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**How Lakes Came to Kansas**

EDWIN O. STENE

Bureau of Government Research, University of Kansas, Lawrence.

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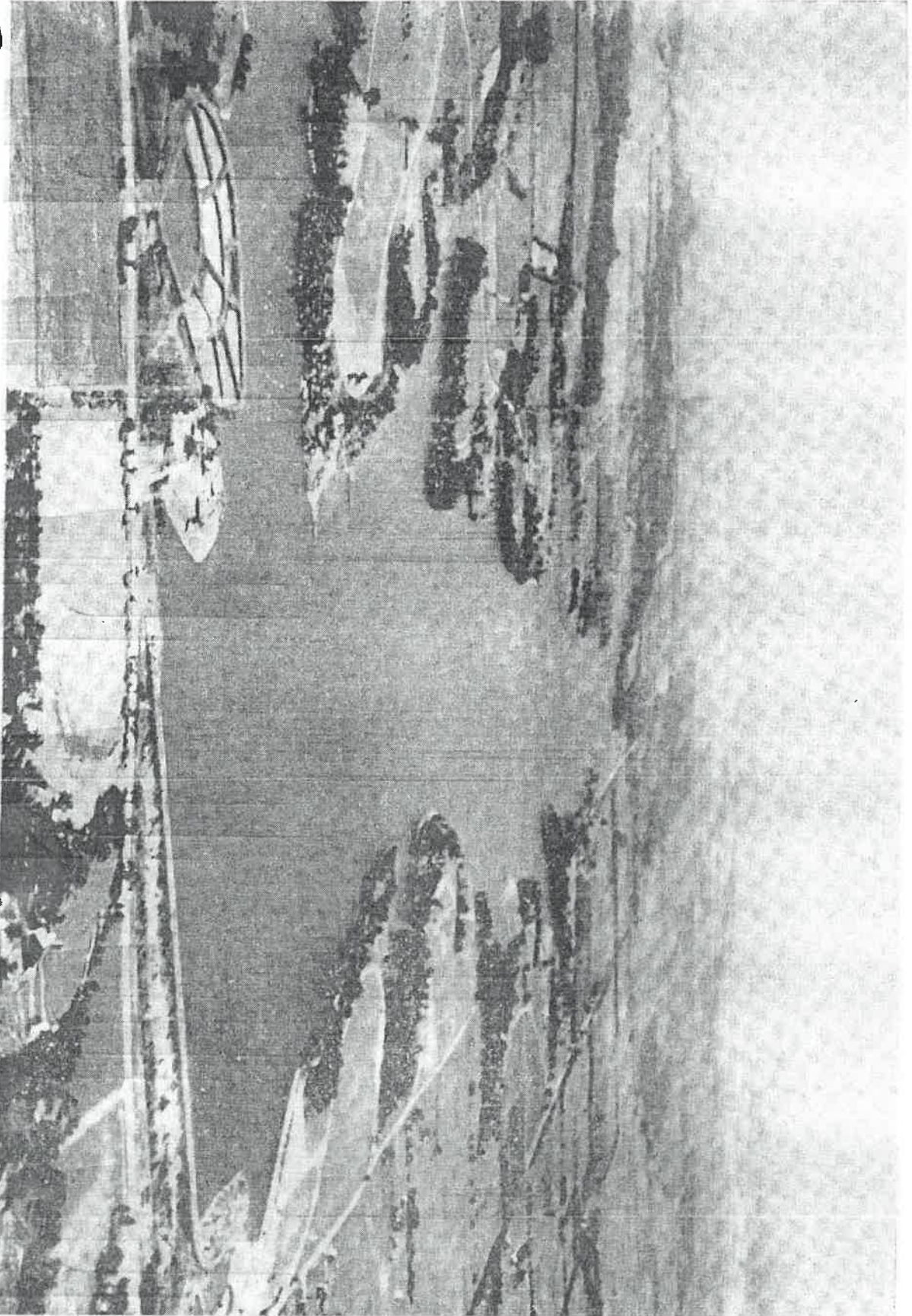


Fig. 1. Lake Shawnee (Shawnee County), County Lake. Photograph, courtesy Supt. A. J. Cox, Lake Shawnee.



However, the first major project to impound water in Kansas occurred in the last decade of the nineteenth century, when F. B. Koen, a wealthy Colorado rancher, undertook to flood a low area in Barton County by drawing water from the Arkansas River. The land in this area, known as Cheyenne Bottoms, was said to be unsuited for agricultural purposes. By flooding the Bottoms, Koen hoped to establish a lake which would serve not only as an attraction to waterfowl and fish, but also as a source of water supply for the irrigation of surrounding farm lands.<sup>(3)</sup>

Koen organized the Lake Koen Navigation and Reservoir Company and dug a ditch 40 feet wide and extending 14 miles from the Arkansas River to the Bottoms. But in the words of a newspaper editorial, "he never turned the water on."<sup>(4)</sup> About the time that the ditch was completed "land sharks came along and settled on some of the land in the basin". They saw the possibility of securing profitable compensation when the land was flooded. Koen made an appeal to the state legislature, and secured legal authority to condemn land under eminent domain for the lake project.<sup>(5)</sup> The necessity of purchasing the lands required extensive financing, however, and litigation before the courts delayed the program for many years. Although the main ditch was dug and a small part of the area flooded, the project as a whole was never completed. Within a short period the ditch was closed by sediment and land falls.

Meanwhile the frontiers of an earlier Kansas had disappeared and agricultural prices had risen above the low levels of the 1890's. Land settlement once more became a primary interest, and so, about fifteen years after the flooding and irrigation project had been undertaken, the Missouri Pacific Railroad announced a new plan to drain the Bottoms in order that the land might be farmed. Newspaper reports told of the excellent hunting grounds the swamps had been, but spoke effusively of the rich soil that would be opened up under the drainage project.<sup>(6)</sup> Thus the first cycle of flooding and draining projects was completed. After another twenty years, as will be seen, water and wild life once more were to be regarded as the most desirable asset in the Cheyenne Bottoms.

None of the early projects to impound water for recreational purposes was undertaken by the state. Farm ponds were recommended by state agencies, yet individual farmers were responsible for such ponds as were built. The legislature granted the right of eminent domain for the flooding of the Bottoms, but the project itself was a private undertaking. A few small lakes were built in

