

TABLE 17.--Distribution of Employable Nonfarm Families by Earned Income, Elk Garden, West Virginia, 1949<sup>1</sup>

Income groups (dollars) <sup>2</sup>	Number	Per cent of families with earned income	Per cent of all employable nonfarm families
Reporting some income			
\$ 600 and over	19	19.4	17.3
601 to \$ 1200	18	18.4	16.5
1201 to 1800	10	10.2	9.2
1801 to 2400	10	10.2	9.2
2401 to 3000	9	9.2	8.3
3001 to 3600	4	4.1	3.7
3601 and over	4	4.1	3.7
Undetermined <sup>3</sup>	24	24.4	22.0
Total	98	100.0	89.9
Reporting no income	11		10.1
Total <sup>4</sup>	109		100.0

<sup>1</sup> Data based on Elk Garden survey.

<sup>2</sup> Income groups, if expressed on an average monthly basis, would be roughly comparable to those listed in Table 18. The second group, for example, represents average monthly incomes of \$50.08 to \$100.00, approximately the same as the second group in Table 18. This facilitates rough comparisons between August, 1950, and the year 1949.

<sup>3</sup> Twenty-four families did not report amount of income.

<sup>4</sup> Excludes five farm families that were employable.

The above comparisons have limited value in view of the differences in time covered by the two periods. There may well have been individual months during 1949, as in August, 1950, when many families received no earned income. This is suggested by the rather high percentage of employable nonfarm families reporting \$1,200 or less in earnings for 1949. It is quite evident that the employment situation in the latter year was not favorable.

Many families receive considerable sums of money from sources other than employment. Such funds may be designated as "unearned" for purposes of classification. They include public assistance, interest, dividends, rent, and unemployment compensation. The proportion of a family's income that is unearned and the source of such income vary considerably according to occupation, education, employment, and other factors. Working-class families, for example, would normally have little unearned income. During periods of unemployment, however, the importance of this type of income would be much greater.

TABLE 18.--Distribution of Employable Nonfarm Families by Earned Income, Elk Garden, West Virginia, August, 1950<sup>1</sup>

Income groups (dollars) <sup>2</sup>	Number	Per cent of families with earned income	Per cent of all employable nonfarm families
Reporting some income			
\$ 1 to \$ 50	7	9.2	6.4
51 to 100	15	19.8	13.7
101 to 150	9	11.8	8.3
151 to 200	12	15.8	11.0
201 to 250	9	11.8	8.3
251 to 300	5	6.6	4.6
301 and over	6	7.9	5.5
Undetermined <sup>3</sup>	13	17.1	11.9
Total	76	100.0	69.7
Reporting no income	33		30.3
Total <sup>4</sup>	109		100.0

<sup>1</sup> Data are based on Elk Garden survey.

<sup>2</sup> Income groups are roughly comparable to those in Table 17 when the latter are expressed in terms of average monthly income.

<sup>3</sup> There were 13 families not reporting amount of income.

<sup>4</sup> Excludes five farm families that were employable.

As of August, 1950, one-half of the 160 nonfarm families reported some unearned income for the month. Table 19 indicates that 7.4 per cent of these families received over \$100 in unearned income, and that approximately one-fourth of them received from \$1 to \$50. As might be expected, 48.8 per cent of those receiving such income reported \$50 or less. Public assistance provided more of these families with unearned income than any other single source, with 44.3 per cent of the unearned-income families reporting some public assistance during August. Another 22.8 per cent of these income receiving families reported some unemployment compensation.

Table 20 reveals that proportionately fewer of the employable families received unearned income. Only 36.7 per cent of these families received income of this nature. This difference can be attributed in part to the larger proportion of public assistance families in the previously described group. Although 41 per cent of the employable families with some unearned income in August received public assistance, this represented only 14.8 per cent of all employable families (including those with no unearned income). For the total nonfarm family group, the corresponding figures were: 44.3 per cent and 22 per cent, respectively. A more important source of unearned income for the employable segment was unemployment compensation.



TABLE 19.--Distribution of Nonfarm Families by Unearned Income, Elk Garden, West Virginia, August, 1950<sup>1</sup>

Income groups (dollars)	Number	Per cent of families with unearned income	Per cent of all employable nonfarm families
Reporting some income			
\$ 1 to \$ 25	12	15.0	7.5
26 to 50	27	33.8	17.0
51 to 75	12	15.0	7.5
76 to 100	15	18.8	9.4
101 to 125	5	6.2	3.1
126 to 150	5	6.2	3.1
151 and over	.2	2.5	1.2
Undetermined <sup>2</sup>	2	2.5	1.2
Total	80	100.0	50.0
Reporting no income			
	80		50.0
Total <sup>3</sup>	160		100.0

<sup>1</sup> Data are based on Elk Garden Survey.

<sup>2</sup> Two families did not report exact amount of income.

<sup>3</sup> Excludes seven farm families reporting unearned income and one family from which information was not obtained.

Unearned income appeared to be an important source of revenue to more families in 1949 than in August, 1950. One-half of all nonfarm families received unearned income in the latter period, whereas 62.9 per cent reported such income in 1949 (Table 21).

This situation may be attributed to several factors. Strikes, work-stoppages, and temporary lay-offs during 1949 resulted in a considerable loss of working time for miners in the Elk Garden area. The Johnstown Coal Company Manor Mine at Vindex, Maryland, for example, reported only one hundred and thirty-five working days during the year. Many of Elk Garden's miners worked at this operation. Such developments, as well as some unemployment, necessitated both unemployment compensation and public assistance. Second, although unemployment was presumably greater after the Vindex operation closed (April, 1950), and possibly for several months thereafter, many of the residents had apparently exhausted their unemployment benefits by August of that year. Thus, while twenty-two families reported receiving compensation during 1949, only eighteen reported this for the month of record. Third, although public assistance cases did increase somewhat, from thirty-two in 1949 to thirty-five in August, 1950, the increase percentagewise was relatively slight. Finally, unearned income data for 1949 are not quite comparable with that for August in that interest and dividends are excluded from consideration in the latter period. Seven families reported receiving such income during 1949.

TABLE 20.--Distribution of Employable Nonfarm Families by Unearned Income, Elk Garden, West Virginia, August 1950<sup>1</sup>

Income groups (dollars)	Number	Per cent of families with unearned income	Per cent of all employable nonfarm families
Reporting some income			
\$ 1 to 25	5	12.5	4.6
26 to 50	15	37.5	13.8
51 to 75	6	15.0	5.5
76 to 100	6	15.0	5.5
101 to 125	1	2.5	0.9
126 to 150	4	10.0	3.7
151 and over	2	5.0	1.8
Undetermined <sup>2</sup>	1	2.5	0.9
Total	40	100.0	36.7
Reporting no income	69		63.3
Total <sup>3</sup>	109		100.0

<sup>1</sup> Data are based on Elk Garden survey.

<sup>2</sup> One family did not report amount of income

<sup>3</sup> Excludes five farm families that were classified as employable.

Table 22 shows a smaller percentage of the employable family group, by comparison with all nonfarm families, received unearned income in 1949. More than one-half (52.3 per cent) of them received some, although thirteen of the fifty-seven families receiving such income reported \$100 or less. Fourteen families were receiving public assistance in that year, only two less than in August, 1950. As in the case of the nonfarm family group, the employable families reported eighteen more cases of unemployment compensation during 1949 than during August.

It is apparent that although the majority of families reported some income in August, many had to subsist on small amounts of cash income. In addition, a significant proportion of this total income was unearned. An increase in employment would go far towards increasing the relative importance of earnings in the family financial structure.

