

AN EVALUATION
OF THE MIGRATORY BIRD SANCTUARIES
IN SASKATCHEWAN

Daniel J. Nieman
and
Robert J. Isbister

Canadian Wildlife Service,
Department of the Environment,
Prairie Migratory Bird Research Centre,
Saskatoon, Saskatchewan.

April, 1973

The data in this report are preliminary and not to be
used in publications without the authors' permission.

ACKNOWLEDGEMENTS

The authors wish to acknowledge the cooperation and assistance of those who made the collection of data and compilation of this report possible.

Special thanks go to the Saskatchewan detachments of the Royal Canadian Mounted Police and the district Conservation Officers of the Saskatchewan Department of Natural Resources who contributed a substantial amount of information regarding the posting, enforcement and public utilization of the sanctuaries. Gratefully acknowledged are J. B. Gollop, A. Dzubin, and H. J. Poston of the Canadian Wildlife Service, who permitted use of the data from previous sanctuary evaluations. Mr. W. Renaud made available his reports on several Saskatchewan sanctuaries.

Mr. G. E. Couldwell, Saskatchewan Department of Natural Resources, supplied current information pertaining to game preserves and wildlife refuges in the province. The Department of the Environment, the Conservation and Development Branch, the Water Resources Commission and the Department of Fisheries provided useful information on the water quality, levels and capacities of the sanctuaries, for which we are grateful.

Finally, many thanks are due to the various individuals who contributed their time and offered information and suggestions during the course of our public interviews.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	i
LIST OF FIGURES	iv
A. INTRODUCTION	1
I. Establishment of the Migratory Bird Sanctuaries in Saskatchewan.	1
II. Wildlife Areas Reserved by the Province of Saskatchewan.	1
III. History of Sanctuary Evaluations in Saskatchewan.	1
B. OBJECTIVES	9
C. METHODS AND PROCEDURES	10
I. Background Information.	10
II. Wildlife Areas Reserved by the Province of Saskatchewan.	10
III. Wildlife Utilization.	11
IV. Wildlife Habitat.	12
V. Public Utilization.	13
VI. Public Opinion.	13
VII. Posting and Enforcement.	14
D. RESULTS	15
I. Basin and Middle Lakes Bird Sanctuary.	15
II. Duncairn Reservoir Bird Sanctuary.	27
III. Indian Head Bird Sanctuary.	30
IV. Old Wives Lake Bird Sanctuary.	40
V. Last Mountain Lake Bird Sanctuary.	53
VI. Lenore Lake Bird Sanctuary.	72
VII. Murray Lake Bird Sanctuary.	84
VIII. Neely Lake Bird Sanctuary.	95
IX. Opuntia Lake Bird Sanctuary.	104
X. Redberry Lake Bird Sanctuary.	115
XI. Scent Grass Lake Bird Sanctuary.	124
XII. Sutherland Bird Sanctuary.	130
XIII. Upper Rousay Lake Bird Sanctuary.	145
XIV. Val Marie Reservoir Bird Sanctuary.	155
XV. Waskana Lake Bird Sanctuary.	165

	Page
E. DISCUSSION AND SUMMARY	176
I. Management of the Migratory Bird Sanctuaries.	176
II. The Migratory Bird Sanctuary Regulations.	178
III. Summary.	180
F. LITERATURE CITED	183
Appendix A	188
Appendix B	192
Appendix C	199
Appendix D	201
Appendix E	202
Appendix F	203
Appendix G	210

LIST OF FIGURES

Figure		Page
1	Locations of the Federal Migratory Bird Sanctuaries in Saskatchewan.	5
2	Basin and Middle Lakes Bird Sanctuary.	25
3	Part of the north shore of Basin Lake.	26
4	The southwest shore of Middle Lake.	26
5	Duncairn Reservoir Migratory Bird Sanctuary.	36
6	Duncairn Reservoir Migratory Bird Sanctuary.	37
7	The south arm of the Duncairn Reservoir.	37
8	An aerial view of part of the Indian Head Migratory Bird Sanctuary.	45
9	Dam No. 2 on the Indian Head Migratory Bird Sanctuary.	45
10	Old Wives Lake Migratory Bird Sanctuary.	56
11	A distant view of the Old Wives Migratory Bird Sanctuary.	57
12	The north end of the Isle of Bays on Old Wives Lake.	57
13	Last Mountain Lake Migratory Bird Sanctuary.	70
14	Canadian Wildlife Service field station, Last Mountain Lake Migratory Bird Sanctuary.	71
15	Public beach on the east shore of Last Mountain Lake.	71
16	Lenore Lake Migratory Bird Sanctuary.	81
17	The west shore of Lenore Lake.	82
18	The small undeveloped beach on the southwest shore of Lenore Lake.	82
19	Murray Lake Migratory Bird Sanctuary.	92
20	An aerial view of Murray Lake Migratory Bird Sanctuary.	93
21	The northwest end of Murray lake.	93

Figure		Page
22	The marsh area of the Lost Horse Creek delta on the east end of Murray Lake.	94
23	Neely Lake Migratory Bird Sanctuary.	102
24	An aerial view of Neely Lake Migratory Bird Sanctuary.	103
25	Opuntia Lake Migratory Bird Sanctuary.	113
26	An aerial view of Opuntia Lake Migratory Bird Sanctuary.	114
27	A deserted recreational area on the west-central shore of Opuntia Lake.	114
28	Redberry Lake Migratory Bird Sanctuary.	126
29	The southwest shore of Redberry Lake Migratory Bird Sanctuary.	127
30	Redberry Lake has numerous natural beaches.	127
31	Scent Grass Lake Migratory Bird Sanctuary.	137
32	An aerial view of Scent Grass Lake Migratory Bird Sanctuary.	138
33	Scent Grass Lake possesses some excellent marsh habitat.	138
34	An aerial view of part of the Sutherland Migratory Bird Sanctuary.	144
35	A large part of the Sutherland Migratory Bird Sanctuary has been maintained as a city park.	144
36	Upper Rousay Lake Migratory Bird Sanctuary.	153
37	Upper Rousay Lake Migratory Bird Sanctuary is composed of a series of peninsulas, bays and islands.	154
38	The extensive marsh area of Upper Rousay Lake supports a wide variety of marsh and water birds.	154
39	Val Marie Reservoir Migratory Bird Sanctuary.	163
40	The north end of Val Marie Migratory Bird Sanctuary.	164

Figure		Page
41	Canada geese nest on the islands of Val Marie Migratory Bird Sanctuary.	164
42	Waskana Lake Migratory Bird Sanctuary.	174
43	Waskana Creek flows into the southeast end of Waskana Lake Migratory Bird Sanctuary.	175
44	Waskana Lake provides an excellent marsh within the city limits of Regina, Saskatchewan.	175

A. INTRODUCTION

I. Establishment of the Migratory Bird Sanctuaries in Saskatchewan.

The migratory bird sanctuaries in Canada were established according to the following criteria: (a) the need to protect migratory birds from being hunted, (b) the need to have some control over use of land in order to preserve habitat required by migratory birds, and (c) the suitability of the area for public use in observing and studying birds (Appendix F).

An Order-in-Council passed in Ottawa on March 9, 1925 outlined the reasons for the establishment of migratory bird sanctuaries:

"That for the better protection of wildfowl it is desirable to create certain areas as bird sanctuaries;

That the Great Plains region of Canada contains probably the most valuable breeding grounds in North America for the wild waterfowl of the Continent and that it is important that measures should be taken to set apart permanently certain areas for the propagation of bird life, a resource of economic value in providing sport and food;

That careful examination has been made by an eminent zoologist of the areas occupied by this valuable bird life and his report has been made the basis of selection as bird sanctuaries of the more important breeding grounds in the said provinces;

That the Provincial authorities are in full accord with the scheme;

That the advance of settlement, followed by cultivation of the land, the drainage of lakes and marsh areas for development purposes, has seriously restricted the areas suitable for the propagation of wild waterfowl and under present conditions it is necessary that proper means should be taken to check the decrease in the number of these birds to guard against the danger of extermination; . . . "

It is noteworthy that the federal migratory bird sanctuaries were, for the most part, established to protect waterfowl and marsh habitat. Since then these areas have, in several instances, become important

refuges for colonial nesting birds and many have been developed as popular recreational areas.

The first federal migratory bird sanctuary in Canada was established in 1887 on Last Mountain Lake. In 1915, during negotiations on the Migratory Birds Convention Act, a system of bird sanctuaries in Canada was discussed. As potential sanctuaries in Saskatchewan, the Minister of the Interior approved reservation of all vacant quarter sections immediately adjacent to Quill, Lenore, Basin, Bitter, Cabri, Bigstick, Crane, Goose, Redberry, Old Wives, Chaplin and White Bear lakes.

In 1917 and 1918, Dr. R. M. Anderson, zoologist for the Geological Survey and a member of the Advisory Board in Wildlife Protection, evaluated several water bodies including these twelve lakes to determine their value to migratory birds and potential as federal sanctuaries. Following these investigations and the signing of the M.B.C.A., twelve bird sanctuaries in Saskatchewan were described: Last Mountain Lake, Lake Johnstone (Old Wives Lake), the Quill lakes, Lenore Lake, Basin and Middle lakes, Chaplin Lake, Crane Lake, Bigstick Lake, Cabri Lake, Whitebear Lake, Redberry Lake and Manito Lake. The Experimental Farms at Indian Head and Sutherland were added to the list in 1924, but remained under the authority of the Forestry Department. All of these sanctuaries, with the exception of Cabri Lake, included not only the water bodies but also certain land areas adjacent to the lakes.

In 1930, the Natural Resources Transfer Agreement between the Government of Canada and the Province of Saskatchewan stated that the Province could preserve established bird sanctuaries and set aside additional sanctuaries as agreed by the two governments. In 1946, an

amendment to this agreement stated that the Province could discontinue any bird sanctuary through an agreement with the Minister of Mines and Resources of Canada and the Minister of Natural Resources and Industrial Development of Saskatchewan. These agreements outlined the procedures and powers of abolishing federal bird sanctuaries and set the stage for a review of all such areas, particularly since several were thought to be unsuitable for the purposes for which they were established.

In 1948, at the request of the Department of Agriculture, federal and provincial officials inspected the bird sanctuaries in Saskatchewan and found that drought had made some areas unsuitable as breeding and nesting grounds for migratory waterfowl. It was recommended that the Chaplin, Crane, Bigstick, Cabri and Whitebear sanctuaries be abolished. This was carried out in 1948 and five replacements were established: Duncairn Reservoir, Murray Lake, Scent Grass Lake, Upper Rousay Lake and Val Marie Reservoir. However, in these new sanctuaries only the land covered by water and the islands therein were included within the sanctuary boundaries. This new policy for the establishment of sanctuaries called for a revision of the boundaries of the other federal bird sanctuaries. From 1949-50 these areas were investigated and it was recommended that all bird sanctuaries include water areas only, with the exception of Last Mountain Lake and Manito Lake bird sanctuaries which retained protected land areas. To compensate for this loss in sanctuary area, Neely Lake and Opuntia Lake bird sanctuaries were established in 1950. Quill Lakes Bird Sanctuary was abolished the same year. In 1953, the Manito Lake Bird Sanctuary was discontinued and replaced in 1956 by the Waskana Lake Bird Sanctuary. This left Saskatchewan with the present fifteen migratory bird sanctuaries:

Last Mountain Lake, Lenore Lake, Old Wives Lake, Redberry Lake, Indian Head, Sutherland, Duncairn Reservoir, Murray Lake, Scent Grass Lake, Upper Rousay Lake, Val Marie Reservoir, Neely Lake, Opuntia Lake, Waskana Lake, and Basin and Middle Lakes (Figure 1).

II. Wildlife Areas Reserved by the Province of Saskatchewan.

In addition to the migratory bird sanctuaries established by the federal government, a system of Game Preserves, Wildlife Management Units and Wildlife Refuges has been maintained by the Province of Saskatchewan. These areas were established for the preservation and management of wildlife populations and habitat.

In 1909, all Dominion Forest Preserves were declared game preserves. Smaller areas were set up to facilitate efficient management, and by 1957 there were 157 provincial game preserves in Saskatchewan which included an area of approximately 12,000 square miles (Murray, 1966). Of this total, 70 were P.F.R.A. pastures and 12 were provincial community pastures. Nine of these areas were also federal bird sanctuaries.

In 1962, the Department of Natural Resources cancelled the Redberry Lake and Indian Head Game preserves since they were also federal migratory bird sanctuaries. By 1972, approximately 120 Provincial Game Preserves were cancelled by the Province of Saskatchewan as these areas were no longer providing a useful wildlife management purpose. Included among the lakes which were abolished as Game Preserves were Val Marie Reservoir and Opuntia Lake, both federal migratory bird sanctuaries. This left 30 Provincial Game Preserves still in existence in 1972, including the areas also covered by five of the federal migratory

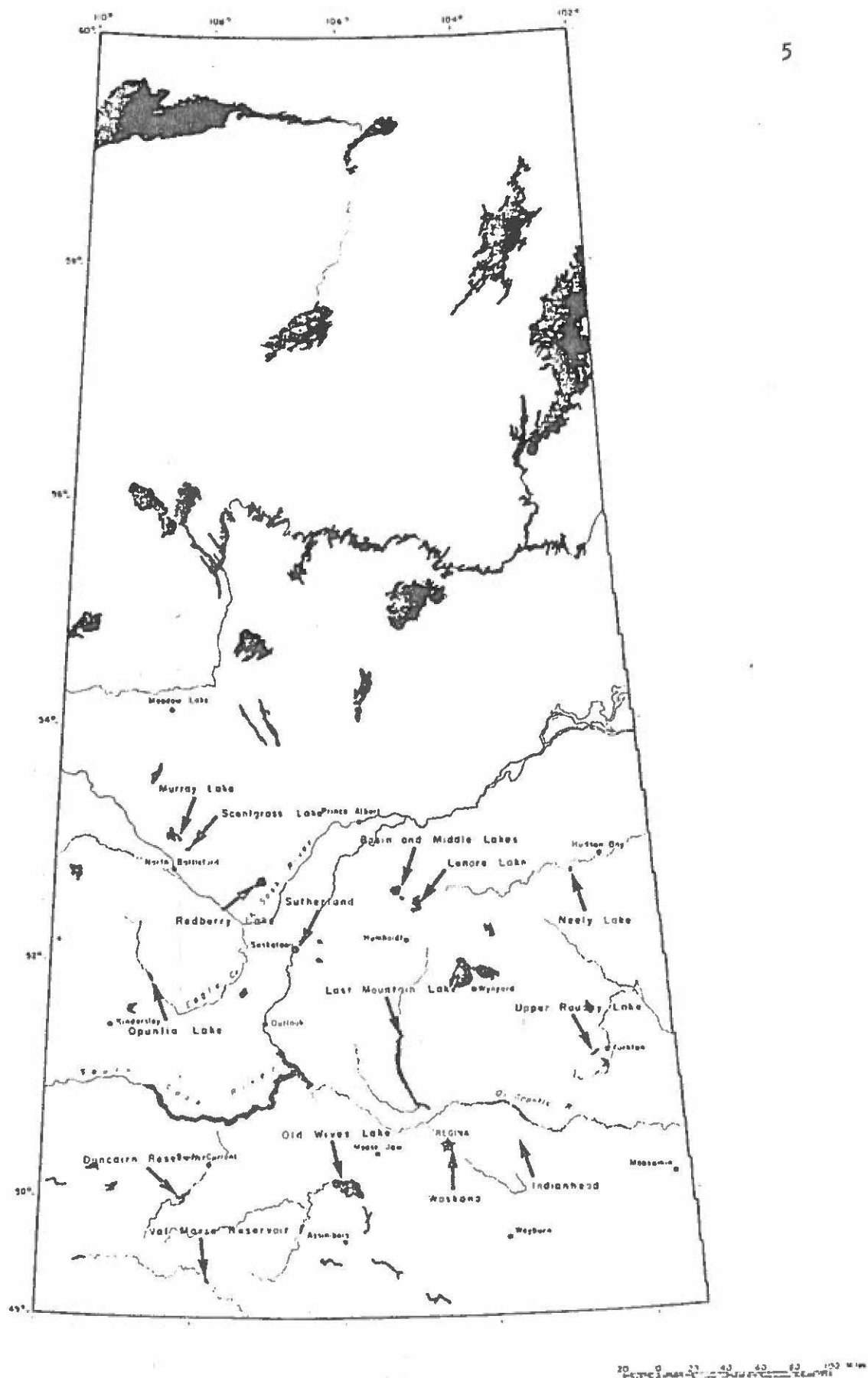


Figure 1. Locations of Federal Migratory Bird Sanctuaries in Saskatchewan

bird sanctuaries, Neely, Last Mountain, Scent. Grass, Upper Rousay, and Waskana lakes (Appendix B).

There are currently twelve Wildlife Refuges in Saskatchewan (Appendix C). These are small areas set up to protect a nesting colony of birds or some similar special value area. They are not open for hunting at any time.

Wildlife Management Units include former Game Preserves which have been re-established as areas requiring some special type of management. Wildlife Management Units differ from the Game Preserves and Wildlife Refuges in that they are often open for hunting during the appropriate seasons. There are currently seventeen such areas in the province (The Saskatchewan Gazette, 1970b, 1970c, 1971b).

III. History of Sanctuary Evaluations in Saskatchewan.

In 1957, the Deputy Minister's office asked the Canadian Wildlife Service to conduct a comprehensive review of the migratory bird sanctuaries in Canada. The sanctuaries in Saskatchewan were investigated with regard to their recreational and educational value and their utilization by migratory birds (Dzubin, 1957; Gollop, 1957). Consideration was then given to having those sanctuaries cancelled which did not fulfill the basic requirements of a sanctuary. The remaining areas were then divided into two groups - those primarily used for recreation or of public relation value, and those which were significantly useful as waterfowl refuges. For those sanctuaries with which the public came in frequent contact it was recommended that there be provisions made for regular inspections and maintenance, and that public facilities be installed

to increase the appeal and usefulness of these areas. In each case, a report was submitted regarding the present conditions of the sanctuaries and suggestions on how each area could be usefully improved with an estimate of cost of development and maintenance. None of the suggested sanctuaries were dropped and very few of the suggested improvements were carried out.

In 1962, the Canadian Wildlife Service proposed a change in the policy respecting land management in migratory bird sanctuaries and specifically requested affirmation of a policy of purchasing, leasing or taking easements on lands where such action would be necessary to protect valuable habitat or facilitate development of recreational and educational facilities. This was to enable the Canadian Wildlife Service to develop existing sanctuaries to better advantage and to render the creation of new sanctuaries more worthwhile. The policy statement regarding these proposals was that the purchase of such lands was to be a last resort. Preferable alternatives included: (a) written agreements setting out the terms on which lands privately held were to be considered as sanctuaries, or (b) long-term agreements whereby private owners agree to take on management functions in a manner set out by the Canadian Wildlife Service.

In 1963, concern was once again expressed over the maintenance and establishment of federal migratory bird sanctuaries. Despite budget limitations at that time, the Canadian Wildlife Service suggested action which would make the sanctuaries more useful for the purposes for which they were established. This was a result of the policy statement for establishment and maintenance of migratory bird sanctuaries, issued in

1963 (Appendix F). It was decided that this policy be put into effect as soon as possible and that the sanctuaries be investigated as units within regional systems. Consideration was to be given to the establishment of new sanctuaries and to the cancellation of those areas which were serving no particularly useful purpose. It was suggested that consideration be given to sanctuary development and management in the preparation of budget estimates in future fiscal years. Once again, little action was taken on these recommendations and the sanctuaries were largely neglected.

In 1971, the Canadian Wildlife Service recognized that an evaluation of the migratory bird sanctuaries in Saskatchewan was in order. The sanctuaries in the province had not been investigated in detail since 1957, and a Canadian Wildlife Service directive (1963) stated that all sanctuaries should be re-evaluated at five year intervals. A report on each sanctuary was to be submitted including recommendations for improvement and maintenance of those sanctuaries with recreation and wildlife use potential.

Cancellation was to be recommended for those areas which were fulfilling no useful purpose as federal sanctuaries. The sanctuaries were not visited and this evaluation involved soliciting comments from wildlife agency personnel familiar with these areas (Poston, 1971). Few definite recommendations were given.

The requested evaluation of the federal migratory bird sanctuaries in Saskatchewan was reinitiated in 1972 in substantial detail, the content of this report. Each sanctuary was investigated from the air and the ground, and the public and wildlife utilization of each water body

evaluated. This study is the most detailed investigation of the sanctuaries carried out to date and represents a desire by the Canadian Wildlife Service to assume responsibility for the proper management of these areas.

B. OBJECTIVES

This study was initiated in 1972 to satisfy the request of the Canadian Wildlife Service which required a complete evaluation of the migratory bird sanctuaries in Saskatchewan.

The primary objective of the investigation was to ascertain whether each sanctuary still conformed to the basic requirements of a sanctuary and to determine the value of these areas to the migratory bird resource and to the public. An evaluation of the sanctuaries formed the basis for recommending continued, and in many cases improved, maintenance of most areas in the best interests of the wildlife resource. It was expected that certain areas would be found to be of only limited value as sanctuaries and their cancellation recommended.

In addition to recommending management procedures for the sanctuaries in Saskatchewan, this report will serve as a repository of information on the individual sanctuaries. Data pertaining to the flora and fauna of the respective water bodies and a measure of the wildlife and human utilization is included for future management purposes.

This study also included a complete literature review of the individual sanctuaries and the sanctuary system. It is hoped that this report will provide the basis for improved management of the federal

sanctuaries in Saskatchewan which have been largely neglected in recent years by the Canadian Wildlife Service. This report is not intended to be the last word on the migratory bird sanctuary situation in Saskatchewan, but will make available information required for the management and administration of these areas.

C. METHODS AND PROCEDURES

I. Background Information.

During the course of this study an attempt was made to investigate the past histories of the federal migratory bird sanctuaries in Saskatchewan, and the basis for their establishment. An extensive literature review was carried out in an attempt to gather all information, published and unpublished, on the individual sanctuaries, the sanctuary system, and government policy regarding these areas. The files of the Canadian Wildlife Service were thoroughly searched in an effort to collect information on past management programs and sanctuary investigations. During this exercise, Canadian Wildlife Service directives and policy statements pertaining to the sanctuaries were also examined in an attempt to clarify the position of the Canadian Wildlife Service regarding the federal migratory bird sanctuary system.

II. Wildlife Areas Reserved by the Province of Saskatchewan.

In the compilation of this report, it was necessary to include a comprehensive review of the special wildlife areas of the Saskatchewan Department of Natural Resources: the game preserves, wildlife refuges

and wildlife management areas. The Saskatchewan Department of Natural Resources supplied the necessary information on these special use areas and outlined the policy regarding each. This information is required in an evaluation of the federal sanctuaries since several of them are also protected by the province under the three previously mentioned categories. These data are particularly important in situations where certain areas are protected by the province in addition to being federal migratory bird sanctuaries. Where such overlap does exist, proposed management activities or plans to cancel any of these areas should be carried out with the full approval and cooperation of both federal and provincial wildlife agencies.

III. Wildlife Utilization.

Since the primary objective for establishing the sanctuary system and for the continued maintenance of these areas was to protect migratory birds and their habitat, this study involved an intensive investigation of the migratory bird utilization of each sanctuary and the type and amount of habitat available. Surveys of the migratory birds present in each area were carried out by aerial and ground investigations in July. Particular emphasis was placed on waterfowl and colonial nesting species - the majority of the sanctuaries were established to protect these birds and their habitat. In addition to the investigations carried out in 1972, data from past surveys and sanctuary studies were utilized to determine the importance of these areas to waterfowl during the spring and fall staging and breeding activities. Additional data on the colonial nesting species were taken from several published and unpublished sources.

IV. Wildlife Habitat.

General descriptions of the sanctuaries (soils, vegetation zones, geological deposits, etc.) were derived from published information on these areas and serve to give a general impression of the type of terrain in which the sanctuary is located. More specific information on the individual water bodies such as surface area, depth, volume and water quality was provided by the Saskatchewan Department of Natural Resources, the Department of the Environment and the Department of Regional Economic Expansion. Most of these data were in the form of unpublished reports prepared by the government departments following recent investigations on these water bodies.

The aerial and ground investigations carried out in 1972 provided data on the vegetation characteristics of each sanctuary, including submergent, emergent, and non-aquatic shoreline species. It should be noted that no vegetation sampling was carried out and the vegetation characteristics described for each sanctuary are conclusions drawn from only a cursory examination of each area. The species listed do not represent the total, or even the majority or most common species present. These plants are listed to serve as indicator species of the actual situation. Conclusions on the expected associated species can be made taking into consideration the listed species and their habitat. It is to be understood, however, that these are data for one year only. Vegetation characteristics can change rapidly due to water level fluctuations and numerous other factors.

During the course of this evaluation, photographs were taken of the sanctuary area, different habitat types, public recreational facilities available and all aspects of the investigation.

V. Public Utilization.

Several of the federal migratory bird sanctuaries are important public recreational areas. Although public utilization is an important criterion for the maintenance of these areas, in some instances the migratory bird resource has not benefited from unrestricted recreational development. It is hoped that a mutually satisfactory balance of interests can be achieved and this demanded that the recreational and public facilities available on each sanctuary be thoroughly investigated. On site observations, Saskatchewan Department of Natural Resources reports, and numerous interviews formed the basis for information regarding the utilization of each bird sanctuary for hunting, fishing, boating, swimming and other recreational activities.

VI. Public Opinion.

Public reaction to the cancellation of any of the migratory bird sanctuaries, or to the continued and improved maintenance of these areas is an important factor to be considered in drawing up a management proposal for the bird sanctuaries in Saskatchewan. Interviews were carried out with various government officials, local landowners, hunters and the public utilizing the sanctuaries for recreational purposes in an attempt to measure public attitudes toward these areas.

During these interviews we attempted to determine if the public were aware of the protected status of these areas, their reaction to possible cancellation or continued maintenance of the sanctuaries, the number of people deriving benefits from these areas, and any recommendations which they might have regarding improved management of the migratory bird sanctuaries.

VII. Posting and Enforcement.

During the course of the ground investigations on each sanctuary, the location and number of federal migratory bird sanctuary signs on these areas were determined. The locations of all sanctuary and provincial game preserve signs were plotted on maps. In those sanctuaries which receive a high degree of public utilization, convenient locations for large introductory signs and displays were noted.

Proper management of the migratory bird sanctuaries requires adequate enforcement of the Migratory Bird Sanctuary Regulations. These duties are carried out in Saskatchewan primarily by the Royal Canadian Mounted Police and the Conservation Officers of the Saskatchewan Department of Natural Resources, during the course of their regular game patrols. To determine the amount of enforcement that each of these areas receives and requires, and to identify any special problem areas, these enforcement personnel were asked to fill out questionnaires.

On the basis of the ground investigations, recommendations were made regarding the number of federal migratory bird sanctuary signs to be maintained on each area.

D. RESULTS

I. Basin and Middle Lakes Bird Sanctuary.

1. Location

The Basin and Middle Lakes Bird Sanctuary is located approximately 25 miles north of Humboldt, Saskatchewan, west of Highway No. 20 between St. Benedict and St. Brieux, Saskatchewan.

2. Legal Description

Comprising the lands covered by the waters from day to day of Basin and Middle Lakes, together with the islands therein, in Township 41, Range 22; Townships 41 and 42, Range 23; Township 42, Range 24, all west of the 2nd Meridian (The Canada Gazette, 1954).

3. Background Information

All vacant quarter sections immediately adjacent to Basin Lake were reserved as a potential sanctuary on May 18, 1915 by the Minister of the Interior during negotiations on the Migratory Birds Convention Act. Middle Lake was also reserved shortly after, and an Order-in-Council passed in 1925 declared that both lakes would constitute the Basin and Middle Lakes Bird Sanctuary (Murray, 1966).

In 1917 and 1918, prior to becoming part of the sanctuary, Basin Lake was evaluated as a wildlife area by Dr. R. M. Anderson, a zoologist for the Geological Survey and a member of the Advisory Board in Wildlife Protection. He reported on the value of the area as a breeding and staging area for migratory birds and recommended that the lake be considered for permanent sanctuary status. With respect to waterfowl habitat, he regarded Basin Lake, with its high timbered shoreline, not as important as the marsh area adjacent to Middle Lake. His recommendations

were highly instrumental in the declaration of both Basin and Middle lakes as a federal bird sanctuary in 1925 (Murray, 1966).

In 1948, at the request of the Department of Agriculture, two officials of the federal and Saskatchewan governments inspected Basin and Middle Lakes Bird Sanctuary to determine if drought had made the lakes unsuitable as breeding and resting grounds for migratory waterfowl. Basin and Middle lakes were considered acceptable and were retained as protected areas (Murray, 1966).

A further inspection of Basin and Middle Lakes Bird Sanctuary occurred in 1949-50, and it was recommended and approved, that the boundary of the sanctuary be revised to include only the water areas of the two lakes. Prior to this, the protected area also included all vacant quarter sections of land immediately adjacent to the lake.

The Canadian Wildlife Service carried out an evaluation of the sanctuary in 1957, to determine if the area still conformed to the requirements of a sanctuary. Although the area was not visited, a complete review of all information available on the sanctuary was carried out. On the basis of the lakes' contribution to waterfowl hunting in the area and the need for protected water bodies in that part of Saskatchewan, it was recommended that Basin and Middle Lakes Bird Sanctuary be retained and that 100 signs be provided for posting (Gollop, 1957h).

In 1971, the Canadian Wildlife Service carried out a very preliminary evaluation of the migratory bird sanctuaries in Saskatchewan, and Basin Lake, especially was recognized as an important fall staging area. The sanctuary was not visited during this survey and no specific recommendations were given (Poston, 1971).

This report presents the results of a comprehensive evaluation of the sanctuary carried out by the authors in 1972. Basin and Middle Lakes Bird Sanctuary was investigated in the field from the ground (July 13, 1972) and by aircraft (July 25, 1972).

4. General Description

The Basin and Middle Lakes Bird Sanctuary is composed of two relatively large lakes in central Saskatchewan (Figure 2). The two lakes are located at the northern extremity of the aspen grove vegetation zone of the grassland and grove region in Saskatchewan (Richards, 1969). Bedrock geological deposits are chiefly Cretaceous shale of the Riding Mountain formation. Soils of this area are primarily dark gray wooded to gray wooded podzols and the climate is classified as humid continental (Richards, 1969). The elevation of the terrain surrounding the lakes varies from 1,200 to 1,800 feet above sea level.

Basin and Middle lakes are almost entirely dependent upon spring runoff and seasonal rains as their major water source. Because of this, both lakes are subject to severe water level fluctuations depending upon annual climatic conditions. Middle Lake has no islands; Basin Lake has several, depending upon water conditions.

The surrounding terrain is not highly regarded from an agricultural standpoint. Public access roads to the lakes are numerous (Basin Lake, 7; Middle Lake, 4).

5. Physical Characteristics

(a) Area: The total surface area of the Basin and Middle Lakes Bird Sanctuary is approximately 21,546 acres at full basin capacity. Of this total, Basin Lake has 13,568 surface acres, Middle Lake has

7,978 (Saskatchewan Fisheries and Wildlife Branch, 1973). Due to severe seasonal water level fluctuations, the water area varies considerably.

(b) Depth and Volume: The maximum water depth of Basin Lake is 52 feet, Middle Lake 9 feet. The average depths of the lakes are 29 and 4 feet, respectively (Saskatchewan Fisheries and Wildlife Branch, 1973).

(c) Shoreline Type: The length of shoreline of Basin and Middle lakes is approximately 31 and 17 miles, respectively. The shoreline of Basin Lake has extensive rocky areas, particularly on the southwest. The south shore is rocky and sandy. Relief between the water and upland terrain is moderate.

Middle Lake has a shoreline similar to Basin Lake. The west shore of Middle Lake is rocky.

(d) Water Quality: The water of Basin Lake appears quite clear from the air; Middle Lake is more turbid. Basin Lake is saline with a total solid content of 11,900 p.p.m. and a pH of 8.7 (Rawson and Moore, 1944). Although no water quality measurements are available for Middle Lake, it is believed to be more saline, probably in excess of 12,000 p.p.m. (Saskatchewan Fisheries and Wildlife Branch, 1973).

6. Vegetation Characteristics

(a) Shoreline: Basin Lake is surrounded by moderate to heavy deciduous tree growth approximately 500 yards from the water's edge. Dominant species include aspen (Populus tremuloides), with an interspersion of maple (Acer negundo) and willow (Salix spp.). Small stands of spruce (Picea glauca) are present. Forest growth is interrupted by small patches of agricultural land. Between the forest and the water is a

dry meadow zone (100-400 yards wide) and/or mudflat depending upon water levels.

The shoreline of Middle Lake is similar to Basin Lake except that there are some extensive wet meadow (Carex spp.) zones on the east and south shores of Middle Lake.

(b) Emergent Aquatics: Basin Lake is a large, open body of water subject to extensive wave action and essentially void of emergent aquatic vegetation (Figure 3). Thin, scattered stands of bulrush (Scirpus spp.) are present but not in sufficient quantity to be regarded as desirable waterfowl habitat.

The east shore of Middle Lake has very little relief resulting in a semi-flooded wet meadow zone of sedge (Carex spp.) and willow (Salix spp.). This is not desirable waterfowl habitat. However, the bay on the south side of Middle Lake is shallow and marshy with good stands of emergent aquatics - primarily cattail (Typha latifolia) and bulrush (Scirpus spp.) (Figure 4). Most of Middle Lake is open water.

(c) Submergent Aquatics: In the open water zones, Basin and Middle Lakes have isolated stands of submergent aquatic vegetation, consisting primarily of pondweeds (Potamogeton spp.). In association with the marshy area of Middle Lake the submergent flora is expected to be richer, probably consisting of species such as hornwort (Cerataophyllum demersum), and water milfoil (Myriophyllum spp.).

7. Waterfowl Use

(a) Breeding and Moulting: Basin Lake does not provide habitat conducive to high waterfowl production. However, a few Canada geese (Branta canadensis) and some ducks do breed on the lake. An aerial survey

in July, 1972 revealed one pair of geese with a brood of four, and approximately 400 ducks. The ducks were primarily divers - canvasback (Aythya valisineria), redhead (A. americana), and lesser scaup (A. affinis) and probably represented moulting concentrations.

Middle Lake supported 20 Canada geese with 6 goslings and approximately 800 ducks during July, 1972. The ducks were mostly in moulting concentrations of 20 to 300, represented by large numbers of redheads, lesser scaup, mallards (Anas platyrhynchos) and assorted dabblers. Numerous broods were also present.

(b) Spring and Fall Staging: Waterfowl survey data show that Basin Lake is a major staging area for ducks, geese and swans. Maximum concentrations of 20,000 ducks, 600 whistling swans (Olar columbianus) and 400 Canada geese have been observed (Dzubin and Norum, 1971). Middle Lake is also heavily used as a fall staging area although to a lesser extent than Basin Lake. Aerial surveys by the Canadian Wildlife Service have revealed as many as 10,000 ducks, 300 swans and 200 Canada geese utilizing this lake in the fall.

8. Other Migratory Birds

Pelicans (Pelicanus erythrorhynchos) have nested on the islands of Basin Lake in the past, but low water levels in recent years have joined these islands to the mainland and breeding has not taken place on this lake since. No pelicans were observed on Basin Lake during the 1972 July aerial survey but apparently they do use the lake periodically. Ten pelicans were observed in the vicinity of Middle Lake. Approximately 200 grebes (Colymbus spp.) were observed on Basin Lake in July and numerous shorebirds were present on the mudflats of both lakes.

9. Public Utilization

(a) Hunting: Basin and Middle lakes, utilized heavily by staging waterfowl, contribute to excellent duck and goose shooting in the area. The protected status of the lakes retains the waterfowl in the area until late in the fall and provides field shooting for many local and non-resident hunters.

(b) Fishing: Middle Lake is too shallow and saline to support a fish population. The Saskatchewan Department of Natural Resources has introduced 1-5 million whitefish fry into Basin Lake every two or three years since 1953 (Sask. D.N.R.). The D.N.R. reports a large amount of fish taken out of Basin Lake in past years.

(c) Other: There are no recreational facilities on either Basin or Middle lakes to provide for swimming, boating or picnining.

10. Public Opinion

Interviews with the local farmers indicated that, despite inadequate posting of sanctuary signs, most were aware that Basin Lake is a sanctuary. None were aware that Middle Lake is also protected.

All persons interviewed indicated a desire that the area remain a sanctuary, primarily for its contribution to excellent waterfowl shooting. They expressed these feelings despite rather severe crop depredation losses from waterfowl originating from Basin and Middle lakes some years. The general consensus of opinion was that Basin Lake was the "most valuable" of the two. Two farmers expressed concern for hunting which apparently occurs within the sanctuary boundaries on occasion.

11. Posting and Enforcement

Our investigations on July 13, 1972, revealed that Middle Lake is not posted as a federal bird sanctuary and Basin Lake has only two signs to this effect.

The Humboldt, Saskatchewan detachment of the Royal Canadian Mounted Police is responsible for the district including Basin and Middle Lakes Bird Sanctuary and carries out routine patrols of the area in spring, summer and fall. This detachment has no recent sanctuary violations on record, and has experienced no particular difficulties in the area regarding the sanctuary (C. W. Graham, pers. comm.).

The Saskatchewan Department of Natural Resources field office in Humboldt administers the sanctuary area regarding game patrols. The Conservation Officer patrols the sanctuaries during the hunting season and only occasionally at other times of the year. He reports the occasional robbing of goose nests and hunting within the confines of the sanctuary. The C.O. commented on the inadequate posting of Basin and Middle Lakes Bird Sanctuary (S. W. Karol, pers. comm.).

12. Discussion

Basin and Middle Lakes Bird Sanctuary appears to be of limited value for waterfowl production due to a lack of habitat. However, both lakes are obviously attractive to large moulting and fall staging populations. Utilization by other species, including pelicans, grebes and shorebirds is extensive.

Public utilization of Basin and Middle lakes for hunting and Basin Lake for fishing is heavy.

Posting of the sanctuary is inadequate and, if the sanctuary is to be retained, should be carried out in the near future. The public appear in favor of the sanctuary.

13. Recommendations

It is recommended that the Basin and Middle Lakes Bird Sanctuary be retained as a federally protected area on the basis of high waterfowl and public utilization. In the interests of the waterfowl resource, it is imperative that there be some protected water bodies in that portion of Saskatchewan, as the presence of the Quill Lakes has caused increased hunting pressure in this area. Protected water bodies will also increase recreation from hunting by retaining ducks and geese in the area. Another factor to be considered is the favorable attitude of the local residents to the presence of the sanctuary.

Basin and Middle Lakes Bird Sanctuary should be posted with federal sanctuary signs during the 1973 field season. Approximately 15 signs will be required for posting on all access roads to the lakes.

14. Summary

(a) Basin and Middle Lakes Bird Sanctuary is composed of two lakes in the parklands of central Saskatchewan.

(b) The area was declared a federal bird sanctuary in 1925 and was evaluated as such in 1917, 1948, 1949, 1957, 1971 and 1972.

(c) Basin and Middle lakes have a total surface area of 21,546 acres, maximum depths of 52 and 9 feet, and average depths of 29 and 4 feet, respectively. There are 48 miles of shoreline.

(d) Both lakes are saline, 11,000 to 12,000 p.p.m.

(e) Basin and Middle lakes are surrounded by deciduous forest with only small areas of emergent and submergent aquatic vegetation.

(f) Waterfowl utilization of the sanctuary is confined primarily to moulting and fall staging activities.

(g) Pelicans, grebes and shorebirds inhabit both lakes.

(h) The sanctuary provides a good deal of hunting and fishing.

(i) The sanctuary is poorly posted.

(j) The public is in favor of retaining the sanctuary as a protected area.

(k) Basin and Middle Lakes Bird Sanctuary should be retained as a protected area and posted during the 1973 field season.