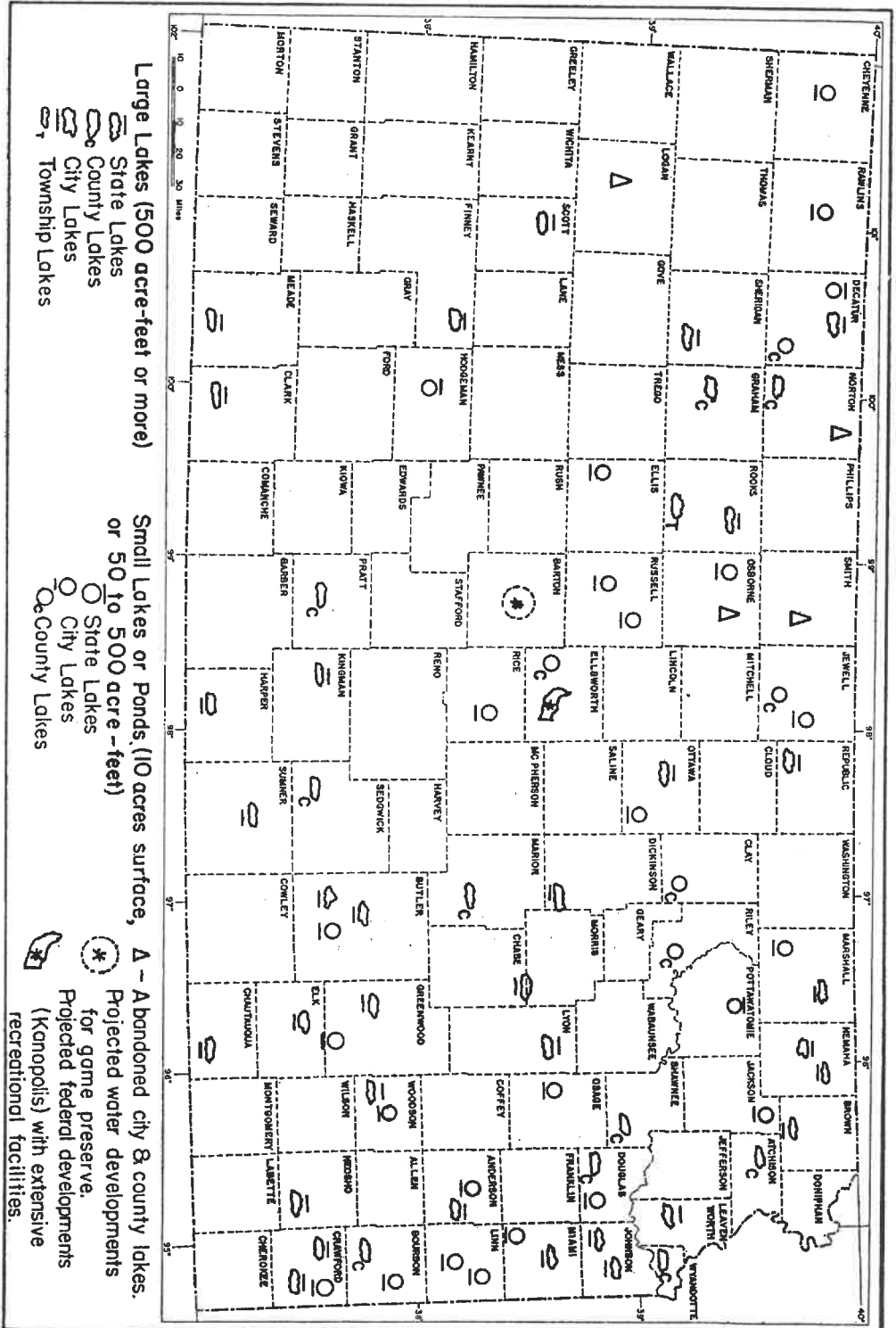


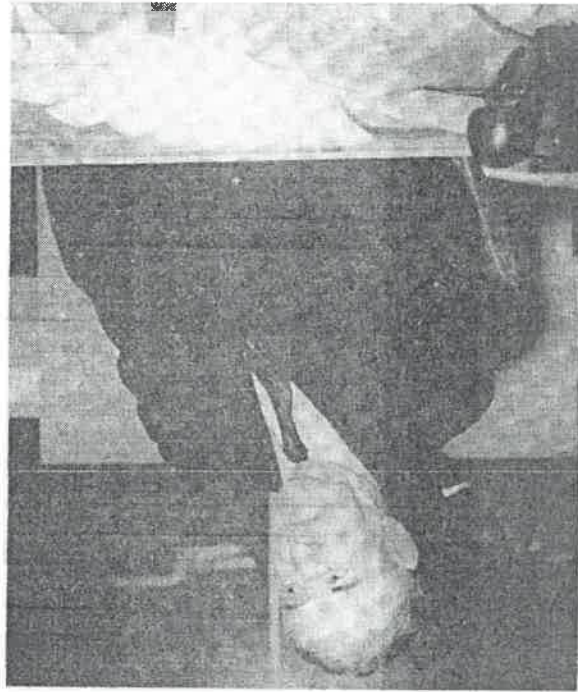
Fig 2. The Lakes of Kansas. Information secured since the map above was prepared shows the following additions or corrections: A city lake (Estridge) should be shown for Wabaussee County and a county lake for Ford County; both lakes shown for Anderson County are city lakes; one of the lakes shown for Butler County should be a state lake. For more detailed information see Tables I, II, and III.

various localities in the state for recreational purposes by sportsmen's clubs and private individuals. Railroad companies built dams to provide water reservoirs, and also in a few cases they developed the impounded waters into attractive lakes.<sup>(7)</sup> The possibilities of artificial lakes were becoming apparent. At the same time, the idea of restoring wild life by means of propagation was winning public support.

*Money in Search of New Uses.* Though it had given its official approval to private projects to impound water, the Kansas legislature did not display an interest in publicly financed projects until special funds for that use were actually in sight. These funds came into being through the enactment of a hunting license law and the enforcement activities of the state fish and game department. In 1905 the office of state fish and game warden was established through the consolidation of two existing agencies. Also in that year the legislature enacted a hunting license law. With the increased revenues obtained under this law, the state fish hatchery was established and developed, and programs for the propagation of upland wild birds were inaugurated. After 1920 the revenues from hunting licenses rose sharply, partly because of a new interest in the sport, partly because the establishment of a small force of full-time, salaried game wardens assured more effective enforcement of game laws than had been possible when the department was compelled to rely on unsalaried wardens. The department's funds began to accumulate. Yet the licensing of fishermen was in the making, not only because the hunters demanded equality of treatment, but also because the department considered a license system as necessary to effective regulation. With these prospects for enlarged revenues, the stage was set for a new program of expenditure.<sup>(8)</sup>

"*A Lake in Every County.*" The development, as outlined above, was well under way in 1923 when Governor Davis appointed as his state fish and game warden a man who was not only an enthusiastic sportsman but also an imaginative leader and a capable writer and speaker. The new warden, J. B. Doze, had previously observed the farm pond programs of Warden Lewis Dyche and others; also he had organized a hunting club and constructed a dam for a small artificial lake. As warden he was anxious to build favorable public relations, especially with hunters and fishermen, and in all probability he was seeking a popular project with which to publicize the work of his department. Already the idea of state lakes had been suggested from various sources, especially by hunting and

fishing enthusiasts. Among those who dreamed of a public lake building program was Lee Larrabee, who later was to be appointed to the first forestry, fish and game commission and to become one of its most active members, and who is now chairman of the re-



MR. J. B. DOZE

organized commission.<sup>(9)</sup> Yet without doubt Warden Doze deserves the credit for initiating public interest in the possibilities of artificial lakes for Kansas.

Shortly after he became warden, Doze began to sponsor the organization of local fish and game associations. He encouraged these associations and city clubs as well to develop ponds. Nevertheless he was convinced early that small ponds would not fulfill the needs of the state. In public lectures and at meetings of associations, therefore, he began to spread the idea of artificial lakes, as sanctuaries for ducks and fish, as beauty spots and as water reservoirs. At his headquarters, Doze obtained a relief map of the entire state, and marked on it the locations of possible lake sites. He carried surveying instruments in his fish car, and made several investigations of sites at the request of local associations. Before the end of his first biennium in office he was advocating "a lake in every county", a slogan that was popularized by a gubernatorial candidate five years later.



Warden Doze's views on the lake program were summarized forcefully in the following excerpt, which is quoted from his first biennial report to the legislature (1924).<sup>(10)</sup>

#### ENLARGE WATER AREA

First of all in importance, if Kansas desires to increase its wild life, is to increase the water area of the state. By doing so we will build more homes for more wild-life population. Under present conditions Kansas cannot expect more than half the wild life of its neighbor on the south or half that of its neighboring state to the north.