TABLE 21.--Distribution of All Nonfarm Families by Unearned Income, Elk Garden, West Virginia, 1949<sup>1</sup>

Income groups (dollars)	Number	Per cent of families with unearned income	Per cent of all nonfarm families
Reporting some income			
\$ 1 to \$ 100	16	16.0	10.1
101 to 250	13	13.0	8.2
251 to 500	28	28.0	17.6
501 to 1000	22	22.0	13.8
1001 and over	12	12.0	7.5
Undetermined <sup>2</sup>	9	9.0	5.7
Total	100	100.0	62.9
Reporting no income	59		37.1
Total <sup>3</sup>	159		100.0

<sup>1</sup> Data are based on Elk Garden survey.

<sup>2</sup> Nine families did not report amount of income.

<sup>3</sup> Excludes seven farm families and two families not reporting.

TABLE 22.--Distribution of Employable Nonfarm Families by Unearned Income, Elk Garden, West Virginia, 1949<sup>1</sup>

Income groups (dollars)	Number	Per cent of families with unearned income	Per cent of all employable nonfarm families
Reporting some income			
\$ 1 to \$ 100	13	22.8	11.9
101 to 250	7	12.3	6.4
251 to 500	12	21.1	11.1
501 to 1000	10	17.5	9.2
1001 and over	7	12.3	6.4
Undetermined <sup>2</sup>	8	14.0	7.3
Total	57	100.0	52.3
Reporting no income	52		47.7
Total	109		100.0

<sup>1</sup> Data are based on Elk Garden survey.

<sup>2</sup> Eight families did not report amount of income.

<sup>3</sup> Excludes five farm families that were classified as employable.

## LEVELS OF LIVING

The level of living of any social group is essentially the way in which it lives and the items, material and nonmaterial, that it consumes. The term often is confused "standard of living," but the latter refers more realistically to the goals or norms that influence our everyday behavior. Although these norms play an important role in our daily life, they usually represent an ideal level of consumption that frequently has not yet been achieved. Levels of living, on the other hand, are the realities of consumption and comprise those elements that the group actually consumes. These actual consumption patterns are frequently treated as partial expressions of the standards of the group.

There are many factors that affect levels of living. The general standards of the group may be viewed as the basic and determining elements. The definition and the achievement of these goals, however, are determined and influenced by other factors. Among these are education, income, size of family, ethnic characteristics, and ecological elements. Most of these have been briefly discussed. We must consider the actual levels of living at Elk Garden.

Housing is one of the most important elements of any level of living. Its significance is not limited, however, to its close relationship to health and general family well-being. In addition to having a restraining influence on mobility, it also represents a significant capital investment. As an investment, it may be converted into cash through sale, rental, or as collateral on a mortgage or trust. Its cash value depends on its location, its state of repair and other attributes, and the general economic level of the area.

There are 162 occupied dwellings in Elk Garden and 8 unoccupied. In general, the majority of the occupied homes might be classified as in a "fair" state of repair. On the basis of very superficial observations, however, it was estimated that about one-third of them are in need of major repair. This is based primarily on external appearances, and may not represent the total of all houses in this class.

There is some degree of uniformity in design and materials used, although this is not as apparent as in many coal mining towns (Table 23). This may be attributed to the fact that many of the houses were built by individuals. Only 13.6 per cent of the owner-occupied dwellings were presumably built by the coal company. Almost two-thirds of the houses (61.7 per cent) are over one story high, the majority having two stories. One-half have some type of board siding, usually clapboard; and over one-third are finished with "asphalt-brick." Most of the roofs (82.1 per cent) are covered with tar paper.

Most of the occupied dwellings are small, but apparently adequate for the average family. The room-person ratio is 1.5 rooms per person. Also, 54.5 per cent of all families are living in units with six or more rooms.

Home ownership frequently involves psycho-social as well as economic commitments on the part of the individual. Consequently, high rates of home ownership are normally correlated with low rates of mobility. It is interesting to observe the high proportion of Elk Garden families that own houses. Virtually three-fourths (74.8 per cent) of all reporting families owned them, while 16.8 per cent rented them. The remainder (8.4 per cent) reported "using" homes, a catch-all category that includes estates.

Another relevant factor that relates to home tenure is equity. In this connection, most of the homes owned in Elk Garden are paid for, 15.2 per cent being mortgaged. The average indebtedness of the latter is about \$630. Since 98.3 per cent of all of the home owners reported taxes paid for 1949, the equity of most owners is unencumbered.

TABLE 23. --Type of Roofing and Siding of Occupied Dwellings, Elk Garden, West Virginia, 1950<sup>1</sup>

Item	Number	Percent
Siding:		
Clapboard	82	50.6
Asphalt <sup>2</sup>	63	38.9
Tar paper	8	4.9
Other	9	5.6
Total	162	100.0
Roofing:		
Tar paper	133	82.1
Asphalt	11	6.8
Tin (metal)	10	6.2
Tin and paper	8	4.9
Total	162	100.0

<sup>1</sup> Data are based on Elk Garden survey.

<sup>2</sup> Much of this type of siding is referred to as "imitation brick."

The average rent is only \$7.44 per month. Such rates do not represent a great financial burden on most families.

The information afforded on property valuations is somewhat limited in that the values expressed represent merely the estimates of the owners. Such estimates are always subject to bias. In the case of Elk Garden, the estimating of real estate values is further complicated by the current situation. Table 24 shows that 64.4 per cent of the owners value their properties at \$1,000 or less.

The assessed valuation of all Class 2 property (owned and occupied real estate) within the corporate limits is another indication of the relatively low value of real property in Elk Garden. It is currently valued, for tax purposes, at \$23,240. The assessed valuation of all classes of property is \$88,710.<sup>7</sup>

Age of dwellings also affects valuations, state of repair, and purchase price. It also has considerable historical significance. In Elk Garden a large number of houses were built prior to the turn of the century. Table 25 shows that 36.0 per cent are at least 51 years old.

<sup>7</sup> This information was supplied by Frank A. Hott, Mineral County Assessor.



TABLE 24. --Owner-Occupied Dwelling Units in Elk Garden, West Virginia, by Estimated Total Value, 1950<sup>1</sup>

Valuation <sup>2</sup> (in dollars)	Dwellings	
	Number	Percent
\$1,000 and under	38	64.4
1,001 to 2,499	10	17.0
2,500 and over	11	18.6
Total <sup>3</sup>	59	100.0

<sup>1</sup> Data are based on Elk Garden survey.

<sup>2</sup> Values represent owners' estimates. The average value of owned property is \$1,467.

<sup>3</sup> Sixty-six owners did not report. The large number not reporting suggests the difficulty involved in estimating current values in the present situation.

TABLE 25. --Age of Occupied Dwellings in Elk Garden, West Virginia, 1950<sup>1</sup>

Age <sup>2</sup> (in years)	Dwellings	
	Number	Percent
1 to 5	14	15.7
6 to 10	9	10.1
11 to 30	24	27.0
31 to 50	10	11.2
51 and over	32	36.0
Total <sup>3</sup>	89	100.0

<sup>1</sup> Data are based on Elk Garden survey.

<sup>2</sup> Average age of buildings: approximately 33 years.

<sup>3</sup> There were 73 dwellings for which this information was not obtained.

Most of the dwellings classified in need of major repair are in this group. Another 11.2 per cent were built sometime between 1900 and 1919. While fourteen houses are 5 years old or less, this does not mean that a new group of residents has moved into Elk Garden in recent years. The survey indicates that most of these new houses were erected by long-term residents in Elk Garden. Many of these houses were built by young married couples of their own labor and often using salvaged or donated material. The percentage of homes in this age group (15.7 per cent) is probably distorted somewhat because so few renters reported on this question. Their inclusion would have undoubtedly resulted in a lower percentage of relatively new homes.

