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A RECREATIONAL LAND USE PLAN FOR A UNIT OF THE WAYNE NATIONAL FOREST, OHIO

by

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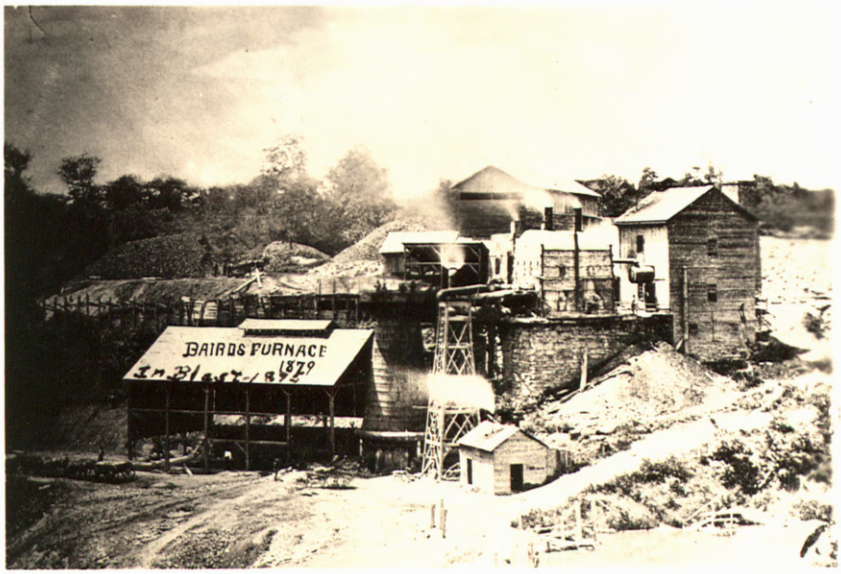


Baird Furnace

In Operation--1879

Copy of only known existing photograph

ACKNOWLEDGMENTS

Grateful acknowledgments are here made for all the assistance rendered me in the preparation of this paper by officials of the Forest Service, and by members of the Ohio Department of Conservation.

TABLE OF CONTENTS

LIST OF MAPS AND FIGURES

I. INTRODUCTION

In the growing complexities of modern day living, increased leisure time to the majority of the population of this country has become at once a blessing and a menace. It is a menace in the respect that many people have never learned to use leisure time in a way that will be constructive, and a blessing in that it allows us for a time to forget those complexities, and to return to them later with renewed enthusiasm and vigor.

The development of our modern industrial system has been the direct cause of this increase in the amount of our leisure time, and its accompanying demand for recreation with which to fill it. This development is still continuing at such a rapid pace today that few of us would care to predict to what extent it will go and what course the increased use of leisure time will take in shaping the pattern of our lives.

The recreational forms to which our leisure time have been directed have undergone a development as radical and pronounced as that of the industrial system itself. In the days of the early settlement of this country, few indeed were the hours of leisure time which any member of the family had to devote purely to recreation. And indeed

most of the recreation was by necessity combined with the accomplishment of a necessary piece of work, as for example the house raising bees of our early pioneer settlers when all the neighbors for miles around would come to help a newcomer place the logs of his cabin. This accomplished the dual purpose of getting a settler's cabin finished faster and better than he could possibly do alone and at the same time giving them the opportunity for mutual exchanges of ideas and problems and the chance to become acquainted with one's neighbors who possibly lived too far away to see only on such occasions as this.

It is thus apparent that it is a far cry from the forms of recreation that were the diversion of those early settlers, to the wide variety that we of this age can and do, indulge in. Indeed, Stuart Chase, in his article on "Play" lists over forty of such forms, many of which require mechanization for their fulfillment and many of which do not.[1]

Not of inconsequential to our well being today is the trend toward healthy, invigorating forms of outdoor recreation. A definite urge toward outdoor forms of recreation is beginning to dominate our desires for the use of leisure time, necessitated by the highly mechanized systems of our present society, which some mechanization

[1]Whither Mankind. Edited by Charles A. Beard, 1929, p. 337.

makes possible many of those outdoor recreations within the limits of our leisure time. With the majority of our population today living in large cities with its resultant strain on the nervous system, it is natural and well that more and more of those people should turn to the out-of-doors away from the cities in order to ease and relieve this strain and to return to them with a body and mind refreshed and renewed. This, indeed, is the essence of the word recreation, or as a matter of speaking, re-creation, as it will be used throughout this paper.

That this use of leisure time in the areas apart from our cities has developed into something economically as well as socially important to society as a whole is brought home to us by the fact that in the Lake States alone in 1938, tourist expenditures amounted to $444,600,000.[1]

Recent years have seen the development of many organized recreation areas on rural lands planned and executed by governmental agencies, chief among which are the Park Service of the Department of Interior, and the Forest Service of the Department of Agriculture and state forestry and conservation departments, and, more recently, by counties, townships, and cities. The developments range from the simplest type of facilities to those so elaborate they almost defeat their purpose by tending to

[1]National Resources Committee, Regional Planning, Part VIII, Northern Lake States, May, 1939, p. 37.

bring us into contact again with those same humanized effects from which we are attempting an escape.

The first national park to be established was Yellowstone set aside by Congress in 1872 for the purposes of protection and use. The National Park Service was established in 1916 as a bureau of the Department of the Interior for the administration of these areas. In 1938 there were 24 such major parks, 1 national historical park, 11 national military parks, 67 national monuments, 10 battlefield sites, 11 national cemeteries, and 4 miscellaneous national memorials, a total of some 15,000,000 acres.[1] It is to the avowed purpose of maintaining these parks in as nearly a natural and untouched state of preservation as possible, commensurate with the demands made upon them by the thousands of visitors who come to them every year, that the Park Service has set itself.

A more recent function of the Park Service has been the establishment of numerous recreational demonstration areas, "organized, developed, and administered by the National Park Service in cooperation with the State Park Authority as a demonstration in better land use, particularly of the need for extensive recreational areas within reach of the majority of the population. These acres will be transferred to the States as soon as legislation will permit

[1]Recreational Use of Land in the United States, Part XI of Report on Land Planning, 1934, p. 69.

and the States provide for their administration, operation and maintenance."[1]

Only in more recent years, has the U. S. Forest Service come to recognize the inevitable and just use of its large forest preserves for recreational purposes. Commensurate with the policy of the Forest Service as stated in the Forest Service manual ". . . . to provide for the use of all resources which the forests contain in the ways which will make them of the largest service."[2], recreation has now assumed an equal position in the correlation with other established uses of the forest.

The objectives of the national forests in the use of their forest resources for recreation are stated in the following excerpt from the recreation manual:

> The national forests include approximately 8 percent of the land areas of the United States. The finest opportunities for non-urban recreation occur on publicly-owned forest lands, and the great majority of such areas are in national forests. The national forests also contain much of the country's outstanding scenery, a large share of the finest fishing and hunting possibilities, and approximately three-fourths of the remaining potential forest wilderness areas. Over 12 million visits were paid to the national forests in 1937 to enjoy these and other outstanding recreation assets. Consequently the management of the recreation resources of the national forests has become a major consideration in national forest administration.[3]

[1]Waterloo Recreational Demonstration Area, National Park Service, Distribution Pamphlet.

[2]U. S. Forest Service, Forest Service Manual, Washington, D.C., p. 3-A.

[3]U. S. Forest Service, Forest Recreation Handbook, Washington, D.C., 1939, p. 5.

The majority of the states under the direction of their conservation and forestry departments in recent years have been producing notable results in the formation of recreational areas within their respective states. Their chief value has been not in the preservation of superlative beauty but in the furnishing of recreational facilities at close hand for everyday use to the centers of population.

Outdoor recreation is thus seen to be assuming larger and larger proportions in the scheme of our present day living. It is a healthy trend, and one which should be encouraged, used judiciously, and enlarged to accommodate all persons who desire this form of recreation.

OHIO

LAND DIVISIONS

Glacial Boundary

Geological Boundary
East: Sandstone - clay soils
West: Limestone Soils

Great Lakes - Ohio R. Watershed

Unglaciated

II. HISTORICAL BACKGROUND OF LAND UTILIZATION

The area under consideration for recreational development to which the remainder of this paper will be devoted, lies as shown in the accompanying map on the drainage of Salt Run in Monday Creek Township of Perry County, Ohio. It falls just within the boundary of the unglaciated faction of the state, in the general region draining southward to the Ohio River.

The glaciated or more northern faction of the state represents the better agricultural soil, the soil having been mellowed by the pulverizing effect of the glaciers, and so here we find the extensive forming and dairying industries coupled with large industrial developments, which have rightly made of Ohio a large producer of foods and goods for the population centers of the last.

The unglaciated faction is now a maturely dissected upland region, known as the Appalachian Plateau. The present level of the ridge tops have been formed by the general uplift of the region and its subsequent erosion, so that it is now characterized by long, flat topped ridges with deeply indented gullies. To this can be attributed the beauty of the country for it has none of the monotony of a flat surface, nor the harsh, rugged outline of youthful

mountains, but instead its smooth, softened surface imparts to the landscape gracefulness and restfulness.

The earliest known inhabitants of the Ohio River valley and its environs were the Mound Builders about whom much conjecturing has been done but relatively few facts established. However, it is now believed by archeologists that the Mound Builders and Indians were Mongolians who arrived on this continent by way of the Bering Straits very soon after the disappearance of the glaciers some 12,000 to 15,000 years ago. Whatever their origin, their presence in Ohio is still evidenced today by numerous mounds erected of earth and stones which still remain as a memorial to their existence. Record show that there were two such mounds on the hills overlooking Salt Run and within the boundaries of the proposed recreation area but all evidence of such was completely destroyed by the widespread strip mining of that section.

Long before the advent of the white man, the Indian inhabitated these lands, and although he probably did not make a permanent home anywhere in Perry County due to the lack of navigatable streams, we can be certain that for him it must have been a pleasant hunting grounds. Indeed, Salt Run itself derives its name from the presence of numerous salt licks to which buffalo were certainly attracted, and so we may surmise that many of them were hilled here. And in later years when the approaching tide of white men had pushed as far west as southeastern Pennsylvania, the

main war path of the Shawnee tribe led across Salt Run, where it is said they always camped long enough to kill their buffalo, and then push on to make war on the white settlements.

The first white man to set foot in Perry County was Christopher Gist, sent by Washington as an agent of the Ohio Land Company in 1748, but none of this county was included in the Ohio Land Company's purchase.

Shortly after the Revolutionary War, about 1788, the rich and fertile Ohio valleys became the goal in the western movement of the pioneers, relentlessly pushing back the Indians who contested fiercely this invasion of their hunting grounds. As seen through the eyes of their earliest settlers, the country at once must have been to them a paradise of beauty and a wilderness frought with unknown and unseen dangers.

And since our impressions today of that wilderness must be garnered from the writings of those who saw it and wrote what they saw, the following quotation is from the pen of E. S. Colborn, whose family were among the early pioneer settlers of Perry County:

> When the first settlers arrived, the country in general was well timbered. The timber consisted of oak, hickory, poplar, walnut, ash, elm, sugar maple, beech, gum, chestnut, sycamore, wild cherry, dogwood and some other varieties. Many of the oaks were very large and of a fine quality.
>
> Wild beasts were not scarce when the early settlers came. Bears, deer, panthers, wild-cats, wolves and

> catamounts roamed at will through the dense forests with none to molest them or make them afraid. Bears, indeed, lingered around long enough to capture fattening hogs from pens and to eat peaches under trees planted by the pioneers. Foxes, coons, opossums, ground-hogs, rabbits, squirrels and other small animals abounded. Wild turkeys were plentiful and the hoot of the owl, the cry of the whippoorwill, and the call of the pheasant were familiar sounds in the ears of the men and women who left civilization behind them and went forth to battle for existence and homes in the wild forest.[1]

The forest to those early settlers represented a serious problem because it stood in the way of their cultivation of the land upon which their very existence depended. Consequently its borders were constantly being pushed back by cutting or burning the timber as fast as the arrival of new settlers or the zeal of the established ones demanded more land. The cutting of timber continued until at one time before the Civil War it had developed into a large industry, and Ohio ranked among the top in the states producing hardwood lumber. Oak, although most plentiful of all and the largest, was probably never very popular with the pioneers because it was so difficult to split and so before the days of the sawmills, other and more easily split trees were used first. Tulip poplars with their long, clean straight boles and enduring properties were the prime favorites for cabin construction. Chestnut grew plentifully on the tops of the ridges in every township and each fertile valley had abundant walnuts and sycamores growing in its rich soil.

[1]E. S. Colborn, History of Fairfield and Perry Counties, 1883.

Monday Creek Township, so named after the two principal streams flowing through it, was first reported settled in 1815 by one Timothy Terrill at the time when the Township was still a part of Fairfield County. It was organized as a Township unit in 1823 and from that point on, its development was more rapid. The first major road in the general locality was known as Zane's Trace, affectionately named after the old settler, Ebenezer Zane, and its location is still a point of contention and interest among the older inhabitants of the region.

The industrial development of the Township had its inception in the establishment of grist mills, at that time called "corn crushes," on every stream. And in view of the present depletion of the major portion of the timber resources of the area and our recently awakened interest and alarm at this situation, it is interesting to note that the historian, Clement L. Mortzolff, in 1902 recorded that the grist mills had all but disappeared because there was not enough water in the streams due to the cutting of the timber.

The earliest pioneers were totally ignorant of the rich coal fields beneath their lands and which at a later date were to assume such an important part in the economic picture of the region, and so the use of wood for fuel was the prevalent custom until about 1815 with the discovery of coal. The coal era began in 1870 and from that time

until now the burning of coal for fuel is so widespread that most of the housewives today have never used anything else, and there exists no market whatever for wood for that use.

About the time of the Civil War, the manufacture of pottery was begun in Monday Creek Township and vicinity and those connected with the business pointed with pride to the fact that the clay there was considered the best in the world. Today the use of that same excellent clay has been turned to the more profitable manufacture of bricks and tile.