The total water area of Kansas was, when surveyed, but 384 square miles. That probably is the maximum figure, and wild-life population must be considered from the minimum water area. Nebraska, a smaller state, has a water area of 712 square miles, while Oklahoma, with a total area of 12,000 square miles less than Kansas, has 643 square miles under water.

There is but one way to increase the water area of Kansas, and that is by impounding flood waters and turning a part of the water from never-falling streams into reservoirs. And there is but one agency to do this—the state. Heroic measures must be adopted, for the task is exceedingly large and entails the building of many dams, many days in the field with tripod and level, scraper and cement mixer.

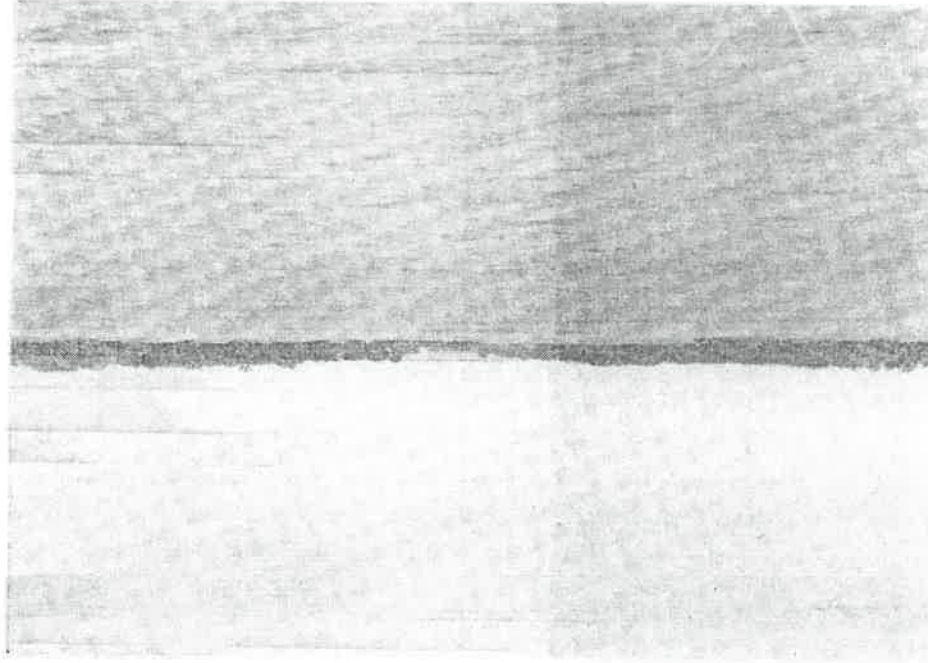


Fig. 3. Meade County State Lake. Photograph, 1945, courtesy Dr. Claude W. Hibbard.

Storage of water in Kansas has long been advocated, and some progress made in a feeble way. Everyone, in a cursory way, knows the advantages of having a pond or stream on land. A more thorough study of advantages derived from a considerable water surface is sufficient to convince that it is time for the state to enter upon a program seeking to enlarge the state's area of water surface.

It is well to point out a few of these advantages. First of all, water areas tend to increase humidity, and a comparatively high humidity in an agricultural region is desired. Water in lakes and ponds also tends to raise the



water level in the ground, or perhaps it would be best to say the moist horizon. Crops near a body of water, as a rule, soil conditions being the same, are more productive. Water surfaces also tend to attract bird life. Bird life is helpful in insect and weed control. There is also considerable commercial value to a water surface. If the water is sufficiently deep and not allowed to become too stagnant it will produce food in the form of fish and edible water fowl, to say nothing of the vacational and recreational possibilities. An expanse of water tempers the cooking heat of summer winds. The foregoing citations intrigue the mind into investigating for other benefits. Space forbids a more lengthy recital.

There are a number of places in Kansas that could be turned into areas of water at a nominal cost, compared to what these places will cost in a few years. The state might do well to begin work on an extensive scale immediately to increase the water area. This work properly belongs in the hands of a commission with sufficient authority to purchase or secure through condemnation proceedings or gift such suitable lands as the state's finances will bear without additional burdens upon taxpayers.

During the last two years a considerable addition has been made to the water area of Kansas. This is a hopeful sign. The department encourages as best it can the building of lakes, the recreation of marshes and the inundation of lowlands. The largest single addition to the Kansas water area is the Santa Fe Railroad's huge reservoir at Cassoday, Butler county. This body of water is perhaps 200 acres in extent, ranging in depth from featheredge to probably 20 feet.

Fish and game associations are taking up projects of building lakes and swamps. The McPherson county organization built the necessary dam and dikes to inundate a considerable area for fishes and fowl. Other county organizations have done preliminary work. The city of Herington has built a reservoir containing at its maximum area about 180 acres, with a depth near 30 feet. Then there are other projects either under way or contemplated.

However, it is apparent that the bulk of the job of enlarging the Kansas water area must fall upon the state. When it is considered that Arizona, supposed to be the driest state of the Union, has almost half the water area of Kansas, would it not be unwise to oppose an enlargement program? Sportsmen of Kansas are willing to pay practically all, if not all, the cost. Certainly, if hunters and fishermen want it and are willing to put up the money, opportunity for objection does not occur.

*Forestry, Fish and Game Commission.* Probably because he had won the enthusiastic support of the fish and game associations, Warden Doze had little difficulty in securing legislative action necessary to initiate his state lake plans. The legislature of 1925 created a forestry, fish and game commission, membership of which included the governor, the state warden, and three other members appointed by the governor and senate. The commission was authorized to acquire title to lands and waters, to build reservoirs, lakes and dams, to supervise the planting of trees, and to provide for fish hatcheries and game farms on state parks. The use of eminent domain was authorized where necessary to acquire lands.<sup>(11)</sup> A sum of \$40,000 was transferred from the fish and game department to the commission.<sup>(12)</sup> With that amount it was obvious that no major program of purchase and development could be undertaken. Of necessity the first biennium was devoted principally to the inspection of sites and the preparation of plans.

