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## The county forests of Wisconsin. 1938

Trenk, Fred B. (Fred Benjamin), 1900-  
Madison, Wisconsin: Wisconsin Conservation Dept., 1938

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# The COUNTY FORESTS OF WISCONSIN

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THE  
COUNTY FORESTS  
OF WISCONSIN



1938

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WISCONSIN  
CONSERVATION DEPARTMENT  
MADISON



## WISCONSIN COUNTY FORESTS

*As of March 15, 1938*

<i>County</i>	<i>Date Established</i>	<i>Acreage</i>
Ashland -----	November 16, 1932 ---	22,862.63
Bayfield -----	April 25, 1932 -----	124,711.73
Burnett -----	February 6, 1933 -----	76,338.25
Clark -----	November 4, 1930 ----	115,440.91
Douglas -----	September 22, 1932 ---	205,386.45
Eau Claire ---	November 16, 1933 ---	24,076.44
Florence -----	January 27, 1933 -----	37,346.75
Forest -----	April 2, 1929 -----	10,146.16
Iron -----	November 16, 1932 ---	121,701.65
Jackson -----	May 2, 1933 -----	96,504.00
Juneau -----	February 13, 1933 ----	7,374.95
Langlade -----	November 6, 1928 ----	89,539.48
Lincoln -----	November 13, 1935 ---	74,247.46
Marinette ----	February 16, 1933 ----	199,025.41
Monroe -----	April 18, 1933 -----	5,467.34
Oconto -----	August 2, 1933 -----	27,470.14
Oneida -----	April 20, 1932 -----	137,641.64
Polk -----	May 6, 1936 -----	7,930.29
Price -----	May 9, 1933 -----	56,013.76
Rusk -----	April 19, 1932 -----	75,854.14
Sawyer -----	June 10, 1932 -----	69,199.35
Taylor -----	November 15, 1932 ---	6,202.33
Vilas -----	September 27, 1932 ---	34,843.74
Washburn ---	November 16, 1932 ---	96,054.24
Wood -----	November 23, 1932 ---	25,267.88
Total -----		1,746,647.12

# FOREWORD



**T**HE county forests of Wisconsin, so interestingly described in this book by F. B. Trenk, forester of the Wisconsin Conservation Department and extension forester of the University of Wisconsin, represent a unique adventure in public forestry. Together, the county and the state are engaged in a gigantic task to make again productive land that has been stripped of all its wealth. The bulk of these county forest lands are unfit for farm purposes. They must again be used for the purpose for which they are best fitted—forestry. To regrow and redevelop new forests is a long and, perhaps, a difficult—but withal—a productive and worthwhile enterprise. It is one that must appeal to all citizens who know something of the history of our original wealth in forests and wild life.

County forests are in a very real sense local forests. The county owns the land. Local people have charge of their development and local labor is used in planting and protection work. With financial aid and technical assistance from the state, these dismantled lands may again play their part in the economic advancement of our northern Wisconsin region. This time, however, we want no temporary prosperity, no boom years followed by decay and depression. We want permanent forests producing permanent crops of forest products on which permanent industry and permanent employment may be sustained. This is the opportunity which the forest movement offers to Wisconsin people.

*H. H. MacKenzie*

Conservation Director

## LAND—AN UNWELCOME SUBSTITUTE FOR TAXES

**T**HE county forests of Wisconsin are the product of a law as old as civilization. It is land that passed from private into public ownership when the owners ceased to pay taxes.

From the very beginnings of government, the application of heavy penalties has been the only way to insure tax collections, for organized government is dependent upon taxes. For real estate, the penalty has invariably been to forfeit the property to the taxing unit.

Government rarely, if ever, coveted this property for its special values. It took the property, in lieu of taxes, because it could always be sure someone else would consider the property a bargain to be purchased, not at its market value, but for only the taxes against it. The new owner was expected to pay the taxes the old one failed to pay. After all, taxes, not properties, run governments.

But what if there are no buyers? Then this ancient principle of taxation collapses. Then either new sources of revenue must be found, or government must find ways to make the unwelcome land productive.

There was a time when the forest covered property of Wisconsin paid all of the taxes assessed against it. Taxes were low, compared with the value of the property assessed. There were but few settlers, and their public wants were small. Capital values were too great to allow the land to be forfeited. Later, when the timber crops were removed, and lumber companies, seeing the end of the operations, began to "drop their lands" for taxes, tax certificates against this delinquent land found a ready market. People said, and believed, that all of this once timbered land would become an agricultural empire. Cleared land, farm buildings, prosperous farmers could pay taxes in dollars just as valuable as any paid by the lumber companies.

How that well of tax income was finally pumped dry, due not to one but to many causes, is an old story. New and more numerous roads, new and better schools, swelled enormously the cost of local governments. Each piece of property dropped from the tax rolls meant a heavier burden for the remaining taxpayers; and every time that burden increased, more taxpayers ceased to pay taxes on their land. By Wisconsin law, it was forfeited to the county. The counties of northern and central Wisconsin experienced this wave of tax delinquency in its most intensive form. Year after year, they advertised and offered for sale the certificates on tax-delinquent land, but there were few buyers. Year after year, the number of certificates, representing an ever-growing area, increased.

While an ancient principle of taxation was in virtual collapse, and counties were desperately seeking other means of revenue, two promising forms of economy encouraged the counties to do what the law allowed, and this old principle of taxation dictated—they took deed to the tax-delinquent land.

To advertise, year in and year out, the tax sales of land that no one wants, is costly. The taking of deed to the land saved the cost of these fruitless tax sales. This reduced the total tax base of the county, which in turn reduced the amount of money which the county paid to the state for special state charges based on the total amount of the county tax roll.

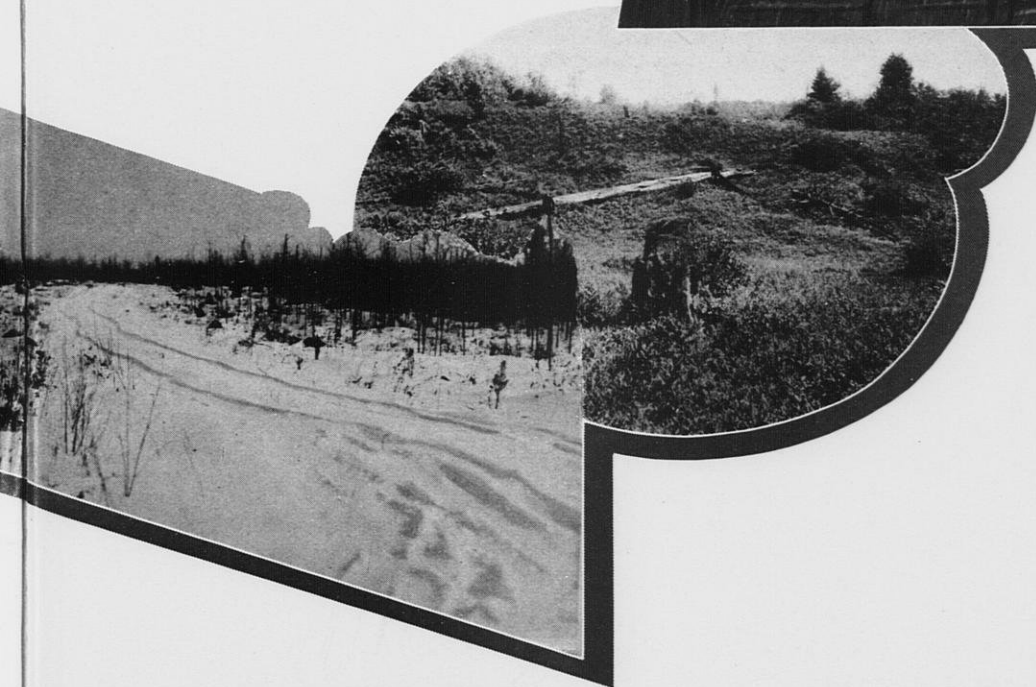
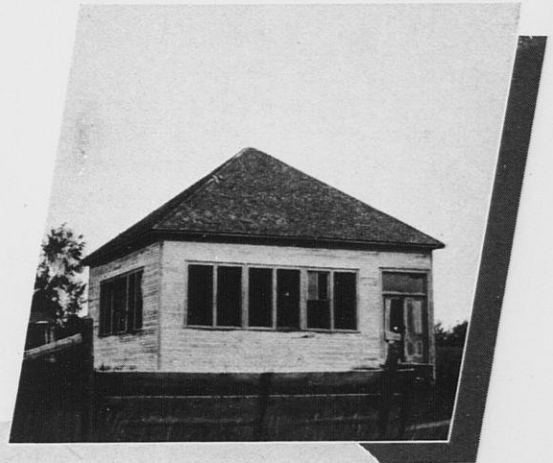
But these were only economies. Still, there was no income from the land. Only now and then did a tract of county land find a buyer, and often he was a woodcutter who would strip



the land of its few remaining trees, forfeiting the land again to the county in lieu of taxes. Sometimes the land was purchased with the intent of settlement on it but too many stumps or too many stones forced the settlers to move to land more suitable for farming. The very processes of nature were being defeated, as a source of that necessary income which keeps governments alive.

