

NATIONAL FOREST MOVEMENT IN ILLINOIS *

BY

L. E. SAWYER, *Extension Forester, Illinois State Natural History Survey, Urbana*

INTRODUCTION

Interest in securing the establishment of National Forest purchase units in Illinois was brought out at the first meeting of the Central States Forestry Congress in Indianapolis on December 3, 4, and 5, 1930, where Mr. E. W. Tinker, Regional Forester of the United States Forest Service, mentioned having received requests as early as May 19, 1930, for information on the possibility of the establishment of National forests in Illinois. Upon being assured that sufficient acreage was available, Mr. Tinker consented to send one of the Acquisition men to make a preliminary examination of the areas.

Mr. William L. Barker, Jr., of the United States Forest Service, spent a week in February, 1931, with Mr. E. A. Norton, Assistant Chief in Soil Survey Mapping, and the writer, in making a preliminary examination of possible suitable areas. In addition to covering the ground as thoroughly as possible, Soil Survey maps showing the types of soils, and State Natural History Survey Maps showing the location of stands and types of timber, were used to locate the boundaries of the suitable areas. The offices of the tax collectors in the various counties were visited, and all available information on tax delinquency was secured. Before leaving the State, Mr. Barker interviewed Mr. R. F. Bradford, Director, and Mr. E. E. Duvall, Assistant Director, of the Department of Conservation, who voiced their approval of the movement.

As a result of the examination, Mr. Barker submitted a preliminary report dated March 6, 1931, in which he recommended the establishment of two purchase units having a total area of 936.3 square miles, provided the State passed a satisfactory Enabling Act. On March 4, 1931, Mr. W. Z. Black, a member of the General Assembly from Champaign, introduced House Bill 405, "an Act in relation to the acquisition of lands in the State of Illinois by the United States, for establishing, consolidating, and extending National Forests." On March 26, Dr. T. H. Frison, Chief of the State Natural History Survey, Mr. Tinker, Mr. Norton, and the writer appeared before the Agricultural Committee of the House in behalf of this bill. On April 23, the bill was passed by the House without opposition. On April 28, Dr. Frison, Mr. Norton, and the writer appeared before the Forestry,

* Presented before the General Session at the Twenty-fifth Annual Meeting of the Illinois State Academy of Science, Mandel Hall, University of Chicago, May 6, 1932.

Fish, and Game Committee of the Senate, to sponsor the bill which was passed without opposition by the Senate on May 21. This bill, which was an official invitation from the State of Illinois to the Federal Government to acquire lands for National Forests within the state, became a law when it was signed by Governor Emmerson on June 18.

PROPOSED NATIONAL FOREST PURCHASE UNITS

Location.—The areas which were examined and recommended for purchase are in the southern part of the State. The western one, in Jackson, Union, and Alexander counties, is referred to as the Illini Unit. The eastern, in Pope, Hardin, Gallatin, and Saline counties, is referred to as the Shawnee Unit (Fig. 1).

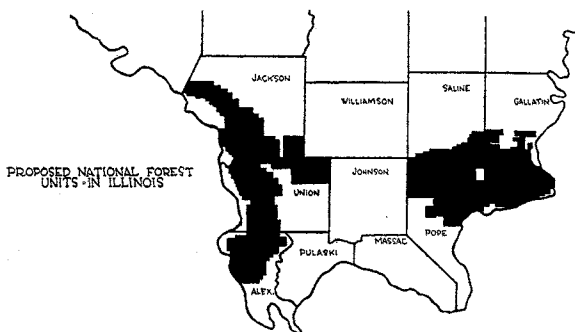


FIG. 1

Topography and soil.—Mr. Norton has described these areas as follows:

