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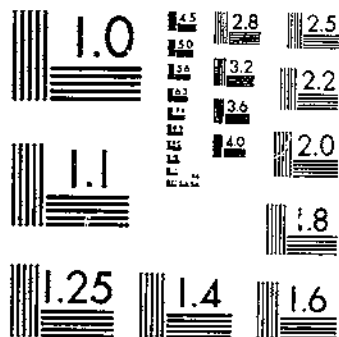
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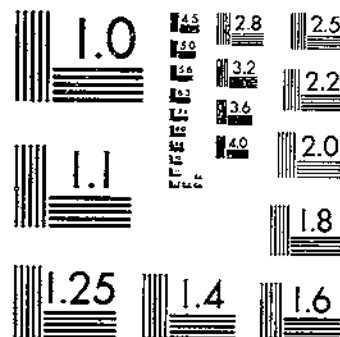
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TA 687 (1938) — USDA TECHNICAL BULLETINS — UPRINTH
A LAND PROGRAM FOR FOREST COUNTY, WISCONSIN — BASED ON AN ANALYSIS OF LAND
JOHNSON, V. A. — HENDERSON, S. — MARSHALL, J. H. — L. OF

START



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

CONTENTS

	Page
Introduction.....	1
Historical background.....	1
Local interest in planning.....	2
Procedure employed in study.....	2
Development of problems in Forest County.....	4
Problems of land use.....	4
Present land use.....	5
Major uses of land.....	7
Agricultural use of land.....	9
Characteristics of land and climate related to agriculture.....	9
Extent and nature of agricultural development.....	10
Farm income.....	13
Forestry as a land use.....	14
Present ownership.....	14
Effect of trends in forest land use.....	16
Recreation as a land use.....	18
Problems of taxation.....	20
The property-tax base.....	21
Reduction in assessed valuation, by classes of property.....	21
Reduction in acreage and average assessed valuation per acre, by classes of property.....	22
Reduction in assessed valuation, by towns.....	24
Ownership and use classification of real property.....	24
Trend in tax levies and tax rates.....	25
Tax delinquency.....	26
Effect of real-property tax delinquency on local revenue.....	26
Acreage involved in tax delinquency.....	27
Tax delinquency in relation to land use.....	30
Ratio of assessed to true value in relation to land use.....	32
Problems of local government.....	33
Organization of Forest County and its towns.....	33
County government.....	35
Cost of county government.....	35
Revenues for county government.....	37
Town government.....	37
Cost of general government and miscellaneous services.....	37
Cost of town roads.....	38
Revenues for town government.....	39
Schools.....	40
Cost of schools.....	41
Revenues for schools.....	44
Cost of all units of local government.....	47
Costs of relief.....	49
Policies and programs for adjustment in land use and local governmental organization.....	50
Land classification.....	50
Relation of land classification to land-use planning.....	50
Land classes.....	50
Land classes designated.....	53
Class I. Nonproblem agricultural areas.....	53
Class II. Problem agricultural areas.....	55
Class III. Areas not suitable for agriculture and having very sparse settlement.....	59

Policies and programs for adjustment, etc.—Continued.		Page
Rural zoning	.....	60
Enactment and administration of rural zoning in Forest County	.....	64
Determination of boundaries of restricted districts	.....	65
Suggestions for changes in zoning boundaries	.....	65
Zoning for recreational uses	.....	68
Benefits of zoning in Forest County	.....	68
Settler-relocation programs	.....	71
Agencies and methods for relocating families	.....	72
County exchange or purchase	.....	72
Purchases by the Forest Service	.....	74
Purchases of the Bureau of Agricultural Economics	.....	74
State aid in relocating settlers	.....	76
Possible savings in governmental costs resulting from relocation of settlers	.....	78
Plan 1. Relocation of only those families living on land purchased by the Bureau of Agricultural Economics	.....	80
Possible savings from the relocation of settlers under plans 1, 2, and 3	.....	84
Public acquisition and management of land in Forest County	.....	86
The national-forest land-acquisition program	.....	86
Land owned by the Indian Service	.....	88
Land program of the Bureau of Agricultural Economics	.....	88
Handling county-owned land	.....	89
Past sales of county land	.....	89
Future policies regarding county land	.....	90
Reorganization of local government	.....	92
Town reorganization or consolidation	.....	93
County consolidation	.....	97
Summary	.....	98
Suggestions and recommendations	.....	99
Land-use classification	.....	100
Zoning	.....	101
Relocation of settlers	.....	102
Policies regarding publicly-owned land	.....	104
Reorganization of local government	.....	104
Appendix	.....	106



UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.

A LAND PROGRAM FOR FOREST COUNTY, WISCONSIN

Based on An Analysis of Land Use Problems

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INTRODUCTION

Many cut-over counties are confronted with a complex of land use and local governmental problems that are holding down the income of their citizens and seriously threatening their continuation as solvent units of government. Such problems exist, in greater or lesser degree, in Forest County, Wis. They have been developing over a period of years, so it is not to be expected that their solution can be achieved overnight or that the county can be placed upon some highroad to financial solvency, or the natural resources quickly restored to virgin abundance. The problems arise fundamentally from maladjustments of the population to the resources of the county.

But certain land programs and policies have been established which, as the years go by, will grow in importance as measures for the betterment of the welfare of the people of the county and of the State of Wisconsin. Continued and expanded concerted action on the part of the county, State, and Federal Government will be necessary if a balance between the human and physical resources of the county is to be established and adequate family incomes and governmental services are to be maintained.

HISTORICAL BACKGROUND

Forest County was originally almost completely covered with high-quality timber. For years after its settlement, beginning about 1850, this resource constituted the principal source of public revenue, and during the course of its exploitation provided a means of livelihood for a large part of the population. Most of the timber has been clean-cut and only recently has provision, through various agencies, been made for restocking. Early anticipation that agriculture would replace forestry over much of the county has failed to materialize, and a considerable part of the limited agricultural development that has occurred

¹ Submitted for publication December 9, 1938.

has been of an extremely precarious nature. As forest employment declined, some of the woodsmen turned to farming as a means of livelihood. Then many families moved in from outside the county and tried to develop farms. Numerous parcels of land that are unsuited to agricultural use because of poor soil, stoniness, isolation, or other conditions, were settled. Part-time employment in lumbering operations supplemented the small agricultural incomes of many of the early settlers, but this type of work has become progressively scarce.

Lack of employment due to the decline of the forest industry, failure of other industries to develop, and attempts to create farms on land unsuitable for agriculture have resulted in incomes too low to provide the ordinary necessities and comforts of living. This lack of adequate income and the failure of new taxable resources to develop on cut-over lands have led to excessive tax delinquency and insufficient local tax revenues to finance public services in the area.

Large acreages have passed into county ownership because of non-payment of taxes, and the tax books indicate that numerous additional transfers may be expected. The Forest Service has acquired a significant part of the total acreage in the county and is continuing its purchases. In view of the changing pattern of land ownership, the reduction in the tax base, the settlement on poor land, and the high cost for public services necessitated by widely scattered settlement, it appears evident that readjustments in land use, in population distribution, and in local governmental organization and functions are necessary to meet the changed situation in the county. (See fig. 1 for location of Forest County.)

LOCAL INTEREST IN PLANNING

County officials recognize the need for modification in local governmental policy to encourage these readjustments. In May 1935, the Forest County Board of Supervisors unanimously passed a resolution requesting the Wisconsin College of Agriculture, the State Conservation Department, the Wisconsin Regional Planning Board, the Wisconsin Rehabilitation Corporation, the Forest Service, and the Land Policy Section of the Agricultural Adjustment Administration² to conduct a study relative to needed readjustments in public services, and to present to the board their findings for the planned development of the county.

PROCEDURE EMPLOYED IN STUDY

In the summer of 1936 the Bureau of Agricultural Economics,³ with the cooperation of the Wisconsin College of Agriculture and the State planning board set up a project to gather the data needed for developing a plan for Forest County. Most of the field data were gathered directly by the Bureau, but some information was obtained from county records through a Works Progress Administration project

¹ In May 1935, the Land Policy Section of the Agricultural Adjustment Administration was administering some phases of the land program which were later transferred to the Resettlement Administration, and are now under the administration of the Farm Security Administration and the Bureau of Agricultural Economics of the U. S. Department of Agriculture.

² In 1936 the Land Use Planning Section of the Resettlement Administration was conducting most of the land use planning work; in 1937 this work was transferred to the Bureau of Agricultural Economics and is thus referred to in this bulletin. The land utilization purchase project in Forest County, initiated by the Resettlement Administration, has been transferred to the Bureau of Agricultural Economics, and is thus referred to here. Shortly before the publication of this report, the purchase project was transferred to the Soil Conservation Service.

sponsored by the State planning board and supervised in the field by the Bureau. The data thus gathered have been analyzed and summarized and are here presented.

In conducting the study, an attempt was made to obtain information on all local factors having a significant bearing on problems of land use and local government in the county. Detailed studies were made of land ownership, utilization, and taxation, the financial

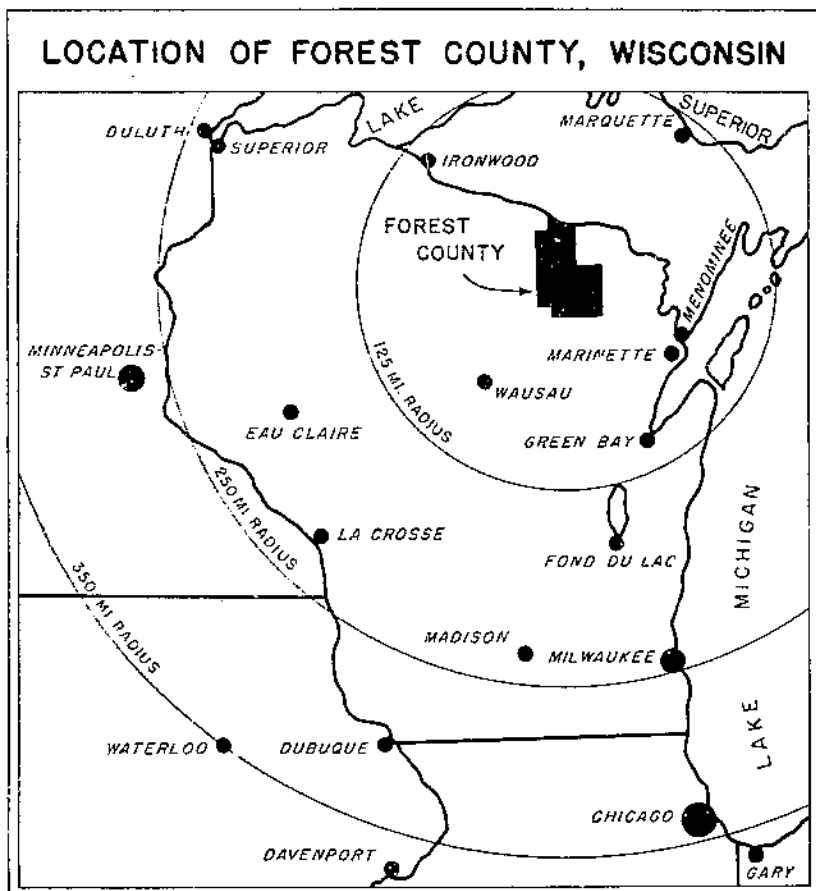


FIGURE 1.— Although Forest County is largely unsuited to agriculture because of its soils, topography, climate, and distance to markets, it is well suited to forestry and recreation.

records and services performed by county and town governments,⁴ the school system of the county, and zoning in Forest County. In addition, a reconnaissance land classification was made, and other factors were studied in lesser detail. These studies were made to ascertain the relationship of the various factors to problems of land use and local government, and with a view to determining the nature of the readjustments in the several factors that may feasibly be made

⁴ In Wisconsin, the term "town" is used to refer to the unit of government that is commonly referred to as the "township" in other States. It does not refer to village or city government.

in keeping with the changing pattern of land use and ownership, and with the possible changes in population distribution.

Data on ownership, utilization, and taxation for each parcel of rural land in the county, obtained from the tax rolls in the county treasurer's office, and from the town assessors and their records, were transferred to punch cards, and numerous machine tabulations were made. County and town financial records, secured from the reports made to the State tax commission by these units, and from the Wisconsin County Boards' Association, were supplemented by information obtained from county and town offices and officials. School records and information concerning the operation of schools were secured from the county superintendent of schools and from the clerks and other board members in the school districts. Information relative to zoning in Forest County was obtained from the records of proceedings of the county board of supervisors and the county zoning committee, from county officials, from the chairmen of the town boards, and from other persons in the county. The procedure followed in developing the reconnaissance land classification is referred to in a later section.

In the first half of this bulletin attention is called to the nature of the more pressing problems of land use and local government in the county, and the trend of a number of factors that have a significant bearing upon these problems is indicated; in the second half an appraisal of present programs and policies is made, and some suggestions are offered relative to the types of readjustments that appear to offer possibilities for improvement.

It is not intended that this bulletin should constitute a tailor-made plan ready for adoption by the county. Obviously, if a plan is to be successfully consummated, it must be developed by or in close cooperation with the people to be affected by it. The bulletin is designed to stimulate further interest on the part of the officials and citizens of Forest County in planning for future development of their county. A beginning has already been made in this direction, as evidenced by the county zoning ordinance enacted in 1934, and by the county board resolution of 1935 requesting the assistance of State and Federal agencies in developing plans for readjustments in land use and public services. The general background here furnished, and the detailed data compiled for its preparation, should provide a basis for further progress.

It is hoped that this bulletin may also stimulate interest in similar studies in other counties in the cut-over region of the Lakes States. The problems of land use and local government in Forest County differ from problems in other cut-over counties largely in degree. Similar problems are encountered in numerous other counties, although they may be less pressing than in this county.

DEVELOPMENT OF PROBLEMS IN FOREST COUNTY

PROBLEMS OF LAND USE

Problems of land use in Forest County are not confined to any particular type of use nor to any specific locality within the county. They affect all major uses and practically all parts of the county. Large acreages of both privately owned and publicly owned lands are affected by a variety of problems that retard or prevent optimum

utilization, the solution of which demands cooperative action on the part of individual landowners and operators and public agencies. A brief survey of present land uses and of the trend in major uses of land in the county may be of help in appraising the significance of the several problems that have developed over a period of time.

PRESENT LAND USE

Forestry is the major land use, as indicated by the fact that forest land occupies about 90 percent of the total land area. The forest-land area includes, in addition to lands bearing merchantable timber, land supporting second growth and some devastated cut-over and swamp lands that are only sparsely timbered. A major part of the land that bears merchantable timber is still in private ownership, while about three-fourths of the cut-over land is now in public ownership (fig. 2).

Agriculture is the second major land use, about 9 percent of the total land area, or 60,000 acres, being in farms (table 1). This does not include farms sold or optioned to the United States Government. Neither does it include tracts of timber or cut-over land owned by farmers but not used in connection with farming operations, or tracts of rural land used almost exclusively for residential purposes. Thus the term farm, as used here, is more nearly restricted to properties actually used for farming purposes than is the case with the census.

TABLE 1. - Present uses of land in Forest County¹

Use of land ²	Acres	Percentage of total	Use of land	Acres	Percentage of total
Private use:			Public use:		
Farms.....	60,397	9.3	Federal forest.....	279,007	42.8
Rural nonfarm homes	5,050	.8	Bureau of Agricultural Economics.....	9,675	1.5
Recreation	3,732	.6	Indian land.....	12,112	1.9
Village, commercial, and industrial.....	2,941	.4	State land.....	36,550	5.6
Merchantable timber	60,495	9.3	County forest crop.....	10,200	1.5
Cut-over or waste	116,564	17.9	Other county land.....	16,954	2.6
Private forest crop.....	26,871	4.1	Town land.....	10,558	1.6
Total.....	276,020	42.4	Other public land.....	420	.1
			Total.....	375,476	57.6
			Total land.....	651,496	100.0

¹ Exclusive of the city of Cranston. Data gathered by this survey from the 1934 tax rolls, but adjusted for transfers to public uses, and vice versa, between 1934 and 1936.

² Approved options, held by the Forest Service and Bureau of Agricultural Economics, classified as in public use. This accounts for certain of the differences between the figures in this table and those in table 2.

Properties occupied by families who live in the open country but who do little or no farming were classified in this study as rural nonfarm homes. Many of the rural nonfarm homes listed here are doubtless included in the United States census as farms as they frequently consist of 40 acres or more of land and the operators may not report any nonfarm occupation, especially for the 1935 census. This distinction between land actually used for farming and that used merely as a place of rural residence should help in interpreting settlement trends and in planning appropriate public policies relative to given areas.

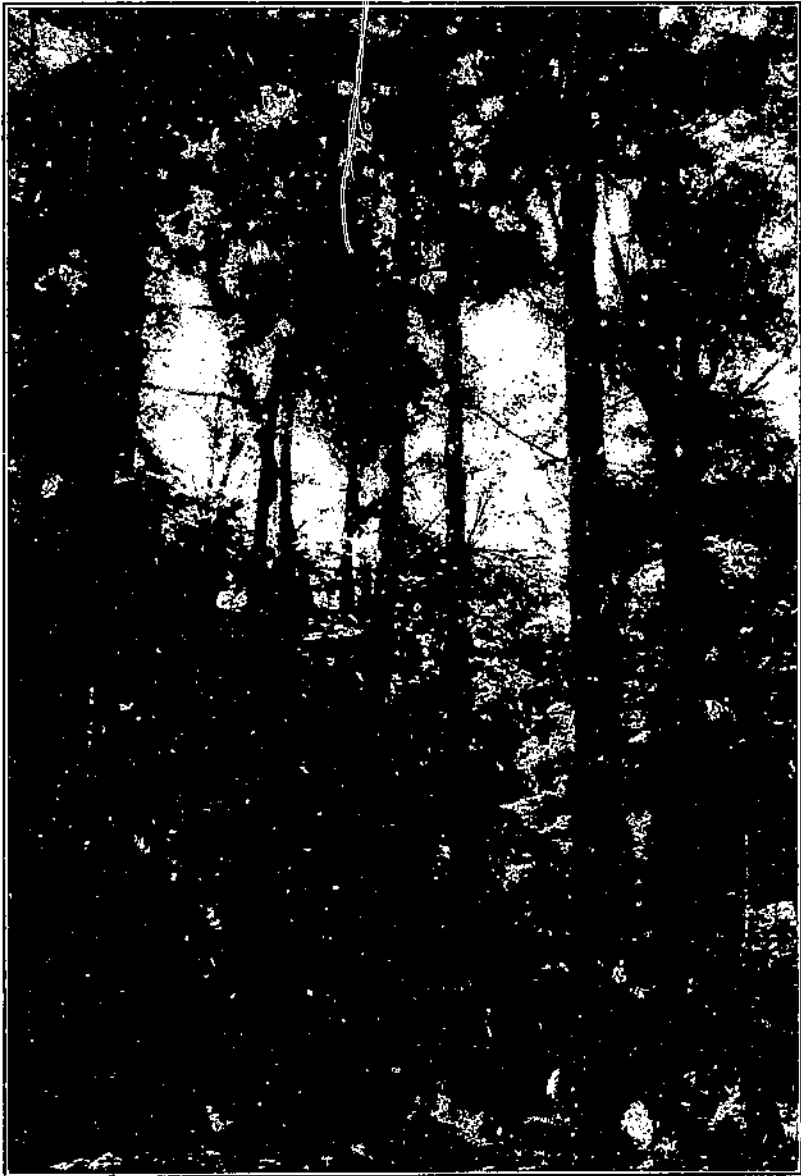


FIGURE 2. --One of the last tracts of virgin timber in northern Wisconsin, located along U. S. Highway No. 8 in Forest County and easily accessible to tourists. Unfortunately, this tract is in private ownership and very likely will soon be cut, to the loss of the people of the State.

Recreation is the third major use of rural land in the county. In terms of acreage it is relatively unimportant, for recreational uses comprise less than 1 percent of the land area. In taxable value, however, it constitutes about 7 percent of the county real-estate tax base, or nearly two-thirds as much as the taxable value of all privately

owned cut-over land in the county (table 8). Village, commercial, and industrial uses likewise occupy relatively little land, but they constitute about a quarter of the value of the real-estate tax base.

MAJOR USES OF LAND

As it was impossible, during the progress of this study, to collect data on trends in land use according to the classification presented in table 1, it has been necessary to use the assessors' reports for such an analysis of trends even though only three use classes are given and these are not completely comparable with similar classes given in table 1.

Rural land is classified by the local assessors in Wisconsin into three categories according to its use: (1) Agriculture, (2) swamp, cut-over, or waste, and (3) timber. Only those portions of farms which are actually used for farming are classified as agricultural land. The remainder of the land in farms is put into one of the other two categories. The trend in acreage in these three classes of land over the 10-year period 1927-36 is shown in table 2.

TABLE 2.—Major uses of taxable rural land in Forest County, 1927-36¹

Year	Agriculture		Swamp, cut-over, or waste		Merchantable timber		Total acreage
	Acreage	Percent- age of total	Acreage	Percent- age of total	Acreage	Percent- age of total	
	<i>Acres</i>	<i>Percent</i>	<i>Acres</i>	<i>Percent</i>	<i>Acres</i>	<i>Percent</i>	
1927	19, 157	3. 1	413, 801	66. 9	185, 385	30. 0	618, 144
1928	23, 829	4. 1	387, 890	67. 5	162, 919	28. 4	674, 638
1929	24, 430	4. 4	303, 803	71. 6	132, 790	24. 1	530, 723
1930	24, 026	4. 2	430, 466	76. 2	110, 482	19. 6	564, 974
1931	22, 067	4. 9	358, 306	79. 4	70, 613	15. 7	450, 985
1932	22, 242	5. 3	335, 231	79. 7	63, 023	15. 0	420, 496
1933	27, 502	6. 7	324, 889	78. 7	60, 113	14. 6	412, 504
1934	25, 655	6. 5	313, 862	79. 5	55, 304	14. 0	394, 451
1935	27, 955	9. 4	225, 649	76. 0	43, 477	14. 6	297, 081
1936	25, 611	8. 8	212, 188	73. 1	32, 645	18. 1	290, 442

¹ Based on assessor's reports.

There has been a reduction of more than 70 percent in the acreage of privately owned merchantable timber during this 10-year period. As the timber was removed, this land shifted into the cut-over classification; but so rapid has been the transfer of cut-over land from private to public ownership, through tax deeds or through public purchase, that the acreage of privately owned cut-over land actually declined about 49 percent from 1927 to 1936.

Some land was developed for agriculture, but the extent was small compared with the acreage made available by the cutting of timber. It should be noted that, although the increase in extent of land used for agricultural purposes was only about 6,500 acres, the proportion of agricultural land to the total acreage of rural land in private ownership increased from 3.1 percent in 1927 to 8.8 percent in 1936.

The various land uses from 1927 to 1936 are indicated in figure 3. The classification is based on assessors' reports as given in table 2, together with other data on residential, mercantile and manufacturing, and public uses. In the main the three classifications of (1) swamp, cut-over or waste, (2) forest crop, and (3) public uses, constitute the

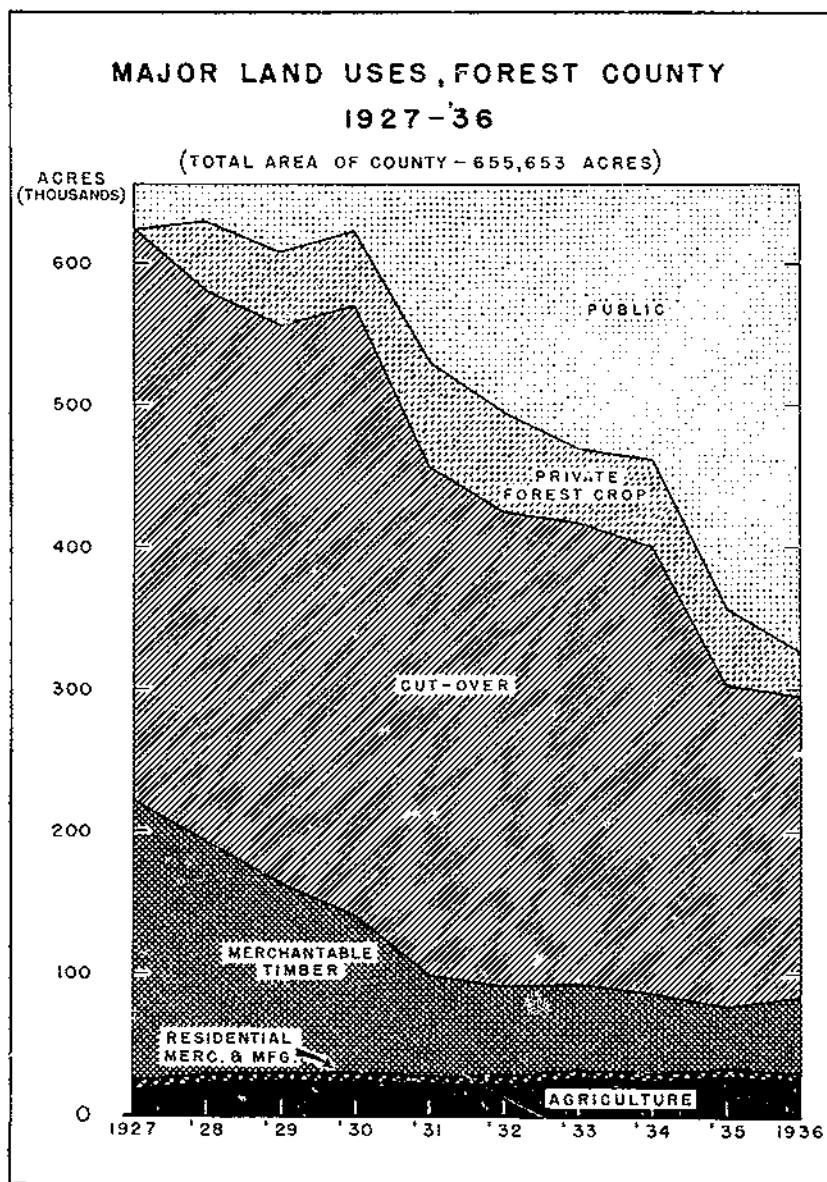


FIGURE 3. The acreage of privately owned merchantable timber decreased more than 70 percent during the period 1927 to 1936. The large decrease in the cut-over class is accounted for by its rapid transfer from private to public ownership through purchase or tax reversion.

same type of land use—namely, cut-over or second-growth timber. The forest-crop land is mainly cut-over land on which, by agreement under a State law providing for regulated forest use, the taxes are held at 10 cents per acre per year throughout the growing period, and State contributions are made to the local government on a per acre

basis. Most of the land classified as in public use is cut-over land, but it also includes a little merchantable timber

AGRICULTURAL USE OF LAND

From its inception to the present time, agricultural development has been closely related to the lumber industry. The first influence of this industry was in attracting population to the area for woods work. Often sale of land for agricultural purposes was held out by lumber companies as an incentive to secure laborers. The rural-population pattern has been markedly affected by this land policy. Frequently the location of farms has been determined by proximity to temporary nonfarm employment rather than by the productivity of the land or nearness to markets and neighbors. Many farms in the county which were developed on a subsistence or part-time basis rather than as commercial units were unable to support families when nonfarm income declined.

The plow has not followed the ax to the extent anticipated earlier. The original timber has now been removed from 85 or 90 percent of the total area of the county, and only one-tenth of this land is included in farms. Even this relatively limited agricultural development has been extended beyond the point of profitability in many places, and its distribution has been such as to necessitate uneconomic provision of social utilities.

CHARACTERISTICS OF LAND AND CLIMATE RELATED TO AGRICULTURE

The nature of the soil, the topography, the cost of clearing, and the climate are all significant factors contributing to the problems of agriculture in the county. A brief description of the physical characteristics of the county may, therefore, help to show why agriculture has not developed further, why much of the present agriculture is on a subsistence or submarginal basis, and may give some indication of the best use for most of the land.

Forest County lies in the geographic region of Wisconsin known as the Northern Highland, which is a part of the Laurentian Plateau extending into Canada. The northern part of this region, including all of Forest County, was completely covered by the continental glacier at all stages of the glacial period. The dominating influence of glacial action on the region is evidenced by morainic topography with occasional outwash plains, by numerous lakes and swamps, and by an irregular drainage pattern.

The soils include loams, sandy loams, and peat as the prevailing types, but with smaller areas of sands and stony sands. The Bureau of Chemistry and Soils of the United States Department of Agriculture has classified the soils of this region under the Herman series. The classification of the State soil survey denotes most of the soils of the county as belonging to either the Kennan or Vilas series. A few small areas are classified under the Plainfield or Antigo series. Peat occupies most of the rest of the area.

The Vilas series consists chiefly of Vilas sandy loam and Vilas stony sand, both of which are usually too low in fertility and too much subject to drought to be suitable agricultural soils. They are also frequently very rough and quite stony. The Plainfield series, in most cases, is too sandy and low in fertility for successful farming, although

the topography is level and there are few if any stones. Very little of the peat soil is cultivated.

The Kennan and Antigo series are the principal agricultural soils. These soils are mostly silt loams with small areas of fine sandy loams and loams. They have a satisfactory supply of the mineral elements, phosphorus and potassium, but are deficient in organic matter and nitrogen. Because of the absence of calcium carbonate in the parent rock material, these soils are acid in varying degree. Rolling to rough topography characterizes a large part of the Kennan soils, and stones are a serious handicap to cultivation in most places. A few areas are relatively level and stone-free. These, together with the Antigo soils, which are usually both level and fairly free from stones, constitute the best agricultural areas.

Erosion is not serious, for very few of the steeper slopes are now under cultivation. Problems would undoubtedly arise if the sloping lands were ever brought under the plow. The Kennan soils are not particularly erosive, however, and the Antigo soils are relatively level.

A climate characterized by a short growing season, cold winters, warm summer days, and cool summer nights, results from the relatively high elevation and high latitude. The growing season, as measured by length of time between dates of killing frosts for corn, averages 100 days or less in all except the southeastern part of the county. Frosts during every month of the year are not unusual, although they seldom injure growing crops seriously during the summer. But the frost hazard sharply limits agricultural development within the forested area because of poor air drainage.

The mean annual precipitation for the county is about 30 to 32 inches. Rainfall is more effective here than in the southern part of the State, owing to lower average temperatures and less evaporation. The rainfall is well distributed for crops, for from 60 to 70 percent falls between April and September.

The heavy cost of clearing land of brush, second-growth timber, and stones is one of the serious handicaps to agricultural development. Rough topography and numerous swamps are other serious physical handicaps (fig. 4).

In general, wherever the land is suitable for cultivation, hay, pasture, small grains, and root crops are successfully grown. Corn is a somewhat doubtful crop, even for silage, although improved varieties would undoubtedly increase the present yields. The excellent pasture and hay crops make the county particularly well adapted to dairying. The cool climate is favorable to potatoes, which are the chief cash crop despite the relatively short growing season.

EXTENT AND NATURE OF AGRICULTURAL DEVELOPMENT

The development of agriculture as well as of the forest industry is reflected, to some degree, in the trend of total population in the county. In 1900, the first census period after Forest County had attained virtually its present size, the total population was 1,396. By 1930 it had a population of 11,118, or an increase of almost eight-fold during the period.

Although the greatest increase in total population occurred in the decade from 1900 to 1910, the greatest increase in the number of farms occurred in the decade following, from 1910 to 1920 (table 3). There was little increase in the number of farms between 1920 and 1930,

reflecting, in the main, the effect of an agricultural depression existing at the same time as good conditions in industry, but perhaps indicating also that the unsuitability of most of the land for agriculture under existing conditions was being recognized. Since 1930 there has been some increase in the number of families living on the land, but indications are that much of the new settlement is more in the nature of rural residences rather than of farms. In many cases houses on formerly abandoned farms have been reoccupied. In other cases new clearings have been made to provide a home and a place to grow a garden while



FIGURE 4.—A typical farm scene in the poorer areas of Forest County. Farming in most parts of the county is confronted with stones, stumps, rough land, and frequently sandy soil.

the main source of income has been provided by temporary jobs of various kinds or by relief.

TABLE 3.—Number and acreage in farms in Forest County in stated years¹

Year	Farms		Year	Farms		Year	Farms	
	Number	Acreage		Number	Acreage		Number	Acreage
1900.....	51	6,594	1920.....	525	56,030	1930.....	562	50,817
1910.....	220	28,210	1925.....	521	44,958	1935.....	661	61,798

¹ Data from U. S. Census of Agriculture for 1900-20 and from assessors' reports to Wisconsin Crop Reporting Service for 1925-35. Assessors' reports did not extend to earlier years, but are used for period available as it is believed they give a truer picture of trend than the census. In particular, the 1935 census probably includes a great many rural families who do little, if any, farming and who were not included in the 1930 census as farmers.

According to data gathered, there were 737 operating farms in the county in 1936.⁵ In addition, there were about 230 families

⁵ Includes about 50 farms on which the United States had accepted options. The number of farms listed in this survey is greater than the number reported by the assessors, a discrepancy probably caused by the difficulty of segregating farms from rural nonfarm homes.

doing little or no farming, but living on tracts of rural land that were classified as rural nonfarm homes. Abandoned farms still held by

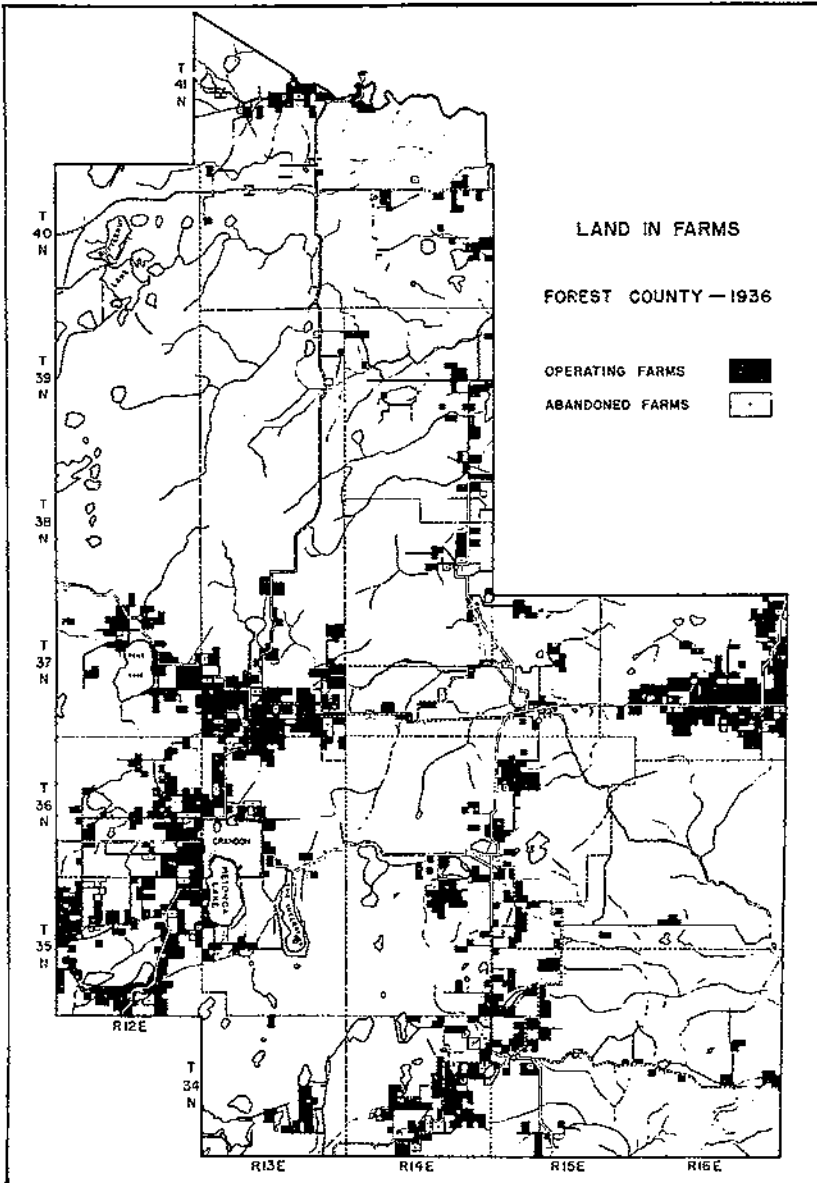


FIGURE 5.—Only about 9 percent of the total land area of Forest County is in farms.

private owners numbered 62. The location of the operating and abandoned farm land is shown in figure 5.

