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Lloyd Smith

Iowa State Planning Board

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HISTORY AND DEVELOPMENT OF THE GOOSE LAKE UPLAND GAME REFUGE AND NESTING AREA

LLOYD SMITH

Since nine out of every ten acres in Iowa are either mowed, grazed, or cultivated, Iowa is one of the hardest, if not the most difficult state in the Union to set up a game program.

With the inauguration of the Biological Survey Unit of the State Planning Board, a survey has been carried on in forty-three counties to determine if possible just what types and how much county-owned wastelands might be available for refuge purposes. The term wastelands is defined as marginal or sub-marginal land on which the top-soil is very thin and will not produce paying crops. This type of land needs a rest and will build itself up if left uncultivated and seeded down with certain types of plantings.

Some counties had delinquent tax school land that they were glad to release for game refuge purposes. In several northwest Iowa counties abandoned gravel pits and small county-owned tracts were secured. The State Conservation Commission also had several dry-lake beds which had been drained. The following treatise is one of these lake beds.

HISTORY

Goose Lake, a state-owned dry lake bed, which lies about seven miles north of the town of Jefferson in Greene County, was drained under Chapter 44, Acts of the 38th General Assembly. Acting under this law, drainage district No. 151, Greene County, was established by the Board of Supervisors on August 29, 1919 and in 1920 and 1921 this lake was tiled and drained.

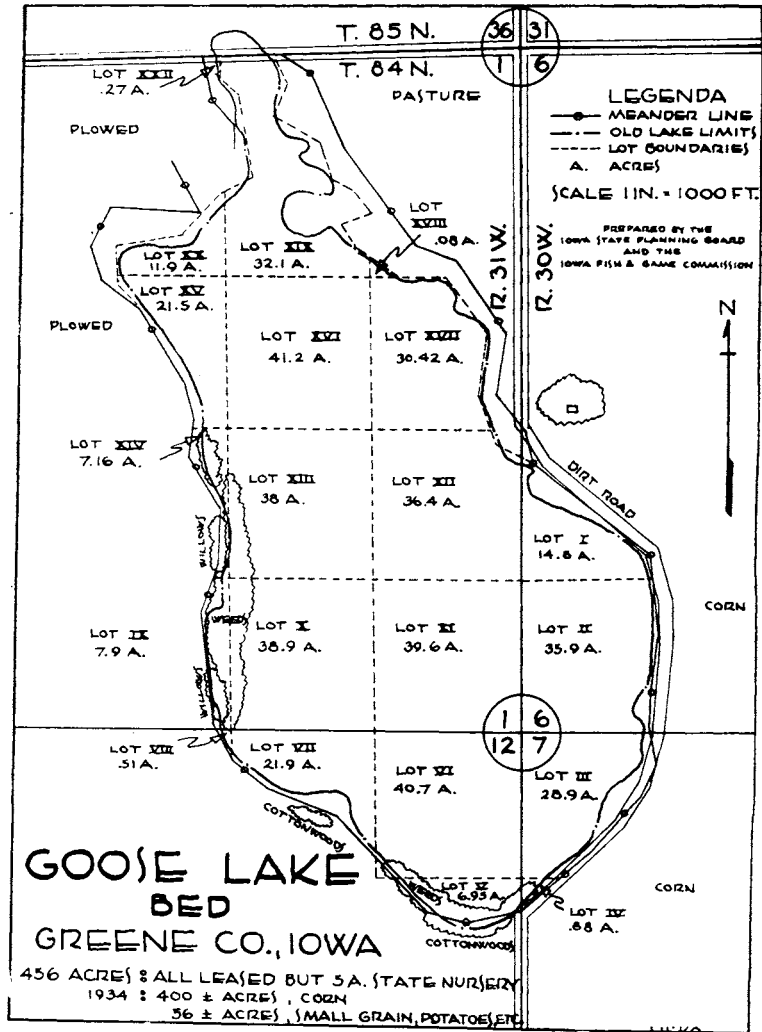
ACQUISITION

During the late winter and spring of 1935, the Greene County Conservation League decided to ask for control of all or a part of the dry lake bed of Goose Lake, totaling some 460 acres for use as an upland game refuge. Accordingly, a committee was appointed with Mr. Frank Burke of Rippey as chairman. This committee petitioned the State Board of Conservation for the use of the lake and on March 28, 1935 leased lots 4, 5, 14, 20, 21, 18,

19 and the nursery located on the east shore of the lake. The total acreage of these lots was approximately 63 acres.