Figure 2. Basin and Middle Lakes Migratory Bird Sanctuary.

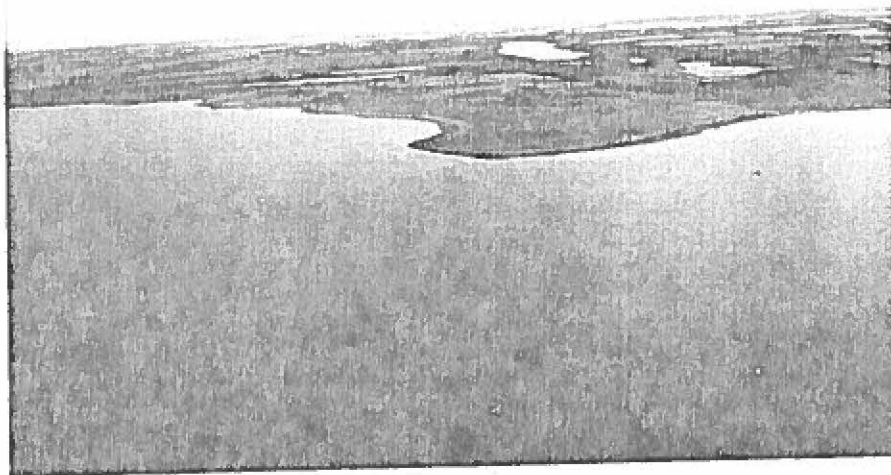


Figure 3. Part of the north shore of Basin Lake. Wave action on this large lake limits the growth of emergent vegetation.

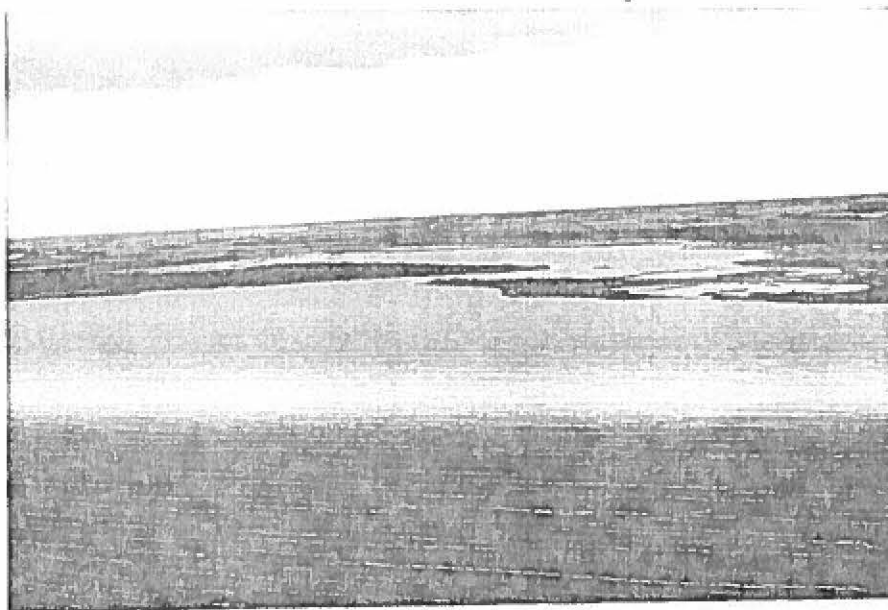


Figure 4. The southwest shore of Middle Lake. The large bay in the background provides some waterfowl breeding habitat.

II. Duncairn Reservoir Bird Sanctuary.

1. Location

The Duncairn Reservoir Bird Sanctuary is located approximately 20 miles southwest of Swift Current, Saskatchewan, between Saskatchewan Highways No. 37 and No. 4.

2. Legal Description

Comprising the following areas: all west of the 3rd Meridian. In Township 13, Range 15, that part of Sections 6, 7 and 18, in Township 13, Range 16, that part of Sections 1 and 12; in Township 12, Range 16, that part of Sections 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 20, 21, 22, 25, 26, 27, 28, 29, 35 and 36; in Township 11, Range 16, that part of Sections 32 and 33 taken for the right-of-way of the Duncairn Reservoir as said reservoir is shown on a plan of survey by J. D. Shepley, date 1942 and on file in the office of the Controller of Surveys, Department of Natural Resources, as number F.793 (The Canada Gazette, 1954).

3. Background Information

Duncairn Reservoir was declared a migratory bird sanctuary by Order-in-Council on November 3, 1948. It was one of five areas which were established as sanctuaries after the 1948 sanctuary evaluation recommended that five protected areas be discontinued due to their lack of suitability as sanctuaries (Murray, 1966).

Duncairn Reservoir was first evaluated as a federal migratory bird sanctuary in 1949 and 1950. The sanctuary was retained, but its boundaries were revised to include only the water area of the reservoir.

The Duncairn Reservoir Bird Sanctuary was investigated by the Canadian Wildlife Service in 1957. The sanctuary was not visited, and the evaluation involved a literature review of all information available on the reservoir and some personal contacts with wildlife personnel familiar with the area. This investigation revealed that the Duncairn reservoir was important as a waterfowl fall staging area and also possessed high recreational potential. It was recommended that the sanctuary be retained, that 20 sanctuary signs be provided for placement on the main access roads to the reservoir, and that any further development of the area by the Canadian Wildlife Service await public pressure from the local residents (Dzubin, 1957g). The importance of posting the sanctuary was stressed, as apparently few local residents were aware of the protected status of the reservoir.

The Canadian Wildlife Service reviewed the status of the Duncairn Reservoir Bird Sanctuary again in 1971. Due to the apparent lack of colonial nesting species and infrequent use of the area by breeding waterfowl, abolishment of the sanctuary was recommended (Poston, 1971). The value of the reservoir as a fall staging area was recognized, but it was assumed that the 500 yard shooting restriction placed on the area by the Saskatchewan Department of Natural Resources would be sufficient to protect waterfowl using the area. The sanctuary was not visited during this evaluation.

In 1972, the authors carried out an extensive evaluation of the Duncairn Reservoir Bird Sanctuary as part of an investigation of all federal sanctuaries in Saskatchewan. Duncairn Reservoir was evaluated from the ground (August 28, 1972) and by aircraft (July 24, 1972). A comprehensive literature review was also carried out.

4. General Description

The Duncairn Reservoir Bird Sanctuary, commonly known as Reid Lake, is a large, relatively deep "Y" shaped reservoir in southwestern Saskatchewan (Figure 5). Duncairn Reservoir is located in a small, isolated area of the spear grass - wheat grass vegetation zone of the grassland and grove region which projects into the extreme southwest corner of Saskatchewan (Richards, 1969).

Bedrock geological deposits are chiefly Cretaceous sedimentary rocks, sandstone and shale of the Bearpaw formation. Soils of the Duncairn area are primarily brown to dark brown cherozems. The climate is classified as semi-arid and the elevation of the terrain adjacent to the reservoir varies from 2,400 to 3,000 feet above sea level.

The Duncairn Reservoir is formed by a dam on the Swift Current Creek, approximately one mile from Duncairn, Saskatchewan. Although in a very dry part of the province, this large body of water has sufficient depth and a reliable water source which maintain favorable water levels except during periods of extreme drought. There are no islands in the reservoir.

The surrounding terrain is almost entirely cultivated with some large expanses of pasture. Public access roads to the reservoir number 16.

5. Physical Characteristics

(a) Area: The total surface area of the Duncairn Reservoir Bird Sanctuary is approximately 3,820 acres at full basin capacity (Canada Dept. of Regional Economic Expansion, 1973).

(b) Depth and Volume: The maximum depth of Duncairn Reservoir is cited as 50 feet (Saskatchewan Fisheries and Wildlife Branch, 1973).

The normal water level is 2,650 F.S.L. with a capacity of 83,500 acre feet of water (Canada Dept. of Regional Economic Expansion, 1973).

(c) Shoreline Type: The shoreline length of Duncairn Reservoir is approximately 40 miles at full basin capacity. The banks of the reservoir are steep and, for the most part, rocky and sandy.

(d) Water Quality: A heavy blue-green algal bloom was in evidence when the area was visited in 1972, and apparently this is an annual occurrence. No other water quality data are available.

6. Vegetation Characteristics

(a) Shoreline: The shoreline above the steep banks is shortgrass or mixed prairie with indicator species of spear grass (Stipa spartea), wheat grass (Agropyron dasystachyum) and snowberry (Symphoricarpos spp.). Between the water's edge and the banks are areas of mudflat of variable width, depending upon water levels. Scattered clumps of willow (Salix spp.), sedge (Carex spp.), water foxtail (Alopecurus) and assorted grasses are in evidence on these mudflats.

(b) Emergent Aquatics: Duncairn Reservoir is a large, open water body with the shoreline subject to extensive wave action (Figure 6). Emergent aquatic vegetation is entirely lacking at normal water levels. During high spring water levels sedge (Carex spp.) exists as an emergent in several isolated areas.

(c) Submergent Aquatics: None were observed. It appears probable that isolated beds of pondweeds (Potamogeton spp.) are present.

7. Waterfowl Use.

(a) Breeding and Moulting: The Duncairn Reservoir Bird Sanctuary does not provide adequate habitat to be utilized by waterfowl as a breeding or moulting area. A maximum of 2 pair of Canada geese have been reported breeding on the lake, and during our July, 1972 aerial survey we observed only 15 duck broods on the entire reservoir. There were also approximately 140 adult ducks observed, mostly mallards (Anas platyrhynchos).

(b) Spring and Fall Staging: The Duncairn Reservoir Bird Sanctuary is an important fall staging area for large numbers of ducks (mostly mallards), geese and whistling swans (Olar columbianus). Although no fall waterfowl population data are available, this lake is apparently very important to hunting in the area and provides some excellent field shoots for local and non-resident hunters. The value of Duncairn Reservoir as a staging lake is accentuated by its location in a semi-arid portion of the province prone to severe droughts. Duncairn reservoir has sufficient depth and volume to retain water during such periods. Also, mallards have been reported wintering at the spillway below the dam (Dzubin, 1957).

8. Other Migratory Birds.

Colonial avian species do not breed on the Duncairn Reservoir Bird Sanctuary. Pelicans (Pelicanus erythrorhynchos) use the lake all summer but do not breed there. Our aerial survey in July, 1972 revealed approximately 200 gulls (Larus spp.), 10 avocets (Recurvirostra americana), 3 terns (Sterna spp.), 1 great blue heron (Ardea herodias) and approximately 150 assorted shorebirds.

9. Public Utilization.

(a) Hunting: Since the lake is a popular fall staging area for ducks and geese considerable hunting is carried out in the vicinity. The proximity of the reservoir to a major population center in southwest Saskatchewan (Swift Current) is conducive to high hunting pressure in the area.

(b) Fishing: The Saskatchewan Department of Natural Resources has stocked Duncairn Reservoir with pickeral fry at least every five years since 1951. In addition, 22,000 brown trout fry were introduced in 1954 and 1955 (Sask. D.N.R.). A considerable amount of fishing is carried out on the lake for pike, pickeral and perch. Apparently the trout introduction was not highly successful.

(c) Other: Considerable boating activity is carried out on the Duncairn Reservoir, mostly for fishing purposes. Most lakeside recreation in the area takes place at Lake Pelletier, approximately 10 miles to the east where boating, swimming and picnicing facilities are maintained (Dzubin, 1957). There were two boat docks in evidence on Duncairn Reservoir during the 1972 survey, but no other recreational facilities available (Figure 7). Apparently the steep, rocky shorelines and frequent blue-green algal blooms discourage extensive public use of the reservoir for purposes other than fishing. The Swift Current Fish and Game League owned a 10 acre plot of land below the dam, but did not develop the property because of periodic flooding (Dzubin, 1957).

10. Public Opinion

Interviews with the local residents of the Duncairn area revealed that very few were aware that the reservoir is a federal migratory bird

sanctuary. All expressed a desire that the area be maintained as a sanctuary and expressed considerable interest in its value as a recreational area, particularly for boating and fishing. The local residents appeared to be concerned that Duncairn Reservoir be protected from hunting. The waterfowl which form feeding flights from the water to the fields in the fall provide excellent duck and goose hunting.

Depredation of cereal crops by waterfowl has not been a serious problem in recent years, and should not be regarded as an important factor in determining the future of the Duncairn Reservoir Bird Sanctuary.

11. Posting and Enforcement.

Our investigations on August 28, 1972 revealed that the Duncairn Reservoir Bird Sanctuary is posted with only two federal migratory bird sanctuary signs.

The Swift Current, Saskatchewan detachment of the Royal Canadian Mounted Police is responsible for enforcement of the area including the Duncairn Reservoir. It carries out regular boat patrols on the lake during the summer, but this is not specifically for enforcement of the Migratory Bird Sanctuary Regulations. The R.C.M.P. also carry out routine ground patrols during the summer and fall hunting season, but report few violations (J. R. Ross, pers. comm.).

Conservation officer personnel from the Saskatchewan Department of Natural Resources (Swift Current) patrol the area in the fall and also report few violations of the Migratory Birds Convention Act or the Migratory Bird Sanctuary Regulations (A. E. Scoville, pers. comm.).

The Swift Current offices of the R.C.M.P. and the D.N.R. both recommended that the sanctuary be better posted as a federally protected area. They report that few non-resident and many local people are unaware of the status of the area.

12. Discussion

The Duncairn Reservoir Bird Sanctuary does not provide adequate habitat to be regarded as an important migratory waterfowl breeding or moulting area. However, the reservoir is heavily used as a fall staging lake, and is particularly important in this respect considering its location in a drought-prone area of Saskatchewan. Utilization by non-waterfowl species is limited to shorebirds, gulls and terns.

The value of the Duncairn Reservoir Bird Sanctuary as a staging area is matched by its importance to the local residents for boating and fishing purposes. There is only one other lake in the vicinity (Lake Pelletier) which offers more recreational potential.

Posting of Duncairn Reservoir as a federal migratory bird sanctuary is inadequate and imperative if the sanctuary is to be retained. The public are in favor of its protected status.

13. Recommendations

It is recommended that the Duncairn Reservoir Bird Sanctuary be maintained as a federally protected area on the basis of high waterfowl and public utilization. It is important that there be a large, protected, waterfowl staging area located in this portion of Saskatchewan which is periodically seared by drought. The public are in favor of the area being retained as a sanctuary which is an important consideration in an agricultural area.

Duncairn Reservoir Bird Sanctuary should be posted with a minimum of 20 federal bird sanctuary signs during the 1973 field season. Signs should be placed on all public access roads to the reservoir. Because of the high degree of utilization of the reservoir by the public, and the presence of a main access road across the dam, a large introductory sanctuary sign should be erected there, as discussed in Section E.

14. Summary

(a) Duncairn Reservoir Bird Sanctuary is a large, deep reservoir located on the shortgrass prairie of extreme southwestern Saskatchewan.

(b) Duncairn Reservoir was declared a federal bird sanctuary in 1948 and was evaluated as such in 1949, 1957, 1971 and 1972.

(c) The sanctuary has a total surface area of 3,854 acres, a capacity of 83,500 acre feet, and a maximum depth of 50 feet.

(d) Duncairn Reservoir is surrounded by shortgrass prairie pasture and large areas of cultivation.

(e) Waterfowl utilization of the sanctuary is confined primarily to fall staging activities.

(f) Pelicans, gulls, terns, herons, and assorted shorebirds inhabit the lake.

(g) Duncairn Reservoir is important for hunting and fishing.

(h) The sanctuary is poorly posted as a protected area.

(i) The public are in favor of retaining Duncairn Reservoir as a sanctuary.

(j) Duncairn Reservoir Bird Sanctuary should be retained as a federal sanctuary and posted as such during the 1973 field season.

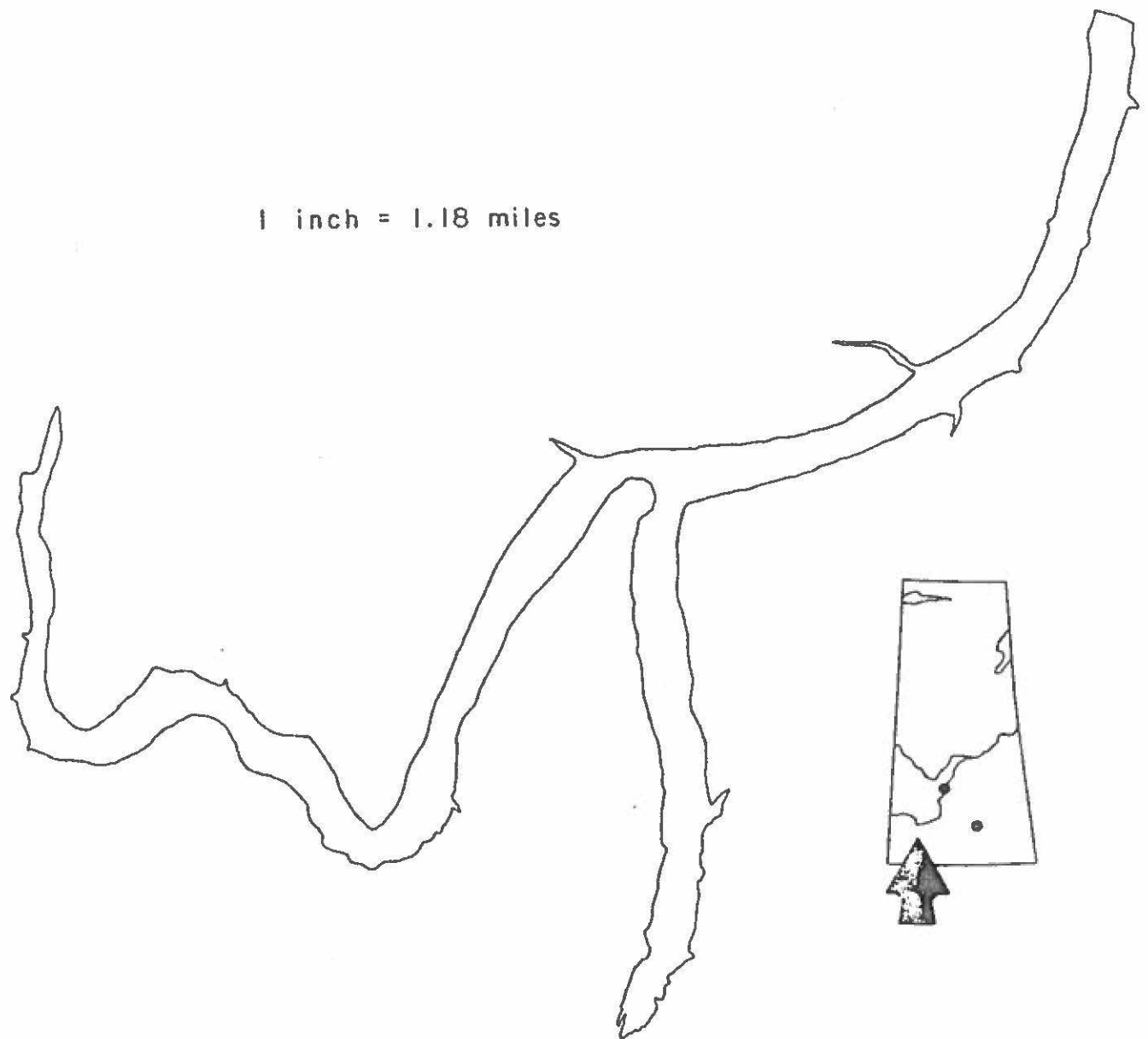


Figure 5. Duncairn Reservoir Migratory Bird Sanctuary



Figure 6. Duncalra Reservoir Migratory Bird Sanctuary.

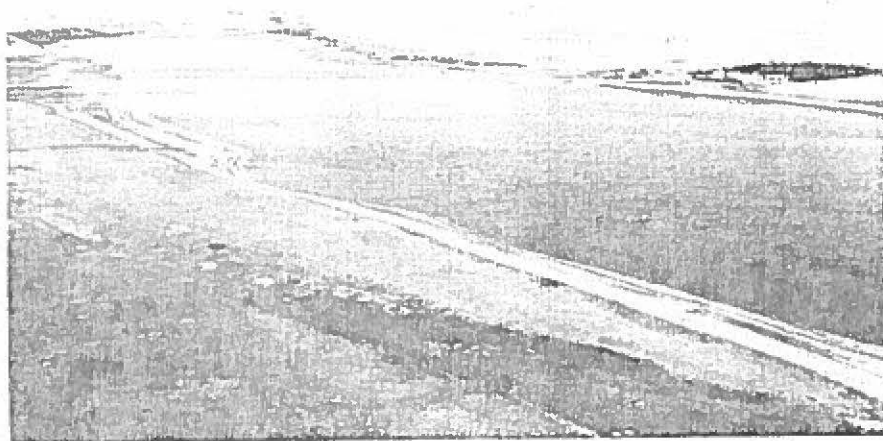


Figure 7. The south arm of the Duncalra Reservoir. Docks and boating facilities are visible at the extreme end of the arm.

III. Indian Head Bird Sanctuary.

1. Location

The Indian Head Bird Sanctuary is located on the Dominion Department of Agriculture Forest Nursery Station, one mile south of Indian Head, Saskatchewan. The sanctuary includes not only the water area, but the land area also as described in (2).

2. Legal Description

The North half of the Southwest quarter of Section 11, Township 18, Range 13, west of the 2nd Meridian (The Canada Gazette, 1954).

3. Background Information

In 1924, the Experimental Farm at Indian Head, Saskatchewan was established as a federal migratory bird sanctuary (Murray, 1966).

In 1948, at the request of the Department of Agriculture, two officials, one federal and one provincial, inspected Indian Head Bird Sanctuary to determine if drought had made the area unsuitable for the purposes for which it was originally established. The area was considered of value to migratory birds and its retention as a federal sanctuary recommended (Murray, 1966).

A further inspection of Indian Head Bird Sanctuary was carried out in 1949-50. The boundaries of all bird sanctuaries in Saskatchewan, except three, were redescribed to include only the water area. Indian Head Bird Sanctuary was one of the three exceptions and remained unchanged.

The Canadian Wildlife Service carried out an evaluation of the sanctuary in 1957 which included a visit to the area, and a review of all known information pertaining to the sanctuary (Dzubin, 1957f). The Indian Head Bird Sanctuary was found to be of very limited value to

migratory waterfowl and to have little recreational potential other than that provided by a picnic site maintained by the Department of Agriculture. If the area did have even minimal utilization by migratory birds, administration and enforcement of the sanctuary could be carried out by personnel of the Forestry Station. It was recommended that no further development of the area by the Canadian Wildlife Service take place, and that Indian Head Bird Sanctuary not be maintained as a sanctuary.

This sanctuary was investigated once again by the Canadian Wildlife Service in 1971. Although the area was not visited during this examination, it was recommended that Indian Head Bird Sanctuary be discontinued for the reasons previously described (Poston, 1971).

The most recent evaluation of the Indian Head Bird Sanctuary was carried out by the Canadian Wildlife Service in 1972. A comprehensive literature review combined with ground (August 29, 1972) and aerial (July 24, 1972) investigations were carried out by the authors.

4. General Description

The Indian Head Bird Sanctuary is composed of three small lakes and the surrounding land area of approximately one-half of a quarter section in southeastern Saskatchewan. The sanctuary is located in the spear grass-wheat grass vegetation zone of the grassland and grove region of Saskatchewan (Richards, 1969).

Bedrock geological deposits are Cretaceous, chiefly sedimentary rocks, sandstone and shale of the Bearpaw formation. Soils of this area are dark brown chernozems, and the climate sub-humid continental (Richards, 1969). The elevation of the terrain surrounding the sanctuary varies from 1,800 to 2,400 feet above sea level.

The Indian Head Bird Sanctuary is formed by dams on the Indianhead Creek. The flow of this creek is governed primarily by spring runoff. The water reservoirs of the sanctuary are used for irrigating the trees and shrubs grown on the Department of Agriculture Forestry Farm.

As previously discussed, the area immediately adjacent to the water areas of the sanctuary is cultivated for tree and shrub growth for forestry farm purposes. The surrounding land is almost totally agricultural. There is one public access road into the sanctuary area.

5. Physical Characteristics

(a) Area: The three small lakes comprising the Indian Head Bird Sanctuary are approximately 15, 8, and 4 acres in size; the land area includes 80 acres (Dzubin, 1957f; Murray, 1966).

(b) Depth and Volume: The maximum depth of the largest water area is approximately 9 feet (Saskatchewan Fisheries and Wildlife Branch, 1973).

(c) Shoreline Type: The total shoreline of the three small water bodies in the Indian Head Bird Sanctuary probably does not exceed two miles. There is moderate to high relief between the water and the upland terrain.

(d) Water Quality: There are no water quality measurements available for the reservoirs of the Indian Head Bird Sanctuary or for the Indianhead Creek which flows into the three small lakes.

6. Vegetation Characteristics

(a) Shoreline: The shoreline around the three water areas is quite variable. The first two dams are completely surrounded by heavy deciduous tree and shrub growth including aspen (Populus tremuloides),

maple (Acer negundo) and several species of willow (Salix spp.) (Figure 9). Between the water and the previously described tree growth is a small band (5 yards wide) of mudflat and wet meadow herbaceous growth. The other dam has a very small part of the south shoreline vegetated with scattered clumps of willow (Figure 8). The majority of the shoreline is primarily wet meadow herbs.

(b) Emergent Aquatics: Although the water areas of the Indian Head Bird Sanctuary are relatively small and shallow, emergent aquatic vegetation is virtually non-existent with the exception of a small stand of cattail (Typha latifolia), bur-reed (Sparganium eurycarpum), sedge (Carex spp.) and associated species at the south end of the second dam.

(c) Submergent Aquatics: The heaviest growth of submergent aquatic vegetation is found in the second dam which, shallow and protected from wind and wave action, contains dense beds of pondweeds (Potamogeton spp.), and watercrowfoot (Ranunculus spp.). Similar species, in lesser numbers, are present in the first dam but not in the third water body.

7. Waterfowl Use

(a) Breeding and Moulting: Very few waterfowl utilize the Indian Head Bird Sanctuary as a breeding area due to a lack of proper habitat and frequent human disturbance. A couple of mallard (Anas platyrhynchos) broods are produced annually on the first dam but that is maximum waterfowl production for the area. The sanctuary is not used for moulting purposes.

(b) Spring and Fall Staging: None of the three water bodies on the Indian Head Bird Sanctuary are used for spring and fall staging activities.

8. Other Migratory Birds

With the exception of a few shorebirds, utilization of the sanctuary water area by other species is minimal. The dense tree and shrub growth on the Forestry Farm, which also lies within the boundaries of the Indian Head Bird Sanctuary no doubt serves as habitat for numerous passerine species.

9. Public Utilization

(a) Hunting: Since the sanctuary area is not attractive to waterfowl species at any time of the year, it does not contribute to waterfowl hunting in the area.

(b) Fishing: None.

(c) Other: The entire forestry farm area is frequently visited by a large number of people and the Department of Agriculture maintains a picnic area for this purpose. Visitors to the sanctuary come to view the forestry farm activities rather than the wildlife and the enjoyment of any wildlife present on the area is incidental.

10. Public Opinion

No interviews were carried out on the Indian Head Bird Sanctuary.

11. Posting and Enforcement

Our investigations on August 29, 1972 revealed that the Indian Head Bird Sanctuary was well posted with six federal migratory bird sanctuary signs located on the periphery of the forest farm. These signs have been maintained by Forestry Farm officials.

The Indian Head, Saskatchewan detachment of the Royal Canadian Mounted Police makes routine patrols of the sanctuary area because of the high degree of utilization by the public (T. W. Tompkins, pers. comm.).

The Saskatchewan Department of Natural Resources conservation officials also report no special problems with the area (G. P. Rolles, pers. comm.). It appears that the large number of forestry farm personnel working within the confines of the sanctuary and the general knowledge of the public that the area is protected, has led to a minimum of difficulties in this regard.

12. Discussion

The Indian Head Bird Sanctuary is of almost no value to migratory waterfowl and any benefits derived from the area by the public is entirely due to the attractions offered by the forestry farm activities. Abolishment of the area as a sanctuary would have no effect on public utilization of the area.

The sanctuary is well posted, probably due to forestry farm personnel activities.

13. Recommendations

It is recommended that the Indian Head Bird Sanctuary be discontinued as it does not fulfill any of the basic requirements of a sanctuary. The sanctuary status of this area plays no role in the protection of migratory waterfowl and does not contribute to public recreation. Any wildlife value of the sanctuary, however minimal, will be guaranteed by the location and function of the area as a forestry farm.

14. Summary

(a) Indian Head Bird Sanctuary is composed of three small dams in the mixed prairie zone of southeastern Saskatchewan.

(b) The area was declared a federal bird sanctuary in 1924, and was evaluated as such in 1948, 1949, 1957, 1971, and 1972.

(c) The water and land area of the sanctuary include 27 surface acres of water and approximately 80 acres of land. Maximum depth is 9 feet.

(d) Two of the dams are surrounded by deciduous tree and shrub growth. The third dam has a shoreline of herbs.

(e) Waterfowl utilization of the sanctuary area is minimal.

(f) The Indian Head Bird Sanctuary provides limited recreation in the form of picnicking, these facilities maintained by forestry farm personnel.

(g) The sanctuary is well posted as a federally protected area.

(h) Indian Head Bird Sanctuary should be discontinued as a sanctuary.

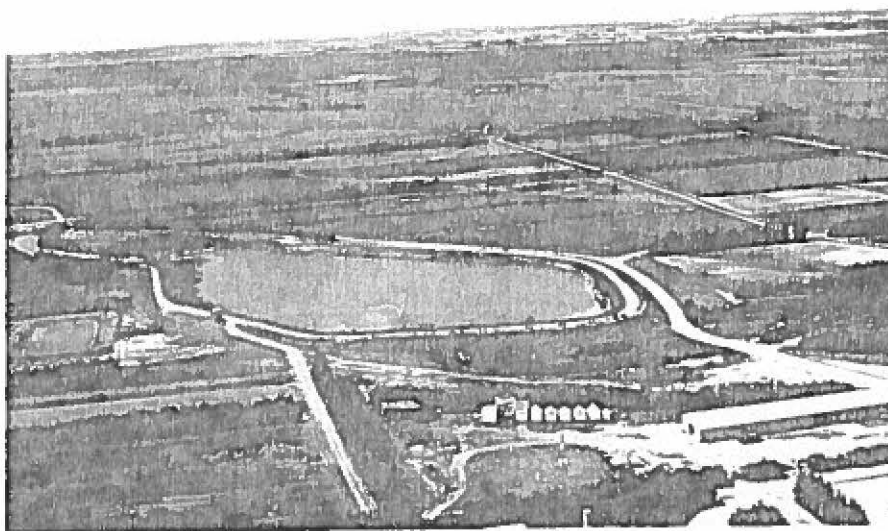


Figure 8. An aerial view of part of the Indian Head Migratory Bird Sanctuary. Dam No. 3 is visible.

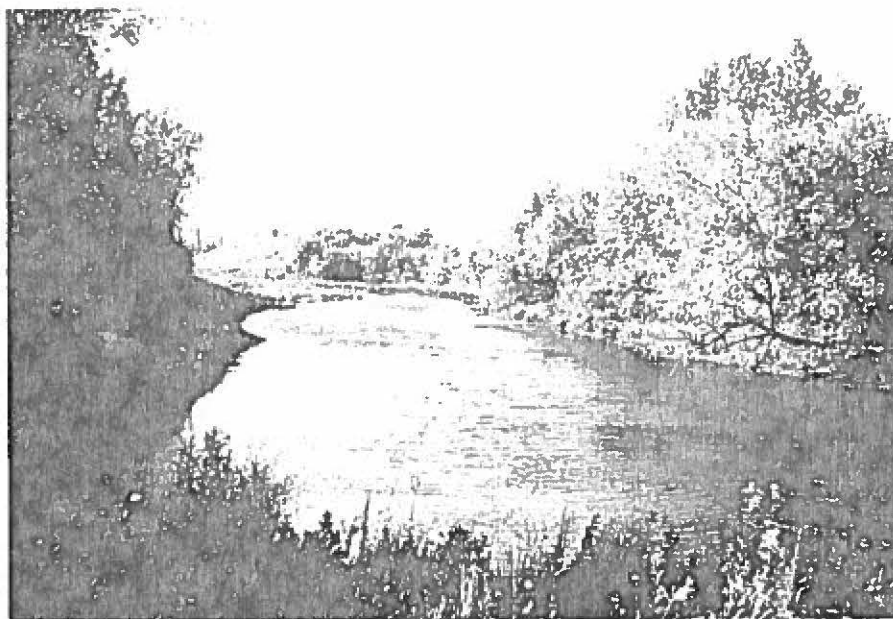


Figure 9. Dam No. 2 on the Indian Head Migratory Bird Sanctuary.

IV. Old Wives Lake Bird Sanctuary

1. Location

The Old Wives Lake Bird Sanctuary is located approximately 20 miles southwest of Moose Jaw, Saskatchewan.

2. Legal Description

Comprising the lands covered by the waters from day to day of Old Wives Lake, formerly known as Johnstone Lake, together with the islands therein, in Townships 12 and 13, Range 28; Townships 12, 13, and 14, Range 29; Townships 12, 13, and 14, Range 30, all west of the 2nd Meridian; Townships 12, 13, and 14, Range 1 and Townships 13 and 14, Range 2, all west of the 3rd Meridian (The Canada Gazette, 1954).

3. Background Information

Old Wives Lake, formerly known as Johnstone Lake, has been a major landmark in southern Saskatchewan since the appearance of the first settlers. It was apparently an important area for market hunting of ducks and geese, an activity which directed government attention to the lake in the early 1900's.

On May 18, 1915, the Minister of the Interior reserved Old Wives Lake and all vacant quarter sections immediately adjacent to the lake as a candidate for future sanctuary establishment (Murray, 1966). Dr. R. M. Anderson, a zoologist for the Geological Survey carried out an investigation of the lake in 1917 and 1918. He reported that Old Wives Lake was of considerable value to migratory birds and commented on the heavy utilization of the lake as a fall staging area for ducks, geese and whistling swans. He recognized the importance of the area for colonial birds, in particular the one large island, Isle of Bays, which supported colonies of pelicans, cormorants, great blue herons

and gulls (Hewitt, 1921). Dr. Anderson's observations and recommendations resulted in the establishment of Old Wives Lake Bird Sanctuary by an Order-in-Council in 1925.

In 1948, following recent droughts, federal and provincial government officials inspected Old Wives Lake to determine whether or not it was still of value to migratory birds. It was recommended that the status of the area remain unchanged.

It was decided in 1949-50 to remove the land areas adjacent to Old Wives Lake from the sanctuary. Formerly, all vacant quarter sections (as of 1915) adjacent to the lake were included in the sanctuary. After 1950, only the area covered by the waters of Old Wives Lake constituted the federal sanctuary (Murray, 1966).

The Old Wives Lake Bird Sanctuary was evaluated by the Canadian Wildlife Service in 1957, to determine if the area still conformed to the basic requirements of a sanctuary. The area was visited and the subsequent report included comments on the physical characteristics of the lake and its wildlife and public utilization. Due to the heavy use of Old Wives Lake by migratory waterfowl during the spring, summer and fall, and its importance to several colonial nesting species, it was recommended that the area be retained as a sanctuary and adequately posted (Dzubin, 1957e).

In 1971, the Canadian Wildlife Service again expressed interest in Old Wives Lake Bird Sanctuary. Although the lake was not visited, past waterfowl survey data indicated that the area was important as a fall staging area for ducks, geese and swans. No recommendation was given at this time (Poston, 1971).

A complete literature review of the common avian species utilizing Old Wives Lake Bird Sanctuary as a breeding area was carried out in 1972 by the Canadian Wildlife Service (Renaud, 1972). During the same year, the C.W.S. carried out a detailed study of the sanctuary including a comprehensive literature review. Old Wives Lake Bird Sanctuary was visited on the ground (August 28, 1972) and from the air (July 24, 1972).

4. General Description

Old Wives Bird Sanctuary is a very large, relatively shallow lake in southern Saskatchewan (Figure 10). The lake is located in the spear grass - blue grama vegetation zone in the grassland and grove region of Saskatchewan (Richards, 1969).

Bedrock geological deposits are Cretaceous sedimentary rocks, sandstone and shale of the Bearpaw formation. Soils of this region are brown chernozems. The climate is classified as sub-humid continental (Richards, 1969). The elevation of the area adjacent to Old Wives Lake varies from 1,800 to 2,400 feet above sea level.

Old Wives Lake is dependent upon spring runoff and seasonal rains as its major water source. The lake is fed from the southwest by the Wood River. Water fluctuations are severe, depending upon climatic conditions, and the lake has been known to go dry (1949). There is one large, permanent island on the lake (the Isle of Bays) and at least one other island makes its appearance during low water levels.

The terrain surrounding the lake is devoted to cultivation and pasture land (Figure 11). Public access roads to Old Wives Lake are numerous (18).

5. Physical Characteristics

(a) Area: The total surface area of Old Wives Lake is 65,400 acres at full basin capacity (Murray, 1966). However, due to severe seasonal water level fluctuations, the water area varies considerably.

(b) Depth and Volume: No data available.

(c) Shoreline Type: The length of the shoreline of Old Wives Lake Bird Sanctuary is approximately 45 miles. There is very little relief between the water and the upland terrain. For the most part, the shore is rocky and sandy, as are the islands. In an average year declining water levels throughout the summer create vast expanses of mudflat around the lake.

(d) Water Quality: The general appearance of the water from the air indicates that Old Wives Lake is turbid and prone to heavy algal blooms. No water quality measurements are available.

6. Vegetation Characteristics

(a) Shoreline: As previously discussed, the usual situation in late summer is a variable expanse of bare mudflat between the water and the dry shoreline of Old Wives Lake. The immediate shoreline has little vegetation due to the sandy and rocky substrate. Scattered clumps of water foxtail (Alopecurus spp.), sedge (Carex spp.) and associated species are adjacent to the prairie terrain which consists of spear grass (Stipa comata) and blue grama (Bouteloua gracilis) as indicator species. There are small stands of snowberry (Symphoricarpos spp.), willow (Salix spp.) and rose (Rosa spp.) along the shore.

(b) Emergent Aquatics: Most of Old Wives Lake is open water. The large size of this water body results in extensive wave action which

inhibits the growth of emergent aquatic vegetation. Due to the widely fluctuating water levels of this lake, the presence and density of emergent aquatic vegetation is in a constant state of flux from one year to another, and our observations should not be regarded as the typical situation. In 1972, there existed a large dense stand of bulrush (Scirpus spp.) at the west end of the lake on the delta of the Wood River. Scattered stands of bulrush, cattail (Typha latifolia), and spangletop (Scolochloa festucacea) present along the south and north shores of the lake were dense enough in some areas to be useful as waterfowl cover. In isolated locations, particularly along the north shore, sedge (Carex spp.) existed as an emergent.

(c) Submergent Aquatics: Beds of submergent aquatic vegetation did not appear extensive in Old Wives Lake. There were scattered beds of pondweeds (Potamogeton spp.) in the open water of the lake. It is expected that a good representation of submergent aquatics exists on the delta of the Wood River in association with the emergent vegetation.

7. Waterfowl Use

(a) Breeding and Moulting: Old Wives Lake Bird Sanctuary is heavily utilized as a breeding and moulting area for dabblers, divers and a few Canada geese (Branta canadensis). Over 42,000 ducks (including a good representation of both divers and dabblers) and 50 geese were observed on the lake during the 1972 July aerial survey. Waterfowl observed during this survey were both breeding and moulting birds. A raft of approximately 1,000 canvasbacks (Aythya valisineria) was observed, and in past years, up to 5,000 have used Old Wives Lake as a moulting area. Renaud (1972) reported Canada geese, mallards

(Anas platyrhynchos), gadwalls (A. strepera), pintails (A. acuta), widgeons (Mareca americana), redheads (Aythya americana), canvasbacks, lesser scaups (A. affinis), and ruddy ducks (Oxyura jamaicensis) as breeders on Old Wives Lake.