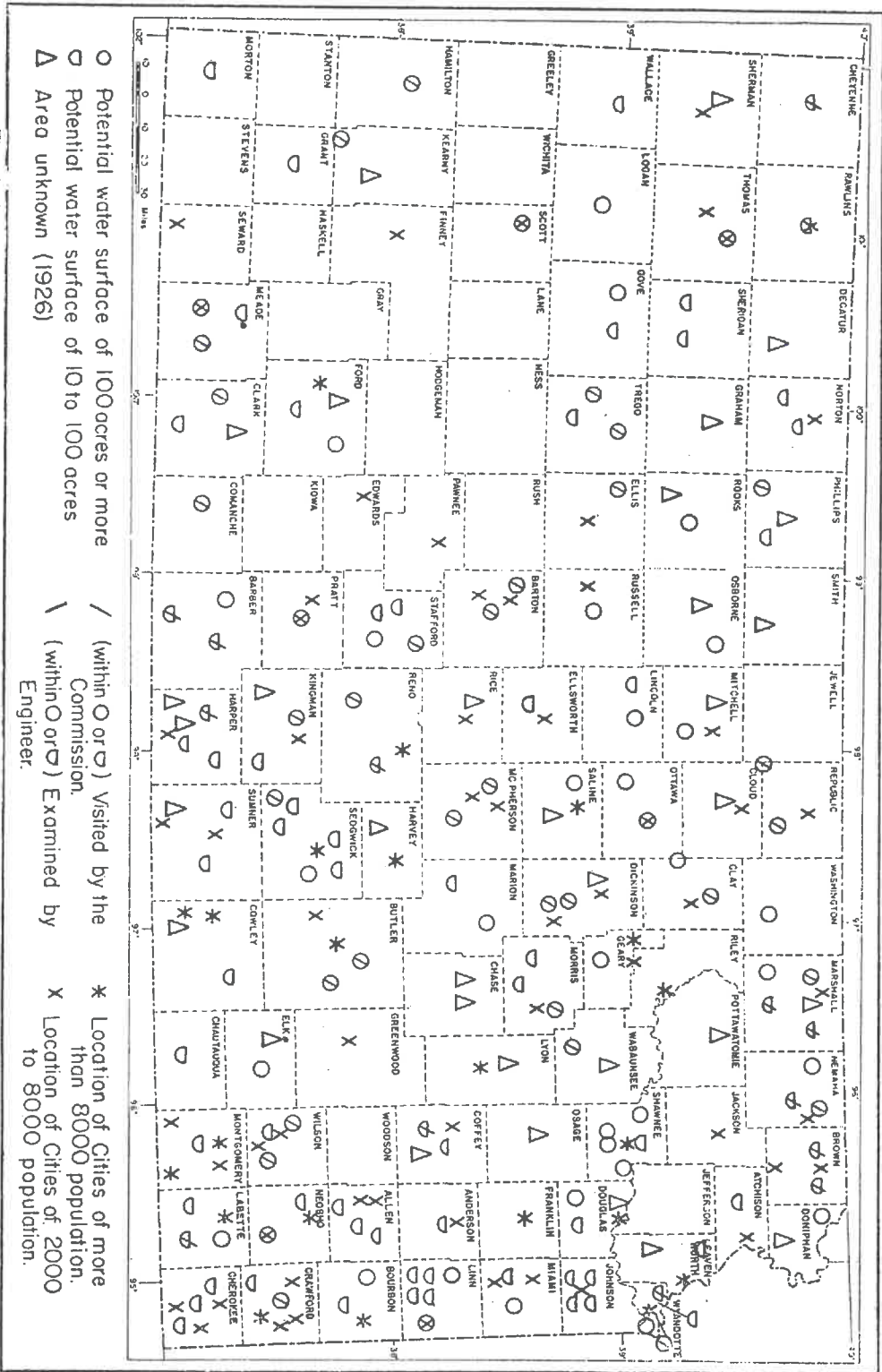


Fig. 4. Potential Kansas Lake Sites Proposed to the Commission, 1925-26. From the First Report of the Commission, 1926.

The commission met in Topeka in October, 1925, and started on a motor tour of prospective lake sites. On a series of such tours during the first biennium, they visited more than fifty proposed sites and met with local delegations in several cities. Interest in the program was so widespread that within a short time one or more proposals had been submitted by nearly every county in the state. A set of standards had to be adopted as a guide to determination of sites that might be developed. These standards included sociological factors such as population and local sentiment as well as land contour and character of the soil.<sup>(13)</sup> In 1926, also, an engineer was employed to inspect a few of the more promising locations.

The progress of the lake program was hastened by the fact that several communities began to take action without awaiting the next legislative session. Sportsmen of Crawford and Neosho Counties purchased the lands in the proposed lake areas and donated them to the commission. Citizens of Atwood, when informed that there was no prospect of a state lake in the next biennium, issued bonds and undertook the construction work with local funds. In one instance a deed offered jointly by three counties was refused after the engineer reported adversely on the prospects of successful establishment of a lake.

In 1927 the legislature placed the fish and game department under the supervision of the forestry, fish and game commission and authorized the use of hunting and fishing license fees for the lake and park program. Shortly thereafter an active construction program was under way, with the result that by the end of 1928 parks had been established and lakes were nearing completion in Meade and Scott Counties in the west, Ottawa County in the central part of the state, and in Crawford and Neosho Counties in the south-east. Another park was established in Leavenworth County in the northeast in the biennium that followed.<sup>(14)</sup>

Costs made it impossible, however, to finance the state lake program from hunting and fishing license fees at the rate that the public demanded. Warden Clapp in 1930 called attention to the fact that on the basis of the average of \$110,000 for the first six lakes it would be impossible to establish more than about one lake each biennium unless other funds were made available. Such a rate fell far short of public demands and, as a result, the pressure for other appropriations became a source of embarrassment to legislators and political party leaders. The legislature was not willing to make appropriations for lakes and parks from the general state

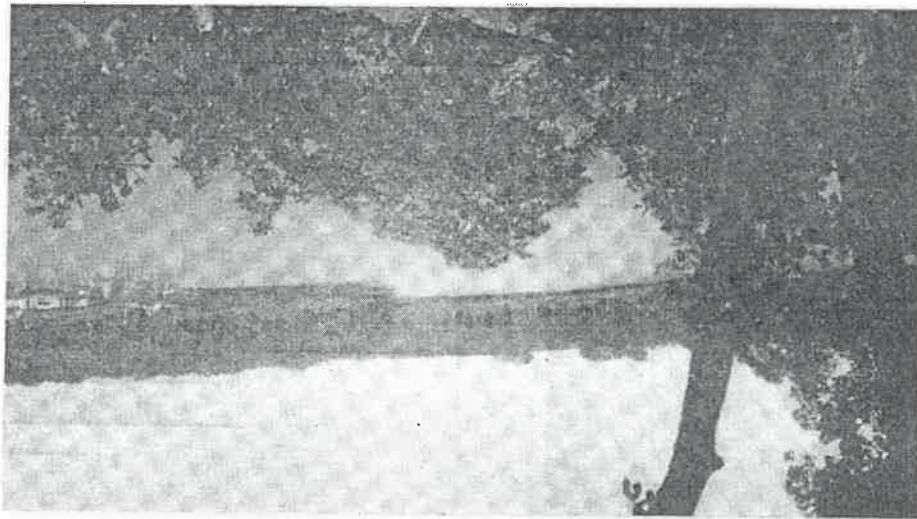


Fig. 5. Leavenworth County State Lake, Tonganoxie. One of the few wooded lakes of Kansas. Photograph, courtesy Dr. L. C. Cox, Tonganoxie.

Funds. The most that it would do was to authorize counties to establish and support lakes and parks.<sup>(15)</sup> This piece of legislation did little to meet the demands, however, as is suggested by the fact that in 1930 an independent candidate who adopted as part of his platform the slogan, "a lake in every county", came within a hair's breadth of being elected governor on a write-in vote. Nevertheless the lake and park program almost came to a complete standstill after 1930. The commission reported in 1932 that it was unable, due to economic conditions, to continue the construction work.<sup>(16)</sup> The counties likewise were unable to exercise the

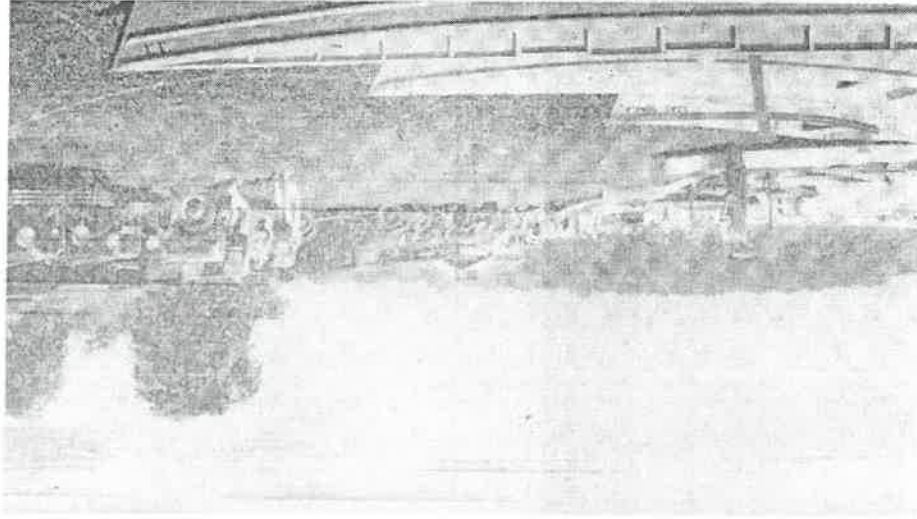


Fig. 6. Leavenworth County State Lake. The boat and bathing area. Photograph, courtesy Dr. L. C. Cox.



powers granted by the legislation of 1929. For a time it seemed that hopes for more lakes had faded into the far distant future. Then suddenly a new opportunity appeared in the form of the federal employment relief program.