Although the distribution and control of land has changed somewhat since the town was incorporated, many of the owning families hold title to only one lot. Others, many of them located on the fringe of the town, have acquired additional lots adjacent to their dwellings; and some of these now have rather extensive holdings. In any event, the original subdivisions have been adhered to so that most acquisitions have involved multiples of the lot size that was standard for the particular section of town concerned.

Table 26 shows that the majority of home owners hold title to relatively large lots. One of the most common lot sizes in the original subdivision was 40 by 120 feet. It is not surprising therefore, to find that 21.7 per cent of the owner-occupied dwellings have 4,000 to 4,999 square feet of land. Another fairly common lot consisted of one acre. It was found that nearly one-fifth of the families had an acre of land. At the lower extreme we find three families with lots of less than 4,000 square feet.

The distribution of landed property has many implications. One of the more pertinent is the relationship between land area and levels of living in terms of food production. The writer believes that home gardens have contributed to the health and well-being of the people during this period of unemployment and low income.

TABLE 26. --Land-Holdings of Nonfarm Owners, by Number of Families and Size of Holdings, Elk Garden, West Virginia, 1950

Area in square feet	Number	Percent
Less than 1,500	1	0.9
1,500 - 1,999	1	0.9
2,000 - 3,999	1	0.9
4,000 - 4,999	24	21.7
5,000 - 7,499	8	7.2
7,500 - 9,999	9	8.1
10,000 - 19,999	10	9.0
20,000 - 43,559	7	6.3
1 acre <sup>1</sup>	21	18.9
Over 1 and under 2	12	10.8
2 and under 4	11	9.9
4 and over	6	5.4
Total <sup>2</sup>	111	100.0

<sup>1</sup> One acre is equal to 43,560 square feet.

<sup>2</sup> Excludes seven nonfarm owners not reporting size of holdings.

Excluding the seven farm families in the population of the area surveyed, Table 27 shows that 26.9 per cent of the families reported having no garden in 1950. This can be attributed to the nonagricultural backgrounds of most of the adults. Approximately 60 per cent of all nonfarm families (82 per cent of those reporting gardens) had gardens of more than 1,000 square feet each. The smallest of these gardens, with proper care, would be capable of producing much food for the average family. Many of these gardens did not have the proper care. Conceivably, much could be accomplished here by an educational agency, such as the Agricultural Extension Service.

In addition to the home production of vegetables, some families produced other important foods. Twenty-eight families kept chickens, eight produced their own pork, and five reported having one or more milk cows.

Another indication of the level of home food production is the amount of home food preservation that is carried on in Elk Garden. Although 34.4 per cent of the families preserved no food during the summer of 1950, 35.2 per cent of those who reported some canning preserved more than one hundred quarts of produce (Table 28). With proper instruction and encouragement, the amount of food preservation could probably be increased substantially.

Before concluding this section on levels of living, something should be said about material household conveniences. The writer has attempted to present comparable information for the rural-nonfarm population of Mineral County as a basis for comparison. Unfortunately, the two groups are not strictly comparable because of the time difference, the county data coming from the 1940 Census.

TABLE 27.--Home Gardening in Elk Garden, West Virginia, by Number and Percent of Families and Size of Garden, 1950<sup>1</sup>

Size of garden (square feet)	Number of families	Percent of families with gardens	Percent of all nonfarm families
Families with gardens			
100 and less	1	0.9	0.6
101 to 1,000	18	15.4	11.3
1,001 to 2,500	38	32.4	23.8
2,501 to 5,000	27	23.1	16.9
5,001 to 10,000	13	11.1	8.1
10,001 to 20,000	5	4.3	3.1
20,001 and over	13	11.1	8.1
Undetermined <sup>2</sup>	2	1.7	1.2
Total	117	100.0	73.1
Families without gardens		43	26.9
Total <sup>3</sup>	160		100.0

<sup>1</sup> Data are based on Elk Garden survey.

<sup>2</sup> Two families did not report approximate size of gardens.

<sup>3</sup> Excludes seven families and one family not reporting, (the seven families being farm families).

TABLE 28. --Distribution of Nonfarm Families by Amount of Home Food Preservation, Elk Garden, West Virginia, 1950<sup>1</sup>

Number of quarts canned <sup>2</sup>	Number of families	Percent of families reporting some canning	Percent of all nonfarm families
Reporting some canning			
Under 50	43	41.0	26.9
51 to 100	25	23.8	15.6
101 to 200	20	19.0	12.5
201 and over	17	16.2	10.6
Total	105	100.0	65.6
Reporting no canning			34.4
Total <sup>3</sup>	160		100.0

<sup>1</sup> Data are based on Elk Garden survey.

<sup>2</sup> The average number of quarts canned by all families reporting was 113.1 quarts.

<sup>3</sup> Excludes seven farm families and one not reporting on this question.

Table 29 shows that a high proportion of the occupied units have electricity (91.1 per cent), and washing machines (74.0 per cent). Few have running water, inside toilets, and central heating. About two-fifths of the families had automobiles, and approximately one-fifth had telephones. Although telephone service is a recent innovation in Elk Garden, the number of subscribers has declined since the lines were installed. Radios totaled (90.5 per cent).

No discussion of the manner in which people live would be complete without reference to community facilities. These include not only those of a general nature, but also those which are primarily psychological, social, economic, and political.

Of primary importance to any community is its water supply. Elk Garden has no central water system. The residents are entirely dependent on individual wells for drinking water and other purposes. This is the usual situation in most rural communities, and normally attracts little attention in this type of study. Here, however, it must be treated as a special case. It involves a matter of grave concern to most residents.

An unpublished report of the West Virginia State Health Department shows that some of the water now available is unsafe. Elk Garden has no central sewage disposal system. Most of the homes and business places are served by the sanitary type of pit privy. In addition, most of the individual water supplies are reported to contain considerable iron and sulphur. The situation was further complicated during the summer of 1950 by a serious shortage of water in many wells. Although it is not yet certain whether the supply of water will continue to be a problem in the future, it appears that the combination of these conditions may



result in a serious public health hazard. Both the acid condition and the shortage of water probably can be attributed, at least in part, to mining operations under and near the town.

To resolve this problem, two steps have already been taken. A survey of the water supply and sewage disposal facilities was made by a representative of the State Health Department.<sup>8</sup> The other action was initiated by local officials--as recommended in the above survey--and concerned preliminary measures leading to an application for a Federal loan under the terms of Public Law 352. These loans are apparently made upon approval of an application and are to be used solely for the purpose of preparing plans for a water supply and sewage disposal system. The present status of this action, however, is not known.

Among the other elements which have a general relationship to community well-being, public transportation, roads and streets, the postal system, and public utilities would possibly be of major importance. As indicated in a previous section, the town is located on a primary state road which provides reasonably satisfactory communication with the area to the west and south. The intra-town street system, although in need of repair and improved maintenance, is also reasonably adequate for intra-town contacts. The town also has satisfactory postal service, including a central Post Office in addition to Rural Free Delivery service. As for public transportation, the town has some bus service which might be improved upon by schedule changes; and rail facilities are available within 2.5 miles of the center. Finally, telephone and electric services are currently accessible to most residents.

Elk Garden has four combination stores and service stations and three taverns. All of the stores handle merchandise other than food. This includes hardware, clothing, and drugs. One of them has a lunch counter. Each of these establishments has been financially affected during this period of unemployment. In some instances, accounts receivable constitute a very troublesome item. One barber shop serves the town and its adjacent area. There are no commercial recreational establishments in Elk Garden. The nearest theater is in Kitzmiller, Maryland, three miles away.

The town has diverse social organizations performing important functions in community life. Four churches serve the various religious groups. Two of these are Methodist, one of them located outside the town limits at Nethkin School. The other churches in town are the Pentacostal and the Church of God. Over one-half of the residents 15 years of age and over reported membership in one of the churches or in some church located outside the area.