(b) Spring and Fall Staging: Old Wives Lake is an important staging lake in southern Saskatchewan. Waterfowl fall aerial surveys have revealed large concentrations of mallards (10,000) and assorted divers using the lake (Dzubin, 1957e). Geese (Canada, white-fronted (Anser albifrons), and snow (Chen hyperborea)) and whistling swans (Olar columbianus) use Old Wives Lake regularly in the fall.

8. Other Migratory Birds

Old Wives Lake Bird Sanctuary is perhaps most important in terms of the protection of the colonial migratory bird species which regularly breed on the islands of the lake, particularly the Isle of Bays (Figure 12). A comprehensive review of the major species utilizing Old Wives Lake is provided by Renaud (1972), from which the following information is taken. (Maximum number of nests in parentheses.)

The western grebe (Aechmophorous occidentalis), a very local breeder in southern Saskatchewan, nests on the Isle of Bays in large numbers (300). The white pelican (Pelecanus erythrorhynchos) (1,000), double-crested cormorant (Phalacrocorax awrites) (350), great blue heron (Ardea herodias) (5), and black-crowned night heron (Nycticorax nycticorax) (415) nest regularly on the Isle of Bays. The California gull (Larus californicus) (200), ring-billed gull (Larus delawarensis) (2,000) and common tern (Sterna hirundo) (1,000) are also common breeders on this island, as are assorted shorebirds including the killdeer (Charadrius

vociferus), spotted snadpiper (Actitus macularia), marbled godwit (Limosa fedoa), American avocet (Recurvirostrata americana) and Wilson's phalarope (Steganopus tricolor). The piping plover (Charadrius melodus) is believed to be a rare, but regular resident.

9. Public Utilization

(a) Hunting: The Old Wives Lake Bird Sanctuary, important as a fall staging area, contributes to excellent field shooting of waterfowl, particularly mallards. It is not renowned as a goose hunting area, but a small harvest of Canadas is taken annually. Most of the hunting occurs to the south and the west of Old Wives Lake.

(b) Fishing: Old Wives Lake is not of sufficient depth to support a fish population (Saskatchewan Fisheries and Wildlife Branch, 1973).

(c) Other: Old Wives Lake Bird Sanctuary furnishes little recreation other than hunting. The quality of the water, the shoreline type and the severity of water level fluctuations discourages recreational activity. The Board of Trade of the town of Mossbank has a small beach on the south side of the lake under development, but little progress has been made to date.

10. Public Opinion

Some of the local residents are aware that Old Wives Lake is a federal migratory bird sanctuary, but the majority are not. The local residents appear to be in favor of the sanctuary and would like to see its protected status retained. Some concern was expressed over waterfowl crop depredation which has been a problem of varying magnitude since 1950, particularly to the south of the lake.

11. Posting and Enforcement

Although the entire lake was not surveyed in 1972, investigations on approximately one-half of the shoreline revealed 5 federal sanctuary signs, 3 of these very old and in poor condition. It is assumed that posting of this sanctuary is inadequate.

The Moose Jaw, Saskatchewan detachment of the Royal Canadian Mounted Police makes regular patrols of this area. Old Wives Lake receives the greater portion of this detachment's effort regarding enforcement of the Migratory Birds Convention Act. The R.C.M.P. report few violations of the sanctuary regulations (W. L. Crawford, pers. comm.).

The Conservation Officer from the Moose Jaw field office of the Saskatchewan Department of Natural Resources also carried out regular patrols of the Old Wives Lake Bird Sanctuary. He reports that the lack of posting of the area as a federal bird sanctuary is a problem (S. Pompu, pers. comm.).

12. Discussion

Old Wives Lake Bird Sanctuary is of considerable value to most species of migratory waterfowl which are resident or transient in Saskatchewan. It is utilized for breeding, moulting and fall staging activities. The large island on Old Wives Lake, the Isle of Bays, is one of the few refuges for colonial nesting water birds in southern Saskatchewan and one of the most important in the province.

Recreational utilization of the Old Wives Bird Sanctuary is limited to waterfowl hunting, mainly to the south of the lake. Posting of the sanctuary is not adequate and the public appear to be in favor of retaining the area under protected status.

13. Recommendations

It is recommended that the Old Wives Lake Bird Sanctuary be retained as a federal migratory bird sanctuary on the basis of its high degree of utilization by migratory waterfowl and colonial water birds. It is imperative that this area be posted with federal migratory bird sanctuary signs, particularly in the area of the Isle of Bays. Approximately 18 signs are required for posting on the public access roads to the lake. This should be done during the 1973 field season, preferably early in the summer to ensure the continued protection of the species breeding on the Isle of Bays.

14. Summary

(a) Old Wives Lake Bird Sanctuary is a very large, shallow lake in the grasslands of southern Saskatchewan.

(b) The area was declared a federal bird sanctuary in 1925 and was evaluated as such in 1917, 1948, 1949, 1957, 1971 and 1972.

(c) Old Wives Lake has a total surface area of 64,400 acres and a shoreline of approximately 45 miles.

(d) Old Wives Lake is surrounded by shortgrass prairie and grassland with extensive cultivation. There are small areas of emergent and submergent aquatic vegetation.

(e) Waterfowl utilization of the sanctuary is heavy for breeding, moulting and fall staging purposes.

(f) The Isle of Bays constitutes one of the most important colonial water bird nesting refuges in Saskatchewan.

(g) The sanctuary provides public recreation in the form of waterfowl hunting.

(h) Old Wives Lake Bird Sanctuary is poorly posted.

(i) The public is in favor of retaining the sanctuary as a protected area despite some waterfowl crop depredation losses.

(j) Old Wives Lake Bird Sanctuary should be retained as a sanctuary and posted accordingly in the near future.

1 inch = 2.67 miles

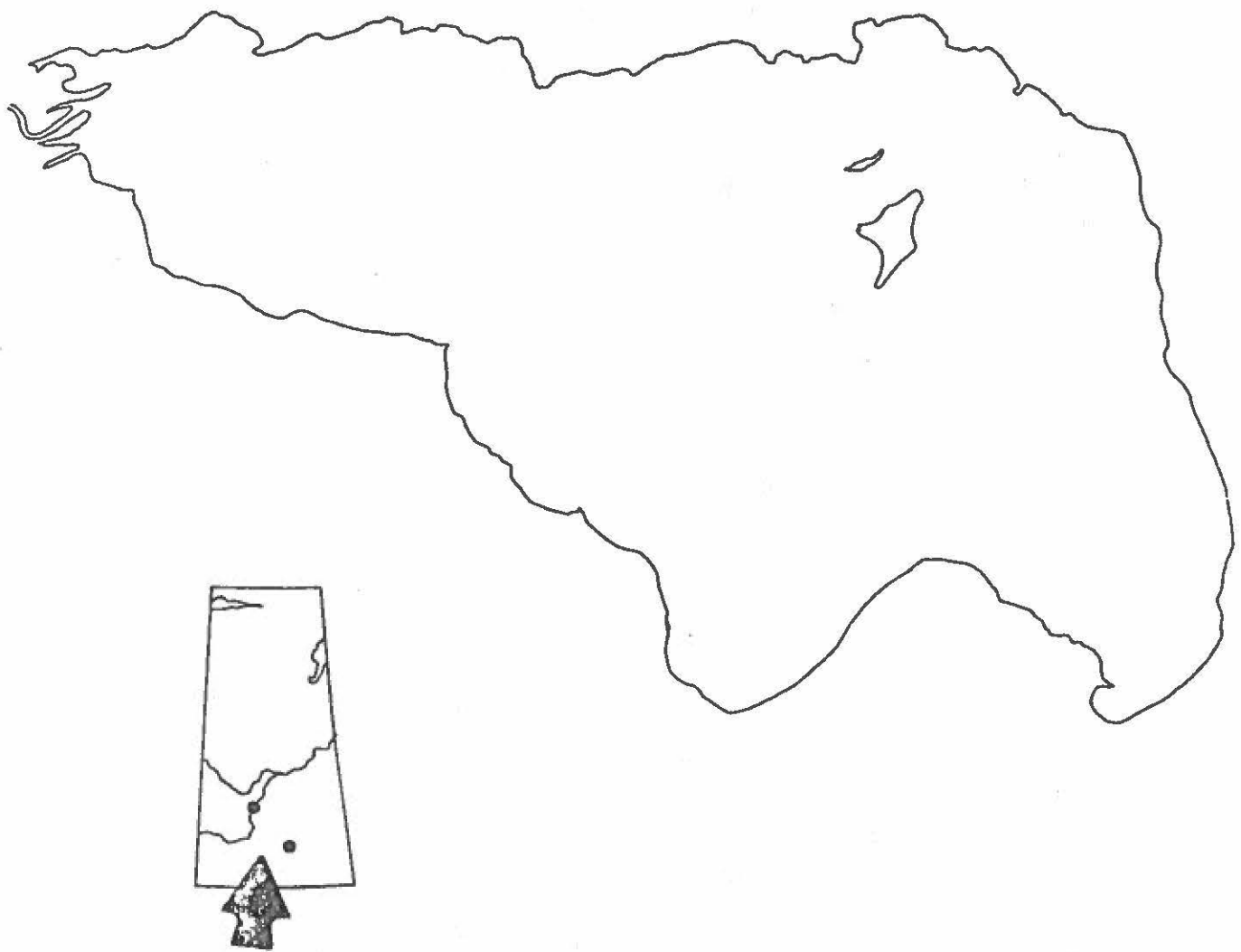


Figure 10. Old Wives Lake Migratory Bird Sanctuary.



Figure 11. A distant view of the Old Wives Lake Migratory Bird Sanctuary.

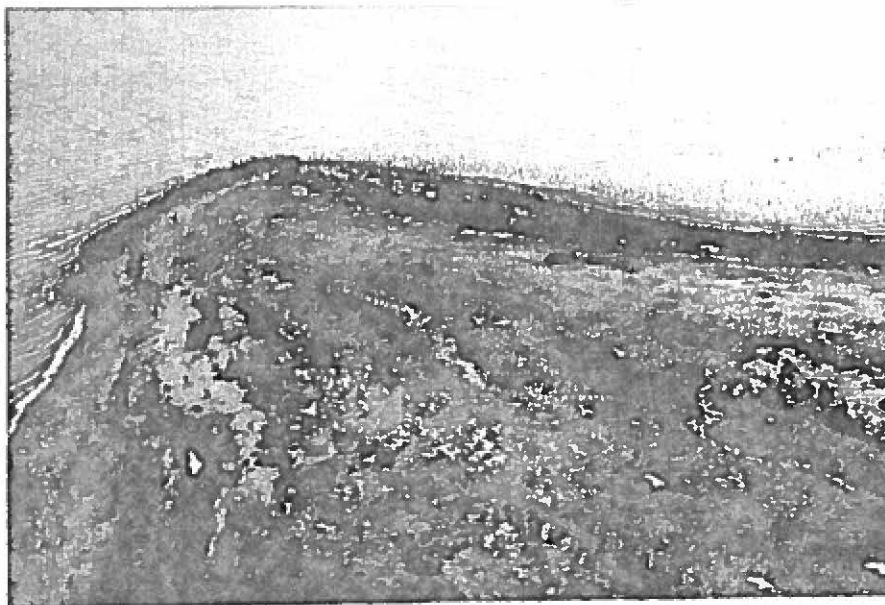


Figure 12. The north end of the Isle of Bays on Old Wives Lake. This island is an important breeding area for many colonial species of birds.

V. Last Mountain Lake Bird Sanctuary

1. Location

The Last Mountain Lake Bird Sanctuary includes the upper portion of Last Mountain lake south to approximately 1 1/2 miles south of Govan, Saskatchewan on the east, and nearly to the mouth of Lewis Creek on the west.

2. Legal Description

Comprising the lands covered by the waters from day to day of that part of Last Mountain Lake lying wholly to the north of Township 26, Range 23 and 24, west of the 2nd Meridian, and the following sections, quarter sections and legal subdivisions:

In Township 27, Range 23, west of the 2nd Meridian: The fractional northwest quarter and fractional legal subdivision 5 of Section 7; the fractional northwest and southwest quarters of Section 18; the fractional northwest and southwest quarters, legal subdivision 2 and fractional legal subdivisions 7, 10 and 15 of Section 19; the fractional northwest and southwest quarters and fractional legal subdivision 7 of Section 30; fractional Section 31.

In Township 28, Range 23, west of the 2nd Meridian: The islands in Sections 5, 6 and 8; fractional Sections 7, 18 and 19 and the parts of legal subdivisions 4 and 5 of Section 20 lying west of Lanigan Creek.

In Township 27, Range 24, west of the 2nd Meridian: Fractional Sections 12, 13 and 24, and fractional legal subdivisions 1, 8 and 15 of Section 36.

In Township 28, Range 24, west of the 2nd Meridian: The islands in Section 1, the islands in Fractional Section 12, and fractional legal subdivisions 15 and 16 of fractional Section 12; fractional Section 13 (The Canada Gazette, 1954).

3. Background Information

Last Mountain Lake has long been a historic landmark in the history of Saskatchewan. It was a major trading area in the 1860's for the Hudson's Bay Company and the Cree and Salteaux Indians. And, as settlement began to encroach upon the west, this large lake provided a fine water route for barging services along its length (Sask. D.N.R., 1961). Last Mountain Lake derived its name from an indulation on the prairie east of the lake which appears blue on the horizon and served as a landmark to early traders and buffalo hunters.

Last Mountain Lake Bird Sanctuary has the distinction of being the first federal bird sanctuary in Canada. Approximately 2,500 acres adjacent to the shoreline at the north end of the lake were reserved from sale and settlement and set apart as breeding grounds for waterfowl by an Order-in-Council on June 8, 1887 (Hewitt, 1921).

In 1917 and 1918 the Last Mountain Lake Bird Sanctuary was evaluated by Dr. R. M. Anderson of the Geological Survey of Canada. He noted the area as excellent waterfowl breeding habitat and important to colonial species (cormorants, gulls) nesting on the islands of the lake. It was recommended that Last Mountain Lake be retained as a sanctuary (Hewitt, 1921).

In 1948, at the request of the Department of Agriculture, officials of the federal and Saskatchewan governments inspected Last Mountain Lake

Bird Sanctuary to determine if drought had made the area unsuitable as a waterfowl refuge. The permanency of this water body, even during periods of drought on the prairies, resulted in the retention of Last Mountain Lake as a bird sanctuary (Murray, 1966).

A further inspection of Last Mountain Lake Bird Sanctuary occurred in 1949-50 to determine if only the water area should be protected and the adjacent lands released for settlement. It was recommended that the land areas remain protected and the status of the sanctuary remained unchanged.

The Canadian Wildlife Service investigated the Last Mountain Lake Bird Sanctuary in 1957. The lake was visited and data recorded on the physical characteristics of the sanctuary and the amount of migratory bird and public utilization. The area was found to be of considerable value as a migratory bird sanctuary with public use compatible with the protection of wildlife. It was recommended that the area be retained as a sanctuary, and that federal government aid be granted to further develop some of the areas utilized by the public (Dzubin, 1957d). A cost estimate for a period of several years was included to develop suitable areas into parks, beaches and playgrounds.

In 1971, the Canadian Wildlife Service carried out a preliminary evaluation of Last Mountain Lake Bird Sanctuary. The sanctuary was not visited, but background information indicated that the lake was of considerable value to migratory waterfowl and certain colonial species. It was recommended that the sanctuary be retained (Poston, 1971).

A comprehensive evaluation of the Last Mountain Lake Bird Sanctuary was carried out in 1972 by the Canadian Wildlife Service. A complete literature review and aerial (July 24, 1972) and ground (August 5, 1972) investigations were included in this evaluation.

4. General Description

The Last Mountain Lake Bird Sanctuary includes the north end of a large lake in south-central Saskatchewan which extends north and slightly west from the Valley of Qu'Appelle (Figure 13). Last Mountain Lake is located in the spear grass-wheat grass vegetation zone of the grassland and grove region of Saskatchewan (Richards, 1969).

Bedrock geological deposits are Cretaceous sedimentary rocks, sandstone and shale of the Bearpaw formation. Soils of this area are dark brown chernozems and the climate is classified as sub-humid continental (Richards, 1969). The elevation of the area adjacent to the lake varies from 1,200 to 1,800 feet above sea level.

Last Mountain Lake is a natural lake, its depth and permanency ensured by a dam on the south end of the lake. One of the major water sources of Last Mountain Lake is the Arm River; the outlet is Long Lake Creek which flows into the Qu'Appelle River near Craven, Saskatchewan. The lake has several islands and numerous bays and peninsulas, particularly at the north end.

The lake is surrounded by cultivated land on all sides, particularly on the east. There are large tracts of grassland on the west shore. Public access roads to the portion of Last Mountain Lake included in the sanctuary number 15.

5. Physical Characteristics

(a) Area: Last Mountain Lake is approximately 84 square miles in area; the area included within the sanctuary boundaries approximates 14 square miles (Saskatchewan Fisheries and Wildlife Branch, 1973).

(b) Depth and Volume: The maximum water depth of Last Mountain Lake is approximately 80 feet with an average depth of 20 feet. The volume of the lake at full basin capacity is 16.4×10^9 cubic meters (Saskatchewan Fisheries and Wildlife Branch, 1973).

(c) Shoreline Type: The length of the shoreline within the sanctuary boundaries of Last Mountain Lake is approximately 25 miles. The shoreline and islands of Last Mountain Lake are rocky in many areas, with extensive tracts of gravel and sand. The shores on the north portion of the lake are flat and shallow; the central area has steep banks.

(d) Water Quality: The water of Last Mountain Lake appears clear from the air with a hint of an algal bloom. Total solids in the water measure approximately 2,550 p.p.m. (Rawson and Moore, 1944) and the pH varies from 8.2 to 9.0 (Saskatchewan Fisheries and Wildlife Branch, 1973).

6. Vegetation Characteristics

(a) Shoreline: Adjacent to the shorelines, Last Mountain Lake has large tracts of cultivated land sown to cereal crops. The pasture land is of the mixed grass prairie type with indicator species of spear grass (Stipa spartea) and wheat grass (Agropyron dasystachyum). The large size of the lake and its numerous bays, peninsulas and islands give the shoreline vegetation a high degree of variability. Extensive areas of mudflat may be found on the north edge of the sanctuary as water levels fluctuate. Upland vegetation here is of the wet meadow type, mainly sedges (Carex spp.). The remainder of the sanctuary shoreline is

typically rocky or sandy and nearly void of vegetation. Beyond this are sedges (Carex spp.), spike-rush (Eleocharis spp.), various other grasses and scattered clumps of willow (Salix spp.) and aspen (Populus tremuloides).

(b) Emergent Aquatics: Most of Last Mountain Lake Bird Sanctuary is open water. However, the shallow water at the north end of the sanctuary supports large and vigorous stands of bulrush (Scirpus spp.) and cattail (Typha latifolia). Many of the shallow bays are choked with bulrush. The remainder of the Last Mountain Lake Bird Sanctuary has a narrow band of bulrush between the rocky, sandy shore and the deep water. Sedges exist as emergents in many of the shallower bays.

(c) Submergent Aquatics: The shallow bays of the Last Mountain Lake Bird Sanctuary have dense areas of submergent aquatic vegetation composed of water crowfoot (Ranunculus spp.), hornwort (Ceratophyllum demersum) and water milfoil (Myriophyllum spp.). In the deeper water, beds of pondweeds (Potamogeton spp.) are present.

7. Waterfowl Use

(a) Breeding and Moulting: The entire north end of Last Mountain Lake is prime breeding and moulting habitat for large numbers of dabbling and diving ducks and a few Canada geese (Branta canadensis). The breeding population of waterfowl in the Last Mountain Lake Bird Sanctuary is very high, particularly during years of drought when the permanent waters of the lake are attractive to birds displaced from the prairie potholes.

An aerial survey of the sanctuary in July, 1972, revealed over 4,000 ducks, mostly mallards (Anas platyrhynchos), pintails (A. acuta), scaup (Aythya affinis), redheads (A. americana) and canvasbacks (A. valisineria). These included both moulting and breeding birds. Four pairs of Canada geese were also observed.

(b) Spring and Fall Staging: The Last Mountain Lake Bird Sanctuary is a major spring and fall concentration area for large numbers of waterfowl. The lake is of particular importance to staging flocks of Canada and white-fronted geese (Anser albifrons), mallards, pintails, and assorted divers. The mallards, pintails and geese form large feeding flocks into the grain fields adjacent to the lake. Fall aerial survey data have shown approximately 20,000 ducks (Dzubin, 1957d) and 5,000 geese (Brace, 1972) utilizing the north end of the lake. Last Mountain Lake provides the largest tract of prime waterfowl habitat in south-central Saskatchewan.

8. Other Migratory Birds

The Last Mountain Lake Bird Sanctuary provides breeding habitat for many water and marsh bird species found in the province. Terns (Sterna spp.), grebes (Aechmophorous spp.), herons (Ardea herodias) and numerous shorebirds were evident during the 1972 survey. Several of the islands in the sanctuary are traditional nesting grounds for colonial birds. Double-crested cormorants (Phalacrocorax auritus), white pelicans (Pelecanus erythrorhynchos) and gulls (Larus californicus, L. delawarensis) nest regularly on the islands (Houston, 1962). Fluctuating water levels and human disturbance has led to widely varying populations of these species breeding in the sanctuary.

During the spring and fall migration periods, Last Mountain Lake Bird Sanctuary is heavily used by large flocks of sandhill cranes (Grus canadensis) and the rare whooping crane (Grus americana) is a regular visitor to the area.

9. Public Utilization

(a) Hunting: The large numbers of migratory waterfowl which utilize Last Mountain Lake Bird Sanctuary as a fall staging area form the basis for some of the best duck and goose hunting in Saskatchewan. Large feeding flights between the sanctuary and grain crops are composed of mallards, pintails, Canada and white-fronted geese. Sandhill cranes which originate from this area are also hunted, as are other dabbling and diver species.

(b) Fishing: Last Mountain Lake supports one of the highest fish populations of any water body in southern Saskatchewan and supports heavy angling pressure every year. Centrally located, the lake provides sport fishing for people from heavily populated urban and rural Saskatchewan during the summer and winter. There are more than 15 species of fish in Last Mountain Lake, of which pickerel, perch and northern pike are the most important game species (Sask. D.N.R., 1961). The Saskatchewan Department of Natural Resources has periodically released large numbers of pickerel fry in the lake. Some of the finest sport fishing in the lake is to be found at the north end of Last Mountain Lake within the boundaries of the sanctuary.

Commercial fishing in the lake is limited to non-sport species such as buffalo fish and cisco. Each year approximately three quarters of a million pounds of these species are removed from Last Mountain Lake.

(c) Other: Because of the scarcity of good fresh water lakes in central Saskatchewan, Last Mountain Lake is heavily utilized for recreational purposes each summer. Swimming, boating, and picnicking facilities are located in various locations along the shores of Last Mountain Lake. The following is a list and description of the beaches

located in the sanctuary (Dzubin, 1957d):

Vances Beach: On west side of the lake, east and south of Imperial, Saskatchewan. Located on Crown land, used primarily by fishermen, a few picnickers and swimmers. Few buildings are evident.

Imperial Beach: On west side of the lake due east of Imperial, Saskatchewan. Undeveloped, located on Crown land and used mostly by fishermen and a few swimmers.

Lasher's Place: On east side of the lake. Private land, used only by fishermen.

Knutehaggens: On east side of the lake. Private land. Small beach and several boathouses but otherwise undeveloped.

Govan Fish and Game League Beach: Located on Crown land approximately 13 miles west of Govan, Saskatchewan, on the east side of the lake (Figure 15). Well developed: cottages, wharf, boathouses, bath houses, concession stand, ball park and beach.

Perry's Beach: On east side of the lake. Privately owned with a small beach and several cottages. Used mostly for boating and fishing.

10. Public Opinion

Interviews with the local residents of the area indicated that the majority of the people are aware of the protected status of Last Mountain Lake Bird Sanctuary. Public opinion is in favor of retaining the north end of the lake as a sanctuary. Depredation of grain crops by waterfowl was an extremely serious problem several years ago, and one of the high priority problem areas in the province. This has been largely alleviated in recent years by lure crops and scare device programs initiated by the Canadian Wildlife Service and the Saskatchewan Department of Natural Resources (Renewable Resources Consulting Services, 1970).

11. Posting and Enforcement

Our investigations of August 15, 1972 revealed that the Last Mountain Lake Bird Sanctuary was not posted as a federal bird sanctuary, but as a provincial game preserve. Apparently the sanctuary boundaries were being redescribed in 1972 and the appropriate posting of sanctuary signs was to take place in the near future (J. Hatfield, pers. comm.).

The sanctuary receives adequate enforcement from the Royal Canadian Mounted Police and the Saskatchewan Department of Natural Resources in Regina. In addition, the Canadian Wildlife Service maintains a field station on Last Mountain Lake with a resident project manager responsible for the administration of the area. The C.W.S. field station is located on the west shore of the lake (Figure 14).

The high waterfowl populations present on the sanctuary and the public utilization of the area in the summer result in some violations of the Migratory Bird Sanctuary Regulations. However, most people are aware of the protected status of the north end of Last Mountain Lake. A more serious problem appears to be disturbance of the island-nesting colonial bird species by boaters and fishermen.

12. Discussion

The Last Mountain Lake Bird Sanctuary contains prime waterfowl breeding, moulting and staging habitat. Heavy utilization of the area by waterfowl and many marsh species is evident. The islands are a refuge for numerous colonial nesting species.

The value of this sanctuary to migratory birds is matched by the attractiveness of the area to a large segment of the urban and rural population of central and southern Saskatchewan.

It appears that utilization of the Last Mountain Lake Bird Sanctuary by the migratory birds and the public are compatible. This sanctuary is one of the few in Saskatchewan which appears to be well maintained and controlled as a protected area.

13. Recommendations

It is recommended that the Last Mountain Lake Bird Sanctuary be retained as a sanctuary on the basis of its value to migratory birds and the public. Because of the high degree of public use of the sanctuary for recreational purposes it is imperative that, in the best interests of the migratory bird resource, the present strict control of the area by the Canadian Wildlife Service be continued.

The Last Mountain Lake Bird Sanctuary should be posted as a federal sanctuary during the 1973 field season.

14. Summary

(a) Last Mountain Lake Bird Sanctuary is a large, deep lake located in the grasslands of south-central Saskatchewan.

(b) The area was declared a federal bird sanctuary in 1887 and evaluated as such in 1917, 1948, 1949, 1957, 1971 and 1972.

(c) Last Mountain Lake has a total area of approximately 14 square miles, a maximum depth of 80 feet and an average depth of 20 feet. There are 25 miles of shoreline in the sanctuary.

(d) Total solids of the lake measure 2,550 p.p.m. and the pH varies from 8.2 to 9.0.

(e) Last Mountain Lake is surrounded by agricultural land, and the water area supports dense stands of emergent and submergent aquatic vegetation.

(f) Waterfowl use of the sanctuary is very heavy for breeding, moulting and staging activities.

(g) Colonial nesting species inhabit the islands and populations of most marsh species are high.

(h) The lake provides recreation in the form of hunting, fishing, boating, swimming and picnicking.

(i) The area is poorly posted as a federal sanctuary.

(j) The public are in favor of retaining the sanctuary as a protected area.

(k) Last Mountain Lake Bird Sanctuary should be retained as a sanctuary and posted during the 1973 field season.

1 inch = 1.18 miles

70

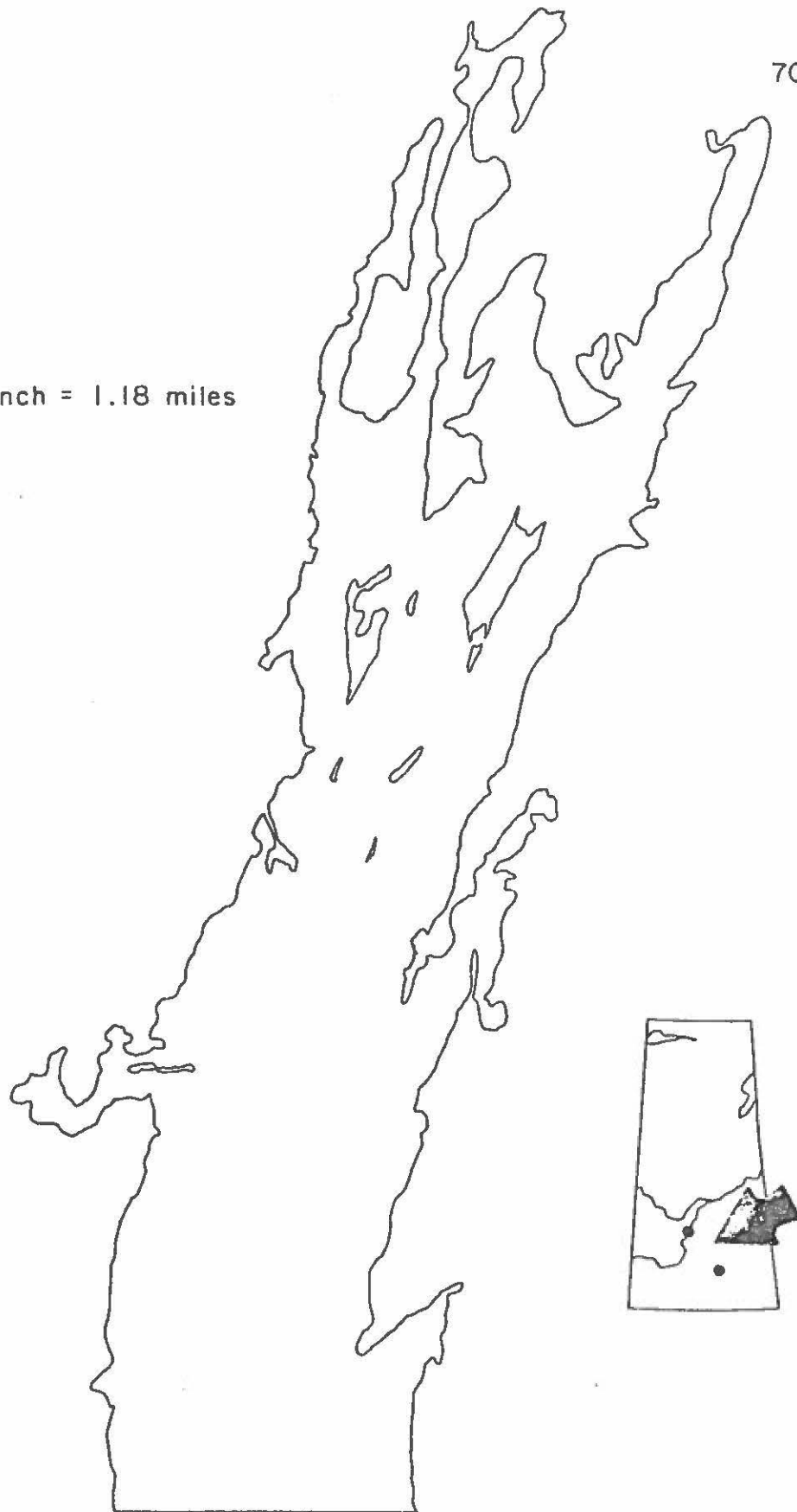


Figure 13. Last Mountain Lake Migratory Bird Sanctuary.

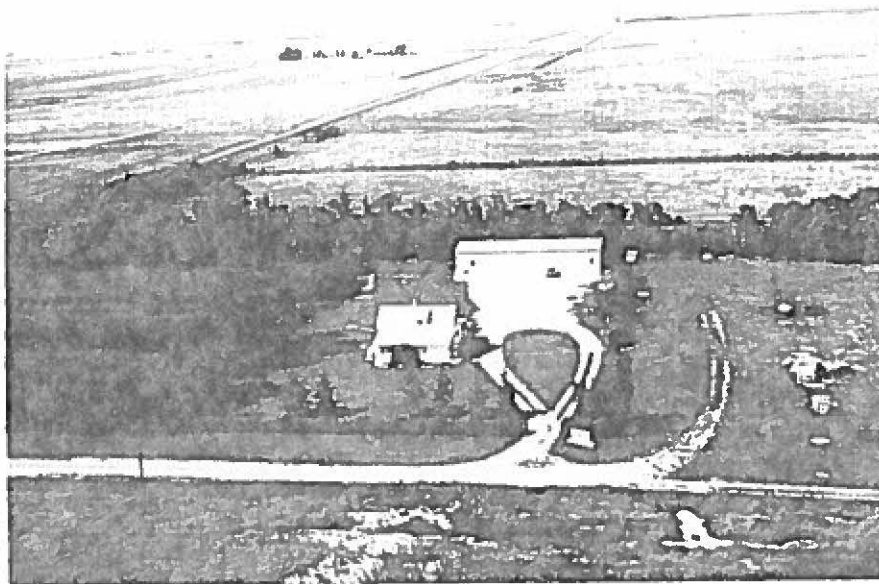


Figure 14. Canadian Wildlife Service field station, Last Mountain Lake Migratory Bird Sanctuary.



Figure 15. Public beach on the east shore of Last Mountain Lake.

VI. Lenore Lake Bird Sanctuary

1. Location

The Lenore Lake Bird Sanctuary is located approximately 15 miles north of Humboldt, Saskatchewan, east of Highway No. 20 between St. Brieux and Lake Lenore, Saskatchewan.

2. Legal Description

Comprising the lands covered by the waters from day to day of Lenore Lake, together with the unpatented islands therein, in Townships 40, 41 and 42, Range 21 and in Townships 40 and 41, Range 22, all west of the 2nd Meridian (The Canada Gazette, 1954).

3. Background Information

All vacant quarter sections immediately adjacent to Lenore Lake were reserved for future sanctuary purposes by the Minister of the Interior in 1915. An Order-in-Council passed in 1925 declared Lenore Lake as one of twelve migratory bird sanctuaries in Saskatchewan (Murray, 1966).

In 1917 and 1918, prior to becoming a sanctuary, Lenore Lake was evaluated as a wildlife area by Dr. R. M. Anderson, a zoologist for the Geological Survey and a member of the Advisory Board in Wildlife Protection. He felt that Lenore Lake qualified as good breeding habitat for waterfowl and that, if protected from hunters, would provide an excellent resting place for birds as settlement and increased hunting pressure occurred in future years.

In 1948, when several of the existing sanctuaries were discontinued because they were of no value to migratory birds during periods of drought, Lenore Lake was inspected. The sanctuary apparently fulfilled the requirements for which it was originally established and was retained on the protected list (Murray, 1966).

Further inspection was carried out in 1949-50 and it was recommended that the Lenore Lake Bird Sanctuary include only the water area of the lake. Prior to this, the protected area included all vacant quarter sections of land, as of 1915, immediately adjacent to the lake.

The Canadian Wildlife Service carried out an evaluation of the Lenore Lake Bird Sanctuary in 1957 to determine if the lake was still of value to migratory birds. Although the lake was not visited, a literature review and interviews with federal and provincial wildlife personnel were carried out. It was recommended that the sanctuary be retained and that 125 federal sanctuary signs be provided for posting the area (Gollop, 1957a). The basis for this recommendation was extensive use of Lenore Lake as a fall staging area by ducks and geese.

In 1971, the Canadian Wildlife Service once again questioned the status of the migratory bird sanctuaries in Saskatchewan. Although the area was not visited, Lenore Lake Bird Sanctuary was recognized as an important waterfowl fall staging area (Poston, 1971). No specific recommendations were made.

This report deals with the most recent evaluation of Lenore Lake Bird Sanctuary, carried out by the Canadian Wildlife Service in 1972. This investigation involved a thorough literature review on the area and an evaluation of the sanctuary by ground (July 13, 1972) and aerial (July 25, 1972) surveys.

4. General Description

The Lenore Lake Bird Sanctuary is one of a series of large lakes located in central Saskatchewan at the northern extremity of the aspen grove vegetation zone in the grassland and grove region of the province (Richards, 1969) (Figure 16).

Bedrock geological deposits are Cretaceous shales of the Riding Mountain formation. Soils of this region are primarily dark gray wooded to gray wooded podzols and the climate is classified as humid continental (Richards, 1969). The elevation of the area surrounding Lenore Lake varies from 1,200 to 1,800 feet above sea level.

Lenore Lake is almost entirely dependent upon spring runoff from numerous small creek channels in the area. The lake is therefore subject to severe water level fluctuations which correspond to spring runoff conditions and seasonal rains. There are several islands present on Lenore Lake depending upon water level conditions.

The surrounding terrain is rolling parkland broken by areas of cultivated land. Public access roads to the lake are numerous (14).

5. Physical Characteristics

(a) Area: The total surface area of Lenore Lake Bird Sanctuary is approximately 21,800 acres, depending upon seasonal water level fluctuations (Murray, 1966).

(b) Depth and Volume: The maximum recorded water depth of Lenore Lake is 21 feet and the average depth approximates 14 feet (Saskatchewan Fisheries and Wildlife Branch, 1973).

(c) Shoreline Type: There are 54 miles of shoreline on Lenore Lake at full basin capacity. Water levels usually recede during the summer months and expose a wide expanse of mudflat between the edge of the water and the shoreline vegetation. Relief between the water and upland terrain is minimal.

(d) Water Quality: During the 1972 survey it appeared that slight algal bloom was present in Lenore Lake. Total solids in the lake

measure approximately 8,000 p.p.m., with a pH of 8.4 (Saskatchewan Fisheries and Wildlife Branch, 1973).

6. Vegetation Characteristics

(a) Shoreline: The terrain around Lenore Lake is aspen parkland with small areas of cultivated land. Clumps of aspen (Populus tremuloides), willow (Salix spp.) and small stands of white spruce (Picea glauca) are present. Between the upland vegetation and the mudflat or water is a band (50-200 yards wide) of wet or dry meadow composed of sedges (Carex spp.) and associated grasses.

(b) Emergent Aquatics: Lenore Lake is a large, open body of water and the shorelines are subject to extensive wave action (Figure 17). Therefore, the greater part of the lake is void of emergent vegetation except in some protected areas. Good stands of bulrush (Scirpus spp.), cattail (Typha latifolia) and spangletop (Scolochloa festucacea) are present in the northeast and northwest arms of the lake and in the large bay on the southwest shore. The vegetation in these areas is dense enough to be useful as emergent cover for waterfowl. During high water levels, sedge (Carex spp.) exists as emergent vegetation in flooded wet meadows.

(c) Submergent Aquatics: There are some extensive beds of pondweeds (Potamogeton spp.) in Lenore Lake. However, submergent vegetation in Lenore Lake is sparse and restricted primarily to the shallow, protected bays of the lake and in association with the emergent vegetation where one would expect to find water crowfoot (Ranunculus spp.), hornwort (Ceratophyllum demersum), and water milfoil (Myriophyllum spp.).

7. Waterfowl Use

(a) Breeding and Moulting: Although Lenore Lake is primarily a large, deep open water body, the protected bays of the lake support a large number of waterfowl and production on this body of water is probably quite high. During the 1972 survey, over 5,000 ducks were observed on the lake, mostly mallards (Anas platyrhynchos), scaup (A. affinis), redheads (A. americana) and canvasbacks (A. valisineria). A large number of these ducks moulted on Lenore Lake as the deep water and emergent cover fulfill the moulting habitat requirements of a good number of species. Over 400 coots (Fulica americana) and 10 white-winged scoters (Melanitta deglandi) were also observed.

(b) Spring and Fall Staging: The Lenore Lake Bird Sanctuary is an important waterfowl fall staging area. Over 30,000 ducks (mostly mallards and assorted divers), 700 Canada geese (Branta canadensis) and 300 whistling swans (Olar columbianus) have been observed staging on the lake in the fall (Dzubin and Norum, 1971).

8. Other Migratory Birds

Pelicans (Pelecanus erythrorhynchos) have nested on the islands of Lenore Lake in past years. Two hundred were observed during the 1972 aerial survey although they were not breeding, probably due to low water levels which joined the islands to the mainland. Grebes (Aechmorrhous spp.), terns (Sterna spp.), herons (Ardea herodias), cormorants (Phalacrocorax aurites), gulls (Larus spp.) and assorted shore and marsh birds use Lenore Lake Bird Sanctuary regularly.