To produce an income from this property, taking the place of taxes, while nature, with or without man's help, grew a new timber crop, was the greatest need of the towns and counties which found themselves burdened with the wreckage of a timber-cutting tide which, in sweeping out to the lanes of commerce, left in its wake stranded communities, blackened acres, and crippled public services.

*Two conditions are principally responsible for abandoned schools; the settlement on lands unfit for agriculture and the loss of the forests which once furnished winter employment for settlers.*





## SUBSISTENCE INCOME WHILE NEW FORESTS GROW

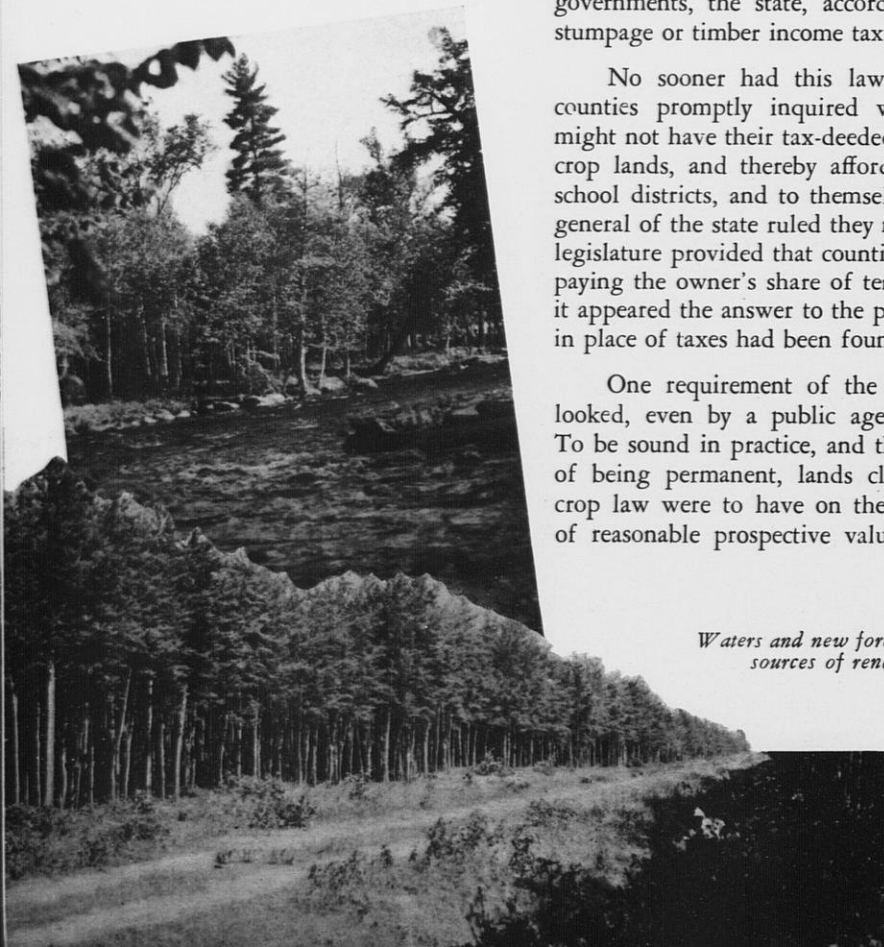
**A**TAX law on forest income is the corner stone of a new type of public forest domain. A law establishing cooperation between counties and the state, is employed to transform county forests "on paper" into productive lands. Together, they constitute the best known approach to maintaining sound local government in a region while its people rebuild and restore its most valuable resource—timber.

It was a forward-looking state legislature which, in 1927, enacted the Wisconsin Forest Crop Law. Based on a relatively new principle in land and timber taxation, it provides for a flat annual tax rate on land, while timber, as a product of the land, is to be regarded as income, and is taxed, like all incomes, only when realized. For forests, this means a tax is levied on timber only when it is cut. The annual tax rate on the land for the fifty-year period of the forest crop law contract is ten cents per acre, to be paid by the owner of the land, except when virgin timber is involved, in which case the annual tax is forty cents per acre per year, gradually decreasing to ten cents per acre per year over a period of years. The income tax on the timber, whenever it is cut, or at the end of the contract, is ten per cent of the value of marketable material, as it stands uncut in the forest. Because this annual land tax, paid to school district, town, and county, is relatively small and often replaces tax revenue many times greater, the state is required, under the law, to pay another ten cents per acre annually to the same tax districts which receive the landowner's annual tax. In return for this extra tax paid by the state to the local governments, the state, according to law, receives the stumpage or timber income tax.

No sooner had this law been enacted, than the counties promptly inquired whether they as owners, might not have their tax-deeded lands classified as forest crop lands, and thereby afford help to the towns, the school districts, and to themselves. When the attorney general of the state ruled they might do so, and the next legislature provided that counties would be exempt from paying the owner's share of ten cents per acre annually, it appeared the answer to the problem of current income in place of taxes had been found.

One requirement of the law could not be overlooked, even by a public agency, such as the county. To be sound in practice, and therefore, to have promise of being permanent, lands classified under the forest crop law were to have on them a growing forest crop of reasonable prospective value. If the counties were

*Waters and new forests are the ultimate sources of renewed income.*





financially unable to pay an owner-share tax on the land, as in fact they were, how much more certain was it they could not possibly finance the planting work and other improvements so urgently needed on much of the land to make possible a future forest crop? It remained mandatory upon the Conservation Commission to reject lands from the Forest Crop Law which did not or could not meet this requirement of a growing crop. For the Conservation Commission to accept the county-owned land for forest crop classification, knowing that it was unlikely the county could ever meet this requirement, seemed most inconsistent.

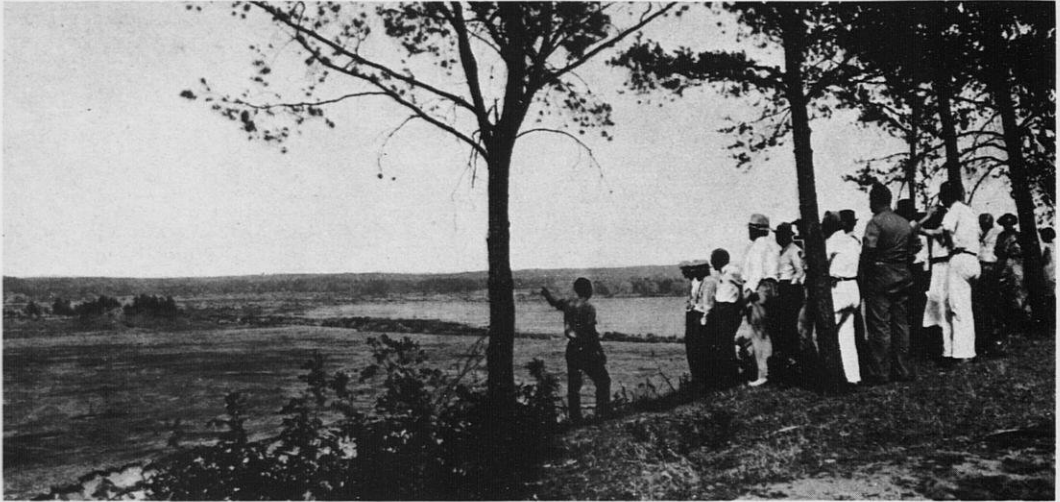
The Wisconsin legislature acted promptly in offering a means by which this impossible conflict of purposes could be avoided. For some years there had been on the statutes a law which permitted counties to engage in forestry operations on county-owned land. The legislature added to this simple law a provision that the Wisconsin Conservation Department would pay to counties, from its forestry funds, ten cents per acre per year, for each acre of county-owned forest crop lands within officially designated county forest reserves. In return for this additional state payment, the state is to collect a severance tax of 50 per cent instead of ten per cent as on privately owned land, whenever any timber is cut.

