

**Waterfowl Populations Observed
Along the Proposed Gas Pipeline Route
Richards Island to N.W.T. - Alberta Border**

March 1977

by
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Canadian Wildlife Service
Mackenzie Valley Pipeline Investigations

WATERFOWL POPULATIONS OBSERVED ALONG
THE PROPOSED GAS PIPELINE ROUTE
RICHARDS ISLAND TO N.W.T. - ALBERTA BORDER

March 1977

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The data for this report were obtained as a result of investigations carried out in 1972-73 under the Environmental-Social Program, Northern Pipelines, of the Task Force on Northern Oil Development, Government of Canada. While the studies and investigations were initiated to provide information necessary for the assessment of pipeline proposals, the knowledge gained is equally useful in planning and assessing other development projects.

Note: These studies were based on the NTS (National Topographic System) mapsheets. Data were compiled and presented using the English System; area conversions to metric units were subsequently impractical.

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ABSTRACT

A four-mile-wide corridor extending 865 linear miles and including 2300 wetland basins along the proposed Mackenzie Valley gas pipeline route (1973) was surveyed by aircraft to document waterfowl and aquatic bird numbers and species. In 1973, counts were conducted during the latter portion of spring breakup (37% of basins), in late June during the breeding season (39% of basins) and in the waterfowl brood-rearing period (15% of basins were randomly surveyed by helicopter).

Detailed maps and charts delineate individual and groups of wetlands that provide essential requirements for significant numbers of waterfowl and aquatic birds. These data suggest that pipeline routing does not directly influence the more valuable wetland habitats of the region.

ACKNOWLEDGEMENTS

A. Doberstein acted as field survey observer on aerial surveys. Messrs. B. Johnson, C. Larsen, and W. Prescott each served as navigator on one complete waterfowl route survey. Much of the transcription and summarization of field data was capably undertaken by Miss J. Golub, H. Mentz and, particularly, Mrs. P. Hovius who also assisted in technical drafting.

1. INTRODUCTION

This report provides results from the second year of waterfowl field studies by the Northern Habitat Evaluation Group of the Canadian Wildlife Service.

First-year studies in 1972 focused upon general definition, delineation, and classification of existing waterfowl habitat over an area approximately 151,000 square miles in the Mackenzie Valley and Northern Yukon (Fig. 1). This area was to include any proposed major development routes for gas or oil pipelines, highways, railroads, etc. The information has been compiled into an Atlas of 33 NTS (National Topographic System) mapsheets illustrating waterfowl habitat and describing habitat features (Poston, *et al.* 1973).

Mackenzie Valley studies in 1973, of limited scope, consisted of a refinement of information through site-specific population estimates on the wetlands along a proposed gas pipeline route from the Alberta-N.W.T. border to Richards Island.

The present trend in northern development has focused considerable attention and concern on the wildlife resources that would be affected by a wide spectrum of projects. Species oriented studies by the Canadian Wildlife Service have been designed to detect, delineate, and define areas important to waterfowl in order to provide the assessment base for present and future development proposals. This report is preliminary in that presentation of data does not include intensive analyses (statistical or otherwise).

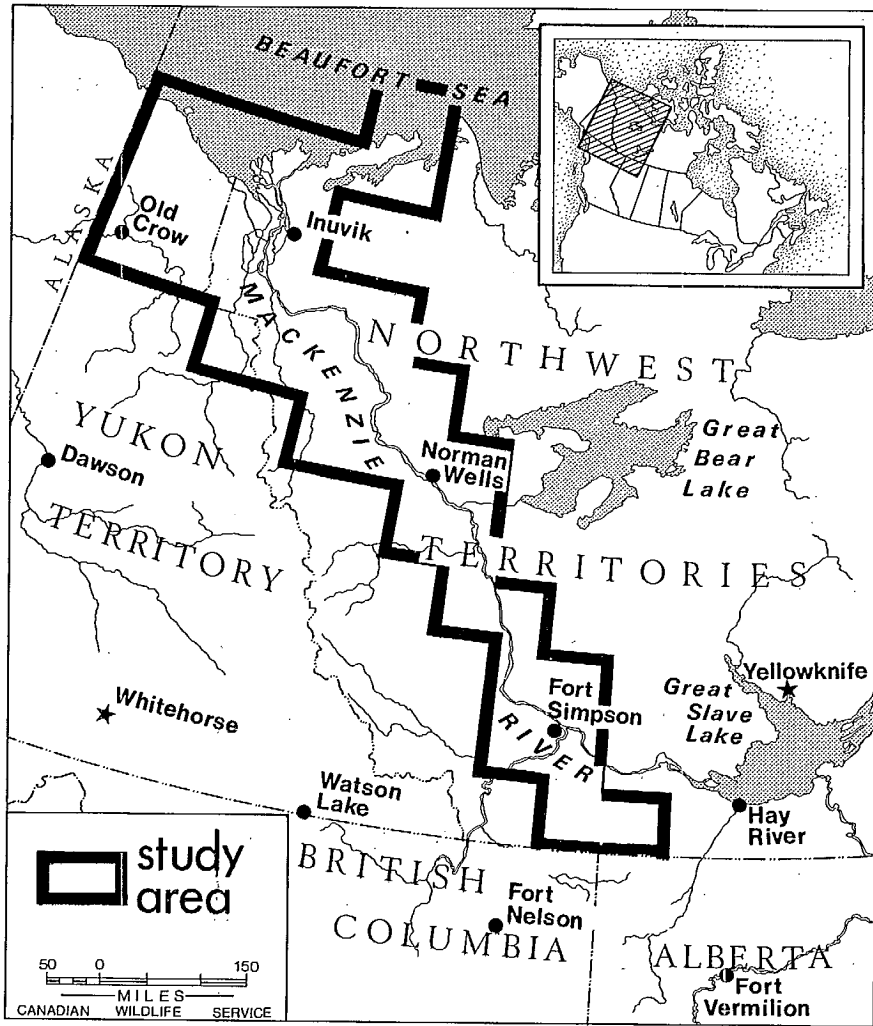


Fig. 1. The 1972 study area.

2. OBJECTIVES

The principal objective of the 1973 field studies was to document waterfowl use of wetland habitat along a proposed gas pipeline route as a means to refine the more generalized information collected in 1972.

Three surveys were conducted to identify waterfowl populations:

- a) during spring breakup as habitat thaws; when migrant birds are predominant.
- b) during the peak of the breeding period; when local resident birds are dispersed on the habitat.
- c) during the brood-rearing period in midsummer when a productivity index can best be obtained.

Survey summary data are presented herein largely as a series of charts and maps indicating the relative indices of each wetland or wetland complex.

3 METHODS

3.1 The Study Area

A four-mile-wide corridor along the proposed pipeline routing, as of May 1973, was plotted from the Alberta-N.W.T. border to Richards Island, a distance of approximately 865 linear miles. This was arbitrarily delineated as the "zone of influence" of such development. The estimated 2,300 wetland basins appearing within or bisected by this artificial boundary were the basis of intensive surveys.

3.2 Timing of Surveys

Three aerial surveys were conducted on the corridor during spring and summer, and timed to coincide with the spring break-up period (survey of migrant and, perhaps, some resident waterfowl); late spring (survey of waterfowl breeding population); and midsummer (survey in waterfowl brood-rearing period). The first survey commenced on 24 May in the south and progressed northward to Richards Island by 11 June. Similarly, the next survey began on 17 June and continued to 27 June. The third survey was undertaken from 21 July to 27 July 1973.

3.3 Survey Methods

Surveys were performed from a wheel-equipped Cessna 185, a float-equipped Cessna 185, and a Bell 206B helicopter. The pilot, a navigator, and the observer participated in each survey. The basin number and pertinent information of numbers, species, distribution and sex (where possible) of all waterfowl and water birds were recorded on a Sony TC-40 tape recorder. The same observer participated in all three surveys.

Total counts were undertaken on selected wetlands. The aircraft

flight altitudes were approximately 100-150 feet above ground level depending upon weather conditions; and flight speeds were about 90-100 miles per hour. The helicopter survey covered a random sample of 25 percent of the basins. Wetlands with islands or patches of emergent vegetation were surveyed more thoroughly than open water bodies.

3.4 Data Compilation and Analysis

Data recorded on tape during the aerial surveys were transcribed, re-checked, then tabulated by local region or units (individual or closely associated wetlands).

Detailed maps of the survey corridor were compiled utilizing aerial photographs. Most of the route was mapped at a uniform scale of about 1 inch = 3 miles. Several restricted areas of limited importance were omitted because photo coverage was not available.

A square-grid was superimposed on the maps to calculate the area of wetlands within and adjacent to the survey corridor. The total number of wetlands per assigned units; total wetland areas per unit (in acres); and proportion of surveyed to non-surveyed basins were documented.

Waterfowl identified during surveys were totaled as to dabbling and diving duck species observed per assigned local unit; loons, shore-birds, other waterfowl, and aquatic birds (coots, grebes) per designated unit; and relative abundance of waterfowl per unit of survey coverage.

Whereas survey bias factors have received study in southern regions - particularly the Prairie Provinces - information is very limited for the North. Established "species visibility ratios" developed from air/ground waterfowl surveys by the U.S. Bureau of Sport Fisheries and Wildlife (Henny, *et al.* 1972) for the breeding period have

not been applied to field sightings. An unknown bias could be created under Arctic conditions such as: unique terrain; vegetative cover ranging from boreal forest, taiga, to tundra; survey techniques; species behavior; and the lack of visibility ratios for the entire species' of Arctic waterfowl. It is emphasized that results tabled herein are from unaltered actual waterfowl counts.

4. RESULTS AND DISCUSSION

4.1 General

The 1973 waterfowl survey route is illustrated in Figure A1, Appendix (page 18). Thereon, 28 segments or "Blocks" are delineated which form the basis of a detailed documentation of habitat and waterfowl. These represent almost the entire habitat base available to waterfowl along this corridor.

General or "average" conditions prevailed in 1973 and, therefore, the data presented can be interpreted as meaningful for assessment of a specific, and perhaps typical, waterfowl season. Survey results for each of three surveys with detailed illustrations of habitat are tabled in the Appendix.

4.2 Spring Migration Survey

The spring migrant survey covered 852 wetlands comprising 48,863 acres (76.3 sq miles). These represent approximately 37 percent of the basins and 60 percent of the total wetland acreage on the portions of corridor investigated. With the exception of large lakes and those in the vicinity of Richards Island, most water bodies were free of ice when the survey was conducted.

The first appearance of migrant waterfowl coincided with early signs of ice deterioration and breakup. Waterfowl numbers increased until after such time as basins were ice-free in late May, with more northern water bodies opening later. Waterfowl concentrations were associated with the earliest open water, particularly lake outlets and pond shoreline interfaces. Flooding caused by melt water often provided additional attractive habitat.

At the time of survey, waterfowl density ranged from an estimated 50.7 birds/sq mile of habitat to concentrations of 536.0 birds/sq mile of habitat (Fig. 2 illustrates the components of the populations as observed). The pooled data, by ascending latitude Blocks, do not pinpoint where the largest numbers of waterfowl were present during the spring migration period; they denote degree of utilization of habitat during a particular time period, irrespective of habitat availability.