9. Public Utilization

(a) Hunting: The Lenore Lake Bird Sanctuary is one of several large lakes in central Saskatchewan which are heavily utilized as fall staging areas by ducks and geese. This lake, therefore, contributes substantially to waterfowl hunting in the nearby grain fields. Lenore Lake is regarded as one of the finest waterfowl hunting areas in the district.

(b) Fishing: The Saskatchewan Department of Natural Resources has stocked Lenore Lake with pickerel and whitefish fry nearly every year since 1955 and introductions have varied from 200,000 to 5 million fry annually. Fishing pressure has been relatively heavy in past years, most of it commercial. Sport fishing on Lenore Lake is a limited activity.

(c) Other: There is a small, undeveloped beach in the large southwest bay of Lenore Lake which is used by the local residents for swimming and boating (Figure 18). There are no other recreational facilities available on the lake.

10. Public Opinion

Interviews with the local residents of the Lenore Lake Bird Sanctuary indicated that very few are aware that the area is a federally protected sanctuary. Although a moderate amount of waterfowl crop depredation attributed to ducks and geese utilizing Lenore Lake as a fall staging area occurs annually, it is not regarded as a serious problem. All persons interviewed wanted the lake to be retained as a sanctuary, primarily because of its major contribution to the excellent waterfowl hunting in the area.

11. Posting and Enforcement

Our investigations in 1972 revealed only one federal migratory bird sanctuary sign evident on the entire lake.

The Humboldt, Saskatchewan detachment of the Royal Canadian Mounted Police and the Conservation Officer of the Saskatchewan Department of Natural Resources carry out regular game patrols around Lenore Lake during the hunting season. They report several incidents of hunting within the confines of the sanctuary, goose nest robbing, and disturbance of waterfowl by aircraft occurring each year (S. W. Korol, pers. comm.).

The R.C.M.P. and D.N.R. expressed concern for the inadequate posting of the lake as a sanctuary, and the lack of interest shown in the area by the Canadian Wildlife Service.

12. Discussion

The Lenore Lake Bird Sanctuary appears to be of prime importance to migratory waterfowl in providing the necessary habitat for breeding, moulting and fall staging. Other migratory bird species utilize this large lake throughout the breeding season. The size and depth of Lenore Lake indicate that this refuge could become particularly important during drought conditions with increased hunting pressure occurring on other lakes in the area.

Public utilization of the lake by local residents is limited to swimming, boating and fishing. There is potential for future development of the area despite the lack of a high urban or rural population in this part of the province.

Posting of the area as a federal bird sanctuary is obviously inadequate and a poor reflection on the Canadian Wildlife Service as its administrator. Lenore Lake Bird Sanctuary should be retained as a sanctuary and posted as soon as possible.

13. Recommendations

It is recommended that the Lenore Lake Bird Sanctuary be retained as a sanctuary on the basis of its importance to migratory waterfowl. Lenore Lake should be posted with federal sanctuary signs during the 1973 field season. Approximately 15 signs will be required for posting on all major access roads to the lake.

14. Summary

(a) Lenore Lake Bird Sanctuary is a large lake located in the parkland region of central Saskatchewan.

(b) The area was declared a federal bird sanctuary in 1925 and evaluated as such in 1917, 1948, 1949, 1957, 1971 and 1972.

(c) Lenore Lake has a total water surface area of 21,800 acres, a maximum depth of 21 feet and an average depth of 14 feet.

(d) The lake is saline, 8,000 p.p.m. with a pH of 8.4.

(e) Lenore Lake is surrounded by deciduous parkland and small areas of cultivated land. It is primarily an open water body with emergent and submergent aquatic vegetation limited to protected bays.

(f) Waterfowl use the sanctuary for breeding, moulting and fall staging activities.

(g) Pelicans, cormorants, grebes and assorted shoreline and marsh species utilize the lake regularly.

- (h) The sanctuary provides for a good deal of hunting and fishing.
- (i) The sanctuary is poorly posted.
- (j) The public are in favor of retaining the area as a sanctuary.
- (k) Lenore Lake Bird Sanctuary should be retained as a protected area and posted during the 1973 field season.



Figure 16. Lenore Lake Migratory Bird Sanctuary.

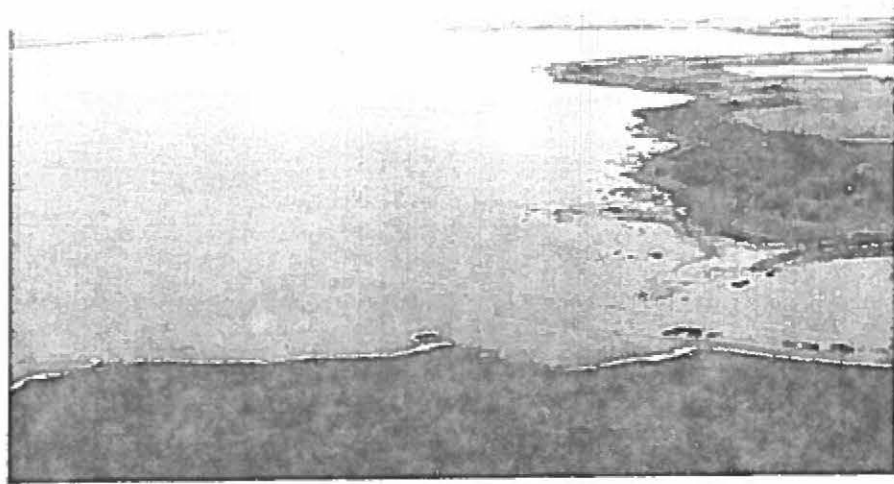


Figure 17. The west shore of Lenore Lake.



Figure 18. The small undeveloped beach on the southwest shore of Lenore Lake. Note the two boathouses in the background.

VII. Murray Lake Bird Sanctuary

1. Location

The Murray Lake Bird Sanctuary is located approximately 18 miles north of North Battleford, Saskatchewan, immediately east of Highway No. 4.

2. Legal Description

The following areas in Range 16, west of the 3rd Meridian. In Township 46, all that portion covered by the waters of Murray Lake, as said lake is shown on a plan of survey approved and confirmed by F. H. Peters, Surveyor General at Ottawa, the 5th of January 1928. And in Township 47, all that portion covered by the waters of Murray Lake, as said lake is shown on a plan of survey approved and confirmed by E. Deville, Surveyor General at Ottawa, the 28th of September 1918. In Township 46, Range 17, west of the 3rd Meridian, that portion covered by the waters of Murray Lake, as said lake is shown on a plan of survey, approved and confirmed by E. Deville, Surveyor General at Ottawa, the 19th of December 1916 (The Canada Gazette, 1954).

3. Background Information

In 1948, at the request of the Department of Agriculture, two officials, one federal and one provincial, inspected the migratory bird sanctuaries in Saskatchewan to determine which areas had become unsuitable as migratory bird refuges because of drought. Five bird sanctuaries were abolished following this investigation, and five new sanctuaries were established as replacements. One of the new sanctuaries was the Murray Lake Bird Sanctuary, created by an Order-in-Council on November 3, 1948 (Murray, 1966).

The Canadian Wildlife Service carried out an evaluation of the Murray Lake Bird Sanctuary in 1957. The sanctuary was visited in November and assessed with regard to the physical characteristics of the area and its utilization by migratory waterfowl and the public. Interviews with local landowners and conservation agency personnel were carried out. Murray Lake was found to be heavily used by waterfowl as a fall staging area and to be an important summer resort. It was recommended that the Murray Lake Bird Sanctuary be retained and 50 sanctuary signs be provided for posting (Gollop, 1957g).

In 1971, the Canadian Wildlife Service expressed an interest in the future of the area. Although the sanctuary was not visited, its value as a waterfowl fall staging area was recognized (Poston, 1971). No specific recommendations were given.

A comprehensive evaluation of the sanctuary was carried out by the Canadian Wildlife Service in 1972. Murray Lake Bird Sanctuary was investigated from the ground (August 17, 1972) and by aircraft (July 25, 1972). A thorough literature review was also carried out.

4. General Description

Murray Lake is a relatively large, deep lake located in west-central Saskatchewan (Figure 19). The sanctuary is situated in the aspen-spruce and fescue vegetation zones of Saskatchewan between the grassland and forest regions of the province (Richards, 1969).

Bedrock geological deposits are Cretaceous sedimentary rocks, sandstone and shale of the Bearpaw formation. Soils of this area are black chernozems and the climate is humid continental (Richards, 1969). The elevation of the area surrounding the lake varies from 1,200 to 1,800 feet above sea level.

Murray Lake has three major water sources. The Lost Horse Creek flows into the east end of the lake, and Crystal Creek enters from the south. The lake is also connected by a short canal to Jackfish Lake, a large body of water which lies immediately to the west of Murray Lake. Water level fluctuations on the lake are not severe. There is one large island on Murray Lake.

There are only limited areas of the surrounding terrain devoted to agricultural practices and most of the land is rolling aspen parkland (Figure 20). The Moosomin Indian Reserve (Indian Reserve No. 112B) borders the north shoreline of Murray Lake and the town of Cochin lies on the extreme western end of the lake. There are 9 major public access roads to the sanctuary.

5. Physical Characteristics

(a) Area: The total surface area of the Murray Lake Bird Sanctuary is approximately 2,880 acres of water at full basin capacity (Saskatchewan Fisheries and Wildlife Branch, 1973).

(b) Depth and Volume: The maximum recorded water depth of Murray Lake is 24 feet, and the average depth approximates 12 feet. The volume of water in Murray Lake at full basin capacity is approximately 4.2×10^7 cubic meters (Saskatchewan Fisheries and Wildlife Branch, 1973).

(c) Shoreline: There are 21 miles of shoreline on Murray Lake. In general, the shoreline is vegetated to the water's edge. Although there are no steep shorelines, the rolling nature of the terrain results in an appreciable amount of relief between the water and the upland.

(d) Water quality: Compared to many of the sanctuaries in Saskatchewan, the water of the Murray Lake Bird Sanctuary is relatively fresh. Total solid content is approximately 770 p.p.m. with a pH of 8.7 (Rawson and Moore, 1944).

6. Vegetation Characteristics

(a) Shoreline: The immediate shoreline of Murray Lake is vegetated with sedges (Carex spp.) and associated grasses. The upland vegetation is a parkland type with stands of aspen (Populus tremuloides) in a fescue (Festuca scabrella) grassland. Scattered patches of rose (Rosa spp.) and snowberry (Symphoricarpos spp.) are also present. In the ravines and low areas near the lake, dense deciduous growth supports stands of aspen, wild cherry (Prunus spp.) and saskatoon berry (Amelanchier alnifolia).

(b) Emergent Aquatics: Murray Lake is primarily open water, but stands of emergent aquatic vegetation grow on the deltas of Lost Horse and Crystal creeks. Extensive areas of bulrush (Scirpus spp.), cattail (Typha latifolia) and sedge are present here and where the canal from Jackfish Lake enters the sanctuary (Figure 22). On the extreme east end of the lake, in the vicinity of the large island, are large tracts of sedge meadow which exist as emergents under normal water level conditions. Small stands of bulrush and cattail grow near the island and in association with the sedge meadows previously described. Two other major stands of bulrush grow along the south shore. The north shore of the lake is void of emergent aquatic vegetation.

(c) Submergent Aquatics: Submergent aquatic vegetation is common in the Murray Lake Bird Sanctuary. Beds of pondweeds (Potamogeton spp.) are present in the deeper water. In the shallow bays and in association

with the emergent aquatics previously described, water milfoil (Myriophyllum spp.), hornwort (Ceratophyllum demersum), water crowfoot (Ranunculus spp.), and bladderwort (Utricularia vulgaris) may be found.

7. Waterfowl Use

(a) Breeding and Moulting: The Murray Lake Bird Sanctuary is not heavily used by waterfowl for breeding or moulting activities. There is ample habitat as described in (6), but it appears that high public recreational use of the lake is an inhibiting factor. Small numbers of dabblers and divers breed in the large marshy area at the east end of Murray Lake. Our 1972 aerial survey revealed approximately 50 ducks of a variety of species. Several broods were recorded.

(b) Spring and Fall Staging: Ducks and geese utilize the Murray Lake Bird Sanctuary as a staging area during the spring and fall. There is little human activity on the lake at this time which is probably a contributing factor. Concentrations of over 6,000 ducks have been recorded on Murray Lake in October (Dzubin and Norum, 1971). Use by geese is less extensive.

8. Other Migratory Birds

Pelicans (Pelecanus erythrorhynchos) use the Murray Lake Bird Sanctuary frequently, but do not breed there. Franklin's gulls (Larus pipixcan) have been recorded breeding on Murray Lake in past years but do not do so presently. Five species of gulls, three species of terns (Sterna and Chlidonias spp.) and a wide variety of marsh and shoreline birds have been observed in the area of the sanctuary (Belcher, 1972). The presence of Jackfish Lake contributes to the periodic use of Murray Lake by many of these species.

9. Public Utilization

(a) Hunting: Waterfowl hunters, primarily from North Battleford, make heavy use of Murray Lake during the hunting season. The ducks (mostly mallards (Anas platyrhynchos)) which stage on the lake during the fall contribute to some fine shooting in the area.

(b) Fishing: In the 1950's, the Saskatchewan Department of Natural Resources stocked Murray Lake with over 4 million pickerel fry. The lake is heavily fished by anglers for whitefish, cisco, suckers, pike, pickerel and perch. Indians are allowed to net fish on the lake and there is a commercial fishing franchise in effect for the sale of fish to tourists.

(c) Other: Murray Lake is an important summer resort and has been commercially developed as such. Boats enter the lake from Jackfish Lake when the latter is too wind-blown to be used. A large portion of the south shore of Murray Lake is developed with cottages and boat wharfs. There is one beach for swimming and numerous picnicking facilities are available around the lake.

10. Public Opinion

Interviews with landowners and tourists in the area of the Murray Lake Bird Sanctuary indicated that very few were aware that the lake is a sanctuary. However, all were in favor of Murray Lake being protected and several felt that more stringent controls should be put into effect on the lake, especially regarding the increasing commercial development. Proper posting of the lake as a sanctuary was suggested.

Crop depredation by waterfowl which use Murray Lake as a fall staging area does occur frequently but is not serious enough to be regarded as a major problem.

11. Posting and Enforcement

Our investigations on August 17, 1972 revealed that the Murray Lake Bird Sanctuary is poorly posted as a protected area. Only one federal migratory bird sanctuary sign was located.

The North Battleford detachment of the Royal Canadian Mounted Police and the Conservation Officer for the Saskatchewan Department of Natural Resources make regular game patrols on the Murray Lake Bird Sanctuary in the fall and sporadic checks during the summer and winter. They report frequent hunting and egg collecting occurring within the sanctuary boundaries (R. J. Stechly, K. A. Smith, pers. comm.). The main problem appears to be a general lack of knowledge regarding the protected status of the area. The R.C.M.P. and D.N.R. stressed that the sanctuary should be properly posted in the near future. Public use of the area is heavy and enforcement personnel are reluctant to enforce the Migratory Bird Sanctuary Regulations unless the lake is properly identified as a sanctuary.

12. Discussion

The Murray Lake Bird Sanctuary contains the necessary habitat to support a large number of migratory waterfowl. However, use of the lake by ducks and geese is restricted to fall staging activities as the recreational use of the lake during the breeding season restricts waterfowl production. As Murray Lake is an important summer resort, public utilization of the lake cannot and should not be discouraged. There are other favourable waterfowl breeding marshes in the area, and Murray Lake does serve as a staging area compatible with present public use.

The Murray Lake Bird Sanctuary should be properly posted as a protected area and retained as a sanctuary. With proper enforcement it is possible to protect the marshy areas and the island in the hope of promoting increased migratory bird use during the summer.

13. Recommendations

It is recommended that the Murray Lake Bird Sanctuary be retained as a protected area. The lake is an important fall staging area and, under proper management, could support a large breeding population of waterfowl and other marsh species.

Ten sanctuary signs should be provided for immediate posting. Because of the high degree of public utilization of the lake, several large introductory sanctuary signs should be erected where commercial development is extensive. These signs would be a fine form of advertisement for the Canadian Wildlife Service.

14. Summary

(a) The Murray Lake Bird Sanctuary is a large lake located in the rolling parklands of west-central Saskatchewan.

(b) The area was declared a federal bird sanctuary in 1948 and evaluated as such in 1957, 1971 and 1972.

(c) Murray Lake has a total surface area of 2,880 acres, a maximum depth of 24 feet, an average depth of 12 feet and an approximate volume of 4.2×10^7 cubic meters. There are 21 miles of shoreline.

(d) Total solid content of the water is 770 p.p.m. with a pH of 8.7.

(e) Murray Lake is surrounded by aspen parkland and contains large areas of emergent and submergent aquatic vegetation on the creek deltas.

(f) Waterfowl utilization of the sanctuary is confined primarily to fall staging activities.

(g) Various species of water and marsh birds are common on the lake.

(h) The sanctuary provides for a good deal of hunting, fishing and boating. It is an important summer resort.

(i) The sanctuary is poorly posted.

(j) The public are in favor of retaining the sanctuary as a protected area.

(k) The Murray Lake Bird Sanctuary should be retained as a protected area and posted during the 1973 field season.

1 inch = .55 mile



Figure 19. Murray Lake Migratory Bird Sanctuary.



Figure 20. An aerial view of Murray Lake Migratory Bird Sanctuary.

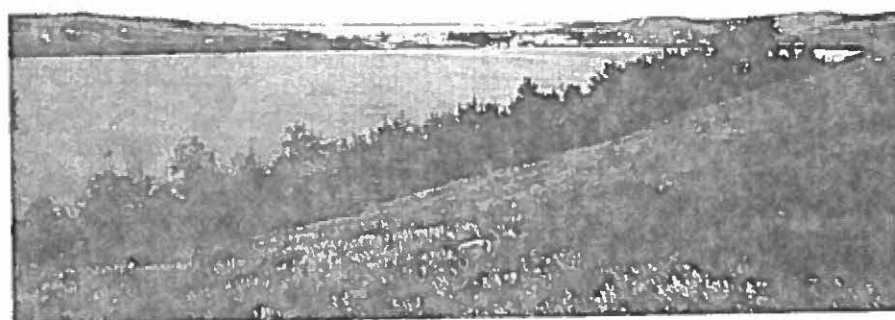


Figure 21. The northwest end of Murray Lake. Note Jackfish Lake and the town of Cochin, Saskatchewan in the background.

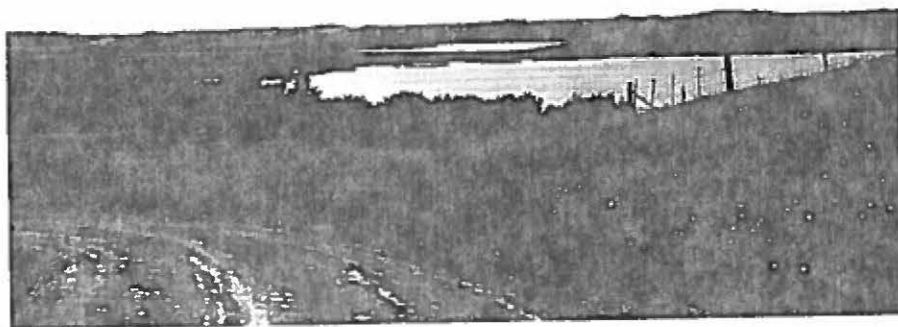


Figure 22. The marsh area of the Lost Horse Creek delta on the east end of Murray Lake.

VIII. Neely Lake Bird Sanctuary

1. Location

The Neely Lake Bird Sanctuary is located approximately 20 miles southwest of Hudson Bay, Saskatchewan, between Shand Creek and Akosane.

2. Legal Description

Comprising the lands covered by the waters from day to day of Neely Lake, together with the islands therein, in Township 43, Range 6, west of the 2nd Meridian (The Canada Gazette, 1954).

3. Background Information

Following an inspection of the migratory bird sanctuaries in Saskatchewan in 1949-50, it was decided that the Quill Lakes Bird Sanctuary be discontinued. Two replacements were established in 1950, one of these the Neely Lake Bird Sanctuary.

In 1957, the Canadian Wildlife Service carried out an evaluation of the Neely Lake Bird Sanctuary. Although the area was not visited, a complete literature review was made and interviews were conducted with conservation agency personnel familiar with the lake. It was recommended that the sanctuary, although reportedly a good breeding and fall staging lake for ducks and geese, be discontinued as a federal sanctuary since it was also protected as a provincial game preserve (Gollop, 1957f).

In 1960, personnel of the Canadian Wildlife Service visited Neely Lake. Although no recommendations were expressed regarding the future of the sanctuary, comments were made on the physical characteristics of the lake and its wildlife and public utilization (Stephen, 1960).

An investigation of the Neely Lake Bird Sanctuary was carried out again in 1971. The lake was recognized as an important waterfowl staging

area, but no specific recommendations were given (Poston, 1971).

This report presents the results of the most recent evaluation of the Neely Lake Bird Sanctuary carried out in 1972. Although it was not possible to visit the area on the ground, an aerial survey was conducted on July 25, 1972. A thorough literature review of the area was also carried out.

4. General Description

The Neely Lake Bird Sanctuary is a lake of moderate size and depth in east-central Saskatchewan (Figure 23). Neely Lake is located in the spruce-aspen-poplar and fen-patterned peatland vegetation zones of the forest region of Saskatchewan (Richards, 1969).

Bedrock geological deposits are chiefly Cretaceous shales of the Riding Mountain formation. Soils of this area are chernozems and podzols, mixed clayey and loamy, dark gray to gray wooded. The climate is classified as sub-arctic and the elevation of the area varies from 1,200 to 1,800 feet above sea level (Richards, 1969).

Tributaries of the Red Deer River and Shand Creek flow near Neely Lake and probably contribute to the lake's water supply as "ground water" via the bog and muskeg terrain separating these water courses from the lake. Seasonal water level fluctuations in the lake are minimal.

The Neely Lake Bird Sanctuary is not in an area highly regarded for agriculture. There are only scattered areas of cultivated land in this relatively isolated part of Saskatchewan. Access to the lake is limited to one road which leads to the west shoreline of the lake. This trail is usually impassable during wet seasons (Stephen, 1960).

5. Physical Characteristics

(a) Area: The total surface area of the Neely Lake Bird Sanctuary is approximately 2,000 acres at full basin capacity (Murray, 1966).

(b) Depth and Volume: Although no data are available on the depth of Neely Lake, the basin is shallow with a maximum depth probably not in excess of 4 feet.

(c) Shoreline Type: There are approximately 9 miles of shoreline on Neely Lake. The shoreline is vegetated to the water's edge and has very little relief between the water and upland vegetation.

(d) Water Quality: No data available.

6. Vegetation Characteristics

(a) Shoreline: The terrain surrounding the Neely Lake Bird Sanctuary is dominated by aspen (Populus tremuloides), balsam poplar (P. balsamifera), and black spruce (Picea mariana). Near the edge of the lake, dense stands of willow (Salix spp.) are present. The vegetation on the immediate shoreline appears to be mainly sedges (Carex spp.) and associated wet meadow species. The terrain near Neely Lake could be expected to support fen and patterned peatland bog species such as Labrador tea (Ledum groenlandicum), leatherleaf (Chamaedaphne calyculata), sheep-laurel (Kalmia polifolia), and various sedges and mosses.

(b) Emergent Aquatics: The shallow, protected nature of Neely Lake encourages the growth of emergent aquatic vegetation. Sedges exist as emergents over a large part of the lake and a band (250 feet wide) of cattail (Typha latifolia), bulrush (Scirpus spp.) and spangletop (Scolochloa festucacea) borders the entire lake (Figure 24). Larger stands of bulrush, cattail and spangletop exist on the north and south

shorelines of Neely Lake. There are numerous "patches" of these emergents scattered throughout the middle of the lake.

(c) Submergent Aquatics: A ground check was not carried out during the investigation of the Neely Lake Bird Sanctuary and it is assumed that due to the shallow nature of the lake, an abundant supply of submergent vegetation exists in association with the emergent aquatic growth previously described.

7. Waterfowl Use

(a) Breeding and Moulting: The Neely Lake Bird Sanctuary provides habitat conducive to the production of waterfowl, particularly diving ducks. Two pairs of Canada geese have been reported breeding on the lake in recent years and during the 1972 aerial survey nearly 300 ducks were observed, mostly canvasback (Aythya valisineria), scaup (A. affinis) and assorted dabblers.

(b) Spring and Fall Staging: Although no fall waterfowl aerial survey data are available, Neely Lake is reportedly an important fall staging area for Canada geese.

8. Other Migratory Birds

Shorebirds are not attracted to the Neely Lake Bird Sanctuary, probably due to the absence of mudflats or sandbars on the lake. A small colony of black terns (Chlidonias nigra) are believed to breed on the lake and gulls (Larus spp.) visit the area periodically.

9. Public Utilization

(a) Hunting: Hunting pressure on migratory waterfowl originating from Neely Lake Bird Sanctuary in the fall is light. Canada geese and mallards are taken in a few agricultural areas adjacent to the lake as the birds forage out to feed.

(b) Fishing: None. Neely Lake is too shallow to support a fish population.

(c) Other: None.

10. Public Opinion

No interviews were carried out with residents of the sanctuary area during this evaluation.

11. Posting and Enforcement.

Since a ground check of the sanctuary was not carried out during this sanctuary evaluation, comments cannot be made regarding the posting of Neely Lake Bird Sanctuary. However, 4 Canadian Wildlife Service migratory bird sanctuary signs were erected in 1960 (Stephen, 1960). At this time, 2 Provincial Game Preserve signs were also present.

The Royal Canadian Mounted Police detachment at Porcupine Plain, Saskatchewan is responsible for the area including the Neely Lake Bird Sanctuary. However, the R.C.M.P. were not aware that this lake is a federal bird sanctuary, and no patrols were made in the area to enforce the Migratory Birds Sanctuary Regulations.

12. Discussion

The Neely Lake Bird Sanctuary supports a large breeding population of ducks, mostly divers, and is utilized as a fall staging area by Canada geese (Branta canadensis). Public use of the lake is almost nil, with the exception of light hunting pressure.

Neely Lake, if maintained as a federal sanctuary, would require a minimum of maintenance and surveillance due to its isolated location, limited access roads, and small rural and urban population. The Neely Lake Bird Sanctuary is unique among the sanctuaries of Saskatchewan with respect to its location within the province and the type of habitat it supports.

13. Recommendations

It is recommended that the Neely Lake Bird Sanctuary be retained as a protected area since this lake supports a high breeding population of waterfowl and would require a minimum of maintenance. Retaining the area as a sanctuary will not cause any adverse public reaction and will ensure that there is at least one federal sanctuary in Saskatchewan located in bog-peatland habitat.

The Neely Lake Bird Sanctuary should be posted with 4 or 5 migratory bird sanctuary signs during the 1973 field season. The Porcupine Plain detachment of the Royal Canadian Mounted Police should be advised of the status of this area and asked to make routine periodic patrols of the lake.

14. Summary

(a) Neely Lake Bird Sanctuary is a medium size, shallow lake located in the forested region of east-central Saskatchewan.

(b) The area was declared a federal bird sanctuary in 1950, and evaluated as such in 1957, 1960, 1971 and 1972.

(c) Neely Lake has a total surface area of 2,000 acres. There are approximately 9 miles of shoreline on the lake.

(d) Neely Lake has abundant aquatic submergent and emergent vegetation and is surrounded by a bog-peatland type of habitat.

(e) Waterfowl use of the sanctuary is confined primarily to breeding activities, although small numbers of ducks and geese stage on the lake in the fall.

(f) Neely Lake provides a limited amount of recreation to local residents in the form of waterfowl hunting.

(g) Neely Lake Bird Sanctuary should be retained as a protected area and posted as such.

1 inch = .34 mile

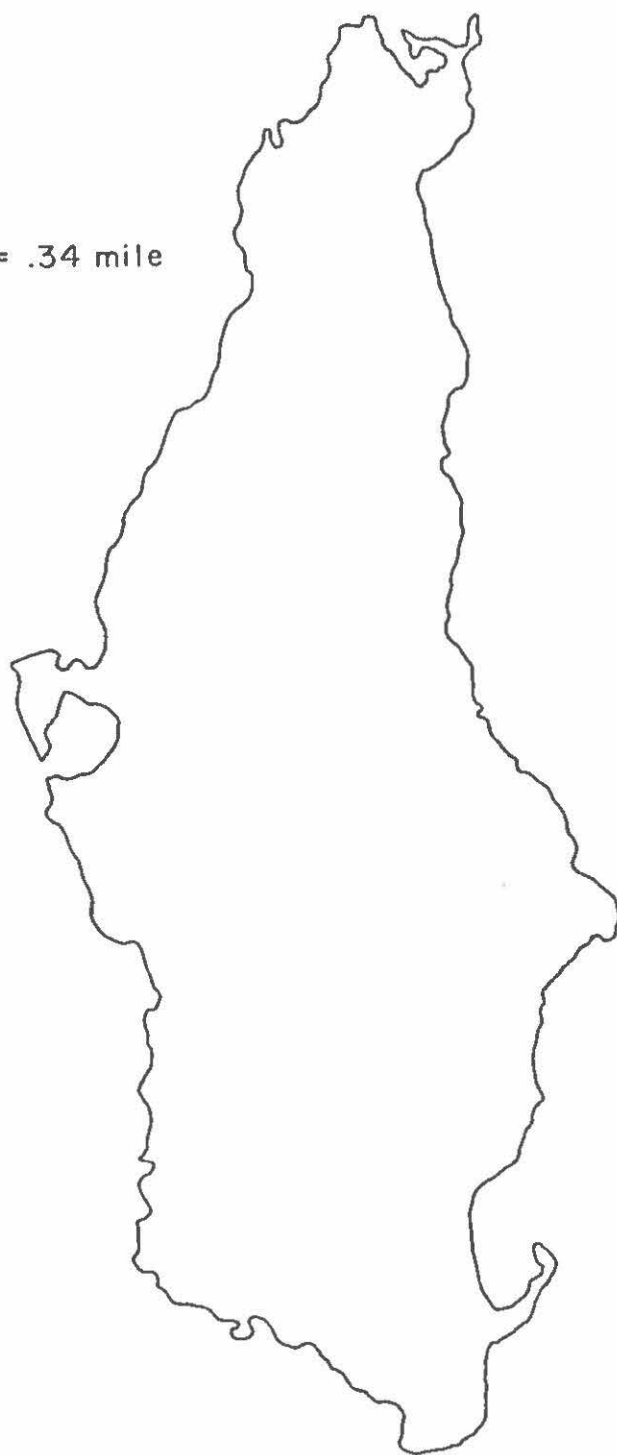


Figure 23. Neely Lake Migratory Bird Sanctuary.

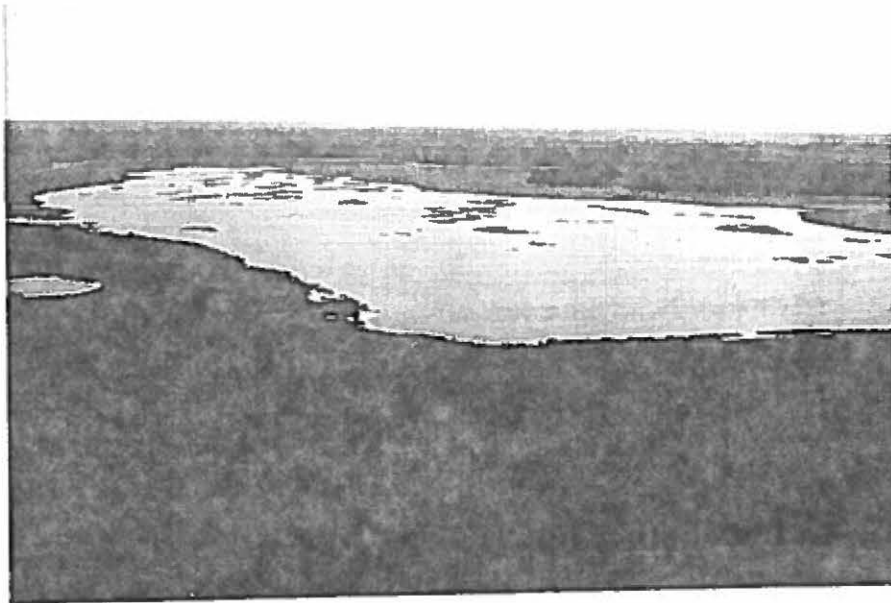


Figure 24. An aerial view of Neely Lake Migratory Bird Sanctuary.

IX. Opuntia Lake Bird Sanctuary

1. Location

The Opuntia Lake Bird Sanctuary is located approximately 25 miles southeast of Kerrobert, Saskatchewan, between Stranraer and Ava.

2. Legal Description

Comprising the lands covered by the waters from day to day of Opuntia Lake, together with the islands therein, in Townships 32 and 33, Range 18, and Townships 32 and 33, Range 19, all west of the 3rd Meridian (The Canada Gazette, 1954).

3. Background Information

Opuntia Lake was established as a migratory bird sanctuary by an Order-in-Council in 1950. Opuntia Lake Bird Sanctuary was one of two replacements for the Quill Lakes Bird Sanctuary which was abolished the same year (Murray, 1966).

The Canadian Wildlife Service carried out an evaluation of the Opuntia Lake Bird Sanctuary in 1957. Due to the importance of this water body as a waterfowl fall staging area and the large amount of public use, it was recommended that the sanctuary be retained and posted accordingly (Dzubin, 1957c).

It was also suggested that the federal government encourage and assist the Board of Trade in Plenty, Saskatchewan in the further development of the beach and recreational facilities on Opuntia Lake. As an alternative, it was noted that the lake was protected as a Provincial Game Preserve and could be abolished as a sanctuary.

In 1971, when the status of this area was questioned, the Canadian Wildlife Service once again recognized the value of the lake

as a fall staging area for waterfowl. Although no specific recommendations were given, it was felt that Opuntia Lake received adequate protection during the hunting season by the 500 yard shooting restriction imposed on this water body by the Saskatchewan Department of Natural Resources (Poston, 1971).

The Canadian Wildlife Service carried out a complete evaluation of the Opuntia Lake Bird Sanctuary in 1972. Opuntia Lake was investigated from the ground (July 12, 1972) and by aircraft (July 26, 1972). In addition, a literature review on the area was carried out.

4. General Description

The Opuntia Lake Bird Sanctuary is a relatively large, shallow lake located in southwestern Saskatchewan (Figure 25). The lake is situated in the wheat grass-June grass vegetation zone of the grassland and grove region of the province (Richards, 1969).

Bedrock geological deposits are Cretaceous sedimentary rocks, sandstone and shales of the Bearpaw formation. Soils of this area are dark brown chernozems of silty to heavy clays. The climate is sub-humid continental and the elevation of the terrain surrounding the lake varies from 1,800 to 2,400 feet above sea level (Richards, 1969).

Opuntia Lake is formed by a P.F.R.A. dam on Eagle Creek. The dam is located at the south end of the lake and most of the water contributed to this reservoir results from spring runoff and seasonal rains. Consequently, the water levels of Opuntia Lake are subject to severe fluctuations and usually decrease steadily throughout the summer. Prior to construction of the dam, the lake dried up completely on occasion. There are no islands in Opuntia Lake.

The Opuntia Lake Bird Sanctuary lies in an area devoted primarily to agriculture, although the terrain immediately adjacent to the lake is grassland (Figure 26). There are ten public access roads to the lake.

5. Physical Characteristics

(a) Area: The total surface area of the Opuntia Lake Bird Sanctuary is approximately 3,450 acres at full basin capacity (Canada Department of Regional and Economic Expansion, 1973).

(b) Depth and Volume: The maximum water depth of Opuntia Lake is approximately 5 feet, with an average depth of 4 feet (Saskatchewan Fisheries and Wildlife Branch, 1973). At full basin capacity, the reservoir contains 17,000 acre feet of water (Canada Dept. of Regional and Economic Expansion).

(c) Shoreline Type: There are approximately 18 miles of shoreline on Opuntia Lake. The east shoreline is composed of high, steep clay banks, very rocky in some locations with small areas of sand. The west shore has less relief and few rocky areas.

(d) Water Quality: The water of Opuntia Lake appears quite turbid. Blue-green algal blooms in the lake occur infrequently (Dzubin, 1957c). The water has a total solid content of approximately 3,570 p.p.m. and a measured pH of 9.1 (Saskatchewan Fisheries and Wildlife Branch, 1973).

6. Vegetation Characteristics

(a) Shoreline: Vegetation on the immediate shoreline is sparse or non-existent, particularly on the rocky and steep east shoreline. Where relief is more moderate, a few sedges (Carex spp.) and associated grasses are present between the edge of the water and the upland terrain.

Vegetation beyond this zone is grassland with wheat grass (Agropyron dasystachyum) and June grass (Koeleria cristata) the indicator species. Scattered stands of rose (Rosa spp.), and snowberry (Symphoricarpos spp.) are also present in association with the prairie vegetation.

(b) Emergent Aquatics: The large size of Opuntia Lake subjects the shorelines to extensive wave action, a condition not conducive to the growth of emergent vegetation. The largest area of emergent aquatics is on the extreme southeast corner of the lake where 10 to 25 acres of bulrush (Scirpus spp.) and sedge were present in 1972. The north end of Opuntia Lake contains a large, shallow mudflat area (the "delta" of Eagle Creek) which supports sedge as an emergent during high water levels. There are three small patches of bulrush and emergent sedge on the west shore in the vicinity of the old picnic site about halfway down the shoreline. For the most part, Opuntia Lake is a large, open water body.

(c) Submergent Aquatics: Submergent aquatic vegetation in Opuntia Lake is limited to beds of pondweeds (Potamogeton spp.) in the deep water at the extreme north end and in the south one-third of the lake. Stands of water milfoil (Myriophyllum spp.), hornwort (Ceratophyllum demersum) and water crowfoot (Ranunculus spp.) grow in association with the areas of emergent aquatic vegetation previously described.

7. Waterfowl Use

(a) Breeding and Moulting: Opuntia Lake Bird Sanctuary supports a small number of assorted dabbling and diving ducks during the breeding season. Production is limited, probably due in part to the lack of aquatic vegetation. The lake is used by small numbers of divers (mostly lesser scaup (Aythya affinis)) during the moulting season.

(b) Spring and Fall Staging: Opuntia Lake is an important spring and fall staging area for large numbers of geese (Canada (Branta canadensis), white-fronted (Anser albifrons), Ross' (Chen rossi), and snow (Chen hyperborea)) and good concentrations of ducks, mostly mallards (Anas platyrhynchos), pintails (A. acuta) and assorted divers. Fall aerial surveys carried out by the Canadian Wildlife Service have revealed maximum concentrations of 15,000 to 20,000 geese, up to 30,000 ducks, 2,000 sandhill cranes (Grus canadensis) and 500 whistling swans (Olar columbianus) on Opuntia Lake Bird Sanctuary (Dzubin and Norum, 1971).

8. Other Migratory Birds

The progressive decline of water levels in Opuntia Lake during a normal summer results in the formation of extensive areas of mudflat on the north and south ends of the lake. These areas are used by a variety of shorebirds. Gulls (Larus spp.) occasionally visit the sanctuary area, but do not breed there.

9. Public Utilization

(a) Hunting: Opuntia Lake provides duck and goose hunting for a large number of resident and non-resident hunters. This lake is situated in one of the most important goose fall staging areas in North America and contributes to excellent waterfowl hunting in stubble fields adjacent to the lake.

(b) Fishing: Full grown yellow perch were introduced into Opuntia Lake in 1952, 450 perch fry were introduced in 1953, and in 1968, 1,000,000 pickerel fry were released by the Saskatchewan Department of Natural Resources (Saskatchewan D.N.R., 1952, 1953, and 1968). However, few fish have been caught in the lake in recent years. It is thought

that perhaps reduced water levels and the consequent increased alkalinity have proved fatal to the fish population.