C. C. C. No account of the development of state lakes and parks would be complete without the consideration of the work of the Civilian Conservation Corps. This work-relief agency, brought into being by Congressional Act of March, 1933, provided a large labor supply and made possible the construction of lakes at a cost to the state of only about one-tenth that of the first five lakes. Conversely the state park and lake program, for which plans already had been prepared and lands already made available through offers of sale or donation, provided an almost ideal set of projects for C.C.C. encampments. No less than eight state lakes were built by the C.C.C., and others already in existence were completed or improved. Yet the state lakes represented only a small portion of the work along that line performed in Kansas by the C.C.C. Local governments likewise took advantage of federal offers, and of the powers granted under the state legislation of 1929. Literally dozens of county and city lakes came into being during the years between 1933 and 1940.

Other federal relief funds served also to hasten the progress of the park and lake developments. As is shown by Table I on page 135, relief labor provided through the services of the Kansas Emergency Relief Committee, and of the Federal Works Progress Administration made possible the construction of several state and local lakes. So rapid was the development of lakes and parks under these relief programs that by 1940 the goal proposed by J. B. Doze and popularized as a campaign slogan by Brinkley was not far from a reality. There was not a lake in every county, but there were in the neighborhood of 100 artificial lakes in the state, a majority of them built in the five year period between 1935 and 1940.

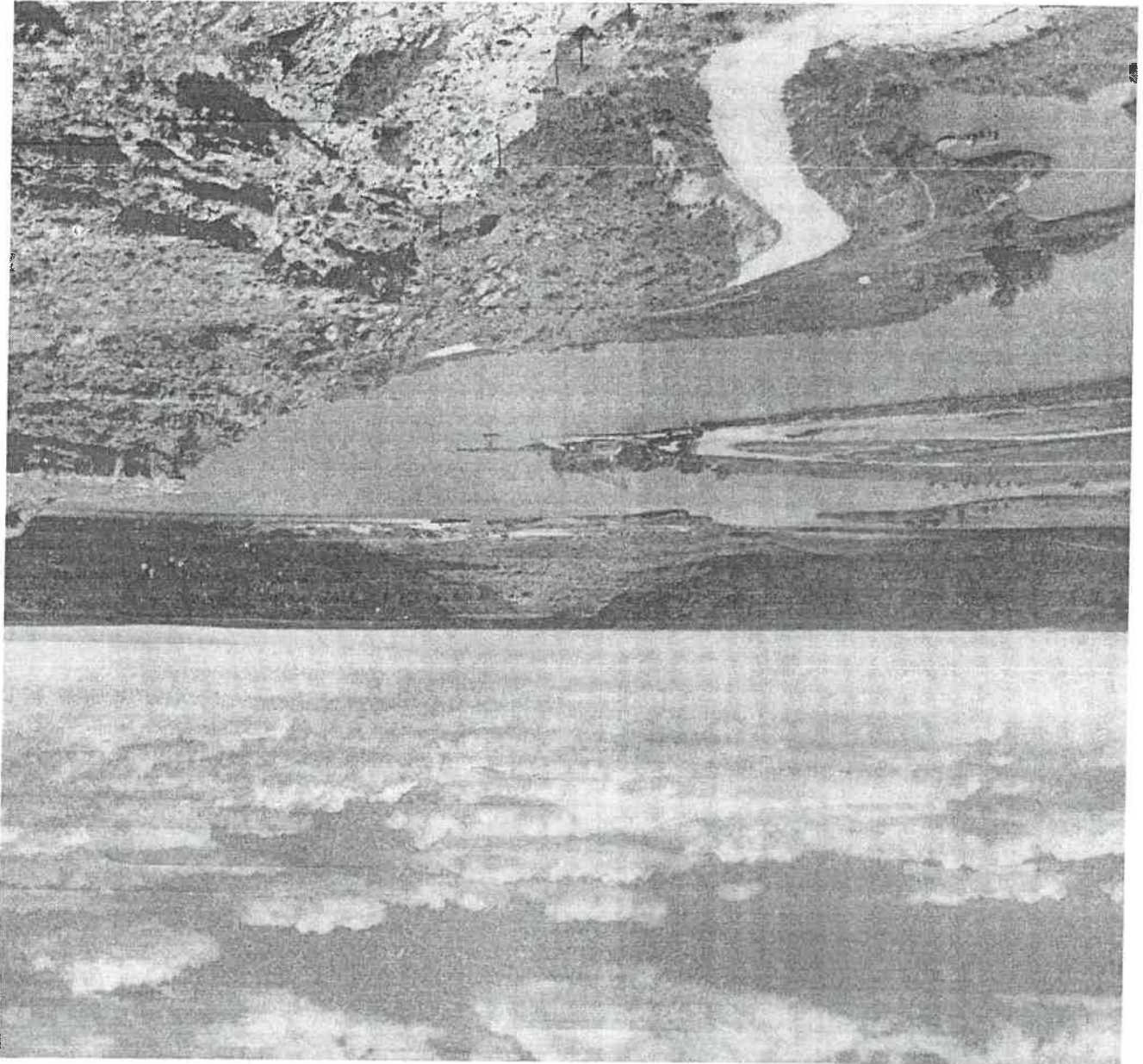
*War-time Suspension.* Necessarily the construction programs came to a standstill after Pearl Harbor. Several county and city projects long since approved by the water resources division of the state board of agriculture remain still in the planning stage, and doubtless many of them will remain so, at least so long as demands for labor exceed the supply. Experiences of the past decades suggest that great activity in the development of artificial lakes and parks is apt to be associated with economic depression and unemployment rather than with prosperity.

The other major project is associated with the Missouri Valley development programs. In fact, a half dozen water reservoirs al-

of an 11,000 acre lake.<sup>(17)</sup>

The plans provide for the construction of 6,000 acres more is contemplated. The land have been purchased thus far, and the purchase of about 12,000 acres of the Bottoms as a migratory bird sanctuary. Over 12,000 acres of the United States Wild Life Service, undertook the development of for wildlife restoration, the state commission, in cooperation with Congress had passed an act in 1938 providing grants in aid to states gone through a cycle of flooding and drainage projects. After future. One of these is the Cheyenne Bottoms, which already have addition of at least two major water areas in Kansas in the near *New Federal Projects.* There is a promise, however, of the

Fig. 7. Scott County State Lake and Park, 1938. Photograph, courtesy Kansas State Forestry, Fish and Game Commission.



ready are authorized or under construction in the Kansas and Verdigris River basins, and numerous other proposed projects are under investigation.<sup>(18)</sup> These reservoirs are designed primarily for flood control purposes, but the Flood Control Act of 1944 provides also for the development of recreational facilities at the flood control reservoirs.<sup>(19)</sup>

Currently the most promising project, from the point of view of developing recreational areas, is the Kanopolis Reservoir in Ellsworth County. The Kanopolis Dam across the Smoky Hill River was under construction when the United States entered the second World War. Work is now being resumed after a four year suspension. Already plans have been prepared for the development of recreational facilities. Ten areas have been selected on the proposed reservoir for development as group camps, individual lease sites, boating headquarters and fishing areas.<sup>(20)</sup> In general the federal plans for water reservoirs appear to anticipate the development of more complete and more varied recreational facilities than any thus far established at state lakes and parks.