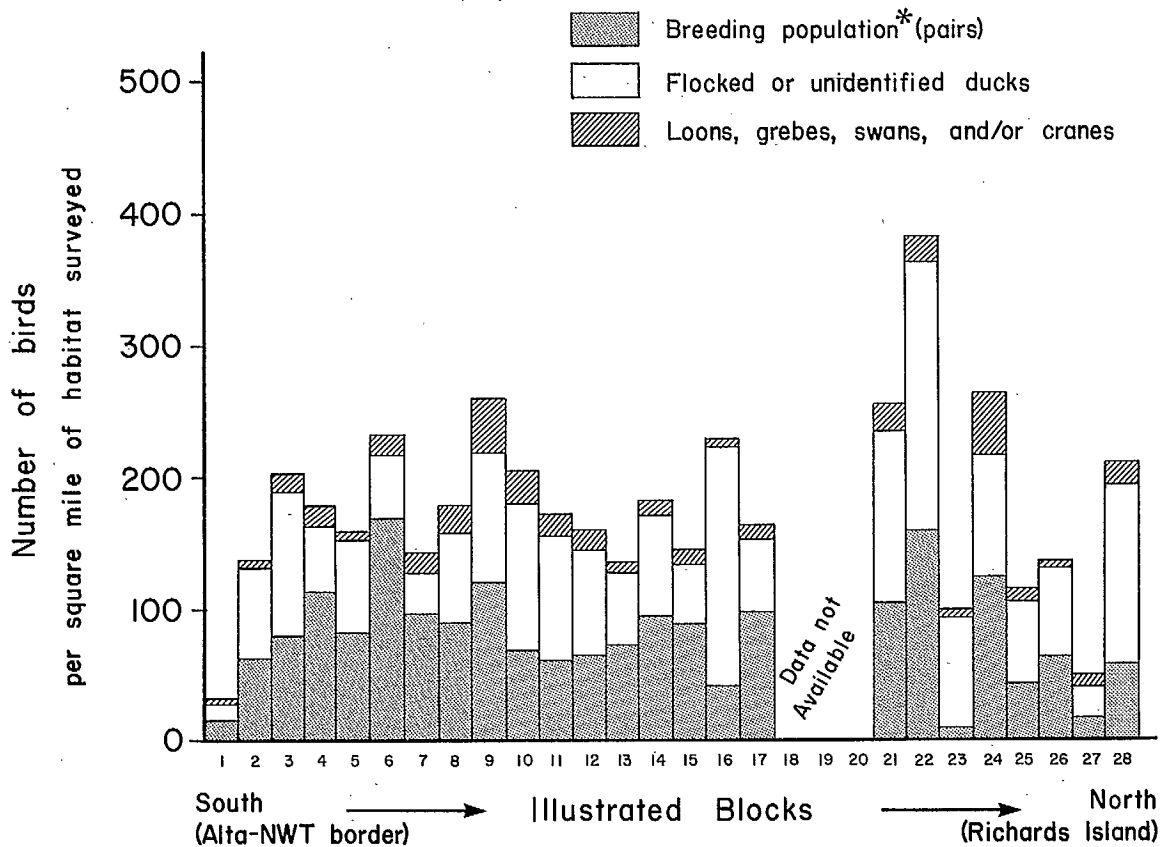
4.3 Breeding Pair Survey

This survey encompassed 893 wetlands comprising 51,323 acres (80.2 sq miles). This represents approximately 39 percent of the wetland basins and 63 percent of the total wetland acreage on the portion of corridor investigated.

Declines in waterfowl numbers from the spring migration were noted since many birds were apparently transients. The Mackenzie Valley habitat was accessible earliest; and, following spring breakup waterfowl dispersed to other habitat to breed. Observed loon populations, by comparison, were similar during all three surveys.

This survey provides an index for production potential by local unit or wetland basin. The breeding segment was designated as identified breeding pairs and males or females observed in groups of three or less (Table 1 Appendix p. 19). Flocked and unidentified birds are presumed to contribute to production in a very minor way.

Table 29 (Appendix) is a summarization of habitat values using waterfowl populations as the sole criterion. Therein, observations of Tables 1b to 28b (Appendix) are compiled on the basis of 'waterfowl/sq mile of



* For definition, see Table I, Page 19

Fig. 2. Distribution of waterfowl population components on the route surveyed during spring migration, 1973.

wetlands surveyed" by a simple extrapolation of acreage surveyed vs waterfowl observed (acreage surveyed/640 x waterfowl observed). This means of evaluation stresses "quality" of habitat as reflected by waterfowl preference along the survey route. The 97 units surveyed have been assigned a "rank" which is a comparison of the estimated total waterfowl population thereon, in birds per square mile of habitat present, with populations on habitat of other units.

4.4 Production (Brood) Survey

This survey was conducted in late July during the brood-rearing period for most waterfowl species. It encompassed 343 wetlands comprising 16,720 acres of wetland (26.1 sq miles). This coverage is approximately 14.9 percent of the basins, and 21.8 percent of the total wetland acreage on the portions of corridor investigated.

Most broods frequented the periphery of wetlands, particularly water adjacent to or within stands of emergent vegetation. Diving duck species frequented the more open waters. All brood sizes were not determined because frequently broods escaped into cover upon the approach of the survey helicopter.

Generally, broods contained as many as six or seven young averaging somewhat less than brood sizes in southern regions where sightings of eight or more young/brood are not uncommon. Production on a per acre basis was generally low, consisting of mainly scaup and scoters.

Complementing the latter portion of the brood-rearing period, post-breeding male ducks and non-breeders, followed by females, annually congregate (usually in groups of several hundred or more) on open waters where they moult and replace flight feathers. Timing of this survey was

somewhat early to obtain maximum counts of moulting birds. Whereas the large open lakes are preferred for moulting, some smaller basins had congregations of waterfowl. It is not known whether moulting lakes are actually traditional in northern habitats, as they are on the Prairies, or whether they change from year to year.

5. CONCLUSIONS AND RECOMMENDATIONS

CWS has completed a basic habitat inventory covering a widespread portion of the Western Arctic (Watson *et al.* 1973; Poston *et al.* 1973); and a program of detailed aerial surveys of waterfowl populations on lands along a proposed pipeline "corridor" northward down the Mackenzie Valley. Both avenues of study have yielded valuable information providing a basis for impact assessment. Data in this report could be further re-worked on a statistical basis, which would result in more precise estimates of total waterfowl populations and production in the 1973 season. An interrelationship - along all or any particular region of the route corridor - between population densities, habitat characteristics, and habitat availability could exist with units delineated in the 'Atlas of Wildlife Habitat Maps - Waterfowl'. Documentation of individual waterfowl species present was generally overlooked; however, related indexes are available from other studies (L.G.L. Ltd. 1973).

To date, investigations have strongly relied on surveys by aircraft. Minimal time has been delegated to personnel working from ground field camps because of the magnitude of the study area. The need exists for a more comprehensive appreciation of climatic conditions, breeding biology of individual waterfowl species, habitat utilization, and projected effects of major development on the waterfowl resource.

Factors of concern tabled and discussed in the 1973 CWS report (p. 114) were: 1) Loss and degradation of waterfowl habitat, 2)

Disturbance of waterfowl 3) Excessive harvests of the waterfowl resource. With upgraded knowledge from 1973 field studies, degrees of severity are more predictable where tentative habitat loss and degradation directly affects waterfowl populations; although effects of changes to local hydrological regimes are still considered to be the major concern. Harvests of waterfowl are strictly a management problem.

Since the early 1970's several millions of dollars have been spent by government and private consultants on wildlife-oriented studies in the Western Canadian Arctic. Over these years waterfowl have received considerable attention by many investigators, and results are available in a number of publications. It is suggested that one or several individuals undertake a consolidation of all waterfowl material acquired in such studies, and assemble one publication with a summarization of salient findings.

6. SUMMARY

The proposed pipeline routing (1973) does not bisect or pass adjacent to any major high quality waterfowl habitat such as the well-known Brackett Lakes or Rampart Flats. These surveys disclose that habitat interspersed as individual or small groups of wetlands along the route is providing essential requirements for significant numbers of many species of waterfowl and associated aquatic birds.

7. REFERENCES CITED

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- Watson, G.H., W.H. Prescott, E.A. DeBock, J.W. Nolan, M.C. Dennington, H.J. Poston & I.G. Stirling. 1973. An inventory of wildlife habitat of the Mackenzie Valley and northern Yukon. Environ. Soc. Comm., North. Pipelines, Task Force North. Oil Dev. Rep. no. 73-27.

8. APPENDIX A: Wetlands Present and Waterfowl Observed Along the Pipeline
Route Corridor

8.1 Explanatory remarks

8.1.1 Illustrations

The data from surveys of the route (Fig. A1, Appendix) have been separated to localized areas termed "Blocks". Each has been prepared on a separate page as a detailed map of all wetlands present along that particular stretch of the survey corridor.

Map scales are approximately 3 miles = 1 inch; or more precisely the survey corridor is 4 miles wide. For orientation, the N.T.S. mapsheet names and numbers are documented; also one or more points designating latitude and longitude coordinates.

Individual wetlands or groups are encircled by boundaries assigned in the 'Atlas of Wildlife Habitat Inventory Maps - Waterfowl' (Poston, *et al.* 1973).

Symbols adjacent each individual wetland refer to the extent the basin was surveyed; i.e. non-surveyed basins remain white without symbols; shaded basins without symbols were surveyed only during the period of spring migration; a shaded basin with adjacent symbol (1, 2 and/or 3) designates one that was surveyed during the spring migration, breeding, production or a combination of these periods.

8.1.2 Tables

Waterfowl habitat compiled in Tables 1a to 28a, compares the extent of survey coverage to total availability within each block of route corridor.

Populations of waterfowl and aquatic birds observed on three individual surveys are compiled in Tables 1b to 28b. Interpretation of such tables requires study of Table 1 which explains the method of compilation and documentation of field data.

Table 29 is a summarization of habitat values using waterfowl populations as the sole criterion.

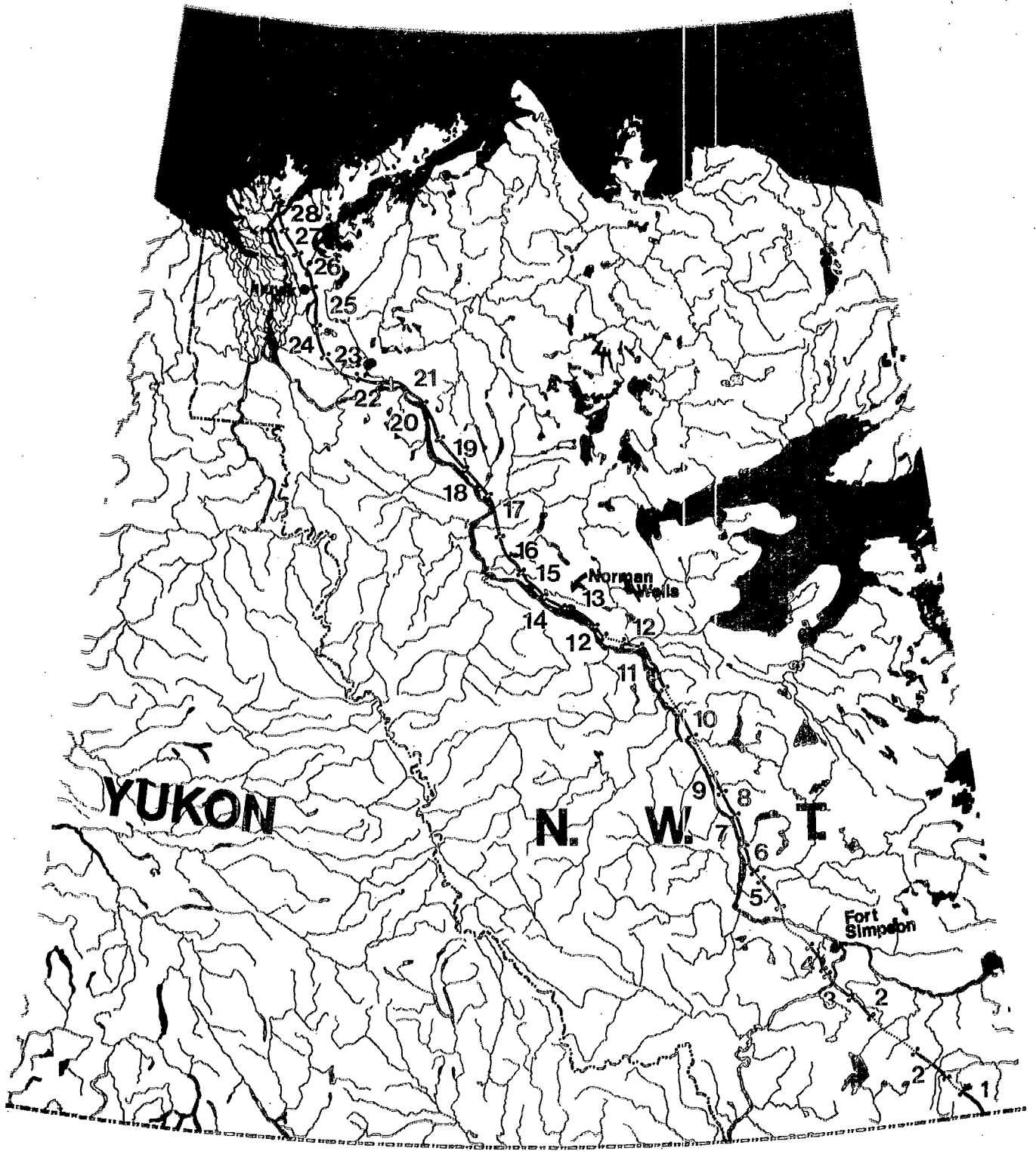


Fig. A1. Proposed pipeline route showing the "Block" or segments surveyed in 1973,