Information was also obtained on new farms and rural nonfarm homes established between 1930 and 1936 and on those abandoned

during the same period. The new places included both abandoned farms reoccupied and new homes established on wild land. During this 6-year period, 124 new farms and 98 new rural nonfarm homes were established, and 72 former farms and 36 former rural nonfarm homes were reported abandoned, making a net increase of 52 farms and 62 nonfarm homes.

FARM INCOME

Farm incomes average much less than those in the southern part of the State, and are less than the average for the 18 typical cut-over counties of northern Wisconsin (table 4). The low farm incomes in the county are caused mainly by unfavorable agricultural conditions and inadequate crop acreage per farm.

TABLE 4.—Average gross income per farm in Forest County compared with incomes in other parts of the State, 1927, 1931, and 1933¹

Year	Average gross income per farm in			
	Forest County	18 northern Wisconsin counties	16 southern Wisconsin counties	Total State
	Dollars	Dollars	Dollars	Dollars
1927	988	1,145	2,862	2,242
1931	721	966	1,784	1,423
1933	624	683	1,401	1,131

¹ Includes gross cash income plus estimated value of products used from the farm. Data from Wisconsin Crop and Livestock Reporting Service.

Prior to the purchase of land in the county by the Bureau of Agricultural Economics under its submarginal agricultural land-retirement program, a number of individual farm records were taken in those areas that appeared to be submarginal for agriculture. Of 167 fairly complete records, 23 were found to be for rural families who had less than 1 acre of cultivated land per farm. These were considered to be rural nonfarm homes rather than farms. The other 144 records indicate fairly well the extent of farming operations and farm income on farms in the poorer agricultural areas. The location of the areas thus represented can be seen in a later figure (fig. 29) which shows the lands bought by the Bureau of Agricultural Economics, since the 167 records were on tracts that later constituted the bulk of the purchases made by that organization.

Of the 144 farms having 1 or more cultivated acres, 49, or 34 percent, produced no cash farm income in 1933. In other words, all operators got out of their farms was a place to live and some food and fuel that they used on the farm. Another 31 percent made less than \$100 of gross cash farm income in that year, and only 5 percent made more than \$500. The average cash income for all 144 farms was \$127 per farm.

Practically half of these 144 farms had fewer than 10 acres of crops per farm, and two-thirds of them had fewer than 20 acres. Fifty-eight percent had no horses, only 8 percent had more than two horses, over 30 percent had no cows, and another 25 percent had only one cow per farm. With such limited farming operations it is not surprising that farm incomes were small. To the extent that such farm operations and income returns represent the agricultural possibilities of these

areas, it seems clear that they should be retired from agricultural use and devoted to forestry or recreation, or that the farmers should be helped to acquire sufficient working capital and to clear additional land where the soil and location factors are satisfactory.

Too small an acreage of cleared land per farm is undoubtedly one of the chief reasons for low farm incomes in Forest County. The effect on farm income in the county of the small acreage of crops per farm is illustrated by the records of the 144 farms. Farms in this group that had less than 10 acres of crops provided an average gross cash farm income of only \$35 per farm. Farms with 30 or more acres of crops produced income of nine times this amount (table 5).

TABLE 5.—Average gross cash income of 144 farms in poor farming areas in Forest County based on acreage in crops, 1933

Crop area per farm (acres)	Farms		Gross cash income per farm
	Number		Dollars
1 to 9.....	69		35
10 to 29.....	51		163
30 or over.....	24		316
All farms.....	144		127

Although the average income on the farms with 30 acres or more of crops still seems very inadequate, it must be remembered that this group, as well as those with less cleared land, undoubtedly includes many farms on land unsuitable for farming. The relationship between acreage of crops and farm income appears sufficiently positive to justify the conclusion that Federal or State assistance to increase the extent of cleared land per farm, if limited to the better parts of the county, would undoubtedly mean the permanent rehabilitation of many farm families—of whom many are now on relief. Even in some of the good parts of the county, practically all of the farm land that is suitable for crops has probably been cleared. In others, however, there are many farms with enough additional good land to assure reasonable incomes if the land were cleared.

FORESTRY AS A LAND USE

PRESENT OWNERSHIP

Private owners still hold about 60,000 acres of merchantable timber. This is almost exactly equal to the acreage in farms. The classification here is not quite the same as that used by the assessors, for some timber is included that apparently is not considered merchantable by the assessors. Private owners hold about 117,000 acres of cut-over land, exclusive of that optioned to the Federal Government in 1936, and about 27,000 acres of cut-over and timberland entered under the State forest crop law. The latter is mostly cut-over land that is being held for forest development. Thus, privately owned cut-over and timberland constitutes about 31 percent of the county area (table 1 and fig. 6).

The purpose of the State forest crop law passed in 1927, is to encourage forestry on nonagricultural lands. It offers an economic inducement, by providing for a low uniform tax throughout the grow-

ing period, on privately owned land where the owner agrees that he will practice systematic forestry on such land. A tax of 10 cents an

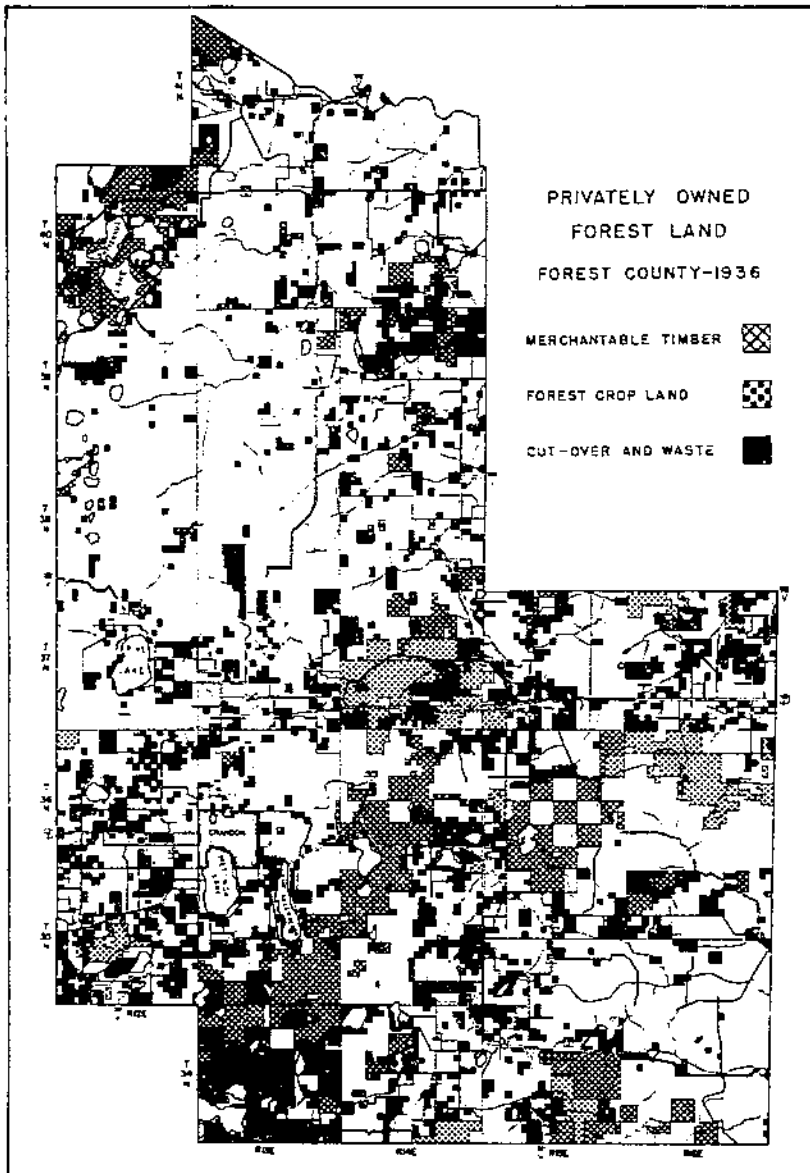


FIGURE 6. Private owners hold about 60,000 acres of merchantable timber, 117,000 acres of cut-over land, and 27,000 acres of cut-over and timberland entered under the State forest crop law, making a total of 204,000 acres in private ownership. This constitutes about 31 percent of the area of the county.

acre is levied against cut-over land regardless of the local tax rate, and for this concession the owner is subject to the payment of a severance

tax of 10 percent of the stumpage value when the timber is harvested. Mature timber entered under the law is taxed at a somewhat higher rate. In order that such a low tax levy will not hamper the towns financially, the State pays the local governmental units 10 cents an acre for whatever acreage is entered under this forest crop law. In 1931 the law was amended to allow the entry of land owned by counties as well as by private owners. In the case of county entry, the State pays the owner's usual tax of 10 cents per acre and, in addition, contributes 10 cents per acre to the county for use in forest-development work on the land entered. The severance tax to be paid by the county to the State at the time of cutting, however, is 50 percent instead of the 10 percent paid by private owners.

The county owned 27,000 acres of land in 1936, mostly cut-over or waste land, but including some abandoned farm land obtained by tax deed. About 10,000 acres of this county land are entered under the forest crop law, and are therefore definitely dedicated to forest use. Most of the rest will probably also be used for forestry, under some type of management.

The town-owned land is also mostly cut-over or waste, with some abandoned farm land. This land was obtained by the towns from the county and will probably be used primarily for forest purposes, although its future use is somewhat more doubtful than is that of the county lands. The sale of land to the towns was begun in 1934 and was made possible by a State law passed in 1933 which allows counties to deed land to towns in exchange for excess delinquent taxes.

Land owned by the State and by the United States Indian Service is largely in some type of forest use, although some of the Indian land is used for residential and agricultural purposes.

The United States Forest Service is the largest owner of forest land in the county. In fact, including accepted options as of 1936, it holds as much land as all of the private owners together, or more than 40 percent of the area of the county. This land is all being used for forestry purposes and should provide a major source of employment for the residents of the county in future years. It is estimated that there are now about 14,000 acres of merchantable timber included in the Forest Service holdings in the county.⁶ The location of the Forest Service lands together with the land owned by the towns, county, State and the United States Indian Service is shown in figure 7.

EFFECT OF TRENDS IN FOREST LAND USE

The decline in privately owned merchantable timber from 185,000 acres in 1927 to 53,000 acres in 1936, as reported by the assessors, has been the most significant factor contributing to present problems. Forest work has become increasingly scarce. Large numbers of former timber workers have established themselves on farms, often in isolated localities or in areas unsuited to agriculture, and frequently despite a lack of training or adaptability to farming. Many others have remained in villages or have built shacks in the woods and are dependent mainly upon relief. Thus, not only is the local government deprived of much of its former tax revenue, but families suffer because of lack of adequate incomes, and costs for relief and other public services are greatly increased.

⁶NELSON, A. Z. A STUDY OF THE NATIONAL FOREST CONTRIBUTION PROBLEMS WITH REFERENCE TO FOREST COUNTS, 1936. Unpublished report. Copy in files of Forest Service, U. S. Department of Agriculture, Washington, D. C.

Although greatly reduced in size, the forest industry still provides work for a considerable number of men. The census of 1930 shows

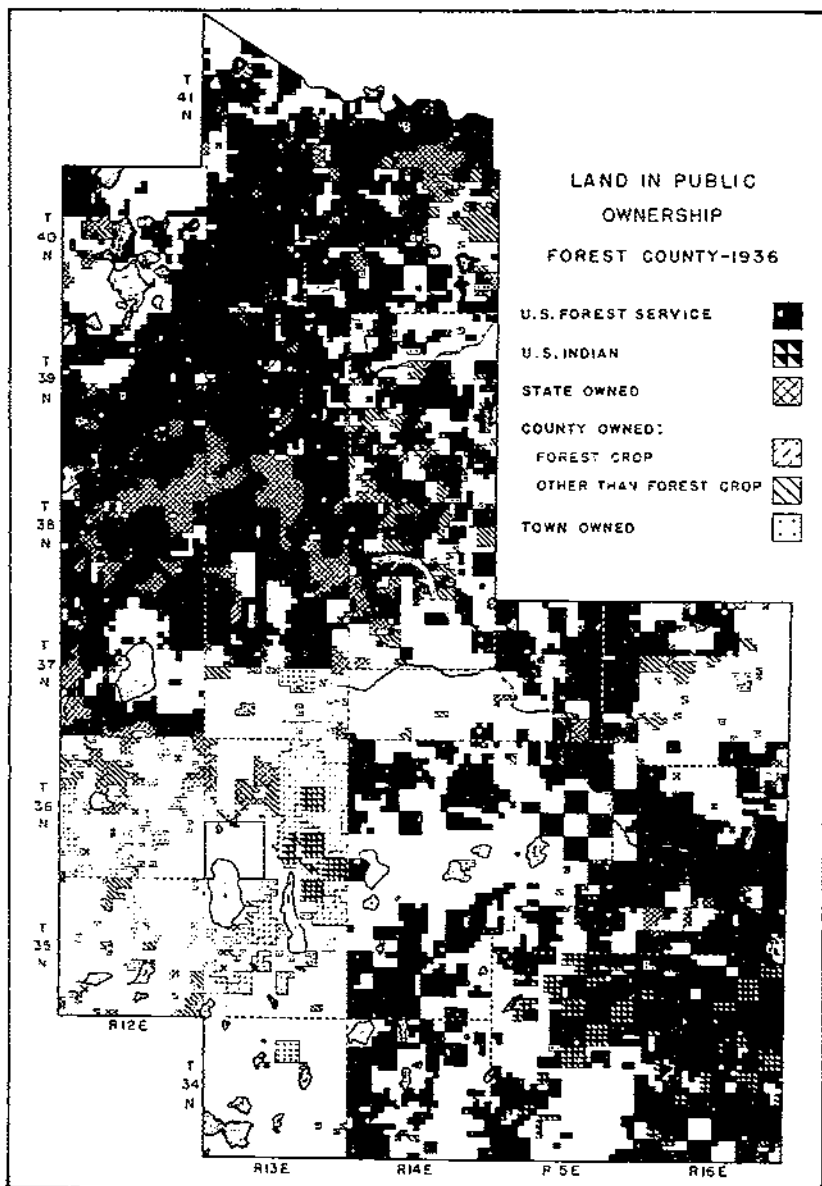


FIGURE 7. About 58 percent of the land in Forest County is in public ownership, the major part of which is held by the United States Forest Service. Land purchased by the Bureau of Agricultural Economics is not shown on this map.

1,541 employed in forestry and in sawmills and woodworking industries in Forest County (fig. 8). During the period 1927-36, 62 percent of the publicly and privately owned timber that had been standing in

1927 was cut. With this trend continuing, the demand for workers in the forest industry has declined materially since 1930, and it is obvious that the present stand of timber will not long support even the present timber industry. The cutting of the small amount of remaining timber and the disappearance of much of the cut-over land from the tax base need not cause great alarm, however, if a thoroughgoing plan for returning the cut-over land to forest use is inaugurated.

Such a program might eventually provide adequate work and incomes for as many people as now live in the county. It will be years before most of the cut-over land will provide timber suitable for cutting, but in the meantime, there is need for the employment of

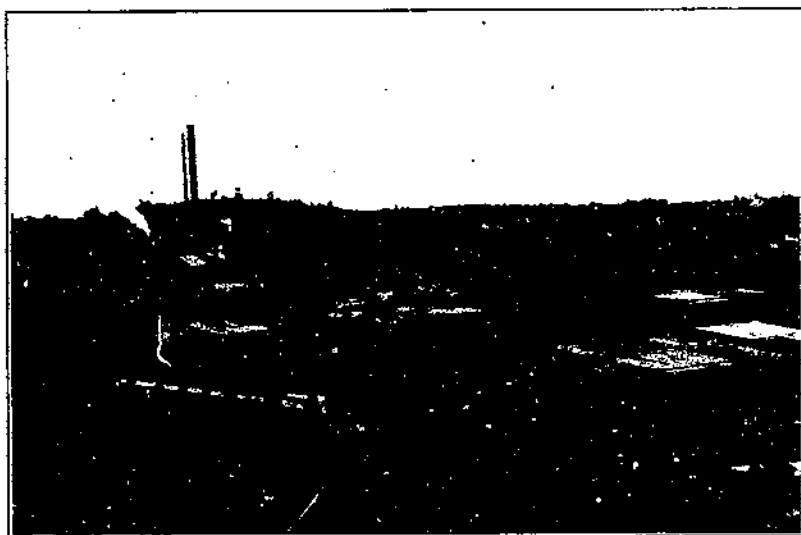


FIGURE 3.—Sawmill at Soperton nearing the end of its active life. The supply of sawlogs is nearly exhausted, but the planing mill can operate for some time on the supply of lumber in the yards.

many men for forest-development purposes. With this situation at hand, the establishment of a forest-farm combination of employment appears to offer possibilities for improving the welfare of the local people and the restoration of the resources of the county.

RECREATION AS A LAND USE

As recreational land use, to a large degree, is a joint use with forestry, plans for increasing the area and improving the type of forest-land use will also improve the recreational possibilities. Conditions for game and fish are improved by the increase of forested areas, stream flow is rendered more uniform, and lake levels are more likely to be maintained. Nevertheless, the more intensive forms of recreational use depend also upon other factors, such as the presence of lakes and streams, suitable roads, recreational facilities like resort hotels and tourist camps, and upon a widespread knowledge of the advantages of an area.

Forest County has an excellent climate for the development of an important recreational industry. It has numerous lakes and streams,

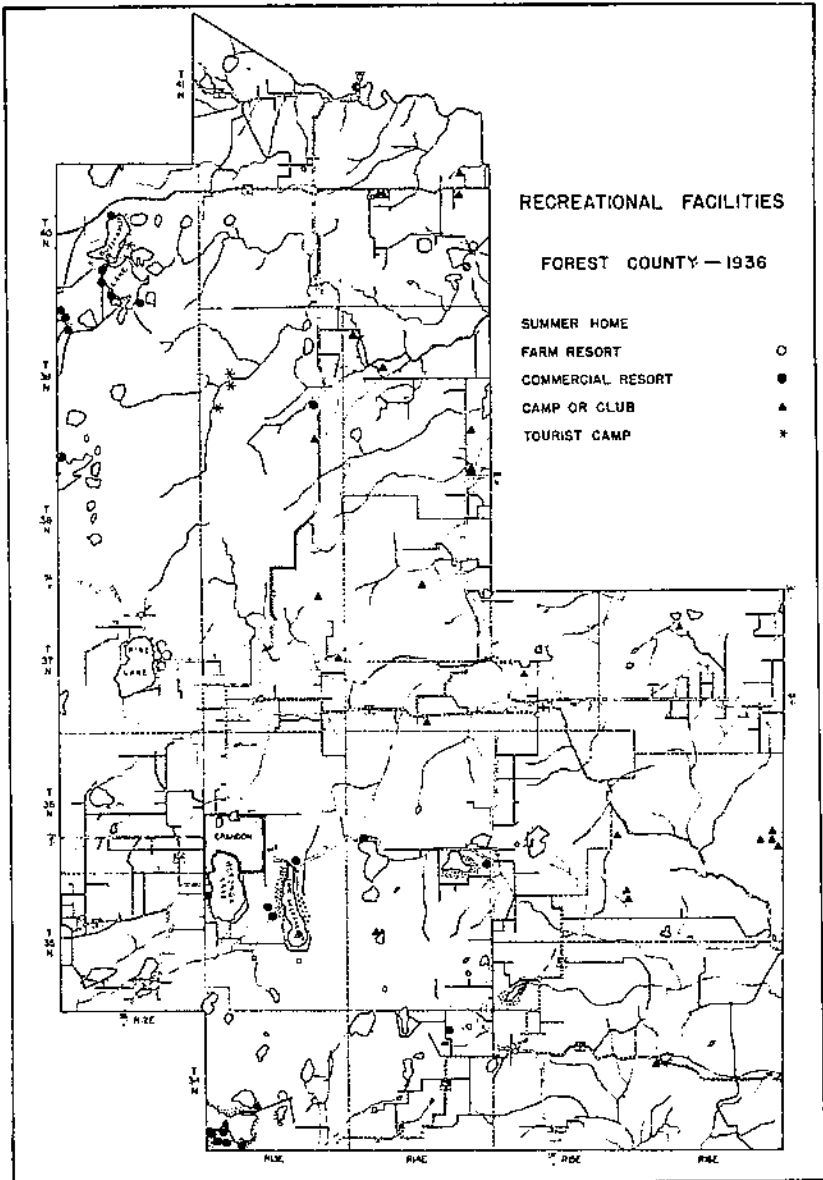


FIGURE 9. Numerous lakes, some good trout streams, more virgin timber than is found in any other county in the State, an excellent climate, and large areas of public land, point toward further development in recreational facilities.

many of the latter being excellent trout streams. It has a larger amount of virgin timber than any other county in the State. The location of the principal recreational facilities and areas is shown in figure 9.

A report of a study of recreation published in 1932,⁷ shows 2,074 acres in Forest County developed for commercial recreation. Non-commercial recreational uses occupied 3,307 acres, and an additional 9,445 acres were considered potentially suitable for recreational use. The 1934 assessed value of land used for recreational purposes was more than 7 percent of the total real-estate tax base outside of the city of Crandon (table 8). While the recreation industry is not so well developed in Forest County as in some other counties in northern Wisconsin, it is a source of very considerable income and one that should receive much attention in the effort to provide employment and income for the citizens (fig. 10).



FIGURE 10.—Recreational development on Lake Metonga, Forest County.

PROBLEMS OF TAXATION

Governmental units depend largely upon the general property tax and upon State aids for their support. Property taxes, the principal local source of public revenue, are assessed on personal and real property. As taxes must be paid out of income, it is the income-producing capacity of property that determines its ability to contribute to the support of government, and it is not surprising that many farms, located on poor land or with insufficient cleared land to provide an adequate family income, have become seriously tax delinquent. But the cut-over land, most of which is producing no income at all, has been the principal factor responsible for precipitating problems of taxation and tax delinquency in the county.

Cut-over lands, once held in anticipation of settlement, have been allowed to go delinquent as the possibility of sale for settlement became more remote and speculative values disappeared. As the owners of speculative holdings have found it unprofitable to meet the

⁷ WEIHERER, G. S., and PARSONS, R. H. RECREATION AS A LAND USE. WIS. AGR. EXPL. STA. BULL. 422, 32 pp., illus. 1932.

carrying charges on their lands, and have allowed them to go delinquent, a smaller and smaller taxpaying base has been left to support local government.

THE PROPERTY-TAX BASE

The size and composition of the tax base are both important considerations in local governmental finance, for they determine in large part the amount of revenue that may be raised locally over a period of time for governmental purposes. A 53-percent decline in the tax base during the last 10 years has resulted in an increasingly strained local financial situation.

REDUCTION IN ASSESSED VALUATION, BY CLASSES OF PROPERTY

The value of each class of property listed on the tax roll has decreased, but the reduction in the different classes of property has been far from uniform. The greatest reduction, as reported by the local assessors, has occurred in the timber classification, which is responsible for 53 percent of the total decrease in the tax base during the last 10 years. In 1927, the timber classification was the largest item in the tax base, being 37 percent of the total base, and almost twice as large as the swamp, cut-over, or waste classification which was the next largest item; but by 1936 it had decreased to 20 percent of the total tax base. Moreover, the total effect of timber-clearing operations is not reflected in the timber classification, for the closing down of lumbering operations carried with it the closing and depreciation in value of sawmills and other mercantile and manufacturing property (fig. 11).

A sharp reduction also occurred in the swamp, cut-over, or waste classification, which decreased from 21 percent to 13 percent of the total tax base from 1927 to 1936. Although the other three classes of property all decreased in dollar value during the 10-year period, they decreased less rapidly than the timber and cut-over classifications, and thus increased in relative importance in the tax base (table 6 and fig. 12).

TABLE 6.— *Decrease in tax base of Forest County between 1927 and 1936, by classes of property*¹

Class of property	Assessed valuation				
	1927		1936		Percentage of all classes
	Dollars	Dollars	Dollars	Percent	
Agriculture	769,169	669,977	209,192	29.5	4.0
Swamp, cut-over, or waste	2,050,291	591,008	1,465,586	71.2	28.1
Timber	3,688,877	912,104	2,776,773	75.1	52.8
Residential, mercantile, and manufacturing	1,887,183	1,689,263	198,220	10.5	3.8
Total real estate	8,225,123	4,095,352	4,129,771	50.0	88.7
Personal property	1,518,108	929,123	591,685	39.0	11.3
Total	9,743,231	5,024,475	4,721,456	53.0	100.0

¹ Includes city of Crandon.

REDUCTION IN ACREAGE AND AVERAGE ASSESSED VALUATION PER ACRE, BY CLASSES OF PROPERTY

The decrease in the tax base has been due to a number of factors, including the cutting of merchantable timber, the transfer of cut-over land to public ownership through tax-deed procedure, purchase of

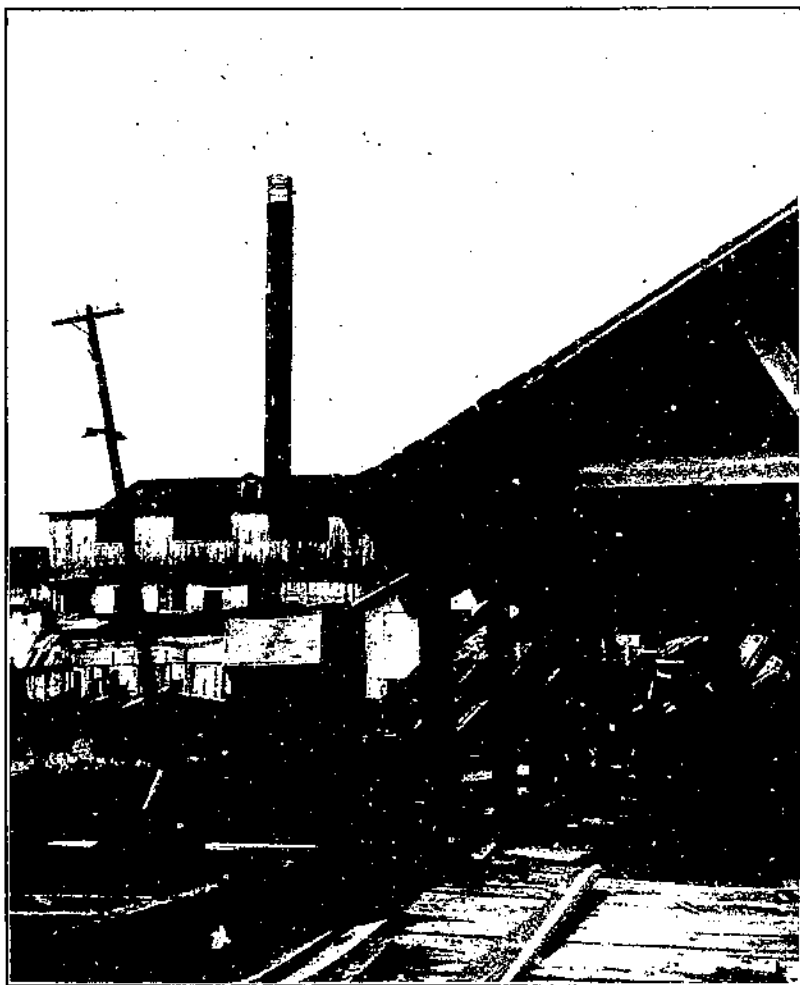


FIGURE 11. - Abandoned sawmill at Blackwell—mute testimony to the decline of the lumber industry.

land by the Forest Service, and the general decline in land and other property values. The acreage of merchantable timber on the tax rolls decreased 72 percent between 1927 and 1936 (table 2). This acreage decrease was accompanied by a drop of 12 percent in average assessed valuation per acre of merchantable timber.

It might be expected that, as the acreage in the timber classification decreased with the removal of the merchantable timber, the acreage in the cut-over classification on the tax roll would increase accordingly.

But because of the transfer of cut-over land to public ownership, the acreage of cut-over land on the tax roll has decreased 49 percent

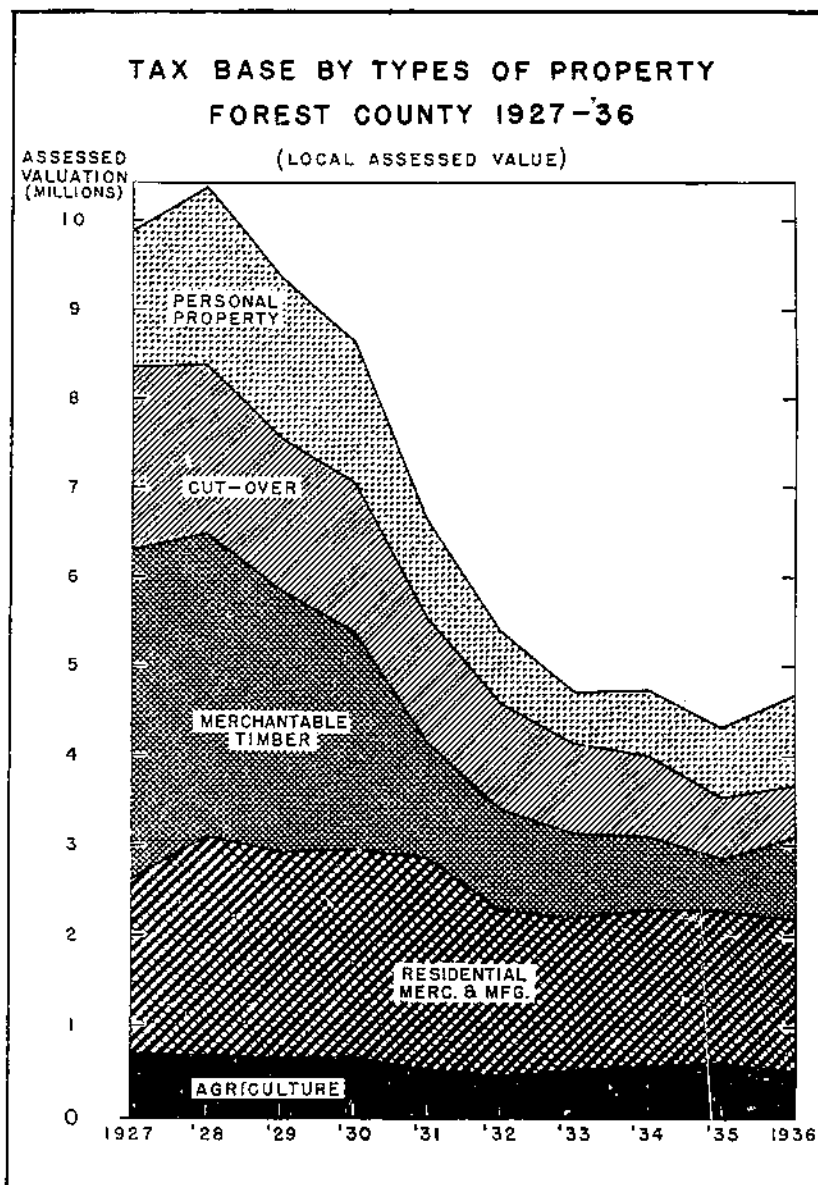


FIGURE 12. Since 1927 a marked decrease has occurred in the tax base of Forest County, the greatest reductions being in valuation of merchantable timber and cut-over lands because of the timber cutting and transfer of cut-over lands to public ownership either by purchase or through tax reversion.

during the last 10 years (table 2), and the average assessed valuation per acre has declined 43 percent during the same period.

The acreage of land in the agricultural classification on the tax rolls increased by one-third between 1927 and 1936, but this acreage increase was more than offset by a 47-percent reduction in average assessed value per acre. The net result was a reduction of 29.5 percent in the total value of agricultural land on the tax roll; however, the relative importance of agricultural land in the tax base increased during the period because of greater decreases in assessed valuation of other classes of property.

The total acreage on the tax roll has decreased 53 percent during the last 10 years. The assessed value of all taxable property has also declined 53 percent. Although there has been a decline in the per acre value of land in each use class, the fact that cut-over land constituted the bulk of the land transferred to public ownership has resulted in a per acre value of all taxable land approximately the same as at the beginning of the period.

REDUCTION IN ASSESSED VALUATION, BY TOWNS

The tax base of every town in the county has decreased, but the decrease has been much more severe in some towns than in others. The decline in taxable values between 1927 and 1936 ranged from approximately 83 percent in the town of Alvin to 5.6 percent in the town of Wabeno (table 7). In the latter town there was an increase in the assessed valuation of personal property during the period, but this was more than offset by a decrease of 19 percent in the assessed valuation of real property.

TABLE 7.—Decrease in tax base of Forest County by towns, between 1927 and 1936

Town	Assessed valuation			Town	Assessed valuation		
	1927	1936	Percentage decrease 1927-36		1927	1936	Percentage decrease 1927-36
	<i>Dollars</i>	<i>Dollars</i>	<i>Percent</i>		<i>Dollars</i>	<i>Dollars</i>	<i>Percent</i>
Alvin.....	675, 135	115, 330	82.9	Nashville.....	672, 548	251, 518	62.6
Argonne.....	776, 125	195, 235	74.8	Purple River.....	250, 930	112, 036	56.9
Armstrong Creek.....	311, 516	140, 333	54.9	Ross.....	258, 615	98, 447	61.9
Blackwell.....	614, 009	124, 591	79.7	Wabeno.....	1,167,915	1,101,350	5.6
Caswell.....	224, 350	77, 430	65.5	Total.....	\$,305,207	\$,381,145	53.3
Crandon.....	210, 796	52, 646	75.0	City of Crandon.....	1,538,024	740, 630	51.8
Freedom.....	954, 905	178, 307	72.3	Total.....	9,843,231	4,621,775	53.0
Hiles.....	780, 180	330, 805	56.4				
Laona.....	1,223,434	952, 557	22.1				
Lincoln.....	476, 616	140, 560	70.5				

Only in the towns of Laona and Wabeno and in the city of Crandon was the percentage reduction in the tax base less than the percentage reduction for the county as a whole. These three units include almost two-fifths of the total 1927 assessed valuation of the county, and thus weight heavily any figures that are based on assessed valuation. Their large valuations are due to the presence of considerable amounts of urban-type property (residential, mercantile, and manufacturing), personal property, and timber in the two towns.

OWNERSHIP AND USE CLASSIFICATION OF REAL PROPERTY

An ownership and use classification of the real estate portion of the tax base is presented here as a prerequisite to interpretation of some of the tax-delinquency data in the following pages. The classification

in table 8 includes all taxable real estate in the county outside of the city of Crandon.

Merchantable timber accounts for a larger part of the assessed valuation outside of Crandon than any other item, including personal property. Practically all of this timber is owned by land, lumber, commercial, and industrial concerns, whose total real property holdings constitute about 50 percent of the assessed valuation of real estate outside of Crandon.

TREND IN TAX LEVIES AND TAX RATES

The total general property-tax levy decreased 57 percent between 1927 and 1936, and the local assessed valuation of general property decreased 53 percent during the same period. Thus, the average tax rate on local assessed values has remained about the same throughout the period. But the tax rate on assessed value does not present a true picture of the real tax burden, since the true value of the tax base, as recommended by the State tax commission, decreased 65 percent during the 10-year period under consideration. The ratio of assessed to true value increased from 55.32 percent in 1927 to 73.91 percent in 1936, thus making the tax rate on true value, which is a good measure of the actual tax burden, increase more than 22 percent during the 10-year period (table 9).