The town is conveniently located with respect to schools. A consolidated high and grade school is available. In addition to a frame structure, the town has a modern brick school building that was constructed during the early 1940's. Because of the consolidated nature of the school, pupils are transported by bus from outlying areas. As of October, the school lunch program catered to some 185 pupils, 36 of whom received free lunches. An additional 79 pupils were eligible for free lunches, but because of inadequate funds, they could not be served.<sup>9</sup>

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<sup>8</sup> This survey was made in December, 1949, and contained many suggestions relative to the establishment of both water supply and sewage disposal systems.

<sup>9</sup> The school receives 8 cents reimbursement from the Federal Government for each lunch--in accordance with the Federal School Lunch Program--plus 20 cents per meal from each pupil (or 28 cents per meal from each adult).



TABLE 29. --Material Levels of Living for Families in Elk Garden, 1950, and for Rural-Nonfarm Families in Mineral County, West Virginia, 1940<sup>1</sup>

Item	Elk Garden		Mineral County <sup>2</sup>	
	Number	Percent	Number	Percent
Automobile	63	39.9		
Truck	18	11.4		
Electricity	144	91.1	1,382	71.8
Telephone	34	21.5		
Running water	23	14.6	702	36.2
Refrigerator (mechanical)	73	46.2	579	30.2
Ice box	28	17.7	208	10.8
Radio	143	90.5	1,428	74.6
Inside toilet	13	8.2	476	24.7
Washing machine	117	74.0		
Central heat	4	2.5	294	15.2
Combination 1 <sup>3</sup>	9	5.7		
Combination 2 <sup>4</sup>	29	18.4		

<sup>1</sup> Mineral County data came from the 1940 Census of Population. The data for Elk Garden are based on the survey.

<sup>2</sup> Data based on occupied units only, less those not reporting for a particular facility.

<sup>3</sup> Includes automobile, electricity, telephone, running water, refrigerator, radio, inside toilet, and washing machine.

<sup>4</sup> Includes automobile, electricity, refrigerator, and washing machine.

Several other organizations serve the townspeople, the Knights of Pythias, Odd Fellows, Rebeccas, Boy Scouts, Girl Scouts, P. T. A., and Pythian Sisters. Participation and interest in these organizations seems to be well developed among certain segments of the population; but less than 10 per cent of all persons 15-59 report membership in three or more organizations. Since this may include membership in both the church and the union, the community as a whole cannot be considered over-organized in terms of organizational membership and participation. The large number of organizations existing in the town and the local area, however, is impressive. Membership in many of them has declined since the beginning of the present period of unemployment.

The health and medical care situation is far from satisfactory. Except for U.M.W.A. members and their families, very few residents have health or hospitalization insurance. The nearest and apparently the only physician in the area resides in Blaine, two and one-half miles away. An estimate indicates that this physician serves a total population in excess of the standard of adequacy (1 physician per 1,000 persons) now accepted by many health authorities.<sup>10</sup> Most residents requiring hospitalization, travel to Keyser, eighteen miles distant. Another hospital is located at Oakland, Maryland, about twenty-three miles away. Dentists of the area are located in Keyser and Oakland.

<sup>10</sup> For a discussion of this point, see F. D. Mott and M. I. Roemer, Rural Health and Medical Care, N. Y. and London, McGraw-Hill Book Co., 1948, p. 155.

The government of Elk Garden consists of a Town Council, Recorder, and Mayor. The Council has five members. These officials seem concerned with the promotion of community well-being. This is in keeping with the rather high degree of community consciousness that prevails in this town.

#### NATURAL RESOURCES--Coal Mining--Past and Present

Unlike many of the other aspects of this problem, physical resources can not and should not be treated as strictly local matters. Commuting to work has become generally accepted practice everywhere in industrial America; therefore, it would seem more realistic to approach this subject from a broader viewpoint than that of the town itself. Mineral County, as well as other adjacent counties, will be included in this analysis. The size of the area, of course, does have some vaguely definable limits that depend on the amount of job competition to be expected. This factor should be considered by those who evaluate these findings.

According to the West Virginia Geological Survey (11), there were an estimated 809,834,066 short tons of minable coal in Mineral County. This was only 0.7 per cent of the total minable tonnage in the State. Most of this coal was located in Piedmont and Elk Districts, the latter having the biggest portion (12).

The local resources in Mineral County were classified by the Survey into twelve minable seams that varied considerable in degree of minability.<sup>11</sup> One of the first to be exploited was the Pittsburgh or "Big Vein," and it was this coal that carried Elk Garden through its peak of activity.

Since there has been no recent survey in this area of the state, it is necessary to rely on currently available estimates for information on total production and reserves. Unfortunately, the estimates are limited to total production and total recoverable reserves, without any current breakdown by seam. According to the West Virginia Chamber of Commerce, the "estimated recoverable reserve" in 1949 for the county was 396,277,000 tons (23). The total production from 1883 to 1949, was 30,538,000 short tons. According to the West Virginia Geological Survey, 25,704,792 tons was mined by the end of 1934.<sup>12</sup>

Table 30 indicates another interesting fact on coal production in Mineral County. The trend in production has been downward, especially in the post-World War 2 period.<sup>13</sup> Although there also was a decline in production for the State during this period, it is by no means as marked as that for the county. When viewed in terms of the average coal production per year from 1883 to 1949 inclusive, the decline for the county seems quite precipitous. The average annual production for Mineral County over this 67-year period was 455,791 short tons, a quantity in excess of that for any year in the post-World War 2 period (23).

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<sup>11</sup> A. J. Headlee, John P. Nolting, Jr., Characteristics of Movable Coals of West Virginia, Vol. 13, W. Va. Geological Survey, 1940, p. 246. In addition, refer to page 2 for a definition of the term "minable." This term, in brief, refers to coal seams which are of sufficient thickness and purity as to be commercially recoverable either by present methods or at some future time when more valuable seams have been depleted. The reader is cautioned not to consider coal beds so described in this report as necessarily minable at the present time.

<sup>12</sup> Price, Tucker, and Haught, (11), p. 314. For the 52 years of recorded production between 1883 and 1934 inclusive, the average annual production was 494,323 tons. The average production for the years 1935-1949 inclusive was 322,214 tons. This evidences the previously noted decline in coal mining over the last 2 decades.

<sup>13</sup> See footnote 12 above.

TABLE 30.--Coal Production for Mineral County, West Virginia, and for the State, 1946-1949<sup>1</sup>

Year	Mineral County (thousands of tons)	State (thousands of tons)
1946	300	143,525
1947	168	173,654 <sup>2</sup>
1948	146	168,589
1949	107	122,914

<sup>1</sup> Source: W. Va. Chamber of Commerce, W. Va. Business Index, Annual Review, August, 1949, and August, 1950.

<sup>2</sup> This was the record production year for the State.

Most of the available information on individual seams of coal in Mineral County is relatively out-of-date. Despite this, however, some of the data are still applicable.<sup>14</sup>

In terms of estimated original reserves, Pittsburgh coal ranked fifth among the twelve minable seams listed for Mineral County. Its importance was largely due to its thickness, ranging from ten to twenty feet and more, its high quality, and its accessibility. These qualities were primarily responsible for its rapid depletion. By 1923 approximately 99 per cent of the original 41,215,426 short tons of this coal had either been mined or lost. About 418,287 short tons, or 20 acres, are still recoverable (12).

Elk Garden was originally credited with having 315 acres of "Big Vein" coal. Only two acres remained in 1923 (12). There are today only small, scattered deposits of this coal in Mineral and Grant counties. Some of these deposits are not commercially minable. Most of the old "pillars" and the "fringe" coal of this seam have apparently been worked over since the geological survey was made. It appears that the "Big Vein" coal is now practically nonexistent in the area immediately adjacent to Elk Garden.

