

BIOLOGICAL REPORT ON THE DES LACS
MIGRATORY BIRD REFUGE
May, 1936

Excellent progress was made in the food and cover planting project. This program is divided into three parts: (1) planting of wild seeds and rootstocks, (2) reforestation, and (3) farming.

Planting of Wild Seeds and Rootstocks

The following table shows the species and amount of wild seeds and rootstocks planted.

Common Name	Scientific Name	Seeds : in lbs.	Rootstocks : in lbs.
Swamp smartweed	<u>Polygonum Muhlenbergia</u>	210	500 ✓
Pale smartweed	<u>Polygonum lapathifolium</u>	500 ✓	
Smartweed	<u>Polygonum spp.</u> (Probably <u>Carya</u>)	200 ✓	
Wild buckwheat	<u>Polygonum convolvulus</u>	800 ✓	
Hardstem bulrush	<u>Scirpus acutis</u> (<u>S. occidentalis</u>)		30,000 ✓
Prairie bulrush	<u>Scirpus compestris</u> (<u>S. paludosus</u>)	350 ✓	
Giant bur-reed	<u>Sparganium eurycarpum</u>		800 ✓
Wild Rice	<u>Zizania aquatica</u>	60 ✓	
Sago pondweed	<u>Potamogeton pectinatus</u>	80 ✓	
Wild millet	<u>Echinochloa crusgalli</u>	7800 ✓	
TOTAL		10,000	31,300

Wild millet, prairie bulrush, and the smartweeds were planted on the islands, and marginal to the water along the dams and shore line on the pond-sites and on Upper Des Lacs Lake. Approximately 20 miles was planted in this manner.

Wild buckwheat was planted around dead clumps of brush, brush habitat improvements for upland game birds, and along the rampart of boulders and gravel bordering ~~off~~ the Upper Des Lacs Lake.

Rootstocks of swamp smartweed, bur-reed and left-overs of hardstem bulrush were planted along dams and islands in pondsites # 3, 4, and 5.

Wild rice was planted in pondsites # 3 and 5 and sago pondweed, in pondsites # 3. (See Map)

Reforestation

Reforestation consisted of transplanting willows marginal to pondsites and of transplanting small woody plants in three coulees and draws that were lacking in cover. Existing stands of trees and shrubs served as indicators of where to plant other trees and shrubs.

Over 4000 willow saplings were planted marginal to pondsites # 4, 5, and 7 for the purpose of forming a blind to hide interference from the road.

Approximately 3000 transplants of choke cherry, june berry, and a few rose, thornapple, and red-osier dogwood have been planted in coulees and draws adjoining pondsites # 3, 5, and 6. Transplants of choke cherry, rose, and red-osier dogwood came from the river bottoms of the Upper Souris Refuge.

Farming

The farming program is not complete, but will be done by the middle of June. So far 168 acres of barley and 8 acres of flint corn

have been planted. Plots have been planted with barley in pondsites # 8, 7, and 6, and also in fields marginal to pondsites and Upper Des Lacs Lake. Corn was planted marginal to pondsite unit 4 and 5. (See Map)

Distribution of Waters in Pondsite Units

The spring run off filled pondsites unit 4 within a foot of maximum height. This unit was fed by 2 large coulees north of it. The period of heavy run off was from April 8 - 20. On April 15 gates were opened allowing water to fill pondsite unit 2. The water reached the height of 9 inches below spillway of the dam north of the pondsite unit 2. Gates were closed between the pondsite units 2 and 4.

On April 15 the spillway on the south dam for pondsite unit 8 became undermined. The gate on the north dam of this unit was opened and water went into units 7a and 7. Not much water was lost. Mr. Lansing, camp superintendent, supervisory personnel, and CCC's did splendid work during this period by placing a coffer dam in front of the undermined spillway.

The rip rapping of the road, crossing pondsite unit 5 was sufficiently complete so that the gate of the dam between pondsite units 4 and 5 could be opened half way on May 12. On May 13 it was completely opened. Approximately $5\frac{1}{2}$ inches of water from pondsite unit 4 flooded pondsite unit 5 within 2 inches of spillway level. Heavy winds prevented accurate tabulating of amount of the water needed to flood pondsite unit 5. The gate was closed on May 15.