Table 1. Guideline for Interpretation of Waterfowl and Aquatic
Bird Identification Summaries

Pair*	close association of two ducks of one species (or identified categorization within dabbling/diver species grouping) of opposite sex.	
Male*	male: close association of 1-3 males of one duck species (or identified categorization within dabbling/diver species grouping).	
Female*	female: close association of 1-3 females of one duck species (or identified categorization within dabbling/diver species grouping).	
Flock	group: close association of 3 ducks of undetermined sex identified to species or dabbling/diver species grouping; or, 4 or more ducks of one species or mixed dabbling/diver grouping.	
Brood	identified female of one duck species (or dabbling/diver species categorization) accompanied by young.	
Unidentified	one or more ducks identified to species grouping only; one or more ducks of undetermined sex, species, or species grouping; close association of numerous ducks of mixed species grouping; broods (b) each of a female duck but of undetermined species.	
Loons	Common, Arctic, Red-throated, or unidentified loons; (totals specify adult:immature ratios only).	
Shorebirds	identified and unidentified species of shorebirds (sightings reliable for general reference only).	
Others	C - Coot CG - Canada Goose Gr - Grebe Gu - Gull	SC - Sandhill Crane WS - Whistling Swan WFG - White-fronted Goose UG - Unidentified Goose
Duck Species present Along Route of Survey		
Dabblers	Mallard, Pintail, Teal (predominantly Green-winged), American Widgeon, Shoveler, Gadwall (rare).	
Divers	Scaup, Scoter, Goldeneye, Bufflehead, Oldsquaw, Canvasback, Ringneck, Merganser, Redhead (rare).	

*assumed functional or potential part of breeding population.

Table 1a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
1	1	11	2306	11	2306	2	374	30	2441
	2	1	421	1	421	1	421	1	421
	3	1	72	1	72	-	-	1	72
	4	22	679	24	713	9	344	47	957
	5	1	313	1	313	1	313	1	313
Total		36	3791	38	3825	13	1452	80	4204

*Refers to "Block" illustration opposite

**Confined to corridor

Table 1b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers				Unidentified			Loons Ad:Imm	Shore- birds	Others		
				Pair	♂	♀	Flock	Broods	Dab	Div				UID†	
1	1	11	2306	4/64#		1/0	3/12			1	1	6		80	
	2	1	421	0/7											
	3	1	72	1/6								14			
	4	22	679	1/13			0/3			2	3	17	1:0		2 Gu
	5	1	313	2/4	1/0	1/0	0/8			1	1	15		8	1 C
Total		36	3791	8/94	1/0	2/0	3/23	--		4	5	52	1:0	88	2 Gu 1 C

†Unidentified duck (non-classified)

#Denotes 4 pair dabblers and 64 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers				Unidentified			Loons Ad:Imm	Shore- birds	Others		
				Pair	♂	♀	Flock	Broods	Dab	Div				UID	
1	1	11	2306	5/32	19/20	1/5	5/45			5		384	8:0	121	2:0 Gr
	2	1	421	0/5	1/1					2		203			
	3	1	72	1/5								3		15	2:0 Gr
	4	24	713	0/36	3/2							7	8:0	10	
	5	1	313	3/2	3/8		0/32							36	
Total		38	3825	9/80	26/31	1/5	5/77	--		7	-	597	16:0	182	4:0 Gr

SURVEY 3 - Production (July 21-July 27)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers				Unidentified			Loons Ad:Imm	Shore- birds	Others		
				Pair	♂	♀	Flock	Broods	Dab	Div				UID	
1	1	2	374				0/68	0/10				6+1b			
	2	1	421	0/1	1/2							280		19	
	3														
	4	9	344				0/3	1/3				5	17	4:1	
	5	1	313				20/0	3/0							
Total		13	1452	0/1	1/2	-	20/71	4/13		5	280	23+1b	4:1	19	--

Block 1

LEGEND

Survey Corridor - - - - -

Surveyed Basin - - - - -

Unsurveyed Basin - - - - -

Creek; Smali River - - - - -

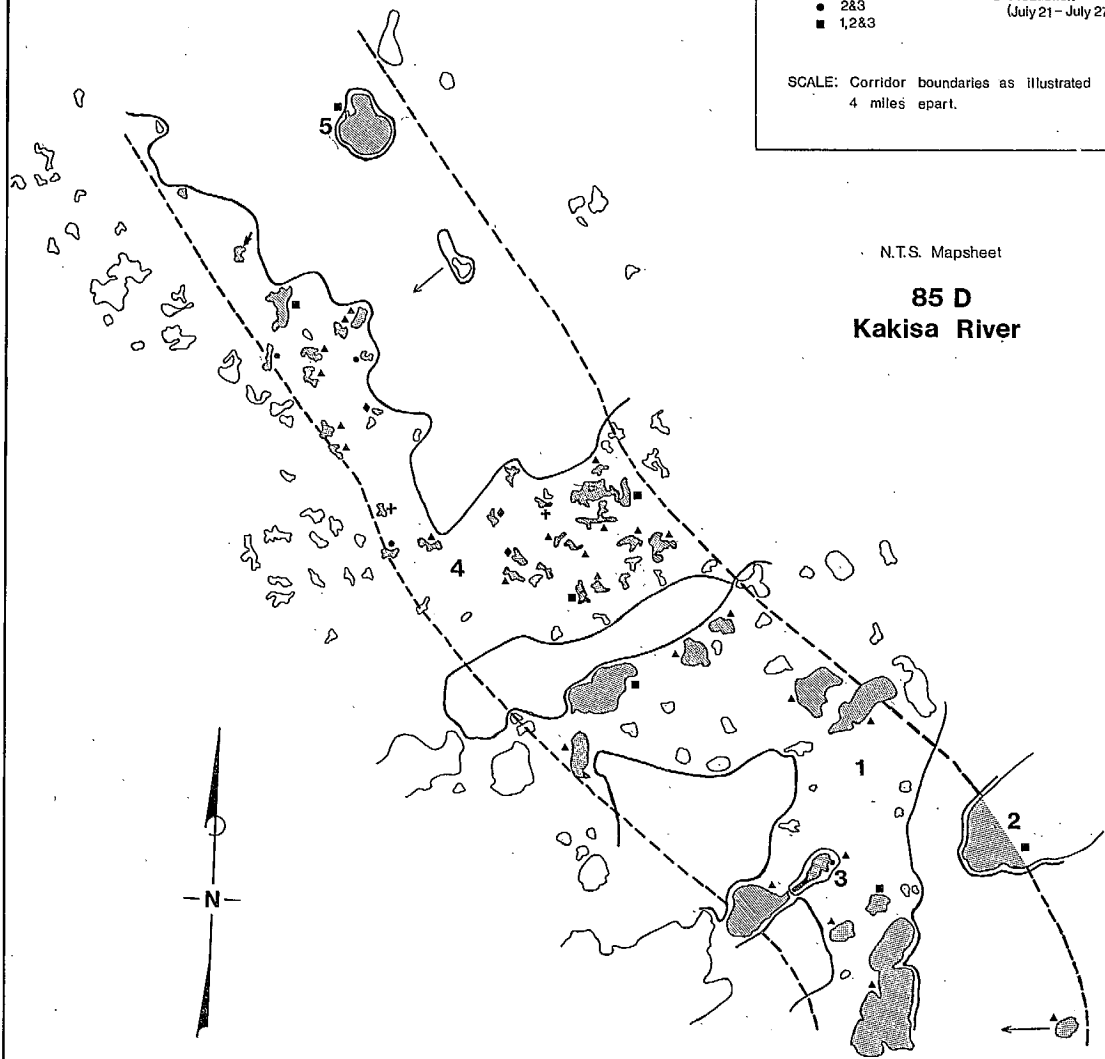
1972 Inventory Unit Boundary - - - - -

1973 Survey Unit Number - **6,3**, etc.

(Arrows indicate basins to be included in unit)

COVERAGE (Numerals refer to timing of survey)	SURVEY TIMING
○ 1	1-Spring Migrant (May 24 - June 11)
◆ 2	
+ 3	2-Breeding Pair (June 17 - June 27)
▲ 1&2	
▲ 1&3	3-Production (July 21 - July 27)
● 2&3	
■ 1,2&3	

SCALE: Corridor boundaries as illustrated are 4 miles apart.



N.T.S. Mapsheet

85 D
Kakisa River

Table 2a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
2	1	2	76	2	76	-	-	3	106
	2	12	677	11	679	1	13	14	889
	3	9	252	3	234	2	68	18	330
	4	7	344	7	400	2	45	8	423
	5	8	548	7	529	3	122	9	554
Total		38	1897	35	1918	8	248	52	2302

*Refers to "Block" illustration opposite

**Confined to corridor: all units 4,5

Table 2b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment		Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified ⁺			Loons Ad:Imm	Shore-birds	Others
Block	Unit			Pair	♂	♀	Flock	Broods	Dab	Div	UID ⁺			
2	1	2	76	0/17 [#]	1/5		0/10			2	2:0	8		
	2	12	677	4/44	1/2		0/81		3	12	54	6:0		
	3	9	252	0/51	0/3						4			
	4	7	344	0/35	1/1		0/33			3	5	1:0	15	1 SC
	5	8	548	0/21	0/2		0/4				2	3:0		
Total		38	1897	4/168	3/13	-	0/128	--	3	15	67	12:0	23	1 SC

⁺ Unidentified duck (non-classified)[#] Denotes 0 pair dabblers and 17 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment		Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
Block	Unit			Pair	♂	♀	Flock	Broods	Dab	Div	UID			
2	1	2	76	0/4	1/1						24			
	2	11	679	1/28	3/4		0/26			12	35	10:0	35	
	3	8	234	1/29	3/25		0/43		1	1	1	2:0		
	4	7	400	0/14	2/1		0/41				4	14:0	4	2:0 Gr
	5	7	529	0/9	0/4						6+1b	4:2	20	
Total		35	1918	2/84	9/35	-	0/110	--	1	13	70+1b	30:2	59	2:0 Gr

SURVEY 3 - Production (July 21-July 27)

Route segment		Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
Block	Unit			Pair	♂	♀	Flock	Broods	Dab	Div	UID			
2	1													
	2	1	13			2/0		0/1	1			1:0		2 SC
	3	2	68					1/1					3	
	4	2	45			1/0		1/2				2:1		
	5	3	122			1/0		1/2			1b	2:2	11	
Total		8	248	-	-	4/0	-	3/6	1	-	1b	5:3	14	2 SC

Block 2

LEGEND

- Survey Corridor - [dashed line]
- Surveyed Basin - [stippled area]
- Unsurveyed Basin - [white area]
- Creek; Small River - [wavy line]
- 1972 Inventory Unit Boundary - [dotted line]
- 1973 Survey Unit Number - **6,3, etc.**
(Arrows indicate basins to be included in unit)

COVERAGE (Numerals refer to timing of survey)	SURVEY TIMING
⊕ 1	1-Spring Migrant (May 24 - June 11)
◆ 2	2-Breeding Pair (June 17 - June 27)
+ 3	3-Production (July 21 - July 27)
▲ 1&2	
▲ 1&3	
● 2&3	
■ 1,2&3	

SCALE: Corridor boundaries as illustrated are 4 miles apart.