Through the forest crop law, the state pays a form of tax to the local governments. Through the county forest aid law, the state helps rebuild the resources. The fifty per cent stumpage is a form of rental to the county for the use of its land. Hence out of the discard of lumbering's stock pile—abandoned land—is being fashioned a new domain that will furnish labor, create recreational values, shelter wild life, and grow the raw materials for labor and a circle of new industries, which, guided by wise state legislation, will avoid the follies of the old.



*Second growth white pine (top) and jack pine (lower) properly pruned and thinned, in two typical county forests.*





*Eau Claire county citizens view the cleared flowage area of future Lake Eau Claire, located within their county forest.*

## EVERY ACRE TO ITS BEST USE

THE paradox of northern Wisconsin is that agricultural expansion halted with the passing of the logging camp. When lumbering was in its heyday, there was an opportunity for winter labor, by which the settler could increase his cash income. There was a cash market in the logging camp for hay and grains grown on the new land, and there was additional income for team hire to loggers in the winter. All of these were basic factors in the economic and farm-management processes of the new settlers. Assuming a settler had chosen land of reasonable fertility, success to the aggressive was the seldom broken rule. From the products of his land, and these extra sources of cash income, his indebtedness was soon lifted, and he was able to add to his capitalization and income-producing resources. Agriculture on raw land prospered as long as farm income was supplemented by outside employment. The real turning point in agricultural expansion of the cut-over north was reached when the decline in lumbering gradually reduced, then terminated, this vital aid.

This background is important as an explanation of spotted land development, even within county forests, and, what is more important, of the care with which county-owned land is selected for permanent forestry, or is reserved for the future use of settlers. Not all of the land acquired by the counties through tax deeds is worthless for agriculture. Some may be of excellent quality, but too far from roads and schools for profitable settlement. Some land may be totally unfit for the plow, but is so located as to make an excellent pasture, or a farm timberlot. Sound county forest development takes into consideration the future of present settlers, as well as future forest income from the land.

Careful choice of county forest land is supplemented by land exchanges to consolidate county forest areas, and by authorization to withdraw lands from the forest crop law when their greatest value is found to be for agriculture. Counties are exchanging land which they own outside of county forests for land otherwise owned within the county forests. These exchanges are made either for the primary purpose of giving more solid ownership within certain areas to the county, or of helping a settler move to better land. Frequently the Conservation Depart-

ment has scattered descriptions of land within a county forest, which are exchanged for county lands within or adjacent to a state forest. More often, the exchanges are made with private owners. It is a process requiring years for final completion. It is a policy designed to be of the greatest benefit to all landowners involved.

Withdrawal of land once entered under the forest crop law is a procedure authorized by law, but the necessity for doing so is growing less each year. Involving extra bookkeeping, as well as suggesting, in some instances, a lack of good faith on the part of the county in making the entry in the first place, it is more and more being limited to correcting past errors of judgment in determining whether forestry was the best use of the land.

Far more important than correcting past mistakes is the increased attention being given new additions to county forests, which avoid these errors. Complete county ownership of extensive areas is frequently desirable, in order to save public costs for services to some future settler. Within such areas, the county enters under the forest crop law all land as soon as it has secured title to it. This results in well blocked or solidly owned county forests. In other areas, land of possible agricultural value may be held out for future sale, often for the exclusive benefit of present settlers who need additional land for pasture or woodland. This is as it should be, for it is now clearly established that the future of northern and much of central Wisconsin lies in the joint development of farms and forests. That is the way the first settlements prospered. That is the way both are being assured future permanence and prosperity.



*A forest plantation on county forest land.  
(Lower) Same view, five years later.*



*(Left) A cranberry reservoir in a Clark county forest.*

## CHARTING A COURSE WITH A LASTING PURPOSE

**P**URPOSES are most surely achieved whenever a plan directs action. Nowhere is a definite course, publicly announced, more necessary than where supervisors and workers are constantly changing. Cooperation is fruitless unless each cooperating agency knows and understands the objective of the other. Because county boards and county officials frequently change in personnel, and because the county forests of Wisconsin rest entirely upon state and county cooperation, a specific document indicating proposed county action in county forest matters became a necessity. It has been filled by what is known in all counties as a county forestry ordinance.

Having the effect of county law, the forestry ordinance states the county's policy, and directs the procedure of all officers working under it.

How are the boundaries of a county forest established? The forestry ordinance states that the county board shall establish forest boundaries by resolution.



*Future timber sales on county forests will regulate how and where the tops are to be banded; timber will sell by the cord or foot, not by the acre.*



Who of the county board is in charge of county forest lands? The forestry ordinance designates a specific committee, and refines its powers and duties.

Who shall be responsible for examining lands before they are added to the county forest under the forest crop law; who shall recommend their use for future agriculture, or for forestry; and what policy shall govern their decisions? The forestry ordinance designates the officers, and states the guiding policy.

Who shall have power to sell county forest land, and under what conditions will the county board refuse to validate any such sales? All forestry ordinances adopted by the counties have been very specific on this point, for it can discredit the good faith of a county if forestry lands are sold after drawing state aid payments for a number of years.

Who shall be in charge of planning and executing work projects; employing men and certifying to expense vouchers? Forestry ordinances have given administration committees the power to employ an administrative county forest officer. Often this man has been the county agricultural agent; and, since he is already employed by the county, this results in a saving to the county in salary costs.

What accounting shall be given of funds advanced by the state for work on county forests? Forestry ordinances prescribe that this fund shall be separately designated in the county treasurer's office, to be drawn against only by the proper county committee or its administrative officer.



*Lake shore frontage is to be preserved.*

How is the annual county forest budget prepared? County forestry ordinances, recognizing the cooperative contributions of the State Conservation Department, make the preparation of the budget a joint county-state task.

How will merchantable forest products be disposed of? Will the county sell the land just because there are merchantable trees on it, or will only the trees be offered for sale? Forestry ordinances have answered this question as conservationists would answer it. Competitive bidding, selective cutting and sale on the basis of the cut products, required in practically all county forestry ordinances, will, if adhered to, spell the end to stripping lands of promising tree growth, then returning the land to the tax delinquent columns.

When cutting operations are conducted to thin out and improve existing woodlands, what will be done with the cut products? County institutions and public relief agencies are generally given the first opportunity to benefit from the use of these products.

All of these are factors in which the county may exercise wide range of judgment. Other factors, more definitely required by the forest crop and the county forest reserve law, such as the necessary procedure in notifying the state of intention to cut, and reporting the amount cut for assessment of the severance tax, are included in the forestry ordinance for the purpose of emphasizing these points to administrative officers.

Charting a new course in methods of growing, protecting and disposing of the products of the county forests, the forestry ordinance stands as the basic county law promising careful stewardship of a public trust.



## DOING FIRST THINGS FIRST

**A**BUSES of half a century are not remedied in a day. To even the most casual observer, much of the land in county forests presents a picture of large work opportunities. What needs to be done first; what can be done today that will make more effective the work done next month; next year? Will failure to take steps against spread of disease today undo the good of a future five-year work program? Where has fire so completely destroyed the soil as to make immediate planting impractical? In which young forests will one day's work with an axe produce more timber than the planting of a thousand trees?

A multitude of work opportunities inevitably gives rise to the question, What are the first things? To answer these in an orderly, specific manner, maintaining a proper balance between all types of work, is to lay the groundwork for a master county forest working plan. This the counties are now doing. Unlike a management plan, which essentially concerns and is confined to the development and disposition of the timber crop, a working plan covers in an orderly arrangement, land surveying, forest protection, planting, improvement cuttings, recreational development, and the administration of numerous special uses.