Another important factor upon which the economic welfare of the region today is to a large extent dependent, began in August of 1891, when the Toledo and Ohio Central Railroad drilling for water, struck the first oil at a depth of 1507 feet. Today, to one visiting the region for the first time, his first impression is usually the presence of hundreds of huge derricks which dominate the landscape on all sides, bearing testimony to the fact that oil here is contributing its part to the lifeblood of the population.

Also an important economic factor was the discovery of natural gas about the same time and in the same way as the discovery of oil.

In 1884 the now famous new Straitsville mine fire was started, and since in very recent years it has attracted thousands of visitors to it every year, it merits brief discussion here because of its close proximity to the proposed

Kehota recreation area. In that year a band of striking miners, as the story goes, lighted a loaded coal car and pushed it down into a mine where it ignited the underground seam of coal and has been burning continuously from that time until now.

Where occasionally the seam has outcropped close to the surface of the ground, flames and smoke can be seen bellowing out of the earth, a spectacle which has attracted the many visitors to the area to see it.

In 1936, the Works Progress Administration began their project to central the fire and completed it in December of 1939. According to their estimate, the fire destroyed $55,000,000 worth of coal, and that in the next 200 years if left unchecked would have burned through coal seams to the Ohio River, 40 miles away, and to Coshoctin, 60 miles away.

Their method of control was to dig tunnels which were filled with clay, being about 14 feet thick and 8 feet high. Two of these tunnels are in Perry County and one in Hocking County, confining the fire to an area of about 30 square miles.

Thus in time the fire will consume itself by burning all the material up to the walls and stopping. Undoubtedly for some time, however, the fire will continue to attract many visitors which will have some influence on the average attendance at the Kehota recreation area.

While we have considered the development of the four major industries most important to the region today, we will now review one which from 1875 until almost the turn of the century became the main source of livelihood for the people of that region but which has now so completely passed from the picture that little remains ever to mark the era. It was at this time that the smelting of iron was developed and at its peak there were 69 charcoal furnaces in southeastern Ohio, a part of the Hanging Rock district, which became the greatest iron producing section of the United States at that time. In order to furnish material for the charcoal demanded by those furnaces and for the coal mines which were by this time widespread, the wholesale destruction of timber was indulged in, soon reducing the timber cover over a large area. Frequent burnings, and over grazing also did their part in this destruction.

In addition to those furnaces smelting iron by the use of charcoal, a new type of furnace was engineered about this time in which coal was used. The pioneer furnace of this type was the Baird Furnace, constructed and operated by Samuel Baird in the northeast corner of section 14 on a small branch of Salt Run and within the recreation unit boundary. Although the entire furnace was dismantled in 1894, Baird Furnace being eminently successful was the incentive for the building of 15 other stacks of similar nature in the Hocking Valley. The furnace today is still

talked about among the old pioneers about the district who still vividly recall the days of its operation. And since the old furnace and its tramway figure so prominently in the present proposed development of Salt Run into a recreational area, as the outstanding example of an absolete but historically important industrial era, specific plans for the marking of its site are treated in part four of this paper.

The information about Baird Furnace as given in the paragraphs following as well as the only known existing photograph of the stacks in operation in 1879, are through the cooperation and help of Mr. Wilber Stout, State Geologist of Ohio, and Mr. J. M. Barry of the Greendale Mineral Company at New Straitsville, Ohio, whose interest in these old furnaces has prompted them to collect a great deal of historical and technical data concerning them.

Baird Furnace went into blast, as already stated, in October 9 of 1875, and being a long shot from the conventional type of furnace caused considerable comment.[1] Mr. D. W. Roy in 1877 comments as follows:

> Samuel Baird is preeminently the founder of this, the first stone coal furnace of the district. It is to be run on native raw coal, native ore, and native limestone. To Mr. Baird belongs the whole credit for it was a great venture. Indeed he was so very derided and sanguine of success and was so determined to live on his own resources and thus to be self-supporting that he went away three miles back from the railroad to build his work. A furnace man all his

[1] Mr. Wilbur Stout and J. M. Barry

life, he knew what he was doing. Although much hooted at and ridiculed by furnacemen generally, and although characterized in advance on every hand as an absurd blunderer, requiring only so much time to annihilate the old pioneer and to wipe him and his possessions into ruin, yet he, undaunted, completed his furnace under the adverse circumstances consequent to the great depression in the iron business and contrary to expectation, he made the Baird Iron Works a decided success both in making good iron and in making good money.

The furnace, said to cost $45,000, was built partway up a small hollow and against a steep bank so that the top of the stack was about 40 feet below the coal stratum thus permitting the fuel to be brought down a small incline from the mine directly to the top of the stack. All the stock for Baird Furnace was taken directly from the nearby hills. The fuel used is described as coming from the Middle Kittanning or No. 6 seam, thus making it the first of the district to be used in the manufacture of iron, and was proved to be one of the few bituminous coals of the country that could be used successfully in the natural state for reduction of ore.

The ore used was known locally as the Baird seam, and was the same seam drawn upon by the charcoal furnaces of the Hanging Rock district. At first operation, limestone was quarried about three miles west of the furnace but after the construction of the tramway, Columbus limestone was substituted resulting in a saving of cost. It is interesting to note the cost of making a ton of ore by this method, and the figures given below are representative of 1876 operation.

Coal, 2 3/4 tons at $.50 per ton	$1.38
Ore, raw, 2 3/4 tons at $2.25 per ton	6.18
Limestone, 3/4 tons at $.30 per ton	.98
	$8.54
Labor	$ 3.00
Repairs	1.00
Interest and discount	.50
Cost of operation and upkeep	$ 4.50
Total cost of production	$13.04

At this time in spite of the depressed prices on iron in the United States, the market ran from $21.00 to $30.00 per ton, which after deducting for freight, still left a considerable profit. The labor required to supply the raw materials and to operate the furnace was as follows:

Operation of furnace	24 men
Mining of ore	48 men
Mining of coal	10 men
Quarrying of limestone	5 men
Total	87 men

Thus a fair sized village built up around the furnace and a company store and doctor were provided for the company's workers.

Until 1883, there was no railroad connection at the furnace, the iron being hauled over bad roads by cattle to Gore Station, about three miles away on State Highway No. 75.

The tramway was constructed in 1883 at a cost of $21,000 from Oreville to the furnace and followed Salt Run. The road was graded so that the loaded cars could be sent down by gravity and the empty cars easily hauled back up again by cattle. The rails long since removed, the tramway bed is still present and in places juts up as high as twenty five feet above level presenting a sore spot in the present landscape. Recommendations for its disposal are also contained in part four of this paper.

Samuel Baird died at the furnace in November, 1877 and the operation of the furnace was then assumed by his son, Frank Baird who ran it as successfully as his father until it was dismantled in 1894. Frank Baird lived until the time of his death in fairly recent years at the old Baird home near the northeast corner of section 14. The house is now almost completely down and like the site of the old furnace bears mute testimony to the passing of an industrial era.

October 1 of 1916 saw the beginning of the extensive strip coal mining of Perry County by the Kehota Mining Company, formed by Keiffer, Holmes and Taylor, from whence the name Kehota came. This operation continued until the spring of 1921, during which time an area 1/2 mile wide and one mile long was completely overturned. Using enormous shovels for removing the dirt which covered the coal from 12 to 70 feet, 20,000 yards of dirt each day is said to

have been removed, while three small loading shovels were used to remove the coal, and five steam engines and fifty cars moved the coal from the shovels to the tipple.

The overturned dirt was left to lie in piles and so today the scene presents one of utter destruction in those places, and stands out as a sore-thumb in the landscape. It is interesting to note that certain states, and notably Illinois, have now passed laws forbidding the leaving of stripped lands in such condition and requiring procedures facilitating their rehabilitation such as planting of trees. The fact that such practices are feasible, should make it possible to eliminate a blight from the landscape, and to prevent these destructive practices being followed again.

And while these industrial developments described above were taking place, equally drastic, too, in its far reaching effects upon the lives of the people who were to live in the region in the years following 1900, were the demands made upon the soil. With the ever increasing tide of settlers moving in upon the land, and the forested cover being pushed farther and farther back, more and more of the steep hillsides were being plowed for cultivation. This resulted in the years following of the rich top soil being carried away and extensive and serious gully erosion inevitably the result. And with this loss of the fertile soil went a large measure of the opportunities and the

chances to make a living off the soil, resulting in the general impoverishment of the people.

The economic conditions in the region by 1930 are made graphically clear to us by these results of investigations of the Soil Conservation Service in their development of the Zaleski Land Utilization Project in Vinton County, which is typical of the region:

> Economic conditions were at a low ebb. From 1880 to 1930 the area in operating farms decreased from 230,000 acres to 152,000 acres, or less than 60% of the land area of Vinton County. In 1930 less than 25% of the road mileage was improved, with 15% abandoned and the balance poor dirt trails that were practically impossable in winter. Tax delinquency was increasing alarmingly. In 1930 more than 18% was delinquent. Public revenue in 1929 was $322,887 for the support of state and local government. The cost of local government was $442,205. State aid made up the difference between receipts and operating expenses.
>
> School costs per pupil varied from $170 in one school with 7 pupils to $35 in another school with 37 pupils. Due to the declining and scattered population and low tax base it was practically impossible to support public institutions at standards generally approved by the state.[1]

An even more alarming picture was being painted in other portions of the region where conditions were present which tended to produce floods. As early as 1884 a major flood occurred in the Muskingum area which is the largest watershed in the state. The largest and most disastrous on record occurred here in 1913 with numerous smaller floods occurring at intervals up to the present time.

[1]Zoleski Land Utilization Project, Vinton County, Ohio, Soil Conservation Service, 1939.

The great economic depression of the early thirties was especially pronounced in its affects upon southeastern Ohio. All of its major industries and especially its coal and oil markets were dealt a heavy blow resulting in widespread conditions of unemployment and social insecurity.

This is a bleak picture, indeed, to paint of a people and a region which only a short two hundred years ago saw the advent of white men into a country abounding with vast resources of all kinds.

Is anything being done, can anything be done, to alleviate these conditions? The answer to both these questions is yes. There is at work today in the region the coordinated activities of numerous governmental agencies, federal, state and local, who have gained the cooperation of many foresighted individuals in starting a long time far-reaching reconstruction program. There is space in this paper to mention only the largest and most important of these measures of reconstruction.

The Wayne Purchase Units were established by the United States Forest Service in 1935 embracing nearly a million and a half acres of southeastern Ohio. Within this area, lands are now being purchased which are primarily suitable for timber production, watershed protection and all

conservation uses. The purposes and objectives of the National Forest are as follows:[1]

> The establishment of a National Forest in this region has as its primary objective the management of the forest land in such a manner that it will raise a continuous forest crop of timber products, exerting the fullest beneficial influence toward the rehabilitation of the soil and wild life; toward the prevention and curtailment of soil erosion; and toward the rehabilitation of the depressed rural population.

Coordinated in its program are the activities of erosion control, planting of trees, timber stand improvement, hunting and fishing, recreation, fire control and improvements of many kinds. And so once again the forests are to come back to the hills and valleys of the region, contributing their part to its rehabilitation.

To cope with the flood situation in the Muskingum area, in 1933 the Muskingum Watershed Conservancy District was credited as a public corporation furnishing an example almost without parallel of many agencies working together on broad and far reaching conservation plans.

The more important phases of their work is summarized as follows:

> Among the major examples of man's attempt to bargain with nature in the Muskingum Valley, visitors may see:
>
> A $43,500,000 system of 14 great flood control and water conservation reservoirs, now practically complete.
>
> An extensive soil conservation and correct land-use program, including four "watershed" projects, three

[1]"Facts About the Wayne National Forest Purchase Units," U.S.D.A. Forest Service, Forest Supervision, Columbus, Ohio.

experimental projects, and a climatic research center, not to mention erosion-control work of 14 C.C.C. camps since 1933.

One of three National Youth Administration camps in the nation--a 200 youth camp engaged in forestation and development of recreational facilities in the reservoir area.

A program of wildlife restoration and game and fish management in all the reservoir areas by the Ohio Division of Conservation, the U.S. Bureau of Biological Survey, and the U.S. Bureau of Fisheries.[1]

Two additional agencies to these mentioned above, the Ohio Agricultural Experiment Station and the Ohio Agricultural Extension Service, have contributed to a large degree to the soil conservation activites of the project.

Except for the water reservoirs, the project is far from completed today. There remains much to be done before man will have properly gained control once more over the destructive forces of nature. Perhaps he never will, but such a diversified conservation plan as this, if it accomplishes nothing else, will at least set the minds of men thinking along these lines of endeavor which can best solve the problem.