N.T.S. Mapsheet
95 H
Fort Simpson

N.T.S. Mapsheet

85 D
Kakisa River

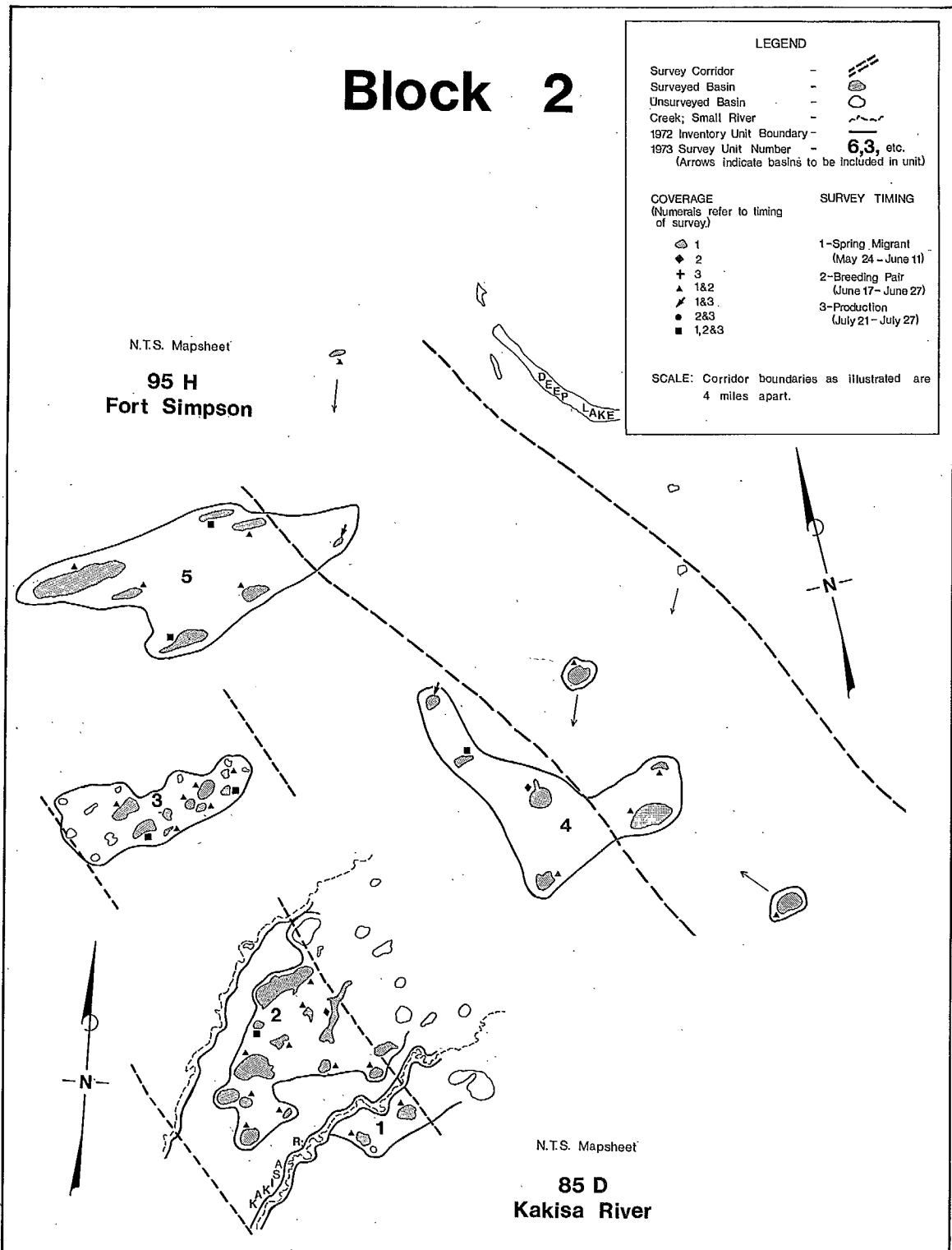


Table 3a. Wetland Numbers and acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
3	1	9	1057	9	1057	2	704	9	1057
	2	5	446	5	446	1	23	5	446
	3	7	905	6	564	-	-	7	905
Total		21	2408	20	2067	3	727	21	2408

*Refers to "Block" illustration opposite
 **Not confined to corridor

Table 3b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Wetlands	Acreage	No's. of Dabblers/Divers					Unidentified			Loons	Shore-	Others
			Pair	♂	♀	Flock	Broods	Dab	Div	UID [†]			
3	1	9	5/47 [#]	9/2		12/14			51	6:0	32		
	2	5	6/94	4/4	1/0	14/55			197	4:0		10:0 Gr	
	3	7	8/95	6/16	0/1				-1	88	3:0	8	2:0 Gr
Total	21	2408	19/236	19/22	1/1	26/69	-	-	1	336	13:0	40	12:0 Gr 1 SC

[†] Unidentified duck (non-classified)

[#] Denotes 5 pair dabblers and 47 pair diver duck species

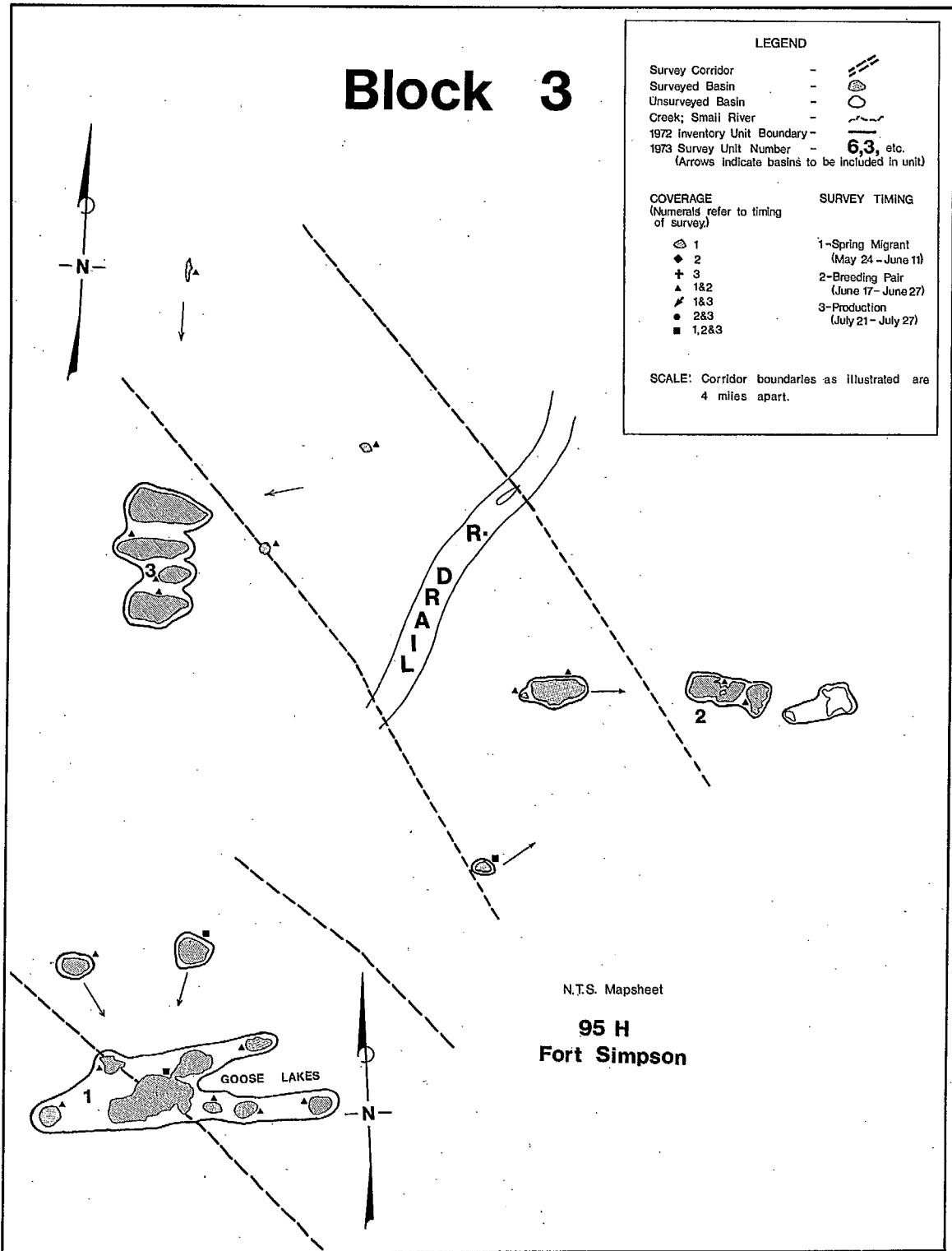
SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment	Wetlands	Acreage	No's. of Dabblers/Divers					Unidentified			Loons	Shore-	Others
			Pair	♂	♀	Flock	Broods	Dab	Div	UID			
3	1	9	0/21	4/5	0/2	0/63			36	8:0	3		
	2	5	0/20	2/13		6/281	1/0	1	26	11:0		5:0 Gr	
	3	6	2/55	0/23		0/44		13	41	3:0		5:0 Gr	
Total	20	2067	2/96	6/41	0/2	6/388	1/0	-	14	103	22:0	3	10:0 Gr

SURVEY 3 - Production (July 21-July 27)

Route segment	Wetlands	Acreage	No's. of Dabblers/Divers					Unidentified			Loons	Shore-	Others
			Pair	♂	♀	Flock	Broods	Dab	Div	UID			
3	1	2				0/18	2/4		3	4:1		2:3 Gr	
	2	1				0/4		1		2:0			
Total	3	727	-	-	-	0/22	2/4	1	-	3	6:1	--	2:3 Gr

Block 3



LEGEND

- Survey Corridor - [dashed line]
 - Surveyed Basin - [shaded area]
 - Unsurveyed Basin - [unshaded area]
 - Creek; Small River - [wavy line]
 - 1972 Inventory Unit Boundary - [dashed line]
 - 1973 Survey Unit Number - **6,3**, etc.
- (Arrows indicate basins to be included in unit)

COVERAGE
(Numerals refer to timing of survey)

- 1 - [circle]
- 2 - [diamond]
- 3 - [plus]
- 1&2 - [triangle]
- 1&3 - [asterisk]
- 2&3 - [square]
- 1,2&3 - [filled square]

SURVEY TIMING

- 1 - Spring Migrant (May 24 - June 11)
- 2 - Breeding Pair (June 17 - June 27)
- 3 - Production (July 21 - July 27)

SCALE: Corridor boundaries as illustrated are 4 miles apart.