Carefully designed working plans have four elements applying to every type of work project. These consist of a written description of the work, and how it fits into other work projects; a county forest base map designating work areas by description and boundary; a tabular analysis of time and material requirements for each working area; and a township map or diagram upon which to record progress and completion.

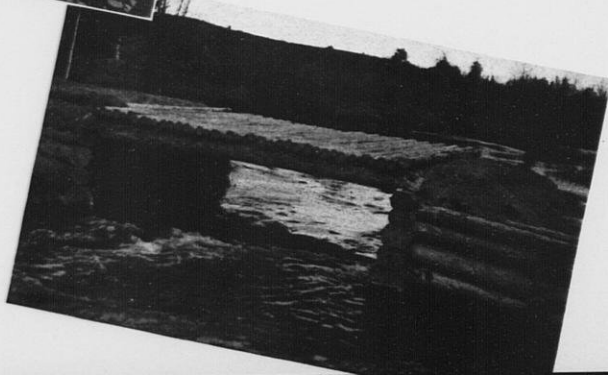
The very labor of preparing so detailed a plan goes far toward determining what is to be done first. Referring as it does to specific areas, it is largely a product of study and observation in the field. Contact with actual conditions before the plan is finally made up presents more clearly to those in charge of the work the



*(Top) A fire lane "stumped", ready for tractor and grader.*



*(Center) A fire lane in a county forest.*



*(Lower) Timbered bridge in a county forest, built by CCC boys.*



*A land survey crew sets a corner in a Jackson county forest.*

amount of local labor available, its need for extra income through forest work, market outlets for salvaged material, areas of immediate fire hazard, and, most important of all, how the growing forest can be developed to sustain present industries.

All county forest working plans are growing documents. Immediate field work does not wait upon the completion of a plan that covers an entire county, or even an entire county forest. It requires only that the entire area be considered in arriving at a sequence or order of starting and completing the work. Through these plans, work has been assigned to various public work agencies which are making, without cost, constructive labor available to the counties.

First on the work program of many counties was locating the county lands with reference to the original survey of the United States General Land Office. This is the land survey.

An inventory of existing shrub and tree growth revealed a mass of information as to subsequent work projects. The location for effective thinnings was learned. Tree planting sites and the trees best adapted were determined. Lanes and trails useful in a protective system were accurately located. Fire hazards, and centers of insect or disease attacks were charted. Each of these is important in itself, but the order in which each is taken up has a lasting influence upon the entire job of restoring and protecting the young forest.

Wisconsin counties having county forests are very much aware of the need for using all labor, both that paid for from state contribution, and that contributed by national or state work agencies, to the best advantage. Accumulated neglect and abuse have produced a veritable log jam of stagnation in quality timber production. But a constantly rising head of public interest, with intelligent leadership working here and there on the keg logs, as revealed in the master working plans of the counties, promise shortly to break the jam, and to have every forestry function of state and county maintaining a steady course toward profitable work and increased resources.

## CORNER HUNTING WITH TRANSIT AND CHAIN

FROM the day of the ancient mariners, man has sought the sun and stars to mark his earthly location. American ingenuity fashioned a system, still based on sun and stars, that reduces the description of locations to a network of numbered squares. It is called the General Land Office Survey. Referring to it is nearly every patent of land ever granted to a Wisconsin lumberman or homesteader. It determines area as well as establishes location. It is an institution sharing a permanent part in our economic system. But despite its permanence in records and documents, the greatest indictment against its application has been the temporary manner in which it was marked on the surface of land.

A county, like any other landowner, should know the location of the boundaries of its lands. The enforcement of the timber trespass law is largely dependent upon this information. Timber cutting and timber sales are open to fraudulent abuse without it. An intelligent working plan constantly refers to it. Appreciating the need for this information, marked upon the land itself in a fashion much more permanent than was done by the original surveyors, the counties have engaged in the re-survey of whole townships as work projects.

What a contrast marks the operations of the present-day survey crew, compared with the original! The first surveyors blazed a new line, and marked the corners where they fell. The modern crew has to search for the old line, as well as the old corner. The first surveyors made notes as they went along. The modern crew must secure a copy of these notes, and follow them for every mile of line. The early surveyors merely cut wooden stakes, scribed them to identify their location, and set them in

*Careful re-surveying gives the location of an old corner, but sometimes it takes a detective's skill to find parts of the old corner.*





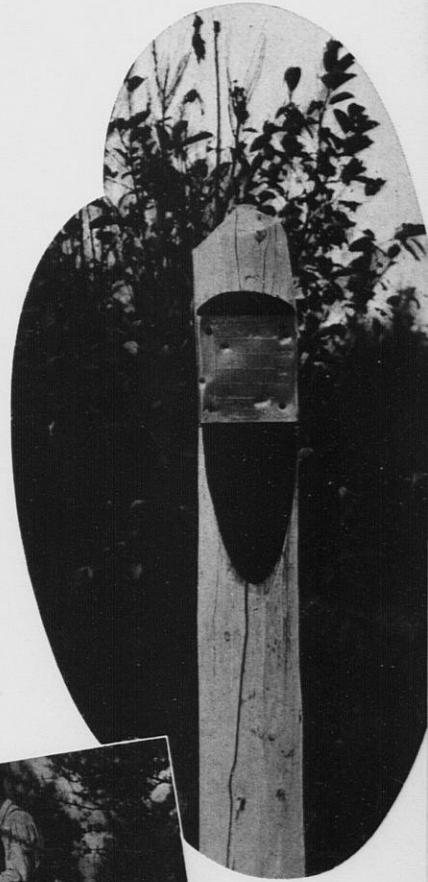
the ground, or on it. The modern crew, once it has satisfied itself the old corner has been found, or that it has sufficient supporting evidence on the true location of an original corner, sets a new one, not of wood, but of steel or concrete or both, with a bronze cap bearing information the old surveyor once inscribed in wood. The original surveyor set a corner on the bearing and distance from the preceding corner; the re-survey crew may have to run lines from several corners before distances between section corners can be equalized to reestablish a lost corner. A magnetic compass guided the early surveyor in determining the direction of his lines. The modern corner-hunter uses a transit, and constantly checks on the sun or the stars for true directions.

When the maps based on the original survey were compiled, they included many gross errors. Maps made from surveys of county forests today are true maps. Accurate courses and true distances are shown with correct acreage. On such a map waste lands, productive forest and areas improved by work projects can accurately be shown.

The land resurveys conducted to date, largely paid for from funds advanced by the state to the counties for county forest development, have cost an average of ten cents per acre, including the cost of corner posts and setting them. This is equal to one year's acreage payment for forest work, a most valuable investment.

Invaluable aid has been given present survey parties by old timber cruisers, loggers, and settlers, who because of their intimate knowledge, could dig up evidences, when all other marks had been destroyed by lumbering or fires. They are truly a vanishing race. Each year fewer of them are available as witnesses. Through funds made available for surveying in county forests, at least a few of them are given an opportunity to put their knowledge of the old survey on enduring bronze.

It is possible some of the new corners are not located on the exact spot of the original. Technically, the original corner is still the correct corner, regardless of where an interpretation of the field notes says the new corner should be. Evidence on the land is the determining factor. Finding and interpreting this evidence often brings out more of the detective in a surveyor than it does of engineering. In a court contest over two conflicting surveys, the one presenting the best evidence pertaining to the original survey is very likely to win. As counties acquire more of the land within a county forest the opportunities for a conflict decrease. Then too, landowners are glad to accept lines and corners established by so accurate a survey.