Another positive program of action has been initiated by the state forestry division which by 1938 had acquired over 60,000 acres of lands to be managed for forestry purposes, and to be improved in all ways possible by

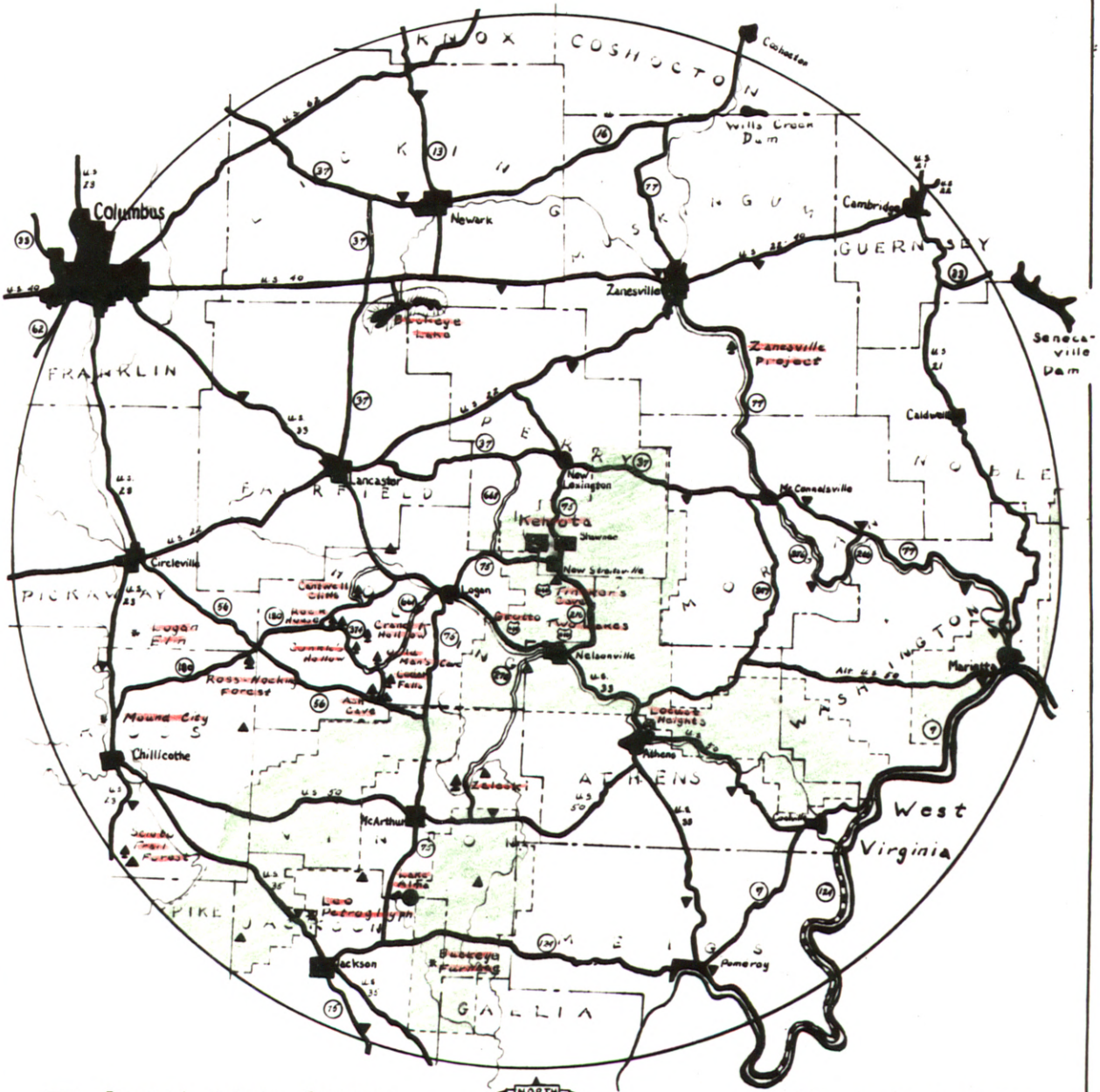
[1]Working Together In The Muskingum Valley, Muskingum Watershed Conservancy District, p. 1.

planting, fire control, cultivation of wildlife, and the establishment of forest parks for recreational uses.

In the rehabilitation of agricultural lands in south eastern Ohio, the Resettlement Administration, the Agricultural Adjustment Administration and the Soil Conservation Service together with the State Agricultural Experiment Station, State Division of Conservation, and State College of Agriculture have gone far in tackling the problems of soil maintenance and correct land use.

The adjustments necessary to affect a program of reconstruction and proper utilization of lands, to restore depleted resources, to improve the social and economic status of the peoples of this area, are complex and far reaching in their ramifications. Through the corelated activities and researches of many agencies, through education and dissimenation of knowledge, and finally through the wills and desires of men themselves to improve their present conditions, may come the attainment of these ends.

RECREATION SURVEY

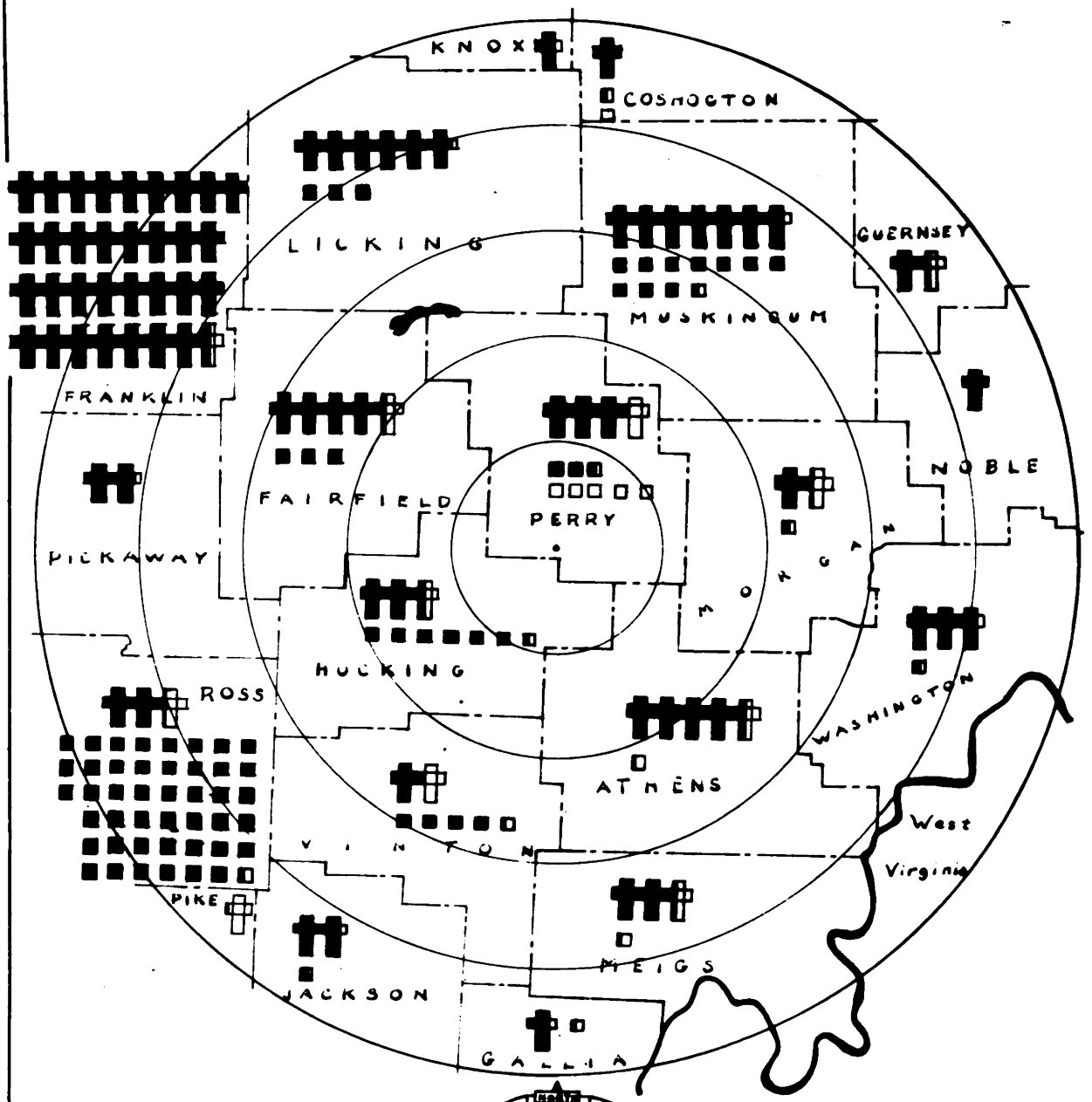


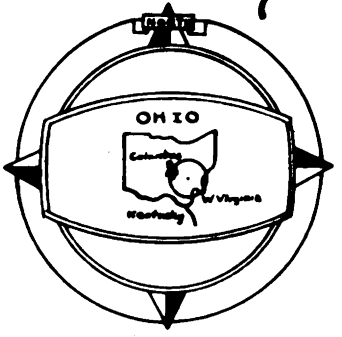
- Proposed Kehota Project
- Roadside Parks - Highway Department
- Forestry Department State Forest Parks
- Conservation Dept. State Parks
- U S Forest Service Recreation Areas
- Points of Interest
- Private Areas
- Fire Lookout Towers
- National Forests, Actual And Proposed
- Hard Surfaced Highway
- Stone or Gravel
- Earth or Badly Worn Surface
- Principal Towns

0 5 10 20 30

Scale - Miles

POPULATION AND RECREATION





Population

10 Mile Radius:	17,000
20 Mile Radius:	81,000
30 Mile Radius:	200,000
40 Mile Radius:	330,000
50 Mile Radius:	760,000

Legend

- 10,000 People
- 500 Acres of Recreation, Proposed
- 500 Acres of Recreation, Actual

Note: Acreages by Administrating Agencies

0 5 10 20 30

Scale - Miles

III. JUSTIFICATION FOR THE DEVELOPMENT OF THE KEHOTA RECREATION AREA

As was pointed out in part two of this paper, the use of wild lands for recreation is but one part of a coordinated program designed for better land utilization. That it is an important part is demonstrated by the fact that it presents an opportunity to use those wild lands for a purpose for which they are by nature especially suited, and which will at the same time add to the enjoyment and social welfare of the people inhabiting them.

Southeastern Ohio with its large areas of cheap land, its forests and potential forested areas, and its concentrated populations of the low income class, offers an ideal area for the development of recreation for public use.

In considering the feasibility or justification for the development of the Kehota tract, it is necessary to study the density of population, and the already existing facilities for recreation which they now have at their disposal within an area immediately surrounding it and the needs of which it is conceivably intended to serve. Here it must be pointed out that the beauty and general attractiveness of the Kehota tract will never be of the outstanding or superlative type afforded by the more

natural landscape of portions of the Lake States or the gems of natural phenomena as offered by many of our National Parks. For this reason the Kehota area will but serve those people of the immediate vicinity who desire the use of such an area and who have neither the time nor the money to travel great distances for recreation. Thus a use radius of fifty miles has been set up surrounding the Kehota tract which distance probably closely approached the maximum which people are willing to travel to reach the recreation area of their choice where they can find the particular kind and facility for enjoyment which they want, within the limits of a day or a weekend. For this reason population with relationship to the outdoor recreations which they may now enjoy will be studied only within that radius in the scope of this paper. It is to be realized that many additional developments exist outside of this area which are available to persons living within the radius, and the more extensive of these will be briefly discussed in addition.

The number of people as determined by the last official census of 1930 living within this 50 mile radius are as follows:

10 mile radius	17,000 people
20 mile radius	81,000 people
30 mile radius	200,000 people
40 mile radius	330,000 people
50 mile radius	760,000 people

The existing recreational developments for which definite physical facilities have been provided occupy a total of approximately 40,000 acres according to figures furnished by the administering agencies. The unequal distribution of these developments is apparent when you consider that 57 percent of that total is located in a part of Ross County alone.

The next consideration there is to classify each individual development in this radius according to the agencies developing or now administering it, and also as to the physical attractions, facilities, or special features which each offer to the recreation seeker:

A. Areas administered by the National Park Service

1. Mound City--57 acres

Mound City is located on the site of old Camp Sherman, and consists of a city of twenty-five mounds enclosed by a low earthworks. This furnishes a splendid opportunity to see the workings of the ancient Mound Builders.

Facilities for picnicking and camping along the Scioto River are provided.

B. Areas administered by the U. S. Forest Service

1. Two Lakes Recreation Area

A small earthen dam has been built forming two small lakes on an area convenient to Nelsonville. Thus facilities are provided in the

forms of bathing, picnicking, hiking, fishing, water and sanitation, accommodating about 100 people daily.

2. Locust Heights

This is an area still under construction within the city limits of Athens and adjacent to the Hocking Valley Ranger Station. A small lake is to be created, furnishing facilities for bathing, hiking, and picnicking, water, sanitation, and power for about 300 people daily. Designed primarily to serve the needs of Athens for immediately convenient swimming and picnicking.

3. The Grotto

The major attraction is an interesting rock ledge in a beautifully wooded ravine. The area offers picnicking and hiking advantages, as well as water and sanitation for about 50 people daily.

4. Tinker's Cave and Shawnee Tower

Here a delightful picnic area is combined with an administrative fire tower site. Tinker's Cave is an overhanging rock, which forms a shallow cave. There is an extensive area of wooded country surrounding the picnic grounds which are ideal for hiking. The picnic

facilities will accommodate about 100 people a day.

C. Areas administered by the Ohio Division of Forestry

1. Zaleski Land Utilization Project

This project is one presenting a demonstration in better land use. In 1935 the Soil Conservation Service with the assistance of the Ohio Conservation Department and the Ohio Division of Forestry began with the transfer of families out of the area to places where they had better chances for employment, and the construction of a recreational area.

The project now completed has been turned over to the Ohio Division of Forestry for administration, contains some 19,000 acres and furnishes one of the few extensive recreation areas in Ohio adjoining a forested area. A 125 acre lake has been constructed around which provisions have been made for swimming, boating, hiking, motoring, picnicking and vocation cabins. In addition a game refuge has been set aside.

2. Hocking State Forest

Within the Hocking State Forest there are seven state parks known collectively as the Hocking Parks, located in the Hocking hills southwest of Logan, and of such rare and

universal beauty as to make them Ohio's best known and beloved spots.

Here the visitor sees unusual rock formations, waterfalls, rocky cliffs and a virgin hardwood forest of hemlock, tulip poplars, yellow birch and beech, pines and many others making it a beautiful spot of carefully preserved beauty.

Facilities may be found at Cantwell Cliffs, Rock House, Crane Hollow, Conkle's Hollow, Old Man's Cave, Cedar Falls and Ash Cave for picnicking, camping and many delightful hiking tracts.

3. Scioto Trail Forest

Here a lake has been constructed which will provide accommodations for swimming, boating, picnicking and camping. In addition, trails and roads provide ample access to an area of hardwood forest.

4. Ross-Hocking State Forest

This forest in northeastern Ross county, of about 19,000 acres, provides facilities and attractions that are the same as those existing at the Scioto Trail Forest, with the addition of a group camp which will accommodate 150 campers.