Another important seam in Mineral County was the "Tyson" or Sewickley. Most of its original tonnage, as for the Pittsburgh, had been either mined or "lost" by 1923,<sup>15</sup> when the geological survey was made (12).

The Bakerstown seam still produces some coal for commercial and domestic use. It is considered an excellent steam coal. It is classified as 25 per cent high volatile A bituminous coal, 40 per cent medium volatile, and 35 per cent low volatile. Located in the southwestern corner of the county, it is described as soft, multiple-bedded, with frequent streaks of "bone" and it is from three to five feet thicker.

<sup>14</sup> Unless otherwise noted, all of the information presented in the following discussion of individual coal seams comes from Headlee and Nolting (3), pp. 19-49.

<sup>15</sup> "Lost" coal is coal that is no longer minable because of cave-ins, flooded mines, mine fires, improper mining engineering, etc.



Mineral County is the only county in the State where a fourth seam, the Upper Baker-town, attains minable thickness and purity. In 1940 it was reported as covering twenty-seven square miles--approximately ninety million tons of coal. Restricted to Elk District, it is from two to five feet thick. It is described as soft, multiple-bedded coal, with some bone and shale. Although it was mined commercially, it is now used locally for domestic fuel.

The Upper Freeport seam, locally termed "Davis" or "Split-Six" coal, also is located in the southwestern corner of Mineral County. It attains a thickness of four to eight feet. It is classified as 50 per cent high volatile A bituminous coal, 37 per cent medium volatile, and 13 per cent low volatile. Described as soft, multiple-bedded, with shale partings, it has been mined commercially and is listed as the most plentiful coal in the county from the standpoint of original tonnage.

The Upper Kittanning seam covers only a very small area of the county. It measures two to three feet in thickness. Usually clean, it is classed as 80 per cent high volatile A bituminous, 16 per cent medium volatile, and 4 per cent low volatile.

Another important seam in the county is the Lower Kittanning. It is classified as 84 per cent high volatile A bituminous, 12 per cent medium, and 4 per cent low volatile. Relatively clean, it nevertheless has a central parting of slate and is two to three feet thick. This seam was being worked by at least one company in Mineral County in 1949.

The Elk Lick seam is three to eight feet thick, and is generally "hard and black," with considerable bone. Often double-bedded, it is classified as 39 per cent high volatile A bituminous, and 61 per cent low volatile.

Little Clarksburg coal also attains minable thickness and purity in Mineral County. Covering nearly thirteen square miles, the seam was estimated to contain about twenty-eight million tons of coal. The bed ranges from two to seven feet thick but it has several slate partings. It is mined for local domestic use only.

Harlem coal attains minable thickness and purity in the southwestern corner of the county. Seldom over two feet thick, it is soft, pure, and will probably be used for local domestic fuel in future years.

One of the three most abundant coals in Mineral County in terms of estimated original tonnage is the Mahoning seam. It is soft and multiple-bedded, and has been mined commercially in this county. The thickness of the seam varies from two to six feet.

Finally, there is considerable Redstone coal in Mineral County.<sup>16</sup> The outcroppings are thick enough for mining; but, there is some doubt as to whether much of it can now be recovered. This seam would be quite difficult to mine since it is situated between the Sewickley and the Pittsburgh seams, both of which have been almost mined out. It covers a very small area of the county, and has been classified as a good steam and domestic coal.

Information was requested by mail from most of the commercial mines in Mineral and Grant counties, and in that section of Garrett County, Maryland, that is within commuting distance of Elk Garden. The returns were limited, either because the operators considered the information confidential, or possibly because of inactivity.

Of the five who replied, only one deep-mine operator from Mineral County reported as many as sixty men employed in December, 1950.<sup>17</sup> The remainder were either small deep-mine operators, or strip-mine operators. Strip mining requires relatively few men to remove a large tonnage of coal. Limited strip mining, such as that in progress in the Elk Garden area, cannot be expected to utilize much of the available manpower there.

<sup>16</sup> See Headlee and Nolting (3), p. 13, and Reger (12), p. 514.

<sup>17</sup> Letter from Mr. Earl K. Hess, Vice-President, Masteller Coal Company, Keyser, West Virginia, dated January 15, 1951. In a previous letter, dated August 29, 1950, Mr. Hess reported 85 men employed during the peak month of 1949.

Another interesting observation might be made concerning the results of this mine survey. In no case did an operator indicate definite plans for expansion. One strip-mine operator informed the writer, however, that adequate working capital was the limiting factor in his operations.

Additional data of interest are obtainable from the annual mining reports of both the West Virginia Department of Mines and the Maryland Bureau of Mines. In the latter case, the 1949 report was the latest available (5). This report indicates that an average of 29.8 men were employed during 1949 by 13 of the mine operators questioned by the author. Included in this average are those employed by at least one large operation at Vindex, Maryland. This mine, operated by the Johnstown Coal and Coke Company of Johnstown, Pennsylvania, employed approximately 155 men in 1949. Many miners commuted from Elk Garden.

As far as West Virginia is concerned, very few commercial companies are listed in Mineral County. The Quarterly Report for the January-June, 1950 period lists only three commercial mines: the Bray Coal Company, the Masteller Coal Company, and the Mt. Pisgah Coal Company (24). No information is reported for the latter company, but the former two employed an average of 81 men over the six-month period. The production of these two companies was small, about 20,000 tons, with only 60 days of work reported for the Masteller Coal Company and 30 for the Bray Coal Company. An unknown number of domestic mines, those employing less than five men, produced close to 5,000 tons of coal over the same period. Another 13,689 tons was produced by a few strip mines in the county, making a total of 38,417 tons of all types for this six-month period. One hundred and forty-eight men were employed in the county by operations of all types during June, 1950.

Grant County, which borders Mineral County, has seven commercial mines listed, only five of them reporting any information for the January to June period of 1950. The total production for the county during the period is listed as 22,489 tons, considerably less than for Mineral County. More men were employed in commercial mines, however, in Grant County, a total of 151 being reported for the month of June (exclusive of strip mines) (24).

To supplement and, in a sense, to verify the information presented thus far, the writer conferred with representatives of two large mining companies, both of them involved in the present situation--the Johnstown Coal and Coke Company, and the Davis Coal and Coke Company of Thomas, West Virginia.

The first of these two companies is the owner of the Manor Mine at Vindex, Maryland, where many of the residents of Elk Garden have, in the past, been employed. As indicated in a previous paragraph, this company employed 155 men during the year 1949. On or about April 1, 1950, however, the Johnstown Coal and Coke Company's Manor Mine at Vindex, closed down. This caused much unemployment in Elk Garden and neighboring towns. According to its president, Andrew B. Crichton, the shut-down was to be temporary. It was brought about by a loss of market orders. The company had previously shipped coal to the Western Maryland Railway Company and another customer in New York. Both of these concerns are now apparently using other fuels to a greater extent than previously. Mr. Crichton informed the writer that the Vindex property contains abundant coal resources and if market conditions improved, the company would consider reopening the mine.<sup>18</sup> A more recent communication from this company, however, indicates that there is no immediate prospect of the mine being reopened.<sup>19</sup>

<sup>18</sup> Letter from Mr. Andrew B. Crichton, President, Johnstown Coal and Coke Company, Johnstown, Pennsylvania, dated August 10, 1950.



Later contact with the superintendent of the Manor Mine revealed the possibility of the mine's reopening at some future date. The superintendent, however, indicated the probability that the labor force would be cut, possibly one-half, if and when the mine was reactivated. Since the company already has numerous mining families residing on its property, employment prospects for residents of Elk Garden would seem rather remote.