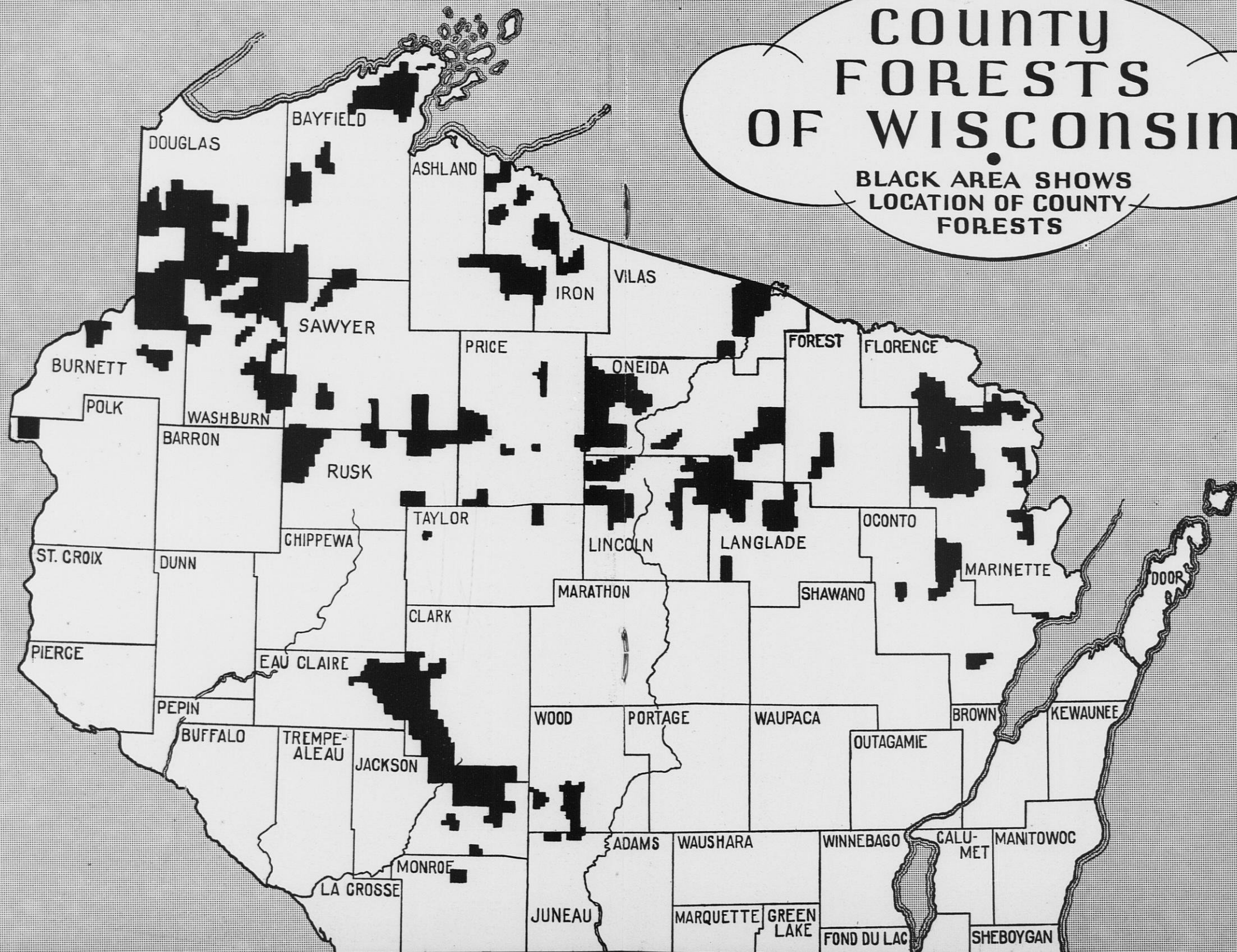


*(Top) A highway marker notes the distance and direction to nearest corner.*

*(Lower) Setting a new and more permanent corner.*

# COUNTY FORESTS OF WISCONSIN

BLACK AREA SHOWS LOCATION OF COUNTY FORESTS





## GRIDIRON STRIPS FURNISH THE FACTS

THE build-up of county forests in Wisconsin has been by legal processes. There were tax certificates and tax deeds. There were legal advertisements and registered mail notices. There were forest crop law forms and forest crop law hearings.

To restore the forests on these lands requires very different information and very different processes. It made no difference in the tax deed whether the land was barren, had a promising stand of jack pine or white pine on it, or was covered with second-growth hardwoods needing nothing so much as simple treatment to reduce fire hazards. In an effective working plan, this information is all-important, and it is being obtained today through that feature of county forest work known as the inventory.

Parallel strips an eighth to a quarter mile apart, depending upon the density and variability of the second-growth trees, provide the means of systematic sampling. A compass-man directs the course of each strip, and maintains at all times a check as to his location with reference to section corners. Tally-men make sample tree measurements a specified distance on each side of the line. Whenever a different type of woodland, or a distinct change in age and size of trees is met, the direction of the line, marking these changes, is indicated on the map. Soil qualities, the elements that really determine rate of tree growth and the kinds of forests, are carefully noted.

From these maps, type sketches, and notes made in the field the land cover map is drafted in the office. A seeming patchwork of enclosures in innumerable shapes and sizes, each dotted enclosure represents the location and extent of a particular kind of combination of trees and tree ages. Fire hazard areas are shown. The best planting locations are bounded, while notes on the existing cover, and the kind of soil, tell their own story as to what planting preparation is necessary, what trees are to be used, and approximately how much time it will require to do the planting. Other enclosures mark the location and extent of thrifty young growth, needing perhaps only a thinning. But the map shows more than this. It tells what kind of products can be cut in this thinning; the volume

*An excellent stand of ash and maple promises much for this county forest.*



to be cut can be roughly calculated from notes on density and size of trees; and there, too, can be seen the means by which the cut products may most easily be moved to main highways.

Cover inventories are being obtained by the counties as part of their own work projects, and some inventory work is being done by the foresters in the Civilian Conservation Corps camps. The information obtained by each is pooled, and worked into the master county working plan, to serve as a guide in organizing and directing all work projects. Whenever a county makes an inventory following the land survey, the final inventory or cover map is drafted on the completed survey map. This produces the most accurate cover map, for type boundaries are shown with reference to lines and corners which are definitely known. These maps are usually drawn at a scale of four inches to the mile, a scale which makes it possible to show a large amount of detail.

When a township is being mapped and the inventory is made, the field crew does not confine its work to those tracts of land which the county owns. Every acre, regardless of ownership, is mapped. The information obtained about privately owned land often has public value. It can be helpful to the assessor; it can guide the county board in determining whether tracts of land acquired in the future through tax deed should be held for sale to farmers already established or be entered under the forest crop law. Private owners of land, interested in protecting and developing their lands for forestry purposes, are welcome to the knowledge gained in this survey.

About the only indication county officials had of what the county was getting when it took a tax deed, was shown in the assessed valuation. The inventory, like the opening of Pandora's box, is bringing to light some long-suspected ills, but it shows also a surprising amount of promising growth, of hope for real values, as the county protects and restores the forests on its lands.

*A lone pine seed tree will  
furnish seed for a new pine  
forest under the volunteer  
aspen crop.*



## COUNTIES EMPLOY THEIR OWN

**D**OLLARS paid to counties as forest aid are spent for local labor. Workmen's compensation insurance protects the forest worker. County forests are serving as a substitute, small though it may be, for those early loggers whose winter pay rolls did much to build the agriculture of the north.

The employment of local workers is placed in the hands of the county administrative officer. Counties have universally followed the practice of selecting workers on the basis of their ability and aggressiveness, and not with reference to relief status. Usually the workers are selected from the community in which the forestry work is being done. Aside from avoiding transportation costs to the workers, this system provides the best means of distributing the work through the county forest areas, for in most counties there is more than one project in operation, in different communities or towns. Equipment is furnished by the county, from the forest aid fund, and is moved from a job just closed, to the new one about to open.



*The reduction of hazards along heavily travelled highways is a valuable forestry work project.*

County forest work camps have been set up as a means of giving men from all parts of a county an opportunity to work on the county forest, and have been occupied by men who were on federal works pay rolls, thereby increasing the amount of work done, without wages being charged to the county. The experience of Rusk County illustrates how both objectives have been realized. The Rusk County forest administrative committee was authorized by the county board to construct two forestry work camps, obtaining logs from county forest lands for the buildings, and equipping them with materials purchased from the county forestry fund.