TABLE 8.—Percentage of total assessed valuation of real estate in Forest County falling in various ownership and use classes, 1934¹

Use classes	Ownership classes					
	Farmers	Individual non-farmers	Land, lumber, commercial, and industrial concerns	Banks and investment companies	Unclassified platted property	All ownership classes
	Percent	Percent	Percent	Percent	Percent	Percent
Agriculture.....	14.13	2.05	0.80	0.70		17.68
Rural nonfarm homes.....	.05	.88	.05	.02		1.00
Recreational.....		1.93	.29	.09	4.99	7.30
Village commercial and industrial.....		.07	7.78		18.25	26.11
Merchantable timber.....	.04	1.24	33.03	.05		34.36
Cut-over or waste.....	.73	4.22	6.05	.35		11.95
Forest crop.....	.01	.01	1.54	.01		1.60
All uses.....	14.96	10.43	50.14	1.22	23.25	100.00

¹ Exclusive of city of Crandon. Values taken from 1934 tax roll but ownership and use adjusted for changes between 1934 and 1936.

² Values estimated.

TABLE 9.—Trends in general property-tax levies, tax rates, and ratios of assessed to true value in Forest County, 1927-36

Year	Total general property-tax levy	Average tax rate ¹	Ratio of assessed to true value	Average tax rate on true value ²	Year	Total general property-tax levy	Average tax rate ¹	Ratio of assessed to true value	Average tax rate on true value ²
	Dollars	Dollars	Percent	Dollars		Dollars	Dollars	Percent	Dollars
1927	540,614	0.05491	55.32	0.09035	1932	306,917	0.05770	59.10	0.09237
1928	518,050	.05095	58.08	.0907	1933	260,221	.05548	74.54	.04173
1929	489,636	.04231	55.98	.08028	1934	230,139	.04871	75.50	.03678
1930	504,736	.03885	64.49	.03207	1935	249,084	.05873	70.26	.04126
1931	377,217	.05079	53.25	.03024	1936	231,464	.05030	73.91	.03718

¹ Average of town tax rates levied for school, town, county, and State purposes.

² Average town tax rates as above expressed in relation to true value of assessed property.

TAX DELINQUENCY

Tax delinquency has been one of the principal factors in a chain of events contributing to the decline in the tax base in the county. As the owners of land have found it too burdensome or unprofitable to continue paying the taxes levied upon it, they have used tax delinquency as an avenue of escape. The county has thus acquired title to a considerable acreage of cut-over land through such forfeiture by private owners. Delinquency has also been heavy on other classes of property, and has resulted in throwing the tax burden on a smaller and smaller taxpaying base whether or not the county acquires title to the delinquent property.

Although 279,000 acres, of the total of 327,000 acres of land that were removed from the tax roll of the county, between 1927 and 1936, have been acquired by the Forest Service,⁸ a large part of this acreage was chronically tax-delinquent at the time of this purchase. Over 23,000 acres of the land, which had actually passed into county ownership through tax-deed proceedings, was transferred directly from county ownership to the Forest Service. In addition, there are now 37,700 acres of land still in county and town ownership which have been acquired through tax-deed proceedings. Of the 256,000 acres of land purchased from private owners, the Forest Service has estimated that 73 percent was delinquent for 1 or more years. Approximately 30,000 acres had outstanding delinquencies for an estimated period of at least 4 years, and 153,000 acres had an average delinquency of 3 years.⁹ Thus it is apparent that the purchase program of the Forest Service has not been responsible for any great reduction of the effective tax base in the county, but chiefly for the removal from the nominal tax base of considerable acreages that had already ceased to pay taxes.

EFFECT OF REAL-PROPERTY TAX DELINQUENCY ON LOCAL REVENUE

Tax delinquency on real property in the county has been erratic during the last 10 years, largely because of the acquisition program of the Forest Service. The percentage of the real-property tax levy that was delinquent at the time of tax sale has varied from 14 percent in 1927 to 46 percent in 1933. Additional revenues through sales of tax certificates to private bidders at tax sales were of some significance a few years ago, but such bidders have not appeared at recent sales. Obviously a very large part of the land represented by tax certificates offered at tax sales is such as to give little incentive to private ownership.

Redemptions after tax sale have been quite large in recent years. Doubtless a large percentage of these redemptions have been made in order to sell the redeemed lands to the Forest Service, for the Forest Service will not accept private lands until taxes outstanding on them have been paid. The county has also sold a considerable amount of land directly to the Forest Service. But after the numerous redemptions and land sales have been taken into account, the accumulated outstanding delinquency, or net deficit from the local-government point of view, during the period 1927 to 1936, amounts to \$238,606, or considerably more than the tax levy due in 1936 (table 10).

⁸ Including approved options.

⁹ NELSON, A. Z. See footnote 6.

TABLE 10.—*Real-property tax levies and collections in Forest County, 1927-36*

Year of collection	Real-property levy ¹	Cash collections			Total	Excess or deficit
		Prior to tax sale	At tax sale (private bidders)	After tax sale ²		
1927	\$438,462	\$378,479	\$16,957	\$5,589	\$401,025	-\$37,437
1928	457,133	389,370	10,180	22,425	421,975	-35,158
1929	417,249	352,693	9,827	16,264	378,784	-38,465
1930	396,882	317,696	22,507	48,872	389,075	-7,807
1931	413,047	332,940		24,444	357,384	-55,663
1932	315,724	178,958	2,137	18,030	229,125	-86,599
1933	264,370	143,311	8,195	47,283	198,789	-65,581
1934	227,026	133,962	5,690	102,914	262,572	+35,546
1935	191,883	146,999		101,694	248,693	+57,110
1936	266,983	152,393		50,058	202,451	-4,532
Total	3,328,459	2,546,801	75,499	467,553	3,089,853	-238,606

¹ Levy of year preceding year of collection.² Tax certificate and deeds sold or redeemed.

In table 10, collections after tax sale include all certificates redeemed during the given year, and therefore may include certificates applicable to the levies of several different years. They also include receipts from sale of land previously taken on tax deeds. The excess or deficit column, therefore, does not represent the status of collections for each year's levy; instead, it shows the amount by which all collections of outstanding real-property taxes and the income from sales of county land during each year falls short of, or exceeds, the levy due the same year. The large redemptions for sale to the Forest Service in 1934 and 1935 resulted in total collections considerably in excess of the levies due during those years.

Tax collections for a few years have thus been supplemented through sales of county-owned tax-deed lands to the Forest Service, and by collections of accumulated delinquent taxes on lands sold by private owners to that agency. The effect of tax delinquency on local revenue would have appeared much more disastrous in the county if the forest acquisition program had not been in progress. On the other hand, it must be recognized that income from this source will cease as soon as the purchase program in this county has been completed.

The amount and relative severity of delinquency varies greatly in the different towns in the county (table 11). The town of Luona, with the lowest percentage of delinquency, has by far the largest levy of any town in the county; and the town of Crandon, with the highest percentage of delinquency, falls in the group of three towns having the smallest levies. The total amount of delinquency shown in table 11 is not comparable with the deficit shown in table 10 for, among other things, table 11 includes only delinquency on parcels of land that were still on the tax rolls in 1936, whereas table 10 includes a large amount of delinquency on lands that were transferred to public ownership during the 10-year period covered by the data.

ACREAGE INVOLVED IN TAX DELINQUENCY

In 1936 only 273,805 acres of rural land, or 42 percent of the land area in the county, were taxable, the rest being in public ownership. Included in this amount are 26,800 acres of privately owned forest-crop land most of which pays a flat tax of 10 cents per acre. Tax

delinquency still further reduces the acreage of the effective tax base. The total area of rural land on which the 1934 tax levy, or one or more previous levies, had not been paid by early 1936, was in excess of 67,000 acres, or more than 24 percent of the total taxable rural land in the county (table 12). This delinquent acreage includes 30,000 acres of land with tax certificates outstanding since 1931-32, which has been subject for some time to transfer to county ownership through tax-deed proceedings.¹⁰

TABLE 11. *Accumulated tax delinquency on real property in Forest County, by towns, 1936*¹

Town	Accumulated tax delinquency as of 1936			Town	Accumulated tax delinquency as of 1936		
	1934 levy on real estate	Amount	Percentage of 1934 levy		1934 levy on real estate	Amount	Percentage of 1934 levy
	Dollars	Dollars	Percent		Dollars	Dollars	Percent
Alvina	5,571	9,925	172.8	Laona	36,087	5,437	15.1
Argonne	10,945	10,618	97.0	Lincoln	11,615	8,383	72.0
Armstrong Creek	7,553	6,343	83.9	Nashville	17,650	13,439	76.1
Blackwell	6,871	1,937	28.2	Popple River	3,277	1,444	44.1
Caswell	3,183	2,609	82.0	Ross	4,041	2,647	65.5
Crandon	3,679	7,482	203.4	Wabeno	26,018	19,696	75.7
Freedom	1,930	2,684	66.6				
Hiles	15,417	5,387	34.9	Total	155,977	97,790	62.7

Exclusive of city of Crandon.

TABLE 12. *Acreage of rural land tax-delinquent in Forest County in 1936 by year of oldest tax certificate*¹

Year of oldest tax certificate	Average tax delinquent	Percentage of total taxable land delinquent	Year of oldest tax certificate	Average tax delinquent	Percentage of total taxable land delinquent
	Acres	Percent		Acres	Percent
1931 or prior	17,735	6.7	1937	7,541	2.7
1932	12,316	4.5			
1933	17,306	6.3	Total delinquent	67,471	24.6
1934	12,182	4.4	Private land not delinquent	206,341	75.4
			Total private land	273,805	100.0

Exclusive of platted and small parcels in urban and recreational areas.

The distribution of delinquent lands throughout the county is shown in figure 13. Obviously the tax status of platted lands cannot be shown on a map of this scale. The location of delinquent lands in relation to taxpaying land, including private forest-crop entries, and public lands may be readily observed. A large part of the land shown in public ownership is land on which private owners have been unwilling or unable to pay taxes, for much of the publicly-owned land was transferred from private ownership by tax-deed. A large additional extent of land now owned by the Forest Service was heavily tax-delinquent when bought from private owners.

In 5 towns, Argonne, Armstrong Creek, Caswell, Crandon, and Ross, more than 30 percent, and in two towns, Argonne and Crandon, more than 40 percent of the taxable rural land has one or more tax

¹⁰ Of the acreage now subject to tax deed, 17,735 acres were subject to deed in 1934 or earlier, and 12,316 acres were subject to deed in 1935. Owing to a change in the law in 1933 governing redemption, the tax certificates sold in that and subsequent years will not be subject to deed until 5 years after date of sale.

certificates outstanding. In Armstrong Creek and Crandon, 20 and 25 percent, respectively, of the taxable rural lands is subject to tax-

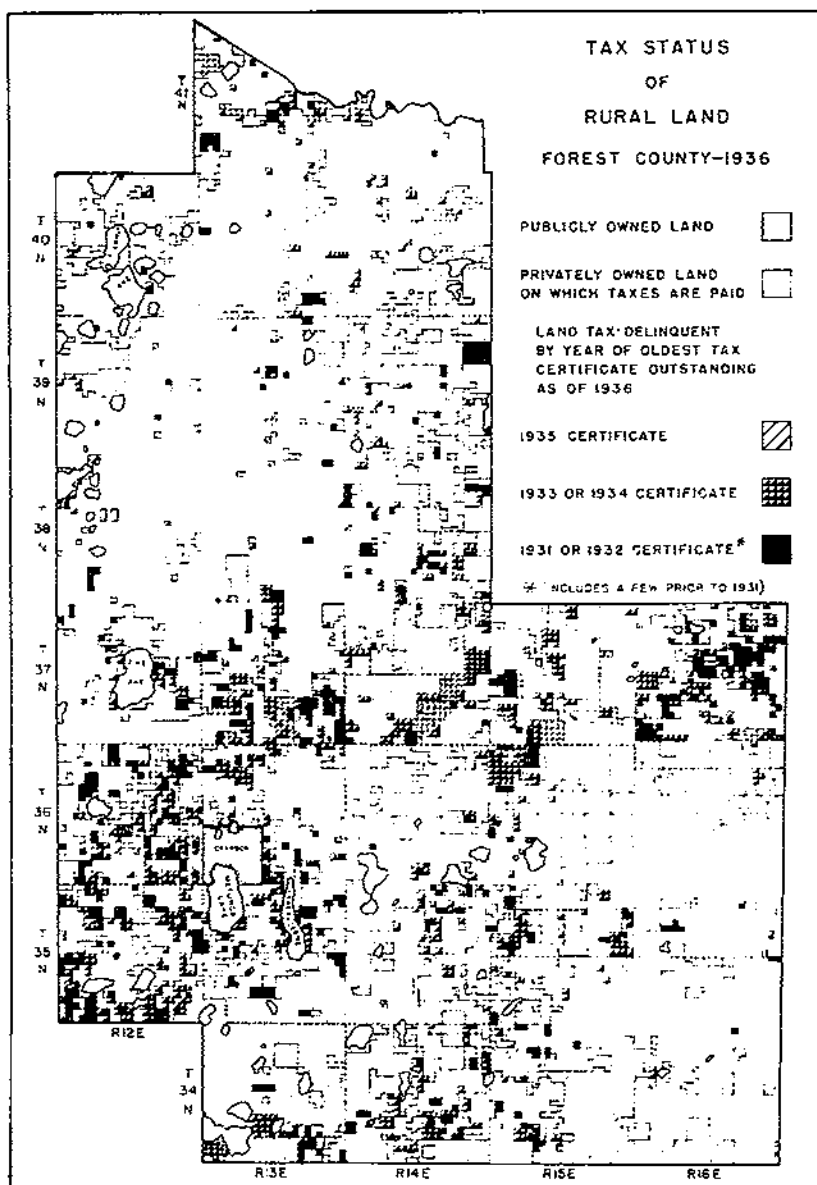


FIGURE 13.- The taxable acreage is small in many of the towns of Forest County. The amount of the effective tax base becomes even smaller when the acreage that is subject to chronic delinquency and tax-deed is considered.

deed. It is evident from figure 13 that the taxable acreage remaining in a number of towns is relatively small, particularly when allowance is made for acreage subject to heavy delinquency and tax-deed.

Even including the entire delinquent acreage, the number of taxable acres is less than 14,000 in each of 5 towns, Blackwell, Crandon, Freedom, Popple River, and Ross, and between 14,000 and 21,000 in 6 other towns, Alvin, Argonne, Armstrong Creek, Caswell, Lincoln, and Wabeno.

Approximately 130,000 acres, or one-fifth of the land area of the county, had already been tax-deeded one or more times by 1936. This does not include the land tax-deeded to private individuals before 1930, but this omitted acreage is probably not large. Approximately 100,000 acres of the land tax-deeded before 1936 are now in public ownership, and about 30,000 acres are in private ownership. A considerable acreage of tax-deeded land transferred to private ownership was later sold to the Forest Service and so is now in public ownership. The location and ownership status of lands tax-deeded before 1936 is shown in figure 14.

TAX DELINQUENCY IN RELATION TO LAND USE

Tax-delinquency data are not sufficiently complete to permit a detailed analysis of the effects of delinquency on the tax base, assessments, rates, and levies. The chief complicating factor is the purchase program of the Forest Service. Complete data are not available to show the delinquency status, at the time of purchase, of lands acquired by the Forest Service; nor can a reliable estimate be made of the amount of delinquent taxes that have been redeemed in anticipation of such purchase. Delinquency percentages are not especially significant in an analysis of delinquency itself, because of this complicating factor but the data are of some significance in giving information relative to the delinquency status of the various classes of land, outside of Crandon, that are still on the tax roll.

TABLE 13.—Accumulated tax delinquency on real property in relation to land use, Forest County, 1936¹

Land use	Amount of 1934 tax levy on real estate		Accumulated tax delinquency as of 1936 expressed as a percentage of 1934 levy	Land use	Amount of 1934 tax levy on real estate		Accumulated tax delinquency as of 1936 expressed as a percentage of 1934 levy
	Dollars	Percent			Dollars	Percent	
Agriculture	28,048	93.4		Village, commercial, and industrial			
Rural nonfarm homes	1,818	125.5		Continued.			
Recreation				Nonplatted	16,709	0.8	
Platted	8,304	65.1		Merchantable timber	51,617	11.1	
Nonplatted	4,072	70.0		Cut-over or waste	18,832	167.5	
Village, commercial and industrial				Private forest crop	2,715	15.6	
Platted	23,739	97.9		All uses	155,977	62.7	

¹ Exclusive of city of Crandon.

² Includes also some small parcels in urban and recreational areas.

Accumulated delinquency on real property still on the tax roll in 1936 was equal to two-thirds of the amount of the 1934 tax levy on this same property.¹¹ As expected, delinquency is most severe on cut-over land, and least severe on land bearing merchantable timber (table 13). As most of the purchases of the Forest Service involve

¹¹ The 1934 tax levy, due in 1935.

cut-over land, this class of land has had delinquency reduced by such purchases more than have other classes. Delinquency on cut-over

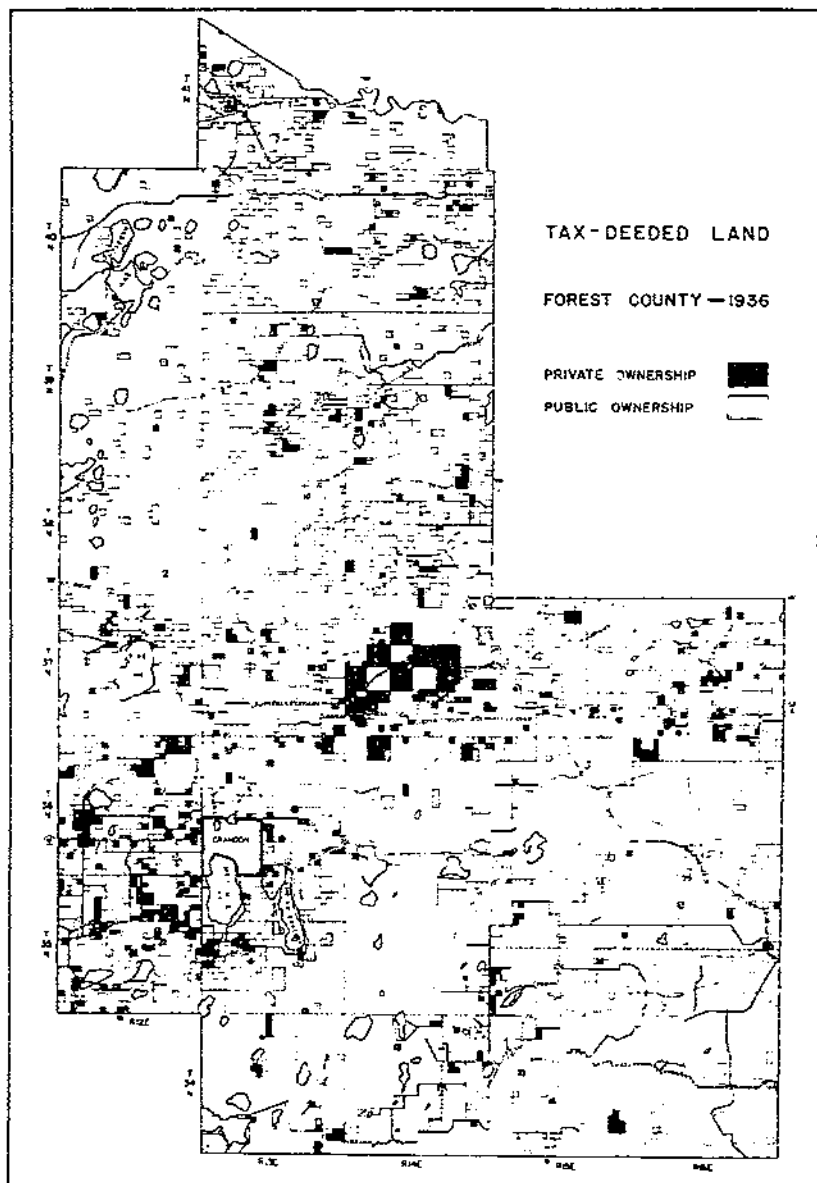


FIGURE 14.—Approximately one-fifth of the land area of the county had been tax-deeded either to private or public ownership by 1936.

land is therefore relatively more severe than is indicated by the data in table 13. Delinquency is also relatively high on rural nonfarm homes, but the aggregate amount involved is not large.

Tax delinquency on farms is much lower than on cut-over land but it is still very high. Farm incomes in most areas are small, and a considerable part of the gross farm income consists of commodities grown for home consumption. After necessary farm expenses and minimum living costs are taken care of, there appears to be little, if any, money left for paying taxes. The nonplatted village, commercial, and industrial property, which is shown in table 13 to have a very low delinquency, is largely sawmill property.

RATIO OF ASSESSED TO TRUE VALUE IN RELATION TO LAND USE

Although the local tax rate applies uniformly to all land in a given taxing district, the ratio of assessed to true value as fixed by the State tax commission, and therefore the tax rate on true value, may be quite different on lands in different uses within the same district. Thus, land in one use may be given what amounts to a preferential tax rate, while land in another use is taxed higher than the average rate. These differences are not uniform from town to town.

Considering the county as a whole, agricultural land is assessed at approximately one-half to two-thirds of its true, or market, value as determined by the tax commission, and during recent years this ratio has been decreasing significantly. Cut-over land, on the other hand, is assessed at approximately its full value, and other classes of land and personal property, except agricultural, are assessed at about three-fourths of full value (table 14).

TABLE 14. *Average ratio of assessed to true value, by classes of general property in Forest County, 1933-36¹*

Class of property	1933	1934	1935	1936
	Percent	Percent	Percent	Percent
Agricultural	62	57	51	48
Swamps, cut-over, or waste	94	112	90	101
Timber	62	40	66	78
Residential, mercantile, and manufacturing	81	76	79	72
Total real estate	75	71	68	72
Personal property	71	86	85	83
All general property	75	76	70	74

¹ As given in the supervisor of assessments reports and approved by the State tax commission.

The high ratio of assessed to true value on cut-over land, compared with that on other land, is probably one of the factors responsible for the high tax delinquency in this land class. But it should not be hastily assumed that if assessments on agricultural land were increased and those on cut-over land decreased, the cut-over lands would be retained on the tax rolls. Such a procedure might prove to be a serious handicap to farmers, and yet fail to halt the shift of cut-over land to public ownership through tax delinquency.

If the present rate of timber cutting continues, a reduction of this part of the tax base to insignificance may be expected within a relatively few years. As the timber is removed, the land goes automatically into the cut-over classification and, according to past experience a large part will then go tax delinquent and be tax-deeded to the county or sold to the Forest Service before reversion to the county. As the total valuation of timber and cut-over land on the tax rolls

decreases. agricultural property, and residential and mercantile and manufacturing property must bear a larger and larger share of the total tax burden.

The trend in this direction, evident during the past decade, may be expected to continue. Aside from the rehabilitation of the forest industry, which is a long-time program, the most urgent need is for an increased ability to pay taxes on the part of agricultural and other property remaining on the tax rolls, and for a decrease in the cost of governmental services. A sound relocation program would go far toward meeting this need by placing families now on poor land in better locations where their incomes would be increased, and by reducing the cost for roads, schools, and relief that is now occasioned by the isolated and uneconomic settlement.

PROBLEMS OF LOCAL GOVERNMENT

Land-use planning is primarily concerned with the human relationships—both individual and group—arising out of land utilization. It is concerned with the status of the individual in relation to the land and with the welfare of the group as related to the land. Each farmer, settler, or squatter has his own relationships with some unit or area of land, which relationships in turn create demands for schools, roads, and other public services.

One of the institutions involved is that of local government. It is one of the means by which groups may modify or direct individual action and render cooperative services to individuals. Accordingly, the nature and scope of the services rendered or withheld, the costs of the services, and the restrictions upon individuals and property imposed by local units of government, have a very significant place in the field of land planning. A study of the fiscal problems of local government frequently provides evidence of present land use maladjustments, and offers suggestions of value in determining desirable future uses, for generally a close correlation exists between the present and potential land uses and the character of the social and political institutions and problems which are associated with the land.

One of the objectives of this bulletin is to note the development of local government in Forest County, to describe its present status and the nature and cost of services rendered, and to suggest modifications, if the evidence points to a need for local governmental reorganization, especially in light of recommended land uses and distribution of population. In this part, primary consideration is given to the costs of local government and to the sources of revenue.

ORGANIZATION OF FOREST COUNTY AND ITS TOWNS

Forest County was organized in 1885 from parts of Langlade and Oconto Counties. Since then a number of changes have been made in the size of the county, and almost 30 changes in town boundaries have occurred. Most of these are shown in figure 15. Under Wisconsin statutes, a town may be organized whenever there are 75 electors in an area of at least 36 sections. In 1885, when Forest County was established, Gagen, Pelican, and Wyman were the only towns, but since then the number has increased to 14. At present, they vary in size from Hiles, with 131 square miles, to Freedom with 34, the average being less than 2 survey townships, or 72 square miles,

per town. The population of the various towns in 1930 varied from 2,168 in Wabeno to 160 in Popple River. Assessed valuation in 1936 ranged from \$1,106,420 for Wabeno to \$52,646 for Crandon.

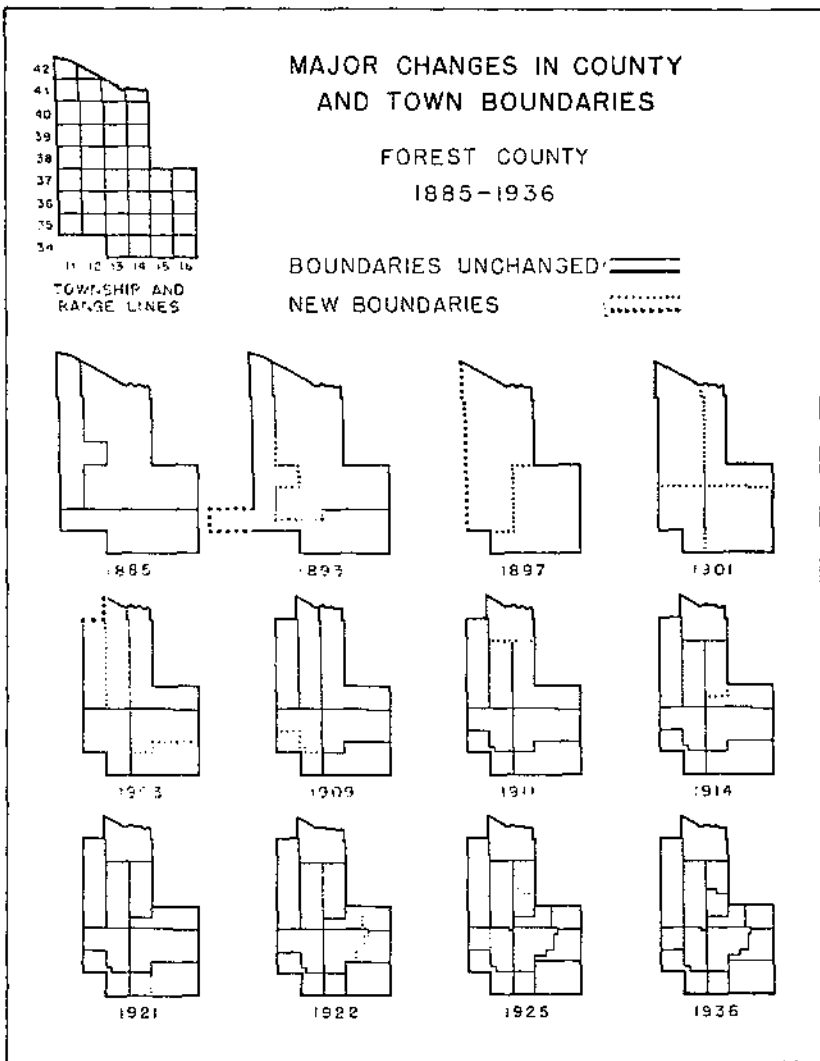


FIGURE 15. Since 1885, when the county was organized, almost 30 changes have been made in town boundaries, the number of towns having varied from 2 in 1897, to 14 in 1936.

Within the legal framework provided for the functioning of local government, individuals and groups have exercised a marked influence on the number of local units of government and on the nature of the services rendered in the county. The lumber companies, for instance, exercised a very great influence over the organization of new towns. It was natural that lumber interests should wish to avoid high taxes

for public services, especially if the services were of no direct benefit to them, and to wish for control over local government. By organizing new towns in areas controlled by them, the economic power of the lumber companies was supplemented by political power. They were then able to control local taxes and to direct the spending of money for roads and schools in such a way as to promote the sale of cut-over land for agricultural purposes, with the hope that consummation of this policy would shift a part of the tax burden to prospective settlers.

The law provides certain conditions requisite for the organization of towns, but unfortunately, except for a few permissive statutes, no provision has been made for the abolition of those towns that do not continue to meet certain minimum requirements or for the elimination of defunct local governmental units, whether counties, towns, or school districts. Many of the original motives that seem to justify the formation of new towns have long since become unimportant. For instance, the desire of the people to be close enough to community centers to participate readily in elections and other similar events was a potent factor in the demand for changes in town boundary lines, but with better transportation facilities this has ceased to be such an important consideration. Another reason for the increase in the number of towns was the desire of each community to have people from its own neighborhood in control of the local government. Once established, local interest, or whatever one chooses to call it, is perhaps the most potent factor in maintaining the status quo of the present units of local government.

At one time Forest County was one of the best lumbering sections of the State, and enjoyed a relatively high degree of prosperity. After the removal of valuable timber resources, the land offered very limited alternative opportunities for productive use. Most of the land is not suitable for agriculture, and recreational facilities and summer homes have not been extensively developed. A rapid decline in the tax base and in revenue was inevitable. On the basis of taxable wealth per capita, it is now the poorest county in the State.

One of the immediate problems confronting this county is that of obtaining the revenue necessary to provide the needed public services. Local tax burdens are heavy, even though governmental services have been reduced to a bare minimum of essentials— for instance, the county does not employ an agricultural agent, and during 1935 it definitely avoided all jury services to save expenses. It is important to find some method whereby taxes may be reduced and public services may, at the same time, be improved or at least not further impaired.

COUNTY GOVERNMENT

COST OF COUNTY GOVERNMENT

The cost of operating and maintaining county government in the county decreased from \$262,471 to \$181,045 between 1927 and 1936 (table 15). The drop in total county expenditures between these periods was chiefly the result of the assumption of the State in 1932 of the total cost of State trunk highway maintenance, with the exception of certain connecting streets and bridges. County expenditures and receipts for State trunk highways do not appear, therefore, in the county financial statements for 1932 and subsequent years. The largest items in county expenditures are for highways, general govern-

ment, charities and corrections, and education. The last is, of course, only a portion of the total amount spent for education in the county, the rest being included in the disbursements of towns and school districts.

TABLE 15. *Expenditures for county purposes, Forest County, in stated years¹*

Purpose	1927	1930	1933	1936
General government	\$42,523	\$33,330	\$23,788	\$27,510
Protection of persons and property	10,125	8,236	11,080	11,191
Health conservation and sanitation	4,117	7,602	2,639	2,713
Highways, roads, and bridges . .	138,007	118,015	27,806	36,584
Education	22,282	30,104	26,561	27,140
Charities and corrections	38,966	41,028	21,667	*72,114
Unclassified	1,831	3,025	1,318	1,265
Interest payments on debt	12,531	10,301	116	2,276
Total	292,371	251,824	123,023	181,015

¹ Not including Federal and State funds for direct or work relief but including county aids for schools.

* Beginning January 1932, the State assumed the total cost of State trunk highway maintenance.

† County expenditures for schools were estimated.

‡ The Federal social security program, starting in 1937, increased both the expenditures for charities and corrections and the receipts from gifts and grants (table 17).

The cost of general government for the county decreased from \$42,523 in 1927 to \$27,510 in 1936. This marked decrease was the result of retrenchment in costs, personnel, and services rendered. The big increase in expenditure for charities and corrections in 1936 was the result of the Federal social security program which began in 1935 and for which the county is the administrative agency. In 1936 the total cost of county government was \$181,045, or approximately \$16.28 per capita, on the basis of the 1930 population census figure. About three-fourths of this was raised locally and the rest was met by State aids.

A study was made of the cost of four offices in Forest County compared with the costs of similar offices in other counties of the State. These offices were those of the county board, sheriff, county treasurer, and county clerk. The costs per capita in Forest County for these offices are relatively high, and the costs per \$1,000 of assessed valuation were almost equal to the highest in Wisconsin, averaging from 12 to 20 times more than the lowest (table 16). Moreover, the high percentage of land on the tax rolls now chronically tax delinquent tends to overstate the true tax base, and consequently the cost per \$1,000 of tax-paying property is in reality greater than is shown by the figures. Conditions vary greatly between counties, and costs must necessarily vary also, but the relatively high costs in Forest County and the wide difference between the highest and lowest cost for these offices throughout the State suggests the importance of studying the possibility of reducing such costs in this county.

TABLE 16. *Comparison of costs of certain county offices in Forest County with highest and lowest costs in the State, 1931-35*

Office	Unit cost per capita			Per \$1,000 assessed valuation		
	Forest County	State		Forest County	State	
		Highest	Lowest		Highest	Lowest
County board	\$6.26	\$9.42	\$9.02	\$9.37	\$9.59	\$9.01
Sheriff	.78	.78	.07	1.39	1.30	.07
County treasurer	.38	.81	.07	.68	.92	.04
County clerk	.21	.53	.06	.41	.65	.03

REVENUES FOR COUNTY GOVERNMENT

In 1936 general property taxes from the 1935 levy supplied 36 percent of the total county revenue in the county, and 25 percent was obtained from tax certificates and deeds sold or redeemed, thus making a total revenue from general property of 61 percent. Thirty-four percent was provided by State aids, and the remaining 5 percent was obtained from various other sources. Receipts from current collections of general-property taxes declined 40 percent from 1927 to 1936.

During recent years this decline has been largely compensated for by a great increase in receipts from tax certificates and deeds sold or redeemed. The latter, however, are primarily the result of land sales to the Forest Service, and cannot be depended upon as a permanent source of revenue. State aids designated in table 17 as gifts and grants—were largely for county highway purposes with the exception of 1936. Before 1932 they included aids for the State highway system which has since been financed entirely by the State. For 1936, the State aids include State and Federal funds for social security payments, but do not include State and Federal funds for direct or work relief.

TABLE 17. Revenue for county purposes, Forest County, in specified years¹

Item	1927	1930	1933	1936
Receipts from taxes				
General property	\$123,917	\$10,924	\$75,022	\$73,872
Income	2,971	1,333	283	539
Public utility	376	1,268	1,369	1,433
Other	38		75	2,151
Fees and charges	2,028	1,186	1,706	1,334
Gifts and grants	93,746	62,138	25,239	168,531
Other general revenue	1,294	509	321	2,224
Commercial revenue	25,891	26,439	1,540	2,105
Tax certificates and deeds sold or redeemed	5,589	18,872	17,263	56,025
Total	255,900	231,801	172,788	202,608

¹ Does not include Federal or State aids for direct or work relief.

Includes delinquent property-tax collections, delinquent tax sales, tax sales, not interest, fees, and penalties on both.

² Beginning January 1932, the State assumed directly the total cost of the State trunk highway system, thus discontinuing State aids for this purpose.

³ The Federal Social Security program, starting in 1935, increased both the expenditures for charities and corrections and the receipts from gifts and grants.

⁴ Purchased by county at tax sale, and later sold or redeemed.

TOWN GOVERNMENT

COST OF GENERAL GOVERNMENT AND MISCELLANEOUS SERVICES

General government and roads accounted for about two-thirds of the cost of town government during the period 1927-36. The cost of general government alone, in the towns of the county, varied from \$20,000 to \$26,000 per year. In 1936 the figure was \$23,402, which is 27 percent of all operation and maintenance costs for the towns, and is equivalent to a 6-mill levy on the total assessed value of all general property in the towns (table 18).

The costs for town government vary widely between towns. For the year 1935-36 the cost of general government per town ranged from \$547 to \$5,817 (table 19). The cost of town roads ranged from \$901 to \$8,685, and the cost of other town services ranged from \$39 to \$8,524 per town. Many of the items included in the latter group

occurred only in the towns that include large unincorporated villages, as in the towns of Laona and Wabeno. The total town costs varied between \$2,601 and \$19,863 with only two towns having costs over \$5,000. Only one town had a total cost of government of less than \$3,000, and thus it can hardly be expected that the cost of operating and maintaining a unit of town government will be less than this amount. The total per capita cost of town government, in the various towns, ranged from \$3.82 to \$19, and averaged \$8.68. The per capita cost for general government alone averaged \$2.35.