*In Summary.* Thus the conservation of water resources in Kansas continues to expand. In the beginning the prevailing type of reservoir was the farm pond, and the chief purpose was the conservation of water for live stock. All projects, recreational and other, were privately financed, though the state provided encouragement by way of plans and information, by assistance in stocking ponds with fish, and later by limited tax abatements. When the state entered into the construction program, the primary purpose was to increase the fish and wild life resources and to develop recreational facilities. Later this program was accelerated with federal support, because the kind of work required was well suited to a new major objective—the provision of work relief for the unemployed. Under this program counties, as well as the state, joined in the lake-park construction activities. At about the same time and also with federal aid, many cities, faced with possible water shortages, undertook lake building projects in order to provide water reservoirs, and, incidentally, to increase their recreational facilities. The latest phase of this developmental process, a phase that is only now beginning to enter the picture, is the flood control program in Missouri River Basin. This program of development promises the establishment of large water reservoirs at several points along the rivers of the state, and these reservoirs, like city reservoirs, will be developed for recreational uses as well as for flood control and water



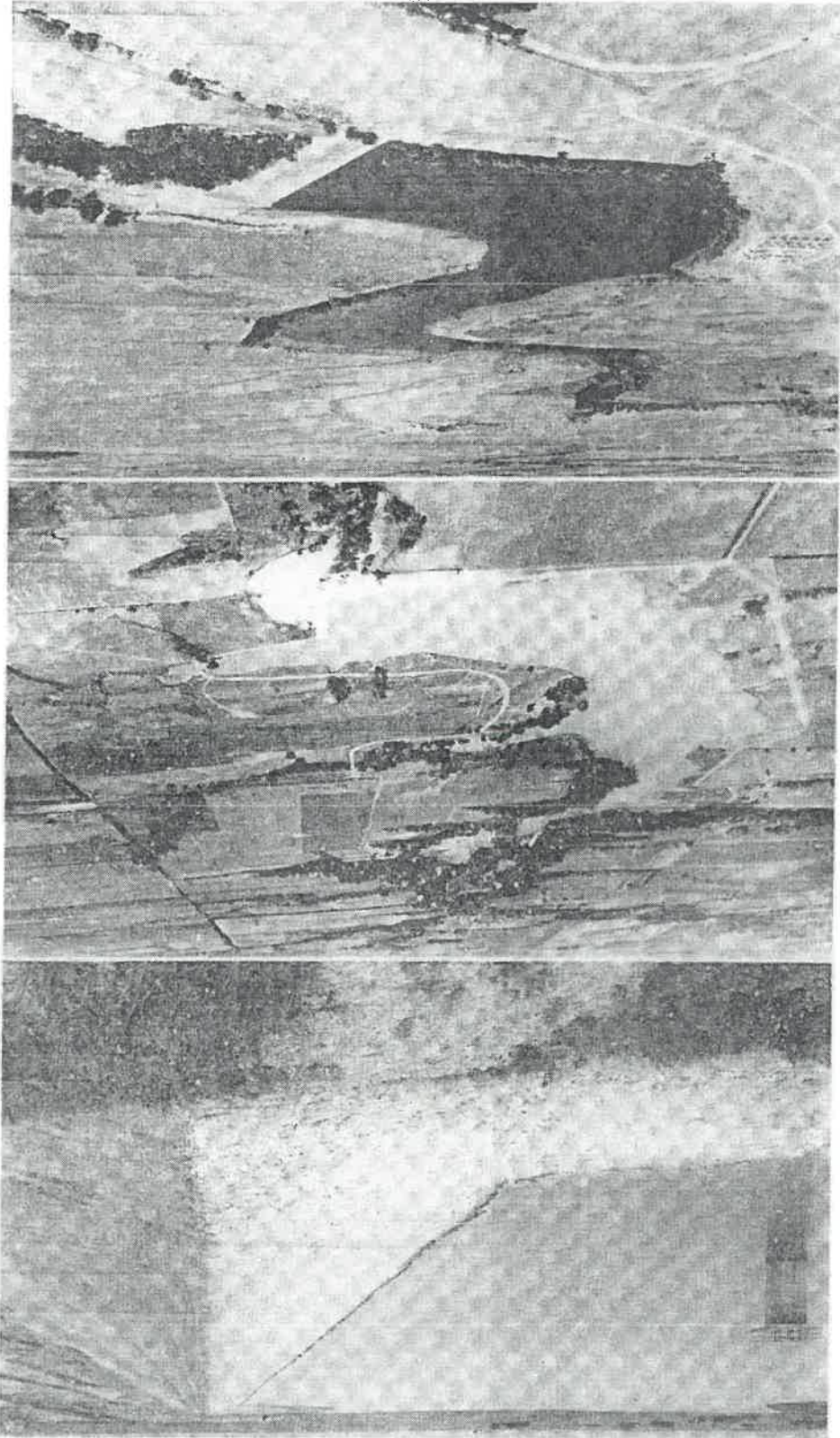


Fig. 8. Upper—Dam and outlet valve, Council Grove (Morris County) City Lake. Photograph, courtesy Mr. S. A. Sulentic, Topeka, Kansas State Board of Agriculture.  
Middle—Atchison County Lake. Photograph, courtesy Division of Water Resources, Kansas State Board of Agriculture.  
Lower—Howard (Elk County) City Lake. Photograph, courtesy Division of Water Resources, Kansas State Board of Agriculture.



conservation purposes. The projects are under direction of the War Department of the United States, whereas sites are investigated and plans prepared in Kansas by the water resources division of the state board of agriculture.

*Problems.* A large majority of the lake construction projects in Kansas thus far have been successful. Perhaps the most serious difficulty is the tendency of the lakes in many localities to fill with silt. One city clerk reported, for example, that "it took just three years to completely fill our lake with sediment." Another official reported regarding the local city lake, that "it was a nice lake but is getting badly filled." Perhaps a half dozen local lakes in the state have been abandoned for similar reasons.

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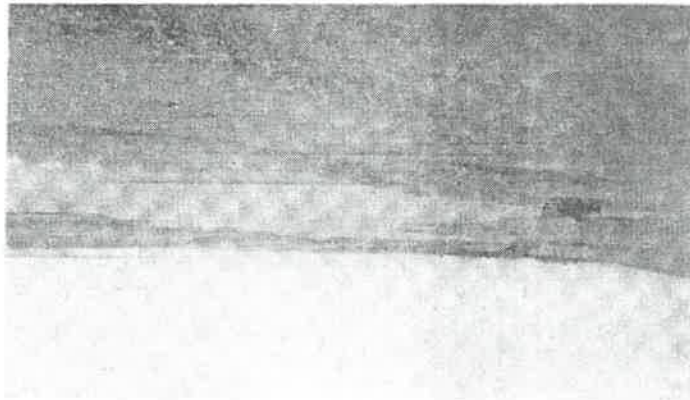


Fig. 9. Rooks County State Lake, Stockton. A. Prairie Lake. Photograph, E. O. Stone.

Even where sedimentation has not been so extensive as to cause the disappearance of a lake there have been instances where the silt deposits have tended to destroy lake bottom vegetation, and consequently fish as well. Sandy swimming beaches have been turned to mud bottoms because of the deposits. This is true even of one of the very few natural lakes, where a one-time sand bottom is now covered with several feet of silt.