"The topography of the land area included in the two proposed National Forest Purchase Units in Southern Illinois is of a general rough, broken, and hilly nature. The region was uplifted in post-Pennsylvanian times and has been exposed to erosion ever since. Maximum difference in altitude is about 600 feet, and there are many precipitous, rocky slopes. About 75 per cent of the area lies on slopes steeper than 15 per cent and is subject to destructive erosion even under a grass cover. Ten per cent of the area is bottomland, subject to frequent overflow. The creek bottomlands are narrow, quite sandy, and inaccessible for cropping. The soils in the large river bottomlands are not only subject to frequent overflow but have a heavy, impervious subsoil which makes underdrainage impractical. The remaining 15 per cent of the area lies on slopes which vary from 3 per cent to 15 per cent and is subject to harmful erosion under cultivation. Most of this has been cultivated at one time or another, but fully two-thirds is now abandoned, either destroyed by erosion or worn out by continual cropping.

"The soils of the area were formed from wind-blown material, known as loess. It was deposited at two intervals during the glacial period on the original rough and broken surface. The earliest deposit was weathered before the latter was deposited, so that when erosion removes the upper layer it exposes the older, unproductive material below. The soils developed under conditions of good drainage and a low water-table and consequently were quickly leached, so that much of the plant food which they originally contained was readily removed. Only a small supply of plant food, held there

by the forest cover, remained in the soils when it was cleared. This was soon washed away by erosion or cropped off by man, and the soil became impoverished.

"Crop yields obtained from two experimental fields operated by the University of Illinois located in that area indicate the worn-out condition of the land. It should be noted that these fields were located on the smoother type of land. At Elizabethtown, in Hardin county, the average yields on untreated land were as follows:

Crops	Bushels per acre
Wheat	16
Corn	11
Soybeans	4
Mixed hay	6
	.17 (tons per acre)

"At Vienna, in Johnson County, the average yields on untreated land were as follows:

Crops	Bushels per acre
Wheat	7
Corn	7
Clover hay	3
	.21 (tons per acre)

"The Vienna field has been discontinued, the conclusion being reached that this land could not, under ordinary grain cropping systems of farming, be made profitable. Treatments at the Elizabethtown field have increased the yields of grain, but seldom was the increase large enough to pay for the cost of treatment.

"The average yields of three crops in the seven counties included in the proposed purchase units, as given by the Crop Reporting Service of the United States Department of Agriculture, are: corn, 26 bushels; wheat, 12 bushels; and oats, 25 bushels per acre. These figures are considerably higher than those from the experimental fields, indicating that the farm land outside the proposed units is more productive than that within.

"The land in this portion of the state has been farmed from 80 to 100 years or more, without much care given to its fertility. Most of it is now worn out because of continual cropping. The cost of reclaiming this worn-out soil for cropping is prohibitive, and much of it is returning to its original vegetative cover by being abandoned and reforested naturally."

Original timbered area.—The seven counties in which it is proposed to establish the National Forest Purchase Units were once completely covered with timber, having a total area of 2,131.18 square miles. Through clearing for agricultural purposes and indiscriminate cutting, the forest area has been reduced to 619.2 square miles, or 29.5 per cent of the original timbered area. According to figures prepared by the Soil Survey, these counties contain an area of 1,146 square miles of land so rough that it will not yield a profit under present systems of management, and 233 square miles of flat land having an impervious subsoil.

Present timbered area.—Although the timbered area of the counties in which the two units lie has been reduced to 29.5 per cent, the units themselves are located in the more heavily timbered parts of these counties. As a result, the Illini Unit is approximately 70 per cent timbered and the Shawnee Unit at least 50 per cent.

Fire problem.—The fire problem on this area is acute. The only portion that can be considered as having adequate fire protection is the 5.15 square miles now held as a State forest. Most of the rest burns periodically. Many portions have been burned over so repeatedly that

they are now practically unproductive. The trees as a rule are fire-scarred, and many of them have been burned to such an extent that they no longer contain any merchantable material. According to the Third Report on a Forest Survey of Illinois, published in March, 1926:

"Forest fires do more damage in this region than anywhere else in the state. An examination of 33 sections in this region in 1921 disclosed that 12 had been partially or completely burned over in the past three years. The reproduction is naturally excellent in this region but fires must be controlled before well-stocked stands can be realized. These rough and broken uplands originally supported a forest of black and white oak, hickory, red oak, tulip, beech, hard maple, black walnut, ash, cucumber-tree, butternut, basswood, elm, Kentucky coffee-tree, black and red gum and mulberry. Customarily, the oaks predominate, yet it is not unusual to find nearly pure stands of beech in the draws and on lower slopes."