PLAN

The Greene County Conservation League wanted to develop Goose Lake as an upland game refuge and production area with the least possible expense to themselves and the State of Iowa. The lake bed at that time was considered an ideal demonstration area as all the land was leased and being cultivated. The lake bed was bare in winter when protection and shelter was needed, and



in the spring no early nesting cover was available. It was proposed that the lease be worked on a crop-share basis, but due to the delay in getting the lease signed and starting actual work on the area, no farmers could be found to crop-share the land because of the fear that the crops would not mature.

However, when the land was leased to the farmers renting the lake bed, provisions were made whereby a seed bed of 20 acres was to be prepared by Mr. Larson and 10 acres by Mr. Youngblood. These arrangements provided for only discing and harrowing the soil.

DEVELOPMENT

With the availability of relief labor in Greene County, the project was started and twelve men were assigned by the FERA Engineer. These men with the aid of two county foremen and a county truck donated by the county board of supervisors started work May 18, 1935. A State Planning Board Fieldman from the Biological Survey Unit was used to supervise the work. Transportation of the men to the project was furnished by the foremen.

PLANTING OF TREES AND SHRUBS

The original plan of planting for the lake bed consisted of planting a shelterbelt of trees 30 feet wide around the entire lake shore. This plan would require a tremendous number of plantings, would entail considerable amount of expense and would be of no more value to upland game birds than scattered clumps of trees and shrubs. A row of trees however, was planted with stock from the nursery which were all walnut and ash. These trees were planted a rod apart around the southwest and north sides of the lake, well up on the high water mark.

On the slopes of the lake shore were planted groups of plantings consisting of the following listed trees and shrubs.

There was some natural cover on the lake banks such as willows, currant, woodbine and mulberry trees. This however was very thin and the banks for the most part were quite bare.

LIST OF PLANTINGS

| | | | |
|------------------|-----|------------------|------|
| Plum ----- | 150 | Willow ----- | 1500 |
| Poplar ----- | 100 | Hackberry ----- | 100 |
| Sumac ----- | 100 | Raspberry ----- | 400 |
| Elm ----- | 100 | Gooseberry ----- | 50 |
| Elderberry ----- | 300 | Currant ----- | 100 |

These plantings were collected along the Raccoon River and

on the highways where they would be grubbed out and destroyed. Between these plantings were constructed approximately twenty brush piles with material collected along the highways. This material had been cleaned out of fence rows by farmers and would have been destroyed.

SEEDING

There were 30 acres of seed bed prepared by the farmers renting the lake bed. This ground was seeded with seed saved from the feeding program last winter and by seed purchased by the Conservation League. The seed was broadcast by hand using FERA labor. The seeding of the various lots is explained in the ensuing paragraphs.

Lots 4 and 5 comprising almost 7 acres located at the extreme south end of the lake were seeded down as follows: A strip of sweet clover (*melilotus álba*) 35' wide was broadcasted with oats for a nurse crop, next to the shore line of the lake bed. This is intended to furnish a strip of nesting cover. The rest of the area was sown to cane which should reseed itself next year and furnish feed this winter.

Lot 1, the nursery, is composed of four acres with about one acre taken up by trees, and is intended to serve as a demonstration area. In it were sown several different kinds of feed to determine their values by selection of feeding done by the birds this winter. This area is enclosed by a rabbit tight fence and will afford protection for the crops.

Starting from the south edge a strip of wheat was sown first, followed by millet, then a strip of Reed's Canary Grass (*Phalaris arundinácea*) which should be harvested this fall to save the seed which will furnish additional seed for next spring. A strip of sunflower and cane were sown next and a strip of lespedeza (*L. frútescens*) adjacent to the trees for nesting cover.

At the north end of the old lake bed there is an area of approximately 44 acres which is composed of Lots 18, 19, 20 and 21. This area is badly infested with cockleburrs, so in seeding this down a plan was worked out to try and eradicate the cockleburrs if possible, by "choking" them out with various methods of seeding.