TABLE 18.—Disbursements for town purposes, Forest County, in stated years ¹

Item	1927	1930	1933	1936
General government.....	\$26,630	\$22,410	\$21,497	\$23,462
Protection to persons and property.....	5,048	8,995	2,833	4,060
Health conservation and sanitation.....	2,600	1,810	1,332	1,455
Highways.....	96,106	44,564	32,731	37,605
Charities and corrections.....	7,240	7,296	7,015	6,511
Education.....	17,140	10,236	4,109	5,709
Recreation.....	262	180	595	1,882
Municipal public service enterprises.....	3,764	555	207	777
Unclassified.....	1,465	7,391	1,730	4,247
Total.....	129,774	103,404	100,009	86,528

¹ As such items as transfer of funds to the school district, tax-levy transfers, and payment on bonded indebtedness, are not true costs, they are not included in the tables of this study.

² Relief during 1931 and 1932 was administered through towns, and part of the funds received from the State during these years was expended in 1933.

TABLE 19.—Total and per capita expenditures for town purposes, by towns, Forest County, 1935-36

Town	Popu- lation 1936 ¹	Total expenditures				Expenditures per capita			
		Gen- eral gov- ern- ment	Roads	Other costs	Total	Gen- eral gov- ern- ment	Roads	Other costs	Total
Alvin.....	841	\$1,111	\$1,448	\$2,000	\$4,568	\$1.32	\$1.72	\$2.30	\$5.43
Argonne.....	780	1,930	901	173	3,004	2.46	1.15	.21	3.82
Armstrong Creek.....	776	927	1,568	1,457	3,952	1.19	2.02	1.88	5.09
Blackwell.....	434	942	1,465	1,708	4,115	2.17	3.38	3.93	9.48
Caswell.....	267	854	1,781	500	3,135	3.20	6.67	1.27	11.74
Crawdon.....	339	1,320	2,001	834	4,155	3.89	5.90	2.47	12.26
Freedom.....	215	1,172	1,747	1,165	4,084	5.45	8.13	5.42	19.00
Hiles.....	621	1,549	3,261	1,169	6,979	2.49	5.25	.28	8.02
Laona.....	1,772	2,377	8,685	8,524	10,586	1.34	4.90	4.81	11.05
Lincoln.....	360	2,167	2,175	30	4,384	6.02	6.05	.11	12.18
Nashville.....	704	1,661	2,821	364	4,846	2.17	3.69	.48	6.34
Poppo River.....	177	547	1,767	287	2,601	3.09	9.98	1.62	14.60
Ross.....	375	1,028	1,614	614	3,256	2.74	4.30	1.64	8.68
Wabeno.....	2,242	5,817	6,368	7,676	19,863	2.50	2.84	3.43	8.86
All towns.....	9,969	23,402	37,605	25,521	86,528	2.35	3.77	2.56	8.68

¹ Estimated by Wisconsin County Boards' Association.

COST OF TOWN ROADS

Total expenditures on town roads in the county decreased from \$66,106 in 1927 to \$37,605 in 1936 (table 20). This decrease occurred despite an increase in the total miles of town road from 291 to 428. The average expenditures per mile of town road decreased from \$227 in 1927 to \$88 in 1936. The average for the 5 years, 1927-31, was \$153, while the average cost during the last 5-year period was only \$79 per mile. This reduction in cost involved a reduction in both outlay and maintenance.

As is to be expected, the cost of town roads varies greatly between towns. For the 5-year period 1932-36, the average annual cost per mile varied from \$34.52 in the town of Argonne to \$167.94 in Laona (table 21). Three towns actually spent less than \$50 per mile. Seven more spent between \$50 and \$75 per mile. Thus, in 10 of the 14 towns, from two-thirds to the entire amount of the town-road costs were borne by the \$50-per-mile State aid for town roads.¹²

TABLE 20.—Number of miles and total and average cost per mile of town roads in Forest County, 1927-36

Year	Town roads Miles	Cost of roads			Average cost per mile
		Outlay	Maintenance	Total	
1927	291	\$18,906	\$47,200	\$66,106	\$227
1928	316	7,033	42,115	49,148	156
1929	217	11,146	35,437	46,583	147
1930	347	6,262	38,242	44,504	128
1931	350	3,645	39,362	43,007	120
1932	385	11,333	32,731	44,064	114
1933	422	6,630	26,121	32,751	78
1934	425	1,379	19,042	20,321	48
1935	437	2,562	28,871	31,433	72
1936	428	6,598	31,007	37,605	88
Average 1927-31	326	9,308	40,471	49,870	153
Average 1932-36	419	5,630	27,554	33,235	79
Average 1927-36	378	7,539	34,013	41,552	111

TABLE 21.—Average yearly cost per mile of town roads in Forest County, by towns, 1932-36

Town	Average miles road for period	Average cost per mile			Town	Average miles road for period	Average cost per mile		
		Maintenance	Outlay	Total cost			Maintenance	Outlay	Total cost
	Number	Dollars	Dollars	Dollars		Number	Dollars	Dollars	Dollars
Alvin	34	58.62	18.52	77.14	Laona	31	138.25	29.69	167.94
Argonne	30	34.52	.....	34.52	Lincoln	31	60.04	3.21	64.15
Armstrong Creek	28	68.50	3.07	72.47	Nashville	48	44.94	2.46	47.42
Blackwell	29	51.75	1.57	53.32	Popple River	23	62.58	.....	62.58
Caswell	17	63.50	.....	63.50	Ross	14	50.56	.....	50.56
Craodon	31	47.91	.....	47.91	Wateno	46	102.29	20.01	131.33
Freedom	21	37.33	25.49	62.82	Total or average	419	65.37	13.60	78.96
Hiles	39	65.03	48.94	114.57					

REVENUES FOR TOWN GOVERNMENT

Receipts for town purposes for the period 1927-36 are shown by sources in table 22. Receipts from general-property taxes decreased from 73 percent of total receipts in 1927 to 33 percent in 1936. During the same period the total revenues for town purposes decreased about one-fifth (table 22). Gifts and grants, on the other hand, which consist chiefly of State aids, increased from 7 percent of total receipts in 1927 to 45 percent in 1936, primarily because State aid for town roads was increased in 1932 from \$25 to \$50 per mile.

¹² The source of State aid for town roads is the gasoline tax. Aids are distributed on the basis of \$50 per mile of town road, or proportionately less if the funds are insufficient. They were somewhat less in 1933 and 1934. A State aid derived from auto registration fees, etc., is not included because the amount is not based on mileage, and goes into the town's general funds.

TABLE 22.—Receipts for town purposes, Forest County, in stated years

Item	1927	1930	1933	1936
Receipts from taxes:				
General property ¹	\$90,708	\$81,882	\$30,984	\$35,522
Income	14,107	18,332	1,260	410
Public utility	831	1,069	1,863	1,045
Other	527	5,183	2,550	9,155
Licenses and permits	1,988	2,542	282	7,223
Fines and forfeits	3,985	1,668	11	137
Gifts and grants ²	9,031	14,080	32,101	47,376
Commercial revenue	5,391	3,074	12,012	4,774
Total	132,568	128,734	87,069	106,422

¹ This includes current and delinquent receipts.

² State aids for town roads increased in 1932.

Bearing in mind the present difficult financial situation and the large percentage of present costs being borne by State aids, it is evident that Forest County is not in a position to construct and maintain town roads without substantial help from the State. Many miles of town roads in the county are not or will not in the near future be needed; and as it is not in the interest of the State to support such roads the towns might well take steps to reduce costs in anticipation of a possible reduction in aids for these roads. Some program of relocating isolated settlers so as to close unnecessary roads should therefore be in the interest of the towns as well as the State.

SCHOOLS

The county school system consists of 17 common-school districts, Crandon City schools, and Crandon Union Free High School district. The district boundaries coincide, with few exceptions, with the boundaries of the towns (fig. 16). For Wisconsin, this is an exceptional situation, for school-district lines usually have little relation to town boundaries, and there are generally several school districts in a civil town. The districts of Forest County vary greatly in size: For instance, Crandon No. 1 contains slightly less than 10 sections, while Hiles No. 1 is composed of four civil townships. Each school district is a local unit of government, separate from town government, the administration being in the hands of district school boards.

During the 1935-36 school year, 19 rural, 10 State-graded (grade schools with more than 1 teacher), 5 grade schools located in villages, and 5 high schools were operated in the county at a cost of approximately \$207,000. The school term is 9 months in length, and every school in the county was actually taught 170 days or more; 113 teachers were employed to teach 3,263 pupils.

The total net enrollment in the 19 rural schools was 480, or an average of 25 pupils each (fig. 17). Five grade schools located in villages which, except in Crandon, were operated in conjunction with high-school systems, had an enrollment of 1,541 grade pupils, or an average of 308 per school.

There are very few schools of unduly small enrollment in the county—only 1 school had less than an average of 10 pupils per day for the year 1935-36. Average daily attendance of the rural schools was approximately 83 percent of net enrollment.

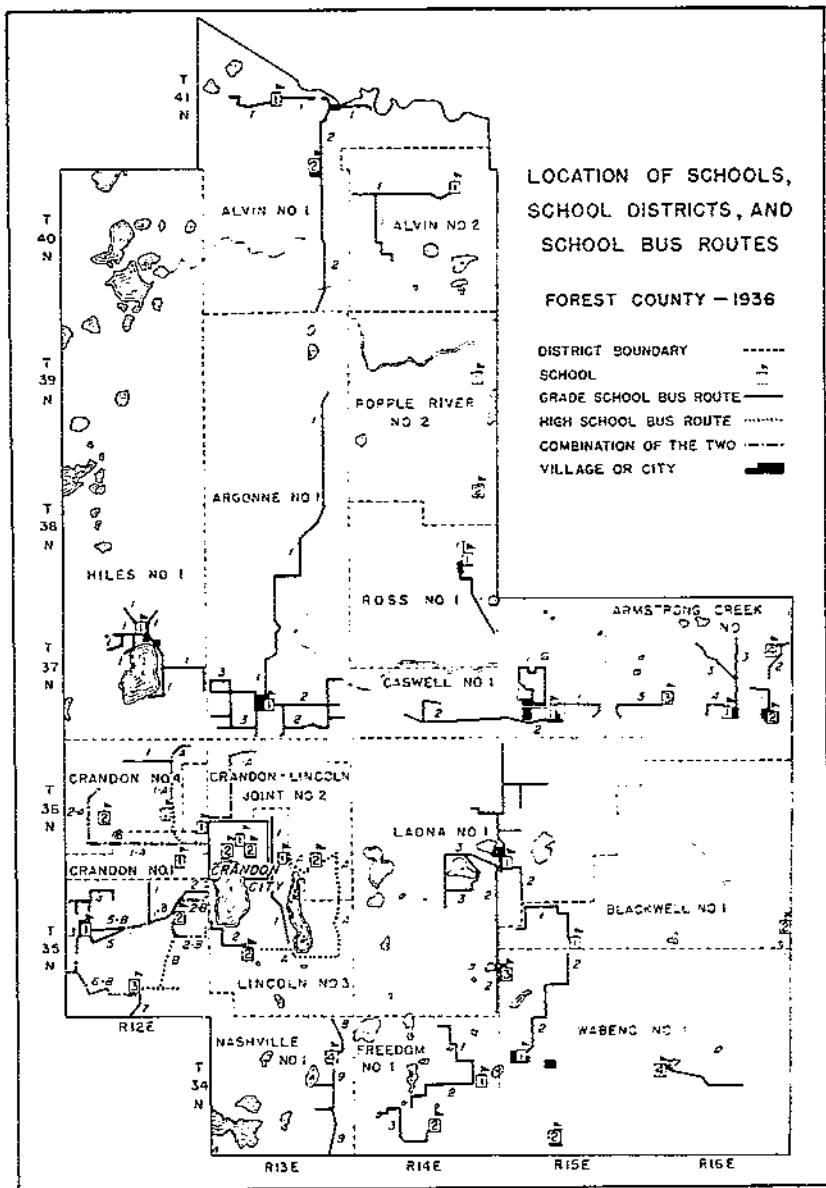


FIGURE 16.—Provision of school transportation has reduced the number of schools of unduly small enrollment. Only 1 school had an average daily attendance of less than 10 pupils for the school year 1935-36.

COST OF SCHOOLS

School enrollment and average costs per pupil for each school are given in table 23. The costs are based on expenditures for the school year 1935-36 except for capital cost items. Capital costs for land and buildings for all the schools in the county during the period

1927-36 were distributed evenly over the 10 years, and prorated to each district and school according to the number of teachers. Capital costs for repairs and equipment were determined for each district separately, but were distributed evenly over the 10-year period and prorated to each school, where there was more than one in a district, according to the number of teachers.

For all rural schools, the cost per pupil, based upon average daily attendance in 1935-36, ranges from \$41.11 for Crandon No. 1 to \$230.16 for Alvin No. 2, the average of all being \$81.07. For 6 of the 19 rural schools, having an average daily attendance of 15 or less, the cost was over \$100 per pupil. In State-graded schools and village grade schools average per-pupil costs were less than for rural



FIGURE 17.—A typical rural school in Forest County.

schools, being \$77.97 and \$56.15, respectively, on the basis of average daily attendance. Although the smaller rural schools are the more costly per pupil, and usually offer the poorest quality of service, the cost per pupil of the larger rural schools—those with an enrollment of 30 or more—compares favorably with those for the State-graded and grade schools in villages. But it should be recalled that the latter schools have better educational facilities and a smaller teaching load per teacher than do the larger rural schools.

More money is spent for schools by all units of government together in Forest County than for any other service of local government. In fact, the cost of education is equal to the combined cost of all other local public services (table 28). The total cost of education in the county declined about 20 percent from 1927 to 1936 (table 24). These data were taken from school-district records and show annual expenditures as incurred except for capital outlay items which were distributed evenly over the 10-year period.

TABLE 23.—School enrollment and estimated cost of operation and maintenance of individual schools based on average daily attendance, classified by type, Forest County, 1935-36

School district	School designation on map	Teachers	Net enrollment	Average daily attendance	Average cost per pupil ¹
	No.	Number	Number	Number	Dollars
Rural:					
Alvin No. 1	2	1	21	15.6	104.21
Alvin No. 2	1	1	19	13.7	230.16
Armstrong Creek No. 1	3	1	40	34.7	45.42
Do	4	1	25	18.3	84.41
Blackwell No. 1	2	1	17	9.6	111.51
Caswell No. 1	1	1	39	37.3	79.74
Crandon No. 1	1	1	35	35.5	41.11
Crandon No. 4	1	1	36	30.3	58.08
Do	2	1	17	16.3	69.30
Crandon-Lincoln Junction No. 2	2	1	25	22.2	56.89
Freedom No. 1	2	1	25	10.1	93.74
Do	1	1	15	14.4	101.50
Lincoln No. 3	1	1	35	22.2	98.41
Do	2	1	23	19.0	96.46
Nashville No. 1	4	1	35	31.6	60.28
Popple River No. 2	1	1	20	17.6	69.42
Do	2	1	13	11.9	101.57
Wabeno No. 1	3	1	15	14.7	90.85
Do	4	1	12	10.2	158.02
Total or average		10	480	398.4	81.07
State graded:					
Alvin No. 1	1	4	119	99.1	90.59
Armstrong Creek No. 1	1	2	55	50.7	59.69
Do	2	2	62	48.3	53.90
Blackwell No. 1	1	4	77	68.6	107.21
Crandon-Lincoln Junction No. 2	1	2	62	50.3	66.84
Nashville No. 1	1	2	60	41.8	90.47
Do	2	2	58	54.7	64.42
Do	3	2	46	39.8	89.90
Ross No. 1	1	3	96	67.9	78.71
Wabeno No. 1	2	2	55	51.3	60.19
Total or average		25	680	572.5	77.97
Village graded:					
Argonne No. 1	1	5	147	127.8	93.68
City of Crandon	2	12	437	373.0	40.45
Hiles No. 1	1	3	10	77.7	80.01
Laona No. 1	1	10	477	403.6	55.14
Wabeno No. 1	1	11	390	358.7	55.10
Total or average		41	1,541	1,341.4	56.15
High schools:					
Argonne No. 1	1	4	45	40.7	192.69
Crandon, Lincoln and Nashville	1	6	213	157.4	80.59
Hiles No. 1	1	2	30	28.2	161.52
Laona No. 1	1	8	120	103.7	122.53
Wabeno No. 1	1	5	154	146.0	121.75
Total or average		5	562	476.0	114.17
Total by type of school:					
Rural		10	480	398.4	81.02
State graded		25	680	572.5	77.02
Graded (villages)		41	1,541	1,341.4	56.10
High Schools		5	562	476.0	114.17
County total or average		113	3,263	2,788.3	74.10

¹Based on average daily attendance.

Annual disbursements were greatest in 1929, when they amounted to \$272,375, but were curtailed during the depression years, especially since 1932, reaching a low of \$203,507 in 1935. As the costs for land, buildings, repairs, and equipment were distributed evenly over the 10-year period, the reduction in total school cost as indicated was entirely in operating costs.

REVENUES FOR SCHOOLS

District taxes provided 72 percent of the revenue for school purposes during the 5-year period 1927-31, but during the 5-year period 1932-36 they provided but 45 percent. Average local tax receipts per year in the first period were \$212,000 but only \$94,000 in the last period. Average annual State aids increased respectively from \$52,000 to \$71,000 for the two periods, county aids from \$15,000 to \$25,000, and commercial revenue from \$15,000 to \$19,000. The percentage of school revenue coming from each of the various sources is shown for a period of years in table 25. Although local taxes provided 45 percent of the revenues for school purposes during the last 5 years, the State of Wisconsin furnished financial aid to the extent of 34 percent, including all of the important State school aids.

TABLE 24. Total expenditures for school purposes in Forest County, by years, 1927-36¹

Year	Expenditures	Year	Expenditures
1927	\$256,891	1932	\$256,893
1928	260,840	1933	208,015
1929	272,375	1934	215,570
1930	265,540	1935	202,597
1931	266,396	1936	206,843
Average	264,410	Average	218,184

¹ Capital costs for land, buildings, repairs, and equipment distributed evenly over 10-year period.

TABLE 25.—Total revenue for schools and percentage of total by source, Forest County, 1927-36

Year	Total receipts	Percentage of total receipts by source			
		State aids	County aids	Local taxes	Commercial revenue
		Dollars	Percent	Percent	Percent
1927	363,973	10.5	3.0	78.8	7.7
1928	294,526	8.2	5.6	82.1	4.1
1929	305,442	19.6	7.5	68.0	4.0
1930	266,150	24.6	3.3	67.3	4.8
1931	306,622	25.7	6.2	62.9	5.2
1932	233,175	32.1	16.5	42.6	8.8
1933	168,697	35.3	3.4	47.9	13.4
1934	125,656	35.7	15.2	38.0	10.2
1935	212,790	34.4	10.4	49.3	5.9
1936	203,330	33.5	11.2	48.5	6.8
Average 1927-31	291,541	17.7	5.1	72.0	5.2
Average 1932-36	208,610	34.1	11.8	45.2	8.9

¹ Includes taxes paid by private owners of forest-crop land, public-utility tax receipts, and taxes raised by towns for the payment of State trust fund loans as well as general-property taxes.

The principal State aids to schools are the following: (1) Flat rate of \$250 per elementary school teacher, (2) equalization aid up to \$350 per elementary teacher in districts with less than \$200,000 valuation per elementary teacher, (3) \$300 per elementary school with three or more teachers (first-class, State-graded) and \$200 per elementary school with two teachers (second-class, State-graded), (4) transportation aid for elementary school pupils transported over 2 miles to school at 10 cents per day per pupil, and (5) high-school aids up to \$1,500 per school with four or more teachers. Most of these aids are subject

to reductions if the funds are inadequate, and numerous qualifications prevent their uniform application to all schools.

The county contributed to the extent of \$250 per teacher, or about 12 percent, during the same period, and commercial revenue of the schools, consisting of other receipts such as tuition, sale or rental of school property, etc., furnished the remainder, or 9 percent. Since about 20 percent of the commercial revenue was received by certain districts from others in payment of tuition costs, there is some duplication by including it, but the relative distribution of the sources of revenue is not thereby materially affected.

Sources of school revenue for each district for the 10-year period 1927-36 are shown in table 26. There is a great difference between districts in the proportion received from various sources. For instance, Blackwell No. 1 raised annually, by local taxation, an amount equal to 73.7 percent of total receipts, while Crandon No. 4 raised only 33.2 percent. State aids amounted to 47.3 percent of the 10-year average annual disbursements of Crandon No. 4, but were only 16.3 percent in the case of Blackwell No. 1. Hiles No. 1 received only 12.2 percent from State aids, but this district as well as Argonne No. 1, Crandon High School, Laona No. 1 and Wabeno No. 1, operate high schools, and the distribution of aids to high schools is different from that made to elementary schools. County school aids ranged from 5.9 percent in Argonne No. 1 to 18.3 percent in Caswell No. 1. Commercial revenue made up a lesser proportion of the funds available for expenditure, ranging from 0.8 percent in Alvin No. 1 to 15.1 percent in Wabeno No. 1 with most of the districts below 7 percent.

TABLE 26. *Total revenue for schools by districts and percentage of total by source, Forest County, 1927-36*

School district	Total receipts	Percentage of total receipts by source			
		State aids	County aids	District taxes	Commercial revenue
	Dollars	Percent	Percent	Percent	Percent
Alvin No. 1	23,309	23.8	6.4	69.0	0.8
Alvin No. 2	7,735	34.6	20.5	43.5	11.4
Argonne No. 1	19,496	28.5	5.9	58.9	6.7
Armstrong Creek No. 1	9,658	43.8	14.9	37.1	1.2
Blackwell No. 1	12,807	16.3	1.7	73.7	3.3
Caswell No. 1	3,063	27.9	18.4	48.2	5.6
Crandon No. 1	1,367	41.3	10.9	39.5	8.3
Crandon No. 4	2,771	47.3	15.3	33.2	4.2
Crandon, Lincoln Junction No. 2	4,394	34.7	12.5	47.9	4.9
City, Crandon grade school	18,517	20.5	12.1	51.8	2.6
City, Crandon union free high school	16,366	12.6		82.6	4.8
Freedom No. 1	3,313	18.1	14.0	63.6	4.3
Hiles No. 1	18,315	12.2	6.3	73.7	7.8
Laona No. 1	33,463	19.0	6.1	71.6	3.3
Lincoln No. 3	3,902	17.8	9.2	67.2	5.8
Nashville No. 1	14,874	38.1	10.2	48.1	3.6
Popple River No. 2	3,873	17.9	13.4	62.7	6.0
Ross No. 1	7,583	31.1	7.0	57.8	4.1
Wabeno No. 1	51,899	24.1	7.9	52.9	15.1
Average or total	261,575	24.5	7.9	60.9	6.7

* Includes taxes paid by private owners of forest-crop land, public-utility tax receipts, and taxes raised by towns to pay State trust fund loans.

Data for 1934 indicate that the school tax rate on true value in Forest County averaged higher than for any other county, and was over twice the average for the State. The average rate in the county

for 1934 was 15 mills, whereas that for the State as a whole was only 7 mills.

In 1935 the average school tax rate was approximately 12 mills per dollar. Eleven of the 18 districts had a school tax rate on true valuation of over 10 mills per dollar and 6 of these had a rate of over 15 mills (table 27). The primary reason for the high tax rate doubtless lies in the low general-property tax base per teacher or per pupil rather than in the high cost of operating the schools. In 1935 the average full value of the tax base per grade school teacher in the county was only \$74,570, while that for the State as a whole was about \$287,000. Seven of the 18 districts with grade schools had less than \$50,000 valuation per teacher.

TABLE 27.—General-property tax base per teacher and tax rate for school purposes, by school districts, Forest County, 1935-36

School district	Elementary school teachers	General-property valuation †		School-tax rate per dollar of valuation on full value
		Total	Average per teacher	
	Number	Dollars	Dollars	Cents
Alvin No. 1	5	205,698	41,140	0.0190
Alvin No. 2	1	85,957	85,957	.0116
Argonne No. 1	5	443,394	88,679	.0160
Armstrong Creek No. 1	5	236,510	39,418	.0085
Blackwell No. 1	6	223,730	44,740	.0238
Caswell No. 1	1	118,145	118,145	.0044
Crandon No. 1	1	36,965	36,965	.0054
Crandon No. 4	2	55,453	27,726	.0126
Crandon, Lincoln Junction No. 2	3	83,259	27,753	.0133
Freedom No. 1	2	223,796	111,898	.0022
Hiles No. 1	3	372,345	190,782	.0121
Laona No. 1	10	1,260,406	126,041	.0147
Lincoln No. 3	2	291,961	145,980	.0035
Nashville No. 1	7	361,532	51,595	.0173
Popple River No. 2	2	156,315	78,158	.0294
Ross No. 1	3	141,772	47,257	.0155
Waheno No. 1	15	1,639,311	69,287	.0059
Crandon, city	12	781,905	65,150	.0084
Total or average	85	6,338,444	74,570	.0118

† Recommended full, or true, value as fixed by the State tax commission, 1935. This is not quite the same as the value used for distribution of State equalization aid, being larger in most districts than the latter and thus a conservative statement of the case.

With such a low value of tax base per teacher, the cost per thousand dollars of tax base is bound to be high even with efficiently run schools. Thus in Forest County the school tax rate is high and State aids for schools are also high. State equalization aid is paid to school districts having less than \$200,000 full value of tax base per elementary school teacher. Nearly every rural school in the county receives the maximum of \$350 per teacher from this aid.

In view of the decrease of more than 50 percent in the total tax base during the last 10 years, and several indications pointing toward a continuation of this decline, it is imperative that this large item of public expense be reduced in every way consistent with good educational procedure. Under the conditions that exist in the county, a settler-relocation program that would allow the closing of some schools and the elimination of much of the pupil transportation would seem to offer the greatest aid in reducing costs. Later in this bulletin a few suggestions are made relative to such a program.

COST OF ALL UNITS OF LOCAL GOVERNMENT

The average annual cost of all public services administered by local units of government during the 5-year period 1932-36, amounted to \$444,439, or about \$40 per capita (table 28). These services were rendered by the county, towns, school districts, and the city of Crandon. Education was by far the largest public-service cost, accounting for about 52 percent of the total, or \$20.75 per capita. Highways were the next largest item, amounting to 15.6 percent of all public-service costs, or \$6.25 per capita. County and town road costs were about equal in amount, and city streets were a small item. Charities and corrections—aside from direct or work relief—were the third largest item, constituting 13 percent of total costs, or \$5.19 per capita. General government was the fourth, and last, large item of expense, general county government making up 6.3 percent of all costs and general town government 4.7 percent. Including the city of Crandon all general government amounted to 11.6 percent of all local governmental costs, or \$4.65 per capita. Protection of persons and property and miscellaneous costs were relatively small items, accounting for 4.8 and 3.1 percent respectively of all costs.

TABLE 28.—Average yearly per capita and percentage expenditures for public services, Forest County, 1932-36¹

Item	Amount	Per capita ²	Percentage of total
	Dollars	Dollars	Percent
Education	230,692	20.75	51.9
County roads	34,062	3.06	7.7
Town roads	32,723	2.94	7.3
City streets	2,737	.25	.6
All roads and streets	69,522	6.25	15.6
Charities and corrections (all units)	57,674	5.19	13.0
County general government	28,104	2.53	6.3
Town general government	21,655	1.99	4.7
City general government	2,776	.23	.6
All general government	51,735	4.65	11.6
Protection of persons and property (all units)	21,270	1.91	4.8
Miscellaneous (all units)	13,746	1.22	3.1
Total	444,439	39.97	100.0

¹ Exclusive of State and Federal funds for direct or work relief.

² Based on population of 11,118, U. S. Census, 1930.

³ Includes amount spent directly by county, towns, and city, in addition to that spent by school districts.

General-property taxes provided 44.1 percent of all the revenues required to meet the costs of governmental services, exclusive of State and Federal services and general relief during the 5-year period 1932-36. If receipts from tax certificates and deeds sold or redeemed are included, the total receipts from general property amount to 59.0 percent (table 29). It must be remembered that the property tax base is rapidly declining as a source of revenue, and receipts from tax certificates and deeds sold or redeemed are largely dependent upon land sales to the Federal Government and are therefore certain to decline in the future. Gifts and grants from the State and Federal Government exclusive of aids for direct and work relief amounted to 31.0 percent of the total receipts.

The largest items included in gifts and grants are: State equalization and other aids to schools; State aids to municipalities for roads and streets; State-highway-privilege aid in lieu of general-property tax on automobiles; State aid to counties for county highways; and State aid for redemption of county highway bonds. Commercial revenue and miscellaneous receipts accounted for 5.3 and 1.8 percent respectively, of all receipts.

TABLE 29. Average yearly and percentage receipts for public services in Forest County, by source of revenue, 1932-36

Source of revenue	Amount	Percentage of total	Source of revenue	Amount	Percentage of total
	<i>Dollars</i>	<i>Percent</i>		<i>Dollars</i>	<i>Percent</i>
General property taxes	206,998	44.1	Gifts and grants (State and Federal)	145,412	31.0
Other taxes	13,696	2.9	Commercial revenue	24,803	5.3
Tax certificates and deeds sold and redeemed	69,992	14.9	Miscellaneous (local and county)	8,712	1.8
			Total	469,613	100.0

In considering the proportion of the total cost of government met by local contributions, it may be said that citizens of the county contribute somewhat to several of the funds from which State aids are received. Table 30 shows the principal items and the amounts contributed as nearly as can be ascertained. The average annual contributions from Forest County to State taxes are \$67,248, or nearly half as much as the gifts and grants for the same period. Other State and Federal contributions to the county, however, are not shown in table 29. Two large items of this kind are State maintenance of State trunk highways in the county, and State and Federal aid for direct and work relief. Numerous other services of a less tangible nature might be mentioned, but these two probably involve the most money.

TABLE 30. Estimated amount of State taxes, Forest County, by principal sources of revenue, average 1932-36

Source of revenue	Amount of taxes	Source of revenue	Amount of taxes
Gasoline	\$27,979	Inheritance	\$617
Motor-vehicle license	23,745	Forestry-general property	488
Liquor	10,704		
Excise	2,691	Total per year	67,218
Public utility	1,026		

During the 5-year period 1932-36, the State allotted an average of about \$100,000 per year for the construction and maintenance of State highways within the county. This is 50 percent more than the amount paid into the State funds by the county. In other words, the county has received State services on highways, in addition to the gifts and grants shown in table 29, sufficient to more than balance the State taxes collected in the county. Furthermore, this is entirely aside from State and Federal aid for general relief which is discussed in the next part of the bulletin.

COSTS OF RELIEF

Relief has been a large item of public expense during recent years. But this item has not been included in any of these tables on public costs except for the usual items of charity and the social-security aids--old-age pensions, aid to the blind, and aid to dependent children. Relief costs have been high in other parts of the State as well as in this county but the per capita cost of relief in the county has been much higher than that in the rest of the State. In fact, since 1932, it has been almost twice as high, on the average--\$27.59, as compared with \$15.09 for the State (table 31). Costs of relief in the county during these 5 years have been over two-thirds as much as all other public costs.

TABLE 31.—Per capita cost of relief in Forest County compared with the State, 1932-36¹

Year	Expenditures for relief			
	Forest County		State	
	Amount	Per capita ²	Amount	Per capita
1932	590,211.14	\$8.11	\$18,925,224.57	\$6.44
1933	239,171.11	21.51	35,133,710.45	11.95
1934	404,993.55	36.43	58,856,123.23	20.04
1935	409,138.86	36.80	48,652,509.96	15.33
1936	390,220.98	35.10	63,102,458.33	21.47
Average	305,747.13	27.59	44,210,003.71	15.09

¹ Direct and work relief administered under programs of Civil Works Administration, Drought Relief, Federal Emergency Relief Administration, Works Progress Administration, and State.

² 1930 population 11,118; Wisconsin 2,939,006—U. S. Census.

The chief causes of this excessive relief burden, aside from the general depression, undoubtedly are attributable to unemployment resulting from the decline of the forest industry, and to the low farm incomes caused by settlement on poor land, or to the inability of farmers to clear enough land to provide operating units of economic size.

Not only has the per capita relief expenditure been much higher in Forest County than for the rest of the State, but the proportion of total relief cost which has been borne by the county and other local units has been much smaller. During the last 5 years, the average local contribution for relief in the county has been only 0.6 percent, whereas the average local contribution throughout the State has been 17.3 percent. In other words, relief costs are high, and the State and Federal Governments are paying practically all of it. The excessive costs and the small contribution from the county are undoubtedly caused by the seriousness of the employment situation and land-utilization problems in the area. They should not be considered as a reflection on the people of the county, nor as an argument for reducing State aids, but they do point out the need for a serious attempt to eliminate, as far as possible, the underlying causes of the problems.

POLICIES AND PROGRAMS FOR ADJUSTMENT IN LAND USE AND LOCAL GOVERNMENTAL ORGANIZATION

After an analysis of these problems arising from present forms of land use, their causes, and their present relation to the resources of Forest County, it is now important to determine the degree to which existing policies have caused desirable changes in land use, or have perpetuated or prevented additional maladjustments; and to determine need for other directional measures that will aid in bringing about desirable adjustments. Although the policies and programs considered are designed primarily to improve the level of income of the people in the county, benefits will also accrue to other parts of the State that are now defraying, by their taxes, a large part of the public costs in the cut-over region.

LAND CLASSIFICATION

RELATION OF LAND CLASSIFICATION TO LAND-USE PLANNING

Land classification forms the link between the physioeconomic environment of an area and the projection of social policies. One step in determining land programs for a region consists of delineating areas that possess uniform characteristics which have a significant influence on the formulation of various policies. As a tool in land-use planning, land classification serves to focus attention upon particular bodies of land to which the various policies are best adapted. Only by breaking down the complex of land forms into workable units is it possible to plan and to direct desirable types of land use.

In line with this research procedure, a land-use classification was prepared for Forest County as a guide in recommending better land use practices and as a basis for appraising changes in government necessary for such improved utilization. Land classification is not new to this county. The rural-zoning ordinance in effect since 1934 is a type of land-use classification in which legal sanctions are given to various forms of land use. The classification presented here is intended to go somewhat beyond the zoning classification, and to indicate all areas generally unsuited to agriculture, whether or not their restriction is feasible at present or in the near future. It is also intended to indicate the relative degree of suitability of various areas for agriculture or other major uses, and to distinguish between areas requiring different types of public programs.

Land classification in this region should help to answer such questions as: Where are the areas most suited to continued agriculture or to the development of new farms? From which areas can families be relocated with the greatest advantage both to themselves and to governmental agencies? What areas are adapted to changes in the form of local government or in public services, such as schools and roads?

LAND CLASSES

With these questions as a basis, Forest County has been divided into three main land classes: ¹³ Class I, nonproblem agricultural areas; class II, problem agricultural areas; class III, areas not suitable for

¹³ Information on the number of farms, percentage of land in farms, average size of farms, farm values, and density of settlement, is given for all classes in appendix tables.