5. Southeastern Ohio Project near Zanesville

This project has an area of 4,800 acres in Muskingum County with a lake, picnic and camping facilities, shelter houses, roads and trails available for public use.

D. Areas administered by the Division of Conservation

1. Lake Alma

An 80 acre lake surrounded by 300 acres of hills covered with hardwoods serving as a game sanctuary. Bass fishing is excellent and boating and picnicking provisions have been made for public use.

2. Buckeye Lake

This lake was one of those originally established in the construction of the Ohio-Erie Canal, and later enlarged to its present size of about 3200 acres.

It is surrounded by forty miles of shores lined with summer cottages, and a public amusement center. A Federal Fish-Hatchery has been established adjacent to it, and so Buckeye Lake by virtue of its stocking of fish, has become a meca for fishermen.

There are no large areas of public use land around the lake.

E. Areas administered by the State Highway Department

As shown on the accompanying recreation survey map, the State Highway Department has provided picnic areas at convenient intervals along most of its major highways. These areas furnish tables, water and sanitation in nicely wooded spots convenient to persons using the highways.

This then comprises these major recreational developments within the 50 mile radius. No previous mention has been made in this paper of the excellent fishing to be found in this section of the Ohio at various places in the Muskingum River nor of the many scenic spots along the Ohio River. In addition, certainly mention should be made here of several excellent developments lying outside of the arbratary boundary of a fifty mile radius, but close enough to be accessible to a great many of the people living within this area, and constituting an existing area influence as shown in Table 1 on page 38.

The first of these is the Vesuvius Recreation Area now being developed by the U. S. Forest Service approximately 15 miles north of Ironton. This project when completed will certainly be one of the most beautiful in the state. Located in an area where the hills are covered with dense hardwood timber, a lake has been built thus providing the up-to-now lacking facilities in this locality for bathing, boating, fishing, as well as camping, picnicking,

hiking, and horseback riding. It is planned to accommodate from 3000 to 5000 individuals daily.

Again, the Senecaville Reservoir created by the Muskingum Watershed Conservancy District which is discussed in part two of this paper is at the present time also being developed for bathing, boating and picnicking. It is expected that this reservoir will be brought to its full conservation level by the spring of 1941. Plans are also being made for additional developments at certain of the other reservoirs created by the District but little definite construction work has been completed at this time.

Certainly southeastern Ohio contains a large share of the resources of the state in the form of scenic beauty. It is in the interest of correct land utilization, therefore, to develop a larger proportionate amount of these intangible resources, to provide facilities for their full enjoyment by all the people of Ohio, to relieve pressure on present much over used areas, and in a very tangible way, to furnish employment and increased revenue to an impoverished region.

The National Park Service in Region One has been carrying on a study to determine, if possible, definite working figures upon which to calculate weekly attendance at recreational areas. The data relating to these calculations has been furnished by Mr. George Wallace, of the Muskingum Watershed Conservancy District at New Philadelphia,

Ohio. The figures are necessarily averages over a number of states and may or may not apply specifically to any certain recreation area. However, they are valuable as an attempt to obtain reliable calculations of attendance, and by further study and adjustment can be made to fit a specified area.

As shown in Table 1, a net weekly attendance is obtained by first multiplying the population within each zone by a coefficient representing the ratio of total persons in that zone to persons using recreational areas within definite limits of travel. The gross attendance is naturally influenced by the existance of similar areas which will take certain estimated percentages of those people, depending first on distance of travel and secondly on the facilities and attractions of each competing area. The net attendance then is a calculation of persons who will use the area within definite zones of travel to reach it, and allowing for other similar influences.

In the case of the Kehota tract a net weekly attendance of 4098 persons is undoubtedly low, judging from the attendance at similar recreation areas nearby. The figures thus shown as applied to the Kehota tract should not be taken as absolute, but are here included as an example of how such data may be obtained and applied. The collection of more local data will be necessary before such calculations may be predicted with any degree of reliability.

TABLE 1

KEHOTA RECREATION AREA

Anticipated Weekly Attendance by Zones

Zone Miles	Population	Rate*	Weekly Attendance		
			Gross	Existing Area Influence Percent**	Net
0 - 5	8,500	.0970	824	0	824
5 - 10	8,500	.0630	536	0	536
10 - 15	32,000	.0409	1309	0	1309
15 - 20	32,000	.0266	851	30	596
20 - 25	59,500	.0172	1023	60	409
25 - 30	59,500	.0112	666	75	166
30 - 40	130,000	.00586	762	80	152
40 - 50	430,000	.00247	1062	90	106
Totals	760,000		7033		4098†

*Based on a study by National Park Service in Region One.

**Estimated influence percentage of similar existing areas.

†Children: 22.9% - 943
Adults: 77.1% - 3155

TABLE 2

KEHOTA RECREATION AREA

Anticipated Attendance by Periods of the Day and Days of the Week

Period	Percent of Attendance*	Attendance	
		Gross	Net
5 week days			
A.M.	9.0	633	369
P.M.	22.0	1548	902
Eve.	9.5	668	389
Total 5 week days	40.5	2849	1660
Saturday			
A.M.	2.8	197	114
P.M.	7.0	492	287
Eve.	2.9	204	119
Total Saturday	12.7	893	520
Sunday			
A.M.	10.4	731	426
P.M.	25.6	1800	1049
Eve.	10.8	760	443
Total Sunday	46.8	3291	1918
All Week Total	100.0	7033	4098

*Based on a study by National Park Service in Region One.

TABLE 3

KEHOTA RECREATION AREA

Estimated Participation in Facilities of Sunday Peak Attendance of 1918 Persons

Facility	Percent of Participation*	Participation (persons)
Scenic Use	46.9	899
Picnicking	32.0	614
Swimming	26.3	504
Hiking	13.9	267
Boating	8.5	163
Camping	5.4	104
Horseback Riding	4.1	79
Fishing	3.6	69
Nature Study	2.8	55

*Based on a study by the National Park Service in Region One.

IV. UNIT PLAN OF THE KEHOTA RECREATION TRACT

A. LOCATION, AREA, AND DESIRABILITY

1. LOCATION

The area under proposal for development lies on the drainage of Salt Run in Monday Creek Township of Perry County, Ohio. The drainage basin itself falls within sections 1, 2, 11, 12, 13, 14 and 24 township 14 north and range 16 west.

Lying in an area thickly populated, within a few miles of numerous towns, and only sixty miles from Columbus and at its closest point 2 1/2 miles from the hard surfaced state highway No. 75, it is particularly well located to serve a recreational use for which the entire region is hard pressed.

In addition to its accessibility to state highway No. 75, and U.S. highway No. 33, bus service is available between Columbus, Logan and Zonesville, thus furnishing moderate priced transportation to New Straitsville and Shawnee, a distance of about three miles from the proposed area.

Passenger train service may be had from Columbus to Shawnee through Newark by way of the Baltimore and Ohio

line, and from Columbus to New Straitsville by way of Logan on the Chesapeake and Ohio line.

The area is thus readily accessible to all persons via-automobile, bus or train. The recreational survey map in the appendix of this report shows its strategic location very clearly.

2. TOPOGRAPHY AND COVER

The topography is typically of the rolling nature common to this part of Ohio with flat topped ridges and steep slopes, with elevations running from the level of the lake at 800 feet to the highest point in the tract at 1,080 feet, a difference of 280 feet. The steepness of the slope surrounding the lake is not excessive over large factions of it and hence will be suitable for development.

Fortunately, from the rim of the surrounding hills down to the lake shore itself, there is an excellent cover of hardwood forest. The main species making up this cover are both red and white oak, some chestnut, beech, hickory, maple, tulip poplar, buckeye, and gum. On the present flow of the basin which will be the flow of the lake are sycamores, willows, walnuts and a dense cover of brush. The trees are nearly all of the sapling size, up to 4.5 inches D.B.H. with a sprinkling of poles, up to 9.5 inches D.B.H. and here and there a portion of sawlog timber. The stands are for the most part moderately

well stocked, hence little underplanting will be required here.

However, a large portion of the ridge tops is not now under any timber cover. It is here that the extensive strip mining devastated large acreages which can be restored to beauty only by careful and judicious planting.

Excessive cutting of timber, overgrazing and general misuse of this area in the past have reduced the wild flowers almost the point of extinction. Judicious management under a recreational plan in which no area will be overused beyond the amount which it can normally recover from one season to the next, should to a large degree bring back the wild flowers. On the other hand, the animals are fairly plentiful, consisting chiefly of coon, possum, fox, squirrels and rabbits.

3. USE HAZARDS

Use hazards do exist on this area in the form of poisonous copperheads, jiggers, and poison ivy and poison oak. Since the copperheads are generally centralized around old mine dumps and thus fairly well isolated from future areas of concentrated use, they probably will never constitute a serious menace. However, their danger cannot be minimized and if at any future time they do prove troublesome, methods of control will have to be devised. The poison ivies and oaks can be grubbed out on areas of high use and elsewhere will not constitute a serious menace. In the case of jiggers

nothing can be done at certain times of the year any more than the mosquitoes of the north country can be exterminated. And while these use hazards cannot be disregarded, they do not constitute a major objection to the recreation use of this area.

4. PAST AND PRESENT USES

Uses of this area in past years from the advent of man until the present time have already been discussed in part two of this paper. After 1921, when the last strip mining was completed, little use of the land has been made except for grazing. There is at present a W.P.A. project operating at the site of the old Baird's Furnace in section 14, engaged in crushing slag from the old mine for use in conditioning roads. This project will be invaluable in the construction of the loop road on the recreational tract, after which it should be moved elsewhere in order that a permanent marker may be established at the historic site of the old furnace.

Although there is still privately owned land within the unit boundaries, there is only one farm of but a few acres actually being cultivated today, and since it is located on land under option for purchase at the present time and is obviously of submarginal quality, it will be justifiable for the Forest Service not to issue a use permit when the land has actually passed into government ownership. Probably the highestuse to which the tract now is being put is

the hunting and fishing that are done along Salt Run. The water in Salt Run, as shown by recent testings, is comparatively free of undesirable sulphur, arising at its headwaters from springs, and with no sources of contamination and no silting of soil from erosion along its route. Salt Run is fairly well stocked with small bass and in the hills surrounding it are an abundance of small fur bearing animals and a few upland game, and so it is natural that it should attract local people for these purposes. This use will not to any extent be lost by the establishment of a recreation area, but its enjoyment will in fact be increased by the stocking of fish, and careful management of game, so that the game will be increased on areas surrounding the unit.

An oil pipe line which is the property of the Ohio Oil Company is visible crossing Salt Run on the section line between sections 12 and 13. It is recommended that this be moved to a more suitable location where it will not be necessary for it to cross under the lake bed.

It has been attempted here to show that past and present uses of the area do not constitute a conflict in any way for its future use for recreation.

5. CLIMATE

The tract from the standpoint of climatic desirability presents a favorable viewpoint. As shown in the accompanying table of weather statistics, Perry County has a normal distribution of precipitation during the year of from 36 to 39

TABLE 4

TABLE OF WEATHER STATISTICS

Monthly, Seasonal, and Annual Averages and Extremes
Columbus, Ohio

	Temperature			Precipitation			Sunshine	
	Average	Maximum	Minimum	Average	No. of Days with .01 inch or More	Snow Average	Average Hours	Prevailing Direction of Wind
December	32	67	-12	2.7	13	4.2	96	S
January	29	72	-20	3.1	14	7.9	114	SW
February	30	72	-20	2.7	12	5.8	128	W
Winter	30	72	-20	8.5	39	17.9	338	SW
March	40	84	0	3.4	14	3.4	176	SW
April	51	90	15	2.9	12	1.1	212	NW
May	62	96	31	3.5	12	---	276	SW
Spring	51	96	0	9.8	38	4.5	664	SW
June	71	99	39	3.4	12	.0	299	SW
July	75	104	49	3.6	11	.0	321	SW
August	73	103	42	3.2	10	.0	285	SW
Summer	73	104	39	10.2	33	.0	905	SW
September	67	98	32	2.5	9	.0	240	S
October	55	90	20	2.5	9	.1	200	S
November	42	77	-5	2.8	11	1.5	130	SW
Fall	55	98	-5	7.8	29	1.6	570	S
Annual	52	104	-20	36.3	139	24.0	2,477	SW

Data from Columbus Station of U. S. Weather Bureau. Approximate for Kehota Tract.

inches; it has from 20 to 30 inches of snowfall each year and a normal temperature distribution during the year of 52°.

6. EXTENT OF AREA

There are approximately 1880 acres of drainage area making up the watershed of Salt Run. Of this area, a minimum of 1520 acres should be included within the unit boundaries of the recreation area. The entire drainage area should be retained in government ownership by the Forest Service and managed on the basis of watershed protection. These area/are shown on the ownership status map.

The State Geologist has stated that the ratio of 10 acres of drainage for one acre of lake is sufficient in southern Ohio. On the basis of this statement and the esthetic desirability of such a level, the lake should be impounded to the 800 feet elevation mark. This will give a desirable and attractive shoreline and the 97.3 acres of lake thus formed will be sufficiently large to permit ample development in the area surrounding it. To obtain such a lake, a 60 foot dam will be necessary, the exact site of which has not yet been determined but which will probably lie close to the south section line of section 13.