N.T.S. Mapsheet

95 H
Fort Simpson

Table 4a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
4	1	3	58	4	90	2	44	4	90
	2	8	382	6	364	2	53	9	411
	3	2	45	2	45	2	45	2	45
Total		13	485	12	499	6	142	15	546

*Refers to "Block" illustration opposite

**Confined to corridor : + 3 adjacent basins

Table 4b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers				Unidentified			Loons Ad:Imm	Shore-birds	Others	
					Pair	♂	♀	Flock	Broods	Dab	Div				UID†
4		1	3	58	1/1#	0/1						6			2:0 Gr
		2	8	382	3/38	6/16		4/3		1	16	5:0	12		7:0 Gr
		3	2	45	3/11	2/3		0/6			4				
Total			13	485	7/50	8/20	-	4/9	--	-	1	26	5:0	12	9:0 Gr

†Unidentified duck (non-classified)

#Denotes 1 pair dabblers and 1 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers				Unidentified			Loons Ad:Imm	Shore-birds	Others	
					Pair	♂	♀	Flock	Broods	Dab	Div				UID
4		1	4	50	1/3	0/1	0/1					8	1:0		
		2	6	364	0/9	2/10	0/6			2	16	6:2	51		5:1 Gr
		3	2	45	2/1	1/0		0/4							
Total			12	499	3/13	3/11	0/7	0/4	--	2	-	24	7:2	51	17:1 Gr

SURVEY 3 - Production (July 21-July 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers				Unidentified			Loons Ad:Imm	Shore-birds	Others	
					Pair	♂	♀	Flock	Broods	Dab	Div				UID
4		1	2	44		2/3		8/0	4/5			29+2b			
		2	2	53	0/1				2/9		1	25			
		3	2	45		0/2		35/18	4/11			3+7b			1:3 G
Total			6	142	0/1	2/5	-	43/18	10/25	1	-	57+9b	--	--	1:3 G

Block 4

LEGEND

Survey Corridor - [dashed line with double dashes]

Surveyed Basin - [stippled area]

Unsurveyed Basin - [white area]

Creek; Small River - [wavy line]

1972 Inventory Unit Boundary - [dotted line]

1973 Survey Unit Number - **6,3, etc.**
(Arrows indicate basins to be included in unit)

COVERAGE
(Numerals refer to timing of survey)

1 - [circle with dot]

2 - [diamond]

3 - [plus sign]

1&2 - [triangle]

2&3 - [square]

1,2&3 - [square]

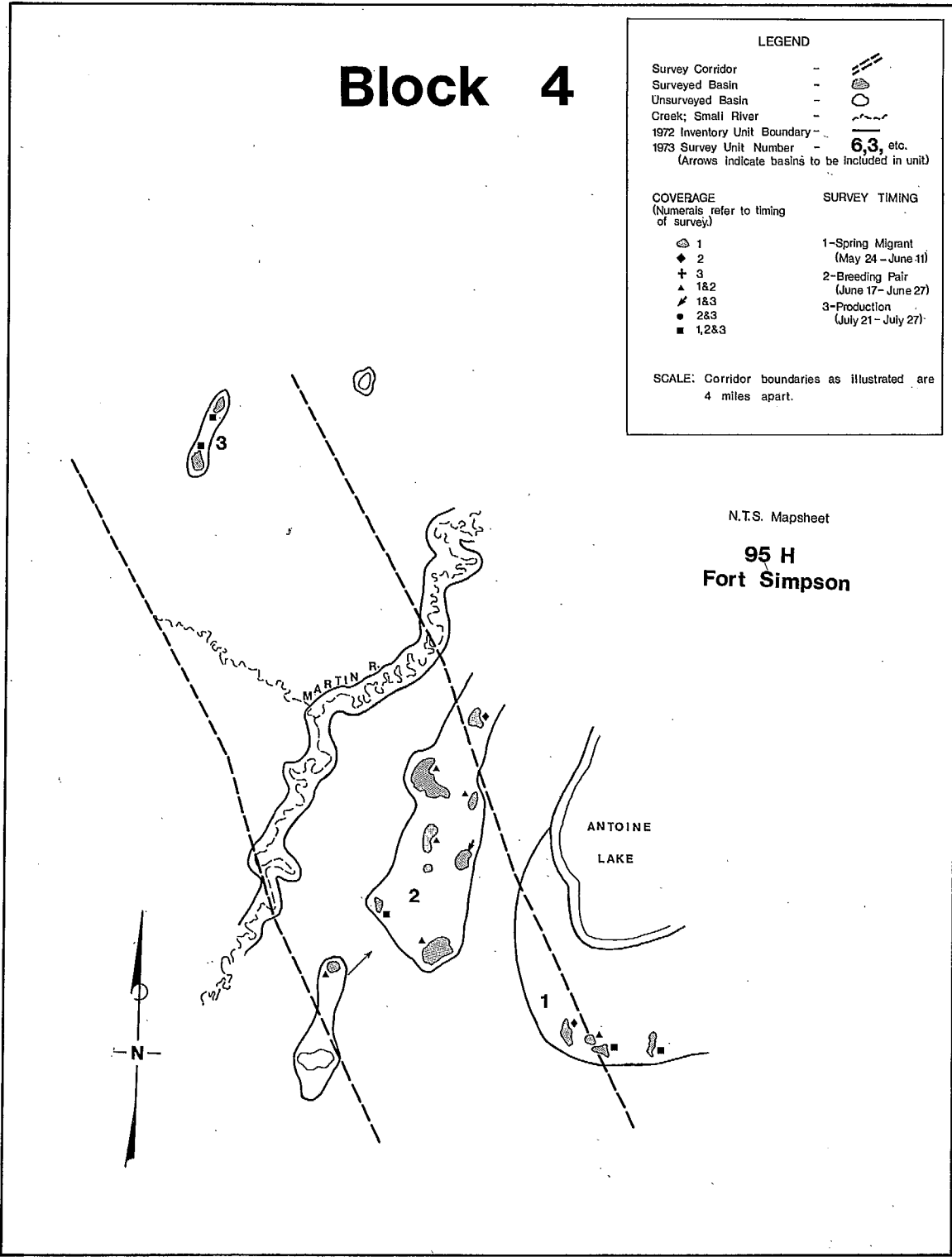
SURVEY TIMING

1 - Spring Migrant (May 24 - June 11)

2 - Breeding Pair (June 17 - June 27)

3 - Production (July 21 - July 27)

SCALE: Corridor boundaries as illustrated are 4 miles apart.



N.T.S. Mapsheet

95 H
Fort Simpson

Table 5a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
5	1	8	565	9	583	1	18	10	599
	2	5	225	3	157	1	49	6	274
	3	7	75	-	-	3	31	8	97
	4	6	234	-	-	2	27	6	234
Total		26	1099	12	740	7	125	30	1204

*Refers to "Block" illustration opposite

**Confined to corridor : + extension Units 1,2

Table 5b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Wetlands	Acreage	No's. of Dabblers/Divers						Unidentified			Loons	Shore-	Others	
			Block	Unit	Surveyed	Surveyed	Pair	♂	♀	Flock	Broods				Dab
5	1	8	565	2/50 [#]	0/8		0/29			2	6	25	3:0	2	2:0 Gr
	2	5	225	2/24	1/10		0/18				8	2	2:0		
	3	7	75	2/10	2/1				1	1	8		12		
	4	6	234	0/22	1/4	0/1	0/23								
Total		26	1099	6/106	4/23	0/1	0/70	--		3	15	35	5:0	14	2:0 Gr

+Unidentified duck (non-classified)

#Denotes 2 pair dabblers and 50 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)


Route segment	Wetlands	Acreage	No's. of Dabblers/Divers						Unidentified			Loons	Shore-	Others	
			Block	Unit	Surveyed	Surveyed	Pair	♂	♀	Flock	Broods				Dab
5	1	9	583	0/14	0/26	0/2	0/9			2	18+2b				4:2 Gr
	2	3	157	0/1	0/4	0/1	0/17				1			15	
Total		12	740	0/15	0/30	0/3	0/26	--		-	2	19+2b	--	15	4:2 Gr


SURVEY 3 - Production (July 21-July 27)


Route segment	Wetlands	Acreage	No's. of Dabblers/Divers						Unidentified			Loons	Shore-	Others	
			Block	Unit	Surveyed	Surveyed	Pair	♂	♀	Flock	Broods				Dab
5	1	1	18				0/12	0/1			10	1:1			
	2	1	49				0/8	0/3			4+2b				
	3	3	31	1/0		0/1		0/1							
	4	2	27					0/2			1				
Total		7	125	1/0	-	0/1	0/20	0/7		-	-	15+2b	1:1	--	--


Block 5


LEGEND

Survey Corridor - 

Surveyed Basin - 


Unsurveyed Basin - 


Creek; Small River - 


1972 Inventory Unit Boundary - 


1973 Survey Unit Number - **6,3, etc.**
(Arrows indicate basins to be included in unit)


COVERAGE
(Numerals refer to timing of survey)


 1

 2

 3

 1&2

 2&3

 1,2&3

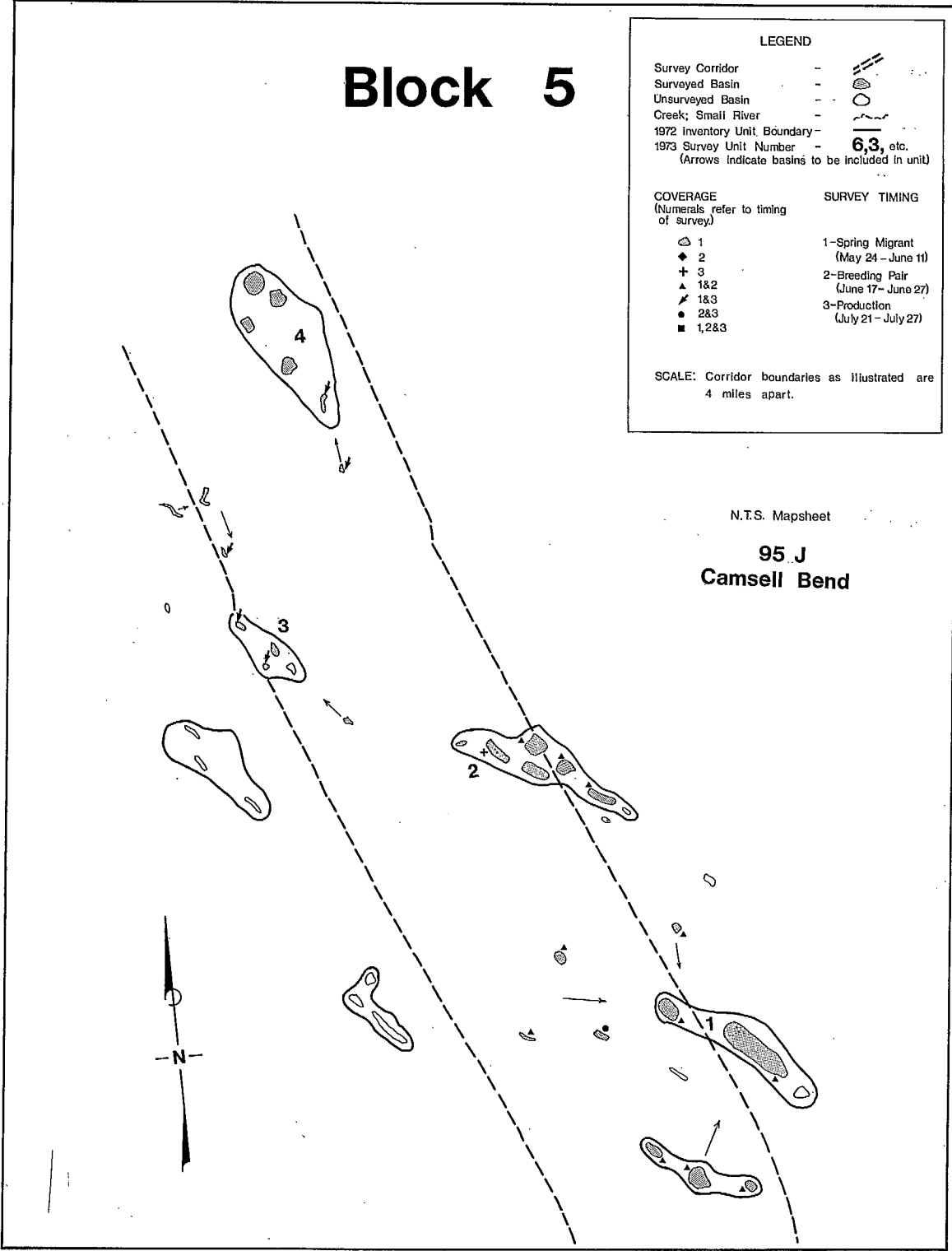
SURVEY TIMING

1 - Spring Migrant
(May 24 - June 11)

2 - Breeding Pair
(June 17 - June 27)

3 - Production
(July 21 - July 27)

SCALE: Corridor boundaries as illustrated are 4 miles apart.