(c) Other: Up until 1968, Opuntia Lake was heavily used by the local residents for boating and swimming. The Board of Trade of Plenty, Saskatchewan owns 65 acres of shoreline on the west-central portion of the lake and in the 1950's constructed recreational facilities including boat and bath houses, a wharf, a ballpark and picnic tables. Recreational use of Opuntia Lake was heavy at this time as there are few large suitable water bodies in the district. However, in recent years local interest in the area has been minimal and the recreational facilities have not been maintained (Figure 27). Fluctuating water levels and the alkalinity and turbidity of the water have contributed to the desertion of Opuntia Lake as a recreational area.

10. Public Opinion

All of the local residents interviewed were aware that the area is protected, but only as a 500 yard restricted water body during the waterfowl hunting season. Very few people were aware that Opuntia Lake is also a federal migratory bird sanctuary.

All persons interviewed expressed a strong desire that the lake remain as a sanctuary and be adequately posted. They felt that the excellent goose hunting available in the district could be directly attributed to the protected status of Opuntia Lake which retains waterfowl in the area.

Waterfowl depredation on cereal crops in the area is moderate to severe in some fields adjacent to the water.

11. Posting and Enforcement

The Opuntia Lake Bird Sanctuary is not posted as a federal migratory bird sanctuary. The area is posted by the Saskatchewan Department of Natural Resources as a restricted water body (no hunting within 500 yards of the water) during part of the waterfowl hunting season.

The Kerrobert, Saskatchewan detachment of the Royal Canadian Mounted Police makes periodic patrols of the Opuntia Lake Bird Sanctuary during the fall waterfowl hunting season. The R.C.M.P. report few problems but have noted that the local residents would prefer better enforcement on this water body (R. J. Prest, pers. comm.).

The Kindersley office of the Saskatchewan Department of Natural Resources has two enforcement officers working in the Opuntia Lake area every fall during the hunting season. During the rest of the year, routine patrols are made. The D.N.R. reports that several incidents of hunters shooting within the boundaries of the sanctuary occur every year. It is recommended that the Canadian Wildlife Service post the area as a federal sanctuary as most of the problems are due to non-residents unaware of the status of the area (K. W. Melnychuk, pers. comm.).

12. Discussion

The Opuntia Lake Bird Sanctuary is of limited value as a recreational area and does not support a high population of breeding and moulting waterfowl. The lake is, however, strategically situated in the major goose fall staging area of western Canada, and is very important as such. Thousands of white-fronted, Canada, snow and Ross' geese stage on Opuntia Lake each fall. This lake is particularly important since

it is the only large lake located in an area susceptible to severe droughts. Since the dam was built it is unlikely that Opuntia Lake will ever go dry.

Although Opuntia Lake is a federal migratory bird sanctuary, it is not posted. It has substantial value as a sanctuary and public opinion is in favor of the lake being protected.

13. Recommendations

It is recommended that the Opuntia Lake Bird Sanctuary be retained as a federal migratory bird sanctuary on the basis of its importance to migrating waterfowl populations. It is of paramount importance that there be a protected lake in this area to act as a refuge for staging geese since hunting pressure in southwestern Saskatchewan is extremely high.

Opuntia Lake should be posted with at least ten migratory bird sanctuary signs during the 1973 field season.

14. Summary

(a) Opuntia Lake is a large, shallow lake in the grassland of southwestern Saskatchewan.

(b) The area was declared a federal bird sanctuary in 1950 and was evaluated as such in 1957, 1971 and 1972.

(c) Opuntia Lake has a surface area of approximately 3,450 acres, a capacity of 17,000 acre feet of water, and maximum and mean water depths of 5 and 4 feet, respectively, at full basin capacity.

(d) The water has a total solid content of 3,570 p.p.m. and a measured pH of 9.1.

(e) Opuntia Lake is in an agricultural area and supports limited stands of emergent and submergent aquatic vegetation.

(f) Waterfowl use of the sanctuary is confined primarily to fall staging activities.

(g) The sanctuary provides excellent waterfowl hunting, but has little other recreational potential.

(h) Opuntia Lake Bird Sanctuary is poorly posted as a federal sanctuary.

(i) The public are in favor of retaining the sanctuary as a protected area.

(j) Opuntia Lake Bird Sanctuary should be retained as a protected area and posted during the 1973 field season.

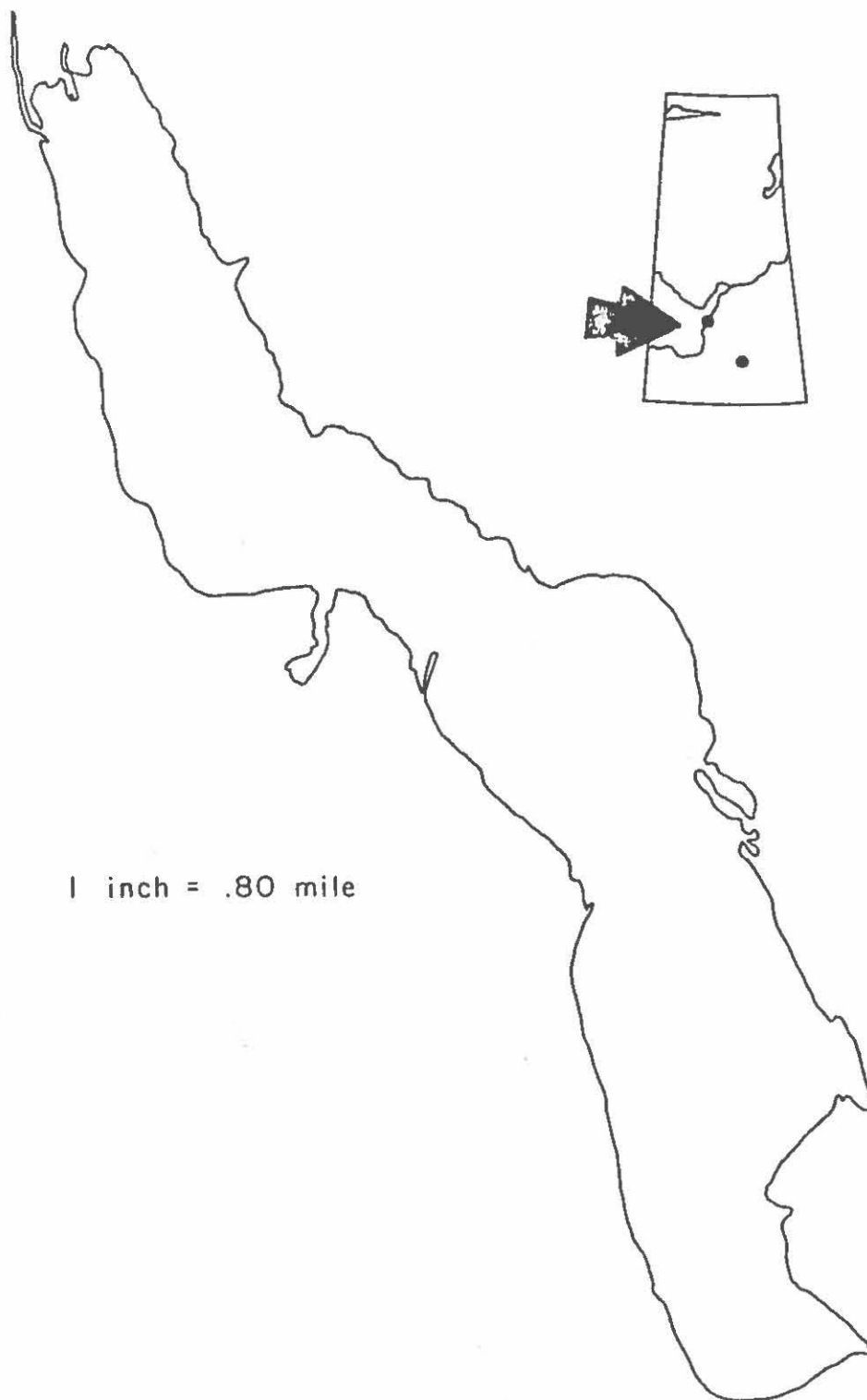


Figure 25. Opuntia Lake Migratory Bird Sanctuary.

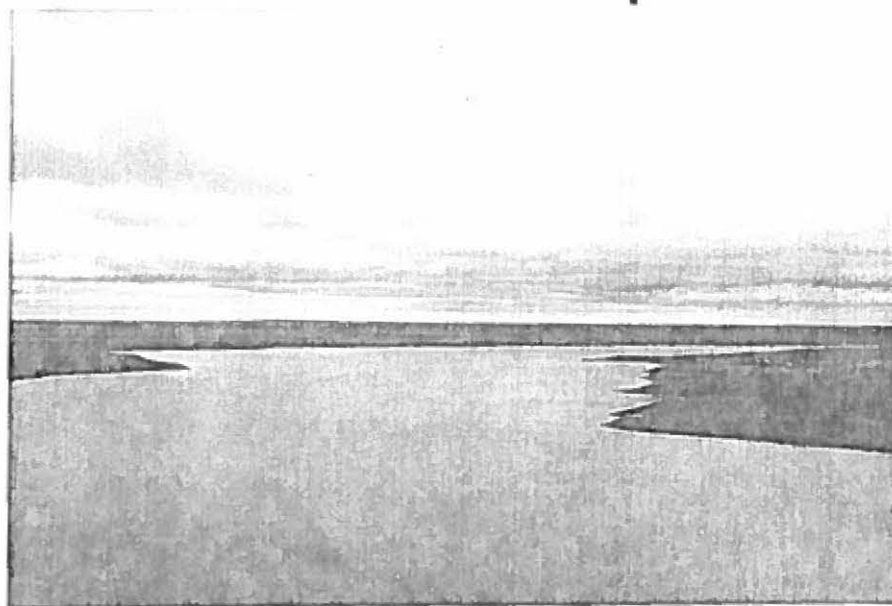


Figure 26. An aerial view of Opuntia Lake Migratory Bird Sanctuary.

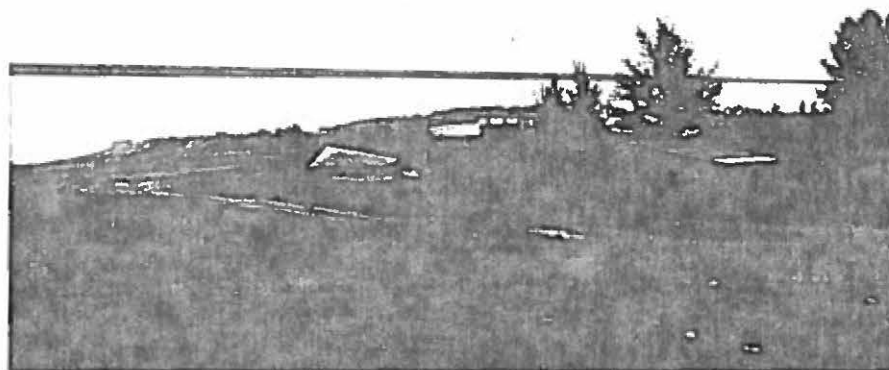


Figure 27. A deserted recreational area on the west-central shore of Opuntia Lake. The turbid, alkaline water make this water body unattractive as a summer resort.

X. Redberry Lake Bird Sanctuary

1. Location

The Redberry Lake Bird Sanctuary is located approximately 35 miles northwest of Saskatoon, Saskatchewan, south of Highway #40 between Hafford and Krydor, Saskatchewan.

2. Legal Description

Comprising the lands covered by the waters from day to day of Redberry Lake, together with the island therein, in Townships 42, 43 and 44, Range 8, and in Townships 42 and 43, Range 9, all west of the 3rd Meridian (The Canada Gazette, 1954).

3. Background Information

All vacant quarter sections immediately adjacent to Redberry Lake were reserved for future sanctuary purposes on May 18, 1915 by the Minister of the Interior during negotiations on the Migratory Birds Convention Act (Murray, 1966).

In 1917 and 1918, prior to being formally declared a sanctuary, Redberry Lake was investigated and evaluated by Dr. R. M. Anderson of the Geological Survey and a member of the Advisory Board in Wildlife Protection. It was noted that Redberry Lake was of considerable value to migratory birds and was recommended that the formerly preserved area including the islands on the lake be protected as a federal sanctuary. Redberry Lake was one of twelve bird sanctuaries established in Saskatchewan by an Order-in-Council in 1925 (Murray, 1966).

In 1948, at the request of the Department of Agriculture, two officials of the federal and provincial governments inspected Redberry Lake to determine if drought had made the area unsuitable for the purposes

for which it was originally established. Redberry Lake was considered to still be of value to migratory birds and was retained as a sanctuary.

A further inspection of Redberry Lake Bird Sanctuary occurred in 1949-50, and it was recommended and approved that the boundary of the sanctuary be revised to include only the water area of the lake. Prior to this, the protected area also included all vacant quarter sections of land adjacent to the lake.

The Canadian Wildlife Service carried out an evaluation of the sanctuary in 1957, to determine if the area still conformed to the basic requirements of a sanctuary. The lake was visited and evaluated with regard to migratory bird use and public recreational potential. Redberry Lake was recognized to be of considerable value as a waterfowl staging area, a breeding area for several species of colonial birds, and to have excellent recreational potential. It was recommended, therefore, that the lake remain protected but that this was being achieved since Redberry Lake was also a Provincial Game Preserve (Gollop, 1957e).

The Canadian Wildlife Service carried out a further investigation of the Redberry Lake Bird Sanctuary in 1964, following numerous complaints from the Saskatoon Natural History Society and various individuals regarding the molestation of migratory birds. Of particular concern was the disturbance by boaters of the colonial species nesting on the islands of Redberry Lake. The C.W.S. recommended that the boundaries of the lake and the islands be well posted with federal bird sanctuary signs (Stephen and Hatfield, 1964).

In 1971, the Canadian Wildlife Service carried out a preliminary evaluation of the migratory bird sanctuaries in Saskatchewan. Although

the area was not visited, background information revealed that the Redberry Lake Bird Sanctuary was of considerable value to colonial birds and migratory waterfowl and should be retained as a federal sanctuary (Poston, 1971).

The most recent evaluation of the Redberry Lake Bird Sanctuary occurred in 1972. The lake was investigated by aerial (July 25, 1972) and ground (August 18, 1972) surveys to determine the physical characteristics of the lake and the importance of the area to migratory birds and the public.

4. General Description

The Redberry Lake Bird Sanctuary is a large, relatively deep lake in west-central Saskatchewan (Figure 28). This water body is located in the aspen-spruce and fescue vegetation zones of the province, between the grassland and forest regions (Richards, 1969).

Bedrock geological deposits are Cretaceous sedimentary rocks, sandstone and shale of the Bearpaw formation. Soils of this region are black chernozems. The climate is humid continental and the elevation of the area surrounding the lake varies from 1,200 to 1,800 feet above sea level (Richards, 1969).

Redberry Lake has one major creek entering the lake at the south end (Marshy Creek). Water level fluctuations are not severe, although there has reportedly been a slow decline in the water level regime over the past fifteen years (Renaud, 1972). There are presently four islands in the lake, although this number may change if water levels continue to decline.

There is extensive agricultural activity near the Redberry Lake Bird Sanctuary, but most of the cultivated land is located a considerable

distance from the shoreline. There are six public access roads to Redberry Lake.

5. Physical Characteristics

(a) Area: The total surface area of Redberry Lake is approximately 15,800 acres at full basin capacity (Saskatchewan Fisheries and Wildlife Branch, 1973).

(b) Depth and Volume: The maximum and average water depths of Redberry Lake are 85 and 45 feet, respectively. At full capacity there are approximately 686,000 acre feet of water contained in the basin (Saskatchewan Fisheries and Wildlife Branch, 1973).

(c) Shoreline Type: There are approximately 36 miles of shoreline on Redberry Lake. Most of the shoreline has little relief and for the most part is very sandy with intermittent areas of gravel, rocks and boulders. The islands are similar. The immediate shorelines are sparsely vegetated.

(d) Water Quality: From the air, the water appears to be very clear. Algal blooms in the lake have not been reported. The water is very saline with a total solid content of 14,200 p.p.m. and a measured pH of 8.7 (Saskatchewan Fisheries and Wildlife Branch, 1973).

6. Vegetation Characteristics

(a) Shoreline: The rocky and sandy shoreline of Redberry Lake is essentially void of vegetation with the exception of scattered clumps of sedge (Carex spp.) and associated grasses. The upland vegetation is a characteristic parkland type, mostly aspen (Populus tremuloides) and scattered clumps of willow (Salix spp.). Ground cover is primarily grasses such as fescue (Festuca scabrella) and associated species

including snowberry (Symphoricarpos spp.) and rose (Rosa spp.).

The island vegetation, as described by Renaud (1972), is composed of tall grasses, snowberry, rose, and gooseberry (Ribes stenosum). Recently exposed areas have a heavy growth of lamb's quarter's (Chenopodium album), Canada thistle (Cirsium arvense), flixweed (Descurainia sophia), common burdock (Arctium minus) and sow thistle (Sonchus arvense). The largest island has some aspen and willow growth as well.

(b) Emergent Aquatics: Extensive wave action on Redberry Lake probably limits the growth of emergent aquatic vegetation. The large bay in the southwest corner of the lake supports a large stand of bulrush (Scirpus spp.), cattail (Typha latifolia) and emergent sedges in a shallow, protected marsh area. A small stand of bulrush along the west shore and emergent sedges scattered around the periphery of the lake complete the emergent flora of Redberry Lake. There is little emergent vegetation associated with the islands.

(c) Submergent Aquatics: Submergent aquatic vegetation in Redberry Lake is limited to beds of pondweeds (Potamogeton spp.) in the deep water, and the expected submergents include water milfoil (Myriophyllum spp.), hornwort (Ceratophyllum demersum) and water crowfoot (Ranunculus spp.) in association with the emergent aquatic vegetation previously discussed. Most of Redberry Lake is open, clear water with a fine sandy bottom void of vegetation.

7. Waterfowl Use

(a) Breeding and Moulting: Canada geese occasionally breed on Redberry Lake, but not in excess of four pairs. During the 1972 survey, approximately 500 ducks were observed confined primarily to the south

end of Redberry Lake near the marsh area described in (6). Production of waterfowl on the lake is not high due to limited habitat. The sanctuary is not an important moulting area.

(b) Spring and Fall Staging: Redberry Lake Bird Sanctuary is an important fall staging area for ducks and a few Canada geese (Branta canadensis) and whistling swans (Olar columbianus). Approximately 30,000 ducks, mostly dabblers, have been observed on the lake during fall aerial surveys (Dzubin and Norum, 1971). Redberry Lake is the only large lake in this area and the permanence of this water body enhances its value as a fall staging area.

8. Other Migratory Birds

Redberry Lake is of considerable value to several species of colonial birds which breed on the islands. The lake has long been known as an important breeding area for these birds and information on several species is supplied by Anonymus (1962), Godfrey (1966), Houston (1962a, 1962b, 1971, 1972), Lies and Behle (1966), Renaud (1972), and Vermeer (1970). The maximum number of nests located in recent years is cited in parentheses.

The white pelican (Pelecanus erythrorhynchos) (150), double-crested cormorant (Phalacrocorax auritus) (70), herring gull (Larus argentatus) (1), California gull (L. californicus) (3,000), ring-billed gull (L. delawarensis) (6,000), and common tern (Sterna hirundo) (150) have been recorded breeding on the islands of Redberry Lake.

Although no data are presently available, the wide expanses of sandy beaches on Redberry Lake no doubt support numerous shorebirds and other water and marsh species.

9. Public Utilization

(a) Hunting: The large number of mallards (Anas platyrhynchos) and pintails (A. acuta) which form fall staging concentrations on Redberry Lake contribute to excellent waterfowl hunting as the birds feed in the grain fields south of the lake. The majority of the hunting is by local residents and hunters from Saskatoon, North Battleford and Prince Albert. Goose hunting is limited.

(b) Fishing: The salinity of Redberry Lake (15,000 p.p.m.) approaches the upper limit for fish survival (Hawson and Moore, 1944). However, whitefish and pickerel fry (1 1/2 million) were introduced into the lake from 1940-43. Since these initial introductions, the Saskatchewan Department of Natural Resources has stocked Redberry Lake every two or three years with 3 to 6 million whitefish and pickerel fry per year (Sask. D.N.R.). Fish survival has reportedly been good and angling pressure on the lake has been heavy in recent years.

(c) Other: Public recreational use of the Redberry Lake Bird Sanctuary is extremely high and increasing each year. There is a large developed beach on the northwest shore, a private beach on the east shore and many natural beaches around the entire lake. The commercial development on the northwest shore includes toilet facilities, a golf course, concession stand, boat wharf, and picnic tables (Figure 30). Redberry Lake is heavily used by sail and power boats. Lots for cabins have been surveyed and it is anticipated that construction on these will begin in the near future. This large, clear and attractive lake relatively close to a large urban and rural population is a very popular summer resort.

10. Public Opinion

Interviews with the local residents of the Redberry Lake area indicated that the majority were aware of the protected status of the lake, but were of the opinion that Redberry Lake was a Provincial Game Preserve, not a federal sanctuary. Vacationers from farther abroad did not appear to be aware that the lake was protected by either federal or provincial legislation. All persons interviewed were in favor of retaining the lake as a sanctuary, and several felt that signs to this effect should be erected around the lake.

Crop depredation by waterfowl does occur in some years but is not frequent enough nor of sufficient magnitude to be considered a serious problem.

11. Posting and Enforcement

The Redberry Lake Bird Sanctuary is not well posted as a federal migratory bird sanctuary. Our investigations in 1972 revealed only 8 sanctuary signs, most located at the north and south ends of the lake.

The Hafford, Saskatchewan detachment of the Royal Canadian Mounted Police patrols the Redberry Lake Bird Sanctuary by boat and car during the summer months. The R.C.M.P. report that the major problem is the inadequate posting of signs and lack of publicity given the area as a federal sanctuary.

The disturbance by boaters of the colonial birds which breed on the islands in Redberry Lake has been a problem for over ten years. The lake is heavily used by boaters, and these people, out of natural curiosity, land on the islands and stroll among the nesting colonies of pelicans, cormorants, gulls and terns. Short exposure to the mid-day sun will kill very young birds, or expose the eggs to predatory species.

Pelicans and cormorants particularly will not tolerate this sort of molestation, and the breeding colonies of these species in Saskatchewan is already limited.

This problem has been brought to the attention of the Saskatchewan Department of Natural Resources and the Canadian Wildlife Service several times in recent years by the Saskatoon Natural History Society and various concerned individuals. It appears that no measures have been taken to alleviate this problem which will no doubt become more serious as recreational use of Redberry Lake increases.

12. Discussion

Redberry Lake Bird Sanctuary, although not productive as a breeding lake, is an important fall staging area for ducks. The lake is most important as a breeding area for colonial birds such as pelicans, cormorants, gulls and terns and as a recreational area for a large urban and rural population. Therein lies the conflict, as discussed in (11). The Migratory Bird Sanctuary Regulations afford only a partial solution to the problem, as they are not intended to be overly restrictive so far as recreational areas are concerned. It appears that a happy medium will have to be attained, whereby the limited breeding habitat of several colonial water bird species will not be jeopardized and a high degree of public use of a fine summer resort can still be maintained. It will require that the Canadian Wildlife Service initiate the required management and administration of the sanctuary and that the public cooperate in these measures.

13. Recommendations

It is recommended that the Redberry Lake Bird Sanctuary be retained as a sanctuary because of its value to several colonial nesting species of birds and its importance to migratory waterfowl as a fall staging area. It also is a very important recreational area.

Because of the recreational potential of Redberry Lake Bird Sanctuary, approximately 40 sanctuary signs should be posted on the boundaries of the sanctuary. To protect the colonial bird species nesting on the islands of the lake, these land areas should be declared restricted from the public and posted accordingly. Large explanatory signs indicating the function and value of the sanctuary and a caution regarding approaching the islands of the lake with power boats should be erected on the public beaches and the main access roads to Redberry Lake.

In addition, some excellent publicity which would encourage cooperation by the public could be attained by printing pamphlets on the sanctuary describing its history, purpose and function. These pamphlets, complete with a species list of the common flora and fauna to be found in the Redberry Lake Bird Sanctuary, could be made available at the concession stand on the main beach.

14. Summary

(a) Redberry Lake Bird Sanctuary is a large, deep lake in the parklands of west-central Saskatchewan.

(b) The area was declared a federal bird sanctuary in 1925 and was evaluated as such in 1917, 1948, 1949, 1957, 1964, 1971, and 1972.

(c) Redberry Lake has a total surface area of 15,800 acres, a full basin capacity of 686,000 acre feet, and maximum and mean depths of 85 and 45 feet, respectively.

(d) The water is highly saline, 14,200 p.p.m. and has a pH of 8.7.

(e) Redberry Lake is surrounded by aspen parkland and grassland and has only limited areas of submergent and emergent aquatic vegetation.

(f) Waterfowl utilization of the sanctuary is confined primarily to the fall staging activities of ducks.

(g) Cormorants, pelicans, gulls, and terns nest on the islands.

(h) The sanctuary provides for a good deal of recreational activity in hunting, fishing, boating, swimming and picnicking.

(i) The sanctuary is poorly posted.

(j) The public are in favor of retaining the sanctuary as a protected area.

(k) Redberry Lake Bird Sanctuary should be retained as a protected area and posted during the 1973 field season.

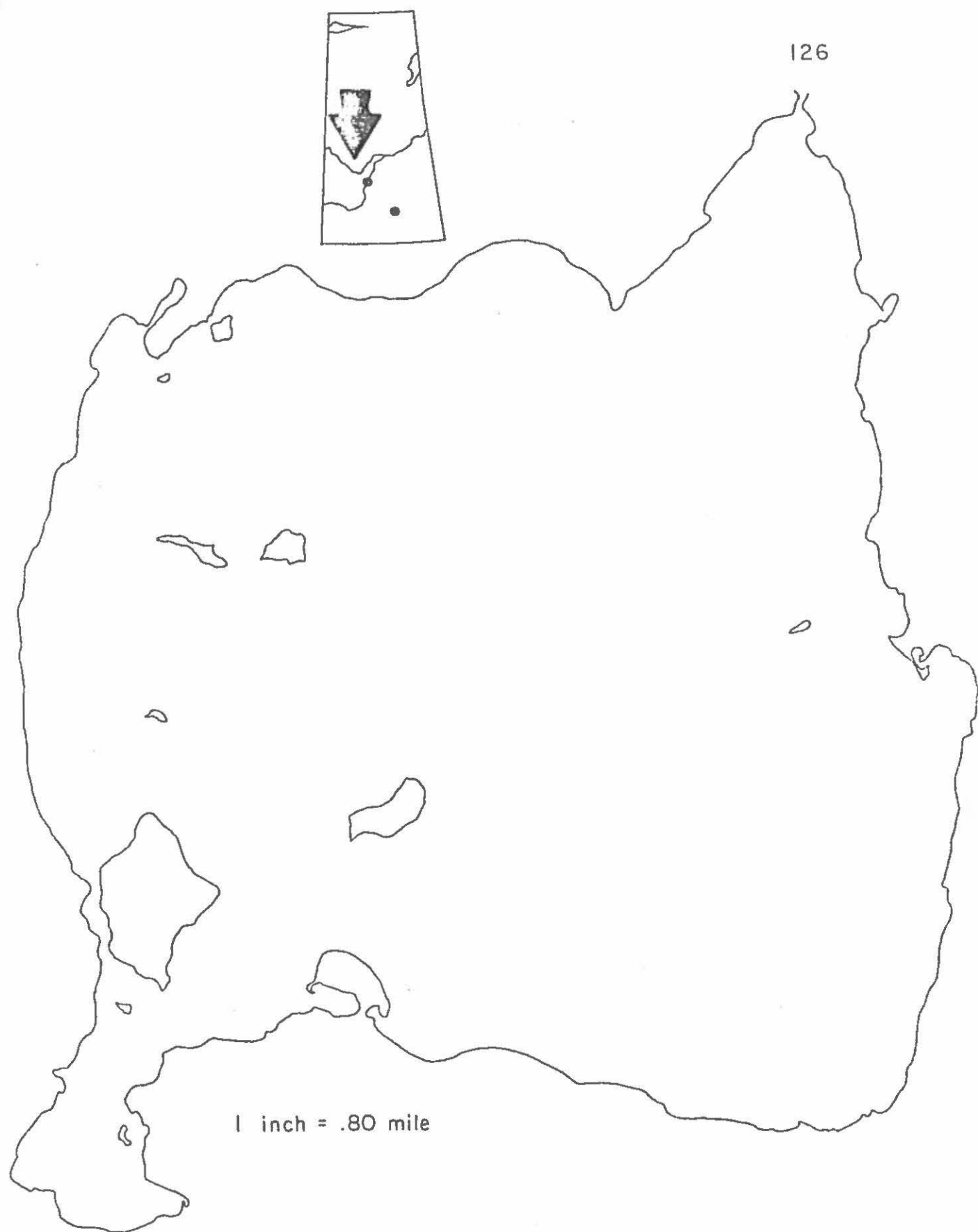


Figure 28. Redberry Lake Migratory Bird Sanctuary.



Figure 29. The south west shore of Redberry Lake Migratory Bird Sanctuary. The numerous islands are used by colonial birds for breeding areas.



Figure 30. Redberry Lake has numerous natural beaches. Above, the main public beach on the northwest shore.

XI. Scent Grass Lake Bird Sanctuary

1. Location

The Scent Grass Lake Bird Sanctuary is located approximately fifteen miles northeast of North Battleford, Saskatchewan, east of Highway No. 4, 1 1/2 miles south of Iffley, Saskatchewan.

2. Legal Description

The following areas in Township 46, west of the 3rd Meridian. In Range 15, all that portion of Sections 7, 8, 9, 16, 17 and 18 covered by the waters of Scent Grass Lake as said lake is shown on a plan of survey of said Township approved and confirmed by F. H. Peters, Surveyor General at Ottawa, the 10th of December, 1927. In Range 16, all that portion of Sections 12 and 13, covered by the waters of Scent Grass Lake, as said lake is shown on a plan of survey of said Township approved and confirmed by F. H. Peters, Surveyor General at Ottawa, the 5th of January, 1928 (The Canada Gazette, 1954).

3. Background Information

In 1948, five of the federal bird sanctuaries in Saskatchewan were cancelled after drought had made them unsuitable as breeding and resting grounds for migratory waterfowl. The Scent Grass Lake Bird Sanctuary was one of five replacements established by Order-in-Council on November 3, 1948 (Murray, 1966).

The Canadian Wildlife Service carried out an evaluation of the migratory bird sanctuaries in Saskatchewan in 1957. Scent Grass Lake Bird Sanctuary was recognized as an important waterfowl refuge, but it was recommended that the lake be dropped as a federal sanctuary since it was also protected as a Provincial Game Preserve (Gollop, 1957d).

In 1971, this sanctuary was again investigated by the Canadian Wildlife Service. The importance of Scent Grass Lake as a fall staging area for waterfowl was recognized, but no specific recommendations were given (Poston, 1971).

This report presents the results of the most recent evaluation of the Scent Grass Lake Bird Sanctuary, carried out by the Canadian Wildlife Service in 1972. A comprehensive literature review and ground (July 11, 1972) and aerial (July 25, 1972) surveys were conducted in an attempt to determine the public and migratory bird use of the lake.

4. General Description

The Scent Grass Lake Bird Sanctuary is a medium sized lake of moderate depth located in west-central Saskatchewan (Figure 31). The lake is situated in the aspen-spruce and fescue vegetation zones of the province, between the grassland and forest regions (Richards, 1969).

Bedrock geological deposits are Cretaceous sedimentary rocks, sandstone and shale of the Bearpaw formation. Soils of this area are primarily black chernozems. The climate is humid continental and the elevation of the area adjacent to the lake varies from 1,200 to 1,800 feet above sea level (Richards, 1969).

Scent Grass Lake is dependent upon spring runoff and seasonal rains, in addition to several natural springs, to maintain water levels. Two major creeks (Page Creek on the east and Crystal Creek on the west) act as water sources and drainage for this lake. An earthen dam on the west end of Scent Grass Lake preserves the water levels. Seasonal water level fluctuations are not common on this lake.

The Scent Grass Lake Bird Sanctuary is located in an area mainly devoted to agriculture and large tracts of cultivated land are adjacent to the lake (Figure 32). There are three public access roads to the lake and no islands.

5. Physical Characteristics

(a) Area: The total surface area of the Scent Grass Lake Bird Sanctuary is approximately 2,000 acres at full basin capacity (Murray, 1966).

(b) Depth and Volume: Scent Grass Lake has a maximum and average water depth of 6 and 4 feet, respectively, at full basin capacity (Saskatchewan Fisheries and Wildlife Branch, 1973).

(c) Shoreline Type: There are approximately 3.5 miles of shoreline on Scent Grass Lake. There is considerable relief between the water's edge and the surrounding terrain due to the location of the lake in rolling parklands. The shorelines are heavily vegetated.

(d) Water Quality: No data are available.

6. Vegetation Characteristics

(a) Shoreline: The south shore of Scent Grass Lake is heavily wooded with aspen (Populus tremuloides), maple (Acer negundo), and willow (Salix spp.). There are intermittent areas of rolling grassland composed of fescue (Festuca scabrella) and associated grasses. There is a dense stand of aspen on the southeast shore. The remainder of the shoreline is primarily grassland with isolated clumps of aspen and willow. A large meadow of sedges (Carex spp.) and assorted wet meadow grasses are present on the "delta" of Page Creek on the east end of Scent Grass Lake.

(b) Emergent Aquatics: The south shore of Scent Grass Lake is void of emergent aquatic vegetation with the exception of a small stand of bulrush (Scirpus spp.) in the southeast corner of the lake. On the "delta" of the Page Creek is an extensive area of bulrush, cattail (Typha latifolia) and sedge. A narrow band (50 yards wide) of emergent cattail, bulrush and sedge borders the north shore. The northeast corner of Scent Grass Lake has a very large stand of these and associated emergent species (Figure 33). This large area of emergent vegetation continues around part of the west end of the lake. The center of Scent Grass Lake is open water, void of vegetation.

(c) Submergent Aquatics: Most of the common species of submergent plants found in lakes of this depth are probably present in varying amounts in Scent Grass Lake. Beds of pondweeds (Potamogeton spp.) grow in the deeper, open water zone of the lake. One would expect to find water milfoil (Myriophyllum spp.), hornwort (Ceratophyllum demersum), water crowfoot (Ranunculus spp.) and similar species in association with the emergent aquatic vegetation previously described (b).

7. Waterfowl Use

(a) Breeding and Moulting: Scent Grass Lake Bird Sanctuary supports a good number of breeding waterfowl associated with the stands of emergent vegetation previously described. Most species of dabblers and diver ducks are represented and Canada geese (Branta canadensis) breed on the lake on occasion. An aerial survey in 1972 revealed approximately 800 ducks on Scent Grass Lake. A large number of these birds were moulting but a small number of broods were also evident. The sanctuary is probably most important as a moulting area due to its

depth, size, and aquatic vegetation cover. The location of the lake adjacent to a prime waterfowl area makes it even more important in this regard. Moore Lake, which lies directly to the west of Scent Grass, is an excellent marsh capable of high waterfowl production. However, it is shallow and prone to severe water level fluctuations. Adults and broods displaced from Moore Lake gain refuge in Scent Grass Lake during the latter part of the brood season and during the moult.

(b) Spring and Fall Staging: Scent Grass Lake is an important fall staging lake for ducks and geese. Fall aerial surveys have indicated concentrations of 2,000 ducks (mostly mallards (Anas platyrhynchos), pintails (A. acuta), and assorted divers) and 7,000 geese (Canada, white-fronted (Anser albifrons), Ross' (Chen rossii), and snow (C. hyperborea)) on Scent Grass Lake in the late fall (Dzubin and Norum, 1971). Whistling swans (Olar columbianus) also use the sanctuary during the fall, but to a lesser degree than geese.

8. Other Migratory Birds

The extensive marsh areas of Scent Grass Lake Bird Sanctuary provide breeding habitat for a large variety of marsh and water birds. Grebes (Colymbus and Podilymbus spp.), herons (Nycticorax and Ardea spp.), rails (Porzana and Coturnicops spp.), terns (Chilidonias and Sterna spp.) and gulls (Larus spp.) are common residents of Scent Grass Lake (Renaud, 1972). Whooping cranes (Grus americana) have been sighted on the lake during the fall migration in recent years. Numerous other passerine species inhabit the marsh and upland terrain in the area adjacent to the sanctuary.

9. Public Utilization

(a) Hunting: Scent Grass and Moore lakes receive heavy hunting pressure in the fall. The sanctuary, especially, which retains a large number of fall staging waterfowl contributes to a great deal of hunting for local residents. The proximity of Scent Grass Lake to a large urban center (North Battleford) increases its importance to the hunting public. Although a large amount of the hunting is conducted in the stubble fields adjacent to the lake, there is reportedly a considerable amount of hunting within the sanctuary boundaries each year.

(b) Fishing: Although Scent Grass Lake does not receive heavy angling pressure, the local residents make regular use of the lake for this purpose. Pike and pickerel are found in the lake and are believed to move into this water body from Murray Lake during high water levels.

(c) Other: There are no recreational facilities on Scent Grass Lake Bird Sanctuary to provide for swimming, boating or picnicking. The shoreline type and water depth of the lake are not conducive to these activities.

10. Public Opinion

Interviews with the local farmers indicated that the majority were aware that Scent Grass Lake is restricted from hunting. Most were of the opinion that the lake is a Provincial Game Preserve and did not know that it is a federal migratory bird sanctuary. All persons interviewed felt that the lake should be retained as a protected area and several expressed concern over hunting which takes place on the lake and suggested that it be properly posted.

Several farmers have suffered severe crop depredation in past years but not on an annual or regular basis.

11. Posting and Enforcement

The Scent Grass Lake Bird Sanctuary is well posted as a Provincial Game Preserve (ten signs located around the lake) but is not posted as a federal migratory bird sanctuary.

The North Battleford detachment of the Royal Canadian Mounted Police and the Saskatchewan Department of Natural Resources Conservation Officer from that city, patrol the sanctuary area regularly in the fall and periodically at other times of the year (R. J. Stechly and K. A. Smith, pers. comm.).

The R.C.M.P. and the D.N.R. report that hunting within the sanctuary boundary does occur. They recommended that the lake be properly posted as a federal bird sanctuary.

12. Discussion

The Scent Grass Lake Bird Sanctuary is important to migratory waterfowl during the breeding, moulting, and fall staging activities. Scent Grass Lake has shallow, marshy areas, deeper open water, and a wide variety of habitat types surrounding the lake ranging from aspen forest and parkland to grassland and cultivated farm land. This variety in habitat types is reflected by the presence of numerous species of water, marsh and upland birds in the area. The sanctuary is close to a large urban population and, with the proper publicity, could receive high utilization by conservation, education and natural history groups.

There has been considerable discussion in recent years concerning draining Moore Lake and lowering or controlling the water level regime

of Scent Grass Lake for irrigation purposes. It is important that the Canadian Wildlife Service initiate proper management of the sanctuary in order that control may be maintained over the future of the area. This will ensure that the excellent marsh habitat of the Scent Grass Lake Bird Sanctuary will be preserved in its natural state.

13. Recommendations

It is recommended that the Scent Grass Lake Bird Sanctuary be retained as a sanctuary. This lake receives an exceptionally high amount of use by a wide variety of water and land bird species and is an important waterfowl breeding, moulting and fall staging area.

Scent Grass Lake Bird Sanctuary should be posted with federal sanctuary signs during the 1973 field season. Approximately 10 signs will be required for posting on the three main access roads to the lake and around the sanctuary boundary.

14. Summary

(a) Scent Grass Lake is a medium size lake located in the aspen parkland of west-central Saskatchewan.