Most of the artificial lakes in the state have fallen short of fulfilling the high hopes and the dreams of the fisherman. Reports of "good fishing" in city and county lakes are disappointingly few. On the whole the state lakes have a better record. Because they are under the direct supervision of the forestry, fish and game commission, these lakes have been watched more closely than most of the local lakes. Moreover, the dams are so constructed that the lakes may be drained, partially or completely, in order to permit the growth of new vegetation or the removal of excess and undesirable

fish population if necessary. Even so, the department is constantly faced with the problem of maintaining an adequate supply of full grown game fish in all state lakes.

Maintenance and management of lakes and parks also present problems. Well-kept grounds, well-managed concessions, and the maintenance of attractive standards of conduct among visitors, all contribute to the attractiveness of public parks and lakes. In fact, the most popular lakes are not necessarily the best fishing grounds. But adequate maintenance requires money, it requires the careful selection of personnel, and it requires the establishment of high standards for concessionaires.

At present there is considerable variation in the appearance of state parks. A few of them are attractively maintained. Others have not yet been developed, and still others appear to have deteriorated somewhat. A few have been left intentionally in a relatively undeveloped condition. Present conditions, however, cannot be regarded as typical, because wartime labor shortages have made it impossible to retain adequate personnel during the past few years. The problem for the future is one of securing income sufficient to maintain existing parks and lakes and at the same time to accumulate funds for future development. The question still remains whether the maintenance of state parks and lakes should be financed entirely from hunting and fishing licenses.

The control of commercial enterprises is an important aspect of maintenances of lakes and parks. The forestry, fish and game commission has followed the policy of granting concessions to private operators, and in many instances these operators have constructed their own buildings and other permanent equipment. Although this arrangement is economical, it has caused some embarrassment in instances where the concessionaires have proved undesirable. Thus far, however, the methods of control may be regarded as largely experimental. A few cities operate boating services and other similar services on a direct employment basis, with apparent success. In most instances where commercial services are provided at county and city lakes, however, the system of private concessions is followed. The recreational plans for the Kanopolis Reservoir anticipate the same kind of arrangement. However, the district office of the corps of engineers has announced that concessions will be granted "only after a review of the completeness and quality of the facilities and services to be offered, and other considerations, rather than purely on a maximum return to the Government."

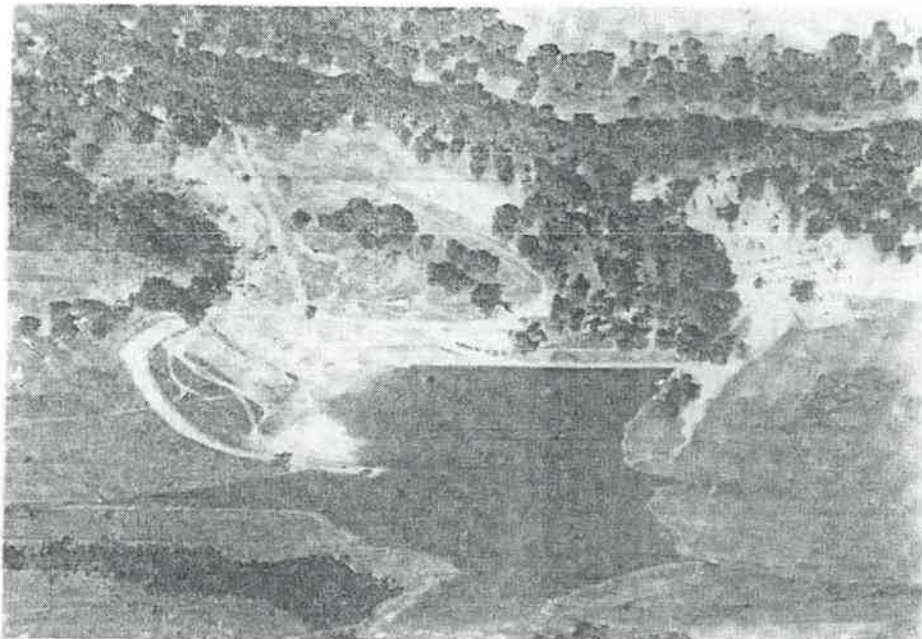


Fig. 10. Sedan (Chautauqua County) City Lake. Photograph, courtesy Division of Water Resources, Kansas State Board of Agriculture.

#### DATA ON PRINCIPAL KANSAS PUBLIC LAKES

The four tables on the following pages contain data regarding the history, area, and other conditions of the twenty-one state parks and lakes, of seventeen county lakes, and of sixteen larger city lakes in Kansas. Information regarding state lakes has been taken from reports of the forestry, fish and game commission and in part from records of the water resources division of the state board of agriculture. For county or city lakes the data also have been obtained from the water resources division (whose approval is a legal prerequisite to the construction of dams), and from replies to questionnaires sent to cities and counties. Not all questionnaires were returned, and so the data for some of the local lakes are incomplete. Lakes in Anderson and Wabauensee Counties, for a few years listed as state lakes, are no longer included in the reports of the forestry, fish and game commission. They are managed as city lakes, by the cities of Garnett and Eskridge, respectively, and are listed below in Table III.

Table IV gives some indication of the large public interest in Kansas lakes.

TABLE I—State Lakes

LOC A T I O N	Area of Park (Acres)	Surface Area of Lake (A)	Capacity (Acres-Ft.)	Max. Depth of Lake	Land Acquired by	Dam Built By	Completed (Before 1925)	Opened to Fishing	Park Supt. (1944)
1. Butler	Augusta	568	1,610	70 ft.	Lease	Santa Fe R.R.		1934-a	Yes
2. Clark	Ashland	1,289	7,662	60 ft.	Donation	C.C.C.		1941	No
3. Crawford No. 1	Pittsburg	418	1,610	54 ft.	Donation	(Strip Mine Pits) (b)	1938	1927	No
4. Crawford No. 2	Farrington	465	3,474	10 ft.	Donation	C.C.C.	1932	1939	No
5. Decatur No. 1	Oberlin	97	130	14 ft.	Purchase	Highway Dept	1938	1940	No
6. Decatur No. 2	Oberlin	481	807	10 ft.	Donat on	C.C.C.	1934	1937	Yes
7. Finney	Garden City	853	4,359	36 ft.	Don. & Purch.	C.C.C.	1934	1937	No
8. Kingman	Kingman	1,562	80	6 ft.	Purchase	Comm. and C.C.C.	1934	1934	No
9. Leavenworth	Tonganoxie	506	3,932	56 ft.	Purchase	C.C.C.	1931	1933	Yes
10. Lyon	Reading	382	1,889	43 ft.	Purchase	C.C.C.	1935	1939	Yes
11. Meade	Meade	1,240	860	37 ft.	Purchase	Commission	1928	1930(d)	No
12. Miami	Fontana	277	90	32 ft.	Purchase	C.C.C.	1938	1939	No
13. Nemaha	Seneca	705	3,660	31 ft.	Donation	Commission	1927	1929	Yes
14. Neosho	Parsons	216	756	25 ft.	Donation	Commission	1929	1931(e)	Yes
15. Ottawa	Minneapolis	711	1,070	35 ft.	Condemnation	Highway Dept.	1933	1940	No
16. Portawatomie	Blaine	100	300	6 ft.	Purchase	K.E.R.C.	1934	1940	No
17. Republic	Jamestown	1,064	1,000	25 ft.	Donation	Commission	1930(f)	1932(e)	Yes
18. Rooks	Stockton	333	516	22 ft.	Purchase	C.C.C.	1937	1940	Yes
19. Scott	Scott City	1,280	912	22 ft.	Donation	C.C.C.	1937	1938	Yes
20. Sheridan	Quinter	436	1,797	50 ft.	Donation	C.C.C.	1937	1938	Yes
21. Woodson	Toronto	446	1,797	50 ft.	Donation	C.C.C.	1937	1938	Yes