Although the Johnstown Coal and Coke Company is directly involved in any discussion of Elk Garden's present problems, the Davis Coal and Coke Company is somewhat more indirectly involved.

Coal mining in the area was initiated at Franklin and Hampshire in the early 1860's. Much of the area was controlled by Potomac and Piedmont Coal and Railroad Company. Chartered by a special act of the West Virginia Legislature in 1866, this company included among its incorporators two prominent West Virginians; they were Henry G. and W. R. Davis. The charter granted many powers, rights, and franchises including those necessary for mining, manufacturing, milling (saw), brick-making, real estate transactions, transportation, and construction of a railroad in Mineral, Grant, Tucker, and Greenbrier counties. This company was reorganized in 1881 and its name changed to West Virginia Central and Pittsburg Railway Company.<sup>20</sup>

Acting under the new charter, dated June 25, 1881, the West Virginia Central and Pittsburgh Railway Company extended its line from Piedmont in a southerly direction. The demand for transportation for coal, lumber, and other products, was gradually increasing along the North Branch of the Potomac, and the railroad was extended up the valley to satisfy this growing demand. By 1881, the road had reached Shaw (approximately four miles north-east of Elk Garden). By 1882 the line was extended to Mineville, where the Big Vein Coal Company began shipping Pittsburg coal in July of that year. Then it was extended to what is now Harrison, about five miles west of Elk Garden. The track was completed to Davis in 1884 and to Parsons in 1888.

During 1888, the Elk Garden Branch was completed from Harrison to Elk Garden. The loading of railroad cars at the mine eliminated the old tram-road and plane and constituted a saving of five to seven cents per ton in production cost. The line was retired in 1934 between Elk Garden and Emoryville; and the Emoryville-Oakmont section was retired in 1941.

Prior and subsequent to 1888, the Central and Pittsburg Company acquired large holdings of coal and timberland in and near Elk Garden. In 1906, the Western Maryland Railway Company absorbed the trackage of the Central and Pittsburg Company, but did not take over the coal and timberlands of the older road. At the present time, the predecessor of the Western Maryland still owns approximately 130,000 acres of coal and timberland. The West Virginia Pulp and Paper Company of Luke, Maryland, handles much of the timber from this large holding.<sup>21</sup>

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<sup>19</sup> Letter from Mr. C. N. Crichton, Secretary-Treasurer, Johnstown Coal and Coke Company, dated January 6, 1951.

<sup>20</sup> Letter from Mr. E. M. Killough, Valuation Engineer, Western Maryland Railway Company, Baltimore, Maryland, dated February 6, 1951: See also Reger (12), pp. 4-5; Ambler (1), p. 364; and Phillips (9), p. 986. The writer is especially indebted to Mr. Killough for much of the information concerning the history and development of the Western Maryland Railway Company and the West Virginia Central and Pittsburg Railway Company.

<sup>21</sup> Conversation with Mr. M. E. Kent, Chief Engineer, Davis Coal and Coke Company, Thomas, W. Va., November 10, 1950. Mr. Kent contributed most of the information contained in the following paragraphs relative to the operations of the Davis Coal and Coke Company.

The Davis Coal and Coke Company entered the area about 1880 and leased much of the land around Elk Garden from the Central and Pittsburg Railway Company. The Davis Company withdrew from Elk Garden about 1924, the same year the Survey indicated that only an estimated 1 per cent of the Pittsburgh seam remained untouched. The land in and immediately adjacent to Elk Garden was then sold to the residents who had leased it and built homes upon it. The few dwellings owned and believed built by the company have since been sold. Despite this, however, the West Virginia Central and Pittsburg Company still owns about 1,000 acres in the vicinity of Elk Garden and the mineral rights alone on approximately 2,300 acres in that area. It has been estimated that there are 200 acres of minable coal and much of this is classified as "fringe" coal. These holdings of land and mineral rights, on lease to the Davis Coal Company, run from a point just east of Blaine along the North Branch of the Potomac to a point west of Chaffee (due north of Elk Garden) and extend southeasterly toward Sulphur City (about two miles south of the town).<sup>22</sup> One or more small private holdings, in addition to the town lots, are interspersed over this area.

Although the Davis Company is no longer active in this area, much of the land and mineral rights described above have been sub-leased to the Progressive Coal Company of Elk Garden and is currently being stripped.

In conferring with M. E. Kent, chief engineer of the Davis Coal and Coke Company, the writer found that the company was not contemplating any deep mining in the Elk Garden area. Mr. Kent said the coal reserves in this locality are not, at the present time, sufficiently minable in terms of thickness and purity to warrant deep operations by large commercial companies. Some of the coal can be recovered by stripping and by small domestic mines employing hand labor and operating at relatively low profit margins.

There appears to be an indeterminate amount of coal left in the Elk Garden locality. Most of it is not commercially minable at present except by stripping. Because of the limited amount of information now available, any such conclusion must be accepted as tentative. It is unfortunate that there is no information on the results of ten test borings made in Elk District by the Davis Coal and Coke Company and the Brady Coal Corporation sometime prior to 1924.<sup>23</sup>

## FOREST RESOURCES

Forest resources have played an important role in the economy of Mineral and adjacent counties. Their importance has been second only to coal. Unlike coal, the contributions of such resources to the economic well-being of the area conceivably could be expanded with proper management and maintained at a high level for an indefinite period in the future. Although most of the area has been cut over at least once, much of it is still classified as forested. Only a few persons in Elk Garden are presently engaged in timber work or related enterprises on a full-time basis; but many others may well be so employed on a part-time or seasonal basis. The forests of Mineral and Grant counties, and of Garrett County, Maryland constitute a potential source of employment and income for a considerable number of people in this section of the State.

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<sup>22</sup> Map of Davis Coal and Coke Company's leaseholds. This map is located at the office of the company, Thomas, W. Va.

<sup>23</sup> For a brief comment on this, see Reger (12), pp. 475-476.

Because of the present and potential importance of forest resources, considerable data have been collected and presented in a special report by R. O. Gustafson, associate forester, the Division of Forestry of the West Virginia University Agricultural Experiment Station. This report, is presented in the Appendix. It not only appraises the present timber resources, but it also considers their utilization potentials, with special reference to the Elk Garden area.

## OTHER RESOURCES

"Next to its coal, limestone is the most valuable mineral commodity that... Grant and Mineral counties can now offer to the markets of the country."<sup>24</sup> In this manner, the author of West Virginia Geological Survey's County Reports, Mineral and Grant Counties, 1924, describes the limestone resources of Mineral County, shortly after the virgin timber had been largely removed as well as most of the Pittsburgh coal. Despite this abundance of limestone resources, however, exploitation has been relatively limited.<sup>25</sup>

The nature of the problem in this case is one of underexploitation. Insufficient limestone supplies, in one form or another, are produced to satisfy present demands. From the standpoint of agricultural lime, for example, only a small proportion (about one-third) of the quantity used in West Virginia also is produced there. In fact, there are only five plants in the State that are exclusively engaged in grinding limestone for agriculture. These plants in 1944 failed to produce enough ground agricultural lime to satisfy the needs of the five counties where they are located (Grant, Pendleton, Tucker, Mineral, and Marion) (14). One problem involves selling the landowner on the need for liming, and the other involves increasing the efficiency of the producers (6).

There appears to be several locations in Mineral County where agricultural lime can be produced and improved. They are the Ward kiln near Claysville, the vicinity of New Creek village, the Keyser area, and the kiln operations northwest of Knobly Mountain (6).