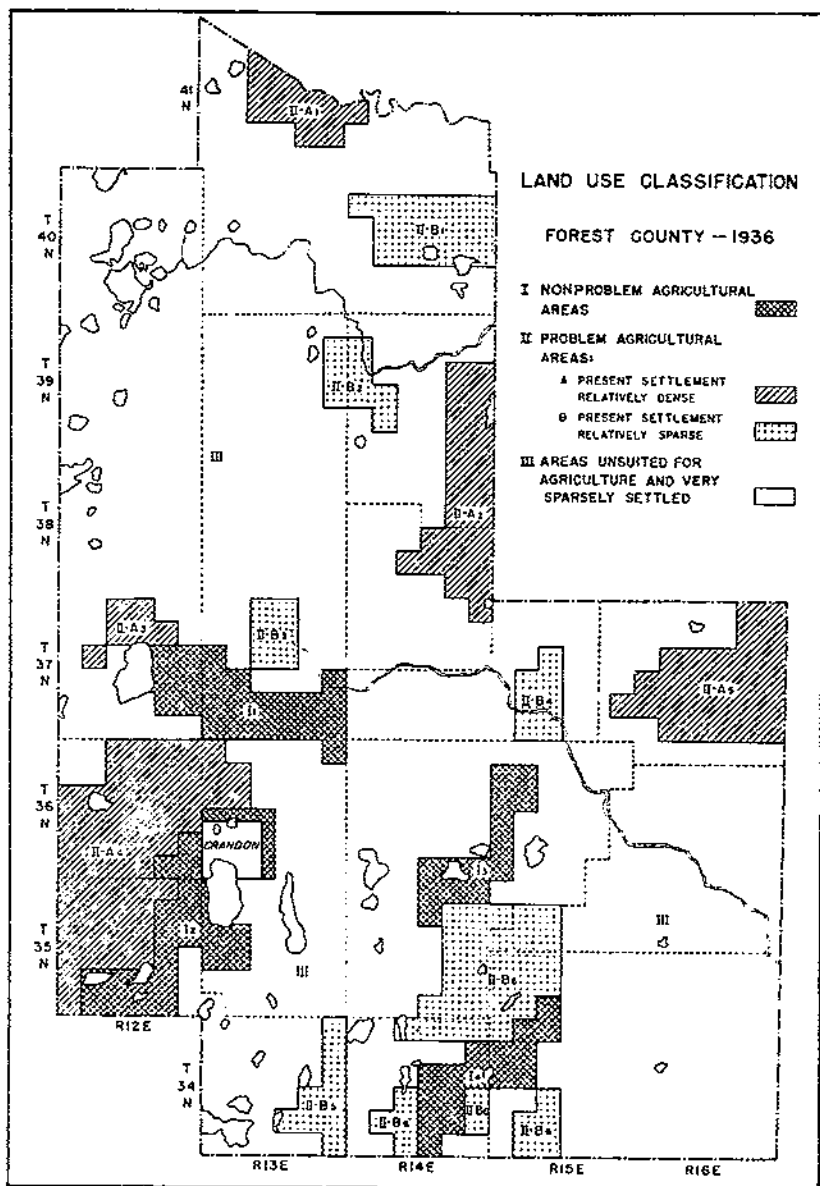


FIGURE 18.—A land classification of this Find is useful as a guide for refining zoning boundaries and for appraising various public land-use policies and programs.

agriculture and having very sparse settlement (fig. 18). The two criteria used in developing this classification are: (1) Agricultural productivity under present forms of utilization, and (2) the density

and extent of settlement.¹⁴ The latter criterion is important for land use planning in that the costs of providing public services and the feasibility of relocating present settlers are both largely dependent upon the land occupancy or settlement pattern.

Class I, nonproblem agricultural areas, comprises 7.3 percent of the county, and includes land now predominantly used for commercial agriculture which appears capable of producing a reasonably adequate farm income on farm units of 80 acres or more. In addition, the density of settlement in these areas is adequate for the provision of public services at a cost comparable with that of farming areas in the southern half of the State. The continued use of class I land for agriculture appears advisable, and it is here that additional land suitable for farming is most likely to be found.

Class II, problem agricultural areas, comprising 20.3 percent of the county, includes areas in which the land is generally unsuitable for commercial agriculture on the basis of either farm income or public costs, or both, but in which significant amounts of agricultural settlement exist. These are "problem" areas under present conditions. The class is divided into two subclasses according to density of settlement, possibility of rehabilitation or adaptability to resettlement, and other public programs or policies.

Subclass II-A, comprising 11.7 percent of the county, includes the more densely settled areas or those for which there is a possibility of being raised to a "nonproblem" status through such programs as the provision of supplementary employment, increases in crop acreage per farm, or changes in farm practices. Zoning and settler relocation are desirable in some limited areas, but it is believed that social policies in the areas comprising this subclass should be directed primarily at improving in place the incomes of people within the subclass, rather than attempting to better their position elsewhere.

Subclass II-B, comprising 8.6 percent of the county, is characterized by relatively sparse settlement with inadequate farm incomes, usually accompanied by high costs for public services because of settler isolation. In most cases, families in these areas should be assisted in moving to better regions, the area should be zoned against future settlement, and the land devoted to some form of forestry or recreational use.

Class III comprises 72.4 percent of the county areas and includes land considered unsuited to commercial farming on which there is now little agricultural settlement. Forestry or recreation is believed to be the best use for most of the land, but in some parts of the class these uses are likely to be extensive in character. The sparsity of settlement in this class usually indicates unreasonable per capita costs for schools, roads, and other public services.

It is probable, therefore, that greater savings in public costs can be achieved, and larger areas can be blocked out for forest production by relocating settlers from this class than from subclass II-B. Zoning against agriculture is recommended, with little qualification, for most of class III land. In none of the classes where relocation of settlers is recommended, is it assumed that all families should be moved. Farms that are near settlements, roads, and schools, or small commu-

¹⁴ For a general discussion of land-use classification and of the procedure used in preparing the Forest County classification, see the following: MURPHY, W. P. LAND CLASSIFICATION FOR LAND USE IN THE GREAT LAKES CUT-OVER REGION, AS ILLUSTRATED BY FOREST COUNTY, WISCONSIN. U. S. Bur. Agr. Econ. Land Econ. Rept. No. 1. 1937. [Multigraphed.]

nities, may justifiably be left for later consideration after the more serious problems of isolation have been solved.

Several different areas, or units, of class I, subclass II-A, and subclass II-B land are shown on the land-use classification map (fig. 18). An attempt was made to include in each area land essentially uniform as to present use capabilities or use maladjustments, and type of public program applicable to it. Only in unit 6 of subclass II-B are noncontiguous parcels of land included in one unit. No separate areas are shown for class III land, largely because of the uniformity in land-use capabilities and similarity of public policies needed in the various areas within the class.

LAND CLASSES DESIGNATED

CLASS I. NONPROBLEM AGRICULTURAL AREAS

Class I includes only land in and around well-established communities where agriculture has been relatively successful. Although no comparison is implied between these areas and agricultural areas in other parts of the State or Nation, it appears that, under present conditions, farms in this class are capable of maintaining fairly adequate standards of living, and that agriculture is therefore the best use for most of the land. A recent study of relief in Forest County shows that 33 percent of all rural families in class I areas received some type of relief during the 3-month period July-September 1936.¹⁵ During this period 52 percent received relief in class II areas, and 58 percent received relief in those of class III. The average for the county was 47 percent.

The type of soil, the extent of cultivated land per farm, and the size and condition of farm buildings all indicate that returns from farming are normally adequate to support people above the subsistence level in class I areas (fig. 19). Expenditures for relief in these areas were primarily for rural nonfarm families. The average value of land and buildings per farm, based on true value as recommended by the Wisconsin Tax Commission, is \$1,968, compared with \$1,074 in subclass II-A, \$1,148 in subclass II-B, and \$1,164 per farm in class III. Some of the individual areas, or units, of this class are small but they are believed to be sufficiently large and compactly settled for satisfactory social development and for the maintenance of public services at reasonable cost. In brief, this class includes the nonproblem agricultural areas of the county, in contrast with classes II and III, where the use of land for agriculture is attended with more or less severe land-use maladjustments.

It should not be assumed that all the land in class I is suitable for agriculture, or that incomes on all farms are equal to the potential productivity of the land. Variability is a characteristic feature of the land type and of the efficiency of farming operations throughout this county.

The number of additional farm units of a desirable type that can be established in class I depends on such factors as the physical characteristics of specific parcels of land, costs of clearing land, and the general level of farm-purchasing power. It is believed that the possibility of locating tracts suitable for new farms is greater in this class than in other parts of the county, and so it would be in the public interest to direct future settlement or resettlement into these areas rather

¹⁵ Eitel, G. W., and SMITH, R. A. Unpublished manuscript in files of Rural Sociology Department, Wisconsin College of Agriculture, Madison, Wis.

than into areas likely to be depopulated through future adjustment programs. Likewise, any program for clearing additional land on farms is much more likely to succeed, and would be much more in accordance with sound public policy, if carried out in class I rather than in other parts of the county. Class I is not without some problems of land use, but these maladjustments can often be alleviated by clearing more land, by changes in management practices, or by other adjustments on the individual farm. Land-planning activities in this class are confined primarily to locating new farms for resettlement, rather than to changing forms of land use, as is the case in classes II and III.

The location and description of the four areas, or units, of class I are as follows:

Unit 1, class I.—This area is located in the west-central part of the county, and includes the largest and most productive body of agri-



FIGURE 19.—A good farm in class I farming area.

cultural land in the county. Farms are usually 80 or 120 acres in size, with the average, 104, materially higher than the county-wide average of 81 acres. There are 76 farms, and these are rather well concentrated along improved roads. Fifty-three percent of the area is now in farms. The soils are largely Kennan and Antigo silt loams of moderate fertility. The Antigo soils, underlain by sand and gravel at depths of from 18 to 30 inches, are somewhat better drained than the Kennan, but are more subject to drought. The area is predominantly gently rolling in character, but is cut up by a number of raw peat swamps. The distribution of stone varies widely, but, in general, is not a serious problem. The stonier land can be used to advantage for woods or pasture in conjunction with the cropland, while the small size of the stones makes them relatively easy to clear. Some undeveloped land suitable for farming occurs in the western part of the area. Dairy products are the principal source of farm income, although potatoes are also an important source of cash income. Transportation needs are well met by State, county, and town roads, and

markets for farm products are available at Argonne and Crandon. There is a high school and a grade school in each of the villages of Hiles and Argonne, near each end of the area.

Unit 2, class I.—This area, lying to the southwest of Crandon, is somewhat less productive than the unit just described. It includes 84 farms in addition to several within the city limits of Crandon. The Kennan and Antigo soils found in this area are similar to those in unit 1, but the Kennan soils are inclined to be somewhat rougher in topography and more stony. In addition, the southern sections of the area are composed of the Plainfield series which are sandy in texture and are of only fair productivity. The Plainfield soils in this area, however, have a heavier subsoil than that typical of the series, and are therefore fairly good agricultural lands although somewhat droughty. Areas of potential farm land are found south of Lake Metonga and in the southwestern part, but agricultural expansion is limited by adjoining areas of rough stony land. Highways are adequate, and railway connections at Crandon and Nashville are within 5 miles of any part of the area. Farming practices are similar to those in unit 1.

Unit 3, class I.—This area, in the south-central portion of the county, extends to the north and south of the sawmill village of Laona. This is the smallest, least productive, and most heterogeneous area in class I. There are 37 farms here, concentrated mainly in the northern and southern sections, with only a few farms near Laona. The soils are predominately of the Kennan, Antigo, and Vilas series. The latter is a rolling to rough, light-textured soil of little agricultural value. There is little opportunity for agricultural expansion in this area, but most of the present farms can be continued satisfactorily.

Unit 4, class I.—This area, near the southern boundary of the county, is the second-best agricultural area, and includes 44 farms located in a fairly compact settlement. The relatively high standard of living, indicated by the general condition of land and buildings, is corroborated by the record of relief which is superior to that of any other area in the county. But this record in regard to expenditures for relief is due in part to the character of the people of this community. The soils are predominantly of the Kennan and Antigo series. The Kennan is generally rolling with occasional pot holes and the Antigo is undulating to gently rolling. Both are good soils for the region, although considerable stone is found on the Kennan soils, especially north of the village of Wabeno (fig. 20). The growing season in this area is from 1 week to 10 days longer than in the northern part of the county, and the average temperature is proportionately higher. Expansion of the area is limited by unproductive soils and excessive stone in adjoining lands. Roads and schools are adequate, and a market is available in the sawmill village of Wabeno. This area, as well as unit 3, is entirely within the national-forest boundaries, but this need not affect the permanence of agriculture on the better land if the forestry and agricultural programs are coordinated.

CLASS II. PROBLEM AGRICULTURAL AREAS

Areas included in this class vary widely as to type of soil, density of settlement, and adaptation to public programs. All of them are problem areas in some degree from the viewpoint of agricultural incomes or of public costs for schools, roads, and relief, or from the

viewpoint of both factors. In many of the areas forestry or recreation would be a more desirable utilization than the present scattered agriculture. In view of the present degree of settlement, however, the retirement of agricultural uses is not possible or desirable throughout the class. The distinction between subclasses II-A and II-B is made primarily on the basis of density of settlement, possibility of rehabilitation, and feasibility of relocating families from these areas, rather than on the basis of suitability of the land for commercial agriculture. In any case, little or no additional settlement is desirable in class II areas.

SUBCLASS II-A. PROBLEM AREAS WITH RELATIVELY DENSE SETTLEMENT

This subclass consists of five units that contain more farms than any other similar areas except those in class I. In general, the land



FIGURE 20. The rock pile is a monument to the costs of clearing land for farming. The cleared land is good, but the cost of clearing is practically prohibitive.

is not suitable for farming, but the settlement is too dense for a complete relocation program at present (fig. 21). In some areas, forestry or other industries may eventually provide enough outside employment to make profitable the operation of present holdings as part-time farms. Until then, granting of public relief is likely to be necessary.

A few farms in the various units of this class which are located on good roads and on fairly productive soils can be improved, insofar as income is concerned, through a rehabilitation program that provides necessary capital for buying additional livestock or for clearing additional cropland. It is not possible to isolate the areas subject to this adjustment without a detailed soil survey and a refined farm analysis, neither of which was feasible in connection with this study.

The following five units of subclass II-A may be found in figure 18:

Unit 1, subclass II A. This area is located in the northern tip of the county. It contains only 22 farms, well concentrated along the county highway west of Nelma, but the number of families is too small

for satisfactory community life. A small area of gently rolling Antigo loam and silt loam soils lying about a mile west of Nelma constitutes the principal agricultural land. The outlying areas, although containing a few farms, are cut up with swamps, and contain so much rough or sandy land as to be generally unsuited for farming. Several families living on the more unfavorable types of land have already been relocated by the Bureau of Agricultural Economics.

The long distance to Argonne or Crandon on the south, results in partial isolation of this community from the rest of the county. The community trade center is Iron River, Mich., 12 miles from Nelma. Potatoes appear to be the most profitable crop on the Antigo soils, although at present they are produced along with small grain on general dairy-type farms. The land is well adapted to the use of



FIGURE 21. Typical farm scene in problem agricultural areas of class II A with relatively dense settlement.

large-scale machinery. During 1935, a large part of this area was rented to an outside operator who produced a crop of potatoes and small grain, but who did not live throughout the year in the area. It is possible that the families might eventually be relocated, the land cropped by these large-scale, nonresident farmers, and public costs reduced thereby. Another possible program for this area is the development of part-time farms, with the national forest, surrounding the area, providing supplementary employment and income. A few more families might even be supported in that way, making an adequate number for community activities.

Unit 2, subclass II A. This area, lying along the eastern border of the county in the towns of Popple River and Ross, contains 29 farms. The soils consist of Kenman silt loam, Vilas sandy loam, and raw peat swamps. Most of the units are too small for any except a subsistence type of farming, but a few successful enterprises raise the average value per farm to a level higher than that of any area outside of

class I. Settlement is sparse except along the last 2 miles of the State highway where it leaves the county.

The desirability of relocating the present settlers must be weighed against the following facts: There are several good farms in the area, a State highway passing through the area connects it with the Long Lake settlement to the east in Florence County, schools are adequate, and the village of Newald in the southern end helps to provide the basis for a satisfactory community. Moreover, this might be a suitable area for part-time farming when the Federal forest reaches the stage where it can provide sufficient additional employment. This unit could provide workers for a large surrounding area without excessive transportation costs and without high governmental expenditures for roads and schools.

Unit 3, subclass II-A—This is a small tract of 6 sections containing only 10 farms. Settlement is clustered around the village of Hiles to the north of Pine Lake. The soils are largely unsuited to farming with much rough stony land and many swamps. The recreational industry at Pine Lake furnishes a small amount of supplementary income for a few farmers through the sale of milk and vegetables to resorters.

The future development of this area is problematical because of the uncertainty of mill employment in the village of Hiles. If a plan could be effected for continuing mill operations, enough part-time employment for farmers might be obtained to solve the rural problem here; otherwise, most of the families should probably be helped to locate elsewhere.

Unit 4, subclass II-A.—This is a large area lying in the southwestern part of the county. The 110 farms included in the unit have the lowest average value of land and buildings per farm of any area in the county. The average size of farms is only 67 acres, and the cultivated acreage per farm is correspondingly small. The soils vary from Plainfield sand to a heavy Kennan silt loam, with the latter predominating. Topography is gently rolling on the former type and rolling to steeply rolling on the latter. Rock is widely distributed on the Kennan soils and, along with rough topography, constitutes a serious hindrance to commercial agriculture. Difficulty of obtaining satisfactory water supplies is a problem. A large number of the farms is of a subsistence or part-time type and, as the off-farm employment is now limited, the relief load is burdensome.

Settlement is probably too dense for a complete abandonment of the area. There is the further fact, which applies to a lesser extent to other areas, that many of the families have become so accustomed to the subsistence type of farming, supplemented by hunting and fishing, that they are not likely to be satisfied or successful on commercial farms elsewhere. Nevertheless, some families in the poorest and most isolated locations might well be moved, a policy which the Bureau of Agricultural Economics has already carried out in a few cases.

Unit 5, subclass II A.—This area, in the eastern part of the county, lies entirely within the town of Armstrong Creek, and consists of a relatively dense settlement of 115 farms. Transportation and school facilities are adequate but markets are poor, for Crandon is the nearest market center of any size. As the farms are small and, under present farming practices, are largely failing to provide adequate family incomes, relief costs are high. The soils and topography vary greatly

within the area, soils ranging from heavy Kenman silt loam to Vilas stony sand. Topography varies from gently rolling to steeply rolling, swamps are numerous, and stone is found in rather large quantities. There is relatively little opportunity for increasing the crop acreages per farm owing to the unfavorable character of the unused land.

Despite low agricultural incomes, the density of settlement would probably make any relocation program impracticable. Strong racial ties which afford a stabilizing influence make it appear probable that the area will continue as an agricultural community. Better farming practices, together with agricultural rehabilitation, can increase farm incomes to some extent. The possibility of some type of outside income, like employment in the national forest, should also be considered.

SUBCLASS II-R. PROBLEM AREAS WITH RELATIVELY SPARSE SETTLEMENT

Six units are included in this subclass, each consisting of a single contiguous area, except unit 6, which includes several small areas that are similar in character and are located in the same general locality. The areas included in this subclass are all generally unsuitable for agriculture, and as settlement is sparse, the costs for roads and schools are high. There are a few small tracts of productive land but they are usually too small to support a community of sufficient size for the maintenance of public services at reasonable cost.

The Bureau has already bought the holdings of a number of the settlers. The relocation of settlers from all subclass II-B areas should proceed as fast as funds are available, recognizing, however, that the most urgent cases may be found in class III areas, and that a few families living on good roads near schools who are receiving adequate incomes from their present farms may not need relocation.

It is not necessary to make a detailed statement regarding separate units of subclass II-B areas, for it is believed that relocation of families and the use of the land for forestry or recreational purposes is the best program for the entire subclass. All of the units except unit 5 are entirely within the Nicollet National forest, and farm land bought in connection with a settler-relocation program can thus easily be put to constructive forestry uses. Unit 1 has an excellent school building and a county highway passes through the area, but most of the soils are stony, poorly drained, or otherwise unsuited to agriculture, and market facilities are generally poor. The Bureau has made a number of purchases in unit 5, and expects to buy out the remainder of the families.

CLASS III. AREAS NOT SUITABLE FOR AGRICULTURE AND HAVING VERY SPARSE SETTLEMENT

The agricultural settlement in class III areas is so sparse, and the areas potentially suitable for farming under present conditions are so small and scattered, that the area as a whole is classified as "nonagricultural." Approximately half of the land is already owned by the Forest Service, and most of the remainder lies within the boundaries of the national forest. The extreme isolation of the little settlement existent in the area results in extremely high per capita costs for roads and schools. Most of the families also suffer from lack of markets and social contacts as well as from the uneconomic cultivation of poor land (fig. 22).

It is in these areas, therefore, that a settler-relocation program is most urgently needed. Some families, not suffering economically because of their land and location or not creating excessive public costs, might well stay where they are. The land bought from the families to be relocated should be turned over to the Forest Service or otherwise administered for the development of forestry or recreation.

Summarizing, if all nonagricultural land in classes II and III are placed in forestry or other appropriate uses, and if agricultural use and year-round settlement is concentrated largely in class I, and to a lesser extent in subclass II-A, the largest amount of employment and income will ultimately be provided for the people of Forest County, and public costs for schools, roads, and relief will be kept at a minimum.

RURAL ZONING

For 10 years, Wisconsin counties have been authorized by statute to enact zoning ordinances to "regulate, restrict, and determine the

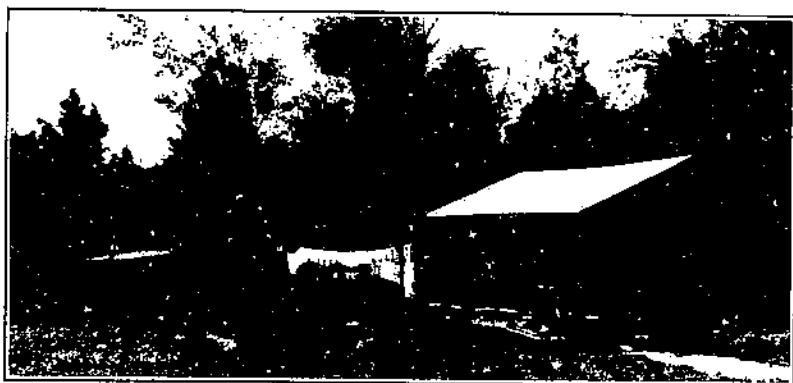


FIGURE 22. The occupant of this place was recently a sawmill employe. The mill is now closed, and he sees no alternative but to try to develop this place whose fields were once cultivated and then abandoned as unprofitable. The family should be given a better opportunity elsewhere.

areas within which agriculture, forestry, and recreation may be conducted." The law was passed in 1929. The ordinances have prevented scattered settlement in cut-over areas where such settlement would create excessive costs for roads, schools, relief, and other public services, and would hinder the development of forestry and recreation in areas unsuited to agriculture. Zoning affords a democratic means by which local people may regulate the use of land in the interests of the locality, the State, and the Nation. It encourages a sound and comprehensive land-utilization program for achieving conservation and development of resources, including guidance to future settlers who may not be familiar with the use-capabilities of undeveloped land areas.

To date, 24 counties in northern and central Wisconsin have passed rural county zoning ordinances restricting 4,811,520 acres of land, much of it subject to serious tax delinquency, scattered settlement, and exploitation of natural resources, and most of it cut-over and nonagricultural, against further agricultural settlement and year-long residence of any kind (table 32).

TABLE 32. Area of restricted and unrestricted districts, of operating farms, nonconforming-user farms, and land open for settlement in the 24 zoned counties of northern Wisconsin, March 1938

County	Land area		Restricted area ¹				Average in noncon- forming uses ²	Unrestricted area			
	Total ³	In farms, 1935 ⁴	Total	Percentage of total land area	Forestry district	Recreation district		Total	Land in farms	Land open to settlement	
										Total	Percentage of total land area
	Acrea	Acrea	Acrea	Percent	Acrea	Acrea	Acrea	Acrea	Acrea	Percent	
Ashland	673,306	141,634	314,120	46.7	314,120		8,900	459,186	132,754	226,432	33.63
Bayfield	957,727	225,662	537,858	56.2	504,848	33,040	20,532	419,839	205,150	214,680	22.42
Burnett	535,539	242,919	145,600	25.3	128,640	6,960	5,390	399,939	237,559	162,380	30.32
Clark	778,592	549,144	126,800	16.3	126,800		8,320	651,722	540,824	110,908	14.25
Chippewa	660,723	590,958	22,680	3.4	22,120		1,795	638,043	499,163	138,880	21.62
Douglas	849,440	205,029	230,400	27.1	230,400		7,457	619,040	197,572	421,468	49.62
Eau Claire	411,296	407,345	55,880	13.6	55,880		2,980	355,416	304,355	51,061	12.41
Florence	312,864	58,342	219,360	70.1	203,320	16,040	7,494	61,594	50,838	12,600	43.64
Forest	655,712	91,278	340,560	51.9	340,560		7,505	315,152	83,773	231,379	35.29
Iron	504,512	52,336	348,720	69.1	348,720		3,075	155,702	49,261	106,531	21.12
Jackson	638,531	381,286	21,120	3.3	21,120		1,720	617,111	379,566	237,845	37.25
Langlade	554,816	217,516	249,400	45.0	246,520	2,880	12,910	305,416	204,597	100,819	18.17
Lincoln	572,589	216,021	222,900	39.9	213,160	9,740	3,329	349,689	212,095	136,994	23.93
Marquette	906,531	334,110	50,000	5.5	50,000		9,546	856,474	324,564	531,910	58.68
Monroe	582,018	485,485	56,257	9.7	56,257		23,594	526,661	461,891	64,770	11.11
Oconto	713,485	353,659	203,610	28.5	203,610		6,049	509,845	347,610	162,235	22.74
Oneida	740,150	120,515	351,737	48.6	351,737		11,695	375,413	108,820	266,593	36.51
Pierce	816,230	224,764	245,320	30.1	232,760	12,560	6,906	579,010	217,858	353,052	43.25
Rusk	591,514	261,528	62,120	10.5	57,200	1,920	4,320	529,394	257,208	272,186	46.02
Sawyer	837,427	136,149	237,480	28.4	237,480		6,435	599,947	129,714	470,233	56.15
Taylor	631,688	311,954	122,160	19.4	122,160		6,107	506,028	305,847	203,181	32.19
Vilas	559,776	52,279	496,038	83.3	298,503	167,535	3,568	381,338	48,271	44,627	7.97
Washburn	531,213	215,316	149,400	28.1	149,400		4,407	381,813	210,909	170,904	32.17
Wood	521,664	374,791	38,480	7.4	23,120	15,360	1,320	483,184	373,474	109,710	21.03
Total	15,527,746	6,660,076	4,811,520	31.0	4,541,525	269,995	176,363	10,716,226	5,884,713	4,831,513	31.12

¹ As calculated by the Wisconsin Department of Agriculture and Markets.
² U. S. Census of Agriculture, 1935.

³ Calculated from official zoning ordinance maps.
⁴ From list of nonconforming land uses.

Fourteen of the twenty-four counties provide for only two use districts—forestry (sometimes also called forestry-recreation), and unrestricted. In the restricted district, agriculture and "family dwellings" (that is, any building occupied by a person or family establishing or tending to establish a legal residence) are prohibited, whereas forestry, recreation of a seasonal character, and several other enumerated uses are permitted. Ten other counties provide for "recreation districts" as a third classification. This district differs from the usual forestry district in that family dwellings are permitted but agriculture is prohibited. As a rule, recreation districts are small areas confined to riparian property on lakes and streams. Of the total 4,811,520 acres in restricted districts only, 269,095 acres are included in recreation districts.

A description of the enactment of the ordinance and an appraisal of the administration and of the benefits of zoning the land of this county is here in order. Forest County has restricted 340,560 acres, or 51.9 percent, of its total land area by placing it in forestry districts (table 32). There are no recreation districts as such. Assuming the acreage in nonconforming uses to represent land in farms in restricted districts, and subtracting the rest of the land in farms as reported by the 1935 United States Census from the unrestricted area, leaves more than 35 percent of the county open to settlement, except where such land has been sold or optioned to public agencies that intend to put it to other uses. The zoning districts, as given in the ordinance passed in 1934, are outlined in figure 23 together with the areas affected by amendments at a later date.

In judging the effectiveness of administration, it must be kept in mind that zoning is a new instrument entrusted to economically poor counties, many of which find it difficult to maintain the ordinary functions of local government. There is no provision for enforcement machinery other than the usual officials who are expected to perform these additional duties within the regular budget. For instance, to avoid additional costs, the task of reporting discontinued nonconforming users was made the responsibility of the town assessors by the 1935 legislature. It is not improbable that when the study here reported was begun in 1936 many of the assessors throughout the north had not become aware of their new responsibility. In fact, the study reveals that this was true in some of the towns of Forest County. Furthermore, the findings here must be tempered by a knowledge of the fact that the ordinance in this county did not become legally binding until its publication on March 7, 1935, and the survey was made only a little more than a year later. For this reason and because this county is economically one of the poorest in northern Wisconsin, the conditions described are not typical of other zoned counties.

A study of a county of this type may be more fruitful than a study of a rich county that is amply manned and efficient in the enforcement of its ordinances, including the zoning ordinance. Students of rural zoning and planning may well keep in mind that this land-use control mechanism is being tried in underprivileged counties with understaffed and poorly paid offices. Neither should this fact be taken as an argument for shifting to the State the power to zone. Rather it is a reason for consolidation of functions and units, for changing the forms and devices of county government in order to make this

unit more efficient and economically capable of supporting local government. On the other hand, it should not be inferred that under

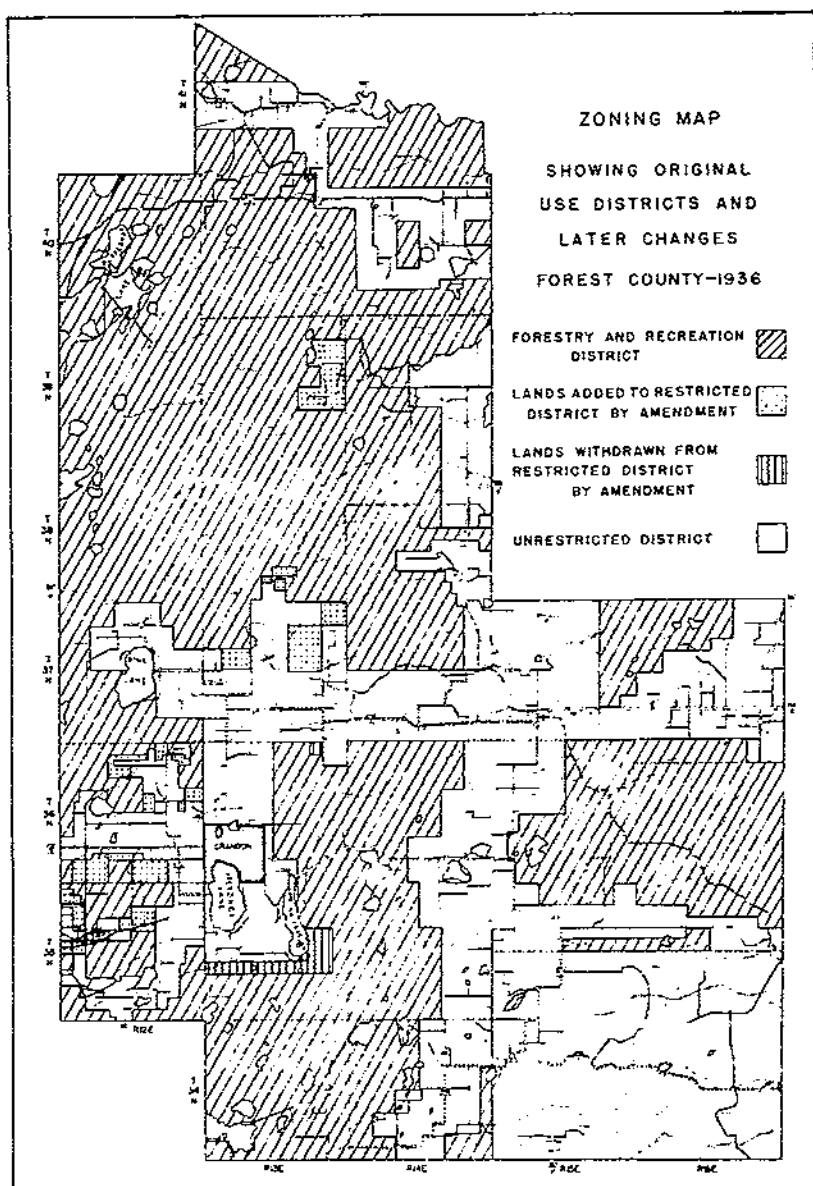


FIGURE 23. By restricting the use of certain areas of land against agriculture and year-round settlement, Forest County is making definite progress toward a solution of its land problems.

other conditions, and in other States with a different State-county-town set-up of government, the power to zone should not be in the hands of the State or even the town.

ENACTMENT AND ADMINISTRATION OF RURAL ZONING IN FOREST COUNTY

The rural zoning ordinance in Forest County was based to a considerable extent upon the information contained in a Wisconsin College of Agriculture circular.¹⁶ This circular was the result of a special study made jointly by the Wisconsin College of Agriculture, the State Department of Agriculture and Markets, the Geological and Natural History Survey, the State Conservation Commission, and the State Department of Public Instruction. It furnishes information on the extent of all industries in the county, and uses maps showing land ownership, soils, operating and abandoned farms, farm communities and primary markets, recreational development, schools, and tax delinquency, and the necessary supporting statistical data.

The Forest County Board of Supervisors appointed a zoning committee to prepare and sponsor the zoning ordinance with the help of the State Conservation Department and the College of Agriculture. The members of this committee, working with State representatives, drew up the tentative ordinance and map, conducted educational meetings in each town, and sponsored a county-wide hearing. The ordinance was adopted by the county board on November 14, 1934, and became operative in all except the two towns that had failed to ratify it.¹⁷

As zoning ordinances are not retroactive, uses that have already been established in a restricted district before the passing of the ordinance can be continued, even if they are not in conformity with the permitted uses. But such uses, designated as nonconforming uses, may not be reestablished, once they have been discontinued.

A list of the nonconforming uses in the restricted district was not prepared in this county immediately following publication of the ordinance. An amendment to the Wisconsin County Zoning Enabling Act in 1935 made such action mandatory on the part of counties enacting zoning ordinances subsequent to that date. Previous to this amendment, Vilas County, in 1933, and some other counties that zoned before the date of amendment, had already published such lists. The failure to perform this function in Forest County may perhaps be partly attributed to the fact that there was no county agent to supervise this task, whereas most other counties had such assistance. A list of nonconforming uses was prepared in the office of the county rural rehabilitation supervisor late in 1936, but at this time (February 1939) the list is still unpublished. Until such a list is prepared, published, and corrected, any county attempting to enforce the zoning ordinance has the burden of proving that any individual settler began an illegal use subsequent to the enactment of the ordinance. The list, when published, constitutes *prima facie* evidence that any nonconforming use not listed is illegal, and is subject to court action.

According to the Zoning Enabling Act, it is now the duty of the town assessors to report any discontinuance of nonconforming uses between assessment periods. A prerequisite for such action is the furnishing to the assessor by the county clerk of an official list of established nonconforming uses in his town. As such a list was not prepared in Forest County, the town assessors did not possess the

¹⁶ WISCONSIN UNIVERSITY, COLLEGE OF AGRICULTURE. MAKING THE MOST OF FOREST COUNTY LAND. Wis. Col. Agr., Ext. Serv. Spec. Cir. 23 pp. (illus., 1931).

¹⁷ These were Cassadun and Wabeno. In Wisconsin, county zoning ordinances may be adopted only for town or towns whose town board or boards shall have given their approval thereto.

necessary data for carrying out this function at the time this study was made. The town chairmen, however, often mentioned cases in which they refused to build a new road or refused to extend a bus line to include some new settler when extra costs would be involved. No data are available to prove conclusively whether or not such actions, together with the general provisions of the ordinance, have been sufficient to prevent entirely any settlement in violation of the ordinance.