Timber stocks.—The original stands contained more than 4,500 board feet per acre, while the existing timbered areas have been so mistreated that according to "a tally of all trees 6 inches and over in diameter on 181.66 acres, they now contain an average of 2,699 board feet per acre and are only one-third stocked."

In recent years this region has been heavily drawn upon for saw logs, ties, and mine timbers, and virtually every species is utilized down to very low diameters. As a consequence, the forests in this region are over-cut, growth does not equal the cut, and the amount of growing timber per acre steadily diminishes. The average acre supports only 37 trees with a volume of 886 cubic feet. The same acre, if fully stocked with trees of the sizes present, should have 108 trees with a total volume of 2,586 cubic feet of timber, or three times the present volume.

The soil of this general region is a productive timber soil and is reputed to produce some of the best-textured white oak in the country. Even under the present conditions of mismanagement, 34 sample plots show that at 80 years of age the trees attain an average height of 73 feet and a diameter breast high of 12.5 inches, and they increase in volume at the rate of 155 board-feet per acre each year. These same stands, if fully stocked and given the proper attention, should be capable of producing not less than an average of 250 board-feet per acre each year—which is considered a good yield.

Illini unit soils.—The soils in the western counties are classified by the Soil Survey into from eleven to thirty types per county. These naturally divide themselves into three groups of sufficient difference for land acquisition. They are (1) bottomland, (2) stony slopes, and (3) upland. Certain areas in the bottomland and upland groups are suitable for farm crops, and these areas are put in a fourth classification, called "Farm Soils."

The Illini unit consists of 481 square miles. Nineteen per cent of this area, or 92.09 square miles is classified as "farm soil"; 75.61 square miles as bottomland that is unfit for agricultural purposes; 5.7

square miles as stony slopes; and 307.6 square miles as upland that is too rough to be cultivated. Most of the "farm soil" is in irregular, more or less inaccessible patches in the broken upland, and crop production and marketing would be expensive, not over 5 per cent of the area being in cultivation at the present time.

Shawnee unit soils.—The Shawnee Unit has a total area of 455.3 square miles, of which 25.1 square miles, or five and one-half per cent, is classified as "farm soil", 18.87 square miles as bottomland unsuited to the production of agricultural crops, 78.08 square miles as stony slopes, and 333.2 square miles as upland that is too rough to be farmed to good advantage with modern machinery. The "farm soil" in this unit is also in small irregular patches that are even more widely scattered than in the Illini Unit.

PUBLIC SUPPORT OF PROPOSED NATIONAL FORESTS

The passage of the enabling act was not all that was necessary to secure the consideration of the units by the National Forest Reservation Commission, as it is the policy of the United States Forest Service not to purchase land in a county unless the people who live there give evidence of their approval. The next step, then, was to determine if the people in the counties involved would be favorable to the establishment of the units. The plans were briefly discussed with the Farm Adviser at Harrisburg, who in turn discussed them with members of the Harrisburg Kiwanis Club. These men called a joint meet at Golconda, May 27, 1931, and requested the writer to attend and explain the entire movement. That evening's meeting resulted in the organization of the Illinois Ozark Reforestation Unit, which has been instrumental in presenting the plan to the civic clubs and other organizations in the Shawnee Unit. A similar program was followed in the Illini Unit.

Meetings were called at centrally located points throughout the units, and the plan was outlined to those attending. The methods of land appraisal and purchase were explained, and the handling of the areas, once they were established, was outlined. One question which was always brought up was, "What will be paid for land?" With the figures given in the annual report of the National Forest Reservation Commission as a basis, the possible purchase prices were discussed. At a meeting in Elizabethtown, Hardin County, on June 1, 1931, when prices of from three to five dollars per acre were mentioned, a man from Karbers Ridge, in the north part of that county, said that it would be too much for some of the land. This was found to be the prevailing attitude throughout the two units, and the general opinion was that all of the land that would be required could be purchased at whatever price the Forest Service considered fair.