Limestone resources can be utilized for many other purposes. The quantities and quality of stone available are suitable for the production of cement, Portland cement, railroad ballast, road material, building stone, and concrete aggregate. They are, however, less suitable for use as blast-furnace flux, the manufacturing of paper and glass, and other purposes requiring pure limestone (12). In the opinion of the Geological Survey, any extension of limestone operations in the county should probably be conducted in those areas where some development has already taken place. This would include the Keyser and New Creek localities as well as Patterson Creek, Cedar Cliff, and Bloomington (6, 11).

It appears that considerable expansion in limestone production is not only feasible but desirable. Although these developments probably would not be located in the immediate vicinity of Elk Garden, some of the residents might find employment at such operations.

The county seems to be well supplied with sandstone, gravel, and sand. The sandstone could be used, and has been to some extent, for outside construction, bridge abutments, culverts, glass manufacturing, concrete, and road building. It was being produced in 1938 at Bloomington (11). Abundant supplies of gravel and sand also are available along the rivers and creeks.

<sup>24</sup> Reger (12), p. 654.

<sup>25</sup> John B. McCue, John B. Lucke, and Herbert P. Woodward, Limestones of West Virginia, W. Va. Geological Survey, 1939, pp. 186-7. See also: C. E. Stockdale, Lime Supplies in West Virginia, W. Va. Agricultural Experiment Station Bul. 329, Morgantown, 1947, p. 25.



Mineral County also has abundant resources of clay and shale that are suitable for brick and other products. Deposits of fire clay, used in making fire-brick and furnace linings, are located one mile east of Piedmont; and brick clays, for use in manufacturing bricks, terracotta, and sewer tile, are found at Ridgeley (11). Stratified shales also are in great abundance in Mineral and Grant counties. These are composed mostly of silica and alumina and are sufficiently plastic for making brick and tile (12).

Ocher constitutes another natural resource. It is used in pigments and consists primarily of hydrated ferric oxide, sand, and clay. The main deposit, mentioned by the Survey, is located at Russelldale (11).

Although the known deposits of iron are limited in quantity and quality, they may be of some utility in the future. The mining of iron ore has been carried on in the county, but discovery of abundant deposits of high quality ore elsewhere in the United States has made local operation generally untenable. The Mineral County deposits are of siderite, limonite, and hematite. The latter two either have been or are presently being used as the source of pigments (red, yellow, and brown) for paint products (11).

The soils of Mineral County are a basic agricultural resource. Other factors, however, such as terrain and climate, have considerable effect on agricultural production. The nature of the terrain in the county limits the possibilities for expansion in this field. In addition, the cultural backgrounds of the people of the area are not such as would normally promote such development. From the point of view of home gardening, the soils in and around Elk Garden seem reasonably adequate. Considerable liming and fertilizing, however, are essentials for good vegetable production.

Water power can be, and frequently is, an important factor affecting the industrial development of an area. In this particular case, considerable water power is available on both the North Branch of the Potomac and along Stony River. Although the North Branch does have many good dam sites, hydroelectric development on a large scale would present many difficulties, including the flooding of the rail lines and valuable coal properties. It might be feasible, however, to construct small dams that would give a head of from ten to fifteen feet (12). Where coal mines are involved, much the same difficulty would be confronted along the Stony River (12).

## CONCLUSION

It is apparent that home ownership, family and community ties, and a common heritage from the past have combined to make this town a relatively stable social group. All life is a process of adjustment, however, and the people of Elk Garden are now faced with a situation that has significant implications, many of which are not yet appreciated by a majority of the residents.

The assembled evidence indicates that coal mining, upon which the people have so largely depended, is an aging industry in the area. Large-scale commercial deep mining does not appear to be feasible at the present time. Once a resource has been exhausted or severely depleted, new adjustments become necessary. If the well-being of these people is to be maintained or improved upon in the future, some local industry must be developed or greatly expanded, a seemingly remote possibility, or most of the people in the present labor force must leave town in search of employment elsewhere. In either event, the individuals so concerned may be forced to adjust to new occupations and a changed environment.

The time for decision even now may be postponed. Recent developments in the international situation and the ensuing changes in our domestic economy may affect the situation considerably in the near future. The expansion of industry and the mobilization of our economy could create heavy demands for coal. In this case, the coal industry might revive locally, thereby creating employment for some of the townspeople. It is difficult at the present time to predict or foresee all the effects of the current increase in business activity, but it is certain that the basic problem cannot be indefinitely postponed. In the absence of a marked increase in coal demand, or the development of some other local industry, the most likely and promising solution to Elk Garden's problem would seem to be an increase in out-migration.



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FOREST RESOURCES IN THE VICINITY OF  
ELK GARDEN, WEST VIRGINIA

West Virginia University  
Agricultural Experiment Station  
Division of Forestry  
December, 1950  
R. O. Gustafson

To aid the Experiment Station's Department of Agricultural Economics in its study of the resource base for employment around Elk Garden, West Virginia, the Division of Forestry has gathered available information on the timber resource. Included in this report are forest areas by timber size, and by major forest type;<sup>1</sup> lumber cut by species in 1947;<sup>2</sup> estimated cut of pulpwood and other non-sawtimber; and standing volumes of sawtimber and other wood estimated by applying average volumes for similar stands to the known acreages.

The forest within thirty road miles of Elk Garden might be considered to offer potential employment. This area lies almost wholly within Mineral and Grant counties, West Virginia, and Garrett County, Maryland, and is about equally divided between the two states. Around the perimeter of the roughly circular area are the towns of Redhouse and Hopemont on the west; McHenry and Frostburg on the North; Rawlings and Romney on the east; and Greenland and Kempton on the south. Approximately 590,000 acres are included in the area, just over 62 per cent of the acreage in the three counties by which it is principally encompassed.

The forest resource should and does contribute much to the support of the Elk Garden area, because more than two-thirds of the land is in timber. The annual value of timber products produced in the area is over \$5,000,000. But the forest should contribute still more to the economy. The timber was cut heavily in the past and the forest is characterized by even-aged young stands. As this young timber matures the forest may be expected to yield a greater value of products.

## THE FOREST LAND

Nearly 68 per cent (640,000 acres) of the 944,000 acres in the three county area is forest land. Each of the counties has about the same proportion of forested and other land. Table 1 shows that 56 per cent of the forest is in the two West Virginia counties.

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<sup>1</sup> Supplied by the Northeastern Forest Experiment Station, U. S. Forest Service, Upper Darby, Pennsylvania, from unpublished data.

<sup>2</sup> Unpublished data furnished by Bureau of the Census, U. S. Department of Commerce, Washington, D. C.



TABLE 1.--Land and Forest Areas in Garrett County, Maryland, and Grant and Mineral Counties, West Virginia.

County	Land Area	Forest area*	Proportion of all land forested
	acres	acres	Per cent
Garrett, Maryland	427,520	281,380	65.8
Grant, West Virginia	305,280	219,870	72.0
Mineral, West Virginia	<u>211,200</u>	<u>139,010</u>	<u>65.8</u>
Three counties	944,000	640,260	67.8

\*Source: Northeastern Forest Experiment Station, U. S. Forest Service.

Approximately 90 per cent of the forest in the three counties is in private ownership, with the balance divided between State and National forests. Of the private forest land, about 45 per cent was listed as farm woodland in the 1945 Census of Agriculture. The remaining 55 per cent is in other, and generally larger, private holdings. There are several large tracts owned by coal or industrial interests.

#### FOREST TYPES

The forests of the Elk Garden area are almost entirely hardwood--predominantly oak. Table 2 shows that the dominant forest types are composed of central and northern hardwoods with relatively minor areas of conifers.