N.T.S. Mapsheet

95 J
Camsell Bend

Table 6a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
6	1	5	47	-	-	3	31	8	65
	2	1	34	-	-	1	34	1	34
	3	6	41	-	-	2	11	22	158
	4	4	20	-	-	2	11	6	29
	5	4	104	-	-	2	14	5	108
	6	3	277	-	-	1	32	6	328
	7	5	56	-	-	1	5	18	169
Total		28	579	-	-	12	138	66	891

*Refers to "Block" illustration opposite

**Confined to corridor: + Unit 2

Table 6b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others	
				Pair	♂	♀	Flock	Broods	Dab	Div	UID†				
6	1	5	47	0/3#	0/2						4				
	2	1	34	0/7	0/6										
	3	6	41	1/7	3/4		0/8			1	10				
	4	4	20	1/2	0/1										
	5	4	104	1/43	2/3					1	2	2:0			
	6	3	277	2/47	1/10		0/10				2	4:0		3:0 Gr	
	7	5	56	0/7	0/1						4	4:0		2:0 Gr	
Total		28	579	5/116	6/27	-	0/18	--		1	2	22	10:0	--	5:0 Gr

†Unidentified duck (non-classified)

#Denotes 0 pair dabblers and 3 pair diver duck species

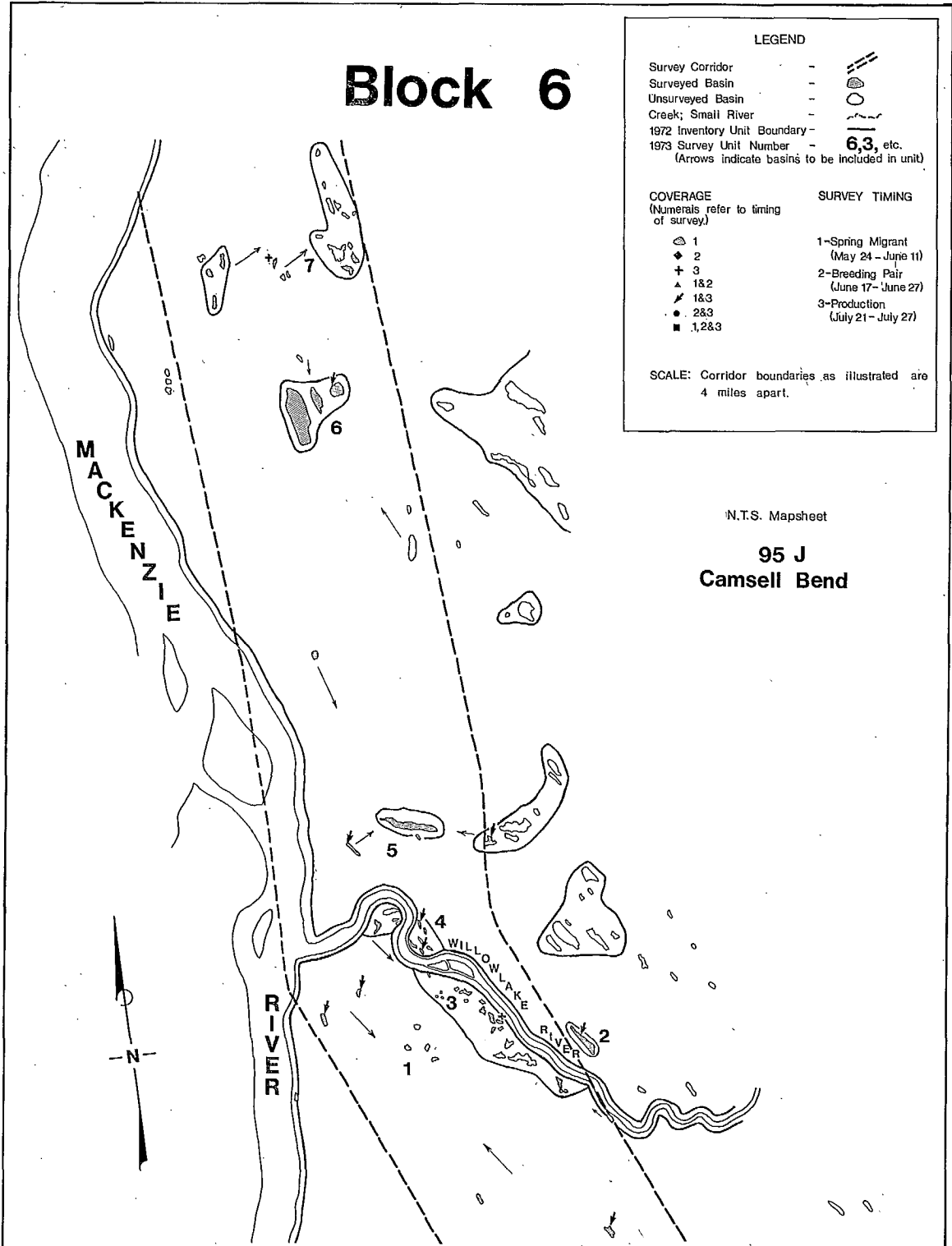
SURVEY 2 - Breeding Pair (June 17-June 27)

Survey Information Not Available (data collection and recording omissions)

SURVEY 3 - Production (July 21-July 27)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others
				Pair	♂	♀	Flock	Broods	Dab	Div	UID			
6	1	3	31	0/2			0/5	0/1		1				2:0 Gr
	2	1	34					0/3		1				
	3	2	11	1/0	1/0		5/0	2/0			5+1b		10	
	4	2	11		0/1			1/1		3	1b			
	5	2	14					0/4			1b			
	6	1	32								3			
	7	1	5	0/1										
Total		12	138	1/3	1/1	-	5/5	3/4	-	5	8+3b	--	10	2:0 Gr

Block 6



LEGEND

- Survey Corridor - [dashed line]
- Surveyed Basin - [shaded area]
- Unsurveyed Basin - [unshaded area]
- Creek; Small River - [wavy line]
- 1972 Inventory Unit Boundary - [dotted line]
- 1973 Survey Unit Number - **6,3, etc.**
(Arrows indicate basins to be included in unit)

COVERAGE (Numerals refer to timing of survey)	SURVEY TIMING
○ 1	1-Spring Migrant (May 24 - June 11)
◆ 2	2-Breeding Pair (June 17 - June 27)
+ 3	3-Production (July 21 - July 27)
▲ 1&2	
✦ 1&3	
● 2&3	
■ 1,2&3	

SCALE: Corridor boundaries as illustrated are 4 miles apart.

N.T.S. Mapsheet

**95 J
Camsell Bend**

Table 7a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
7	1	2	32	-	-	-	-	2	32
	2	1	47	-	-	1	47	3	74
	3	2	9	-	-	2	9	4	20
	4	5	75	-	-	1	7	14	124
	5	15	494	2	168	8	118	53	811
	6	1	116	-	-	-	-	2	122
Total		26	773	2	168	12	181	78	1183

*Refers to "Block" illustration opposite

**Confined to corridor

Table 7b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Wetlands	Acreage	No's. of Dabblers/Divers					Unidentified			Loons	Shore-	Others		
			Block	Unit	Surveyed	Surveyed	Pair	♂	♀	Flock				Broods	Dab
7	1	2	32	0/4 [#]	0/1										
	2	1	47	0/10	0/8										
	3	2	9												
	4	5	75	0/1	0/1					1	2		6:0		
	5	15	494	0/60	1/27	0/1	0/16			2	12		6:0	6	3:0 Gr
	6	1	116	0/3									3:0		2 SC
Total		26	773	0/78	1/37	0/1	0/16	--	1	2	14	15:0	6	3:0 Gr	2 SC

*Unidentified duck (non-classified)

#Denotes 0 pair dabblers and 4 pair diver duck species

SURVEY 2 -- Breeding Pair (June 17-June 27)

Route segment	Wetlands	Acreage	No's. of Dabblers/Divers					Unidentified			Loons	Shore-	Others		
			Block	Unit	Surveyed	Surveyed	Pair	♂	♀	Flock				Broods	Dab
7	5	2	168	0/1							4				
Total		2	168	0/1	-	-	-	--	-	4	-	--	--	--	--

SURVEY 3 - Production (July 21-July 27)

Route segment	Wetlands	Acreage	No's. of Dabblers/Divers					Unidentified			Loons	Shore-	Others		
			Block	Unit	Surveyed	Surveyed	Pair	♂	♀	Flock				Broods	Dab
7	2	1	47						1/2				3:2		
	3	2	9												
	4	1	7						0/1						
	5	8	118	1/1	0/2	1/0			3/4	3	2	2+6b	2:0	2	2:0 Gr
Total		12	181	1/1	0/2	1/0	-		4/7	3	2	2+6b	5:2	2	2:0 Gr

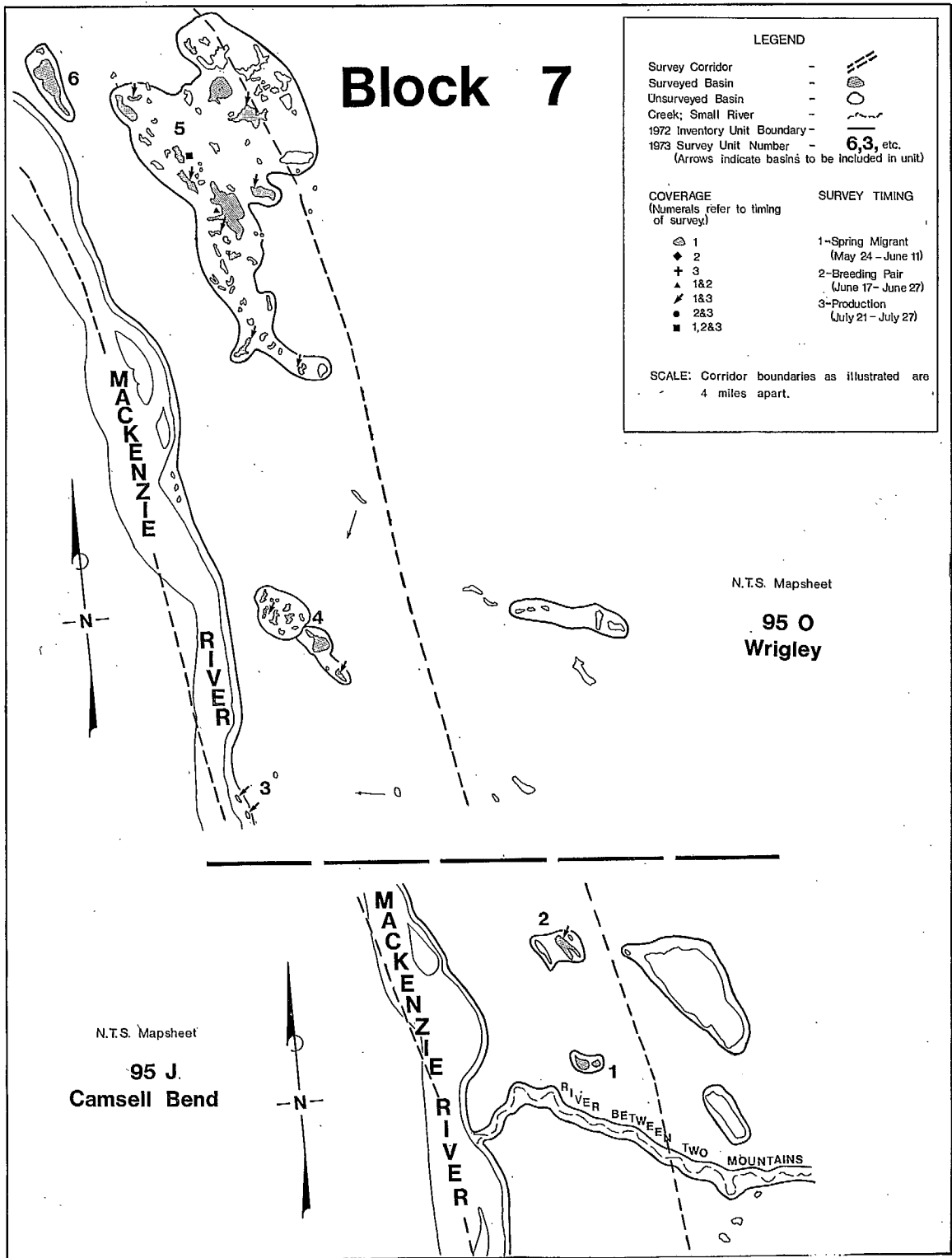


Table 8a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*	Block	Unit	Surveyed Wetlands						Total Wetlands**	
			Survey 1		Survey 2		Survey 3		No.	Acreage
			No.	Acreage	No.	Acreage	No.	Acreage	No.	Acreage
8	1	3	34	-	-	1	11	3	34	
	2	2	247	2	247	-	-	4	266	
	3	2	14	2	14	2	14	7	33	
	4	2	44	3	57	-	-	9	104	
	5	12	205	12	197	1	7	41	368	
Total			21	544	19	515	4	32	64	805