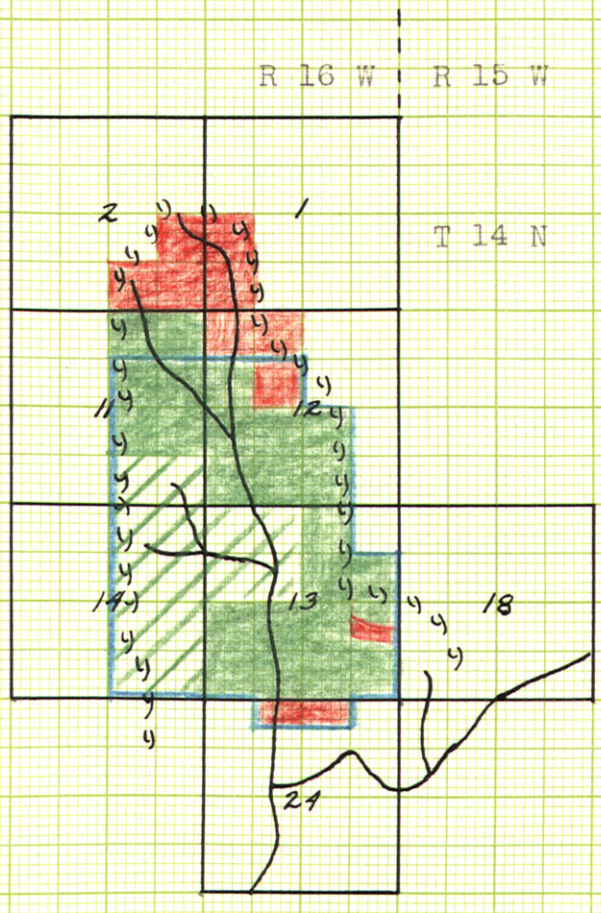
Ownership Status Map.

Kehota Recreation Tract

Wayne National Forest, Ohio

January 1, 1940

Scale: 1 inch = 1 mile



Legend

		Acres
	Forest Service ownership	945
	Optioned	560
	Acquisition necessary	375
	Unit boundary	
	Drainage boundary	

1880

Total in watershed: 1880 acres

Total in unit: 1520 acres

7. OWNERSHIP

As of January 1 of 1940, 945 acres of the total drainage area is under government title, and an additional 560 acres have been optioned for immediate purchase. The remainder of the area is largely under one ownership, the Kehota Mining Company, and no difficulty is anticipated in purchasing it at a reasonable price.

Is is the ordinary policy of the government in acquiring title to land, not to purchase any mineral rights. The expenditure of large sums of money in the development of recreation areas seems to justify the purchase of those mineral rights for lands contained within the unit boundary. Only in this way can positive knowledge be had that the recreation area will not be disturbed at some future time by the exercising of the mineral rights.

8. FUEL SUPPLY

Another factor of desirability is the presence of an abundance of wood for fuel. General cleanup work over the entire area is not to be recommended, but such cleanup will nevertheless be necessary surrounding certain areas of concentrated use, such as picnic grounds. This cleanup and future salvage cuttings held to the minimum, augmented by wood from surrounding areas of the National Forest will insure a cheap supply indefinitely into the future.

9. BUILDING MATERIALS

Of prime consideration should be the character of the buildings and facilities for use in the development of a recreation area. And since these facilities can be only as good as the material and labor expended in their construction, an available supply of good, economical material is important in determining the desirability of an area for development.

Chestnut as a timber tree is rapidly disappearing from the forests of Ohio due to the invasion of the chestnut blight. However individual trees may still be found scattered throughout the hardwood forest in quantities sufficient for the demands of a good construction timber for use on the Kehota project. Chestnut is desirable because it possesses both the qualities necessary for appearance and the essential weather enduring properties.

For use in the construction of foundations of buildings, and steps for steep hillsides, there is a supply of limestone rock in the close vicinity.

B. POLICIES AND OBJECTIVES

1. RECREATIONAL OBJECTIVES

In determining the facilities for recreational use which an area should provide, a number of factors must be considered. These are as follows:

a. Uses which the area is by nature well adapted for.

b. Need of facilities for certain uses not provided on other areas, or a need of increased facilities for greater accomodation.

c. Facilities should be provided for, as far as the character of the area permits, for participation in those recreational forms which people most enjoy doing.

d. Priorities should be given those recreational forms which the largest number of people may enjoy.

e. Economic considerations of construction, maintenance and administration.

Each of these factors, then, must be considered and all correlated together in determining what shall be the recreational objectives in order of priority for any recreation area. In the section on Recreation in the Report on Land Planning, a study was made of 25,832 users of state parks throughout the country in an effort to determine what those users of state parks like to do. They voted as follows: 56 percent swimming, 53 percent touring, 50 percent fishing, 48 percent camping, 45 percent picnicking, 33 percent hunting; 30 percent boating, 29 percent hiking, 22 percent nature study, 19 percent tennis, 18 percent golf, 17 percent winter sports; 16 percent riding, and 8 percent bicycling. Dancing, baseball and softball were also determined to be popular but no percentages were obtained.

Provisions then should be made on the Kehota area for as many of these uses as are possible commensurate with all the other factors enumerated above.

As has been shown by the recreational survey, southeastern Ohio is almost totally lacking in usuable natural bodies of water; thus the establishment of artificial lakes for recreational use is of prime necessity since water is important from the standpoint of beauty of the landscape and in creating a medium for enjoyment upon which so much of our recreation depends.

With all of these previously mentioned factors in mind, the recreational objectives in order of priority for the Kehota area should be:

a. Swimming
b. Fishing
c. Camping
d. Picnicking
e. Boating
f. Hiking
g. Nature study
h. Horseback riding
i. Touring
j. Organization camp
k. Overnight cabins

It will be noted that winter sports and summer home sites are not included in this list. In the case of winter

sports, the winter weather and particularly the snows of this section of Ohio are most uncertain. In view of this fact it is not feasible to make any preparations for winter sports. Hiking may be indulged in in winter and skating on the lake will be possible at certain times, but only temporary provisions will be necessary to handle this use. It is felt, too, that no suitable area is available on a lake of this size and type of surrounding topography for summer home sites without seriously encroaching upon land more in demand for other uses by larger groups of people.

At this point, a brief discussion of multiple use principles as employed by the U.S. Forest Service should be entered upon as it fits into the picture of recreational planning. The confusion arising from the general use of this term in a variety of situations and conditions is clarified in the following statement by Mr. G. A. Pearson, Senior Silviculturist of the Southwestern Forest and Range Experiment Station, Tucson, Arizona:

> The practice of utilizing forest lands for a variety of purposes has given rise to the term 'multiple use". Few terms in forestry have been more misinterpreted and misapplied. To many it apparently means that each and every acre can properly be subjected to a variety of uses simultaneously without conflict and without regard for relative values. There is a natural tendency to let management be governed by local pressure of the day, even though that may involve subjecting the land to the lowest form of use. A broader viewpoint, while recognizing the possibility of several use, gives priority to that class of use which is capable of yielding the highest returns.[1]

[1] G. A. Pearson, Journal of Forestry, vol. 38, No. 3 (March, 1940), 261.

Thus, it is clear at this point that no conflict should or does exist between the use of the specified Kehota tract for recreational purposes and the other diversified objectives of management of forest resources. This area is primarily to be used for development of recreation as its major resource, as that "class of use which is capable of yielding the highest returns," in this instance in terms of human enjoyment.

2. POLICY OF CHARACTER OF CONSTRUCTIONS AND IMPROVEMENTS

First of all it is necessary to establish a principle of construction which is most important, and that is that any area worthy of improvement at all deserves the best that man is capable of or the works of nature are best left untampered with. Nothing can more detract from the beauty of a recreation area than poorly constructed, poorly designed or inadequate improvements of any kind. However, any facility justifies its use in a recreation area if it adds to the comfort or enjoyment of people using the land for this purpose.

Mr. Frank A. Waugh has established several principles applying to such structures and because of their basic and fundamental character they are reflected here:

Artificial structures in wild park lands should be made as inconspicuous as possible, should be harmonious with the landscape as fully as possible, and should be constructed of native materials such as local stone, peeled logs, etc. Nevertheless the general principle is true that what is practical

and useful, simple, direct, and straightforward, is agreeable to the human eye.[1]

These principles should dominate every man made improvement on the Kehota tract. Log buildings of native species are probably the most desirable type of construction to satisfy all the demands of incongruous development. However, even apart from financial considerations which are considerably larger in the case of log buildings, there is another factor involved which limits their use considerably.

Log buildings which do not "go all the way" in imitating the appearance of pioneer buildings are better substituted by suitable rough finish frame buildings which make no attempt at this quality. For all the reasons considered, the recommendation is here made that rough frame buildings be used on the Kehota area. Every attempt must be made to keep the buildings of a minimum size commensurate with the needs they must serve, as inconspicuous as possible, and of harmonious design. The U. S. Forest Service standard building specification with few modifications where required fill these requirements nicely. A stain treatment which at once protects the wood and still leaves a rough unfinished appearance of a desirable brown color should be used on all the buildings and picnic tables. Guard rails since they must be in direct contact with the ground should be creosated

[1]Frank A. Waugh, Landscape Conservation, Department Interior, National Park Service, E. C. W.

giving them a color similar to that if stain were used. On very dangerous positions on the loop road, guard rails should be painted over the creosote with aluminum paint for increased visibility. This may seem in direct conflict to a harmonious landscape, but factors of safety are of prime consideration. Bark must be removed from the guard rails before treating, as should also be done in the case of logs for buildings if such are to be used, in order that later peeling of the bark will not result in fungus and insect attacks and in its general deterioration.

3. SILVICULTURAL POLICIES

A wild land recreation area differs from city parks in many respects, but perhaps none as much as in those factors relating to naturalness. On areas such as the Kehota tract, this feature must be preserved so far as is practical. Therefore, only in small portions which will be devoted to concentrated use should any form of silvicultural work be carried out. On picnic areas, etc., some clearing away of brush, or snags, or dam timber may be necessary, but even here this must be kept at the very minimum. In justifying this, it is well to remember the old axiom of: "nature left alone is always orderly." In an undisturbed forest there always exists a biotic balance between all forms of animals and plant life. This is desirable and once destroyed is not easily regained. Snags, logs, and trees of undesirable form are all part of the

landscape of a natural forest, and where the principles of timber production are not involved should not be removed unless they constitute a menace to the safety of persons in the area.

Fire, while always an important consideration, can be best controlled by other methods than the cleaning away of this inflammable material.

Openings may be made in order to furnish vistas at various points along the loop road or any of the trails, but only if made judiciously and without apparent intent.

4. TIMBER MANAGEMENT PLAN

The U. S. Forest Service has three management policies relating to areas used for recreation. These are:

a. Recreation dominate

b. Recreation codominate

c. Recreation subordinate

The first category will apply to this project since here recreation is undisputably the dominant use. A very modified timber management plan for that area included within the unit boundary shall then be adopted in which the timber resources shall be considered mainly from the viewpoint of aesthetics, watershed protection and game cover.

There are at the present time relatively few acres of mature or nearly mature timber, and chiefly on those slopes directly adjacent to the lake, so that the cutting of timber will not be a matter of any concern for some years. As the

present stands mature, only such cutting should be done as is necessary to maintain a good stocking of desirable species, by removing the overmature, decadent or dead timber in a form of very modified selection system. Even more stringent cutting should be applied in the buffer zones surrounding all subunits, trails, roads, and particularly the slopes contingent to the lake. The width of buffer zones is arbitrary, dependent upon existing conditions in every case, but should never be less than the sighting distance from all roads, trails and sub unit areas.

The wood thus cut will be of sufficient quantity to furnish the fuel supply for recreation use.

5. PLANTING PLAN

The planting of an area in which the timber is to be a resource for human enjoyment and not for the economic production of wood products for revenue, involves additional principles of planting to those standards ordinarily adopted for forest plantings. Careful consideration must be given, as always, to the silvicultural characteristic of the species adaptable to existing conditions of site and to fundamental rules of planting. In addition, an appearance of naturalness and general attractiveness are also goals to be achieved.

The appearance of "row upon row" plantations creates an artificial aspect which should be astutely avoided. Trees should be fairly evenly spaced to assure proper growth but not precisely so.

In this particular section, conifers have been proved beyond any doubt to be far better on inferior sites such as those existing here. And, too, the colors of conifer stock contrasts agreeably with those of the already present hardwoods and furnishes a variety, so that with the exception of one small area, the use of conifer stock is recommended exclusively.

Not all open areas need be planted, since erosion is not present, and the presence of openings in the forest only enhances and frames the beauty of the timbered areas, as well as affording desirable openings for game. Of greatest concern is the planting of the strip coal mining areas which are at present most unsightly. The leaving of stripped lands in unproductive condition is now prohibited by law in Illinois and undoubtedly other states will be wise to adopt similar measures. The rehabilitation of these lands, however, is not as great a task as might at first appear. Mr. James W. Briston, Secretary of the Illinois Coal Strippers Association, recently made this statement regarding them:

> Methods by which operators have attacked these problems give evidence that these scarred landscapes could be rehabilitated and passed on to future generations as valuable and sightly as if the surface had never been disturbed by mining.[1]

Examinations show that the overturned dirt does have at least the minimum of nutrients and water essential for

[1] James W. Briston, "The Ugly Duckling Grows Feathers," Outdoor America, February, 1940.

tree growth, and in fact trees have been found to grow faster on the overturned soil than on undisturbed land. Thus there is no apparent value in leveling the piles before planting.

The question here arises as to the feasibility of planting exotics, referring to any tree out of its natural range. In addition to the greater expense involved, exotics have often resulted in failures due to their susceptibility to insects and fungi. Much of the element of chance can then be removed by use of known native stock for planting on the Kehoba project.

Black locust (Robinia psuedoacacia) while of known value for quick growth on any site, is subject at any early age to attack from the locust bores. For this reason as well as the arguments advanced for the use of conifers, black locust is not recommended for this particular idea.

A total of 388 acres is the minimum to be planted within the designated unit boundaries, stock to be taken from the closest Forest Service Nursery.

a. Planting Area #1.

Since this is an administration area to which most of the visitors to the park will come, it furnishes an ideal opportunity for public education in a way that will not be intrusive.