On May 20 the gate north of pondsite unit 5 was reopened and 4 sections of flashboards were let down on dam south of this pondsite. The water went over this spillway filling the channel and the depression in the south end of pondsite unit 6. The gate south of this

pondsite unit was opened, and water entered pondsite unit 7. No attempt was made to raise water level of pondsite units 7 and 7a since the nests of ducks, such as blue-wing teal, would be drowned out.

The water stored in pondsite unit 4 will be used to keep water level up to spillway level in pondsite unit 5, to keep water in channel in pondsite unit 6, and to allow some water to pass into pondsite units 7 and 7a if the water level drops too low in these pondsites. If there is a slight drop in the water level in the pondsite units 7 and 7a it will be advantageous for the existing dense beds of sago pondweed and red top grass.

The flooded pondsite of unit 5 and the channel of unit 6 will be planted with aquatic plant duck foods.

If there is sufficient water next season, pondsite unit 6 which is planted with barley will be flooded. The flooded barley fields will induce ~~may~~ waterfowl to stay. The aquatics planted in the stream bottom channel this season will tend to spread over the flooded area next season.

Waterfowl Census

The tabulation of waterfowl in the following table is conservative. There are many more ducks in the area than are actually tallied. The first brood of pintail were seen May 18. Farmers reported seeing young pintails on May 16 and 17.



Fig. 1

Captain C. J. Bakken, officer in charge and Mr. L. Lansing, camp superintendent. Splendid cooperation with supervisory personnel, army staff, and CCC has made it possible to report excellent progress.



Fig. 2

Wild millet, prairie bulrush, and pale smartweed were sowed in this manner along the shore of Upper Des Lacs Lake.



Fig. 3

Wild millet and other seed were raked over after being sowed.



Fig. 4
Sample of willow that is being
planted marginal to pondsites.



Fig. 5
Pruning transplanted willows.



Fig. 6
The planting of willows marginal to pondsites.



Fig. 7
Sowing of barley by the CCC.



Fig. 8
Teams were hired for plowing harrowing
and planting.



Fig. 9



Fig. 10



Fig. 11

A brood of 8 pintails were observed on May 18. 4 were caught much to the anxiety of the mother duck.

Census on Waterfowl on the Des Lacs Migratory Bird Refuge

Species	May 1, 1936 Des Lacs Refuge	May 9, 1936 Des Lacs Refuge	May 18&19, 1936 Des Lacs Refuge	May 25&26, 1936 Des Lacs Refuge
Mallard	140	124	52	38
Gadwall (Gray Duck)	124	356	238	536
Baldpate	200	274	76	99
Green-winged teal	32	40	2	6
Blue-winged teal	91	37	56	55
Shoveler (spoon bill)	45	395	263	511
Pintail	473	381	232	275
Redhead	38	30	48	47
Canvasback	90	4	9	28
Scaup	484	415	329	183
Ruddy Duck	238	461	429	277
Grebe, Horned & Eared	10	45	206	78
Grebe, Pied Billed	4	2		1
Buffle-heads	5			
Grebe, Western				10
Coot (mud hen)	4	58	37	43
Ducks Unidentified	1	172	199	99
TOTAL	1979	2794	2176	2286

Ducks 2689

May 4, 1933
Coots
Sum

Ducks 2154

Predator Control

Field observation indicate that crows are not abundant. However they are fairly well concentrated in parts of the Upper Des Lacs. Crow nests are being destroyed in this region. The lack of crows in this vicinity is attributed to the active crow drives by the sportsmen of Kenmare. 869 crows have been killed and 289 nests destroyed.

BIOLOGICAL REPORT ON THE LOSTWOOD
MIGRATORY BIRD REFUGE
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CCC Labor was not available for projects dealing with the development of the Lostwood Refuge. Consequently, proposed planting of grains and transplanting of small aspen saplings has not been carried out.

However, a few aspen were transplanted by 3 CCC that work directly with the refuge manager. These plants were planted marginal to a pond lacking in cover, and will serve as a sample of the type of reforestation proposed for this refuge.

The project of last season of terracing several hills for the purpose of causing erosion, more abrupt run off and concentrating the drainage into one depression is not effective.