TABLE II—County Lakes\*

County	City	Plans Approved by Water Resources Div.	Dam Completed	Surface Area of Lake (A)	Capacity (Acres Feet)	Max. Height of Dam	Fulltime Care-taker	Local Fees for Fishing
1. Atchison	Horton	1934	1935	91	819	35 ft.	Yes	Yes
2. Bourbon	Ft. Scott	1934	1935	106	485	39 ft.	Yes	No
3. Clay	Clay Center	1934	1935	18	102	20 ft.	No	No
4. Decatur (h)	Jennings	1934	1935	(Washed Out)	3,957	63 ft.	Yes	Yes
5. Douglas	Lone Star	1935	1939	195	146	23 ft.	No	No
6. Ellsworth	Hollywood	1935	1937	23	487	24 ft.	No	No
7. Ford (h)	Morland	1936	1935	85	709	31 ft.	No	No
8. Graham	Morland	1936	1935	15	75	13 ft.	No	No
9. Jewell (h)	Russell Springs	1936	1939	(Reported almost dry)	2,472	28 ft.	No	No
10. Logan	Marion	1936	1939	152	407	42 ft.	Yes	Yes
11. Marion	Marion	1936	1938	69	447	38 ft.	Yes	Yes
12. Norton (h)	Pratt	1936	1938	96	(Does not hold water)	12.5 ft.	Yes	Yes
13. Pratt	Pratt	1936	1935	393	7,500	58 ft.	Yes	Yes
14. Riley (h)	Topeka	1934	1937	238	2,996	43 ft.	Yes	Yes
15. Shawnee	Garden Plains	1935	1940	305	6,900	90 ft.	Yes	Not open
16. Sedgewick	Kansas City	1936	1940					
17. Wyandotte	Kansas City	1936	1940					

\*Harvey and Sumner Counties have "overflow dams" on the Little Arkansas and the Ninnescah rivers, respectively.



TABLE III—Larger City Lakes (Over 400 Acre Ft. Capacity)

City	Distance Approved by Plans	From Water Rec-Com- pleted (Acre)	Surface Area (Acre)	Capacity (Acre ft.)	Height of Dam	Local Fees
Atwood (twp.)	1 block	1933	160	950	8 ft.	No
Anthony	2 mi.	1934	135	950	32 ft.	Yes
Augusta	1/2 mi.	1931	180	1,820	41 ft.	Yes
Council Grove (h)	1940	1942	387	8,416	65 ft.	Yes
El Dorado	3 1/2 mi.	1927	315	1,550	65 ft.	Yes
Emporia	20 mi.	1935	405	6,603	60 ft.	Yes
Eskridge	4 mi.	1936	202	3,458	64 ft.	Yes
Eureka (h)	1935	1939	259	3,690	57 ft.	Yes
Gardner	2 1/2 mi.	1937	131	2,351	58 ft.	No
Garnett	0	1937	48	839	56 ft.	No
Herrington	1922	1922	410	3,505	31 ft.	No
Horton	1/2 mi.	1924	175	1,576	42 ft.	Yes
Howard	1 1/4 mi.	1934	60	777	32 ft.	Yes
Olathe	2 1/2 mi.	1931	56	490	32 ft.	Yes
Paola	4 mi.	1934	40	470	29 ft.	Yes
Painville (twp.) (h)	1935	1938	158	1,037	27 ft.	Yes
Sabetha (h)	3 1/2 mi.	1935	112	1,255	77 ft.	Yes
Sedan	1934	1935	55	660	37 ft.	Yes
Wellington	10 mi.	1934	349	3,066	32 ft.	Yes

TABLE IV—Park Use Data for Fiscal Year 1940 as Estimated by Caretakers and Other Agents (k)

County State Park	Fishers	Picnickers	Visitors	Total
Butler	16,946	24,795	103,710	32,805
Crawford No. 1	4,875	4,072	34,376	32,805
Crawford No. 2	9,729	632	34,376	34,376
Decatur No. 2	2,448	7,851	13,324	13,324
Leavenworth	10,948	16,624	67,103	67,103
Madison	3,327	5,074	12,288	12,288
Neosho	10,751	8,602	14,426	14,426
Ottawa	4,501	12,184	81,865	81,865
Scott	3,068	6,752	13,210	13,210
Woodson	19,008	3,930	29,009	29,009
Totals	85,601	90,516	402,116	402,116

NOTES ON TABLES

- a. This date is given in the *Seventh Biennial Report, 1938*. The lake may have been open to fishing when the commission leased it from the Santa Fe Railroad and for a short time thereafter.
- b. Crawford County State Park No. 1 contains several small ponds in abandoned surface coal mine pits. These bodies of water existed when the land was donated to the state.
- c. Duck hunting is permitted in these lakes.
- d. Closed in 1941 for drainage and improvement, including the removal of rough fish; reopened for fishing in 1944.
- e. Not open for fishing in 1946; partially drained for cleaning and to permit regrowth of vegetation.
- f. Dam partially washed out by flood in 1933; rebuilt by the C.C.C.
- g. Superintendent of Meade Park Game Farm.
- h. No direct reports received from these counties and cities.
- i. City plans to require a local fishing fee in the near future.
- k. *Eighth Biennial Report*, p. 19.

LITERATURE CITED

- (1) *Areas of the United States, 1940*, Sixteenth United States Census, 1942, p. 6.
- (2) *CF, Third Biennial Report of the State Fish Commissioner, 1882*, pp. 16-39; and *Annual Report 1893*, pp. 3-7.

- (3) *Topeka State Journal*, Jan. 24, 1899.
- (4) *Wichita Eagle*, May 9, 1900.
- (5) *Topeka State Journal*, May 1, 1900; *Laws of Kansas*, 1899, ch. 151.
- (6) *Kansas City Journal*, Aug. 2, 1914.
- (7) *Kansas Fish and Game*, Sixth Biennial Report of the Fish and Game Department, 1926, p. 12.
- (8) STENE, "Wildlife Conservation in Kansas," these *Transactions*, v. 47, p. 289 ff (Mar., 1945).
- (9) *Ibid.*, pp. 315, 321; *Kansas Fish and Game*, Mar. 1942, p. 2.
- (10) *Fifth Biennial Report of the State Fish and Game Department*, 1924, pp. 6-7.
- (11) *Laws of 1925*, ch. 257.
- (12) *Laws of 1925*, ch. 13.
- (13) *First Report of the Forestry Fish and Game Commission*, 1926, pp. 11-12.
- (14) *Second Biennial Report*, 1928, p. 7.
- (15) *Laws of 1929*, ch. 158.
- (16) *Fourth Biennial Report*, 1932, p. 25.
- (17) *Ninth Biennial Report*, 1942, p. 32; *Kansas City Star*, Feb. 4, 1945, p. 1B.
- (18) Report of the Kansas State Board of Agriculture, *A State Plan of Water Resources Development*, v. 63, No. 294. (Map of projects in envelope attached to inside back cover).
- (19) 58 U. S. Stat. 889-890 (78th Congress, 2nd Session, ch. 665, sec. 4).
- (20) *Kanopolis Reservoir, Proposed Development of Recreational Facilities*, War Department Corps of Engineers, Kansas City District, April, 1946.