DETERMINATION OF BOUNDARIES OF RESTRICTED DISTRICTS

One of the objectives of this survey was to gather physical and economic data beyond that found in the Wisconsin circular entitled, "Making the Most of Forest County Land" in order to offer any needed suggestions for changes in the boundaries of the districts. The changing of the classification from restricted to unrestricted in certain areas must not be considered as indicating any error in the original zoning classification. It is impracticable, if not impossible, to get all the pertinent information relative to any area at the time of zoning. Boundary lines must be drawn as appear best at the time. Later information or changed conditions may warrant a withdrawal of restrictions in certain areas as well as the imposition of restrictions in other areas not originally restricted. Land areas suitable for agricultural purposes often shade by infinitesimal degrees into other land areas where agriculture should be discouraged. In this case a relatively small change in economic conditions or trend in land settlement may justify a change in boundaries. In other cases, the distinction is more clear-cut, and the zoning boundaries can be drawn with considerable exactness and permanence.

It would seem that the boundaries of the restricted district in certain areas might well be extended to include more nearly all the territory in which agriculture and year-round residence should be discouraged or discontinued, in line with the original hope of the sponsors of zoning this county that additional areas would gradually be restricted until all the land unsuited to agriculture would be closed to future settlement. Some move in this direction was embodied in an amendment of November 1935. At that time land was added to the restricted district in the towns of Nashville, Craudon, and Argonne, while a small area was changed from the restricted to the unrestricted district in the town of Lincoln. These changes are shown in figure 23.

SUGGESTIONS FOR CHANGES IN ZONING BOUNDARIES

Interviews with individual town chairmen, who collectively comprise the county board, indicated that, in addition to the changes, already made, there were only two places where extensions of the restricted districts were being considered. The idea was even expressed in a few instances that the need for more farm land in this country would soon make advisable the withdrawal of some of the land from the restricted district. Such optimism does not appear justified in the light of recent trends in agricultural technique, population growth, and foreign trade. In any case, it would seem advisable to zone on the basis of all pertinent physical and economic data, recognizing that future changes may be desirable if conditions change materially (fig. 24).

One of the towns that proposed to extend the zoning boundaries was Caswell, which remained entirely unrestricted under the original ordinance. Subsequently, most of the land in the town has been acquired by private lumber companies and by the Forest Service. The town chairman indicated that at an early date virtually all of the town would be placed in the restricted district, but this has not yet been done. Such action would be in keeping with the land-use classification in figure 18, which has been used as a basis for certain suggested changes presented in this bulletin.

In the town of Blackwell, the Bureau, by buying the holdings of several settlers at the end of a 9-mile stretch of road in the southeastern corner of the town, has made it possible to close a school and to turn the road over to the Forest Service for a fire lane. The territory on both sides of the road for the entire distance is unrestricted, but the town chairman has indicated that this would all be restricted to remove the danger of future settlement on the few tracts remaining



FIGURE 21. In Forest County much additional land such as this might well be zoned against further settlement.

in private ownership. This action has not yet been taken, but it is recommended as a desirable immediate step. In fact, practically all of the town of Blackwell might well be restricted as public or private timberland.

The purchase program of the Forest Service, the Bureau of Agricultural Economics, and private lumber companies, makes zoning an especially feasible program in most of Forest County. The large acreages of land held in public ownership prevent any extensive agricultural development, and the prohibition of settlement on the isolated tracts through zoning is not likely to create local opposition. The entire towns of Alvin, Popple River, and Ross are within the Federal forest purchase area, and figure 18 shows that they are also entirely included in areas generally unsuitable for commercial agriculture. It is therefore suggested that, with the exception of the villages and a relatively small area in northern Alvin and perhaps another area in eastern Popple River and Ross, these entire towns be zoned against agricultural settlement.

In each of the remaining nine towns substantial areas should probably be left unrestricted in view of present settlement and adaptability to a system of profitable agriculture. In the southern parts of the towns of Hiles and Argonne, a contiguous area lying in T. 37, R. 12 and 13 is perhaps the largest single block of fair agricultural land in the county. This should, of course, be left unrestricted. The northern townships of these towns are restricted at present and should so remain, being largely already in public ownership.

A second fairly large farming area extends irregularly into the towns of Crandon, Nashville, and Lincoln. Most of the territory is rather close to the city of Crandon. Two fair-sized and several small lakes lie in these towns. Much of the territory is thickly settled, but the Bureau has carried on an active purchase program and has removed many of the settlers from the less desirable locations. Although much of the land that remains occupied is submarginal, it would probably be unwise to restrict those areas in which settlement remains fairly dense.

A town presenting considerable difficulty in zoning is Armstrong Creek, where a fairly large and compact community of people, mostly of Polish extraction, is located on relatively poor land. Despite the diligence with which farming is carried on by these settlers, the nature of the land, combined perhaps with the farming methods, has resulted in comparative poverty. Yet the compactness of the settlement, the racial ties, and the community development probably preclude any possibility of the relocation of these families, in the near future at least. In this case the relative unsuitability of the land for agriculture is outweighed by other considerations. But the restricted district might be extended somewhat, in order to exclude possible additional settlement on the edges of the area. Future governmental costs could thereby be held to a minimum, and the extension of settlement into areas likely to provide only meager living standards would be prevented.

The village of Laona forms the center of a fair-sized area of agricultural development which extends out from the village in a narrow belt. One portion extends north, almost to the northern limit of the town; the other extends west and south. (See figure 18, unit 3, class I.) The present restricted area might well be extended to include much of the poorer land in the southern and northern parts of the town.

The only other good agricultural area in the county lies almost entirely in the town of Freedom, but includes a small part of the western edge of the town of Wabeno. The agricultural development in Freedom is based upon fertile soil, considerable in extent, which has made it possible to construct better homesteads, to develop the land more intensively, and to carry on a type of farming that is perhaps as profitable as any in the county.

As the Forest Service has bought rather closely to the outer limits of this agricultural area, the recommended boundaries for the district will follow closely the outer limits of present development. The present situation which leaves unrestricted certain areas of good undeveloped land on the edge of the settlement should probably be continued. This will allow the community to be enlarged somewhat if, in the future, this land appears to be more valuable for agriculture than for forestry.

Much of the land in the town of Wabeno is characterized by extreme stoniness which makes prohibitive the cost of clearing it for cultivation. A few square miles of land lying next to the town of Freedom on the west are shown in figure 18 to be suitable for agriculture. Some good farms have been developed in other parts of the town, but they are scattered.

It is therefore recommended that the town of Wabeno be zoned, and that the restricted area include all except the present development along the west-central edge of the town contiguous to the development in the town of Freedom. A large part of the land in the town is already devoted to some type of forest use.

ZONING FOR RECREATIONAL USES

Some of the Wisconsin counties have found it advisable to establish a distinct recreational land-use district, within which year-round residence is permitted but agriculture is prohibited. The need for a recreational zone is based primarily upon the necessity to protect recreational property against encroachment by agriculture or other uses considered undesirable under the circumstances, and the need for caretakers to stay throughout the year on the more valuable types of recreational property. Particular dangers from farming are the reduction in recreational-property values due to the clearing of timber from lake shores or other recreation sites, and in some cases the silting of lakes through the cultivation of fields that drain directly into them (fig. 25). A sound policy would appear to be to protect as far as possible the timber resources around the sizable lakes in Forest County, and to encourage their development for recreational purposes. Areas that might well be considered for a recreation district are: Pine Lake, Lake Lucerne, Lake Metonga, parts of the areas about the lakes in the lower township of Nashville, and the northern township of Hiles. The latter areas are not developed to any extent as yet, and it might be found better to retain them in the forest district for some time to come. The whole question of how soon and to what extent year-round residence should be allowed in potential or developed recreational areas needs further study—not only in this but in other counties of the State.

BENEFITS OF ZONING IN FOREST COUNTY

Most of the residents of this county recognize that zoning has been beneficial even though savings in governmental costs cannot be accurately measured. As it is impossible to tell how many families may have been prevented from establishing homes in the restricted districts by the zoning law, it is impossible to measure the increase in governmental costs that such settlement would have incurred.

As nonconforming users, who were established before the passage of the zoning ordinance, are permitted to remain in the area, costs for schools, roads, and public services due to these nonconforming settlers continue. However, two factors have been at work to reduce the number of settlers in the restricted districts—the resettlement program of the Federal Government and the voluntary migration from these districts.

There are no data at hand to indicate how many homes have been abandoned in the restricted area since it was zoned, but two

significant tendencies are indicated. (1) It appears that the number of new homes established in the restricted district since 1930, relative to the total number of homes in the district, is considerably larger than in the unrestricted district, which means that movement into the area just before the passing of the zoning ordinance was relatively heavy, and the extent to which it was stopped by zoning has doubtless brought a considerable saving in potential public costs. (2) The rate of home abandonment since 1930, relative to the total number of homes in the district, was also higher in the restricted than in the unrestricted district (table 33). As nonconforming uses cannot be reestablished once they have been discontinued, this



FIGURE 25.— Unsuccessful farming retards recreation on this peaceful lake shore— an argument for the establishment of a recreation zone.

would seem to indicate that there should be a substantial decrease in the population of the restricted area through normal abandonment, if the ordinance is properly enforced. But natural abandonment by itself could not be relied upon to evacuate the restricted area.

TABLE 33. *New homes established and homes abandoned in restricted and unrestricted districts in Forest County, 1930-36*

Item	Restricted district		Unrestricted district	
	Total	Percentage of 1930	Total	Percentage of 1930
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>
Total homes in 1930	106	100	733	100
New homes established	65	61	167	23
Homes abandoned ¹	21	20	71	10
Total homes in 1936	150	142	899	112

¹ Exclusive of properties bought by Bureau of Agricultural Economics.

Forest County is in a particularly favorable position to secure benefits from zoning because of public land-purchase programs in the county. At present the Forest Service is buying land in most of the poorer parts, and the increased purchases make it increasingly necessary that isolated settlers be removed from regions where forestry is to be practiced; besides, future settlement should be prevented on the lands still remaining in private ownership. The purchase program of the Bureau of Agricultural Economics, through buying the holdings of isolated settlers, supplements that of the Forest Service. Thus zoning is made easier, for the area becomes less attractive to prospective settlers because of the absence of present or prospective neighbors and other community benefits.

Zoning benefits the county not only through the savings in the costs for public services but also through promoting the most desirable use for the natural resources. Forest County has valuable recreational resources and draws many visitors some of whom come hundreds of miles in the hope of catching fish and seeing deer, bear, and other specimens of wildlife. Much of the land is in its best use when allowed to grow into forest, and simultaneously to provide a favorable environment for the propagation of wildlife. Isolated settlers, however, often destroy recreational values by hunting and fishing in or out of season and poachers frighten and kill the game and the county and outsiders both lose. If this county keeps settlement out of the poor-land areas through zoning and maintains this land in forestry, recreational developments will be fostered and substantial income will accrue to the county. (Fig. 26.)

When appraising the accomplishments of the northern counties in prohibiting agriculture on almost 5 million acres of land, or about one-seventh of the area of Wisconsin, it should be remembered that this represents a complete reversal of the attitude of the people toward land use 15 years ago. The change from a policy of unrestricted development of agriculture, hostility to forestry, and little thought for the broader aspects of recreation, to prohibition of settlement and active encouragement of forestry, is a drastic reversal of programs. Zoning has become a directional mechanism which not only guides settlers to the better lands, located on roads and near schools and markets, but also actually makes it illegal to follow any other course. Finally it should be pointed out that zoning has not closed the north to settlement, for there still remain between 4 and 5 million acres of land in the unrestricted zones that are not in farms. In other words only about half of the land not in farms has been restricted against future settlement.

In southeastern Wisconsin a type of zoning is getting under way which involves both rural and suburban uses and in which the restrictions, even in strictly rural areas, are considerably more complicated than those imposed in northern and central Wisconsin. This is mentioned principally in order to point out that the regulations established in any county or area need not follow strictly those used in other areas, but should meet the particular problems of that area. In most areas of northern Wisconsin the chief problems are those of high governmental costs resulting from isolated settlement, low living standards, and high relief costs resulting from attempts to farm poor land, and the destruction of forestry and recreational resources frequently associated with isolated settlement.

To obtain the greatest benefit from zoning, the county should proceed immediately to publish the list of nonconforming uses and have it corrected to date. A number of changes in the zoning boundaries might well be made, as already suggested. An attempt should be made (in connection with these changes and in general) to develop a greater consciousness regarding zoning throughout the county. Representatives of the State College of Agriculture or of the State Conservation Department would doubtless be willing to help in scheduling meetings to discuss the benefits of zoning, possible changes, and methods of enforcement. In this way the county should be able to increase the benefits it is now receiving from its zoning ordinance.

Zoning itself is not a cure-all for every maladjustment in land use. As it does not of itself provide for the discontinuance of established



FIGURE 26. A sandy beach, a high dry bank, trees, and a good road indicate the potentialities for recreational development if properly protected by desirable land-use regulations.

uses, supplementary measures are needed to hasten the blocking up of areas for more economic uses, and to provide opportunity for families living on poor land to move to better land.

Among the valuable supplementary or companion measures to zoning are: Public purchase of lands; exchange of publicly-owned land in developed areas for holdings of settlers in sparsely settled districts; State forest crop laws; discretion in the provision of funds for roads and schools; and adjustments in policies regarding taxation, State grants-in-aid, tax delinquency, and reversion of lands. Some of these measures have been briefly considered, but additional consideration will be given to them later in this bulletin.

SETTLER-RELOCATION PROGRAMS

Leaders of the zoning movement in Wisconsin realize the economic and social justification for relocating isolated settlers, especially those

living in forestry districts. Very few such families have sufficient capital, without financial help, to move to more highly developed areas. The restrictions imposed by zoning render the sale of their holdings to other persons difficult. In the interest of better land use, the relocation of nonconforming users presents a challenging possibility. It is a pressing human problem calling for action.

Without relocation of settlers and other supplementary measures the positive benefits of zoning are restricted to the prevention of future settlement usually invoking increases in costs for public services, and low incomes and living standards for the families, and to aid in fostering conservation measures relating to forestry and recreational developments. Isolated settlers are bound to cause unreasonable expenses for schools, roads, and relief, to hinder adequate enforcement of the zoning ordinance, and to undermine the spirit and objectives that make for sound land-use adjustments. Relocation of isolated and stranded settlers living on submarginal agricultural land is a worthy task whether the land is restricted or unrestricted, but it is of more importance and lasting benefit where zoning has preceded resettlement.

Relocation of families is quite as urgent from the standpoint of individual family welfare as from that of reducing local costs of government. Low standards of living resulting from inadequate incomes and isolation affect society in numerous ways aside from reduced tax revenue and increased public expense. Locating families now stranded on poor land or in isolated locations on good land in well-developed communities should not only help to rehabilitate the families financially, but should give them a fuller social life, and should provide the children with a schooling and background that will enable them to make an even better adjustment to present and future conditions than may be possible for the parents.

The location of all rural families in Forest County is shown in figure 27. This map may be examined along with the zoning map (fig. 23) to ascertain the location of nonconforming users, and may also be compared with the suggested land-classification map (fig. 18) to obtain some idea of the number and location of families living in unrestricted areas that are also considered undesirable for agricultural settlement.

AGENCIES AND METHODS FOR RELOCATING FAMILIES

COUNTY EXCHANGE OR PURCHASE

One of the first methods of relocating settlers to receive attention was the exchange of county-owned land. As the counties had been obtaining tax title to much land in unrestricted as well as in restricted areas, it appeared that settlers living in restricted areas might be induced to exchange their holdings for county-owned land in unrestricted areas. There are two major difficulties involved in this plan. (1) A large part of the tax-title land acquired by the counties is not suitable for farming, and the choice of new locations is not nearly so wide as the total acreage acquired might indicate. (2) It has not been possible to secure adequate titles to tax-deed lands to encourage their settlement and development for agricultural purposes. As a result of these difficulties, the exchange of county land has thus far accomplished little toward the relocation of nonconforming users.

Several counties have used State-aid funds, received on forest-crop land, to buy the holdings of nonconforming users. Thus, the money

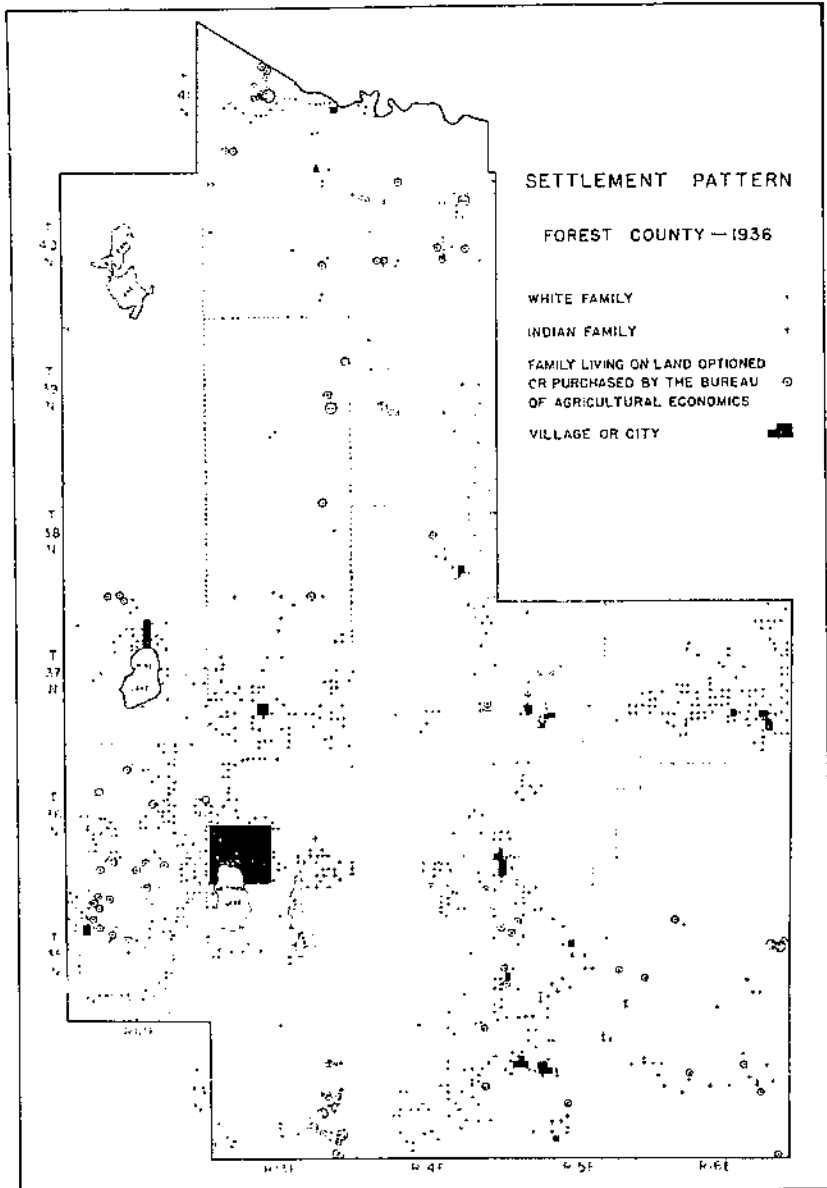


FIGURE 27. Although most of the settlement is grouped about rural trade centers, there are many isolated and stranded settlers whose relocation would result in material savings in expenditures for schools, roads, and relief, would make for elimination of human hardships, and would increase the effectiveness of the rural zoning ordinance.

that was given the county for the development of forestry on county forest land achieved its purpose by retiring agricultural land and by

permitting forestry to be substituted. But this purchase plan cannot be expected to move a large number of families. Forest County, with about 10,000 acres of land under the forest crop law, receives about \$1,000 State aid annually for the development of its county forest. Even if all of this were used to buy the holdings of nonconforming users, it would only buy out about one farm a year; and with approximately 75 families still living in restricted areas after the purchases by the Bureau of Agricultural Economics, it would not go very far toward solving the land problem. In counties having larger acreages of land entered under the forest crop law, the number of holdings that might be purchased would be correspondingly increased. In a few instances, the exchange of county-owned lands has been used to advantage for blocking out holdings in county forest areas. This is a very desirable policy that should be encouraged.

PURCHASES BY THE FOREST SERVICE

Very few families have been living on land purchased by the Forest Service. Records obtained from the town assessors in 1936 indicate that only seven families were living on the 77,550 acres in the county that were under option to the Forest Service at that time. The principal purpose of the Forest Service purchase program is to place large areas of land within the boundaries of the national forest under Federal ownership and forest management. The funds would not go far if used to buy agricultural holdings, and therefore the program does not meet the need for relocating settlers. Furthermore, some of the areas from which settlers should be moved are outside of the boundaries of the national forest.

PURCHASES OF THE BUREAU OF AGRICULTURAL ECONOMICS

By far the largest movement of families from poor land or from isolated locations has been the result of the purchases of the Bureau of Agricultural Economics. Nearly 10,000 acres, consisting mostly of subsistence farms and rural nonfarm homes, have been bought or are included under accepted options as of May 1937 (fig. 28). The location of this land is shown in figure 26. There were 131 families living on this land at the time of optioning. Somewhat over half of these were in the restricted zone; the rest were living in the unrestricted areas within the boundaries of the national forest.

In figure 29, 109 families are shown as having been relocated with the help of the Bureau of Agricultural Economics through purchase of their holdings. Before the summer of 1936, 22 families whose holdings were purchased by the Bureau had already been relocated; they are therefore not shown in this category on the map. By May 1, 1937, about three-fourths of the 131 families living on land under option to, or purchased by, the Bureau had moved from the land. A little over half of these relocated outside the county. Of the families relocating within the county, about one-third settled on farms and the rest either plan to carry on some other line of work or have retired after moving into or near villages or towns. Old couples, or others unable to operate commercial farms or work at ordinary labor, are being provided with new homes and garden plots near

neighbors and sources of relief and medical aid (fig. 30). Of these relocating outside the county, about two-thirds are now farming.

Thus approximately half of all families that have moved off the land bought by the Bureau have relocated on farms either within the county or elsewhere, and most of them have been able to finance themselves in their new locations from funds obtained by selling their land to the Bureau. It is not known, however, how many of the new places can be considered farms and how many are of the type classified in this report as "rural nonfarm homes."

Aside from the savings in school and road costs resulting from the relocation of these families a matter that will be taken up later, the rehabilitation of the families should help materially to reduce the relief load. It has been estimated that the total amount of various forms of relief granted since 1932 to the families in this county on land



FIGURE 28. — B. The purchase of such isolated holdings, the Federal Government is engaged in the solution of a pressing human problem.

since purchased by the Bureau equals or exceeds the amount paid for the land. The records of the relief agencies show that relief payments of more than \$75,000 were made to this group. Aid from such agencies as the Civilian Conservation Corps, National Youth Administration, Surplus Commodities Corporation, Civil Works Administration, Drought Relief, and other agencies was in addition to this figure. The Bureau is paying slightly less than \$100,000 for the properties formerly occupied by the people who received this relief.

It is not surprising that so much relief has been required for these families when the types of farms on which they were attempting to make a living are considered. The small size of the farm business and the small incomes obtained from these farms have been indicated in table 5 and the text preceding it. The average assessed valuation of operating farms that were under option to the Bureau in 1936 was only \$280, as compared with \$720 per farm for the county as a whole. Accumulated tax delinquency on these optioned farms in 1936 amounted to 1.1 times the amount of the 1934 tax levy on these properties.

STATE AID IN RELOCATING SETTLERS

A proposal has recently been made that some of the State aids for schools and roads, now going to local units of government, be used

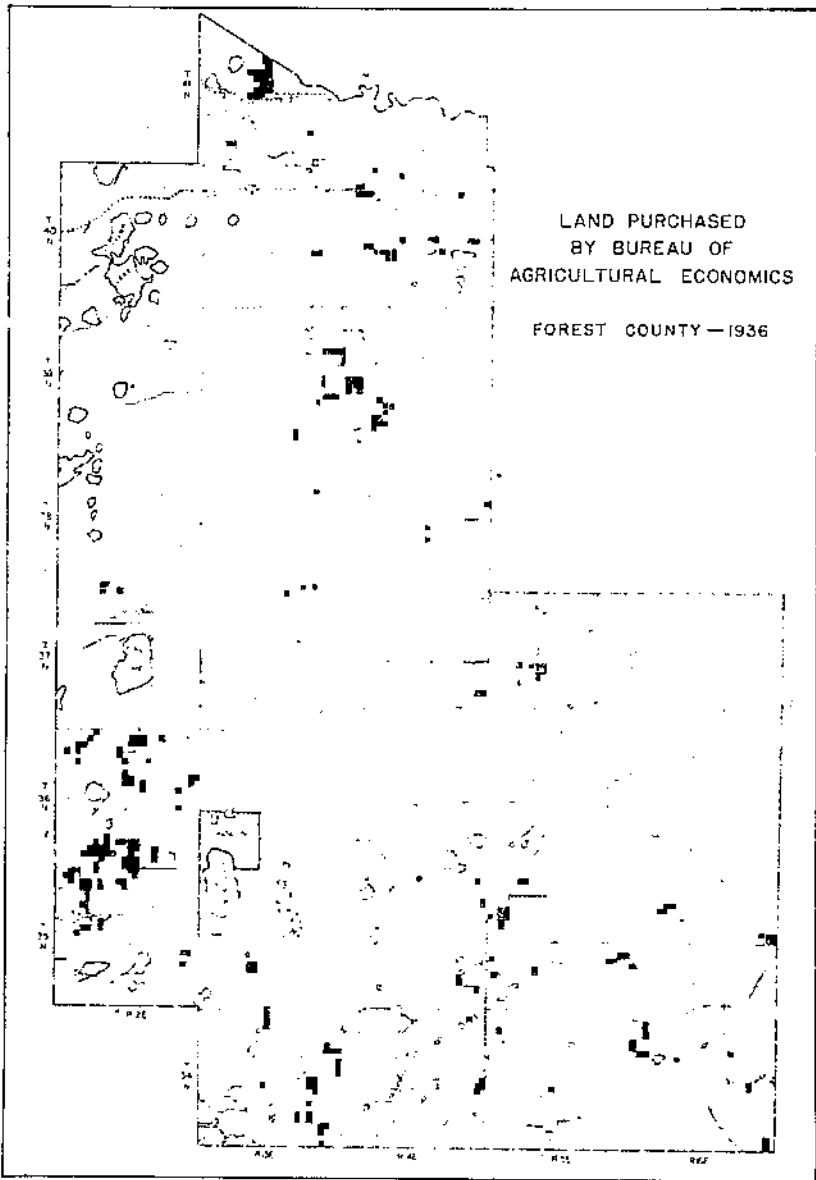


FIGURE 29. Land purchased by the Bureau of Agricultural Economics, Forest County, 1936.

to facilitate the relocation of settlers living in restricted zones. A bill embodying this proposal² was drawn up and introduced in the 1937

² Assembly Bill 885, Wisconsin Legislature, regular session, 1937.

regular session of the legislature. It passed the assembly, but was not voted on by the senate because of the rush of business during the closing days of the session. The proposal has sufficient merit for mention as a possible method of achieving the relocation of settlers from zoned areas.

In brief, the bill proposes to set up a State settler-relocation committee to investigate cases of high governmental costs of roads, schools, and other public services resulting from remote or isolated settlement within restricted use districts. Various officials of county and State departments would be called on by the committee for information pertaining to local governmental services and costs. With the approval of the Governor, the committee would purchase the lands on which nonconforming uses had been established before the enactment of county zoning ordinances, when in their opinion the removal of the owner, renter, or purchaser under a land contract would effect

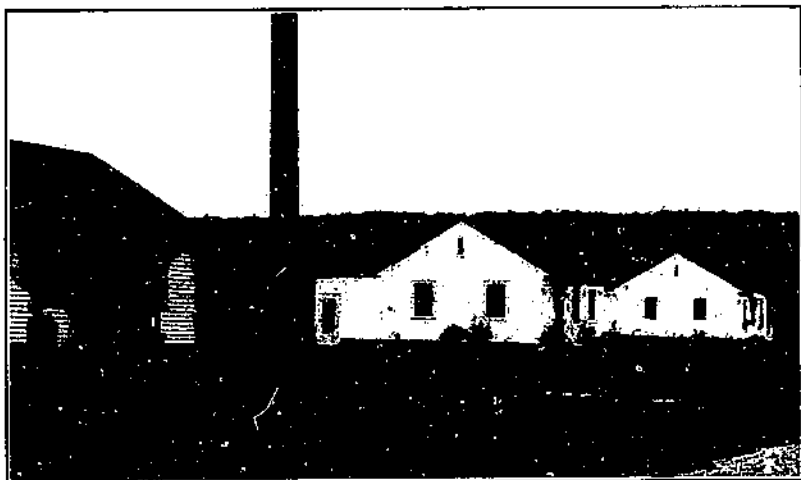


FIGURE 30. Retirement homesteads in Crandon, in Forest County.

savings in State funds or State contributions to local units of government, or both.

The bill provided for a small appropriation to start the purchase of land but the principal funds, after the program was started, were to be derived from the savings resulting from the relocation of families. It provided that whenever the committee shall have effected the removal of settlers, it shall determine how much of the State aid for schools and town roads "were made necessary by the presence of such settlers for the year preceding their removal," and that amount shall annually thereafter, until the end of 1944, be paid in to the settler-relocation fund instead of to the school districts and towns involved. These funds would then be used to buy out more families.

By this procedure the county and local communities would benefit from the relocation of settlers to the extent that the total savings resulting from the closing of schools and roads were greater than the savings in State aids for schools and roads. As State aid for county roads is in part based on the number of miles of town roads in a county, the elimination of town roads following the relocation of settlers

would decrease State aid for county roads. Thus without some change in the method of distributing aid for county roads, the plan might meet with material opposition in certain areas, and might undermine to some extent the support given to rural zoning.

Relocation under this bill would be limited to families in restricted areas. This would necessitate the extension of restricted districts to include other areas of poor land or isolated settlement, if the maximum amount of savings were to be obtained by the local governments and the State. It is also limited to cases where savings in State aids would follow relocation. Some other agency or procedure would have to be relied on for the relocation of families stranded on poor land but who are not thereby causing increased State aid.

POSSIBLE SAVINGS IN GOVERNMENTAL COSTS RESULTING FROM RELOCATION OF SETTLERS

An estimate was made of possible savings in costs of schools and roads in Forest County through the relocation of isolated settlers. No attempt was made to determine the possible savings in relief costs or in other public services. In estimating savings in school and road costs resulting from relocation of isolated settlers, no allowance was made for possible increases in school and road costs in the areas to which the families might move. It was assumed that such movement would usually be into fairly well-developed communities, and that the added taxpaying ability that the families would bring to the area would, on the whole, balance any additional costs involved. In most cases the schools could absorb a few more pupils without much added cost, and additional road costs would seldom be incurred.

After estimating the total savings, an analysis was made to ascertain as accurately as possible the extent to which the various governmental units would share in these savings. It was assumed that such reductions in school and road costs as could feasibly be accomplished after relocation of settlers, would be made, even though in certain cases the local unit having the power to alter school services or close roads might not appear to benefit directly by such changes. This situation exists in those poorer land areas where schools and most of the town roads are maintained largely by State aids. In estimating savings no change in the general type of school and road administration or of the organization of local government was assumed.

The estimated possible savings in school costs are based upon the school-district records of costs for the year 1935-36, except for the capital outlay, which was based on total average expenditures in the county for school land and buildings during the 10-year period 1927-36, and was prorated to the individual schools in each district according to the basis that seemed most appropriate for each item. An additional saving on two schools closed before the 1935-36 school year had to be estimated, since data on the cost of operating these schools are not available.

Savings in road costs were estimated on the basis of the average expenditures per mile for town roads during the 5-year period, 1932-36. Expenditures in each town were computed separately, and expenditures for both outlay and maintenance were included. It is recognized that expenditures on particular town roads that are likely to be closed are probably lower than the average on all town roads. However, as expenditures on all town roads have been at a very low level

during the last 5 years, perhaps the average cost in each town is a fair estimate of the probable savings that could be effected by closing the roads under consideration (fig. 31). Most of the data from which the total estimated savings in school and road costs were computed are shown in tables at the end of this bulletin.

In estimating the portion of the total savings that would accrue to the State, the following State aids were taken into consideration: (1) Equalization aid to schools at \$250 per rural teacher, plus an additional aid to districts with low valuation per teacher, amounting to \$350 per teacher in most Forest County schools; (2) aid to State-graded schools (having more than one teacher) at the rate paid



FIGURE 31. Settler relocation would mean the closing of many miles of such town road.

during the year 1935-36, which amounted to \$240 per State-graded school of the first class (having three or more teachers) and \$160 per school of the second class (having two teachers); (3) transportation aid to schools at the rate of 10 cents per day per pupil transported; and (4) State aid to towns for roads and streets at the rate of \$50 per mile of town road. No consideration was given to State aid to towns in the form of highway-privilege aid. As this money is not distributed on the basis of road mileage it would not be affected by the closing of town roads.

The only portion of the savings assumed as going to the county is that accounted for by the county school aid to districts at the rate of \$250 per teacher. After savings in State and county aids were deducted from the total savings in school and road costs, the remainder was credited as savings to towns and school districts.

Another significant result of the closing of town roads, not included in these calculations, is the effect which a decrease in the

number of miles of town roads would have on State aids for county roads and State allotments for construction of State highways within the county. Sixty percent of each of these funds is distributed to the counties on the basis of the total miles of roads of all kinds, exclusive of city and village roads and streets. For this reason, a reduction in the mileage of town roads reduces the allotment of these funds by whatever factor is used in distributing this 60 percent. On the basis of average annual aids and allotments during the last 5 years, this amounts to a reduction in State aid to county highways of \$21 for each mile of town road closed, and a reduction in allotments for construction on State highways within the county of \$55.40 per mile of town road closed.

The total State expenditures are not affected by these considerations, but the allotments to Forest County are reduced when town roads in the county are closed, and the allotments to other counties are thereby increased. The reductions in these expenditures within the county are therefore shown as separate calculations, following the tables on estimated savings resulting from the relocation of settlers.

The number and choice of families that might be relocated, and the estimates of possible savings were made for three different sets of conditions or plans of relocation. Under plan 1, only the families whose holdings are being purchased by the Bureau of Agricultural Economics would be moved. Under plan 2, in addition to the families moved under plan 1, about half of the remaining nonconforming users in the county would be relocated. Under plan 3, it is proposed that most families now living in isolated locations or on poor land in restricted or unrestricted areas be moved where their relocation would effect economies in school or road costs and where the adjustment would be in conformity with the land-use plan presented in the land-use classification map. (See fig. 18.)

The town roads that might be closed, if isolated settlers were relocated in accordance with plans 1, 2, or 3, are shown in figure 32. Town roads have been listed for closing only where it appears evident that they will not be needed after relocation of families. Only 26 miles of road would be closed under plan 1, 75 miles under plan 2, and 95 miles under plan 3.

Estimated savings in road and school costs were carefully made for each of the three plans. A brief analysis is here presented of plan 1 and a summary is given of plans 1, 2, and 3. This should enable the reader to note the method used in ascertaining possible savings in school and road costs and the conclusions reached, without going through the detailed steps for each plan.

PLAN 1. RELOCATION OF ONLY THOSE FAMILIES LIVING ON LAND PURCHASED BY THE BUREAU OF AGRICULTURAL ECONOMICS

Of the 131 families living on land under option to, or purchased by, the Bureau of Agricultural Economics, 22 had moved before the gathering of the information for this study; consequently, under plan 1 consideration is given to the possible savings in school and road costs from the relocation of the 109 families of which 61 were nonconforming users. Undoubtedly a number of the 22 families moved before the study also helped to make possible the savings in both school and road costs. Although many of the 109 families have moved since the sum-

mer of 1936, this does not affect an analysis of possible savings in school and road costs resulting from their relocation.