(b) The area was declared a federal bird sanctuary in 1948 and was evaluated as such in 1957, 1971, and 1972.

(c) Scent Grass Lake has a total surface area of approximately 2,000 acres and maximum and average water depths of 6 and 4 feet, respectively.

(d) Scent Grass Lake is surrounded by aspen, grassland and cultivated land and has large areas of emergent and submergent aquatic vegetation.

(e) Waterfowl use the lake for breeding, moulting and fall staging activities.

(f) A wide variety of marsh, water and land bird species breed in the sanctuary area.

(g) The sanctuary provides for a good deal of waterfowl hunting and some fishing.

(h) The sanctuary is poorly posted.

(i) The public are in favor of retaining the sanctuary as a protected area.

(j) Scent Grass Lake Bird Sanctuary should be retained as a protected area and posted during the 1973 field season.

1 inch = .39 mile

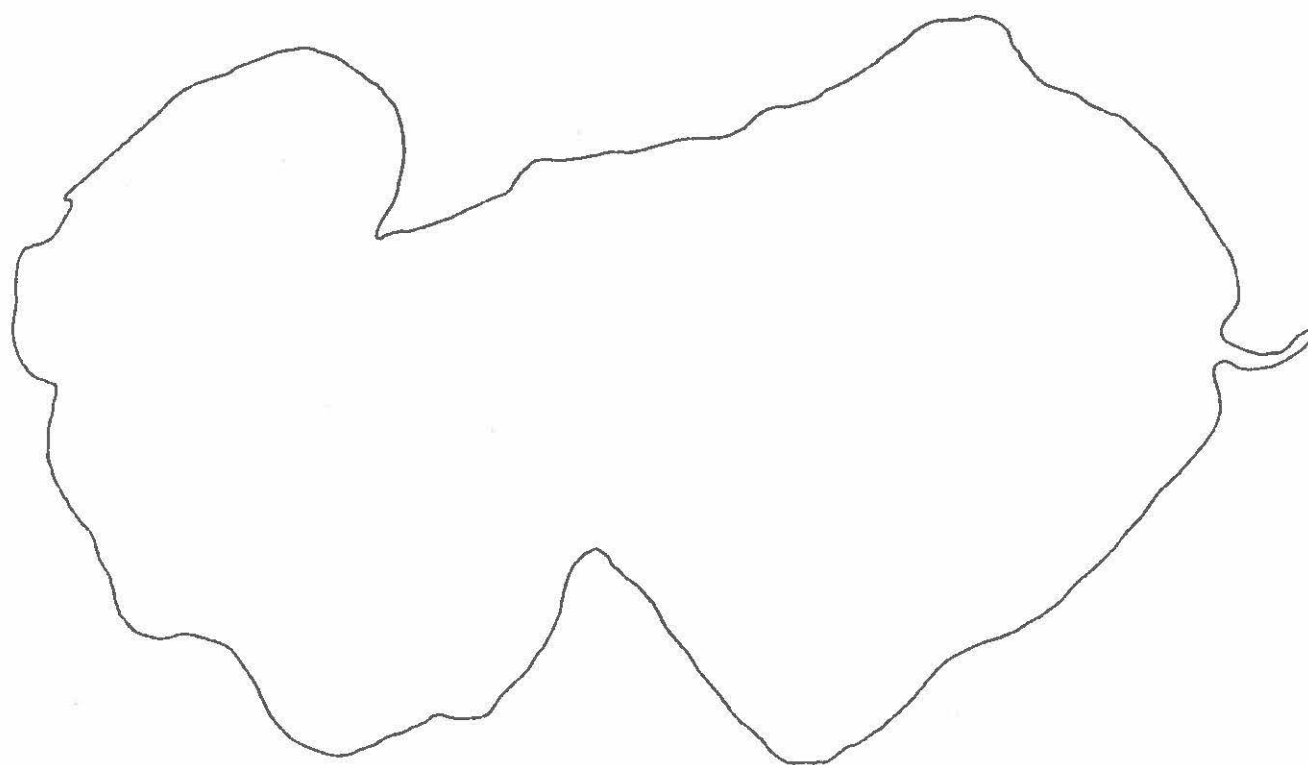


Figure 31. Scent Grass Lake Migratory Bird Sanctuary.

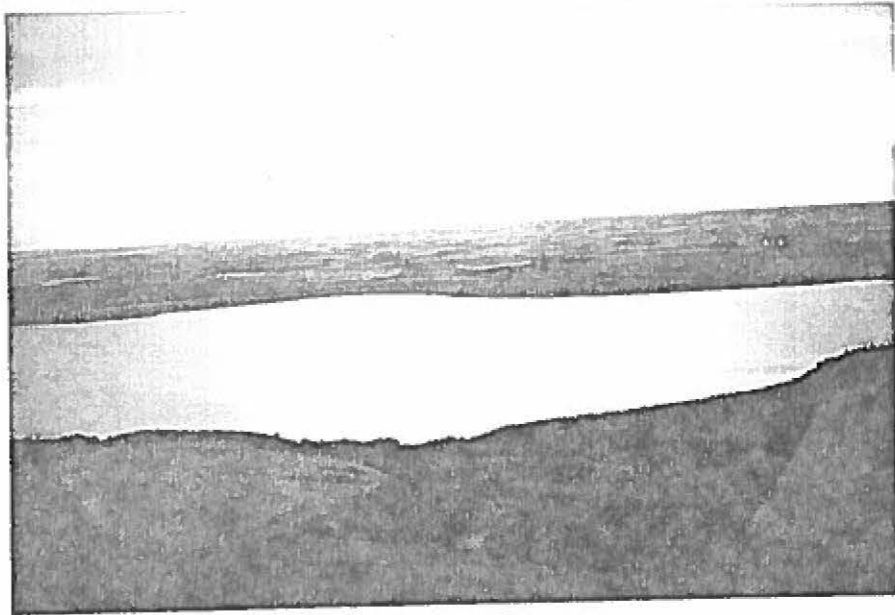


Figure 32. An aerial view of Scent Grass Lake Migratory Bird Sanctuary.



Figure 33. Scent Grass Lake possesses some excellent marsh habitat. Above, the bay on the northwest shore of the lake.

XII. Sutherland Bird Sanctuary

1. Location

The Sutherland Bird Sanctuary is located in the Sutherland subdivision, within the city limits of Saskatoon, Saskatchewan.

2. Legal Description

The southeast quarter of Section 12 and the northeast quarter of Section 1, Township 37, Range 5, west of the 3rd Meridian (The Canada Gazette, 1954).

3. Background Information

The Forestry Department's Experimental Farm at Sutherland, Saskatchewan was declared a federal migratory bird sanctuary in 1924, and was to remain under the management of that department.

The migratory bird sanctuaries in Saskatchewan were investigated twice between 1948 and 1950. The first examination was to determine if these areas were still of value to migratory waterfowl during periods of drought, and the second investigation regarded the description of most sanctuaries to include only the water areas. There is no evidence to indicate that the Sutherland Bird Sanctuary was evaluated as described; it most likely was not since it was retained as a sanctuary despite very limited value to waterfowl and the boundaries which included a significant amount of land area were not changed.

The Sutherland Bird Sanctuary was evaluated by the Canadian Wildlife Service in 1957. This examination of the sanctuary included a concise description of the physical features of the area and a recommendation that the sanctuary not be retained as a federal migratory bird

refuge since it was within the city limits of Saskatoon and of no value to waterfowl (Gollop, 1957c).

In 1971, the Canadian Wildlife Service recommended once again that the Sutherland Bird Sanctuary be abolished. It was noted that the Canadian Wildlife Service had almost no control over land use changes, and that even if the sanctuary was of some value to migratory birds, complete protection of the area could be effected by the City of Saskatoon. As an alternative to discontinuing the sanctuary it was suggested that limited surveillance and the erection of sanctuary signs by the C.W.S. would constitute a good form of advertisement for this agency (Poston, 1971).

In 1972, the Canadian Wildlife Service conducted an evaluation of the Sutherland Bird Sanctuary. A literature review on the area and ground (July 10, 1972) and aerial (July 25, 1972) surveys of the sanctuary completed the investigation.

4. General Description

The Sutherland Bird Sanctuary is located in central Saskatchewan, within the city limits of Saskatoon. The sanctuary is included in a recreational area and nursery farm commonly known as the Forestry Farm. In addition to the land area described in (2), is a flooded area within a small zoo managed by the City of Saskatoon Parks and Recreation Department (Figure 34). This small water area supports the zoo's waterfowl population. The Forestry Farm is landscaped and developed into a large park with recreational facilities, a zoo, picnic tables, trees and lawns (Figure 35). Very little natural vegetation remains on the sanctuary area.

5. Physical Characteristics

(a) Area: The land area of the Sutherland Bird Sanctuary is approximately 320 acres. The water area, including the flooded pond in the zoo, is not in excess of ten acres.

(b) Depth and Volume: Although no data are available, the depth of the water in the zoo pond probably does not exceed a maximum of 4 feet and an average of 1 foot.

(c) Shoreline Type: The shoreline of the zoo pond in the Sutherland Bird Sanctuary is low and muddy due to recent flooding. It is mostly unvegetated.

(d) Water Quality: No data available.

6. Vegetation Characteristics

The vegetation characteristics of the Sutherland Bird Sanctuary are as varied as one would expect to find in a forestry and agriculture nursery station. Native species are poorly represented within the sanctuary boundaries. The entire bird sanctuary is a nursery station, park and zoo with large expanses of lawn and cultivated exotic shrub and tree species. There is no evidence of an appreciable amount of submergent or emergent aquatic vegetation in the zoo pond.

7. Waterfowl Use

The Sutherland Bird Sanctuary receives no use by wild populations of migratory waterfowl. An assortment of native and exotic species of ducks, geese and swans are retained on the zoo pond for public viewing in the summer. These pinioned birds are kept within a barn during the winter.

8. Other Migratory Birds

Utilization of the Sutherland Bird Sanctuary by migratory bird species other than waterfowl is restricted to those species common to city parks. Robins (Turdus migratorius), starlings (Sturnus vulgaris), English sparrows (Passer domesticus) and a variety of other passerines inhabitat the sanctuary.

9. Public Utilization

(a) Hunting: The Sutherland Bird Sanctuary does not contribute to hunting in the immediate area. The sanctuary is not utilized by free-flying migratory waterfowl at any time of the year and even if it were, hunting in the area would not be allowed due to the location of the sanctuary within the city limits of Saskatoon.

(b) Fishing: There is no fishing activity in the Sutherland Bird Sanctuary. The small zoo pond in the sanctuary does not support a fish population.

(c) Other: The Sutherland Bird Sanctuary is heavily utilized by the public as a park and zoo. Picnic facilities are available.

10. Public Opinion

No interviews were carried out during the course of our evaluation.

11. Posting and Enforcement

The Sutherland Bird Sanctuary is not posted as a federal migratory bird sanctuary. The area is maintained and patrolled by Saskatoon city park officials and the city police.

12. Discussion

The Sutherland Bird Sanctuary is not important to migratory waterfowl. The area is important only as a nursery station and as a city park and zoo. The Canadian Wildlife Service has no actual control over the area.

13. Recommendations

It is recommended that the Sutherland Bird Sanctuary be abolished as a federal migratory bird sanctuary. The area is of no value to migratory birds, and if it were retained it would be difficult for the Canadian Wildlife Service to assume control of the sanctuary.

14. Summary

(a) The Sutherland Bird Sanctuary is a forest nursery and park located within the city limits of Saskatoon.

(b) The area was declared a federal bird sanctuary in 1924 and was evaluated as such in 1957, 1971 and 1972.

(c) The Sutherland Bird Sanctuary includes approximately 320 acres of land and 10 acres of water.

(d) The sanctuary includes wide expanses of lawn and exotic shrub and tree species. There are few native species in the park and no aquatic vegetation in the zoo pond.

(e) Migratory waterfowl do not utilize the Sutherland Bird Sanctuary at any time of the year.

(f) The sanctuary provides public recreation as a park, picnic and zoo area.

(g) The sanctuary is not posted as a federal migratory bird sanctuary.

(h) The Sutherland Bird Sanctuary should not be retained as a federal sanctuary.



Figure 34. An aerial view of part of the Sutherland Migratory Bird Sanctuary. The small dugout has been extended to cover a larger area and supports the zoo's population of waterfowl.

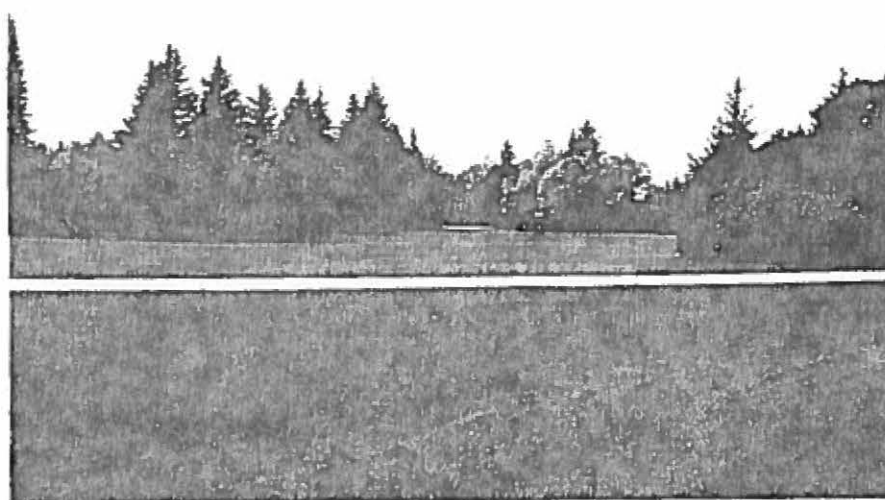


Figure 35. A large part of the Sutherland Migratory Bird Sanctuary has been maintained as a city park.

XIII. Upper Rousay Lake Bird Sanctuary

1. Location

The Upper Rousay Lake Bird Sanctuary is located approximately 4 miles southeast of Yorkton, Saskatchewan, between Highway No. 9 and Highway No. 10.

2. Legal Description

In Township 25, Range 5, west of the 2nd Meridian and being all that portion of Sections 22, 23, 24, 25, 26, 34, 35 and 36, covered by the waters of Upper Rousay Lake (The Canada Gazette, 1954).

3. Background Information

In 1948, five of the federal bird sanctuaries in Saskatchewan (Chaplin, Crane, Bigstick, Gabri and Whitebear lakes) were cancelled because drought had made them unsuitable as breeding and resting grounds for migratory waterfowl. The Upper Rousay Lake Bird Sanctuary was one of five replacements established by an Order-in-Council on November 3, 1948 (Murray, 1966).

The Canadian Wildlife Service carried out an evaluation of the Upper Rousay Lake Bird Sanctuary in 1957. It was determined that this excellent marsh area supported large concentrations of ducks and geese in the fall, and as such, contributed to a considerable amount of waterfowl hunting in the area. Although there are other good marshes near Upper Rousay Lake, it was felt that this sanctuary would assume increased importance to migratory waterfowl during a drought. It was recommended that the Canadian Wildlife Service either post and maintain the Upper Rousay Lake Bird Sanctuary or abolish it because of its status as a Provincial Game Preserve (Gollop, 1957b).

In 1962, the Canadian Wildlife Service recommended that this sanctuary be cancelled. Little information is available regarding the reasons for this decision although severe crop depredation by waterfowl and the status of the area as a Provincial Game Preserve could have been factors. However, this recommendation was not carried out.

The Canadian Wildlife Service investigated the Upper Rousay Lake Bird Sanctuary again in 1971. The value of the lake as a fall staging area for migratory waterfowl was recognized. No recommendations regarding the future status of the area were offered (Poston, 1971).

The most recent evaluation of the Upper Rousay Lake Bird Sanctuary was conducted by the Canadian Wildlife Service in 1972. A comprehensive literature review combined with aerial (July 24, 1972) and ground (August 29, 1972) surveys completed the investigation.

4. General Description

The Upper Rousay Lake Bird Sanctuary includes a shallow lake and its contiguous marshes in east-central Saskatchewan (Figure 36). The sanctuary is located in the aspen grove vegetation zone of the grassland and grove region of the province (Richards, 1969).

Bedrock geological deposits are Cretaceous shales of the Riding Mountain formation, and the soils of this area are primarily black calcareous chernozems. The climate is humid continental and the elevation of the area around the lake varies from 1,200 to 1,800 feet above sea level (Richards, 1969).

Upper Rousay Lake is dependent upon spring runoff and seasonal rains as the major water source and is therefore prone to substantial water level fluctuations. The lake is one of a series of relatively

shallow interconnected water bodies including Rousay, York, Leech and Crescent lakes.

The land north of Upper Rousay Lake Bird Sanctuary is used for the growth of cereal crops. Pasture land and hay meadows border most of the lake, and much of the terrain adjacent to the shoreline is not arable due to its marshy nature. The lake is composed of a large series of peninsulas, bays and temporary islands (Figure 37). Upper Rousay Lake can be reached by only three public access roads.

5. Physical Characteristics

(a) Area: The total surface area of the waters of the Upper Rousay Lake Bird Sanctuary approximates 5,000 acres. Due to inconsistent water levels and a poorly defined, marshy shoreline, the exact surface area of the sanctuary is difficult to determine and varies greatly between seasons.

(b) Depth and Volume: Although no specific water depth data are available, it appears from preliminary observations that Upper Rousay Lake probably does not exceed a maximum water depth of four feet and the average depth is probably in the order of one to two feet.

(c) Shoreline Type: There are approximately 20 miles of shoreline on the Upper Rousay Lake Bird Sanctuary, although there is great variability in this figure at different water level regimes. There is little relief between the water's edge and the upland terrain which makes the entire area prone to flooding. The shoreline of Upper Rousay Lake is heavily vegetated.

(d) Water Quality: No data are available.

6. Vegetation Characteristics

(a) Shoreline: The entire shoreline of Upper Rousay Lake is vegetated with sedges (Carex spp.) and associated wet meadow grasses. The only shrubs and trees adjacent to the lake are a small stand of maple (Acer negundo) on the east shore and scattered clumps of aspen (Populus tremuloides) and willow (Salix spp.) on the periphery of the lake.

(b) Emergent Aquatics: The entire lake may be classified in a year of average spring runoff as an excellent marsh with regard to emergent aquatic vegetation growth (Figure 38). Upper Rousay Lake and associated marshes have an uninterrupted fringe of emergent bulrush (Scirpus spp.) 50 to 100 yards wide with intermittent areas of cattail (Typha latifolia) and spangletop (Scolochloa festucacea). Sedges grow as emergents in many areas. There are also dense stands of bulrush on the entire lake, particularly at the north end, in a wide range of densities creating excellent waterfowl cover.

(c) Submergent Aquatics: Upper Rousay Lake Bird Sanctuary supports a good variety and quantity of submergent aquatic vegetation. Pondweeds (Potamogeton spp.), water milfoil (Myriophyllum spp.), mare's tail (Hippuris vulgaris), hornwort (Ceratophyllum demersum), water crowfoot (Ranunculus spp.) and associated species can be found throughout the lake.

7. Waterfowl Use

(a) Breeding and Moulting: Upper Rousay Lake Bird Sanctuary provides excellent habitat for waterfowl production. Large numbers of dabbling and diving ducks and several pairs of Canada geese (Branta canadensis) breed on the sanctuary every year. An aerial survey in 1972 revealed two pairs of Canada geese and over 600 ducks of assorted species,

many with broods. This large marsh is also an important waterfowl moulting area.

(b) Spring and Fall Staging: Waterfowl fall aerial survey data indicate that the Upper Rousay Lake Bird Sanctuary is an important fall staging area for ducks, particularly mallards (Anas platyrhynchos) and geese. Although there are several similar lakes in the area which provide fall staging habitat for migratory waterfowl, Upper Rousay Lake is particularly attractive to these birds because of its protected status.

8. Other Migratory Birds

The excellent marsh habitat of the Upper Rousay Lake Bird Sanctuary supports numerous water and marsh species of migratory birds. Grebes (Colymbus and Podilymbus spp.), herons (Nycticorax and Ardea spp.), rails (Porzana carolina), terns (Chilidonias and Sterna spp.), gulls (Larus spp.) and numerous shorebirds are common summer residents on Upper Rousay Lake.

9. Public Utilization

(a) Hunting: The large concentrations of migratory waterfowl which use Upper Rousay Lake as a fall staging area provide excellent hunting for local and non-resident hunters alike. The lake is relatively close to a good sized urban center (Yorkton, Saskatchewan) and hunting pressure is heavy as "field shooters" and "fence-liners" attempt to bag birds from the large flights which forage out to feed in the stubble fields adjacent to the lake.

(b) Fishing: The Upper Rousay Lake Bird Sanctuary is not of sufficient depth to support a harvestable population of sport fish.

(c) Other: There are no recreational facilities on the Upper Rousay Lake Bird Sanctuary.

10. Public Opinion

Most of the local residents are aware that Upper Rousay Lake is protected from hunting as a Provincial Game Preserve, but virtually none know that the lake is also a federal migratory bird sanctuary. Most of the residents appear to be in favor of retaining the area as a protected wildlife refuge.

Crop depredation by waterfowl has been a very serious problem in past years, particularly at the north end of Upper Rousay Lake. However, it is not felt that opening the area to hunting would solve the problem. Scare and kill permits have been issued to the affected landowners in the past.

11. Posting and Enforcement

Investigations in 1972 indicated that the Upper Rousay Lake Bird Sanctuary was posted as a Provincial Game Preserve but not as a federal migratory bird sanctuary.

The members of the Royal Canadian Mounted Police detachment at Yorkton, Saskatchewan were not aware that the area in question is a federal sanctuary, and hence only routine patrols were made to the Upper Rousay Lake area. The R.C.M.P. were aware, however, that the lake is a Provincial Game Preserve (W. R. Alexander, pers. comm.).

The Conservation Officer from the Saskatchewan Department of Natural Resources office in Yorkton indicated that the area has been patrolled by his department only as a Provincial Game Preserve. Since Upper Rousay Lake is not posted as a federal migratory bird sanctuary, it would be difficult to enforce the Migratory Bird Sanctuary Regulations (P. A. Bergren, pers. comm.).

Both enforcement agencies expressed a certain degree of concern over the lack of posting and publicity on the Upper Rousay Lake Bird Sanctuary and noted that a limited amount of hunting does occur within the sanctuary boundaries each year. Enforcement in the area is a problem because of the lack of access roads to the lake and the undefined boundaries of the sanctuary which are often ambiguous due to fluctuating water levels and the marshy condition of the shoreline.

12. Discussion

The Upper Rousay Lake Bird Sanctuary is of considerable value to migratory waterfowl for breeding, moulting and fall staging activities. It is an excellent marsh which supports a diverse flora and fauna.

Public utilization of Upper Rousay Lake for recreation is restricted to waterfowl hunting. Posting of the sanctuary is inadequate. If the lake is to be retained as a protected area, sanctuary signs should be erected in the near future.

There are several lakes in this part of Saskatchewan which are similar to Upper Rousay and which offer migratory birds comparable habitat. It is, however, imperative that at least one of these lakes be restricted from the hunting public. Upper Rousay Lake is a federal sanctuary as well as a Provincial Game Preserve, the latter of which the public are aware.

13. Recommendations

It is recommended that the Upper Rousay Lake Bird Sanctuary be retained as a federal migratory bird sanctuary on the basis of its value to waterfowl as a breeding, moulting and fall staging area. Upper Rousay Lake should be posted with the appropriate federal sanctuary signs during the 1973 field season. Approximately ten signs will be required for posting on the three main public access roads and at various locations around the lake.

14. Summary

- (a) Upper Rousay Lake Bird Sanctuary is located in the aspen parkland of east-central Saskatchewan.
- (b) The area was declared a federal migratory bird sanctuary in 1948 and was evaluated as such in 1957, 1971, and 1972.
- (c) Upper Rousay Lake has a total surface area of approximately 5,000 acres at full basin capacity.
- (d) The lake is surrounded by cultivated land and hay meadows and supports dense stands of submergent and emergent aquatic vegetation.
- (e) Migratory waterfowl utilize the sanctuary for breeding, moulting and fall staging activities.
- (f) The extensive marsh area of Upper Rousay Lake supports a wide variety of marsh and water birds.
- (g) The sanctuary provides a considerable amount of recreation in hunting.
- (h) The lake is not posted as a federal migratory bird sanctuary.
- (i) The public are in favor of retaining the sanctuary as a protected area.
- (j) Upper Rousay Lake Bird Sanctuary should be retained as a protected area and posted with sanctuary signs during the 1973 field season.

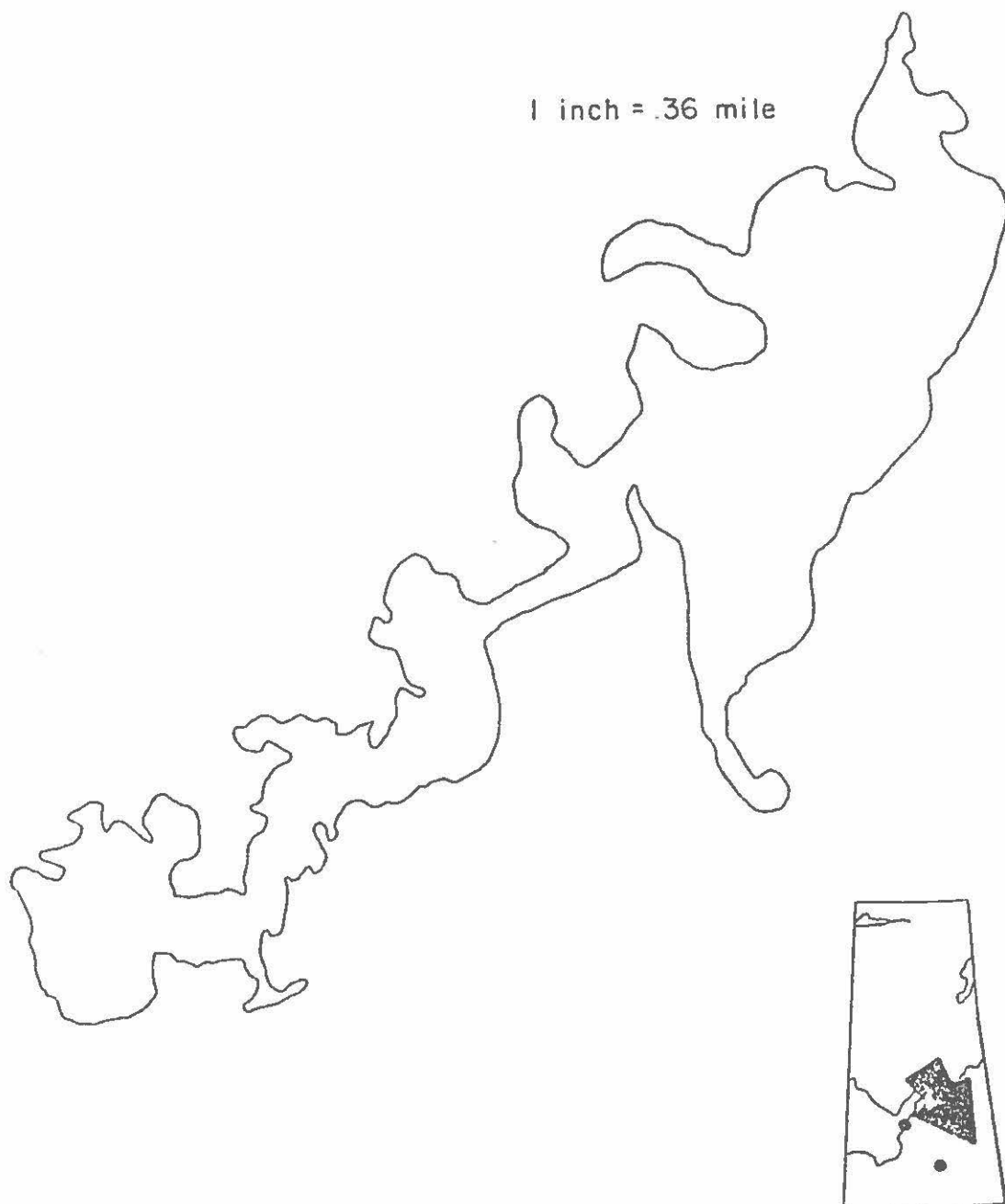


Figure 36. Upper Rousay Lake Migratory Bird Sanctuary.

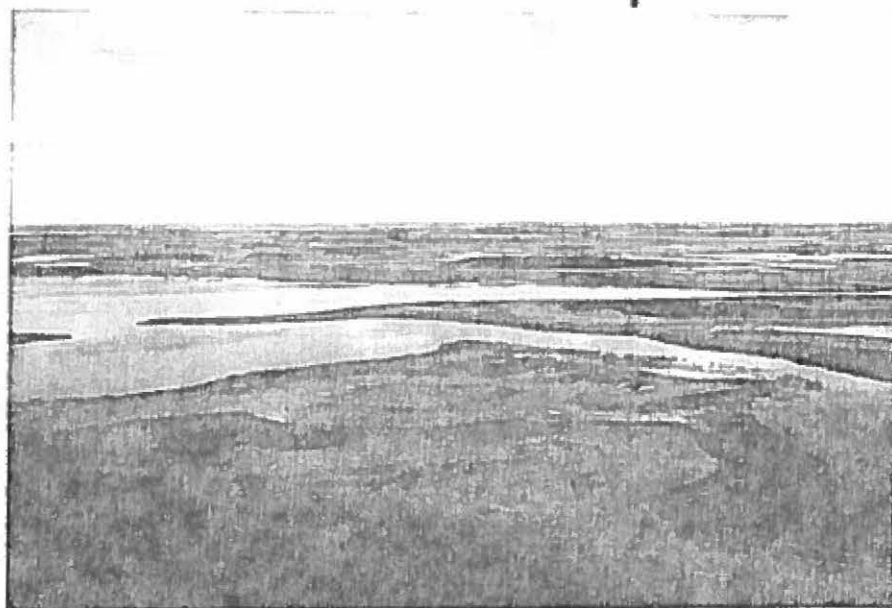


Figure 37. Upper Rousay Lake Migratory Bird Sanctuary is composed of a series of penninsulas, bays and islands.

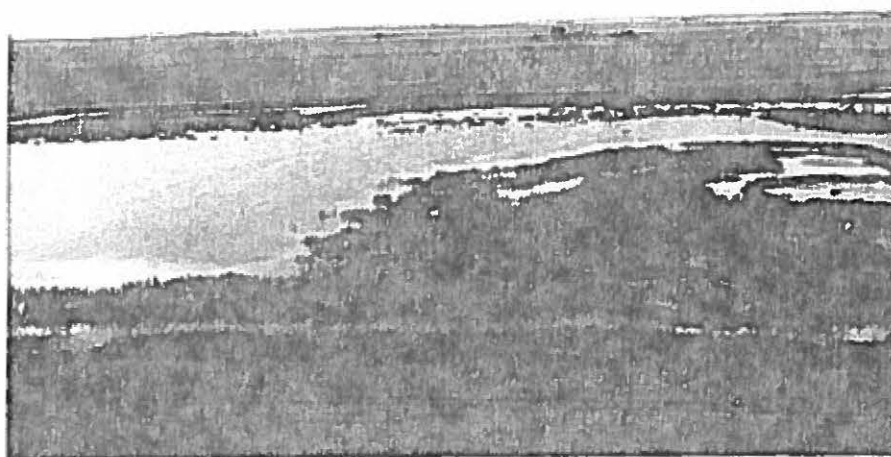


Figure 38. The extensive marsh area of Upper Rousay Lake supports a wide variety of marsh and water birds.

XIV. Val Marie Reservoir Bird Sanctuary

1. Location

The Val Marie Reservoir Bird Sanctuary is located approximately six miles northwest of Val Marie, Saskatchewan.

2. Legal Description

In Township 4, Range 14, west of the 3rd Meridian and being all that portion of Sections 15, 20, 21, 22, 28, 29, 33 and 34 covered by the waters of the Val Marie Reservoir (The Canada Gazette, 1954).

3. Background Information

The Chaplin, Crane, Bigstick, Cabri and Whitebear lakes migratory bird sanctuaries were cancelled by an Order-in-Council on November 24, 1948. On November 3, before this became law, five replacements were established for the drought prone areas abolished. The Val Marie Reservoir Bird Sanctuary was one of these sanctuaries set up in 1948 (Murray, 1966).

The Canadian Wildlife Service carried out an evaluation of the migratory bird sanctuaries in Saskatchewan in 1957. Although the sanctuary was not visited by personnel from the C.W.S. during this investigation, a review of background information and interviews with conservation agency personnel familiar with the reservoir indicated that the area was of considerable value as a fall staging area for migratory waterfowl. However, it was recommended that the sanctuary be discontinued since it was also a Provincial Game Preserve (Dzubin, 1957a).

In 1971, the Canadian Wildlife Service once again reviewed existing information on the Val Marie Reservoir Bird Sanctuary. Although no specific recommendations were made, the sanctuary was recognized as

being of value as a waterfowl production, with limited utilization by cormorants and pelicans (Poston, 1971).

In 1972, the Canadian Wildlife Service carried out aerial (July 24, 1972) and ground (August 28, 1972) investigations on the Val Marie Reservoir Bird Sanctuary to determine if the area still conformed to the basic requirements of a federal migratory bird sanctuary. This report presents the findings of this recent evaluation of the reservoir.

4. General Description

The Val Marie Reservoir Bird Sanctuary is a large, relatively deep reservoir in extreme southwestern Saskatchewan (Figure 39). This water body is located in the spear grass-blue grama-wheat grass vegetation zone of the grassland region of the province (Richards, 1969).

Bedrock geological deposits are mainly Cretaceous sedimentary rocks, sandstone and shale of the Bearpaw formation. Soils of this region are chiefly regosolic brown soils. The climate is semi-arid and the elevation of the terrain adjacent to the reservoir varies from 2,400 to 3,000 feet above sea level (Richards, 1969).

The Val Marie Reservoir was created in 1937 by impounding the Frenchman River behind a P.F.R.A. dam (Cameron, 1946). There is an adequate water supply to the reservoir from this spring-fed creek. However, since the water is heavily utilized for irrigational purposes, water level fluctuations are common and often severe. There are several islands on the lake.

The terrain adjacent to the Val Marie Reservoir is almost entirely grassland pasture (Figure 40). Cultivated areas exist only below the dam. There are two public access roads to the reservoir.

5. Physical Characteristics

(a) Area: The total surface area of the Val Marie Reservoir Bird Sanctuary is approximately 1,250 acres of water at full basin capacity (Saskatchewan Department of the Environment, 1973).

(b) Depth and Volume: The Val Marie Reservoir has a capacity of 10,100 acre feet of water (Saskatchewan Department of the Environment, 1973). There are no data available on maximum or average water depths of the reservoir.

(c) Shoreline Type: There are approximately 25 miles of shoreline on the Val Marie Reservoir Bird Sanctuary. The shoreline is rocky and sandy and wide expanses of mudflat adjacent to the water are usually in evidence by mid-summer. There is a large amount of relief between the water's edge and the upland terrain, particularly on the south side of the reservoir.

(d) Water Quality: Although there are no water quality data available for the Val Marie Reservoir, the water appears muddy-green. Heavy algal blooms are common on the reservoir by late summer.

6. Vegetation Characteristics

(a) Shoreline: The shoreline vegetation beyond the mudflat or rocky and sandy shore is prairie or grassland. Indicator species include spear grass (Stipa spp.), blue grama (Bouteloua gracilis) and wheat grass (Agropyron spp.). Ball cactus (Mamillaria vivipara), prickly-pear cactus (Opuntia spp.), greasewood (Sarcobatus vermiculatus), rose (Rosa spp.), and scrub willow (Salix spp.) are present on the terrain adjacent to the reservoir. The "delta" of the Frenchman River supports a variety of sedges (Carex spp.) and associated dry meadow plants.

(b) Emergent Aquatics: Emergent aquatic vegetation is virtually non-existent on the Val Marie Reservoir Bird Sanctuary with the exception of the west end of the reservoir where the Frenchman River enters the sanctuary. There is little relief in this area and numerous creek channels and small potholes which exist support stands of cattail (Typha latifolia) and bulrush (Scirpus spp.) when water levels are not excessively high.

(c) Submergent Aquatics: Beds of sago pondweeds (Potamogeton spp.) and water milfoil (Myriophyllum spp.) grow throughout the reservoir. An assortment of other submergent species including hornwort (Ceratophyllum demersum) and water crowfoot (Ranunculus spp.) could be expected in association with the emergent vegetation described in (b). Submergent vegetation growth is not extensive in the Val Marie Reservoir.

7. Waterfowl Use

(a) Breeding and Moulting: A few broods of Canada geese (Branta canadensis) are raised on the Val Marie Reservoir each year and there has been moderate production of ducks, mostly dabblers, in most years. An aerial survey in 1972 revealed approximately 150 ducks, primarily mallards (Anas platyrhynchos), widgeon (Mareca americana), and assorted dabblers and 40 Canada geese including several broods. The reservoir is probably used as a moulting area for small numbers of ducks which breed on the potholes in the area. Although the Val Marie Reservoir does not support large numbers of waterfowl during the breeding and moulting seasons, this water body is nonetheless important during years of drought as it represents the only permanent water body of a large size in this area.

(b) Spring and Fall Staging: The Val Marie Reservoir Bird Sanctuary is an important spring and fall staging area for Canada geese and ducks, mostly dabblers. It is the only large water body in the area and the mudflats are attractive to loafing waterfowl. There are no fall aerial survey data available on waterfowl use of the reservoir, but estimates indicate that in excess of 1,000 geese and 2,500 ducks have been observed on the sanctuary during the hunting season.

8. Other Migratory Birds

Pelicans (Pelecanus erythrorhynchos) and double-crested cormorants (Phalacrocorax auritus) frequent the Val Marie Reservoir Bird Sanctuary periodically during the summer, but are not known to breed there. Gulls (Larus spp.), terns (Sterna spp.), herons (Ardea herodias), and assorted shore birds inhabit the Val Marie Reservoir during the summer.

9. Public Utilization

(a) Hunting: The Val Marie Reservoir Bird Sanctuary, heavily used by staging migratory waterfowl, contributes to excellent hunting in the fields adjacent to the reservoir. This situation provides the only good fall waterfowl hunting for many miles in this dry terrain. Most of the waterfowl hunters are local residents from the Val Marie district. Waterfowl hunting represents the most frequent public recreational use made of the Val Marie Reservoir Bird Sanctuary.

(b) Fishing: Fishing activity in the Val Marie Reservoir is limited to a small amount of angling from the P.F.R.A. dam and from below the spillway.

(c) Other: Little use is made of the Val Marie Reservoir for activities other than hunting and fishing. There are no recreational

facilities near this water body, however, the local residents picnic on the banks occasionally. There are few large bodies of water in this part of the province which have developed parks and recreational areas.

10. Public Opinion

Interviews with local residents of the area indicated that most people are aware that the Val Marie Reservoir is protected as a Provincial Game Preserve. Little knowledge of its sanctuary status was expressed.

The public appear to be in favor of the sanctuary, primarily because of the concentrations of waterfowl which use the reservoir in the fall and provide the finest hunting available in the area. Public opinion is that if the sanctuary were open to hunting, ducks and geese would not remain on the reservoir throughout the fall.

Crop depredation by waterfowl is not regarded as a serious problem in the area.

11. Posting and Enforcement

Investigations on the Val Marie Reservoir Bird Sanctuary in 1972 indicated that the area is not posted as a federal migratory bird sanctuary and no Provincial Game Preserve signs were evident on the public access roads.

The Val Marie, Saskatchewan detachment of the Royal Canadian Mounted Police makes only routine patrols of the reservoir (R. D. Crisall, pers. comm.). The Conservation Officer (Saskatchewan Department of Natural Resources) from Val Marie was not aware that the Val Marie Reservoir is a federal sanctuary, but does carry out patrols of the area because of its status as Provincial Game Preserve (A. E. Scoville, pers. comm.).