It is suggested that five species of pine most commonly planted or growing naturally in this region, be planted in

adjacent strips so that the branch road off the east entrance road leading to the administration building, traverses through all sections of this plantation. Attractive and and easily read, but not too conspicuous, signs should be placed for each species giving its common name and date of planting. In this way, one of the major functions of the Forest Service, that of growing timber crops, can be presented in an interesting manner. At a latter date for purposes of education, it could be possible to have further demonstrations in silvicultural operations and cuttings. These five pines are suggested if available from the nursery: red pine (Pinus resinosa), pitch pine (Pinus rigida), Virginia pine (Pinus virginiana), shortleaf pine (Pinus echinata), and white pine (Pinus strobus).

b. Planting Area #2.

This includes all of the stripped lands east of the lake. Shortleaf pine and pitch pine planted together by staggering them in uneven rows will because of their fast growth cover the stripping very quickly, and at the same time present an attractive cover. The two pines planted together will not have the monotomy of a pure stand.

c. Planting Area #3

Here an understory of white pine will bring an understocked hardwood stand to a satisfactory stocking, and will provide an extra bit of color on the hillsides adjacent to

the lake in sharp contrast to that of the hardwoods. White pine can be very successfully grown as an understory tree and will eventually overtop the hardwoods.

d. Planting Area #4

This is the one hardwood planting site on the area, and was so chosen for yellow poplar (Liriodendron tulipifera) because it presents ideal site qualities for growing what is probably one of the most attractive hardwoods, and which is not present elsewhere on the area in sufficient quantities to be noticeable.

e. Planting Area #5

This includes all of the stripped lands west of the lake, and the same general recommendations will be followed here as set up for area #2, or the stripped lands east of the lake.

Planting of shrubs specifically for wild life will be discussed under the next sub section. In addition planting of shrubs and flowers around the newly established lake margin may hasten its return to an ecological balance, but species for planting cannot be recommended without a careful study of the character of vegetation around similar natural lakes in the same region.

Landscaping around the buildings, and approaches, will be necessary, but done in such a way that it appears natural in every respect. For quick coverage of road cuts, Japanese honeysuckle is most useful.

This, then, covers all the necessary planting within the unit boundary. In addition, the remaining strip mined lands on areas outside the recreation tract, should be planted up as fast as title is taken by the Forest Service in order to quickly rehabilitate such undesirable scars from the landscape.

6. WILD LIFE

The Forest Service recognizes wild life as a major resource of the national forests, and in its management of game has this objective,

> To recognize the recreational, economic, aesthetic, and educational values of wildlife and to produce and utilize on a sustained yield basis the maximum number of wild animals which are compatible with social needs and within the productive capacity of the Forest.[1]

As is ordinarily done on Forest Service lands, the management of wild life, including the stocking of fish and game on the Kehota tract will be administered by the Ohio State Department of Conservation, with any additional necessary research done by the U. S. Biological Survey and the U. S. Bureau of Fisheries.

On an area which thousands of persons are using daily it is scarcely feasible within the limits of safety to permit any hunting. It will be necessary, therefore, to post sufficient notices around the area boundary to insure the supervision of this regulation.

[1]U. S. Department of Agriculture, Forest Service Region Nine, Wild Life Handbook, p. 1.

The management of wild life on the recreation tract should have a two fold objective. First, it shall constitute a part of the aesthetic and educational value of the natural forest, and secondly, it will in a large measure serve to restock surrounding areas where it may serve as a more tangible resource for hunting purposes under state game laws. Sound principles of wild life management should be worked out based on more exacting field data than is available for this paper. The recommendations following are of a general nature which could be followed until detailed plans can be drawn up.

In preparing the present river flat for the future lake bottom, all trees should be cut up to the water line at the 800 foot elevation. The trees and brush thus made available can be turned into fish shelters. These shelters have long been recognized as essential for fish to escape from their enemies and also for the development of aquatic fish food. They should be anchored firmly with sand bags.

The abandoned tramway bed constructed for use at Baird Furnace should be pushed well down underneath the water level line so as to prevent the formation of sulphuric acid. The water in Salt Run at the present time is clear and free of all trace of sulphur which is very injurious to fish. This is a very essential point and great care should be taken not to pollute the water in this way.

There are some fish in Salt Run now but with the

formation of the lake, additional stocking will undoubtedly be necessary. Such stocking will be done by the state, and probably from other fish rearing ponds, but an excellent site is available at the head of the lake, as shown on the large topographic map, for the establishment of such rearing ponds on the area. The lake will be suitable for stocking of bass, croppie and sunfish.

There are a moderate number of fur bearing animals on the area today. Red and gray fox are both quite abundant and the hunting of fox by hounds constitutes one of the major sports of the farmers in this region. Racoon and opossum are present but not in large numbers, as is the case with squirrels and rabbits. Deer are so rarely seen now that the presence of an occasional white tailed deer results in much publicity. Racoon and opossum are both interesting and valuable and the habitat of this section of Ohio is suitable to them both. There could be further stocking of these animals without much additional preparation for them. Fox are generally considered harmful to game and so nothing should be done to encourage their increase over the present number.

Quail and ruffed grouse are both present, the quail being fairly numerous. Both are suited to this habitat and will constitute satisfactory upland game birds for stocking.

Ruffed grouse require hardwood mixtures, and short distances from roads and openings. With the planting of

desirable food such as the dogwoods, viburnum, wild rose, Virginia creeper and other similar plants, the stocking of grouse should be quite successful on this area.

Quail has very similar requirements and must have cover and openings within one-fourth to one-half of a mile. These conditions are met by the numerous grassy openings which will not be planted. Food patches will scarcely be necessary because grain fields are nearby within the minimum distance.

For the protection of song birds, bird houses can be placed at various places around the buildings since they constitute such a valuable service in the control of insect pests, as well as by their beauty and song.

7. GRAZING

This tract is at present quite intensively used for grazing purposes, but with the establishment of a recreation area, grazing should be excluded from the unit for the protection of ground cover and general appearance. It may be necessary to construct fences along the boundary lines if this cannot be restricted in any other way.

8. CIRCULATION

a. Approach Roads

There will be three approach roads leading to the unit, all originating from State Highway No. 75. The road approaching from the west is in the poorest condition and if used to

any extent should be improved by the county. In wet weather this road would be dangerous in its present condition. The road approaching from the east is in fair condition and if properly maintained should be sufficient for the probable volume of traffic over it.

The road leading up to the dam from the south branches off the approach road from the east, and is part of the road now following up Salt Run which will be under water when the reservoir is full. This road will receive heavy use up to the dam and improvement will be necessary. Signs finished according to standard Forest Service specifications for recreation areas will be placed at the corners indicated on the large topographic unit map. Similar entrance signs should be placed near the point where the east road and the west road enter the unit.

b. Unit Roads

The loop road through the unit from the east to the west entrance should be sufficiently wide to safely permit two lanes of traffic, and should be covered with gravel for safe passage in all kinds of weather. The slag pit now operated by the W.P.A. at the Baird Furnace will be useful in conditioning the unit road, after which it should be removed.

Guard rails should be used along all points of the road where necessary as a safety factor, and on extremely dangerous points should be painted with aluminum paint

for increased visibility at night. Parking, of course, should be restricted solely to designated parking areas.

As an aesthetic feature, an old type rail fence, so typical yet of the region, would be desirable along both sides of the east entrance road as far as and including the administrative area. The careful planting of colorful shrubs and roses would further add to this effect and give it an appearance of naturalness.

Within the unit boundaries approximately eight miles of new road constructionwill be necessary to place the loop road as shown, and two miles of improvement will be necessary on existing roads to bring them to the desired standards. The location of the loop road as shown has been placed with regard to the present cover where it can be most attractive. Such roads need not be built under the strictest engineering rules, and so the grade will vary considerably, but always staying within the limits of safety.

Signs should be placed at various places along the loop road directing attention to picnic, camping and other facilities along its route.

c. Trails

Approximately 17 miles of trail construction will be necessary as outlined on the unit map. These trails will be used for both hiking and horseback riding. It is not likely that these two uses will conflict with each other

in the use of the same trails for both, but if this does occur, specific uses for each trail will have to be clearly designated.

The trail skirting the shore of the lake should approximately follow it, but be at least 15 to 20 feet back from it. The ridge trail affords a good view and after the strip mining has effectively been covered by planting will be one of the most attractive of all.

Many people come to acres such as this purely to enjoy the view, and to further their enjoyment of it, rouch, crude log benches should be placed at various places along the trail where a particularly fine scene is afforded.

Again, small attractive signs should be placed at all branches of the trail, and at places where facilities are available.

9. PROTECTION

a. Vegetative Cover

The protection of vegetative cover is one of the outstanding problems in the administration and maintenance of any recreation area. If proper control is not exercised, people can soon knowingly and unknowingly destroy the very resources which they have come to see. The destruction of the ground cover can be prevented, perhaps entirely eliminated, by following a very concrete and definite plan

of action from the outset. The principles of planning are not important here. No area should be designed to accommodate more people in one season than that area can normally completely recover from by the next season. Each sub-unit is definitely limited in its capacity to accommodate, and to exceed this limit should constitute a major crime of recreational planning.

Another very effective method of control is by the alternate use of similar areas. Thus a picnic unit may be used for one season and then left to stand idle for the next season or two, and then placed back into use. If this method is combined with the principle of limitation to a capacity load, there should be little likelihood of any area becoming "worn out."

Between much used areas, foot travel should be restricted as much as possible to trails. However, if the use is not overtaxed, it is desirable to have sufficient areas where people may hike through the woods at will.

b. Fire

The Kehota area is visible from two Forest Service lookout towers which should be sufficient to spot fires immediately. The regular Forest Service fire fighting system, the main unit of which is now the C.C.C. Camp at Nelsonville, will function in the case of a fire on this unit as elsewhere on the Forest. In addition for

emergencies where quick action might prevent a large fire, it would be well to have a fire truck with sufficient fighting equipment on the area during the fire season.

In addition to preparedness for any possible fire, preventive measures should be taken to reduce or eliminate them entirely. Fire should be allowed only in fireplaces or designated areas, and no chance should be lost in gaining the help and cooperation of persons using the area.

c. Insects and Fungi

The damage from insects and fungi in a forest stand can never be minimized especially since insect attacks on forest pine plantations in Ohio have been on the increase. However, neither is it of immediate concern on this particular tract since no extra damage from either is at present apparent. Diseased trees should always be at once removed as soon as detected, and if an insect attack should ever show signs by becoming epidemic, it is feasible to use spraying equipment. In this case, the high cost of the spraying must be weighed against the probable damage or severity of the attack.

The most essential safeguard is periodic inspection for signs of unusual damage which might necessitate more specific methods of control.

10. UTILITIES

a. Water

Water is one of the most important factors to be considered on any public use area and no area could be used without a plentiful supply of pure water. For this reason the water system on this tract should merit careful consideration. Since the water in Salt Run is pure and fit for use, the water from the lake could very easily be drawn to the top of the hill, filtered and chlorinated and sent by gravity to all places where it is to be used. However, for a period of a few years until the lake bottom has thoroughly settled, wells would be a more desirable source of water. Insufficient data is at hand to recommend a spot for drilling but since there is a well on the west drainage at the present time, it is probable that drilling in favorable locations will produce results. If the water thus obtained is pure enough and of sufficient quantity it would be advisable to retain them. If not, water from the lake can be resorted to.

Frequent testings of the water system will be a very necessary requirement to insure health precautions for all persons using the area.

b. Sanitation

Sewage disposal is the next factor of great importance and every precaution must be taken to avoid contamination. For those units located on top of the hill no particular

problems will be involved. Here a septic tank system with a tile drain would be most satisfactory in which the tank is first used in the breaking of the solids by bacteria, after which the liquified sewage is distributed through the soil by a tile system.

Those units directly on the lake will require more careful layouts so as not to contaminate the water in the lake. The biggest of these is the bathing beech immediately on the lake, and here the tile drainage must be left as far up the hill as possible. The clay in the soil willtend to make it less porous and thus help to reduce the danger of contamination. For the picnic units farther up the lake, simple pit privies should be sufficient but they must be kept clean and sanitary at all times.

All parts of the sanitation system, like the water system, should be subject to stringent periodic inspections and careful maintenance.

c. Power

Power is available from State Highway No. 75, a distance of less than three miles and hence the cost of bringing it into the unit would not be prohibitive. At the point where it enters the unit, it would be desirable to have underground conduits so that no poles and wires would be apparent. All of the buildings should be wired for electricity but not the picnic units.

d. Telephone

Telephone service is also available from New Straitsville and like the power line, should be carried into the unit in underground conduits. Telephone service is especially necessary for fire protection.

11. SUPERVISION AND ADMINISTRATION

Under the present proposed development of the Kehota recreation area, the State Conservation Department is to furnish certain of the material for construction, while the Forest Service is to furnish the land, and labor, and assume administration of the completed development. The responsibility, then, for the administration of this area will rest upon an appointed resident custodion responsible to the district ranger, and so on up through the usual channels of administrative authority.

Occupancy on this area will ordinarily extend from about April 15 to October 15, with the highest use falling between June 1 and September 1. Although ice skating is the only winter sport which may be indulged in with any assurance of suitable winter weather, it will be advisable for the custodian to maintain residence on the area for the entire year.

Cleanup work should be systematically and regularly done so as to maintain the neatness of the unit at all times. Provisions for garbage and wastes should be made by removable receptacles which can be hauled away frequently.

This system of disposal has been proven far superior to the garbage pit method. Buildings and facilities should be maintained in a good state of repair until such time as their entire replacement is necessary. Roads and trails should be maintained to a degree commensurate with their safety, general utility, and attractiveness.

The usual Forest Service policy with regard to the charging of fees will be followed here. On the Kehota tract, small fees will, under the policy, be charged for fuelwood, cut and ready for the fireplaces, and use of dressing rooms at the bath house. The riding stables, Kehota Inn and overnight cabins and the boat rentals will probably be leased to private parties on a concession basis. The other alternative would be to issue a use permit on the basis of which such permitees would build their own buildings and utilities conforming to the same stringent building requirements followed elsewhere in the unit. The organization camp will be leased to groups of individuals, clerks or organizations on a short term lease, probably not exceeding two weeks, for which a small fee is customarily charged.