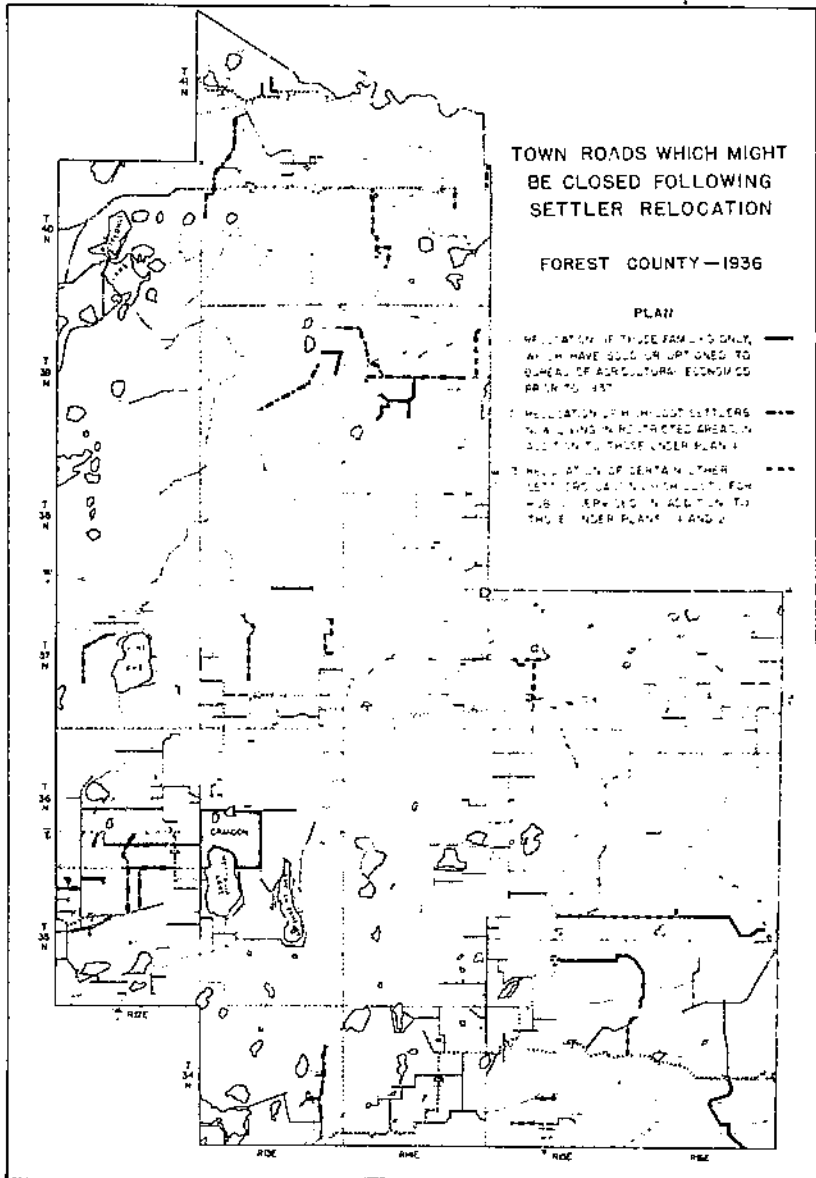


FIGURE 32. Settler relocation makes possible the closing of many miles of town roads and substantial savings in road costs.

Only 16 of the 109 families are, or were, so located as to help in effecting any appreciable savings in school costs unless additional families are moved. When the removal of families in a school district

simply decreases school enrollment by a few pupils, no significant saving in costs results, unless school transportation is involved. The school districts, and the schools wherein it appeared possible to effect savings in costs by relocation of families living on land purchased by the Bureau, are indicated in table 34.

By closing one of the schools operating in 1935-36, one bus route, and parts of two other bus routes, a total estimated annual saving of \$1,510 in school costs was possible. In addition, two schools were closed before the school year 1935-36 as a direct result of purchases by the Bureau. The figures on the operating costs for these schools are not available, but it is estimated that the saving amounted to \$1,000 per school, making a total saving of \$3,510 in school costs as a result of the relocation of 131 families by the Bureau.

TABLE 34.—Estimated annual savings in school costs resulting under plan 1 from relocation of 16 families living on land purchased by Bureau of Agricultural Economics

School district and school	Schools in district (fig. 16)	Type of saving	Families of feeding savings	Estimated annual savings in			
				State aid	County aid	District taxes	Total
				Number	Dollars 1,100	Dollars 500	Dollars 100	Dollars 2,000
Alvin No. 2	2	2 schools closed prior to 1935-36.					
Acadme, Argonne	1	8 miles north end of No. 1 bus route closed ¹	4	99		83	182
Blackwell, Riverdale	2	School closed	5	600	260	220	1,070
Nashville, Nashville	1	2 miles No. 5 bus route closed.	3	18		72	90
Woodhewn	4	All No. 5 bus route closed ²	4			168	168
Total			10	1,817	760	943	3,510

¹ Out of 109 shown in fig. 27.

² Not shown.

³ Location of all bus routes shown in fig. 16.

⁴ Remaining families too near school for district to receive State aid.

It was found that the relocation of only 30 of the 109 families would effect savings in road costs, and that 41 would effect savings in school or road costs or both. By closing 26 miles of town road, the State would benefit to the extent of \$1,300 and the towns by \$693, or a total estimated annual saving of \$1,993. In table 35 only those towns are listed in which some town roads could presumably be closed as the result of the relocation of the 109 families, and only those families are included whose relocation helped in closing these roads.

It should be recalled that the State aids for county highways and the allotment for State highway construction would be affected by a reduction in the number of miles of town road in Forest County. On the basis of State funds granted for these purposes for the 5-year period 1932-36, the closing of 26 miles of town road would affect county and State highway funds as follows:¹⁹

Reduction in aid for county highways, 26 miles at \$21 per mile	\$546
Reduction in allotment for State highways in county, 26 miles at \$55.40	1,440
Total per year	1,986

¹⁹ See p. 80 for explanation of reduction in aid to county highways and in allotment for State highways to county per mile of town road eliminated.

TABLE 35. Estimated annual savings in town taxes through closing town roads resulting under plan 1 from relocation of families living on land purchased by Bureau of Agricultural Economics

Town	Families affecting savings ¹	Miles road closed	Average cost per mile, 1932-36 ¹	Estimated annual savings in—		
				State aid	Town taxes	Total
	Number	Miles	Dollars	Dollars	Dollars	Dollars
Alvin	10	2	77	100	54	154
Arbonne	2	4	34	200	-84	136
Blackwell	5	4	53	200	12	212
Crandon	4	3	48	150	-6	144
Nashville	2	1	47	50	-3	47
Peppie River	4	4	93	200	52	252
Wabeno	3	8	131	400	645	1,045
Total	30	26	60	1,300	693	1,993

¹ Out of 109 shown in fig. 27.

² See table 21.

The loss of \$1,986 State-aid for county roads and State allotment for State roads, in addition to the loss of \$1,300 State aid to town roads, would seem to be a serious discouragement to the closing of town road after relocation of settlers. The total reduction in aids and allotments from the State is thus \$3,286 compared with a reduction in roads costs to local units of \$1,993. In addition, the people could no longer share in the benefits of this expenditure for wages and material for road work.

A summary of the estimated annual savings under plan 1, by units of government, is shown in table 36. As indicated, the towns would benefit only to the extent of about one-third of the total savings on roads, while the county would receive no benefit. On the other hand, the reduction in State funds spent on county and State roads in the county would be nearly three times the net saving to the towns on town roads. For the three schools closed, the State would benefit by \$1,817, the county by \$750, and the school districts by \$943. In other words, the saving to the county and school districts is about equal to the benefit accruing to the State. The total annual saving to the county, towns, and school districts on schools and roads is \$2,386, while the benefits to the State amount to \$3,117.

TABLE 36. Summary of estimated annual savings resulting under plan 1 from relocation of families living on land purchased by Bureau of Agricultural Economics

Unit of government	Estimated savings			Other reductions in State funds to county		
	Schools	Roads	Total	County road aid	For road construction	Total
State	\$1,817	\$1,300	\$3,117			
County	750		750			
Town and school district	943	693	1,636			
Total	3,510	1,993	5,503	\$546	\$1,440	\$1,986

A similar method of analysis was followed for plans 2 and 3. The results for all three plans will now be considered.

POSSIBLE SAVINGS FROM THE RELOCATION OF SETTLERS UNDER PLANS 1, 2, AND 3

Under plan 1, with only the 109 families relocated as a result of purchases by the Bureau of Agricultural Economics, the estimated annual savings amount to \$50 per family. This amount would be lower if the additional 22 families, who had moved before this study because of purchases by the Bureau had been included in the calculations, as the number of families would have been greater. Under plan 2, which calls for the relocation of about half of the remaining nonconforming users in the county in addition to the families moved under plan 1, the savings per family would be \$79. Under plan 3, which proposed to relocate all families in restricted or unrestricted areas living in isolated locations or on poor land whose relocation would seem practicable and would make additional savings possible, the savings per family would be \$95.

Expressed in another way, the relocation of 109 families under plan 1 means an annual possible saving of about \$50 per family, but if 43 other nonconforming users were also moved, as in plan 2, the savings on the additional families would be about \$150 per family. And finally, if in addition to these 152 families, 63 other isolated families were also relocated, as in plan 3, the savings on this last group would be about \$135 per family. (Table 37.)

TABLE 37. Comparison of estimated annual savings per family relocated under plans 1, 2, and 3, in Forest County

Item		Plan 1	Plan 2	Plan 3
Families relocated	number	109	152	215
Total savings	dollars	5,503	11,937	20,442
Savings per family relocated	do	50	79	95

Under plans 1 and 2 the savings in State aid are, respectively, \$3,117 and \$7,300, while the combined savings to the county and other local units of government are considerably smaller, for plan 1 being \$2,386 and for plan 2, \$4,637. Under plan 3, however, the possible savings of \$9,949 to the local people are almost equal to the benefits of \$10,493 to the State. It is interesting that under plan 3, providing for movement of the larger number of families, the additional savings over plan 2 are considerably greater for the local units than for the State.

Crandon is the only town that shows a net loss due to the proposed relocation of settlers and consequent adjustment in services under all three plans. This is because no savings were possible in school costs in this town, and its average expenditures on town roads were \$48 per mile, or slightly less than the State aid received. The town of Alvin, on the other hand, shows a gain of \$3,082 under plan 3. In view of the fact that in some towns the loss in State aids would be as much or more than the local savings from closing schools and roads, the question arises as to whether it might not be desirable to change the State-aid system in some way so that aids may become an incentive rather than a possible hindrance to adjustments in public services. Some economic inducement to compensate for loss of State aids appears to be desirable. (Table 38.)

TABLE 38. *Comparison of estimated annual savings in State aids, county aids, and local taxes under plans 1, 2, and 3, in Forest County*

Item		Plan 1	Plan 2	Plan 3
Schools closed	number	3	4	6
Bus routes discontinued	do	1	4	11
Town road closed	miles	27	75	95
Savings in-				
State aids	dollars	3,117	7,300	10,493
County aids	do	750	1,250	1,750
Local taxes	do	1,686	3,357	8,199
Total		5,553	11,907	20,442

A measure of the significance of the savings estimated here may be gained by comparing them with the total tax levy on certain classes of land in the county. The tax levy on all cut-over land is slightly less than the total estimated savings due to relocation of settlers under plan 3, and the levy on all agricultural land is only about one-third larger than the estimated savings under plan 3 (tables 13 and 38).

Another measure of the importance of the savings would be a comparison of estimated savings with the probable cost of buying out the families being considered for relocation. According to the experience of the Bureau of Agricultural Economics in northern Wisconsin, it costs on the average about \$800 to buy the property of an isolated settler who wishes to relocate. This would mean that the annual savings under plan 1 would be about 6 percent of the cost of purchasing the 109 farms; under plan 2, the savings would amount to 10 percent of the cost; and under plan 3, they would be nearly 12 percent. In the past, most of the families have financed themselves after selling their holdings so the expense involved in settling in new locations may be disregarded in the present analysis.

It is not to be assumed that the \$20,442 estimated savings under plan 3, or 12 percent of the cost of land purchase, is a measure of the total savings in the cost of public services. This is for schools and roads only. In addition, the savings in relief costs might almost equal those for schools and roads. It has already been noted that total relief payments to families in Forest County, who were later bought out by the Bureau, amounted, during the 5 years 1932-36, to approximately as much as the Bureau paid for all the farms bought in the county, or about \$100,000. This is \$20,000 per year, or nearly four times the estimated savings in school and road costs resulting from the relocation of these same families.

Obviously, it would not take any large percentage of saving on the relief cost to add materially to the estimated savings from relocation. As relief costs are primarily related to economic opportunities, they will be accordingly affected as these families moving to other homes, either within the county or elsewhere, have improved economic and social status.

The annual savings indicated in table 38 represent an estimate of the possibilities of reducing school and road costs by relocation of isolated settlers. If the schools and roads were not closed as suggested after relocation of the families, the savings would be less than estimated. On the other hand, it may be possible to close more schools and roads than indicated.

PUBLIC ACQUISITION AND MANAGEMENT OF LAND
IN FOREST COUNTY

With over half of the land in Forest County already in public ownership and more being transferred to public ownership every year through purchase or tax reversion, the question of policies toward such ownership and management is important. The trend toward public ownership of land that is primarily suitable for forestry is doubtless in line with a sound land-use program for the county. Ownership of land creates responsibilities, however, and in this respect the county is faced with the task of disposing of, or holding and administering in such a way as to conserve and develop the physical resources, its present holdings and those being acquired through tax reversion.

The Forest Service began buying land in the county in 1930, and by 1936 owned 249,182 acres, or about 40 percent of all the land in the county. The Indian Service holds 12,000 acres, and the Bureau of Agricultural Economics is buying nearly 10,000 acres consisting largely of subsistence or part-time farms. The State owns about 36,000 acres, the county 27,000, and the towns over 10,000 acres. The State is not buying any land in the county, and its present holdings there are being used for forest production. The county and town lands were obtained by the county taking tax deed to tax-delinquent lands.

As neither the State nor the Indian Service is making any very significant changes in their ownership or use of land, the chief agencies to be considered in relation to public ownership of land in the county are the Forest Service, the Bureau of Agricultural Economics, and the county and town governments.

THE NATIONAL-FOREST LAND-ACQUISITION PROGRAM

It is being recognized that much of the county is destined to remain in some form of forest use. About 75 percent of the county consists of cut-over land of little economic value for agricultural purposes. Furthermore, few private owners consider holding cut-over land for forestry use a profitable investment, as indicated by the amount of tax delinquency. The bulk of such land appears certain to shift into public ownership by way of tax reversion or public purchase. The national-forest purchase area includes fully three-quarters of the county, and, to date, the Forest Service has bought roughly half of the land within the boundaries of the national forest. (See fig. 7.) The total acreage purchased to March 31, 1937, by type of seller, the average price paid per acre, and the estimated amount of delinquent taxes paid on the land bought, are shown in table 39.

Of the total of 249,182 acres bought by the Forest Service, about one-sixth was bought from the county and the rest from private sellers. The higher price paid to private sellers was doubtless due to the inclusion of considerable merchantable timber on the purchases from private parties. Delinquent taxes paid by private individuals averaged 24 cents per acre on land sold to the Forest Service, as estimated from data compiled for the period 1930-35. Table 40 presents an analysis of the type, value, and tax delinquency on land that was under option to the Forest Service during the summer of 1936.

TABLE 39. Land purchased by the United States Forest Service in Forest County, 1930-37¹

Year of purchase	Purchased from				Estimated delinquent taxes paid on land bought
	Private sellers		County		
	Acreage	Cost	Acreage	Cost	
	Acres	Dollars	Acres	Dollars	
1930	3,416	5,786			
1931	37,763	73,040			11,000
1932	1,693	3,174	1,475	2,507	9,000
1933	480	714	828	1,408	16,000
1934	4,732	7,611	2,277	3,432	13,000
1935	90,133	196,306	14,857	18,723	3,500
1936	79,656	317,109	3,974	5,005	
1937 ²	7,933	22,864	365	555	
Total	225,406	656,661	23,776	31,716	53,500
Average cost per acre		2.91		1.33	

¹ Data from Forest Service, Milwaukee, Wis.² Payments on certificates issued in year designated by "Year of purchase" column. Estimates for payments on delinquencies of other years not available.³ To Mar. 31, 1937.TABLE 40. Number of acres, assessed value and tax levy 1934, and tax delinquency of land under option to United States Forest Service, by type of land use, Forest County, 1936¹

Land use	Acreage	Resident families	Assessed values, 1934	Tax levy, 1934		Total tax delinquency as of 1936 ²	
				Total	Per acre	Amount	Percentage of 1934 levy
				Dollars	Dollars	Dollars	Percent
Abandoned farms	240		700	37	0.15	23	62.2
Rural nonfarm homes	164	4	510	34	.21	194	576.6
Recreation	82		1,515	83	1.01	30	36.1
Timber	1,183		76,134	3,593	.86	236	9.4
Cut-over	51,832	3	109,062	8,340	.16	16,561	108.3
Total private	56,501	7	245,521	12,063	.21	17,136	141.7
Public ³	21,049						
Total	77,550	7	245,521	12,063		17,136	

¹ Accepted options only.² Not including 1935 tax levy.³ Mostly county land.

The most noticeable feature of this table is that 67 percent of the land being purchased by the Forest Service is private cut-over land, while 27 percent is in public ownership, largely cut-over land owned by the county. Another striking feature is the small number of families living on the land being bought, there being only seven families for the entire 77,550 acres under option. This means that the Forest Service purchase program is of little assistance in relocating isolated settlers. It is, of course, significant in connection with the general relocation program, since government purchase of nonagricultural land serves to prevent the future use of this land for agriculture or other types of occupancy.

Accumulated delinquent taxes on all land under option to the Forest Service amounts to nearly 1.42 times the 1934 tax levy, or an average of (over) 21 cents per acre, while for all land purchased and under option the average delinquency was about 30 cents per acre. In another study, the Forest Service has estimated that about 150,000

acres of the land that they bought in Forest County had an average delinquency of 3 years, and that approximately 30,000 acres had an average delinquency of 4 years' taxes before the time of purchase.²⁰ It thus appears that a large part of the purchases of the Forest Service was of tax-delinquent land that would probably have reverted eventually to county ownership by tax deed.

Approximately 24,000 acres of county tax-reverted land had already been bought directly from the county by March 1937 (table 39). A large share of the 225,406 acres bought from private sellers was chronically tax-delinquent, and another significant portion was bought from private individuals who had bought it from the county specifically for sale to the Forest Service. Thus it appears that the Forest Service purchases have not greatly reduced tax revenues in this county.

The Forest Service program benefits the county in a number of ways. The county received an average price of \$1.33 per acre for the 23,776 acres sold to the Forest Service, or a total of \$31,716. If this income were invested at 4 percent, it would yield an annual return of about 5 cents per acre. The Forest Service will also pay to the county, on the basis of the present system of payments, 25 percent of the gross receipts from the sale of timber cut from the land. In addition, another 10 percent at least will be spent for the construction and maintenance of roads and trails. The greatest benefit, however, will undoubtedly come through the increased employment that can be expected to result from a consistent and scientific forestry program carried out on the large acreage owned by the Forest Service. In addition, other indirect benefits may be obtained from the national-forest program such as the possibility of increased income from the recreational industry, fire-protection work on private lands, and reduction in local costs of government where schools and roads are eliminated and where the effects of the program bring about governmental reorganization.

LAND OWNED BY THE INDIAN SERVICE

The Indian Service is buying some land to provide more adequately for about 70 or 75 Indian families who are living in the county. Land already owned by the Indian Service upon which about four-fifths of the Indians in the county are living is shown in figure 7. Most of the remaining families are living on a small parcel of land in the southern part of township 35, range 12. Land is being bought by the Indian Service around the larger lakes in this township, and an attempt is being made through the growing of wild rice to put the Indians on a more self-sustaining basis. In the town of Wabeno, where about half of all the Indians in the county live, consolidation of the holdings of the Indian Service to make tribal organization and control more workable, is contemplated. The problem of relief among the Indians has been serious, and the provision of schools has also created difficulties. Hence, any program that makes the Indian population more self-sufficient should be viewed favorably by the people of the county.

LAND PROGRAM OF THE BUREAU OF AGRICULTURAL ECONOMICS

The primary objective of the land program of the Bureau of Agricultural Economics in this county is to benefit families living on poor land or in isolated locations, and to reduce governmental costs of

²⁰ NELSON, A. Z. See footnote 6.

local units and to the State, rather than merely to terminate the agricultural use of poor land and to substitute a forestry use. The benefits of this program to the State and local units of government were considered in the section of the bulletin that deals with relocation of isolated settlers. Nearly 10,000 acres are being purchased in this county, and most of this land is being turned over to the Forest Service. The rest will doubtless be transferred to the State or some other public agency for administration.

Compensation to the county in lieu of taxes will be made by these agencies on the basis of established plans as, for instance, the plan used by the Forest Service, or some other basis of payment that may be devised. Definite provisions will be made to see that the land itself will not be used again for agriculture, but will be devoted to forestry or some other appropriate use.

HANDLING COUNTY-OWNED LAND

Forest County owned about 27,000 acres of land in the summer of 1936, of which only slightly more than 10,000 acres were entered under the forest crop law. Probably more than 10,000 acres have been tax-deeded to the county at some time in the past. One question that arises is whether the county has followed the best policy in the past with respect to this tax-deeded land, and whether any conclusions can be drawn that might help to guide county land policies in the future.

PAST SALES OF COUNTY LAND

The land sold by the county since 1932 and the average price received from each class of buyer are shown in table 41. The Forest Service, the largest buyer during the period 1932-37, has purchased 23,776 acres at an average price of \$1.33 per acre. Sales to towns were next in importance totaling 17,800 acres, and sales to individuals were about the same, or 17,480 acres.

TABLE 41.—Sales of county land to private and public agencies, Forest County, 1932-37

Year	Sales to county land to			Total sales
	Individuals	Towns	Forest Service	
	Acres	Acres	Acres	Acres
1932	1,000		1,457	2,457
1933	5,800		828	6,628
1934	7,080	9,780	2,277	19,137
1935	1,700	5,080	11,877	18,657
1936 (January-June)	110	3,430		3,540
1936 (full year)			4,971	4,971
1937 (to Mar 31)			967	967
Total	17,480	17,800	23,776	59,056
Estimated average price per acre	Dollars 0.92	Dollars 1.97	Dollars 1.33	Dollars 1.31

† November and December for individuals; full year for Forest Service.

* Based on sale of 11,700 acres for which data as to price were at hand.

The sale of land to towns, begun in 1934, was made possible by a State law passed in 1933²¹ allowing counties to deed land to towns

²¹ Wis. Stats., ch. 59.07, par. 21

in exchange for excess delinquent taxes which the county is authorized, but has been unable, to collect for the towns.²² The law requires that the price be not less than the face value of the tax certificates against the land. The land was transferred to the towns at an average price of \$1.97 per acre. Sales of land to the towns under this law are really not true sales, but are merely bookkeeping transactions of changing the ownership of the land to the towns, and accordingly relieving the county of the obligations to the towns arising from excess delinquent taxes. For land not sold to the towns, the county is under no obligation to pay anything to the towns in satisfaction of excess delinquent taxes, except to the extent that land is sold to someone else or collections are made on the delinquent taxes.

Some land was sold or charged to each of eight towns. The largest sales included 4,660 acres to Crandon, 4,620 acres to Nashville, and somewhat smaller acreages to the towns of Alvin, Lincoln, and Argonne. The location of the land owned by the towns is shown in figure 7. Approximately 7,000 of the 17,800 acres transferred to the towns were resold at an average of 90 cents per acre, the income from which went to the towns.

The sales of land to private individuals averaged only 62 cents per acre. Presumably the county was willing to sell at a relatively low figure to private buyers in order to get the land back on the tax rolls, a policy that can hardly be justified from the data on hand. Land thus sold is not always put to desirable uses. In some cases, for instance, the pulpwood has been cut off and the land has been allowed to go tax-delinquent again, or it has been resold to the Forest Service at a substantial profit. Land has also been sold for agricultural uses in areas where this use is undesirable.

FUTURE POLICIES REGARDING COUNTY LAND

Much of the land now chronically tax-delinquent will eventually become subject to deed, and the county can therefore look forward to disposing of, or maintaining under some form of use, not only the 27,000 acres now owned, but several times this amount. The policies adopted for this land are therefore of considerable significance to the future welfare of the county. The bulk of the land now owned by the county, which is not entered under the forest crop law, lies within the national forest boundaries (fig. 7). Under the present policy of the State conservation commission, it would probably be impossible for the county to enter this land under the forest crop law. Neither should much of this land be sold for agricultural use, as very little of the county-owned land, which is within the national forest, is suitable for agriculture. (See land classification map, fig. 18.) Furthermore, it is evident the privately owned cut-over land, not entered under the forest crop law, tends rapidly to become tax-delinquent and to pass into the hands of the county through tax deed. It would seem that in the long run the best disposition of county land within the national forest area would be through sale to the Forest Service.

Although little of the county-owned land outside the national forest lies in areas considered suitable for agriculture, some land now subject to tax deed may be suitable for farming, and when this land comes into county ownership, it might well be sold for this use. Most of the

²² All delinquent taxes in each town are turned over to the county, against which are credited county taxes due. Any excesses above county taxes are known as excess delinquent taxes.

county land, however, outside as well as within the national forest, should be retained in some form of public ownership or control. The agricultural use of land sold by the county in areas not suited for such purpose may effectively be prevented by adjustment of the zoning boundaries where they are not already adequate. Otherwise, despite special care not to sell poor parcels of land for farming purposes, some of the land will be so used.

The problem of handling scattered parcels of land unsuitable for agriculture, lying interspersed among operating farms in a relatively good farming area, is serious. Where such lands come into the hands of the county, it might be well to look into the possibility of leasing or selling them to surrounding farmers for wood lots or wild pasture, at a rather low figure, but with a provision in the lease or deed specifying that the land could not be used for certain types of agricultural uses.

Although Forest County in the past has turned considerable land over to the towns for resale, there is some question as to the advisability of this transfer of land from the county to the towns. From the viewpoint of land-use planning it would seem a rather unwise procedure, for it distributes the responsibility of directing the land into its proper use among the towns. If, as sometimes happens in the poorer areas, a substantial number of the voters are squatters, there may be considerable pressure to sell the land for purposes not consistent with the future welfare of the communities. Moreover, sales of lands are more likely to be made for agricultural use in isolated locations, or in areas unsuited to farming, by the towns than the county, for the towns do not have the alternative of entry under the forest crop law. Frequently the towns bear a smaller proportion of the costs of isolated settlement than do the county and State. Furthermore, it may seem advisable in the near future to reorganize town government in Forest County and the ownership of varying amounts of land by the towns would tend to hinder such adjustments.

Much of the land owned by the county outside of the national forest might be sufficiently blocked up for entering under the forest crop law. Many of the parcels held at present are too scattered for such entry, but by withholding from sale all nonagricultural lands acquired in such areas, the county might eventually acquire sufficiently solid blocks of land to induce the State conservation commission to accept them for entry under the law. Exchange of county land in other areas for private or town land in the proposed forest would also help to accomplish this objective. Probably in no other way could the county receive as much return as by entering these lands under the forest crop law, for the State would pay 10 cents per acre for local governmental purposes, and another 10 cents for the development of timber on the land.

Three areas appear to hold possibilities for such county forests under the forest crop law. One includes the western portion of the town of Crandon and the northern township of Nashville. A considerable acreage of land is already owned by the county here, much more is subject to tax deed, and the land held by the towns in this area might be obtained through the process of exchange. A second area, which is rather small but which might become large and compact enough to enter, is in the town of Armstrong Creek. In this town considerable land on the periphery of the agricultural settlement but

outside the national forest, is either county-owned or subject to tax deed. A county forest here would also serve to prevent the extension of agricultural settlement into areas unsuited to this use. The third possible area for county forests is an extension of the present forest crop area in the town of Lincoln. Several seriously delinquent parcels are interspersed among the present county holdings now under the forest crop law. Furthermore, in the town of Nashville to the south (township 34, range 13) there is an extensive area of land recently cut-over that appears likely to pass into county hands soon, and should become a part of this forest crop area.

By taking tax deed to chronically tax-delinquent land, by starting proceedings to quiet title by court action if necessary, by blocking holdings into as large unbroken units as possible, and by entering them under the forest crop law, this county is in a position to achieve marked progress in bringing about better land-use practices. The chief objectives should be to prevent settlement in isolated locations or on poor land, to encourage recreational development, and to build up the natural resources necessary for the maintenance of better economic and social conditions in the county.

REORGANIZATION OF LOCAL GOVERNMENT

Major shifts in land use, such as those that have been occurring in Forest County and those that have been proposed in this bulletin, necessitate changes in the distribution of population, which in turn involve changes in the need for and type of public services. The effect of the land-use adjustments upon taxable values in certain areas will probably reduce current revenues to a point at which it will be impossible to maintain all existing governmental functions. Custom, tradition, and legal barriers have long stood in the way of many needed changes in local government. A clear understanding of the relationship of changing land use to problems of local government should help materially to overcome many of these obstacles, and should lead the way to reform in essential institutions.

Local governmental institutions may either contribute toward the present maladjustments in land use and occupancy, or they may be made to promote proper adjustments. For instance, obsolete units of government, financed largely by State aid, serve to perpetuate undesirable land-use practices, while efficient and well-administered units are in a position to plan wisely for future roads, schools, and other public services, and thus foster desirable changes in land uses. In view of the land problems and land programs in this county, the related problems of local government, and the desire of the people to improve present conditions, reorganization or consolidation of local government should have a prominent place in the county's approach to its problems.

The land-use adjustments already effected in the county and those that may be considered desirable and likely to occur will have a great effect on the population pattern, and will involve the closing of several schools and roads; in fact, some schools have already been closed. The educational program should be adjusted to the needs arising from land-use adjustments, and the educational system should promote and not hinder the needed social and economic changes. A more centralized control of the school system would expedite the closing of certain

schools and would help to bring about needed changes in school-bus routes.

The rapidly declining tax base and the likelihood of virtual depopulation of certain towns is indicated by the situation in the towns of Blackwell and Caswell. In 1930 Blackwell had a population of 417. The Bureau of Agricultural Economics has already bought several farms, and if the remaining isolated settlers were relocated, almost no residents would be left in the town except in the village of Blackwell. Should the village virtually disappear, as will probably result with the cutting of the remaining timber in the immediate vicinity, there would be little need for a town government. During the period from 1927 to 1936, the tax base of Blackwell decreased from \$614,000 to \$125,000, or approximately 80 percent.

The town of Caswell is in a similar situation, with a population of but 244 in 1930. The Bureau is buying several of the farms there, and most of the remainder might well be retired, as the area is generally unsuited to agriculture. The tax base in Caswell decreased 65 percent during the 10-year period 1927-36, or from \$224,000 to \$77,000. Practically no merchantable timber is left and very few farms. As with Blackwell, almost the only excuse for a town government is a small village that would have very little reason for continuance if the farm families were relocated.

With these towns and other large areas of the county becoming almost exclusively forested areas with few requirements for schools, roads, charities, and other services, it is doubtful whether the town governments in such areas serve any useful function that could not better be rendered directly by the county or State. A change in the form of government that would do away entirely with town government would eliminate considerable cost, and would probably make it possible to provide whatever services are needed in a more efficient way.

But the constitution of the State of Wisconsin prevents any such action as a result of the current interpretation that all county and town governments must be as uniform as practicable. If it were legally possible, such areas might be governed best as unorganized territory under the direct administration of the State. In the face of constitutional difficulties and the opposition almost certain to arise over the elimination of town governments, the reorganization or consolidation of towns may be the most feasible step to secure greatest progress in reform of town government.

TOWN REORGANIZATION OR CONSOLIDATION

During the 5 years 1932 to 1936, the average cost of general town government for all the towns in Forest County was \$21,055 per year, exclusive of such public services as roads, schools, protection of persons and property, health conservation, sanitation, and charities. In other words, the cost of the administrative functions of town government, which are the principal items that would be affected by town consolidation or reorganization, was approximately \$21,000, or an amount equivalent to 4.7 percent of the cost of all public services, exclusive of State and Federal services in the county. During this period the average annual cost of general county government in the county was \$28,104, representing 6.3 percent of all costs.

Thus the total cost of general government for towns and county was 11 percent of all local governmental costs. Although this is a relatively narrow margin on which to make savings through consolidation or reorganization, the consolidation of two or more towns, even without change in the form of the town government, should effect considerable savings in many items of expenditure, which would reduce the tax burden upon the people in the towns affected.

Costs for the 11 principal functions of general government in the towns of the county are itemized in table 42 for the year 1935. The relatively large costs for the towns of Laona and Wabeno arise from expenditures of large unincorporated villages in these towns. In many of the towns, the volume of work embodied in each function is inadequate to bring efficient administration and, furthermore, the total work load by functions, if two or more towns were consolidated, would frequently not materially increase the combined costs beyond the present cost for one of the towns. This is indicated in table 42 by the fact that the total cost of the 11 functions tends to be fairly uniform for towns of various size, excluding those having unincorporated villages of considerable size—Laona and Wabeno.

TABLE 42. *Costs of 11 principal functions of general government in the towns of Forest County, 1935*

Town	Estimated population 1935	Town board	Town clerk	Treasurer	Assessor	Board of review	Police	Street lights	Elections	Health board	Fire protection	Town hall	Total
		No.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
Alvin	841	188	310	264	107	30	50	30	17	163	58	1,277	1,277
Argonne	786	647	315	257	265	27	12	132	60	60	130	1,875	1,875
Armstrong Creek	776	310	165	191	150	16	60	228	26	95	0	1,247	1,247
Blackwell	434	192	222	217	175	72	60	187	35	77	0	1,337	1,337
Caswell	267	217	226	185	150	21	0	130	51	121	35	1,136	1,136
Crandon	330	683	204	182	232	32	0	0	32	0	26	1,391	1,391
Freedom	215	201	228	324	100	24	0	0	12	195	4	1,211	1,211
Hiller	621	465	233	207	220	30	55	148	49	80	22	1,509	1,509
Laona	1,772	509	381	360	365	8	1,044	273	148	110	638	3,777	3,777
Lincoln	360	344	278	282	229	45	0	0	38	15	714	1,945	1,945
Nashville	764	370	284	272	271	24	0	0	55	103	10	1,339	1,339
Popple River	177	174	170	183	138	30	50	0	29	26	45	815	815
Ross	375	264	271	228	165	36	120	755	36	72	16	2,023	2,023
Wabeno	2,212	876	539	595	400	60	1,103	1,639	134	360	1,234	553	7,543
Total	9,990	5,533	3,785	3,717	2,938	455	2,554	3,512	782	1,117	1,068	1,034	28,326
Average		395	270	266	210	32	182	253	58	101	141	117	2,023

¹ Estimated by Wisconsin County Boards' Association.

Many objections will undoubtedly be raised to any specific consolidation that may be proposed. Some of the objections are purely personal in character, and in the nature of inarticulate feelings, without a logical explanation, but others are not without sound justification. Frequently there are economic factors of considerable importance that hinder consolidation. For example, one town may have a large unincorporated village within its boundaries. Such items of public cost as police, street lights, and fire protection are charged against all the property owners in the town as well as against the owners of village property, for whose benefit these costs are almost exclusively incurred. If, now, another town without village costs were to be consolidated

with such a town, these cost items would be borne partly by the property owners in this town. If the larger villages were incorporated, one of the objections to consolidation would thereby be avoided and, incidentally, some of the tax load on rural land would be removed and placed on the village property which is responsible for it.

Outstanding indebtedness is another factor that may be a real obstacle to consolidation if there is a marked difference in the amount of indebtedness between towns.

There may be more objection to consolidating two neighboring towns than to a more general and sweeping consolidation of all the towns in the county according to some definite and logical plan. Then the consolidation of all the towns into a very few new towns should make for greater savings in governmental costs and for more efficient administration. With these factors in mind, two proposals are presented as possible plans for consolidation. It may well be that other combinations of towns would be better than either of these presented, but at least the plans are suggestive of what might be done toward reorganizing town government in this county.

In any reorganization plan it must be remembered that the kind and number of governmental services to be rendered in any area should be dependent upon the number and interrelationships of the people, the need for services as affected by land use, and the ability of the people to pay for governmental costs. People live in an area chiefly because of the possibilities for economic activity that the region affords, either directly or indirectly. People will migrate to a region like northern Wisconsin if economic opportunities are adequate, but when economic opportunities decline relative to other areas, the population will usually also decline. It follows that in proposing a reorganization of towns in Forest County consideration must be given to the probable future uses of the land and to centers of population. Towns should be set up according to the probabilities of permanent population and to the consequent need for their existence.