*Refers to "Block" illustration opposite
 **Confined to corridor

Table 8b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID ⁺			
8	1	3	34	1/5 [#]	3/2					1	6				
	2	2	247	1/7	0/1		0/6			1	3		1:0	2	
	3	2	14	0/3	0/2						3				
	4	2	44	3/2							6		1:0		2:0 Gr
	5	12	205	14/22	4/4	0/1				1	32		8:0	16	
Total			21	544	19/39	7/9	0/1	0/6	--	2	1	50	10:0	18	2:0 Gr

⁺Unidentified duck (non-classified)

[#]Denotes 1 pair dabblers and 5 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
8	2	2	247	1/10	0/8		0/88			1	3				
	3	2	14	0/1	0/1										
	4	3	57	0/3	0/3								1:0		
	5	12	197	3/31	1/2		0/9			1	4	12	2:0	50	
Total			19	515	4/45	1/14	-	0/97	--	2	7	12	3:0	50	--

SURVEY 3 - Production (July 21-July 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
8	3	2	14	1/0				0/1							
Total			2	14	1/0	-	-	--	0/1	-	-	--	--	--	--

Block 8

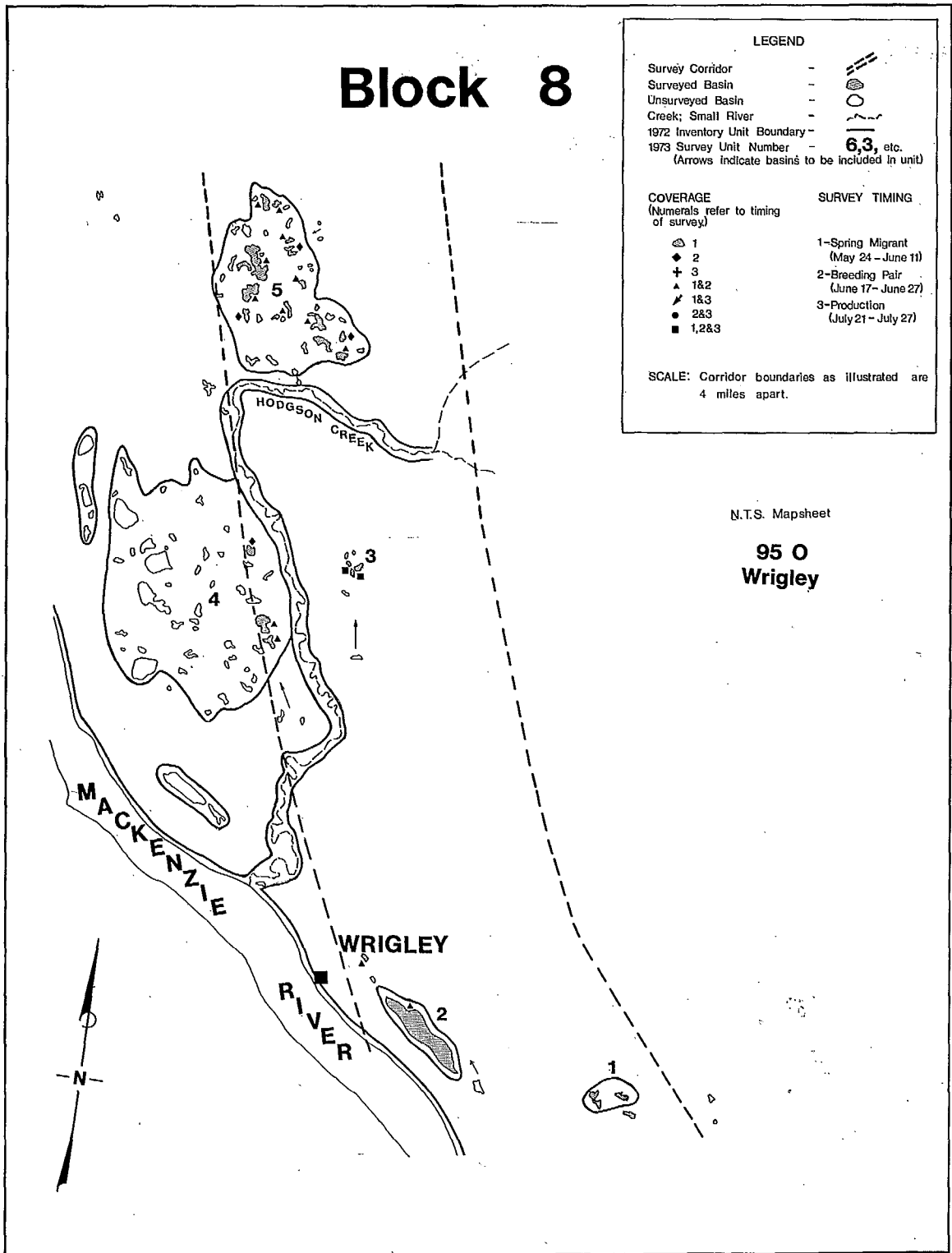


Table 9a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
9	1	7	220	7	220	1	9	25	314
	2	8	270	9	276	4	37	26	364
	3	2	67	2	67	1	24	19	175
Total		17	557	18	563	6	70	70	853

*Refers to "Block" illustration opposite

**Confined to corridor

Table 9b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others	
				Pair	♂	♀	Flock	Broods	Dab	Div	UID ⁺				
9	1	7	220	1/54 [#]	0/10		4/22					12			
	2	8	270	2/13	2/3		0/60			1		6	2:0	1	
	3	2	67	0/18	0/1	0/1	0/18								
Total		17	557	3/85	2/14	0/1	4/100	--		1	-	18	2:0	1	--

⁺Unidentified duck (non-classified)

[#]Denotes 1 pair dabblers and 54 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others	
				Pair	♂	♀	Flock	Broods	Dab	Div	UID				
9	1	7	220	0/22	0/6	0/1	0/67				4	1	7:0		
	2	9	276	0/9	3/5		0/56			1	1		5:0		
	3	2	67	0/3	0/4	0/1	3/3	1/0			1				
Total		18	563	0/34	3/15	0/2	3/126	1/0		1	6	1	12:0	--	--

SURVEY 3 - Production (July 21-July 27)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others		
				Pair	♂	♀	Flock	Broods	Dab	Div	UID					
9	1	1	9					1/0						2	1:0 Gr	
	2	4	37	0/1				1/4			1+1b				2:0 Gr	
	3	1	24					1/0								
Total		6	70	0/1	-	-	-	3/4			-	-	1+1b	--	2	3:0 Gr

Block 9

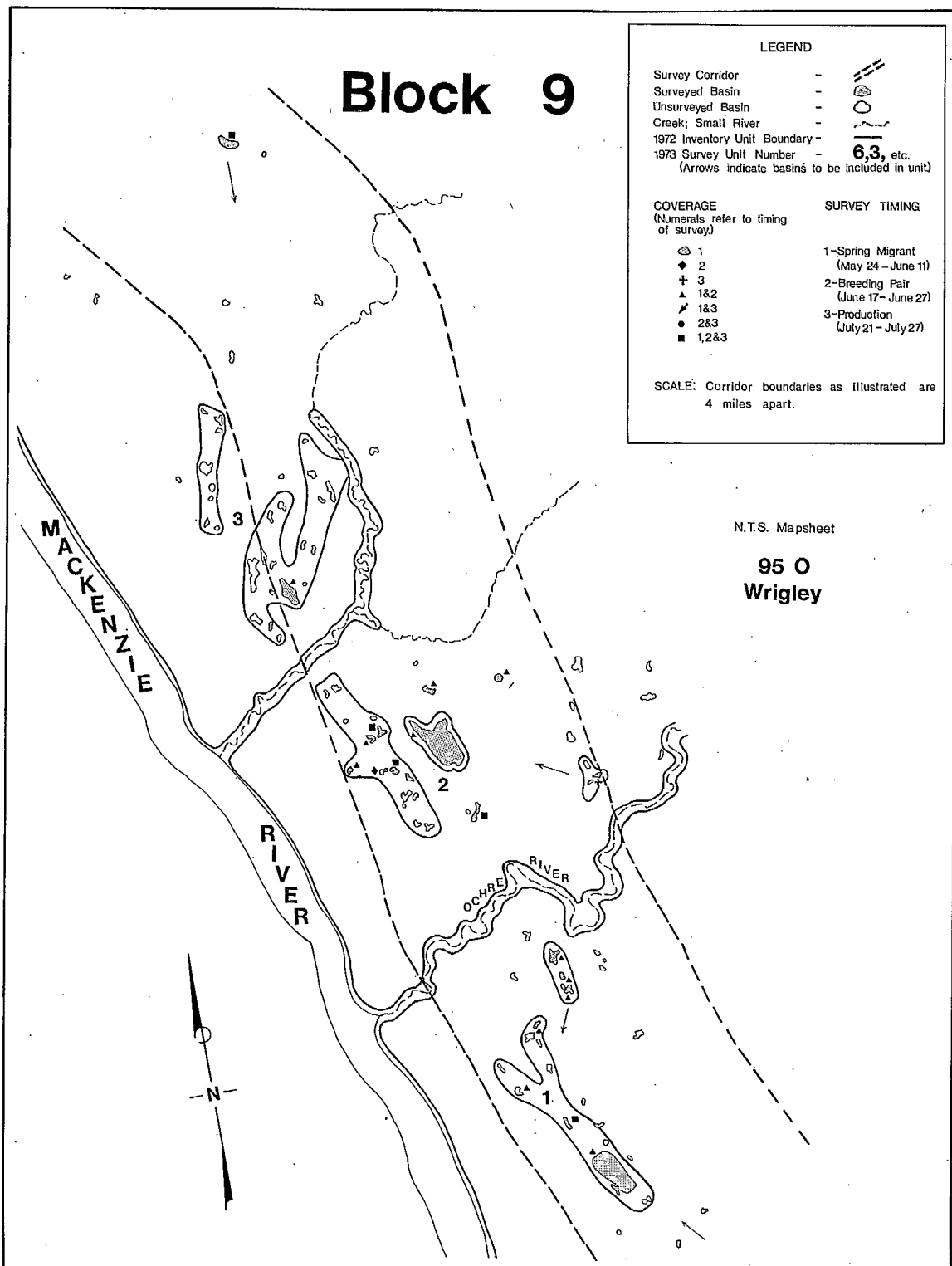


Table 10a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
10	1	18	470	21	463	5	88	24	592
	2	1	52	1	52	1	52	1	52
	3	1	68	1	68	1	68	1	68
Total		20	590	23	583	7	208	26	712