Starting from the north end flax (*linum usitatissimum*) was sowed first, followed by rye grass (*lolium perénne*) which is very similar to wild rye and reseeds itself.

Rye grass is more or less of an experiment but should furnish some feed and early cover and material for nesting purposes. A

strip of cane was sown next, with some fox tail (setaria) seed which was collected during the feeding program last winter.

Following this a strip of sweet clover was sown for nesting cover. Then quite an extensive area was planted to amber cane, succeeded by a strip of sweet clover for nesting cover. There are about 15 or 20 acres left along the south side of this piece which should be sowed to fall rye this coming fall.

Lot 14 located about midway on the west side of the lake bed has an area of about 8 acres. The south half of this area was sown to lespedeza for permanent nesting cover and the north half to cane for winter feed. This completed the sowing of food patches and nesting cover.

FENCING

Approximately 200 rods of fencing was done on the north end of the lake. The trees for posts were donated and were cut by FERA labor. The wire was furnished by the Greene County Conservation League.

COST OF DEVELOPING

The cost of development of 63 acres of Goose Lake is as follows:

| | |
|--|----------|
| <i>FERA Labor</i> | |
| Approximately 460 man hours at .30----- | \$138.00 |
| <i>Seed</i> | |
| Seed furnished by Conservation League---- | 17.00 |
| <i>Fencing</i> | |
| 4-80 rod spools barbed wire at \$3.50----- | 15.00 |
| Staples ----- | 1.00 |
| | <hr/> |
| Total----- | \$171.00 |

GAME CENSUS

According to Mr. Leland of the Conservation Board by actual count he saw 423 pheasants and six covies of quail concentrated on Goose Lake last winter after a severe sleet storm. However, due to lack of cover on the lake this spring, the game census was as follows:

6 rabbits 12 pr. quail 20 pheasants

No pheasant nests were found, but several dropped single eggs were discovered lying on the bare ground. With an abundance of food and cover this winter and next spring, there is every rea-

son to believe there will be a similar concentration on the lake this winter, and considerable nesting next spring where there was none this year.

RECOMMENDATIONS

There is every reason to believe that the Greene County League will acquire next year lots 9 and 15 located on the west shore of the lake. If this takes place, it is proposed and recommended that lots 15, 14, and 9 lying along the west shore of the lake be fenced tight.

To finance this fencing it is recommended that lot 15 and the north half of lot 14 be leased on a crop-share basis to Mr. Larson. The Conservation League can either leave its share in the field for feed until April 1, of the following year when the remainder can be harvested and sold by Mr. Larson, or the League's share can be harvested in the fall and artificial feeding done as is necessary. The latter plan is probably more feasible as it would leave the corn in a more saleable condition.

Approximately twenty acres of the north end was left unseeded for three reasons. Lack of seed, facilities for preparing the seed bed and it was badly infested with cockleburrs. It is proposed that Mr. Larson work out his labor in advance this fall by preparing these twenty acres for the seeding of fall rye. The seed is to be furnished by the Conservation League and the seeding either by FERA or by Mr. Larson himself. This seeding will furnish early nesting cover in the spring and feed in the fall. Also it will reseed year after year. Lot 9 should be seeded to permanent nesting cover. The rest of the Acreages should reseed themselves next year so they will need no planting.

ACKNOWLEDGMENTS

Acknowledgment is made to the Greene County Conservation League and its committee, Mr. Frank Burke, and Ed McCaffery for their financial aid and coöperation and to the Board of Supervisors and the FERA office for their participation.

CONCLUSION

During the winter of 1935-1936 the areas on Goose Lake were checked by the author four times at two weeks intervals. There seemed to be sufficient feed and cover at all times even though a considerable amount of the feed was caught by the frost and did not mature.

At one time during the most severe part of the winter, Con-

ervation Officer, W. L. Harvey, of Ames, reported that approximately eighteen hundred pheasants and quail were taking advantage of the feed and cover on the lake-bed. With the cover that will be available during the nesting season of 1936, there should be a considerable number of birds produced where none were produced in the spring of 1935.

IOWA STATE PLANNING BOARD,
DES MOINES, IOWA.