Evidence of local approval took the form of petitions addressed to the National Forest Reservation Commission. The county organ-

izations sponsoring the establishment of the units requested petitions first from the county commissioners or boards of supervisors of the various counties. Without exception these men readily signed the petitions, for they said that the land was not bringing in enough revenue each year to pay the cost of keeping up the roads and schools and that the cash refund of 25 per cent of the gross receipts from the Forest Service would eventually bring in far more than the taxes had ever done.

As a result of the action of the Illinois Ozark Reforestation Unit, thirty-three petitions requesting the establishment of the Shawnee Unit have been forwarded to the National Forest Reservation Commission, copies of them having been sent to the Governor of Illinois, Director of Conservation, and to the Regional Forester. Included in these petitions are four from the county supervisors or commissioners, eight from village or city councils, eighteen from civic clubs or other organizations and three from business concerns that are vitally interested in the welfare of that section of the state.

At the present time the success or failure of the whole movement lies in the hands of the National Forest Reservation Commission, which consists of the Secretary of Agriculture, the Secretary of War, the Secretary of the Interior, two Senators and two Representatives. The action that these men take on the petitions will depend largely upon the recommendations they receive from the Chief Forester of the United States Forest Service. The indications are that we cannot be sure of having his recommendations for the establishment of the units. From his standpoint this would be a radical departure from the policies approved by Congress and thus far pursued by the Department of Agriculture and the Commission. The Forest Service offers the argument that acquiring lands for National Forests in Illinois would mean extending the Federal ownership into new regions for purposes not advocated by the Department or contemplated by the purchase legislation. Let us examine this argument.

The Weeks Law, as enacted by Congress March 1, 1911, authorizes the purchase of land for National Forests on the watersheds of navigable streams. The Clarke-McNary Law, as enacted by Congress June 7, 1924, provides for the purchase of lands for National Forests that are primarily adapted to the production of timber. The proposed national forest purchase units in Illinois meet the requirements of both of these laws. The one on the eastern side of the state lies on the watershed of the Ohio and Wabash rivers, and the one on the western side of the state on the watershed of Mississippi River. These streams, being easily of as much importance to the welfare of the United States as any of the streams on the Eastern Seaboard whose watersheds are now being protected by National Forests, should be entitled to the same protection. After once seeing the areas that have been approved and

recommended for the establishment of the two purchase units, an observant person could not conscientiously say that the areas as a whole were suitable for anything except the production of timber.

The United States Forest Service has made the statement that its plan is to purchase 2,500,000 acres, in units of 100,000 acres or more, in the logged-off regions of the Lake States and an equal area in the cut-over pine lands of the South. These units of 100,000 acres or more are to serve as demonstrations, which might be followed by the states and private individuals in the management of similar lands. This program means the purchase of about 5 per cent of the logged-off land and would leave about 95 per cent to the states and private owners. Should two units of 100,000 acres each be established in southern Illinois, it would be approximately 3 per cent of the area of land in the southern 36 counties that is now sub-marginal for grain production. This would be less than 2 per cent of the total land area in the state that is better suited to the production of timber than any other crop. Considering the surrounding states which have a land problem similar to Illinois and in which the two units would serve as demonstrations of proper forestry practices, the two proposed units of 600,000 acres would be less than one-half of one per cent of the total area that should be in timber in these states.

The establishment of the two proposed purchase units in Illinois would represent a solution to one of the problems of the Central States Forest Experiment Station. The report of that station for 1930-31 includes the following statement: "No Federally owned land is available to the Station, except the National Forest now being purchased in Kentucky and the National Forest already organized in northern Arkansas. The Station wishes to take this opportunity to announce the pressing necessity for the establishment of more working centers. Permanent work cannot be undertaken until such working centers are established." Forestry experimental work necessarily requires a long period of time and cannot be undertaken unless the ownership, management, and protection of the land are assured for the required period. Federal ownership of the two proposed units in Illinois would assure the Central States Forest Experiment Station of the permanent working centers desired.