Each camp accommodates thirty-two men. Some men furnish teams or trucks, for which extra hire is paid. The men are assigned to the camp for indefinite periods, and are on the Works Progress Adminis-

tration pay roll (1937). The food served, costing an average of fifteen cents per meal, is paid for by the workers, but the cook is paid by the county.

Work done by the camps, which might almost be termed local Civilian Conservation camps, includes the cutting of cordwood for county institutions, in connection with timber thinnings, telephone line construction in the county forests for the Conservation Department, fire lane maintenance, and tree planting. Here, the county forests are offering an excellent opportunity for constructive work projects, and the county is benefiting through its cooperation with other work agencies.

Crew foremen on camp jobs as well as those sponsored by the county alone are selected by the county forest administrative officer. For ordinary woods work, the foremen are chosen locally, but for a few jobs, such as those involving experience in directing the survey crew, foremen are kept on the pay roll for longer periods and are moved from place to place.



Workers employed by the county for work on county forests are paid every two weeks. The pay roll voucher, made up and signed by the county administrative officer, is drawn against the county forest aid fund. At the same time, there is drawn against this fund a proportional share of the cost of workmen's compensation insurance, which protects every forest worker while he is employed on the job. The recently enacted unemployment insurance law likewise applies to the county forest worker, the county paying a sum to the state unemployment insurance fund in proportion to the forest worker's pay roll.

Comparable in importance to the fact that through the county forest local labor is given some income, is the changed attitude shown by the workers toward forestry, and conservation in general. Many of the mature workers are also taxpayers. In a very real sense, these county forests are their forests. Time and again, tree planters have shown they believed it was their trees which were in danger when fire broke out. The counties are employing their own, but more important still is the community of forest interest that is developing between the county, as a forest landowner, and its citizens.



*The bunk houses and kitchen of a well-equipped Rusk county forest work camp.*

## EPIC PROGRESS THROUGH MOBILIZED YOUTH

A SINGULAR unity of purpose dictated the assignment of the nation's youth to conservation work. Retaining and restoring national resources—human and moral on one hand, organic on the other—has been and is the highest single objective. The county forests of Wisconsin were, from the outset, found to be so soundly organized as to meet the high Emergency Conservation Work standards for this constructive labor on public lands. It represents a contribution to the improvement of forest resources in the state that pales any recorded vision of what could conceivably be done in so short a time. Because the counties were ready when their great opportunity came, they have shared liberally in the enormous benefits.

Striking vigorously from the very first against that arch-enemy of all forests—fire—the Civilian Conservation Corps has in this one field of endeavor, established a record of brilliant courage on the fire line, and of invaluable aids in prevention. Naturally, the county forest areas had long been particularly vulnerable to losses from fire. It was "no-man's land." It was included in the state forest protection system, but that didn't change the attitude of people who saw no future value in sapling forests. And by very token of this gross indifference to county forest areas in the past, the new measures for protection are all the more valuable to the counties.

Fire lanes came first. Inability to get to fires promptly, and with sufficient power equipment, had long handicapped the efforts of the state Conservation Department. Heavy power machinery supplemented hand labor to construct, quickly and economically, through the county forests many miles of substantial forest roads.

New fire lookout towers, constructed by C.C.C. labor, greatly improved the network of observation points that furnished a view of privately owned and county land, alike. Hundreds of additional miles of telephone line connected old towers and the new ones, with ranger stations and the camps.

Actual outbreaks of fire, and there have been thousands of them, truly furnished what has sometimes been called "the moral equivalent of war". Energy, enthusiasm for action, and the indomitable will to win, gave seasoned forest protection officers a brand of fire fighters they had never before witnessed.

In the more constructive features of forest restoration and improvement, age-long evidences of the C.C.C. labor have been imprinted on the county forests. Nurseries were enlarged by C.C.C. labor, for the production of more planting stock than had ever been produced. Much of this stock went on county forests. The number of trees planted runs into many millions. For the first time in history, upon thousands of acres, there has been heard the ring of the axe as it fashioned a thrifty, young forest where before, its ring had always foretold ruin. Sometimes dead and highly inflammable material was cut, stacked, and when snow had fallen, burned. Often it was living trees, low in value but harmful to others of more worth, that were felled.

Their conservation work has not been confined to trees. The county forest of the future will offer recreational values as well as wood. This means better streams for fishing. This means improved lake frontage. Stream and lake improvement, to provide better food and better spawning grounds, has been on the work sheet of every camp working in county forests.

Most of the boys in the camps are Wisconsin boys. Frequently they are citizens of the county in which their camp is located. Like to the men of the county who labor on the county forests, these forests are coming to have a more personal interest for them. As citizens of the state, they share in the ownership of the forests they build.





*Trail building, telephone line construction, tree planting and fire fighting are only a few of the jobs done by CCC boys in county forest areas.*

## PERMANENT ADVANCES ON THREE FRONTS

**T**HREE evils beset the fate of "no man's land" from the day the timber was cut. Repeated fires burned the very soil. Low quality marked much of the new timber growth, as well as that on cut-over land which had somehow escaped the more devastating fires. Some lands became treeless, and stayed so. To make effective advances against any one of these conditions would be an accomplishment of no little importance. To register progress against all three would be the most conclusive evidence that valuable and aggressive work is being done by all agencies having a part in county forest development. That real progress has been made on all three fronts is apparent in the record.

The combined efforts of the Conservation Department in providing improved systems of forest fire detection, and more efficient fire fighting tools, of the Civilian Conservation Corps in reducing fire hazards and supplying man power on the fire line, and of the counties in patrolling areas of high hazard and contributing toward the elimination of fire hazards, have shown immediate results in the record of fire losses. Atmospheric conditions are responsible for greatest fire hazards, and these vary from year to year. Therefore, it is always difficult to measure the true effectiveness of fire prevention and suppression activities on a year to year basis. But percentage of total area under protection burned in any one year is a sound basis for calculating the mathematical risk of fire loss. Forest protection agencies agree that an annual acreage of fire loss equal to one per cent of the area protected is a fair accomplishment; if this can be reduced to one-half of one per cent—that is, a hazard of a fire on any given area occurring once every two hundred years—the ultimate in fire prevention has been achieved.

For three successive years, including the periods of unusual drought in 1934 and 1936, well over 80 per cent of all fires have been kept to an area of less than four acres per fire. There is every reason to believe that with continued improvement in detection and suppression equipment, aided by a constantly growing public consciousness that fires are a man-caused evil which can and must be prevented, forest fires will be kept well within a risk of one-half of one percent—one fire on a given acre once in two centuries!

Winter work by Civilian Conservation Corps camps has consisted largely of improvement cuttings on forested land, where trees of poor quality interfere with the growth of better ones. Camps designate the work as timber stand improvement.

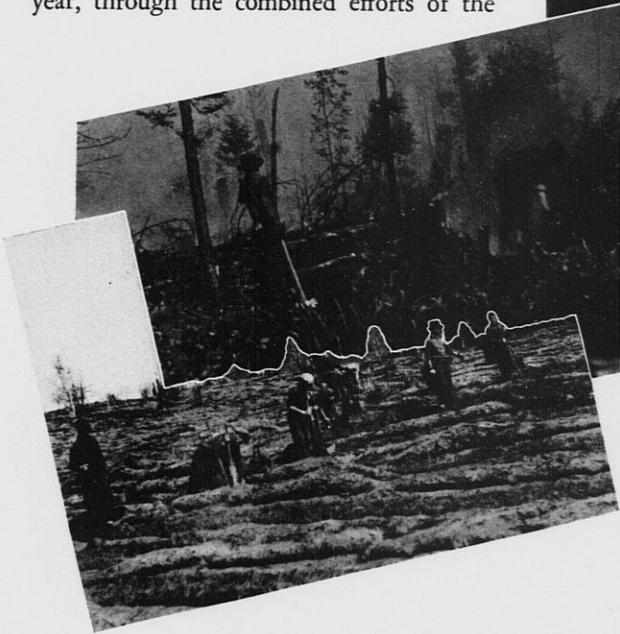
Sometimes it is a "thinning from below". Trees

*A crowded stand of basswood and hard maple, thinned to the proper density. There was a cash profit from the sale of the wood taken from this forest.*



still living, but hopelessly over-topped, are removed, to permit better root growth and less competition for the larger, more promising timber trees. Here, the material taken out is generally low in value, since most of the cut trees are small. This type of cutting produces relatively little slash, for the crowns of the trees are small. The branches are scattered and soon rot after cutting, thereby reducing the amount of material that would create a fire hazard.