The two proposed reorganizations of towns suggested are based on a careful analysis of these and other factors. The proposed reorganizations consider not only probable population and tax base, but also the location of areas that would require more or less identical functions, and areas that are in need of only a minimum of functions. The arrangement of new towns as set up in these two plans is shown in figure 33.

Under plan No. 1, the county is divided into four towns. Three of these—Towns I, II, and III, as shown in figure 33—consist of areas with considerable agricultural development. Town IV consists almost exclusively of land devoted to forestry, although there are also a few small agricultural settlements. This plan is based on the assumption that since the governmental requirements of a forest area differ in kind and degree from the requirements of an area having a considerable agricultural and village population, it is desirable to put these two area types into separate town units.

For instance, as Town IV is a forested area, it might establish a town government that would provide all the services needed by the area, and the minimum of such other services as are required by law. As the area is large, and as the services of the type required by more populous centers would be kept at a minimum, it is probable that

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URDATA

A LAND PROGRAM FOR FOREST COUNTY, WISCONSIN, BASED ON AN ANALYSIS OF LAND

JOHNSON, V. H. HENDERSON, S. MARSHALL, J. H.

2 OF 2

such a government could be maintained at a cost commensurate with the ability of forest land to support a unit of government.

This assumes that the town government would be of the usual type, but would be adjusted to the distinct needs of the town as nearly as possible under present State laws. If the constitution of Wisconsin permitted, Town IV would be well adapted to an unorganized territorial form of government. Under such a type of government, all administration and all services rendered within the area would be under the direct control of the county or State. Thus roads, police protec-

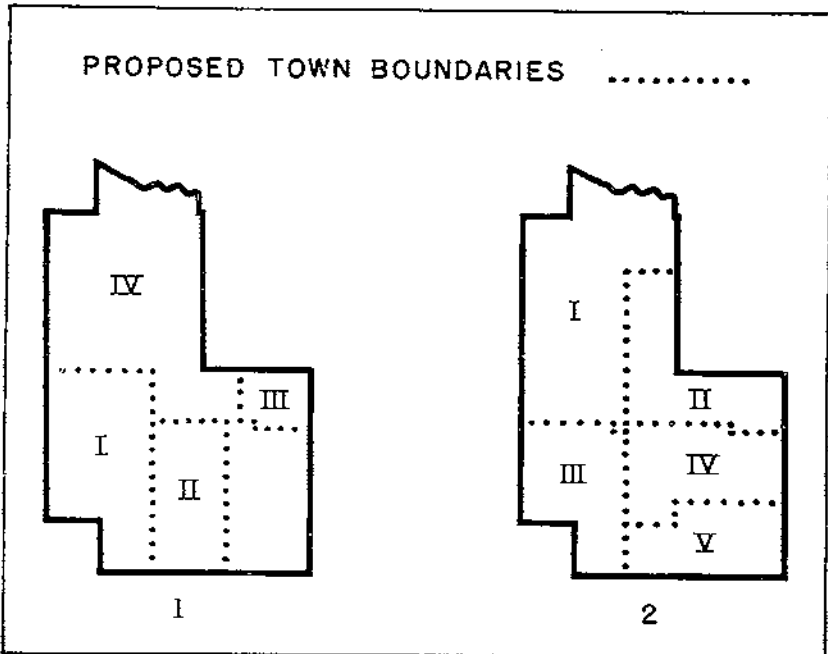


FIGURE 33.—Under plans 1 and 2, the number of towns would be reduced from the present number of 14 to 4 and 5 respectively. Plan 1 calls for adjusting the size of towns and type of governmental organization in accordance with major land uses, and plan 2 provides that each town have a substantial agricultural, industrial, or urban tax base.

tion, relief, and general administration would be the responsibility of the State or the county.

Under plan No. 1, Town I, exclusive of the city of Crandon, would have a population of 2,785 on the basis of the 1930 census, and an assessed valuation of general property of \$730,000 based upon the 1936 assessment. For each of the other proposed towns, the population and assessed valuation would be on the same basis of comparison respectively—4,488 and \$1,669,000 for Town II; 776 and \$141,000 for Town III; and 1,920 and \$1,830,000 for Town IV. Seven of the present 14 towns now have a population of less than 500 each, and 8 towns have assessed valuations of less than \$150,000 each.

Town III (Armstrong Creek) remains the same as at present because it is such a definite unit by itself and is so isolated from other populous areas. Moreover, it already has the lowest per capita cost for general

government of any town in the county (table 19). Town IV is very large but, for the most part, it is adequately supplied with State and county roads so that few town roads would need to be maintained to provide the necessary communication facilities within the town.

Plan No. 2 assumes that, instead of segregating the forest area to be served by a somewhat different type of town government, it would be better to have the present system of town government in each town and to include therein part of the forest area. In this way the distance, from any one town, to centers of populations would not be great, and each town would have a substantial agricultural, industrial, or trade-center tax base.

All the special services needed for populous areas would be provided, but such services would not be extended into the forested areas. This plan would fit somewhat more easily into the standard mold of Wisconsin local government. But such a plan would not make possible a lower tax rate on forested land than on agricultural or urban land, than would possibly result under plan 1. On the other hand, much of the forest land is in public ownership, and well-blocked areas or private land can at present obtain special tax concessions by being entered under the Wisconsin forest crop law.

Under plan 2, the new towns would have a population of from 1,500 to 2,500 each, and an assessed valuation of at least \$400,000, computed on the same basis as for plan 1. Specifically, Town I would have a population of 2,218 and an assessed valuation of \$651,000. Town II would have a population of 1,595 and a valuation of \$420,000. Similar figures for Town III, exclusive of Crandon, would be 1,463 and \$444,000. For Town IV, they would be 2,205 and \$1,075,000, and for Town V they would be 2,457 and \$1,281,000. Under either of these plans, or under some other plan that might meet the needs of the county better than these, substantial savings in the cost of town government should be possible.

COUNTY CONSOLIDATION

County consolidation has been suggested as one way of reducing the tax burden in submarginal land areas and of improving administrative efficiency so as to facilitate desirable adjustments in land use. Little if any reduction in county costs could be obtained merely by a reorganization of county government in Forest County. Present costs have already been drastically cut, and it appears that the only feasible way to reduce county governmental costs would be to consolidate the county with some neighboring county or counties.

A detailed study was made of the cost and work load of each county office in Forest County and in Florence County, which lies immediately to the east and north of Forest. The purpose for which all money was spent was learned, the work in each office was analyzed so far as possible by type and quantity of work, and every effort was made to take into consideration the variable factors arising from the combination of offices. By itemizing the work load of each office, learning its costs and determining a standard work load for each office before and after county consolidation, a fair basis was obtained for determining the size of office force needed to perform the work of the two counties combined.

From the data thus obtained, it was estimated that the combined annual cost of county government for the two counties, if they were

consolidated, might be reduced by approximately \$13,500. This represents about 8 percent of their combined 1935 county tax levies, or 4.4 percent of all property taxes levied for local government in the counties. Both the tax base and cost of county government are about twice as great in Forest County as in Florence County. If the same proportionate relation exists between total costs and the amount raised by property taxes, the reduction in the tax burden would be about the same in each county, or slightly more than 4 percent. These estimates assume no change in the nature of present services. As a matter of fact, there would probably be some change, presumably in the direction of increased efficiency because of a more balanced work load.

In this analysis 14 county offices or services were considered but approximately \$12,000 of the estimated savings were accounted for by 8 of the offices, each of which showed an estimated saving of between \$1,000 and \$2,000. These offices were those of the county board, clerk, treasurer, register of deeds, superintendent of schools, and the circuit court, courthouse, and highway administration.

Although the savings are based on a careful study of the general situation in the two counties as well as on an analysis of the individual cost figures, they are indicative of possible savings rather than an accurate measure of them. In fact, major emphasis is not placed on county consolidation; but its possibilities should not be overlooked in making any program to adjust local government to the needs of a changing land use. Consideration should also be given to the inconvenience and cost caused some residents by having to go farther from their homes to the county seat of the consolidated county and other possible social costs that cannot be appraised accurately. Advantages of consolidation should be weighed against its disadvantages.

In many respects Forest and Florence Counties make a logical combination, although the present location of the county seats and present population distribution are not particularly favorable to consolidation. Unquestionably any benefits from enlargement of Forest County could be better realized by the formation of a new county based on natural conditions and the trade areas of the region. This would mean that present county boundaries would be ignored. For instance, the upper part of Marinette County could logically be joined to Forest and Florence Counties, or Vilas and Oneida might also be included in the same consolidated county.

SUMMARY

Two major sets of problems have arisen in Forest County as a consequence of the decline of the forest industry and the maladjustments in agricultural land use: (1) Inadequate family incomes that often cannot provide even the bare necessities of life; (2) acute fiscal distress of local government despite an excessive tax burden and relatively larger State-wide grants than are found in almost any other county in the State.

Low incomes from farming and from other pursuits have been reflected in low standards of living, inability to pay taxes, reversion of thousands of acres of land to the county, and unusually high costs of relief. During the 3-month period July to September 1936, in the season when the relief load is relatively light, 47 percent of all

rural families in the county received some kind of public assistance. Per capita relief costs in the county since 1932 have been approximately twice as great as in Wisconsin as a whole, and the county has contributed only 0.6 percent of the cost of direct and work relief--aside from local charities--while the average for local contributions throughout the State has been 17.3 percent.

The difficulty of obtaining enough tax revenue to maintain local public services is primarily the result of a shrinking tax base brought by the depletion of forest resources and the high cost of providing needed public services for scattered and isolated settlers, often on poor soil, whose taxpaying capacity is very limited. During the 10-year period 1927-36, the total tax base of the county decreased \$5,221,456, or 53 percent, partly because of the fall in the general price level after 1930 but primarily as a result of timber cutting and the reversion of cut-over land to the county or the sale to the Federal Government for forestry purposes. The gradual realization that little of the cut-over land can be sold for agricultural or other intensive uses together with the present low value of anticipated future timber crops, has induced many of the owners of cut-over land to allow their tracts to revert to the county in lieu of payment of taxes.

The average tax rate for all purposes on assessed value has not increased during the 10-year period, but has been high throughout, averaging from 50 to 55 mills. On the basis of the true value of the property as fixed by the State tax commission, however, the tax rate has increased 22 percent. During the same 10 years, the tax base declined so greatly that, despite the high and rising tax burden, the total general-property tax levy for all purposes decreased 57 percent. Total expenditures for all county and local governmental functions were reduced only 23 percent, and an increase in State aids was necessary to make up the difference between the sharply reduced local tax revenue and the slightly reduced local governmental costs. State and county aids to towns in the county were equal to 10.7 percent of all local taxes in 1927, and by 1935 they had increased to 100.1 percent. For the State as a whole, such aids to local units were equal to 5.0 percent of local taxes in 1927, and 15.5 percent in 1935.

Large areas of isolated settlement are causing high costs per unit for public services rendered in many towns of the county. This is especially true for road and school costs, which account for two-thirds of the total governmental costs for the county, towns, and school districts. The high per-unit costs of local government caused by the marked decrease in the value of taxable property and local tax revenue, the decline in population in certain areas, and the present trends in land use all indicate the desirability of some type of reorganization or consolidation of local governmental units.

SUGGESTIONS AND RECOMMENDATIONS

Any program for adjustments in land use should seek to bring about more satisfactory living standards for the local people, and should protect their future interests, as well as those of the State and Nation, through the conservation of the natural resources. For Forest County, the best use of the land appears to be forestry, with agriculture and recreation as supplementary uses. The cut-over land that has reverted or is now reverting to the county should be managed in

such a way as to insure the maximum continuous employment and income consistent with costs of development and management; and the majority of farm families should be located on productive soil, in well-settled communities, with enough cleared land per farm to insure reasonably adequate incomes. Further development of the recreational opportunities would also provide employment for local citizens, a market for agricultural products, and an enlarged tax base.

It appears that direct or work relief will be necessary to take care of a large number of families for the immediate future, and perhaps for several years. In the provision of this relief, two important courses of action seem desirable. (1) Such forest jobs as are available might well be given primarily to the local people. This would involve some adjustment in the present Civilian Conservation Corps program in the county. (2) The relief program should be coordinated with other land-use policies to facilitate the attainment of desirable land uses.

The relocation of isolated settlers on productive soil in or near community settlements constitutes a type of relief whose financing is confined largely to the purchase cost of the isolated tracts of land occupied by these settlers and to the cost of relocating them. This type of relief may be considered self-liquidating, since in time the original cost to the public will be more than repaid through savings in costs of public services.

Another type of relief that would reduce the need of public assistance consists of furnishing financial aid to farmers for clearing more land, where the location and nature of the farms seems to warrant such action. The feasibility of this program would depend on the care with which farms were chosen to receive such aid, on the method of clearing, and on the policy as to the portion of costs to be charged against the farmers. There is no doubt that lack of cleared land per farm is one of the most serious agricultural problems of the cut-over region of which Forest County is a part, and any policy that could remove this limitation would contribute materially to the rehabilitation of the area.

In a long-time land program for the county, the most important factors meriting consideration are the placement of extensive areas in some type of managed forestry, the development of the recreation industry, the readjustment of population distribution so that costs for schools, roads, and other public services are decreased, and the accomplishment of needed changes in the local governmental organization in accordance with the changed land use and population pattern. Public institutions can and should be the basis for programs which will aid or encourage these needed adjustments.

Specific suggestions for action that have been presented in the preceding sections on policies and programs will be summarized briefly here. Action along the lines proposed would seem to be in accordance with the best interests of the individual residents of Forest County, the local governments involved, and the people of the State.

LAND-USE CLASSIFICATION

An action program designed to encourage the proper use of land, the best distribution of population, and the adjustment of governmental organization and services to the needs of the area must be based on accurate information concerning each part of that area.

Moreover, the policy with respect to each part must be consistent from year to year, since any program of land use adjustment will take a period of years to complete. The program should proceed according to a definite plan, the details of which are adjusted in accordance with changing conditions.

In the study here reported a suggested land-use classification has been developed from a reconnaissance survey of the county including a careful appraisal of the physical, social, economic, and political conditions existing in different areas. The various areas within the county are classified both according to what appears to be the best future land use, and according to the type of public program that appears most likely to bring about and stabilize this use. Figure 18 shows the location of the various areas designated in the land-use classification.

This plan is presented as a type of classification or plan that Forest County might wish to use as a guide in carrying out programs of zoning, settler relocation, disposition of county land, or local governmental reorganization. Its function is to delineate land areas possessing uniform characteristics which have a significant influence on the formulation of social policies. Such policies, designed to aid in solving land problems in the region, cover both positive and negative aspects of land-use adjustments. On the one hand, their objective is to discontinue present uses which result in unjustifiably high social costs, and to prevent such future maladjustments, and on the other hand, to facilitate the development of socially desirable uses of land by both private and public owners. Settler relocation and rural zoning illustrate the first type of program, and agricultural rehabilitation and public forest management illustrate the latter.²³

ZONING

Forest County has been zoned since November 1934, and the zoning ordinance is operative in all except two towns. Two use-districts have been established: (1) A forestry and recreation district; (2) an unrestricted district.

Forest County has never published an official list of the nonconforming uses existing at the time of passage of the ordinance. Such a list was prepared in 1936, and should be brought up to date and published as soon as possible as a guide to the assessors in reporting changes in land use within the restricted district. Furthermore, until such a list is published, the county has the burden of proving that an individual settler began an illegal use after the enactment of the ordinance. Other means for increasing the effectiveness of administration, such as public purchase of tracts occupied by isolated settlers, should be encouraged.

The boundaries of the restricted areas should be extended in a number of places. Settler relocation programs should be accompanied or preceded by zoning restrictions to prevent other families from moving into the area and nullifying the effect of the relocation program. Several areas within the national forest, from which the Bureau of Agricultural Economics has moved families, should be protected by an extension of zoning. Other areas should be restricted against additional settlement in anticipation of possible future reloca-

²³ Mushbach, W. F. See footnote 14.

tion programs. The land-use classification map might well be used as an aid in determining these extensions of the restricted district.

The people of the county are deriving benefits from rural zoning. In a number of instances settlement in isolated areas has been prevented by refusal to build roads or to furnish school facilities to families who propose to move into restricted districts, thereby preventing possible increased costs for these purposes. The county is in a particularly favorable position to secure benefits from zoning because of the public land-purchase programs in the county, which are hastening the blocking up and administration of areas for more economic uses, and which provide an opportunity for families living on poor land to move to better areas.

The advisability of creating a third, or recreation, district should be considered in those recreational areas that are now partially developed. In other counties having recreation districts, year-round residence on recreational property is permitted, and agricultural development, which is likely to lead to the clearing of land on the lake shores, is prevented.

RELOCATION OF SETTLERS

Zoning, if properly administered and enforced, will prevent future settlement in an area, but it cannot repair damage already done by unwise settlement. A relocation program is therefore the only practicable way to eliminate the high road and school costs resulting from isolated settlement already established. Furthermore, scattered and isolated settlers are "sore spots" in the enforcement of a zoning ordinance. Their relocation would do much to strengthen the administration and enforcement of rural zoning, and thus would make it more effective as a means of securing desirable adjustments in land use, and of protecting future settlers against the undesirable economic and social consequences associated with isolated settlement or with the cultivation of poor land. Relocation of isolated and stranded settlers living on submarginal land is a worthy task whether the land is restricted or unrestricted, but is of more importance and lasting benefit where zoning has preceded relocation.

The Bureau of Agricultural Economics is purchasing the holdings of 131 families who formerly lived in restricted areas, or inside the national forest boundaries. Such schools, school-bus routes, or roads as can be closed as a result should be closed as soon as possible in order to take full advantage of possible savings, which have been estimated at approximately \$5,500 annually. Savings in relief and other public costs are also likely to be substantial. But the full benefit of these purchases cannot be obtained without the relocation of additional families in the areas involved. In fact, it may happen that the cost of public services and the maladjustments of settlers to the land may even be increased by the relocation of only a portion of the isolated families in an area.

Federal, State, or county agencies should be encouraged to buy out and to relocate additional families in the restricted zones and in other areas that are unsuited to agriculture. In a number of localities, the removal of a few families, in addition to those already relocated by the Bureau, would make possible the closing of schools and roads that must now be maintained for these few remaining families.

It is estimated that if 43 nonconforming users were relocated, in addition to those relocated by the Bureau, the possible yearly savings would be raised from \$5,500 to nearly \$12,000. The average annual savings would be increased from \$50 to \$79 per family. Under another plan, if, in addition to these families, 60 or 65 families outside of restricted zones but in problem areas were also relocated, an estimated \$20,000 or more could be saved per year in road and school costs. This is an average of \$95 per family relocated. Restriction against future settlement through zoning should precede removal of families not now in the restricted zone.

The nature of State aids in Wisconsin may often serve to prevent the realization of the greatest possible savings from the relocation of settlers, for the reduction in State aids granted to a local taxing unit, due to the closing of schools or roads, may sometimes be as much as, or more than, the unit saves in expense by such closing. Under such circumstances it is natural that the local unit may not want to discontinue the services even though they are no longer needed. However, in very few cases would the closing of schools or bus routes result in a net loss to the school district. On the average, about half of the saving in school costs would be absorbed by reductions in State aids, one-third would go to the school district, and one-sixth to the county.

The closing of town roads, however, would frequently be a financial disadvantage to the towns and county. The average annual expenditure for town roads in Forest County during the last 5 years has been \$79 per mile, the expenditure by towns ranging from \$35 to \$168 per mile. The State aids to towns for town roads are paid on the basis of a given amount per mile of town road—usually \$50 per mile. Thus, any town spending less than this amount on town roads, or spending less on any particular town road to be closed, would apparently suffer a net financial loss by closing such town road. In addition, the State aids to the county for county trunk highways would be reduced by approximately \$21 for every mile of town road closed within the county, since this much has been distributed on the basis of total miles of town, county, and State road within the county. Similarly, the funds allotted by the State for construction on the State highway system within the county would be reduced by about \$54 per year for every mile of reduction in town highways.

A solution to this situation necessitates some change in the basis for distributing State aids whereby such aids would become the means of encouraging, rather than of discouraging, the discontinuance of public services no longer needed. State aids for local services are desirable if State-wide sources of revenues are substituted in part for purely local sources in order more equitably to finance public services which are desirable in the interest of the general welfare. But State aids should not encourage or facilitate uneconomic settlement or other problems that land-use adjustment programs are attempting to correct. The bill introduced in the 1937 session of the Wisconsin Legislature providing for the use of State aids to facilitate the relocation of nonconforming users in zoned areas is a step in the right direction. Care must be exercised in framing and applying such legislation in order not to affect State aids in such a way as to create opposition to the relocation program.

POLICIES REGARDING PUBLICLY OWNED LAND

The United States Forest Service is probably the agency in the best position to take over most of the cut-over land and to handle it in such a way as to provide a maximum of employment and income to the people of the county over a long period of years. It appears in the best long-time interest of the county, therefore, that the program should be encouraged.

The county already owns a considerable amount of land and more is in the process of reversion. Where such land lies within the national forest, sale to the Forest Service seems to be the best policy. Sales of county-owned land for agricultural use should be limited to exceptional parcels lying within areas already fairly well settled and considered suitable for continued agricultural use.

Most of the land now owned by the county outside the national forest, or which may be obtained by the county through tax deed, could probably be most profitably entered under the forest crop law. It may take some time to accumulate enough land, and some exchanges of land with public or private parties may be necessary, in order to obtain large enough blocks to be accepted by the State conservation commission for entry under the law. It is believed, however, that in no other way can the county receive as large a return for most of the cut-over land that comes into its possession.

Transfer of land to the towns, in exchange for excess delinquent tax rolls, would appear to hinder rather than to aid in the orderly development and management of the county land. It divides the responsibility for land sales and probably tends to encourage sale of land that is not suited for agricultural purposes. It also retards or prevents the consolidation of county holdings in sufficiently large blocks to be entered under the forest crop law.

REORGANIZATION OF LOCAL GOVERNMENT

Major adjustments in land use, such as those that have been occurring in Forest County and those that have been proposed in this bulletin, modify the population pattern, and consequently raise questions as to the need for changes in public service and type of governmental organization. The emphasis in this study has been upon consolidation rather than upon reorganization of local government.

Needless to say, many economies might be achieved, with or without consolidation, by changes in the method of rendering various types of public services. In some cases the county might take over the handling of certain services, and thereby achieve the benefits of consolidation without consolidating the towns themselves. For example, the construction and maintenance of town roads might be more efficiently administered by the county than by the towns, and substantial savings might thus result to the taxpayers of the county. Through the adoption of a county-unit school system, a number of benefits could be achieved by the county. In addition to some savings in school costs among the more important and significant advantages are: (1) Equalization throughout the county of the local burden of education; (2) more likely elimination of small schools; and (3) the establishment of a more efficient organization of transportation routes.

Two proposals for the consolidation of town governments are considered in this bulletin. One suggestion, or plan, calls for varying

the area of towns and the type of governmental organization in accordance with the major land uses. Thus, a town in which practically all of the land is devoted to forest uses should be larger, and should provide only those services needed by this type of use, insofar as this is possible under present Wisconsin statutes. On the other hand, it may be more advisable to provide each town with a substantial agricultural, industrial, or urban tax base, and to add the forest area to several or all of such towns as proposed in plan 2. Under either plan the major savings in costs of town government would result principally from a decrease in administrative costs.

Total expenditures for general government in the 14 towns were about \$23,000 in 1936. It would therefore appear that substantial savings might be made through some type of town consolidation.

County consolidation offers some opportunity for reduction of the tax burden, and is a possible means of improving the administrative efficiency of county government, which in turn should encourage and speed up desirable adjustments in land use. Probably little, if any, reduction in costs could be obtained by a reorganization of county government here, as costs have already been drastically cut. From a careful study of the cost and work load of each county office in Forest and Florence Counties, it was estimated that the combined annual cost of county government for the two counties, if they were consolidated, might be reduced by approximately \$13,500. If two-thirds of the saving accrued to Forest County—the tax base and total levy are about twice as great as for Florence County—this would mean a reduction of somewhat more than 4 percent in the total tax levy. The inclusion of additional counties or areas—not necessarily complete counties—to provide the most economic size and type of county, would doubtless result in greater savings in governmental costs and more efficient administration than could be realized by the consolidation suggested above.

The principal objective of governmental reorganization or consolidation in Forest County should be to adjust the public services and costs to the present needs of the area in view of changes in land use and in the population pattern. Desirable adjustments of people to the land may be encouraged by efficient administrative units of local government; likewise, land-use adjustments may make the need for changes in the organization of local government so obvious as to stimulate some action in this direction.

APPENDIX

TABLE 43. *Total tax rates by towns, per dollar of valuation, Forest county, 1927-36*

Town	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
Alvin.....	\$0.05761	\$0.06228	\$0.07246	\$0.08418	\$0.06144	\$0.06300	\$0.07510	\$0.05506	\$0.07908	\$0.07420
Argonne.....	.07710	.07800	.09613	.09120	.1186	.1139	.09271	.05443	.06207	.07368
Armstrong Creek.....	.0795	.03	.05397	.06750	.06780	.04791	.05700	.06300	.06361	.07250
Blackwell.....	.05073	.07188	.05656	.07927	.08273	.07904	.08276	.06137	.04999	.08830
Caswell.....	.044	.05300	.059	.06800	.0500	.0495	.041	.03500	.04000	.04500
Crandon:										
City.....	.04021	.03009	.03600	.03700	.038	.04200	.04300	.04900	.04830	.037
Town.....	.05283	.08418	.07072	.07405	.10058	.10796	.09090	.07864	.07866	.08032
Freedom.....	.02071	.0205	.03350	.04025	.02860	.03390	.03445	.02584	.03231	.04531
Hiles.....	.05479	.05961	.05181	.05659	.0506	.0610	.0590	.05430	.04940	.07613
Laona.....	.05819	.05930	.07030	.09374	.07730	.07030	.05430	.04920	.05549	.06169
Lincoln.....	.05378	.05393	.06075	.06713	.06824	.0671	.07508	.06471	.07054	.07682
Nashville.....	.05814	.05162	.056	.05868	.05950	.07139	.06500	.06450	.05680	.06690
Popple River.....	.05010	.04618	.05061	.06385	.04642	.04514	.04884	.03919	.07078	.03602
Ross.....	.06685	.07455	.0621	.08201	.09264	.08136	.08898	.06183	.07968	.07455
Wabeno.....	.0609	.04117	.03841	.03951	.04908	.04675	.04678	.03472	.04191	.04278
Average tax rate for the county.....	.05491	.05005	.05231	.05885	.05670	.05770	.05518	.04871	.05873	.05030

TABLE 44.—Average tax levy per acre on nonplatted rural land, by use class, Forest County, 1934¹

Use class	Acreage	Total tax levy	Average tax levy per acre	Use class	Acreage	Total tax levy	Average tax levy per acre
	<i>Acres</i>	<i>Dollars</i>	<i>Dollars</i>		<i>Acres</i>	<i>Dollars</i>	<i>Dollars</i>
Operating farms.....	55,603	21,951	0.39	Forestry.....	60,495	51,617	0.85
Abandoned farms.....	3,564	6,097	1.55	Out-over.....	110,564	18,832	.16
Rural nonfarm homes.....	5,050	1,518	.36	All uses.....	246,934	121,210	.49
Recreation.....	2,980	4,072	1.37				
Commercial or industrial ²	1,478	16,799	11.37				

¹ Exclusive of forest crop land.

² Mostly sawmill property.

TABLE 45.—Number of farms, by minor land-class areas, Forest County, 1936¹

Land class	Farms in—						Total by classes
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	
	Number	Number	Number	Number	Number	Number	
I.....	76	84	37	44			241
II-A.....	22	29	10	110	115		256
II-B.....	20	8	5	10	10	59	112
III.....							56
All areas.....							735

¹ Including farms optioned by Bureau of Agricultural Economics.

² No separate unit areas in this class.

TABLE 46.—Percentage of all land in farms by minor land-class areas, Forest County, 1936

Land class	Percentage of land in—						Average by classes
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	
	Percent	Percent	Percent	Percent	Percent	Percent	
I.....	53	43	31	30			44
II-A.....	20	19	21	22	48		27
II-B.....	15	9	12	23	20	18	17
III.....							2
All areas.....							9

¹ No separate unit areas in this class.

TABLE 47.—Average value of land and buildings per farm by minor land-class areas, Forest County, 1936¹

Land class	Value in—						Average by classes
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	
I.....	\$3,336	\$1,037	\$630	\$2,246			\$1,068
II-A.....	1,122	1,620	1,091	710	\$1,274		1,074
II-B.....	940	935	1,184	1,104	547	\$1,288	1,148
III.....							1,164
All areas.....							1,300

¹ Estimated true value, based on ratio of assessed to true value on agricultural land in the town as fixed by the State tax commission. Values are for 1934 tax year.

² No separate unit areas in this class.

TABLE 48.—Average acres per farm, Forest County, 1936

Land class	Area in—						Average by classes
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	
	Acres	Acres	Acres	Acres	Acres	Acres	Acres
I.....	104	76	70	58			86
II-A.....	79	97	79	67	70		73
II-B.....	72	60	88	116	124	79	84
III ¹							87
All areas.....							81

¹ No separate unit areas in this class.

TABLE 49.—Rural population per square mile, Forest County¹

Land class	Population of—						Average by classes
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	
	Number	Number	Number	Number	Number	Number	Number
I.....	16.5	18.0	15.3	13.3			17.0
II-A.....	13.3	8.7	16.0	13.5	23.1		14.8
II-B.....	5.5	3.2	4.3	8.9	11.0	7.7	7.2
III ¹							9
All areas.....							4.3

¹ Data from present study, 1936. Includes all families on land not in villages, cities, and/or other platted property.

² No separate unit areas in this class.

TABLE 50.—Plan 2: Estimated annual saving in school costs resulting from relocating Bureau of Agricultural Economics families and part of the nonconforming users in Forest County

School district and school	School No. on Fig. 10	Type of saving	Families moved		Savings			
			Bureau of Agricultural Economics	Non-conforming	State aid	County aid	District taxes	Total
			Number	Number	Dollars	Dollars	Dollars	Dollars
Alvin No. 1, Elvov	1	5 miles, No. 2 bus route closed. ¹	1	4	105		15	120
Do.....		Parent transportation—	2	3	87		120	216
Alvin No. 2 ²	(2)	2 schools closed prior to 1935-36.			1,100	500	400	2,000
Argonne, Argonne high	1	8 miles, No. 1 bus route closed.	4	2	152		118	270
Blackwell, Riverside	2	School closed.....	5		600	250	220	1,070
Nashville, Nashville	1	All bus route No. 4 closed.	5	11	18		172	190
Do.....		2 miles, bus route No. 5 closed.	3	1	18		72	90
Do.....		Reduce from 2- to 1-teacher school.			760	250	-103	907
Sherrman.....	2	All bus route No. 1 closed.	1	10	52		168	220
Woodlawn.....	4	All bus routes No. 8 and No. 9 closed.	22	4	58		446	504
Do.....		School closed.....			600	250	551	1,401
Total.....			43	35	3,550	1,250	2,158	6,958

¹ Location of all bus routes shown in fig. 10.

² 2 schools closed as result of purchase program prior to collection of data 1935-36. Savings estimated. State aid for transportation from closed schools estimated at \$100.

³ Not shown.

TABLE 51.—Plan 2: Estimated annual savings in road costs resulting from relocating Bureau of Agricultural Economics families and part of the nonconforming users in Forest County

Town	Families effecting savings		Road closed	Average cost per mile, 1932-35	Savings		
	Bureau of Agricultural Economics	Non-conforming			State aid	Town taxes	Total
	Number	Number	Miles	Dollars	Dollars	Dollars	Dollars
Alvin.....	12	4	9	77	450	243	693
Argonne.....	2	2	15	34	750	-240	510
Blackwell.....	5		4	53	200	12	212
Crandon.....	5	1	7	48	350	-14	336
Hiles.....		2	2	114	100	128	228
Nashville.....	20	15	15	47	750	-45	705
Popple River.....	4	2	11	63	550	143	693
Wabeno.....	3		12	131	600	972	1,572
Total.....	51	26	75	60	3,750	1,190	4,940

TABLE 52.—Plan 2: Summary of effects of relocating settlers in Forest County

Governmental unit	Estimated savings			Other reduction in State funds to county		
	Schools	Roads	Total	County road aid	State highway construction	Total
State.....	\$3,550	\$3,750	\$7,300			
County.....	1,250		1,250			
Town and school district.....	2,188	1,199	3,387			
Total.....	6,988	4,949	11,937	\$1,575	\$4,155	\$6,730

TABLE 53.—Plan 3: Estimated annual savings in school costs resulting from relocating Bureau of Agricultural Economics families, 43 other nonconforming users and 63 additional isolated settlers in Forest County

School district and school	School No. on map	Type of saving	Families moved			Savings			
			Bureau of Agricultural Economics	Nonconforming	Other	State aid	County aid	District taxes	Total
			No.	No.	No.	Dol.	Dol.	Dol.	Dol.
Alvin No. 1: Elvey.....	1	5 miles No. 2 bus route closed. ¹	1	4		175		-55	120
Do.....		All parent transportation.....	2	3		87		120	216
Alvin No. 2: Hall.....	1	All No. 1 bus route closed.....	0	0	0	100		427	527
Not operated 1925-36.		School closed.....	5	1	13	600	250	1,770	2,626
		2 schools closed.....				1,100	500	400	2,000
Argonne: Argonne.....	1	All No. 1 bus route closed.....	4	2	7	292		473	765
Blackwell: Glenwood.....	1	do.....	1			141		534	675
Riverside.....	2	School closed.....	5			600	250	220	1,070
Caswell: Brookside.....	1	All No. 1 and No. 2 bus routes closed.	6		10	296		739	1,035
Nashville: Nashville.....	1	All No. 3 and No. 4 and 2 miles, No. 5 bus routes closed. Reduce from 2 teachers to 1.	8	14	1	36		434	470
Sherman.....	2	All No. 1 bus route closed.....	1	10		750	250	-103	997
Woodlawn.....	4	All No. 8 and No. 9 routes closed.	22	4		58		108	220
Wabeno: Hillside.....	2	Parent transportation closed.	1		3	36		64	100
Outer Lake.....	4	All No. 1 bus route closed.....	3		3	210		195	405
		School closed.....	0		0	600	250	366	1,216
Total.....			65	38	57	5,743	1,750	6,764	14,257

¹ Location of all bus routes shown in figure 16.
² Families listed are in addition to those on bus route closed.

TABLE 54.—Plan 5: Estimated annual savings in road costs resulting from relocating Bureau Agricultural Economics families, 43 other nonconforming users and 63 additional isolated settlers in Forest County

Town	Families effecting savings			Road closed	Average cost per mile 1932-36	Savings		
	Bureau of Agricultural Economics	Nonconforming	Other			State aid	Town taxes	Total
				Miles	Dollars	Dollars	Dollars	Dollars
Alvin.....	15	4	7	15	77	730	-405	1,155
Argonne.....	2	2	3	17	34	850	-272	578
Blackwell.....	6		1	9	53	450	27	477
Caswell.....	3		3	5	63	250	65	315
Crandon.....	3	1		7	48	350	-14	336
Hiles.....	2			2	114	100	128	228
Nashville.....	20	15		15	47	750	-45	705
Popple River.....	4	2	1	13	63	650	500	810
Wabeno.....	4		3	12	131	600	102	1,572
Total.....	56	26	18	105	60	4,750	1,435	6,185

TABLE 55.—Plan 3: Summary of effects of relocating settlers in Forest County

Governmental unit	Estimated savings for			Other reduction State funds to county		
	Schools	Roads	Total	County road aid	State highway construction	Total
State.....	\$5,743	\$4,750	\$10,493			
County.....	1,750		1,750			
Town and school district.....	6,764	1,435	8,199			
Total.....	14,257	6,185	20,442	\$1,095	\$5,263	\$7,258

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END