Personnel from both enforcement agencies advise that not all of the public are aware of the protected status of the lake, and that posting of the area should proceed in the near future.

12. Discussion

Although the Val Marie Reservoir Bird Sanctuary does not produce large numbers of migratory waterfowl, its use as breeding habitat by small numbers of ducks and geese retains a resident waterfowl population in the area. The reservoir assumes a special importance to the migratory waterfowl resource during the fall when large numbers of ducks and geese stage on this water body. Staging lakes are at a premium in this portion of the province and, of those which do exist, only a very few are restricted from fall hunting activity. The Val Marie Reservoir retains large numbers of waterfowl in extreme southwest Saskatchewan.

Use of the sanctuary by the public for recreational purposes other than hunting is restricted to a limited amount of fishing and picnicking. The public are generally not aware that the reservoir is a federal migratory bird sanctuary as the area is not posted.

13. Recommendations

It is recommended that the Val Marie Reservoir Bird Sanctuary be retained as a federal migratory bird sanctuary. This water body is important to migratory waterfowl as a breeding, moulting and fall staging area. The general lack of such water bodies in this portion of Saskatchewan indicates the need that some of these be restricted from hunting. The waterfowl population from a wide area will congregate on these areas during periods of drought and during the fall staging activities.

The Val Marie Reservoir Bird Sanctuary should be posted with 10-15 federal migratory bird sanctuary signs during the 1973 field season. These signs should be placed on the public access roads to the reservoir and spaced at regular intervals along the shoreline.

14. Summary

(a) The Val Marie Reservoir Bird Sanctuary is an impoundment of the Frenchman River in extreme southwestern Saskatchewan.

(b) The area was established as a federal migratory bird sanctuary in 1948 and was evaluated as such in 1957, 1971 and 1972.

(c) The Val Marie Reservoir has a total surface area of 1,250 acres of water at full basin capacity.

(d) The reservoir is surrounded by semi-arid grassland and has limited areas of submergent and emergent aquatic vegetation.

(e) Waterfowl use the area for breeding, moulting and fall staging activities.

(f) The Val Marie Reservoir Bird Sanctuary provides a considerable amount of waterfowl hunting and limited recreation by fishing and picnicking for the local residents.

(g) The reservoir is not posted as a federal migratory bird sanctuary.

(h) The public are in favor of retaining the sanctuary as a protected area.

(i) The Val Marie Reservoir Bird Sanctuary should be retained as a protected area and posted during the 1973 field season.



Figure 39. Val Marie Reservoir Migratory Bird Sanctuary.



Figure 40. The north end of Val Marie Migratory Bird Sanctuary.

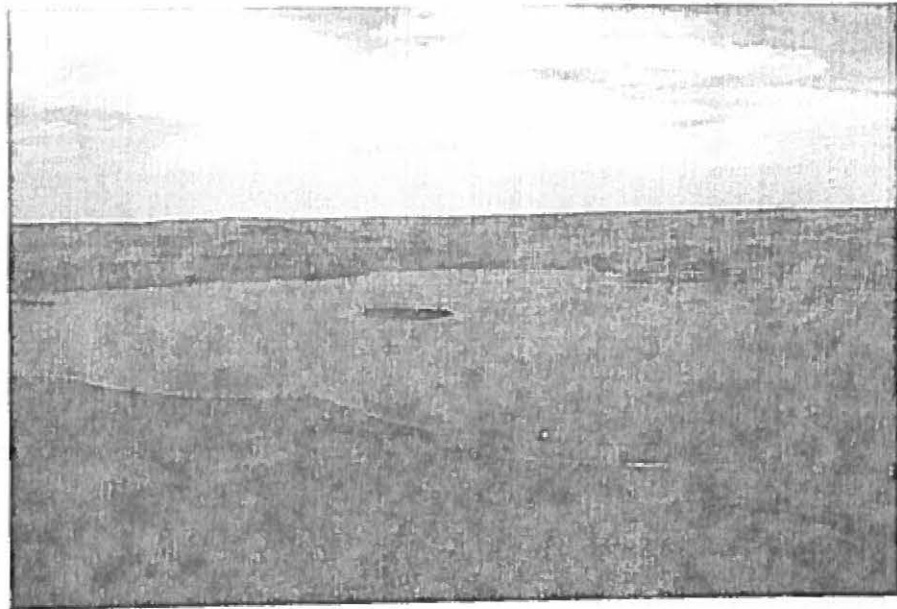


Figure 41. Canada geese nest on the islands of Val Marie Migratory Bird Sanctuary.

XV. Waskana Lake Bird Sanctuary

1. Location

The Waskana Lake Bird Sanctuary is located within the city limits of Regina, Saskatchewan between Highway No. 1 and Regina Bypass No. 1 Highway.

2. Legal Description

Firstly: All that portion of the southwest quarter of Section 17 in Township 17, Range 19, lying west of the 2nd Meridian in the Province of Saskatchewan, Dominion of Canada, lying south and west of the southerly and westerly limits of Douglas Park as shown on plan of Record in the Land Titles Office for the Regina Land Registration District as No. 3256 and Q3743, respectively.

Secondly: All that portion of the original road allowance lying between Sections 8 and 17 in the said Township and Range and west of the westerly limit of said plan Q3743.

Thirdly: All that portion of the north one-half of said Section 8, lying west of the westerly limit of the surveyed roadway, known as No. 1 Highway bypass, as shown in the Plan of Record in the said Land Titles Office as FU741, excepting there from the portions included for registration on Plans of Record in said Land Titles Office as No. FL1542 and ER3825 and also excepting that portion lying between said Plans FL1542 and ER3825 (The Canada Gazette, 1954).

3. Background Information

In the 1950's, the Waskana Lake, creek and contiguous marshes came to the attention of the Saskatchewan Museum of Natural History. As the city of Regina expanded and enveloped the lake, action was taken to

preserve this natural park area. Suggestions were made for posting, fencing, and developing the park. In 1953, a pair of Canada geese were introduced into the area and a breeding program initiated in this proposed "Bird Park" (Bard, 1956). Concern was expressed regarding the future management, enforcement and development of the area. The city council of Regina, the Fish and Game League, the Natural History Society and the Saskatchewan Department of Natural Resources were encouraged to take on the responsibility of developing and maintaining the park. Although the Waskana Lake Bird Sanctuary was established by the Canadian Wildlife Service in 1956, the development and administration of the area was carried out mainly by the City of Regina and the Wascana Center Authority (Murray, 1966).

In 1957, the Canadian Wildlife Service conducted an evaluation of the Waskana Lake Bird Sanctuary. A major part of this investigation dealt with the proposed development plans for the sanctuary as a wildlife and public recreational area (Dzubin, 1957b). The City of Regina and the Saskatchewan Museum of Natural History were planning to develop the area in the near future, and the Canadian Wildlife Service was urged to encourage and assist these activities.

The Canadian Wildlife Service largely ignored the Waskana Lake Bird Sanctuary until 1971, when it was recommended that the area be abolished as a federal sanctuary since the Canadian Wildlife Service had almost no control over land use changes in the park (Poston, 1971). The necessary maintenance and administration of the lake was being carried out by city and provincial authorities.

A further evaluation of the Waskana Lake Bird Sanctuary was carried out in 1972 when aerial (July 24, 1972) and ground (August 29, 1972) surveys were conducted by the Canadian Wildlife Service.

4. General Description

The Waskana Lake Bird Sanctuary is located within the city limits of Regina, Saskatchewan in south-central Saskatchewan (Figure 42). The lake, creek and associated marshes are completely surrounded by a major urban center and receive their water supply from Waskana Creek which enters the area from the southwest (Figure 43). The sanctuary, which includes land as well as water areas, is developed as a public park with large expanses of lawn, cultivated trees and shrubs, sidewalks, roads, and park benches. There are nine major public access roads to the sanctuary.

5. Physical Characteristics

(a) Area: The total area of the Waskana Lake Bird Sanctuary includes approximately 100 acres of land and 220 acres of water (Murray, 1966).

(b) Depth and Volume: There are approximately 5,850 acre feet of water in Waskana Lake at full basin capacity (Saskatchewan Department of the Environment, 1973).

(c) Shoreline Type: The entire shoreline of the Waskana Lake Bird Sanctuary has moderate relief and well vegetated banks of lawn and shrubs in the park area and of a marshy nature further to the southeast.

(d) Water Quality: The only water quality measurement available is a pH of 9.3 (Saskatchewan Department of the Environment, 1973). The

lake water appears quite clear and free of heavy algal blooms.

6. Vegetation Characteristics

(a) Shoreline: The shoreline vegetation of the Waskana Lake Bird Sanctuary is devoted to large expanses of lawn and various species of native and exotic tree and shrub species. Typical city park vegetation is represented in this sanctuary.

(b) Emergent Aquatics: For the most part, the sanctuary is void of emergent aquatic vegetation, particularly at the west end of the lake. Elsewhere, especially on the southeast part of the sanctuary and along the banks of Waskana Creek, large dense stands of emergent cattail (Typha latifolia), bulrush (Scirpus spp.) and sedges (Carex spp.) grow.

(c) Submergent Aquatics: Beds of pondweeds (Potamogeton spp.) and water milfoil (Myriophyllum spp.) grow throughout the Waskana Lake Bird Sanctuary. An assortment of other submergent species including hornwort (Ceratophyllum demersum) and water crowfoot (Ranunculus spp.) grow in association with the emergent vegetation described in (b).

7. Waterfowl Use

(a) Breeding and Moulting: The Waskana Lake Bird Sanctuary supports a considerable amount of excellent waterfowl habitat in close proximity to a high urban population (Figure 44). Canada geese (Branta canadensis) were introduced into the lake in 1953 and in less than twenty years increased to over 200 breeding pairs. Several dabbling duck species, most notably the mallard (Anas platyrhynchos) and diving ducks including the redhead (Aythya americana), canvasback (A. valisineria) and ruddy duck (Oxyura jamaicensis) breed regularly in Waskana Lake (Sanderson, 1964). Although waterfowl production in the sanctuary is not exceptionally high this fine marsh area does produce a good number of ducks and geese.

(b) Spring and Fall Staging: The Waskana Lake Bird Sanctuary is used by large numbers of spring and fall staging waterfowl and supports a considerable amount of wintering birds. The power plant on this water body keeps the water open during the winter and has supported as many as 1,000 Canada geese and 900 mallards throughout the winter. Lesser numbers of gadwall (Anas strepera), pintail (A. acuta), blue-winged teal (A. discors), American widgeon (Mareca americana), canvasback, lesser scaup (A. affinis), common goldeneye (Glaucionetta clangula), bufflehead (G. albeola) and ruddy duck have been recorded on Waskana Lake throughout the winter (Renaud, 1972).

8. Other Migratory Birds

The marsh habitat of the Waskana Lake Bird Sanctuary supports a large number of avian species as outlined in Renaud (1972) and Sanderson (1964). Colonial birds which breed on the marsh include the eared grebe (Podiceps caspicus), American avocet (Recurvirostrata americana), common tern (Sterna hirundo), black tern (Chilidonias niger), yellow-headed blackbird (Xanthocephalus xanthocephalus), and red-winged blackbird (Agelaius phoeniceus). Other species of birds which may be observed within the confines of the Waskana Lake Bird Sanctuary include five species of grebes (Colymbus spp., Aechmophorus spp., and Podilymbus spp.), white pelicans (Pelicanus erythrorhynchos), and mute (Cygnus olor) and whistling swans (C. columbianus) (Renaud, 1972). Rails (Porzana carolina), coots (Fulica americana) and gulls (Larus spp.) also frequent the sanctuary.

9. Public Utilization

(a) Hunting: The location of the Waskana Lake Bird Sanctuary within the city limits of Regina prevents the hunting of waterfowl in the area immediately adjacent to the sanctuary. The Saskatchewan

Department of Natural Resources has also prohibited the hunting of geese in parts of three game management zones south and west of Regina to protect those birds which may forage in that direction to feed during the hunting season. The Waskana Lake Bird Sanctuary does not, therefore, contribute directly to waterfowl hunting in the area. It is noteworthy, however, that geese from the Waskana flock have been used in various restocking programs in Saskatchewan which constitutes a very worthwhile contribution to the waterfowl resource of the province.

(b) Fishing: The Department of Natural Resources introduced pickerel and perch fry in the late 1950's and in 1970 (Sask. D.N.R., 1953-58, 1970). Waskana Lake has received a high degree of fishing intensity in recent years.

(c) Other: As previously outlined, the Waskana Lake Bird Sanctuary is developed as a park and recreational area. Sail and row-boating on the lake is common and the park area is used for sight-seeing.

10. Public Opinion

Although no interviews with local residents of the sanctuary area were carried out, there is no doubt that this very important and popular park area would have the complete support of the people of Regina and surrounding district.

11. Posting and Enforcement

Investigation of the Waskana Lake Bird Sanctuary in 1972 indicated that the area is not posted as a federal migratory bird sanctuary. All enforcement of the area is carried out by city park officials and the Regina City Police.

12. Discussion

The Waskana Lake Bird Sanctuary is a rare example of an excellent marsh area and its naturally occurring flora and fauna existing in close association with a major urban center. Although waterfowl production on the area is not exceptionally high, the resident population of ducks, geese, swans and numerous other marsh species presents a unique opportunity for the co-existence of a popular park adjacent to a natural wildlife area. The Waskana Lake Bird Sanctuary cannot be underestimated with reference to its value to the wildlife and the public.

Waskana Lake has not been maintained as a sanctuary by the federal government and the major part of the maintenance and development of Waskana Lake Bird Sanctuary has been carried out by the Government of Saskatchewan, the City of Regina, the Wascana Center Authority and various interested groups such as the Regina Natural History Society.

13. Recommendations

It is recommended that the Waskana Lake Bird Sanctuary be abolished as a federal sanctuary. There can be no doubt that this unique area possesses all of the major requirements of a federal bird sanctuary and is of inestimable value to the wildlife and the public who utilize the park and lake. There can also be no doubt that this area should remain protected as a wildlife refuge and maintained and developed as such. But the Canadian Wildlife Service probably should not become involved in this area to the same extent as the other sanctuaries in Saskatchewan.

It has been suggested that the posting of the Waskana Lake Bird Sanctuary as a federal migratory bird area would be an excellent form

of advertisement for the Canadian Wildlife Service due to the high intensity of public use (Poston, 1971). This is indeed true, but it could also be construed as soliciting credit for something others have achieved. The C.W.S. has not played a major role in the development and maintenance of the lake and park, and posting the area as a federal sanctuary would not convey this fact to the public.

Also to be considered is the fact that the C.W.S. has little control over land use changes or development of the park as all aspects of administration, maintenance and development have been taken over by the Wascana Center Authority and Regina city officials. The C.W.S. could not hope to assert any amount of authority regarding this park without causing adverse city and government reaction.

Finally, it is not necessary that the federal government retain the Waskana Lake Bird Sanctuary in order to preserve the value of this area for wildlife and the public. The Wascana Center Authority and the City of Regina has and will continue to assume responsibility for the maintenance, administration, development and protection of the lake and park as it is one of the most important and popular park areas in the city. In any matters regarding the migratory bird use of the area, the Canadian Wildlife Service will always have authority under the Migratory Birds Convention Act. It is not necessary for the area to be retained as a federal sanctuary to ensure the protection of migratory bird species.

14. Summary

(a) The Waskana Lake Bird Sanctuary is a lake and park located within the city limits of Regina in south-central Saskatchewan.

(b) The area was established as a federal bird sanctuary in 1956 and was evaluated as such in 1957, 1971 and 1972.

(c) The total area of the Waskana Lake Bird Sanctuary is approximately 100 acres of land and 220 acres of water. There are 5,850 acre feet of water in Waskana Lake at full basin capacity.

(d) Waskana Lake is surrounded by wide expanses of trimmed lawn and cultivated shrubs and trees. There are extensive areas of emergent and submergent aquatic vegetation within the sanctuary area.

(e) Waterfowl use Waskana Lake for breeding, moulting and wintering purposes.

(f) Most of the common bird species of prairie marshes can be found in the Waskana Lake Bird Sanctuary. Several colonial species nest in the sanctuary.

(g) The sanctuary provides a considerable amount of fishing, boating and assorted recreational activities.

(h) The sanctuary is not well posted as a federal migratory bird sanctuary.

(i) The Waskana Lake Bird Sanctuary should not be retained as a federal migratory bird sanctuary and should be abolished in the near future.

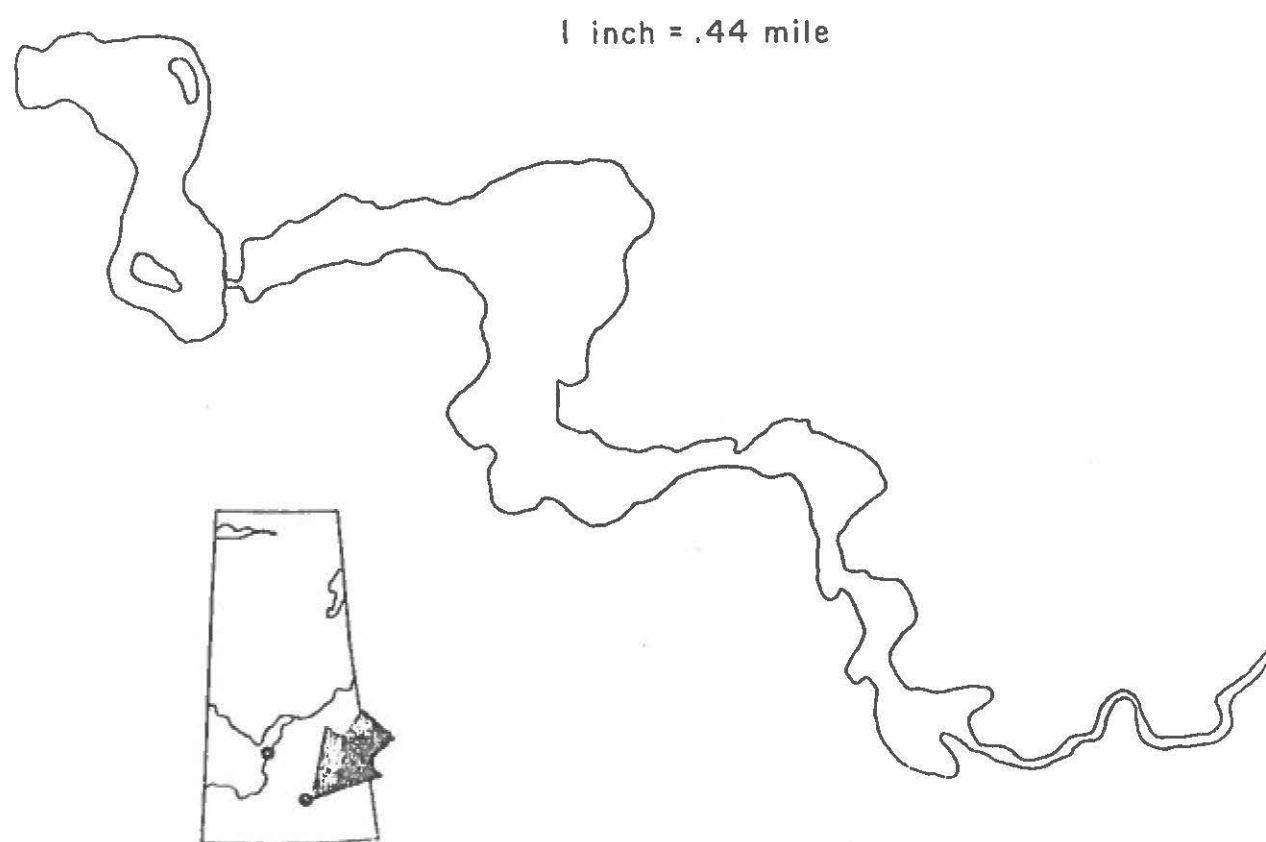


Figure 42. Waskana Lake Migratory Bird Sanctuary.

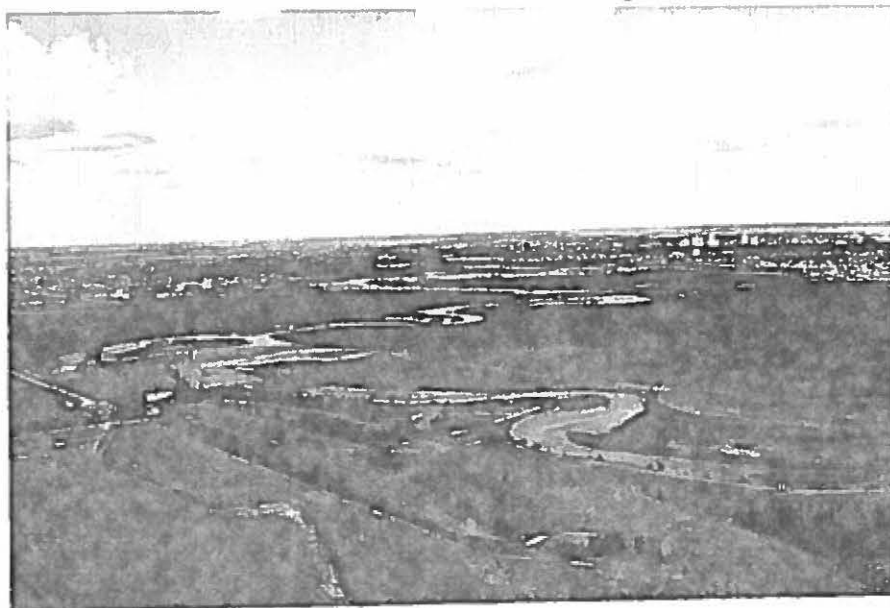


Figure 43. Waskana Creek flows into the southeast end of Waskana Lake Migratory Bird Sanctuary.

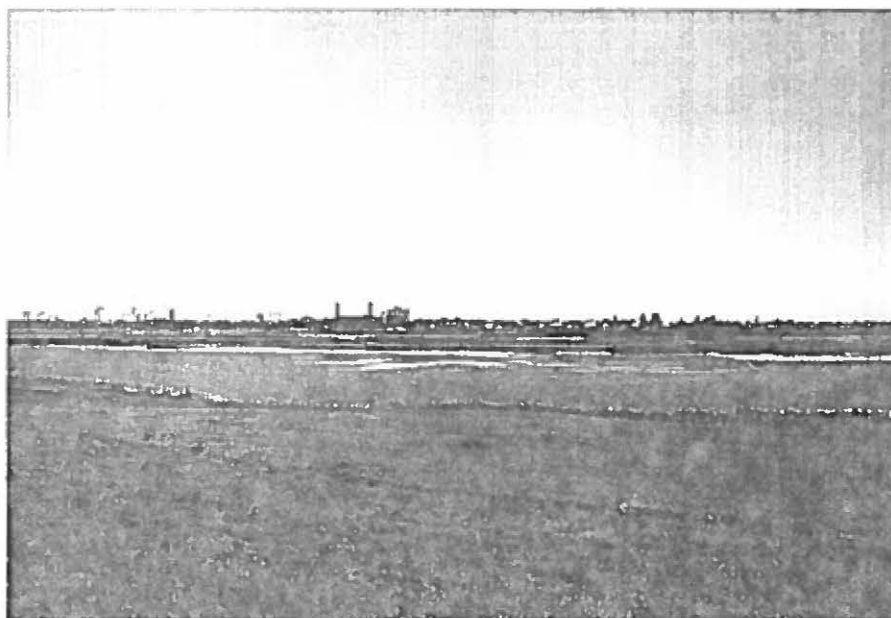


Figure 44. Waskana Lake provides an excellent marsh within the city limits of Regina, Saskatchewan.

E. DISCUSSION AND SUMMARY

I. Management of the Migratory Bird Sanctuaries

The federal migratory bird sanctuaries in Saskatchewan should be posted with sanctuary signs in the immediate future. The number of signs required for each sanctuary is outlined in this report, and should be regarded as a minimum. This number is based upon the erection of one sign on each public access road to the sanctuary. Some areas will, because of their location and accessibility, require additional signs which may be erected at a later date when time permits. Metal signs and stakes should be used if possible to ensure permanency and minimum maintenance.

In addition to the standard metal sanctuary signs, large explanatory signs indicating the function and value of the sanctuaries should be erected in areas which receive a large amount of public use. An excellent form of advertisement for the Canadian Wildlife Service and the creation of a public relations and education program regarding the sanctuaries, could be attained by the distribution of pamphlets on these areas and in the towns located near the sanctuaries. The pamphlets could give a brief history of the area, the purpose of the sanctuary, a species list of the flora and fauna expected to be found in the sanctuary, and an abstract of the Migratory Bird Sanctuary Regulations. The sanctuaries which should receive these public relations measures are outlined within the text of this report.

The erection and maintenance of the sanctuary signs should be carried out under the supervision of the Canadian Wildlife Service. Assistance could be obtained from local detachments of the R.C.M.P. and district Conservation Officers of the D.N.R.

The federal migratory bird sanctuaries in Saskatchewan should be evaluated by the Canadian Wildlife Service at least once every five years. These periodic investigations should involve an evaluation of the migratory bird and public use of the sanctuaries. Especially important are indications of any major habitat change on these areas which might affect migratory bird use. Natural changes, and those caused by increased recreational development and public utilization of the areas should be carefully monitored. During these evaluations the Canadian Wildlife Service should remain aware of public attitudes toward the sanctuaries, particularly with regard to crop depredation and the effects of the protected areas on migratory waterfowl hunting. Since this report presents all of the necessary background information, a short report every five years on the status of the sanctuaries should suffice to keep C.W.S. up to date on these areas.

The migratory bird sanctuaries in Saskatchewan should be patrolled at least twice a year (in the early spring and immediately prior to the hunting season) to ensure that posting of these areas with federal sanctuary signs is adequate and that these signs are properly maintained. This could perhaps be carried out by the district Conservation Officers of the Saskatchewan Department of Natural Resources, or by the local detachments of the Royal Canadian Mounted Police. These individuals would forward a report to the Canadian Wildlife Service and if additional signs are required, the necessary action taken.

The individual bird sanctuaries differ in the intensity of use by the public and consequently will require a varying degree of management. The previously discussed five year evaluations and bi-annual patrols

represents the absolute minimum of effort required on any sanctuary. Those areas which receive a large amount of public recreational use (e.g., Redberry Lake) or are important waterfowl fall staging areas located in an area of high hunter concentrations (e.g., Opuntia Lake) demand additional attention. These "problem" areas may require an increased number of patrols by wildlife officials and a continuing program of public education on the value of these areas to the wildlife resource. This can be effected through a cooperative effort by C.W.S., D.N.R. and the R.C.M.P. with regard to the patrols. The presence of large, introductory signs on these areas and the distribution of information pamphlets as previously discussed would create public appreciation for the value of these sanctuaries and the reasons for their establishment.

Any proposed changes in the status of the migratory bird sanctuaries or the implementation of intensive management programs on these areas should be preceded by consultation with C.W.S., D.N.R. and R.C.M.P. personnel. Officials of these agencies should be aware at all times of the status of these areas. The same should hold true with the provincial game preserves and wildlife refuges where these areas coincide with migratory bird sanctuaries.

II. Migratory Bird Sanctuary Regulations

It has been some time since the Migratory Bird Sanctuary Regulations have been critically examined. Although the general policy of the Canadian Wildlife Service may not have changed since the most recent version of these regulations was prepared, there have been changes in the sanctuaries which have created new problems not covered by the regulations.

This is not meant to be a thorough critique of these regulations; however, several problems were confronted during this investigation which showed these regulations to be inadequate in some areas. Perhaps it will be to the advantage of those who will eventually undertake the task of rewriting the Migratory Bird Sanctuary Regulations to point out some weakness and inconsistencies of these regulations as they apply to the situation in Saskatchewan:

1. Section 2 (a), (e) should refer to the Canadian Wildlife Service and the Department of the Environment.

2. Section 7 refers to the presence of dogs or cats in the sanctuaries. In several of the Saskatchewan sanctuaries it would be difficult to enforce this section. Some of these areas have become very popular and well developed summer resorts. It would be unrealistic to demand that the public obtain special permits to allow them to transport their pets into such areas.

3. The "detrimental" activities referred to Section 8 could present special problems in court in some instances. For example, power-boats in proximity to islands utilized as breeding areas by colonial birds are often detrimental to these birds, but not always. Perhaps restrictions on power-boats should be introduced into the regulations for some Saskatchewan sanctuaries where this is a problem (e.g., Redberry Lake). However, the Migratory Bird Sanctuary Regulations are not meant to be overly restrictive as far as recreational areas are concerned, and severe restrictions could cause adverse public reaction.

4. The protected area of the sanctuaries includes only "the lands covered by the waters from day to day". The boundaries of the sanctuaries should be extended to include some land beyond the water's edge. To protect only the water area is to leave a major portion of the migratory birds and their habitat susceptible to harm.

5. If the protected area of the sanctuary only includes that part covered by water "from day to day", what happens if part of the sanctuary dries up during a severe drought? Can this land then be legally farmed, ditched, etc., activities which would apparently be legal, but could serve to the future detriment of the sanctuary?

6. The Migratory Bird Sanctuary Regulations should be reviewed and rewritten as soon as possible.

III. Summary

The migratory bird sanctuaries in Saskatchewan were established to protect migratory birds and their habitat and to create areas where the public may study and observe birds. The first federal migratory bird sanctuary in Canada was established in 1887 on Last Mountain Lake, Saskatchewan. Since then, additional areas have been preserved until at present there are fifteen sanctuaries located within the province. In addition to the federal sanctuaries, the Province of Saskatchewan has retained thirty provincial game preserves and twelve wildlife refuges.

The most recent complete evaluation of the migratory bird sanctuaries in Saskatchewan occurred in 1957. However, few of the recommendations suggested were carried out and these areas have remained

largely neglected until the present. This report is the most detailed investigation on the sanctuaries carried out to date, and represents a desire by the Canadian Wildlife Service to assume responsibility for the administration and management of these areas.

Information was collected on the fifteen individual sanctuaries in Saskatchewan including data on the physical characteristics of the areas, an evaluation of the habitat and the utilization of these areas by migratory birds and the public. The amount of enforcement that each area receives and public attitudes toward the sanctuaries were investigated. Prior to the evaluation of these areas, a complete literature review on the sanctuaries and the Canadian Wildlife Service policy on the administration of these areas was conducted.

Twelve of the fifteen migratory bird sanctuaries in Saskatchewan should be retained as federal sanctuaries. Indian Head, Sutherland and Waskana sanctuaries should be discontinued. The former two do not sustain enough habitat or migratory birds to be of any value. The latter, although an excellent marsh area, is out of the control of the Canadian Wildlife Service.

The other sanctuaries are important as breeding, moulting and fall staging areas for waterfowl and at least four are breeding areas for colonial water birds. Most of these supply some public recreation in the form of boating, fishing or hunting and four are popular summer resorts. The public are unanimous in their desire to retain these twelve areas as federal sanctuaries.

There have been enforcement problems on many of these areas, primarily due to the lack of proper posting of sanctuary signs. None

of these areas are properly posted. Nearly two hundred signs are required for the adequate posting of all these areas, although half that number will suffice until additional time and funds are available. In addition, three sanctuaries should have large introductory signs erected on the public recreation areas of the lakes.

The migratory bird sanctuaries of Saskatchewan should be evaluated every five years and be patrolled a minimum of twice a year to ensure the maintenance of the sanctuary signs. Regular enforcement patrols, if possible, should be carried out by C.W.S., D.N.R. and R.C.M.P. personnel. The Migratory Bird Sanctuary Regulations should be reviewed and rewritten in the near future.

F. LITERATURE CITED

- Anonymous. 1962. Protection urged for colonial birds on Redberry Lake. *Blue Jay*, 20:77.
- Bard, F.G. 1956. Proposed Wascana Bird Park. Saskatchewan Natural History Society. Unpublished report. 6pp.
- Belcher, M. 1969. Birds of Regina. Regina, Saskatchewan Natural History Society. 78pp.
- _____. 1972. An Early Provincial Museum field camp in the Battleford area. *The Blue Jay*. March, 1972. p. 8-17.
- Brace, R.K. 1972. An evaluation of lure crops as a means of alleviating crop depredation by waterfowl in Saskatchewan. Canadian Wildlife Service. Unpubl. report.
- Cameron, A.W. 1946. Report on waterfowl investigations conducted at P.F.R.A. projects in southwestern Saskatchewan. Canadian Wildlife Service. Unpublished report. 53pp.
- Canada Dept. of Regional and Economic Expansion. 1973. Unpublished report to Canadian Wildlife Service, Saskatoon. 5 charts, pers. comm. W.B. Thompson.
- Dzubin, A. 1957a. Val Marie Reservoir Bird Sanctuary (Saskatchewan). Canadian Wildlife Service. Unpubl. report. 3pp.
- _____. 1957b. Wascana Lake Bird Sanctuary (Saskatchewan). Canadian Wildlife Service. Unpubl. report. 3pp.
- _____. 1957c. Opuntia Lake Bird Sanctuary (Saskatchewan). Canadian Wildlife Service. Unpubl. report. 4pp.

- _____. 1957d. Last Mountain Lake Bird Sanctuary (Saskatchewan).
Canadian Wildlife Service. Unpubl. report. 4pp.
- _____. 1957e. Old Wives Lake Bird Sanctuary. (Saskatchewan). Canadian
Wildlife Service. Unpubl. report. 3pp.
- _____. 1957f. Indian Head Bird Sanctuary (Saskatchewan). Canadian
Wildlife Service. Unpubl. report. 2pp.
- _____. 1957g. Duncairn Reservoir Bird Sanctuary (Saskatchewan).
Canadian Wildlife Service. Unpubl. report. 3pp.
- _____. 1971. Prairie Canada Wildfowl Inventories. Autumn 1956-
1970. Unpubl. printouts of fall aerial surveys.
- Gouffrey, Earl. W. 1966. Birds of Canada. Ottawa, Queen's Printer.
428p.
- Gollop, J.B. 1957a. Lake Lenore Bird Sanctuary (Saskatchewan).
Canadian Wildlife Service. Unpubl. report. 2pp.
- _____. 1957b. Upper Rousay Lake Bird Sanctuary (Saskatchewan).
Canadian Wildlife Service. Unpubl. report. 3pp.
- _____. 1957c. Sutherland Bird Sanctuary (Saskatchewan). Canadian
Wildlife Service. Unpubl. report. 2pp.
- _____. 1957d. Scent Grass lake Bird Sanctuary (Saskatchewan).
Canadian Wildlife Service. Unpubl. report. 3pp.
- _____. 1957e. Redberry Lake Bird Sanctuary (Saskatchewan). Canadian
Wildlife Service. Unpubl. report. 3pp.
- _____. 1957f. Neely Lake Bird Sanctuary (Saskatchewan). Canadian
Wildlife Service. Unpubl. report. 2pp.
- _____. 1957g. Murray Lake Bird Sanctuary (Saskatchewan). Canadian
Wildlife Service. Unpubl. report. 3pp.

- _____. 1957h. Basin and Middle Lakes Bird Sanctuary (Saskatchewan).
Canadian Wildlife Service. Unpubl. report. 2pp.
- Hewitt, C.G. 1921. The Conservation of the Wildlife of Canada. Charles
Scribner's Sons, New York. 344pp.
- Houston, C.S. 1962. Hazards faced by colonial birds. The Blue Jay,
20:74-77.
- Houston, C. Stuart. 1969. Turkey vulture breeding records in
Saskatchewan. Blue Jay, 27:37.
- Houston, C. 1971. Recent Saskatchewan banding of the double-crested
cormorant. Blue Jay, 29:74-79.
- _____. 1972. Recent Saskatchewan banding of the white pelican.
Blue Jay, 30:24-27.
- Knight, Keith M. 1967. Birds of the Moose Jaw area. Moose Jaw
Natur. History Soc.
- Lies, Michael F. and William H. Behle. 1966. Status of the white
pelican in the United States and Canada through 1964. Condor
68:279-292.
- Macoun, John, and James H. Macoun. 1909. Catalogue of Canadian birds.
Ottawa. Dept. of Mines.
- Mitchell, H. Hedley. 1924. Catalogue of the birds of Saskatchewan.
Can. Field-Nat., 38:101-118.
- Murray L. H. 1966. Bird sanctuaries in Saskatchewan 1887-1965. Blue
Jay 1966:110-120.
- Hieman, D.J. 1971. Evaluation of the Migratory Bird Sanctuaries in
Saskatchewan. Canadian Wildlife Service. Unpubl. progress report.
6pp.

- Poston, H.J. 1971. Comments on migratory bird sanctuaries in Saskatchewan. Canadian Wildlife Service. Unpubl. report. 3pp.
- Rawson, D.S. and J.E. Moore. 1944. The Saline Lakes of Saskatchewan. Canadian Journal of Research. D, 22:141-201.
- Renaud, W. 1972a. Birds of Old Wives Lake. Canadian Wildlife Service federal migratory bird sanctuary report. Unpubl. report. 5pp.
- _____. 1972b. Birds of Redberry Lake. Canadian Wildlife Service federal migratory bird sanctuary report. Unpubl. report. 11pp.
- _____. 1972c. Birds of Scent Grass Lake. Canadian Wildlife Service federal migratory bird sanctuary report. Unpubl. report. 4pp.
- _____. 1972d. Birds of Wascana Lake. Canadian Wildlife Service federal migratory bird sanctuary report. Unpubl. report. 3pp.
- Renewable Resources Consulting Services. 1970. A preliminary study of waterfowl damage to grain crops in Saskatchewan. Edmonton, R.R.C.S., 67pp.
- Richards, J.H. ed. 1969. The Atlas of Saskatchewan. University of Saskatchewan, Saskatoon. 236pp.
- Sanderson, R.M. 1964. Regina Waterfowl Park nesting survey, 1962. Blue Jay, 22:14-17.
- Saskatchewan Department of the Environment. 1973. Unpubl. report on water levels of several Saskatchewan lakes. 5pp., 17 charts, pers. comm. D.L. Macleod.
- Saskatchewan Department of Natural Resources. 1950-1971. Annual Reports.
- _____. 1961. Depth Sounding Map. Last Mountain Lake. D.N.R., Administration Bldg., Regina. 1pp.
- _____. 1971. Game Preserves. Wildlife Bulletin, June 10, 1971. Saskatchewan Fisheries and Wildlife Branch. 29pp.

- Saskatchewan Fisheries and Wildlife Branch. 1973. Unpubl. report on water levels and water quality measurements of several Saskatchewan lakes. 6pp., pers. comm. P.C. Naftel.
- Saskatchewan Gazette. 1970a. Saskatchewan Regulation 221/70. The Saskatchewan Gazette, Vol. 66, #37, Part II, 408-409.
- _____. 1970b. Saskatchewan Regulation 136/70. The Saskatchewan Gazette, Vol. 66, #24, Part II, 235-237.
- _____. 1970c. Saskatchewan Regulation 223/70. The Saskatchewan Gazette, Vol. 66, #37, Part II, 410.
- _____. 1971a. Saskatchewan Regulation 207/71. The Saskatchewan Gazette, Vol. 67, #30, Part II, 399-400.
- _____. 1971b. Saskatchewan Regulation 224/71. The Saskatchewan Gazette, Vol. 67, #33, Part II, 416-419.
- Stephen, W.J.D. 1960. Neely Lake Bird Sanctuary (Saskatchewan). Canadian Wildlife Service. Unpubl. report. 1pp.
- Stephen, W. and J. Hatfield. 1964. Investigation of Redberry Lake Bird Sanctuary. Canadian Wildlife Service. Unpubl. report. 4pp.
- Vermeer, Kees. 1970. Aquatic breeding birds of the Isle of Bays. Blue Jay, 28:86-87.
- _____. 1970. Colonies of double-crested cormorants and white pelicans in Saskatchewan. Canadian Field-Naturalist, 84:39-42.

Appendix A. Description of the Migratory Bird Sanctuaries administered by Canadian Wildlife Service.

1. Basin and Middle Lakes Bird Sanctuary

Comprising the lands covered by the waters from day to day of Basin and Middle Lakes, together with the islands therein, in Township 41, Range 22; Townships 41 and 42, Range 23; Township 42, Range 24, all West of the 2nd Meridian.