Easements on the approach roads leading into the unit should be obtained if possible so as to prevent any occurrence of the "hurdy-gurdy" type of private development being built immediately adjacent to the unit boundaries. No provisions should be necessary on the unit itself either

for car servicing or for selling of provisions because of its short distance from several towns.

A recreational development of this type presents an unusually fine opportunity for unobtrusive public relations and educational work, and every chance should be taken to utilize it. Attractive maps showing the recreational facilities and their location should be prepared for distribution in order to acquaint people with the area. Fire prevention can be taught through the use of printed material and a few well worded, attractive signs. The demonstration planting area on the administrative site can be utilized beneficially since it will be seen by the majority of the visitors to the area.

In order to obtain exact attendance records, register box books should be kept at all use areas, and enough actual counts taken to satisfactorily determine the number of visitors to the unit.

C. SUB UNIT IMPROVEMENTS

1. DAM SITE

A large earth fill will be necessary in the construction of the dam and probably will be taken from the east hill. This will necessitate the replanting of this hillside, an area not included in the planting plan since at the time of writing of this paper detailed engineering plans for the

dam have not been completed. It is suggested to use a portion of this cut for a parking area since it is convenient to two trails leading out from it and a short distance from the boat dock and bathing beach with combined picnic area.

This unit will be mainly interesting from the standpoint of viewing the construction of the dam itself.

2. BOAT DOCK, BATHING BEACH AND PICNIC AREA

Here is presented an ideal opportunity for a convenient and easily accessible combination of popular facilities. The mooring dock for boats is in a sufficiently sheltered cove as to be protected from any waves. It is not probable that the level of the lake will vary a great deal throughout the year and no special provisions will have to be made on this account. The construction of both the boat storage building and the mooring dock can be very simple in design.

On a lake of this size and use, it will not be desirable to permit motor boats, and so the use of the lake for boats will be restricted to canoes and row boats. However, one motor boat for administration purposes only will doubtless prove necessary.

The bathing beach is one of the most desirable spots on the lake for this purpose, but will require the laying of sand filler for a suitable bottom. The dressing rooms can be of the open top type and will require the services

of at least one attendant. Safety of the persons using this beach is of prime importance, and a lifeguard should be on duty at all times it is being used. Rope protectors are necessary to separate the deep and the shallow water portions.

It is suggested that toilet facilities be provided, accessible from the rear of the bath house, to be used by persons using the beach as well as those using the adjacent picnic grounds.

The picnic grounds occupying the area between the bathing beach and the boat dock will by virtue of its location be one of the most popular on the unit, and greater care will have to be exercised here to prevent any destructive use. An excellent view is provided for a considerable distance up the lake, and the spot is agreeably wooded.

3. ADMINISTRATION AREA

The plans for this sub-unit call for the location of the administration building on the rim of the slope leading to the lake from which a beautiful view in all directions is possible. A discussion of the demonstration planting site on this area has already been covered in this report and need not be repeated here. This sub-unit will serve as the central administrating unit, with the custodian's residence, the general service area, riding stable, and main administration building all located in one convenient grouping

and immediately convenient to the bathing beach, boat dock and adjacent picnic area.

4. SALT RUN PICNIC UNIT

The main attractiveness of this unit is its position on the lake which gives it a delightful view both up and down the lake and the excellent timber hardwood stand in which it is situated. A nearby small intermittent stream to the north has some attractive rock formations and at such times of the year as it is running will be a beautiful and cool spot.

It is suggested that a shelter house be built here directly on the point between the main lake body and the arm extending east for a short distance.

5. RIVERSIDE PICNIC AREA

This is one of the most attractive spots on the entire unit in which a natural small flat basin has been formed by Salt Run. A view down a portion of the lake is possible and the good timber cover and running water will make it pleasantly cool at all times. There is some possibility of this unit being flooded very early in the spring but this is not a serious objection since this condition will not prevail for long.

6. COMMUNITY FIREPLACE

This is a natural flat topped, narrow point of a ridge with steep slopes on three sides, but overlooking the lake

for an excellent view. There is not room for any picnic tables, but of sufficient size for a fairly large community fireplace, with rough log seats arranged around a central fire. The excellent timber cover, and the view of the lake make it a natural spot for this use and will doubtless prove its popularity very shortly.

7. HILL VIEW PICNIC UNIT

This unit combines a good lake view, both up and down, and across to the opposite slope where a stand of tulip poplars has been recommended for planting, and its location in a mixed hardwood cover. It is not as readily accessible to all roads and trails as are most other units, and this factor will make it desirable for those wishing more seclusion.

8. AUTO CAMP GROUNDS

In the layout of the auto camp grounds, the spurs should be sufficiently long to permit the parking of trailers if necessary. Each individual site should be separated from the others as much as possible, and each provided with a fireplace but probably no other utilities, except for water and sanitation for the entire unit. Sufficient suitable space will be available for use of tents.

The location of the unit is specially desirable since it commands a view on nearly all sides by virtue of its high elevation on top of the ridge.

It is difficult to estimate the probable use of this

unit, since the Kehota tract is considerably off the trunk highways used by tourists. However, it will undoubtedly prove popular for use by local people from nearby towns. Sufficient room is available for enlarging the unit to almost any proportions if necessary.

9. BAIRD FURNACE SITE

As the pioneer iron furnace of the entire district, this site merits careful handling. If it were not for the probable prohibitive factor of cost, an entire exact reconstruction of the furnace from data available concerning it, would be entirely justifiable. Certainly the outstanding furnace of its type representing an industrial era that can never return, is worth preserving for its historical significance. However, since this will probably prove impractical, it is recommended that a large attractive sign setting forth the interesting historical data as contained in the forepart of this paper, be constructed on this site and in full view of the road. The wording could be of this nature:

BAIRD'S FURNACE

1875 - 1888

This is the original site of Baird's Furnace, the pioneer iron furnace of the Hocking Valley. Established by Samuel Baird, it proved an outstandingly successful business venture in the face of adverse circumstances.

A fair sized village was once located around this site but was abandoned with the cessation of operation in 1888.

Today but little remains to mark the passing of an important industrial era.

Little else should be done to change the character of the site, except the removal of the slag pit now operating there.

10. ORGANIZATION CAMP

The main essential of an organization camp is simplicity. The layout plans accompanying this report are for a medium sized camp accomodating from 48 to 64 campers in two units, with a combined lodge and main dining hall. This will provide sufficient room for 4 to 8 counsellors depending on the number of campers.

Facilities can be provided on the lake for a private dock for swimming and boating and every attempt should be made to keep the camp fairly isolated and to maintain high standards of health and safety for the youths using it.

It is located in a particularly desirable area, with room for future expansion if necessary and sufficient flat ground for a medium sized playfield, and off the main loop road for some distance.

11. KEHOTA INN AND OVERNIGHT CABINS

This site affords one of the finest ridge top views of the entire unit. It is suggested that the Inn be a small one existing mainly for the serving of meals to visitors and that the cabins be used for overnight accomodations.

The most desirable arrangement for the cabins has been

found to be that where they are divided into two rooms with a connecting door. Thus the same cabin is readily usable for either large or small groups. Running water and sanitation should be provided in each cabin.

The cabins are but a short distance above the lake, on a narrow natural bench, affording easy access to the lake.

D. SUMMARY

In conclusion, it is hoped that the Kehota Recreation Tract of the Wayne National Forest, will amply serve those needs for which it is intended, and do its part toward the rehabilitation of the region by contributing to the social and economic welfare of the people influenced by it.

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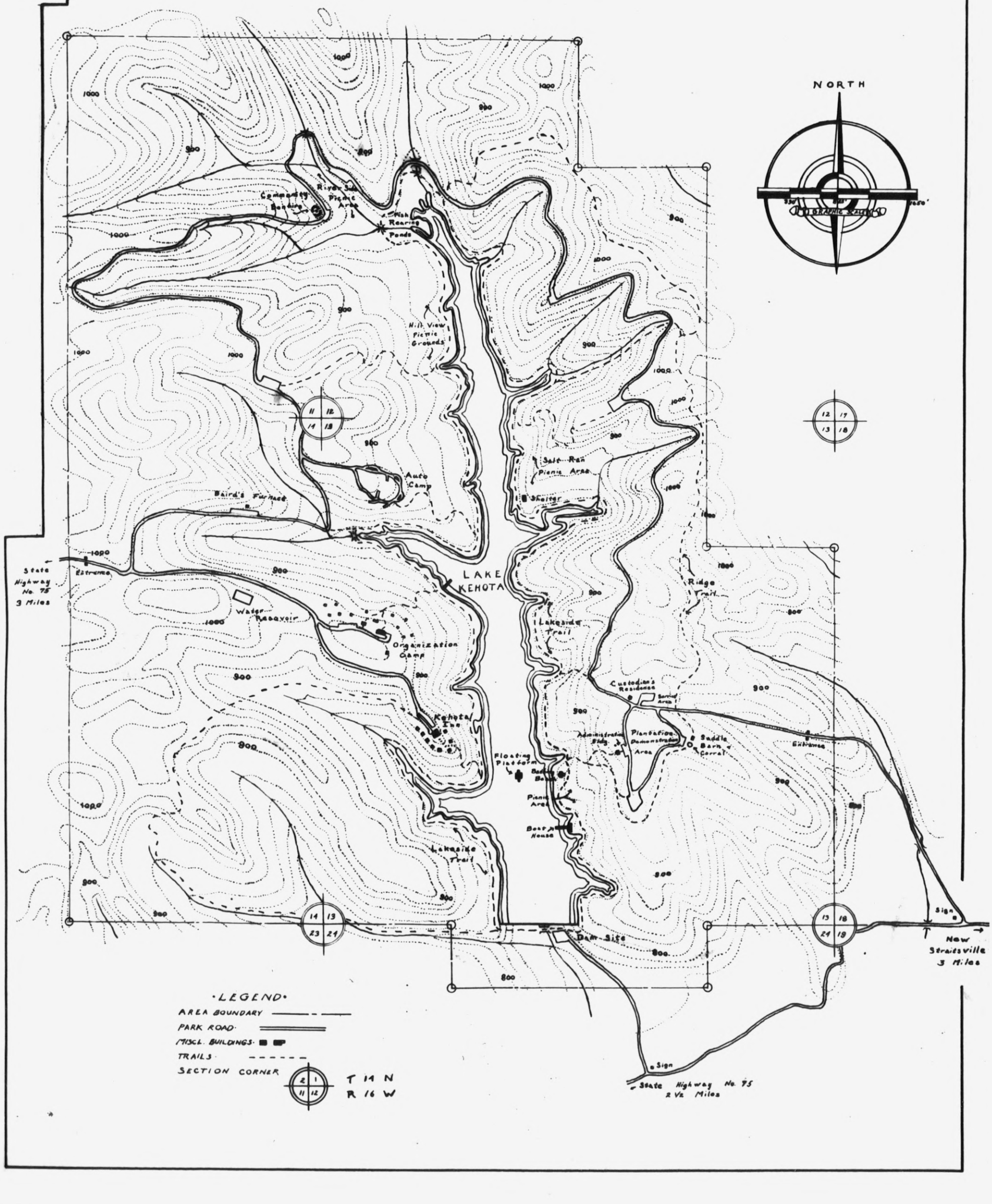
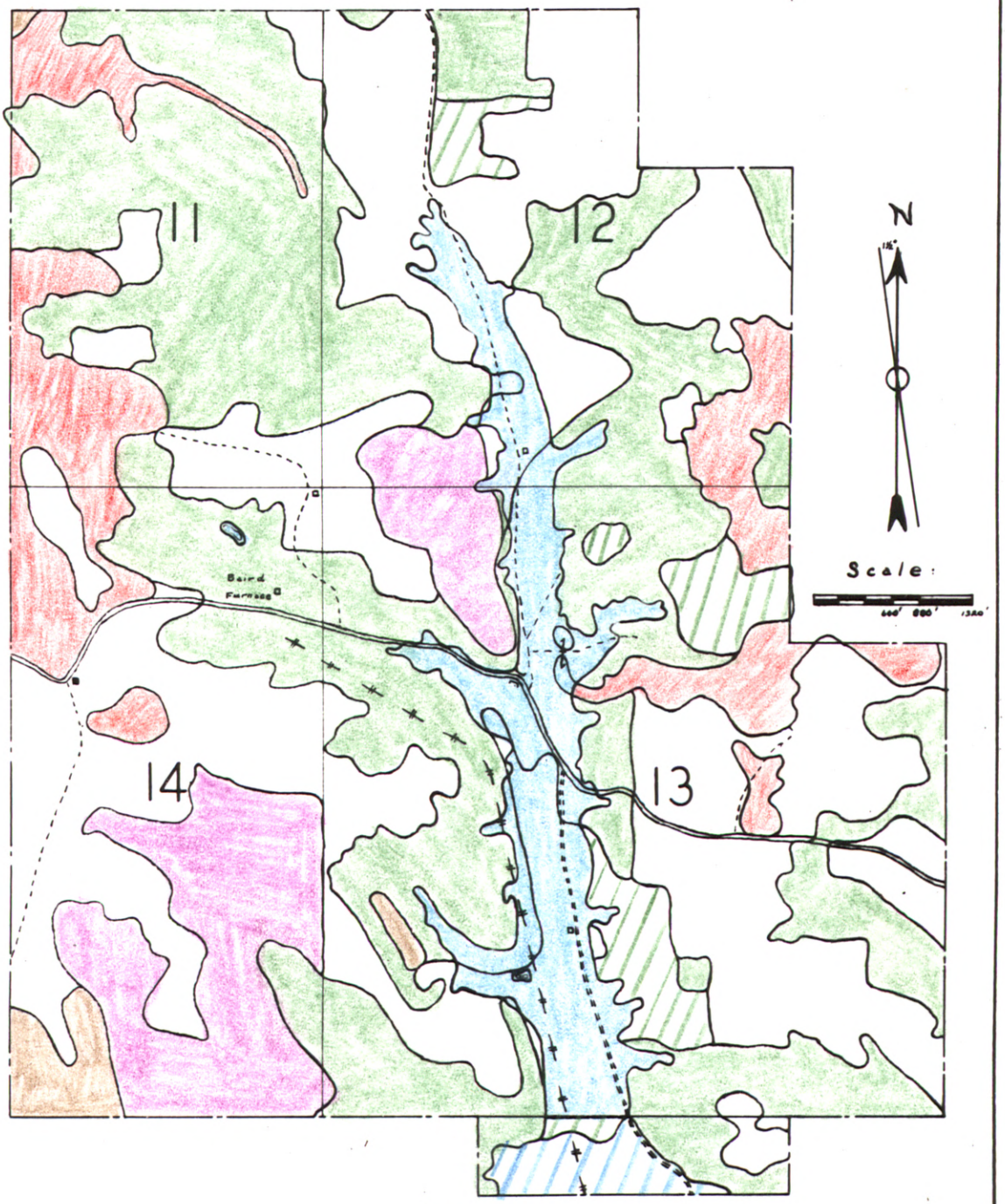
A P P E N D I X