Our forestry problem in Illinois is commonly referred to as a farm woodlot problem, and that is true for the majority of the state, but in the areas in which National Forest purchase units are recommended the problem never was nor is it now a farm woodlot problem. This area is, as a whole, unsuited to agricultural use (grain crops or hay) and for that reason is not different in this respect from the semi-mountainous regions or the pine lands of the Lake States and the South. Illinois is not receiving any part of the federal funds appropriated for the protection of forests from destruction by fire, for the Forest

Service has removed Illinois from the list of states that were receiving federal cooperation for fire protection purposes. At the present time Illinois has no cooperative nursery whereby it can take advantage of the federal money available for the production of nursery stock for reforestation purposes.

The establishment of one or more National Forest Purchase Units in Illinois would be of untold value to the state and to the central hardwoods region. They would serve as demonstrations of correct forestry practices. In addition, the purchase of this land would benefit many of the people living within the proposed units and the counties within which the units lie. Many of the people living back in the hills in the proposed units have lived there all of their lives. The productive capacity of the land has decreased to a point where they can no longer eke out an existence, and they have no funds with which to go elsewhere. The purchase of this land by the Federal Government would enable them to leave their worn-out lands and migrate to a more prosperous section of the state.

Abandonment of title by tax delinquency is increasing at an alarming rate. At the time the preliminary examination of the proposed areas was made in February, 1931, the total area of land forfeited for the non-payment of taxes in the counties in which the units are located was 25,320 acres, distributed among them as follows: Jackson, 2,900 acres; Union, 3,000 acres; Alexander, 9,200 acres; Gallatin, 8,900 acres; Pope, 600 acres; and Saline, 640 acres. These figures are only for the portions of the counties included in the proposed purchase units and not for the counties as a whole. While figures from the 1931 tax sales are not available for all of the counties, those available are very conclusive evidence that the amount of forfeitures is increasing. In Alexander County alone, in the portion included in the proposed unit, the area of land forfeited for the non-payment of taxes in 1931 had increased to 24,469 acres, an increase of 15,269 acres in one year. In Jackson County the forfeitures increased from 2,900 acres in 1930 to 12,003 acres in 1931.

Unless the fire hazard is extremely great, National Forests are open to the public for recreational purposes as long as the Forest Service regulations are obeyed. Areas suitable for summer home sites can be leased at a nominal charge, agricultural lands can be farmed under a special use permit, and except for areas that may be designated as State or Federal game preserves, National Forests are open to the public as hunting and fishing grounds. More than thirty million people registered as visitors to National Forests in 1931. If the purchase units are established in southern Illinois, they will furnish recreational areas for thousands of Illinois people.

With the large reduction being made in the Federal appropriations for acquisition work, it would, of course, be impossible for the pur-

chase of lands in these proposed units to begin at once, but when the general economic conditions of the country return to normal and money is again made available for the acquisition of National Forest lands, Illinois should have one or two units already approved by the National Forest Reservation Commission, in which the purchasing of land could begin at once. The lands recommended for purchase do lie on the watersheds of navigable streams and are better suited to the production of timber than any other crop. The conditions existing on the proposed purchase units are similar to those in Kentucky and Arkansas where units are already established. The establishment of these units would not be a departure from the policies of the Department of Agriculture and the National Forest Reservation Commission if the lands already purchased in Arkansas and those being purchased in Kentucky fulfill the specifications as interpreted by those bodies. Illinois can have National Forests if every interested individual and organization will make it a point to bring the matter to the attention of senators and representatives and other influential men in Washington. Just demands, coming from a state that pays as large a percentage of the Federal taxes as does Illinois, cannot long be ignored, and Illinois will have the National Forests to which she is entitled.