2. Duncairn Reservoir Bird Sanctuary

Comprising the following areas: all West of the Third Meridian.

In Township 13, Range 15, that part of Sections 6, 7 and 18; in township 13, Range 16, that part of Sections 1 and 12; in Township 12, Range 16, that part of sections 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 20, 21, 22, 25, 26, 27, 28, 29, 35 and 36; in Township 12, Range 17, part of sections 13, 14, 23, 24, 26, and 35; in Township 11, Range 16, that part of sections 32 and 33 taken for the right-of-way of the Duncairn Reservoir as said reservoir is shown on a plan of survey by J. D. Shepley, dated 1942 and on file in the office of the Controller of Surveys, Department of Natural Resources, as number F. 793.

3. Indian Head Bird Sanctuary

The North half of the Southwest quarter of Section 11, Township 18, Range 13, West of the 2nd Meridian.

4. * Old Wives Lake Bird Sanctuary

Comprising the lands covered by the waters from day to day of Old Wives Lake, formerly known as Johnstone Lake, together with the islands therein, in Townships 12 and 13, Range 28; Townships 12, 13 and 14, Range 29; Townships 12, 13 and 14, Range 30, all west of the 2nd Meridian; Townships 12, 13 and 14, Range 1 and Townships 13 and 14, Range 2, all west of the 3rd Meridian.

5. Last Mountain Lake Bird Sanctuary

Comprising the lands covered by the waters from day to day of that part of Last Mountain Lake lying wholly to the north of Township 26,

* Name changed by P. C. 1955-460 of March 30, 1955.

5. (cont'd)

Ranges 23 and 24, west of the 2nd Meridian, and the following sections, quarter sections and legal subdivisions:

In Township 27, Range 23, West of the 2nd Meridian: The fractional northwest quarter and fractional legal subdivision 5 of Section 7; the fractional northwest and southwest quarters of Section 18; the fractional northwest and southwest quarters, legal subdivision 2 and fractional legal subdivisions 7, 10 and 15 of Section 19; the fractional northwest and southwest quarters and fractional legal subdivision 7 of Section 30; fractional Section 31.

In Township 28, Range 23, west of the 2nd Meridian: The islands in Sections 5, 6 and 8; fractional Sections 7, 18 and 19 and the parts of legal subdivisions 4 and 5 of section 20 lying west of Lanigan Creek.

In Township 27, Range 24, west of the 2nd Meridian: Fractional Sections 12, 13 and 24, and fractional legal subdivisions 1, 8 and 15 of Section 36.

In Township 28, Range 24, west of the 2nd Meridian: The islands in Section 1, the islands in fractional Section 12, and fractional legal subdivisions 15 and 16 of fractional Section 12; fractional Section 13.

6. Lenore Lake Bird Sanctuary

Comprising the lands covered by the waters from day to day of Lenore Lake, together with the unpatented islands therein, in Townships 40, 41 and 42, Range 21 and in Townships 40 and 41, Range 22, all west of the 2nd Meridian.

7. Murray Lake Bird Sanctuary

The following areas in Range 16, West of the Third Meridian.

In Township 46, all that portion covered by the waters of Murray Lake, as said lake is shown on a plan of survey approved and confirmed by F.H. Peters, Surveyor General at Ottawa, the 5th of January 1928.

And in Township 47, all that portion covered by the waters of Murray Lake, as said lake is shown on a plan of survey approved and confirmed by E. Deville, Surveyor General at Ottawa the 28th of September 1918.

In Township 46, Range 17, West of the 3rd Meridian, that portion covered by the waters of Murray Lake, as said lake is shown on a plan of survey, approved and confirmed by E. Deville, Surveyor General at Ottawa the 19th December 1916.

8. Neely Lake Bird Sanctuary

Comprising the lands covered by the waters from day to day of Neely Lake, together with the islands therein, in Township 43, Range 6, west of the 2nd Meridian.

9. Opuntia Lake Bird Sanctuary

Comprising the lands covered by the waters from day to day of Opuntia Lake, together with the islands therein, in Townships 32 and 33, Range 18, and Townships 32 and 33, Range 19, all West of the 3rd Meridian.

10. Redberry Lake Bird Sanctuary

Comprising the lands covered by the waters from day to day of Redberry Lake, together with the islands therein, in Townships 42, 43, and 44, Range 8, and in Townships 42 and 43, Range 9, all west of the 3rd Meridian.

11. Scent Grass Lake Bird Sanctuary

The following areas in Township 46, West of the 3rd Meridian.

In Range 15, all that portion of Sections 7, 8, 9, 16, 17 and 18 covered by the waters of Scent Grass Lake as said lake is shown on a plan of survey of said Township approved and confirmed by F.H. Peters, Surveyor General at Ottawa, the 10th of December 1927. In Range 16, all that portion of Sections 12 and 13, covered by the waters of Scent Grass Lake, as said lake is shown on a plan of survey of said Township approved and confirmed by F.H. Peters Surveyor General at Ottawa, the 5th of January 1928.

Area 1504.1 acres more or less.

12. Sutherland Bird Sanctuary

The southeast quarter of Section 12 and the northeast quarter of Section 1, Township 37, Range 5, west of the 3rd Meridian.

13. Upper Rousay Lake Bird Sanctuary

In Township 25, Range 5, west of the 2nd Meridian and being all that portion of Sections 22, 23, 24, 25, 26, 34, 35 and 36, covered by the waters of Upper Rousay Lake.

14. Val Marie Reservoir Bird Sanctuary

In Township 4, Range 14, west of the 3rd Meridian and being all that portion of Sections 15, 20, 21, 22, 28, 29, 33 and 34 covered by the waters of the Val Marie Reservoir.

15. Waskana Lake Bird Sanctuary*

Firstly: ALL THAT PORTION of the south west quarter of section 17 in Township 17, Range 19, lying west of the Second Meridian in the Province of Saskatchewan, Dominion of Canada lying south and west of the southerly and westerly limits of Douglas Park as shown on plan of Record in the Land Titles Office for the Regina Land Registration District as No. F.3256 and Q3743 respectively.

Secondly: ALL THAT PORTION of the original road allowance lying between sections 8 and 17 in the said Township and Range and west of the westerly limit of said plan Q 3743.

Thirdly: ALL THAT PORTION of the north one half of said sections 8, lying west of the westerly limit of the surveyed road way, known as Number 1 Highway bypass, as shown in the plan of Record in the said Land Titles Office as F U 741 excepting therefrom the portions included for registration on plans of Record in said Land Titles Office as No. F L 1542 and E R 3825 and also excepting that portion lying between said plans F L 1542 and E R 3825.

* Established by P.C. 1956-1060 of July 12, 1956.

Appendix B. Description of the Provincial Game Preserves administered by the Saskatchewan Department of Natural Resources (Sask. D.N.R., 1971).

1. Andrews Lake Game Preserve

Consisting of the following lands lying west of the third meridian:
In township 12, range 23, all of sections 23, 24, 25 and 26.

2. Berube Lake Game Preserve

Consisting of the following lands and water lying west of the third meridian:

In township 52, range 7, all those portions comprising the waters of Berube lake and 300 feet perpendicularly distant inland from the water edge of Berube Lake.

3. Blaine lake Game Preserve

Consisting of the following lands lying west of the third meridian:

In township 43, range 6, the northwest quarter of section 5 and those portions of the northeast quarter of section 5 and the southwest quarter of section 5 lying north and west of the left bank of the North Saskatchewan River and the east half and southwest quarter of section 8.

4. Boggy Creek Game Preserve

Consisting of the following lands lying west of the second meridian:

In township 18, range 18, all of section 7, the northwest quarter of section 8 and the west half of section 18.

In township 18, range 19, all of section 12 and the south half of section 13.

5. Charron Lake Game Preserve

Consisting of the following lands and water lying west of the second meridian:

In townships 39 and 40, ranges 16 and 17, all those portions comprising the waters of Charron lake and 300 feet perpendicularly distant inland from the water edge of Charron Lake.

6. Crystal Beach Lake Game Preserve

Consisting of the following lands lying west of the third meridian:

In township 31, range 11, all of sections 17, 18, 19, 20, 29, 30, 31 and 32.

In township 32, range 11, all of sections 5, 6, 7 and 8.

In township 31, range 12, all of sections 13, 14, 15 and 16, the northeast quarter of section 21, all of sections 22, 23, 24, 25, 26, 27, 28, 33, 34, 35 and 36.

In township 32, range 12, all of sections 1, 2, 3, 4, 9, 10, 11 and 12.

7. Dafoe Game Preserve

Consisting of the following lands and waters lying west of the second meridian:

In township 32, range 18, the west half and southeast quarter of section 28, that portion of the northeast quarter of section 28 lying south and west of the fence marking the east boundary of the Pasture, all of section 29, that portion of the southeast quarter of section 31 lying east of the Pasture boundary fence, the south half of section 32, that portion of the northeast quarter of section 32 lying south of the Pasture boundary fence and those portions of the west half and southeast quarter of section 33 lying south and west of the Pasture boundary fence.

8. Deep Lake Game Preserve

Consisting of the following lands lying west of the second meridian:

In township 17, range 13, all of sections 1, 2, 11, 12, 13 and 14.

9. Estevan Park Game Preserve

Consisting of the following lands lying west of the second meridian:

In township 2, range 8, the east half of section 10, all of section 11, the south half of section 14 and the southeast quarter of section 15.

10. Kendal Game Preserve

Consisting of the lands and water between the banks of that portion of Moose Mountain Creek which is bounded on the north by Saskatchewan Government Highway No. 16 and on the south by the surveyed municipal road in section 36, township 14, range 12, west of the second meridian, together with all land lying within 500 yards of either bank of the said portion of the said creek.

11. Last Mountain Lake Game Preserve*

Consisting of the following lands and water lying west of the second meridian:

In township 27, range 23, the northwest quarter of section 6, the west halves of sections 7 and 18, section 19, the west half of section 29, all of sections 30 and 31, and the southwest quarter of section 32.

In township 28, range 23, the northwest quarter of section 5, the west half of the southwest quarter of section 5, sections 6, 7 and 8, the west half of the west half of section 9, the northwest quarter of section 16, the west half of the southwest quarter of section 16, sections 17, 18, 19 and 20 and the west half of section 21.

In township 27, range 24, the northeast quarter of section 1, the east half of section 12, sections 13 and 14, the east half of section 15, the east half of the southeast quarter of section 22, sections 23, 24 and 25, the east half of section 26, the east half of the southwest quarter of section 26 and all of section 36.

In township 28, range 24, sections 1, 12, 13 and 24.

12. Little Manitou Game Preserve

Consisting of the following lands lying west of the second meridian:

In township 32, range 25, the northeast quarter of section 3, the south half of legal subdivision 1 and the south half and northwest quarter of legal subdivision 2 of section 10.

13. McLaren Lake Game Preserve

Consisting of the following lands and waters lying west of the third meridian:

In township 15, range 28, the southwest quarter of section 30.

In township 15, range 29, the west half and southeast quarter of section 25, the north half of section 26, the northeast quarter of section 33, the west half and southeast quarter of section 34, the southwest quarter of section 35, the waters of McLaren Lake and 300 yards perpendicularly distant inland from the water's edge of McLaren Lake.

14. Macklin Game Preserve

Consisting of the following lands lying west of the third meridian:

In township 38, range 28, the north half of section 33.

In township 39, range 28, all of section 3 and the southeast quarter of section 4.

15. Marsden Game Preserve

Consisting of the following land and water lying west of the third meridian:

In township 44, range 27, all of sections 22, 27 and 34.

16. Melville Game Preserve

Consisting of the following lands lying west of the second meridian:

In township 22, range 6, that portion of section 31 lying north and east of the Canadian National railway right-of-way.

In township 23, range 6, all of sections 6 and 7.

In township 22, range 7, that portion of section 36 lying north and east of the Canadian National railway right-of-way.

In township 23, range 7, all of section 1 and all of section 12.

17. Middle Creek Game Preserve

Consisting of the following lands lying west of the third meridian:

In township 4, range 29, all of sections 19, 30 and 31 and the north-west quarter of section 32.

In township 5, range 29, the west half of section 5 and all of sections 6, 7, 8, 17, 18, 19, 20, 29, 30, 31 and 32.

In township 6, range 29, the north halves of sections 3 and 4, all of sections 5 to 10 inclusive, the south half of section 15 and all of sections 16 to 21 inclusive.

In township 4, range 30, fractional section 20, all of sections 21 to 28 inclusive, fractional sections 29 and 32 and all of sections 33, 34, 35 and 36.

In township 5, range 30, all of sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15 and 16, all of fractional sections 17 and 20, all of sections 21 to 28 inclusive, all of fractional section 29 and all of sections 33, 34, 35 and 36.

In township 6, range 30, all of sections 1, 2, 11, 12, 13, 14, 23 and 24.

18. Moose Jaw Game Preserve

Consisting of the following lands lying west of the second meridian:

In township 16, range 26, all of sections 17 and 20 and the south half of section 29.

19. Neely Lake Game Preserve*

Consisting of the following land and water lying west of the second meridian:

In township 43, range 6, all that portion comprising the waters of Neely Lake and 900 feet perpendicularly distant inland from the water edge of Neely Lake.

20. Outlook Game Preserve

Consisting of the following lands lying west of the third meridian:

In township 29, range 8, all of sections 29 and 32, and those portions of the west half of sections 28 and 33 lying west of the westerly bank of the South Saskatchewan River.

In township 30, range 8, all of sections 5 and 8, the south half of section 17, all of sections 20, 28, 29, 32, 33, 34 and those portions of sections 4, 9, 16, 21, 27 and 35 lying west of the westerly bank of the South Saskatchewan River.

21. Patterson Lake Game Preserve

Consisting of the following lands lying west of the second meridian:

In township 30, range 5, all of legal subdivisions 5, 12 and 13 in section 30.

In township 30, range 6, all of legal subdivisions 7, 8, 9, 10, 15 and 16 in section 25.

22. Radisson Lake Game Preserve

Consisting of the following lands and waters lying west of the third meridian:

In township 40 and 41, range 10, all those portions comprising the waters of Radisson Lake and 600 feet perpendicular distant inland from the water edge of Radisson Lake.

23. St. Peter Game Preserve

Consisting of the following lands lying west of the second meridian:

In township 37, range 21, all of sections 8, 9, 16, 17, 20 and 21.

24. Saltcoates Game Preserve

Consisting of the following lands lying west of the second meridian:

In township 23, range 2, the northwest quarter of section 36.

24. (cont'd)

In township 24, range 2, all of section 1 and legal subdivisions 1 to 6 inclusive of section 12.

25. Scent Grass Lake Game Preserve^{*}

Consisting of the following lands lying west of the third meridian:

In township 46, range 15, all of sections 7 and 8, the west half of section 9, the west half of section 16 and all of sections 17 and 18.

In township 46, range 16, the northeast quarter of section 12 and the southeast quarter of section 13.

26. Upper Rousay Lake Game Preserve^{*}

Consisting of the following lands lying west of the second meridian:

In township 25, range 5, the north half of section 24, all of section 25 and the east half of section 26.

27. Valeport Game Preserve

Those portions of sections 28, 29, 32 and 33 in township 20, range 21, west of the second meridian, contained within the following limits and consisting of the following lands and waters:

Commencing at the southerly side of the westerly and of the P.F.R.A. dam in section 28, thence easterly along the southerly limit of said dam to its intersection with the westerly limit of the Canadian Pacific Railway as shown on Registered plan No. BQ1113, thence northerly and westerly along said limit to its intersection with the easterly limit of a road shown in the northwest quarter of section 32 on Registered Plan CQ461, thence southerly and westerly along said easterly limit to its intersection with the easterly limit of road shown on Registered Plan No. Q7004, thence southerly along said easterly limit to its intersection with the east boundary of section 29, thence south easterly to the point of commencement.

28. Wascana Game Preserve^{*}

Consisting of the following lands and waters lying west of the second meridian:

In township 17, range 19, the northeast quarter of section 7, the north half of the northwest quarter of section 7 and all of sections 8, 9, 17 and 18.

29. Willow Bunch Game Preserve

Consisting of the following lands lying west of the second meridian:

29. (cont'd)

In township 6, range 27, the southwest quarter of section 14, those portions of sections 15, 16, 17 and 18 lying north of the north shore of Willow Bunch Lake, the southwest quarter of section 20, those portions of sections 21 and 22 lying south of the Canadian Pacific Railway right-of-way, the northwest quarter and southeast quarter of section 19 and all that portion of the southwest quarter of section 19 lying north of the north bank of Willow Bunch Lake.

30. Wood Mountain Game Preserve

Consisting of the following lands lying west of the third meridian:

In township 4, range 2, the west half of section 7, the west half and the northeast quarter of section 18, all of sections 19 and 20 and the south half of section 30.

In township 4, range 3, all of sections 10 to 15 inclusive, all of sections 22, 23 and 24, the south half of section 25, all of section 26, the southeast quarters of sections 27 and 35 and the southwest quarter of section 36.

* Also federal migratory bird sanctuaries.

Appendix C . Description of the Wildlife Refuges administered by the Saskatchewan Department of Natural Resources (Saskatchewan Gazette, 1970 and 1971).

1. Fairy Island Wildlife Refuge

Consisting of Fairy Island located in Emma Lake at 53°37'N, 105°57'W.

2. Frenchman River Wildlife Refuge

In township 2, range 13, west of the 3rd meridian, the northeast quarter of section 23.

3. Heglund Island Wildlife Refuge

Consisting of Heglund Island in Cypress Lake at 49°28'N, 109°28'W.

4. Hidden Valley Wildlife Refuge

In township 20, range 20, west of the 2nd meridian, the north half of section 21.

5. Isle of Bays Wildlife Refuge

Consisting of Isle of Bays located in Old Wives Lake at 50°07'N, 105°55'W.

6. Nisku Wildlife Refuge

In township 22, range 1, west of the 3rd meridian, that portion of section 31 lying north and west of the graded road running through the said section.

In township 23, range 1, west of the 3rd meridian, the southwest quarter of section 6.

In township 22, range 2, west of the 3rd meridian, the east half of section 35 and all of section 36.

In township 23, range 2, west of the 3rd meridian, all of sections 1 and 2, the east half of section 10, all of section 11 and the south half and the northwest quarter of section 12.

7. Redberry Wildlife Refuge

Consisting of an island located in Redberry Lake at 52°40'N, 107°10'W.

Appendix C . Concluded.

8. Backes Island Wildlife Refuge

Consisting of Backes Island located in Primrose Lake at $54^{\circ} 58' N$, $109^{\circ} 43' W$.

9. Rock Island Wildlife Refuge

Consisting of Rock Island located in Dore Lake at $54^{\circ} 43' N$, $107^{\circ} 10' W$.

10. Scheelhaase Island Wildlife Refuge

Consisting of Scheelhaase Island located in Suggi Lake at $54^{\circ} 22' N$, $102^{\circ} 49' W$.

11. Gatehouse Island Wildlife Refuge

Consisting of Gatehouse Island located in Kazan Lake at $55^{\circ} 35' N$, $108^{\circ} 21' W$.

12. Horseshoe Lake Wildlife Refuge

In Township 29, Range 5, west of the second meridian, the southeast quarter of Section 2 with the exception of the north half of Legal Subdivision 8.

Appendix D . Index to the topographical maps (scale: 1:50,000) of the migratory bird sanctuaries in Saskatchewan (Surveys and Mapping Branch, Department of Mines and Technical Surveys).

<u>Migratory Bird Sanctuary</u>	<u>Map Title</u>	<u>Map Number</u>
Basin & Middle Lakes	Basin Lake, Sask.	73A/11E,W
	St. Brieux, Sask.	73A/10W
Duncairn Reservoir	Gull Lake, Sask.	72K/11E
	Simmie, Sask.	72F/16E
Indian Head	Indian Head, Sask.	62L/12E
Lost Mountain Lake	Imperial, Sask.	72P/6E,W
Lenore Lake	Fulda, Sask.	73A/6E
	Lake Lenore, Sask.	73A/7W
Murray Lake	Jackfish Lake, Sask.	73F/1
Neely Lake	Wilkes, Sask.	63D/10
Old Wives Lake	Courval, Sask.	72J/1E
	Old Wives Lake, Sask.	72I/4W
Opuntia Lake	Dodsland, Sask.	72N/15E
Redberry Lake	Hafford, Sask.	73B/11E
Scent Grass Lake	North Battleford, Sask.	73C/16E
Sutherland	Saskatoon, Sask.	73B/2E
Upper Rousay Lake	Willowbrook, Sask.	62M/2E
Val Marie Reservoir	Hillandale, Sask.	72G/5W
Wascana Lake	Regina, Sask.	72I/7E

Appendix E . Offices of the Royal Canadian Mounted Police and Saskatchewan Department of Natural Resources Conservation
Officers responsible for enforcement of the regions which
contain migratory bird sanctuaries.

<u>Name of Sanctuary</u>	<u>R.C.M.P. Detachment</u>	<u>D.N.R. Office</u>
Basin & Middle Lakes	Humboldt, Sask.	Humboldt, Sask.
Duncan Reservoir	Swift Current, Sask.	Swift Current, Sask.
Indian Head	Indian Head, Sask.	Fort Qu'Appelle, Sask.
Last Mountain Lake	Regina, Sask.	Regina, Sask.
Lenore Lake	Humboldt, Sask.	Humboldt, Sask.
Murray Lake	Cochin, Sask.	North Battleford, Sask.
Noely Lake	Porcupine Plain, Sask.	Somme, Sask.
Old Wives Lake	Moose Jaw, Sask.	Moose Jaw, Sask.
Opuntia Lake	Kerrobert, Sask.	Kindersley, Sask.
Redberry Lake	Hafford, Sask.	North Battleford, Sask.
Scent Grass Lake	North Battleford, Sask.	North Battleford, Sask.
Sutherland	Saskatoon, Sask.	Saskatoon, Sask.
Upper Rousay Lake	Yorkton, Sask.	Yorkton, Sask.
Val Marie Reservoir	Val Marie, Sask.	Swift Current, Sask.
Wascana Lake	Regina, Sask.	Regina, Sask.

Appendix F . Establishment and Management of Migratory Bird Sanctuaries

New bird sanctuaries under the Migratory Birds Convention Act may be established anywhere in Canada by Order in Council, provided that certain preliminary steps have been taken to ensure that the proposed sanctuary will in fact serve the purposes of migratory bird protection within the definitions given in the Act and has the approval of the Province in which it is situated. The following policy and procedure for the establishment and management of migratory bird sanctuaries is taken from a statement approved by the Deputy Minister (Canadian Wildlife Service, Ottawa, March 6, 1963).

1. Establishment

1. Policy

In deciding whether to establish an area as a migratory bird sanctuary the following criteria are to be employed:

- (a) need to protect migratory game birds from being hunted;
- (b) need to have some control over use of land in order to preserve habitat required by migratory birds;*
- (c) suitability of the area for public use in observing and studying birds.

If an area proposed as a migratory bird sanctuary meets one or other of those criteria, it may be considered as a candidate area. The next steps are:

* This criterion should be considered as the primary justification of sanctuary establishment only if the land concerned is Crown land, or, if privately owned, it seems likely that its control can be obtained by purchase, easement, or other agreement with the owner.

- (a) to secure the co-operation of landowners;
- (b) to assess public reaction;
- (c) to consider any enforcement problems that may arise from creation of a sanctuary.

In general, an area should not be made a sanctuary if public reaction to its establishment is likely to be strongly unfavourable, or if difficult problems of law enforcement will result. However, evaluation of those factors is a matter of judgment and both positive and negative factors must be considered. Arbitrary rules for decision cannot be laid down.

Sanctuaries already established should be re-evaluated at five-year intervals. Cancellation should be considered for those which would not appear to meet criteria for establishment. In considering cancellation much weight must be given to the possibility of adverse public reaction to cancellation.

Every proposal for the establishment or cancellation of a sanctuary should be examined in regard to the location and function of provincial game preserves or sanctuaries. There should be consultation with provincial officials to determine whether provincial, federal or joint action is most appropriate in meeting the need for new sanctuaries.

2. Procedure

Establishment of a sanctuary may be proposed on the initiative of the Canadian Wildlife Service or proposals may be received from outside the Service. Preliminary study of a proposal should determine whether the criteria noted above under "Policy" are likely to be met, and whether public reaction and considerations of enforcement favour adoption of the proposal. Information required for preliminary study

will be obtained by:

- (a) discussing proposal with local residents and authorities;
- (b) conducting biological reconnaissance of the area;
- (c) ascertaining land ownership.

3. If Preliminary Study Results in a Decision to Establish a Sanctuary, a Formal Proposal Should be Prepared as Follows:

(a) When the area to be covered by the proposed sanctuary includes privately-owned property:

i. A petition is drawn up and signed by all the property-owners concerned, requesting that a bird sanctuary be established within definite stated boundaries and consenting to the inclusion of their property therein. The petition must be accompanied by a map of the area on a sufficiently large scale to show the boundaries of the proposed sanctuary and of the several properties contained therein, and by a legal description of the exact boundaries of the proposed sanctuary. The petition may be submitted to the Wildlife Biologist for the district for forwarding to the head office of the Canadian Wildlife Service or it may be sent direct to the head office of that Service.

ii. The Wildlife Biologist for the district inspects the location of the proposed sanctuary and determines whether local conditions are suitable for establishment of a sanctuary for migratory birds.

iii. If the Wildlife Biologist's report is satisfactory, the matter is then placed by the Department of Environment before the Provincial Department concerned, and the views of the Provincial Department are sought.

iv. If provincial approval is given, the Department of Environment prepares a Memorandum to Council, on the basis of which an Order

in Council is passed, establishing a bird sanctuary under the Migratory Birds Convention Act within the legally-defined boundaries specified as in paragraph 1 above.

Subject to approval of the Department of Environment, the original sponsors of the proposal have the privilege of selecting the name by which the sanctuary is to be known.

(b) If the area to be covered by the proposed sanctuary includes publicly-owned lands:

The procedure is in general similar to that outlined above, except that if the area is entirely federal Crown land no preliminary petition is required. If the land is owned by a municipality or other public body, consent of that body to inclusion of its property in the sanctuary is necessary. Establishment of migratory bird sanctuaries on Province-owned lands is usually a matter for federal action with provincial concurrence.

If any part of the proposed sanctuary area is privately owned it is the policy of the Department of Environment not to include such property in the sanctuary without the consent of the owner or owners. When the initiative is taken by property-owners, as in Section a(i) above, this consent is given by them in the original petition, but owners of adjoining property may give their consent subsequently if they wish their property to be included in the sanctuary. If a property-owner is prepared to give his consent he should not do so later than the date arranged for inspection of the area by the Wildlife Biologist so that the entire area to be included may be inspected at one time. It is desirable that all property-owners concerned should be aware of the bird sanctuary regulations, which, once a sanctuary is established

apply equally to those owning property within the sanctuary and to all others.

After establishment of a sanctuary, if the owner of adjoining property desires to have his property added to the sanctuary area, he should submit a petition as in Section a(i) above. Thereafter the procedure outlined in Section a will be followed, culminating in the passing of an Order in Council enlarging the area of the sanctuary to include the property in question.

II. Management

1. Policy

The general objective of management of migratory bird sanctuaries is to provide for optimum use by people and birds. More specifically to ensure:

(a) most intensive use by birds consistent with their own welfare through (i) habitat improvement, and (ii) adequate enforcement of protective regulations; and

(b) most intensive and rewarding use by people through (i) provision of access and such facilities as may be needed, and (ii) interpretation of natural features by means of signs, displays, pamphlets, etc.

If intensive use by people is incompatible with intensive use by birds, priority of use must be decided. The decision will be based on the status of the birds and their habitat on the one hand, and on the recreational needs of people on the other. Again, arbitrary rules for decision cannot be laid down.

2. Procedure

It is not possible to manage an area effectively without quite

detailed knowledge of its ecological characteristics. Therefore, the first step in management is a thorough study of the soils, fauna, flora, and waters of the area, the use of the area by man, and the relationships among and between those human and natural factors.

The next step is to determine what management practices are necessary, bearing in mind decisions which may have been reached with regard to priority of uses. Management practices may include:

(a) habitat improvement by means of water level control, redistribution of water, fencing, planting, plant control, provision of nesting sites, etc.;

(b) improvement of public facilities by posting, putting up roadside signs, construction of nature trails and observation sites, provision of interpretive information by means of leaflets, signs and displays, providing conveniences for public use such as shelters, picnic tables and toilets.

(c) habitat maintenance by purchase, lease, or easement of patented lands and by reservation of Crown lands.

A plan for management indicating timing and costs of various procedures in full detail is to be prepared. Following approval of the plan, the necessary arrangements with regard to estimates and planning of field activities are to be made and the management plan carried out according to schedule.

Approved persons may be appointed as Honorary Game Officers, with authority to enforce the sanctuary regulations. Information regarding the appointment and powers of game officers under the Migratory Birds Convention Act is given in the pamphlet "The Migratory Birds Convention Act and Migratory Bird Regulations", copies of which will be

supplied by the Canadian Wildlife Service on request.

The Department may appoint local residents as part-time salaried caretakers with the powers of game officers under the Act, in cases where the values involved and the total situation make such action desirable.

As far as practicable, the Royal Canadian Mounted Police customarily assist in enforcing bird sanctuary regulations and other migratory bird sanctuaries.

III. Review of Existing Sanctuaries

1. Step 2 in the procedure for establishment of sanctuaries should be followed in reviewing the usefulness of existing sanctuaries. Sanctuaries should be re-evaluated at five-year intervals.

2. If the review results in a decision to cancel the sanctuary, the reasons for so deciding should be fully recorded and an appropriate Memorandum to Council prepared.

3. If the review results in a decision to maintain an existing sanctuary, management procedures should be continued as may be called for.

Appendix G. The Migratory Bird Sanctuary Regulations.

Migratory Bird Sanctuaries in Canada are established under the authority of the Migratory Birds Convention Act, which is administered, in conjunction with the Royal Canadian Mounted Police and in co-operation with the provincial game authorities, by the Canadian Wildlife Service of the Department of the Environment. The Migratory Birds Convention Act was adopted in 1917 by the Parliament of Canada, to ratify and implement a treaty regarding the protection of migratory birds, signed by representatives of His Majesty and the United States of America in 1916.

The sections of the Migratory Birds Convention Act which particularly apply to bird sanctuaries are quoted below.

INTERPRETATION

3. In this Act,

"close season" means the period during which any species of migratory game, migratory insectivorous, or migratory non-game bird is protected by this Act or any regulation;

"migratory game birds" means

- (a) Anatidae or waterfowl, including brant, wild ducks, geese and swans,
- (b) Gruidae or cranes, including little brown, sandhill and whooping cranes,
- (c) Rallidae or rails, including coots, gallinules and sora and other rails,

(d) Limicolae or shorebirds, including avocets, curlew, dowitchers, godwits, knots, oyster catchers, phalaropes, plovers, sandpipers, snipe, stilts, surf birds, turnstones, willet, woodcock, and yellowlegs, and

(e) Columbidae or pigeons, including doves and wild pigeons;

"migratory insectivorous birds" means bobolinks, catbirds, chickadees, cuckoos, flickers, flycatchers, grosbeaks, humming birds, kinglets, martins, meadowlarks, nighthawks or bull bats, nuthatches, orioles, robins, shrikes, swallows, swifts, tanagers, titmice, thrushes, vireos, warblers, waxwings, whippoorwills, woodpeckers, and wrens, and all other perching birds which feed entirely or chiefly on insects;

"migratory nongame birds" means auks, auklets, bitterns, fulmars, gannets, grebes, guillemots, gulls, herons, jaegers, loons, murres, petrels, puffins, shearwaters, and terns;

"Minister" means the Minister of the Environment. R.S., c. 179, s. 3; 1953-54, c. 4, s. 12; 1966-67, c. 25, s. 40.

REGULATIONS

4. (1) The Governor in Council may make such regulations as are deemed expedient to protect the migratory game, migratory insectivorous and migratory nongame birds that inhabit Canada during the whole or any part of the year.

(2) Subject to the provisions of the Convention, the regulations may provide,

(f) for the prohibition of the killing, capturing, taking,

injuring or molesting of migratory game, migratory insectivorous or migratory nongame birds, or the taking, injuring, destruction or molestation of their nests or eggs, within any prescribed area, and for the control and management of such area; and

MIGRATORY BIRD SANCTUARY REGULATIONS

The following Regulations for the control and management of Bird Sanctuaries, and prescribing certain areas as Bird Sanctuaries, were adopted by Order in Council P. C. 1954 - 1804 of November 23, 1954:

SOR/54-576

MIGRATORY BIRDS CONVENTION ACT
Migratory Bird Sanctuary Regulations
P.C. 1954-1804

AT THE GOVERNMENT HOUSE AT OTTAWA
Tuesday, the 23rd day of November, 1954

PRESENT:

His Excellency the Governor General in Council

His Excellency the Governor General in Council, on the recommendation of the Minister of Northern Affairs and National Resources and pursuant to the Migratory Birds Convention Act, is pleased to order as follows:

1. The Regulations for the control and management of Bird Sanctuaries and prescribing certain areas as Bird Sanctuaries, established by Order in Council P.C. 5989 of 24th November, 1949, as amended, are hereby revoked; and
2. The annexed "Migratory Bird Sanctuary Regulations" are hereby made and established in substitution for the regulations hereby revoked.

R. B. Bryce,
Clerk of the Privy Council.

MIGRATORY BIRD SANCTUARY REGULATIONS

1. These regulations may be cited as the Migratory Bird Sanctuary Regulations.

2. In these regulations,

- (a) "Director" means the Director of the National Parks Branch of the Department of Northern Affairs and National Resources;
- (b) "game officer" means a person who is a game officer under the Migratory Birds Convention Act;
- (c) "hunting" means chasing, pursuing, worrying, following after or on the trail of, stalking or lying in wait for the purpose of taking a migratory bird, and any trapping, attempting to trap or shooting at a migratory bird, whether or not the migratory bird is then or subsequently captured, killed or injured;
- (d) "migratory birds" means migratory game birds, migratory insectivorous birds and migratory non-game birds as these are defined in the Migratory Birds Convention Act;
- (e) "Minister" means the Minister of Northern Affairs and National Resources; and
- (f) "owner" means a person who owns, harbours, possesses or has control or custody of a dog or cat.

BIRD SANCTUARIES

3. The areas described in the Schedule hereto shall be bird sanctuaries and each bird sanctuary described in the Schedule shall be known by the name immediately preceding the description of the area or areas comprising that bird sanctuary.

PROHIBITIONS

4. No person shall in a bird sanctuary hunt, kill, capture, take, injure or molest migratory birds, or take, injure, destroy or molest their nests or eggs, except as in these regulations it is otherwise provided.

5. No person shall without lawful excuse have in his possession while within a bird sanctuary any migratory bird or portion hereof or the nest or egg of any such bird.

6. (1) No person shall have in his possession while within a bird sanctuary any firearm or any decoy or other appliance of a kind used for the hunting, killing, capturing or taking of migratory birds without being in possession of a valid and subsisting permit therefor issued by the Director.

(2) Subject to the provisions of the Migratory Birds Convention Act and regulations thereunder, the Director may, by permit, authorize in any year a person to have firearms in his possession and to shoot and have in possession; wild ducks and wild geese in such portion of a bird sanctuary and during such time as the Minister may from time to time decide.

6A. No person shall during the period from the first day of May to the thirty-first day of August in any year climb or attempt to climb the

cliff on the north and east sides of Bonaventure Island or Perce Rock, both in the County of Gaspé, Province of Quebec, referred to in Parcels 1 and 2 respectively of item 5 of Part V of the Schedule hereto.

DOGS AND CATS

7. (1) No person shall keep a dog or cat in a bird sanctuary or take or bring a dog or cat upon a bird sanctuary unless he has a permit authorizing him to do so,

(a) issued by the Chief of the Canadian Wildlife Service of the Department of Northern Affairs and National Resources, where the lands in the bird sanctuary are owned by Her Majesty in Right of Canada; or

(b) issued by the Chief Game Officer of a province, where the lands in the bird sanctuary are owned by Her Majesty in right of the province.

(2) No owner of a dog or cat shall permit his dog or cat to run at large in a bird sanctuary.

(3) A game officer may destroy any dog or cat found chasing or molesting migratory birds in a bird sanctuary.

(4) A game officer may seize a dog or cat that he finds running at large in a bird sanctuary.

(5) A game officer who has seized a dog or cat under subsection (4) may, in his discretion, restore possession of the dog or cat to the owner thereof where,

(a) the owner claims possession of the dog or cat within five days after the date of seizure; and

(b) the owner pays to the game officer all expenses incurred in securing, caring for and feeding the dog or cat.

(6) Where at the end of five days possession of the dog or cat has not been restored to the owner under subsection (5), the game officer may sell the dog or cat by public auction.

(7) The proceeds of the sale of a dog or cat by public auction shall be distributed in the following manner:

- (a) all expenses incurred in securing, caring for and feeding the dog or cat shall be paid to the game officer;
- (b) the expenses of the public auction shall be paid; and
- (c) the balance, if any, shall be paid to the owner.

(8) Where a dog or cat has not been reclaimed within five days after seizure under subsection (5) and no bid has been received at a sale by public auction, the game officer may destroy or dispose of the dog or cat as he sees fit.

8. No person shall carry on in a bird sanctuary, the lands of which belong to Her Majesty in right of Canada or in right of a province, any activity that is detrimental to migratory birds or their eggs or nests unless he has a permit authorizing him so to do issued by,

- (a) the Chief of the Canadian Wildlife Service of the Department of Northern Affairs and National Resources where the lands in the bird sanctuary are the property of Her Majesty in right of Canada; or
- (b) the Chief Game Officer of the province in which the bird sanctuary is situated where the lands in the bird sanctuary are the property of Her Majesty in right of the province.

9. Nothing in these regulations shall

- (a) prevent waterfowl hunters who carry their firearms unloaded from crossing Grand Manan Bird Sanctuary by the secondary

road which leaves the main highway at Mark Hill and crosses Lot No. 76 which forms a part of the said bird sanctuary;

- (b) prevent waterfowl hunters from transporting unloaded firearms and other hunting appliances through Ile au Heron Bird Sanctuary during the open season for waterfowl in that district; or
- (c) interfere with the use of Red Deer Bird Sanctuary, Britannia Bay Bird Sanctuary and Dionne Farm 4H Bird Sanctuary for agricultural purposes.
- (d) prevent prospecting for or development of mineral resources in the Cape Dorset Bird Sanctuary or be construed as designating Cape Dorset Bird Sanctuary as a reservation in the sense employed in Section 15 of the Northwest Territories Quartz Mining Regulations;
- (e) prevent any person who is the holder of, or eligible for, a general hunting licence for the Northwest Territories from carrying a firearm within any migratory bird sanctuary lying north of the 60th parallel of north latitude for the purpose of taking fur-bearing animals, big game or sea mammals in accordance with a general hunting licence for the Northwest Territories;
- (f) prevent any person who is engaged in the herding of reindeer from using dogs for the purpose of retrieving reindeer that stray into Kendall Island or Anderson River Migratory Bird Sanctuaries;

- (g) prevent any person engaged in the herding of reindeer from allowing such reindeer to pass through the Anderson River Migratory Bird Sanctuary to and from the Nicholson Peninsula at $69^{\circ}55'$ north latitude and 129° west longitude; or
- (h) prevent any person from fishing in Terra Nova Bird Sanctuary.

(2) Notwithstanding anything contained in these Regulations, any person may use sled or pack dogs in a migratory bird sanctuary north of the 60th parallel of north latitude if he does not permit any of them to run at large while migratory birds are present in the sanctuary.

10. No person shall use a boat or other floating device that is equipped with any means of propulsion other than sails or oars within Vaseaux Lake Bird Sanctuary unless permitted in writing by the Chief of the Canadian Wildlife Service of the Department of Northern Affairs and National Resources.