Ducks found on the Lostwood Refuge are:

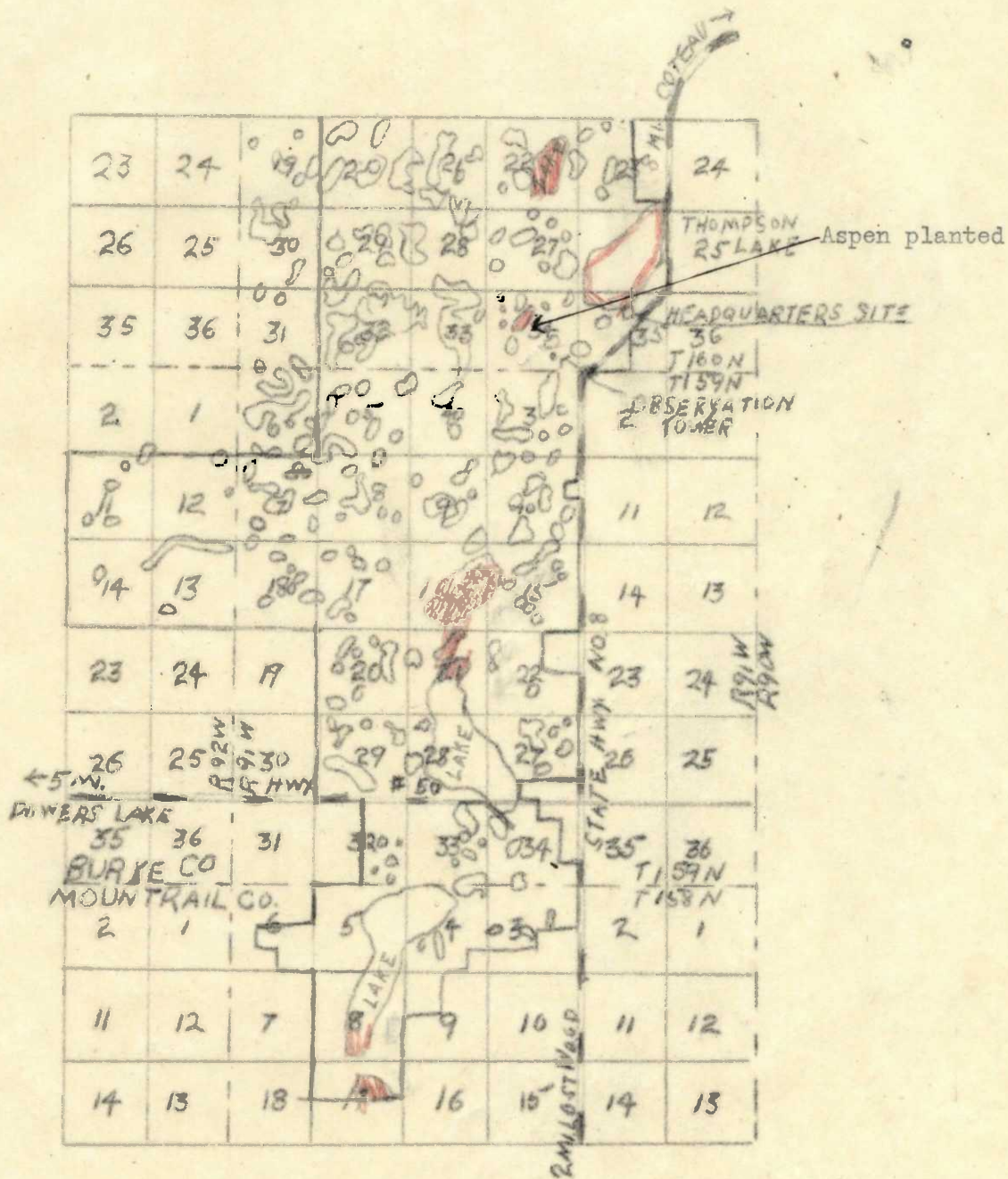
✓ Mallards	✓ Ruddy duck
✓ Gadwell	✓ Lesser scaup
✓ Baldpate	✓ Redheads
✓ Blue-winged teal	✓ Canvasback
✓ Green-winged teal	

Map shows places on concentration of waterfowl.

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LOSTWOOD REFUGE



Where waterfowl are observed to be concentrated in the Lostwood Refuge.