TABLE 2.--Forest Area in Major Forest Types in the Elk Garden Area

Forest Type	Forest area	Proportion of forest area
	Acres	Per cent
Oak	433,450	67.7
Northern and Cove Hardwood	131,510	20.5
Yellow Pine - Oak	58,180	9.1
Conifers	<u>17,120</u>	<u>2.7</u>
All types	640,260	100.0

A more complete picture of the importance of the various tree species that comprise the forest can be obtained from statistics of annual lumber production. Oak alone accounted for 59 per cent of total lumber production in 1947. Table 3 indicates that the three principal species--oak, maple, and hickory--made up just over 75 per cent of the 1947 cut.

TABLE 3.--Lumber Produced in Garrett County, Maryland, and Grant and Mineral Counties, West Virginia, in 1947, by species<sup>1</sup>

Species	Lumber cut in 1947	Proportion of all lumber
	board feet	per cent
Oak	11,067,000	59.0
Maple	1,899,000	10.1
Hickory	1,248,000	6.7
Hemlock	679,000	3.6
Black Cherry	665,000	3.6
Yellowpoplar	582,000	3.1
Yellow Pine	512,000	2.7
Basswood	426,000	2.3
Beech	401,000	2.1
Birch	370,000	2.0
Chestnut	300,000	1.6
Ash	262,000	1.4
White Pine	221,000	1.2
Sycamore	50,000	0.3
Spruce	25,000	0.1
Black Walnut	20,000	0.1
Other species	20,000	0.1
All Species	18,747,000	100.0

<sup>1</sup> Source: Bureau of the Census, U. S. Department of Commerce.

The less desirable species, particularly beech and hickory, make up a greater proportion of the total timber stand than lumber production figures indicate, because these less valuable species are often by passed in cutting operations. Conversely, the most valuable species--black walnut, yellowpoplar, black cherry--are heavily cut. The statistics of lumber production, however, closely represent the relative abundance of the various species.

## THE TIMBER STANDS

Practically all of the forest has been cut-over at some time in the past, so that present stands are largely second (or third) growth, either alone or mixed with larger trees left standing after cutting operations. But despite past cutting, nearly one-third of the stands are classed as sawtimber and contain more than 1,500 board feet per acre. Table 4 shows that these sawtimber stands and the pole size stands contain harvestable timber, and together they account for 75 per cent of the forest area.

TABLE 4.--Forest Acreage in Various Timber-size Stands in the Elk Garden Area\*

Timber-size stand	Forest area	Proportion of forest area
	acres	per cent
Sawtimber (over 1,500 bd. ft./A.)	190,860	29.8
Pole	292,150	45.6
Sapling and other	<u>157,250</u>	<u>24.6</u>
All stands	640,260	100.0

\*Source: Northeastern Forest Experiment Station, U. S. Forest Service.

There is an estimated 935,000,000 board feet of sawtimber and 4,500,000 standard cords of other wood in standing timber in the three-county area, with per acre averages for all forest land of 1,460 board feet and 7 cords of wood. Immediately past annual harvests of timber have amounted to about 20,000,000 board feet plus 55,000 cords, per acre cutting rates of 31 board feet and nearly one-tenth cord. It is likely that these cuts are only slightly over 50 per cent of annual growth. But, in any event, proper resource use indicates additional cutting to put the forest in better condition through the removal of poorer trees.

### UTILIZATION (and employment) POTENTIALS OF THE FOREST RESOURCE<sup>3</sup>

The Elk Garden area is primarily forest country with over two-thirds of the land timbered. It is logical to look to the forest to support a sizable share of the economy. Developments can be made on a long-time basis, for this is mountainous country likely to remain in forest. Also, the timber is mostly young. Larger rather than smaller volumes of timber can be expected to be available in the future.

This is hardwood country. Oak timber predominates, but there are important volumes of maple, beech, birch, hickory, black cherry, yellowpoplar, basswood and ash. Hemlock is the leading conifer, and there are appreciable volumes of yellow pine and white pine.

The forest has been cut-over, therefore the bulk of the timber is relatively small and of relatively low quality. Some high quality timber can be cut. For the immediate future, however, volume outlets for small size and low quality timber are necessary. The present problem is to find markets to fit the available timber.

<sup>3</sup> This discussion is confined to the timber resource. Recreation, game, fish, and water resources of the forest are utilized and also furnish direct employment. But developments along those lines are generally confined to particular situations.

Among the many possible uses for the timber of the area, the following seem most promising:

1. Mine timbers. Round or sawed timbers in smaller sizes. Generally 4 to 12-inch diameter sound logs or bolts. Especially oak, but can use almost any species.

2. Pulpwood. Any size sound timber from 4-inch diameter up. West Virginia Pulp and Paper Company's Luke, Maryland, mill, in the area now uses hard hardwoods and conifers.

3. Posts. Round timber from 3 to 10-inch diameters, sound and straight. Oak and other species.

4. Ties and timbers. Sound sawlogs from 12-inch diameter up. Especially oak, also most hard hardwoods.

5. Boxes, crates, and pallets. Sound, low-grade lumber of most any species.

6. Small dimension. Generally clear cutting grades of lumber, but also some sound cutting. A wide variety of possible products--rough, semi-finished, or finished. Small dimension can utilize almost the entire sound product of the log if proper orders are secured. Among likely products are:

a. Toy or novelty parts of maple, beech, birch, oak, and other woods.

b. Surveying stakes of oak or other wood.

c. Ladder rungs and possibly tool handles of hickory.

d. Furniture parts (rounds, squares, and flatstock) of oak, maple, beech, birch, poplar, ash, etc.

e. Brush and small tool handles of beech, maple, birch, or hickory.

f. Machine or industrial parts of oak, hickory, ash, maple, beech, etc.

g. Dowels of beech, hickory, ash, or oak.

7. Flooring. Primarily oak lumber of lower clear cutting grades--#3A and #2 Common, also maple, beech, and birch.

8. Toys and novelties. Clearcutting grades of most hard hardwoods. Preferred woods are maple, beech, and birch.

9. Playground equipment. Better cutting grades of oak, hickory, ash, maple, beech, and birch.

10. Rustic furniture. Especially cane-bottom chairs with hickory or oak legs and rounds.

Mine timbers, pulpwood, and ties require little investment in equipment and only common skills. All three are now produced in the area and additional employment requires only organization to expand production. It would seem possible to arrange forest improvement cuttings on one or more large properties to produce these and other products from the timber which should be removed. Depending on the condition of the timber stands, about one-half the existing volume might be cut to improve the forest--an average of five cords per acre. Such a cut would provide about ten man days of work in cutting and transporting the products. Twenty-five acres would provide a year's work for a man. At the present fairly low growth rates it would require four hundred acres to keep a man continuously employed. But as stands matured and improved, more labor would be required for harvesting wood. For the present, an average tract of 5,000 acres could provide permanent employment for about 12 men.

A small preservation plant for the production of treated posts, fencing, and gate material, highway guard posts, and similar material is a definite prospect for the area. Plant investment can be kept fairly low (\$5,000-\$10,000) and the operation requires only moderate skills. Such a plant might provide employment for ten to twenty men in all operations.

The other products listed require various types of surfacing and cutting machines, generally larger investments, technical know-how, a larger plant, and more elaborate supporting facilities. Pallets and certain lower value dimension can be produced in small plants without large investment. Rustic furniture also might be produced in a small plant employing 20-40 people. Such a small plant locally originated and controlled is a definite prospect.

For larger plants the Elk Garden community is an unlikely area. Transportation advantages, community facilities, a labor supply of diversified skills, water supply, and other factors frequently control the selection of a plant location. Elk Garden ranks low in these factors compared with nearby towns, and lower still in comparison with areas in other regions. It should be understood that any plant the resource will support is a possibility. But for larger installations, it is likely that company founders would locate elsewhere.

The present forest resource will support a sizeable industry based on the utilization of smaller size and lower grade hardwoods - especially oak. For the Elk Garden community, one or more small wood-processing plants are definitely within the capacity of the area's resources.