Sometimes it is a "thinning from above" which foresters call a release cutting. Often large, over-mature but unmarketable trees were left standing when the original timber was cut. They may stand out against the sky line as sentinels of the forest, but more properly, if less poetic, they are robbers preying upon a youthful forest. They shade out and deform younger but more valuable trees growing within range of their shadows, and their long, hungry roots. Rarely they serve an important function as seed trees; more often, their removal is a benefit to the forest. Every year, through the combined efforts of the



*Tree planting is becoming a safer venture, as fire losses are being reduced by an efficient protection system.*

C.C.C. camps, and county forestry crews employed through county forest aid funds, several thousand acres of county forest lands are thinned and improved by careful use of the axe. The products, to the extent they have value, and frequently they do, are turned over to the relief agencies, or are sold.

Tree planting has been a major part of county forest development from the establishment of the first county forests. There are thousands of acres of land upon which artificially established forests are the only hope of there ever being any forest. At the close of 1937, a total of over 40,000,000 trees had been planted through the combined efforts of the counties, the Conservation Department and the Civilian Conservation Corps camps. Some areas have been planted twice, for the purpose of replacing losses caused by drought and heat. Following tremendously increased tree production at the state nurseries, annual increases in the rate of planting will shortly double or treble these figures.

Combined work programs between the counties, the state, and the Civilian Conservation Corps are creating values on lands once considered not worth the taxes. Better forest protection, improvement in the quality of growing forests, and establishing plantations on idle lands underlie these new values.



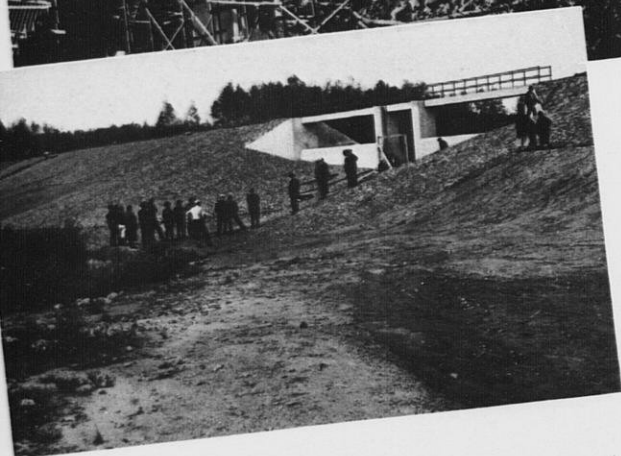
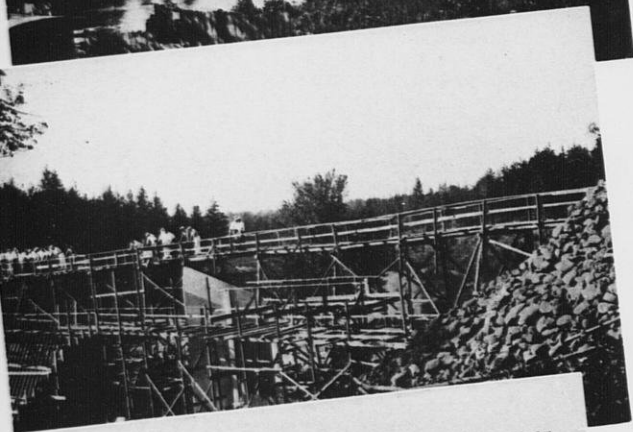
## WATER—A HANDMAIDEN OF FOREST USES

**N**OT all forest wealth is in trees. Forests that frame a lake, or feed a trout stream, aren't reckoned in saw logs, not, at least, in a region that has found the vacationist a better customer than the lumberman. So also, is some land more valuable when under water, than above it. There is yet no surplus of cooling lakes or sparkling streams in this state, which is proud of its heritage of both.

These other values that are found in an associated use of forests and waters have been fully recognized since county forests have been established. Work projects designed to protect and increase them have been favored at every opportunity. As each project has been completed, new and higher land values have been created; the basis for higher and a steady source of income has

been established. Although not financed directly by county forest aid funds, because investments in land, labor, and materials are generally too great for these modest sums, efforts in county forests to increase water resources and water values have been directed principally along two lines: the creation of new lakes by the construction of dams, and the improvement of trout feeding and spawning grounds in our forest streams. The labor and materials have been supplied largely through federal emergency funds, but the benefits are being realized by the counties themselves.

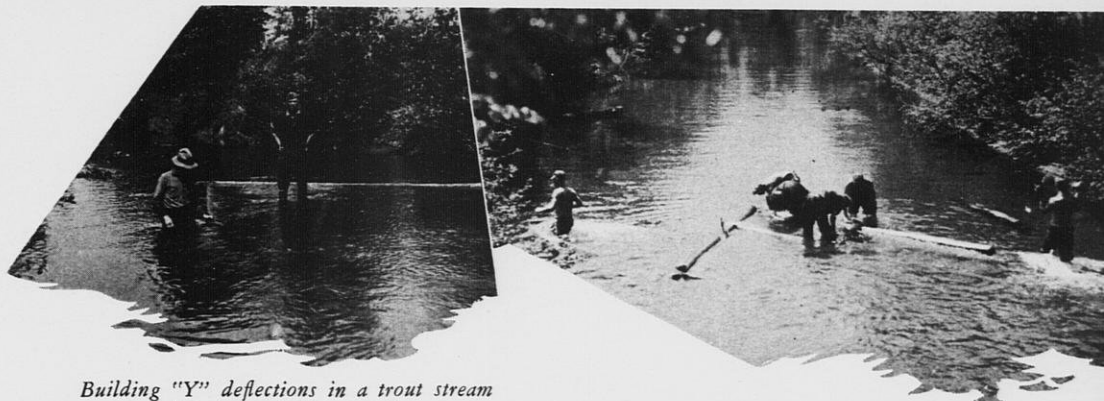
A brilliant example of flood water conservation and control, and a whole chain of benefits arising therefrom, may be found in the Lake Nancy dam, constructed in Washburn County by work funds. A new lake with a splendid high shore line is being created, giving recreational value to lands hitherto almost valueless. Through a diversion canal, to be constructed in the future, an entire chain of lakes, each with resort property along the shores, will be restored to normal level, by diverting spring flood waters of the Totogatic river into them. This will sustain ground water levels in the adjacent areas. Fresh water,



*(Top) The flowage area of the future Lake Nancy on the Totogatic river.*

*(Center) Construction work on the Lake Nancy dam.*

*(Lower) Another dam for a lake on the Totogatic river, Sawyer county.*



*Building "Y" deflections in a trout stream  
for stream improvement.*

preventing stagnation in the summer, will promote fish life, make the lakes more attractive for fishing, and for summer resorts, increasing thereby adjacent land values and incomes. Several hundred acres of county forest land, contributed for the purpose, and cleared of all trees, so there will be no snags in the flowage, will bring more revenue to the county, many times over, than this land could possibly have brought in the form of tree growth. Yet this dam, the lake, and the canal, are only a part of the entire plan of land use within this county forest, formed from the tax-delinquent lands the county took when no one would have them.

This is but one dam and lake being constructed in county forests, for the primary benefit of the county. Others completed or in process of construction include the dam and lake on the St. Croix river in the town of Gordon, Douglas County; the dam and lake on the Totogatic river in the town of Lenroot, Sawyer County; the dam and lake on the Eau Claire river in Eau Claire County; and the smaller dam on Hay Creek in Clark County.

Plans for the development of the shoreline property created by the dam on the Eau Claire river, all of which is now county owned, illustrate the safeguards which assure full public benefits on this land. There is to be a public camp ground reserved for each mile of shore line. It would be expected, of course, that Eau Claire County would want to sell cottage and cabin sites on the new lake frontage, to realize income, through taxation, on the improved real estate; but this lake will never become one encircled with "No Trespassing" signs. A score or more of public camp sites, distributed around the entire lake, lying almost entirely, as it does, within the Eau Claire County forest, assures permanent public use of this part of the county forest.