KEHOTA
RECREATION AREA
WAYNE NATIONAL FOREST - OHIO



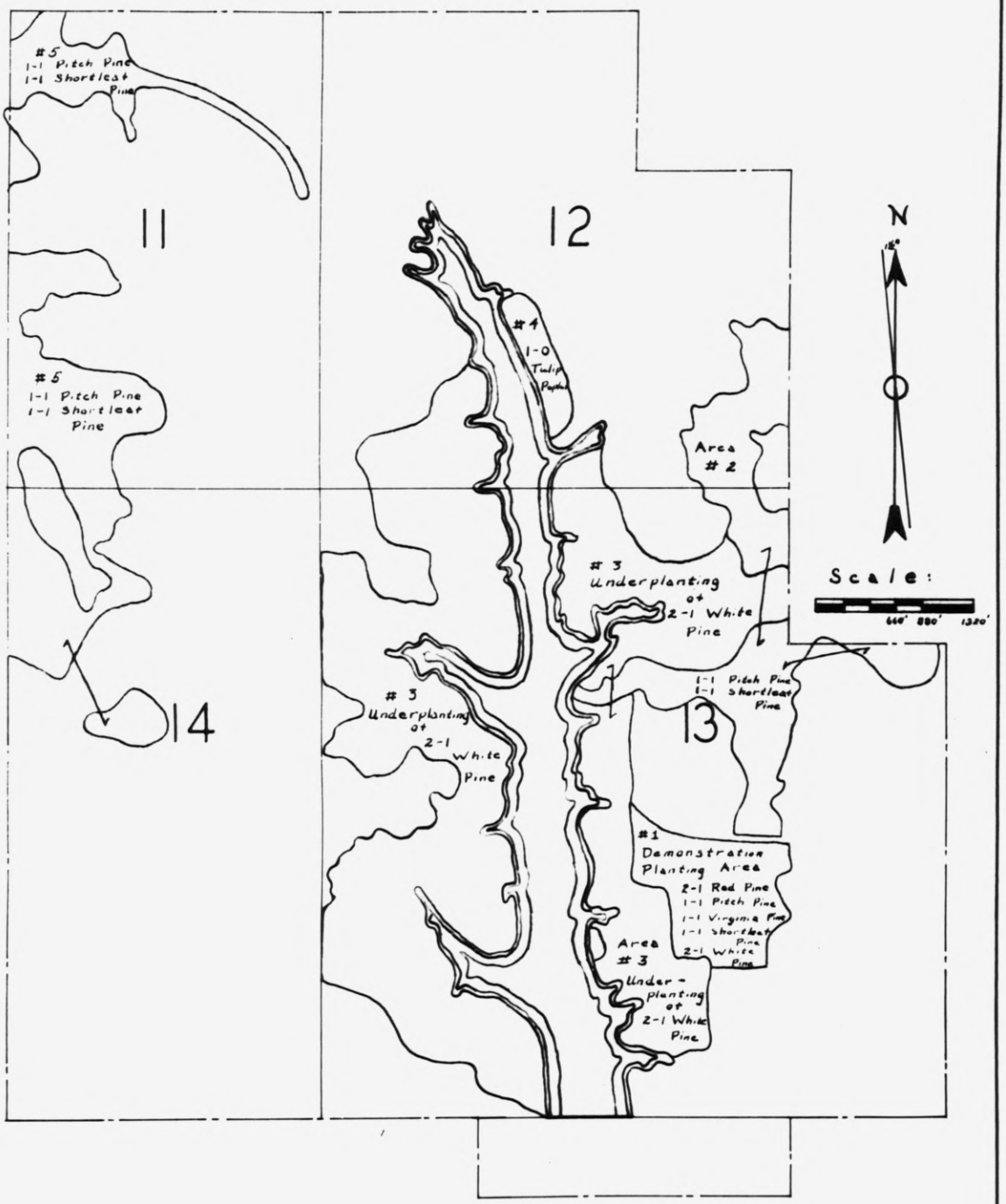
COVER TYPE MAP



Legend

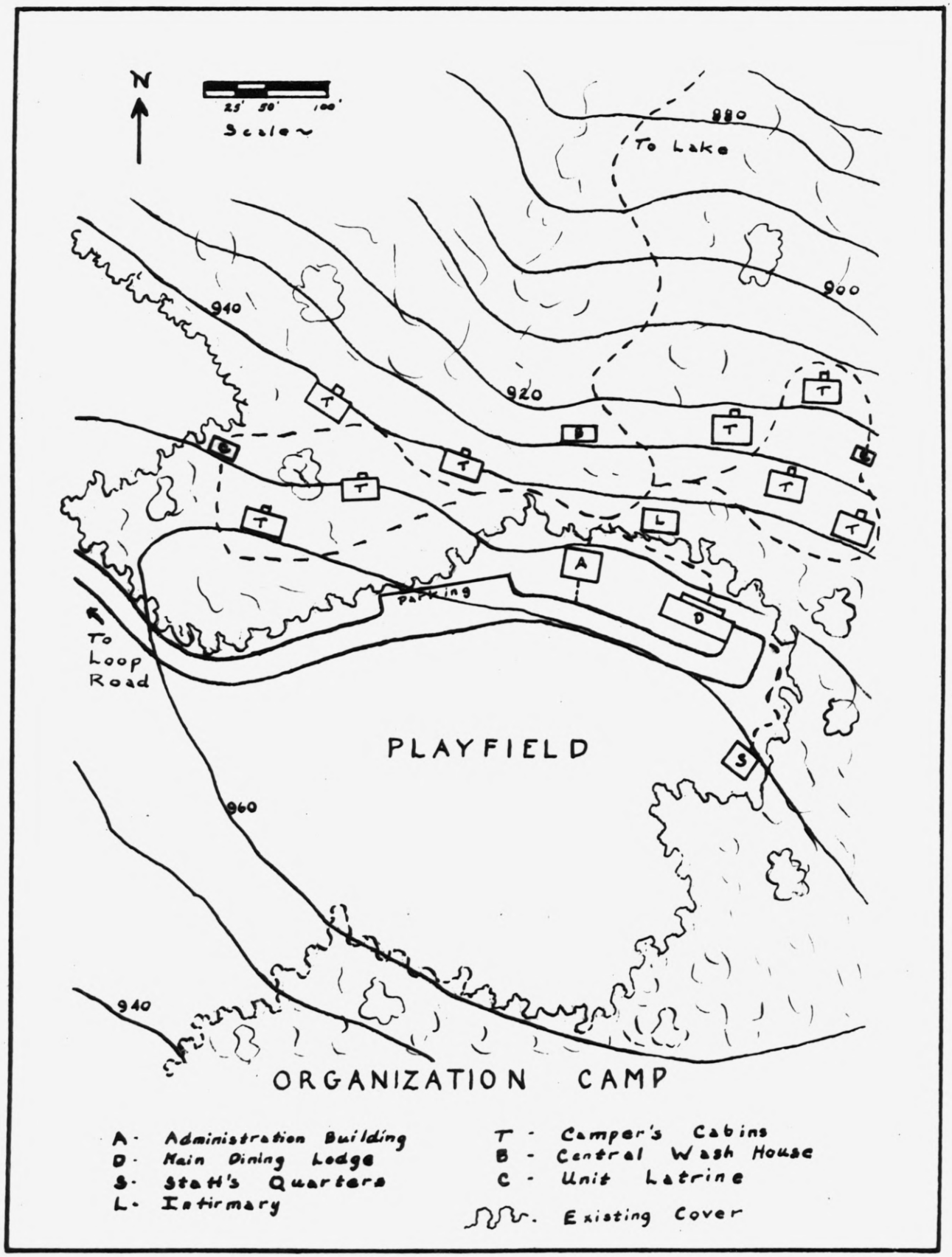
- Hardwood Saplings, Poorly Stocked
- Hardwood Saplings, Well Stocked
- Hardwood Sawlogs
- Brush
- Open, Grassland
- Cultivated Land
- Strip Mining
- Lake, Proposed
- Buildings
- Roads
- Trail
- Abandoned Railroad Grade

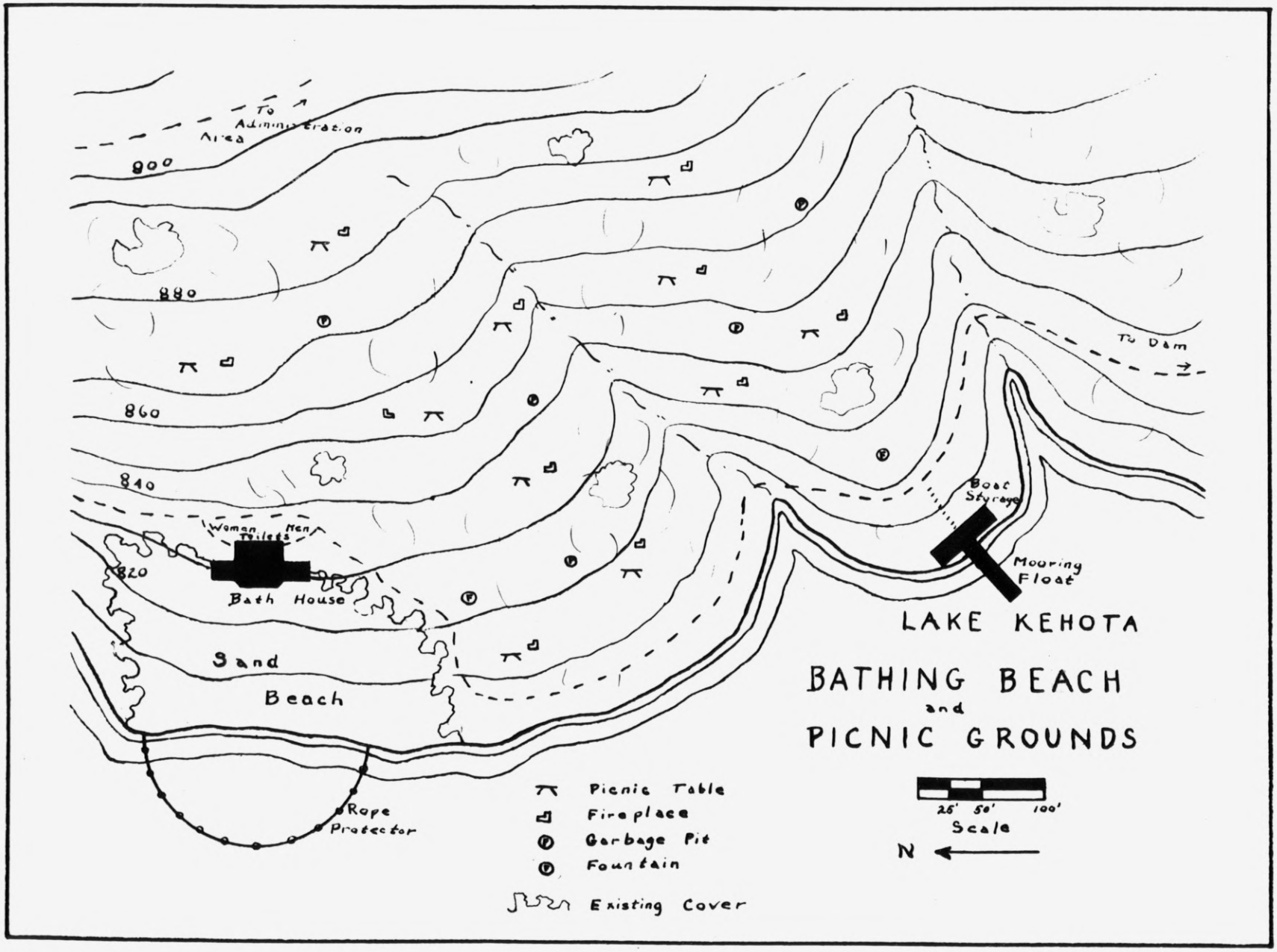
PLANTING PLAN



Acreages

Area No 1	-	26.7 acres
Area No 2	-	54.8 acres
Area No 3	-	220.0 acres
Area No 4	-	7.1 acres
Area No 5	-	79.4 acres
Total		388.0 acres


N
25' 50' 100'
Scale
980
To Lake
900
940
920
T
B
C
L
A
D
S
Parking
To Loop Road
PLAYFIELD
960
940
ORGANIZATION CAMP
A - Administration Building
D - Main Dining Lodge
S - Staff's Quarters
L - Infirmary
T - Camper's Cabins
B - Central Wash House
C - Unit Latrine
Existing Cover


To Administration Area
900
880
860
840
820
To Dam
Boat Storage
Mooring Float
Woman Toilets
Men
Bath House
Sand Beach
Rope Protector
LAKE KEHOTA
BATHING BEACH
and
PICNIC GROUNDS
Picnic Table
Fireplace
Garbage Pit
Fountain
Existing Cover
25' 50' 100'
Scale
N