Less spectacular in appearance, but no less valuable in contributing to the recreational value of many county forests, is the stream improvement work being carried on by the Civilian Conservation Corps, other federal emergency agencies, the Conservation Department, and by the counties. The ideal trout stream must be kept cool, principally through shade; it must have clean spawning beds, it must provide food where the trout can obtain it; it must be free from mud and silt; and it must afford natural hiding places for the trout. It is a tremendous job to do all of this for streams which have collected mud and forest debris in their stream beds during half a century, but it is a work that is going successfully forward. It is creating one more value that will make the county forests a public asset, and a source of added income.

# • The COUNTY FORESTS



*(Top) A light frame house was moved by a county owned tractor from the old location to the new.*

*(Center) Cutting timber skids upon which to move the barn.*

*(Lower Left) A good potato field on the "new" farm.*

*(Lower Right) A new barn has been built, and a concrete base has been constructed for a small farm house.*



## RESTORING RESOURCES NOT MADE OF WOOD

**T**HERE is a very human side to the development and consolidation of county forests. It involves giving aid to stranded and isolated families. Within many county forests are settlers who can see no future in their present location. Through circumstances beyond their control, they face continued isolation, little or no income from the soil, for often it is unfit for farming, and they usually cause unwarranted expenses to the local government. The relocation of some of these families is going forward within the limited resources of the counties. It is made possible through that feature of the county forest reserve law which permits counties to purchase or exchange land to consolidate county ownership within county forests.

Resettlement cases within the resources of the county to accomplish represent relatively small investments. The later rehabilitation of resettled families, through loans for additional land and equipment, where it is necessary to furnish this aid, must of necessity be provided by other agencies.

A number of families removed from county forests have been given rehabilitation aid. The county's contribution has usually been made through two separate transactions.

Most counties own much more land than what is included within the county forest. The best of this land is frequently held by plan and design to be used as future "trading stock" in the consolidation of county forests. Hence, counties own land that may be settled upon. It is offered in exchange the lands of certain settlers within county forests who are agreeable to relocating elsewhere. It takes cash to start up again on new land, even if the land has been given to the settler. In the exchange involving county-owned raw land and that of the settler, having modest improvement, there is usually a difference in values, in favor of the settler. Since the land to be acquired from the settler will be added to the county forest and be entered under the forest crop law, the county forest reserve fund reasonably may be drawn upon to furnish the cash representing the difference in values.

In one year fifteen families in five counties found it possible to move from county forests through purchase of their lands with county aid funds. Most of these families required no subsequent rehabilitation help. Typical of those who obtain help for developing the new land is the case of the settler here illustrated.

His former location was within a county forest. He had less than three acres of cleared land, and this was extremely stony. The balance of this "40" consisted of either swamp, or heavy hardwood land, which could be made ready for cultivation only after a minimum cost of \$200.00 per acre. Despair was gradually undermining self-reliance in the family which occupied this place.

Less than two miles away, outside of the county forest boundary, was a cleared tract of thirty acres, to which the county had taken deed. It was adjacent to a town road. The soil had excellent agricultural possibilities. An exchange was agreed upon, and a rehabilitation loan, secured by the new property, was advanced to the settler, with which he built a substantial barn, constructed a foundation for his house, and put in his first crops. Shortly before harvest time he put his house, still located at the old site, and two poultry buildings, on skids, and with power furnished by a county highway tractor, moved the buildings to the new location. Winter found the old house improved and placed on the previously constructed concrete foundation, his barn full of feed, his poultry flock well housed, and his root cellar with ample supplies, and his outlook transformed to one of optimism. The county has effected a real economy for itself and the town in eliminating certain public services; the net acreage of the county forest has been enlarged; a substantial taxpayer has been added to the town.

## THAT COUNTY FORESTS MIGHT BE BETTER KNOWN

**N**O SUBSTITUTE for a map in identifying places with things has ever been found. Every school room is equipped with one or more of them, dealing with places as far apart as the local township and far-off India. None is more commonly found, in school, or office, or home than that of the local county. Sometimes it shows only township boundaries, section lines, and streams. Sometimes it shows private ownership by property boundary and name. Sometimes highways only are highlighted. Whatever its purpose, size and color, a map, by its constant use, creates a mental image that tells where things are.

That county map will soon be out-of-date which does not show at least the boundary of the county forests. Affecting county and town and school income, furnishing recreational facilities, representing a large investment in public funds once visualized only as tax certificates, the county forests are most appropriate geographical areas to be identified on local maps. The youthful student learns that in public forests, he has an equity. It becomes more real, as he constantly visualizes its boundaries on a map, supplemented by conscious knowledge of the area every time he travels near or through it.

But mere knowledge of the location of the public land he shares is not nearly so important, as the opportunity to visualize from time to time the improvements going on which will make his equity in this land more valuable. There were many who initially accepted the county forest as a sort of stop-gap, to help local taxes during an emergency, to be dispensed with as soon as the hoped-for rising tide of land values would produce buyers for all tax-delinquent and county-owned land. To the extent that these prospects have diminished in recent years, the future of the county forests appears more secure. The objective of producing an entrenched county policy calling for the sale of only ripe timber, under regulated cutting practices, and retaining the land for continued timber production; and the more immediate objectives of education in forest protection from fire, the conservation of water and wild life, and a fuller understanding of the social value of forests, can be achieved by using the county forests from time to time as object lessons. Organized county forestry tours are the best means toward this end.

*An attractive sign marks the boundary of this county forest.*



A visit to a successful forest plantation produces a feeling of assurance that man, in cooperating with nature, is hastening the day of a new timber crop.

There is real craftsmanship in using an axe in a mixed woodland to produce a forest of superior quality and growth, and a skill that can be fully appreciated when seen.

Forests will never be fireproof, but there is a vast field of instruction to be realized in the measures that are applied to reduce fire hazards, and the rate at which a fire might travel. No less significant would be personal contact with the men and the system guarding the forests, ready to fight fire whenever and wherever it occurs.

A crawler-type tractor and fire-break plow in action offer a combination of enormous power and efficient fire-line construction which is truly spectacular.

It is like watching a detective at work, to see the care with which surveyors uncover evidence of marks and stakes long lost to the unobserving eye.

The jetting of a well by a stream of water forced at high pressure through a small pipe, that a water supply for fire fighting might more readily be had in the forests, has more than once been likened by interested spectators to the wonder, told of old, when Moses smote the rock, and water gushed forth.

These are the substance of tours that make more real, a vision of accomplishments. Every year, counties with advanced forest developments are organizing tours, the better to acquaint their citizens with what is being done to hasten, and to make more certain, that day when this renewed resource of the soil will sustain a balanced agriculture and industry of the future.



*Organized tours acquaint county residents with work progress and forest values.*



# WORK UNITS ACCOMPLISHED BY CIVILIAN CONSERVATION CORPS ON COUNTY FORESTS

1933-1937, Inclusive

1. Number of trees planted -----	32,000,000
2. Acres of trees planted -----	27,744
3. Acres of trees replanted -----	6,580
4. Acres of timber stand improvement --	23,292
5. Miles of truck trails built -----	1,964
6. Acres of fire hazard reduction -----	192,598
7. Miles of roadside cleanup -----	2,387
8. Miles of fire breaks constructed -----	336
9. Miles of linear land survey -----	2,002
10. Permanent corners set -----	450
11. Acres of type mapping and inventory --	1,000,000
12. Miles of telephone lines built -----	2,942
13. Miles of trout streams improved -----	703
14. Number of fish rearing ponds constructed -----	111
15. Number of lakes treated for food or spawning facilities -----	130
16. Acres surveyed for ground water -----	425,000
17. Acres protected against blister rust ----	143,852
18. Number of lookout tower cabins constructed -----	21
19. Number of recreational camp sites developed -----	55

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COUNTY FORESTS OF  
WISCONSIN

RBW7  
C76  
CFW

DOCUMENTS  
COLLECTION



**YOUNG FORESTS GROW WHERE FIRE IS PREVENTED**