*Refers to "Block" illustration opposite

**Confined to corridor

Table 10b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others
				Pair	♂	♀	Flock	Broods	Dab	Div	UID ⁺			
10	1	18	470	1/4 [#]	8/2		0/10		4	73	16:0	3	4:0 Gr	
	2	1	52	1/1	4/0			1	1					
	3	1	68	0/4	1/0		0/6		1	6	1:0			
Total		20	590	2/47	13/2	-	0/16	--	6	-	80	17:0	3	4:0 Gr

⁺Unidentified duck (non-classified)[#]Denotes 1 pair dabblers and 42 pair diver duck speciesSURVEY 2 - Breeding Pair (June 17-June 27)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others
				Pair	♂	♀	Flock	Broods	Dab	Div	UID			
10	1	21	463	2/59	8/13	0/2	30/355		3	2	1	11:0		3:2 Gr
	2	1	52					2						
	3	1	68	0/2	0/1		0/3	1/0						
Total		23	583	2/61	8/14	0/2	30/358	1/0	5	2	1	11:0	--	3:2 Gr

SURVEY 3 - Production (July 21-July 27)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others
				Pair	♂	♀	Flock	Broods	Dab	Div	UID			
10	1	5	88	1/1		1/0		4/11		4	3:1	4	4:2 Gr	
	2	1	52				6/0	2/1	2	1:0	2			
	3	1	68			1/0	3/0					25	1 C	
Total		7	208	1/1	-	2/0	9/0	6/12	-	-	6	4:1	31	4:2 Gr 1 C

Block 10

LEGEND

Survey Corridor - - - - -

Surveyed Basin - [hatched pattern]

Unsurveyed Basin - [white circle]

Creek; Small River - [wavy line]

1972 Inventory Unit Boundary - [dashed line]

1973 Survey Unit Number - 6, 3, etc.
(Arrows indicate basins to be included in unit)

COVERAGE
(Numerals refer to timing of survey.)

1 - [circle with 1]

2 - [diamond with 2]

3 - [plus sign]

1&2 - [triangle with 1&2]

1&3 - [circle with 1&3]

2&3 - [square with 2&3]

1, 2&3 - [square with 1, 2&3]

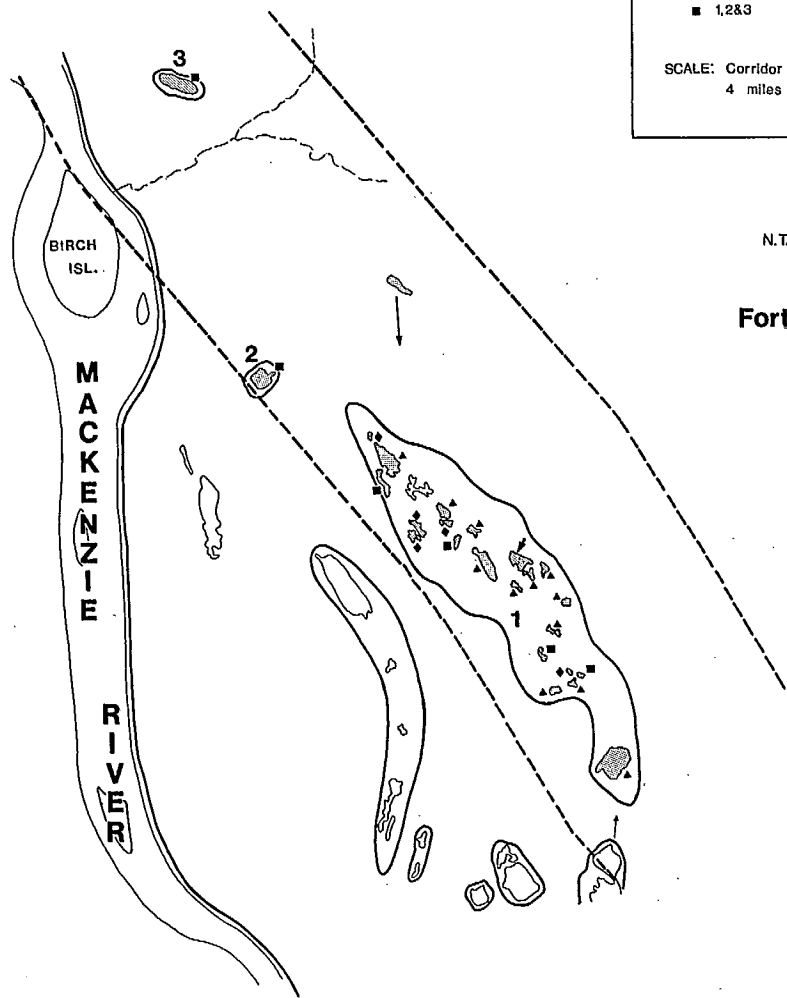
SURVEY TIMING

1 - Spring Migrant
(May 24 - June 11)

2 - Breeding Pair
(June 17 - June 27)

3 - Production
(July 21 - July 27)

SCALE: Corridor boundaries as illustrated are 4 miles apart.



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Table 11a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
11	1	1	232	1	232	1	232	1	232
	2	6	92	6	92	-	-	7	101
	3	1	310	1	310	1	310	1	310
	4	21	688	22	718	4	70	34	853
	5	30	1043	35	983	10	299	54	2002
	6	1	27	4	74	-	-	9	140
Total		60	2392	69	2409	16	911	106	3638

*Refers to "Block" illustration opposite
 **Confined to corridor

Table 11b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Wetlands	Acreage	No's. of Dabblers/Divers					Unidentified			Loons	Shore-	Others		
			Block	Unit	Surveyed	Surveyed	Pair	♂	♀	Flock				Broods	Dab
11	1	1	232	18/41 [#]	5/3		0/75								
	2	6	92									2:0			
	3	1	310	0/27	1/7		0/31					2:0			
	4	21	688	7/45	8/7					1	1	39	14:0	2	2:0 Gr
	5	30	1043	1/50	3/13	0/2	0/177			1	3	28	29:0	2	1:0 Gr
	6	1	27												1 SC
Total		60	2392	26/163	17/30	0/2	0/283	-	2	4	71	47:0	4	3:0 Gr	1 SC

[†]Unidentified duck (non-classified)

[#]Denotes 18 pair dabblers and 41 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment	Wetlands	Acreage	No's. of Dabblers/Divers					Unidentified			Loons	Shore-	Others		
			Block	Unit	Surveyed	Surveyed	Pair	♂	♀	Flock				Broods	Dab
11	1	1	232	0/25	1/3					2					2:2 Gr
	2	6	92	0/5	0/1	0/1		0/3			1		2:0		
	3	1	310	1/5	0/4	0/1	0/84								
	4	22	718	0/21	2/10		0/18				4	11	11:0	95	10:0 Gr
	5	35	983	0/29	0/14	0/1	4/194	1/0		1	1	1	35:1	14	9:0 Gr
	6	4	74										6:0		1 SC
Total		69	2409	1/85	3/32	0/3	4/296	1/3	3	6	12	54:1	109	24:2 Gr	1 SC

SURVEY 3 - Production (July 21-July 27)

Route segment	Wetlands	Acreage	No's. of Dabblers/Divers					Unidentified			Loons	Shore-	Others		
			Block	Unit	Surveyed	Surveyed	Pair	♂	♀	Flock				Broods	Dab
11	1	1	232				1/1	0/255	0/1				181+1b		1:0 Gr
	3	1	310					0/20	1/10 [†]						
	4	4	70					2/0	6/1			2:0			
	5	10	299				1/1	3/30	0/5			2	3	11:4	3
Total		16	911	-	-	4/2	3/305	7/17 [†]	-	2	184+1b	13:4	3	3:2 Gr	

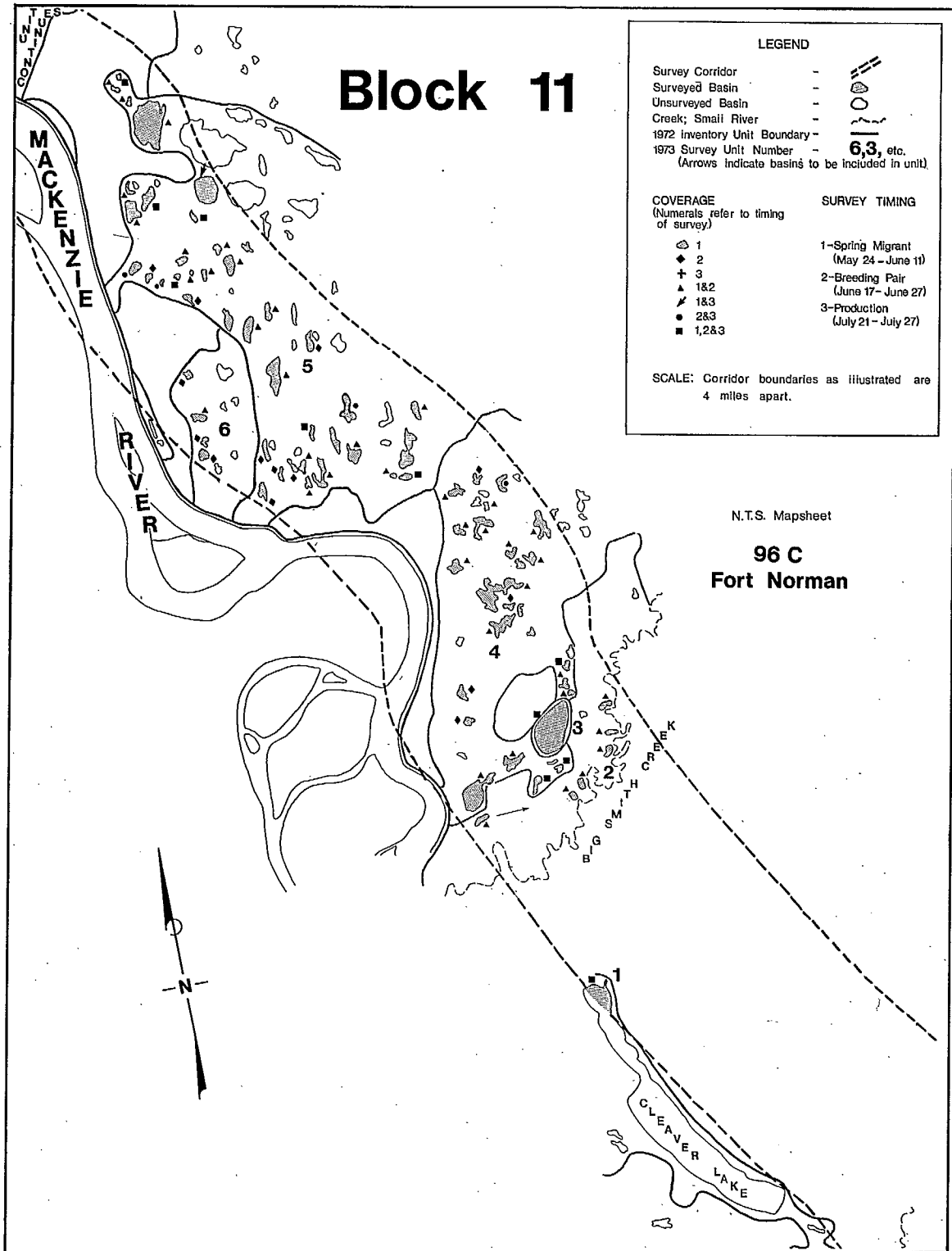


Table 12a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
12	1	38	1449	38	1456	12	218	63	1807
	2	4	106	3	90	-	-	9	142
	3	4	77	4	76	2	43	12	151
Total		46	1632	45	1622	14	261	84	2100

*Refers to "Block" illustration opposite

**Confined to corridor: + 2 surveyed basins, Unit 1

Table 12b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

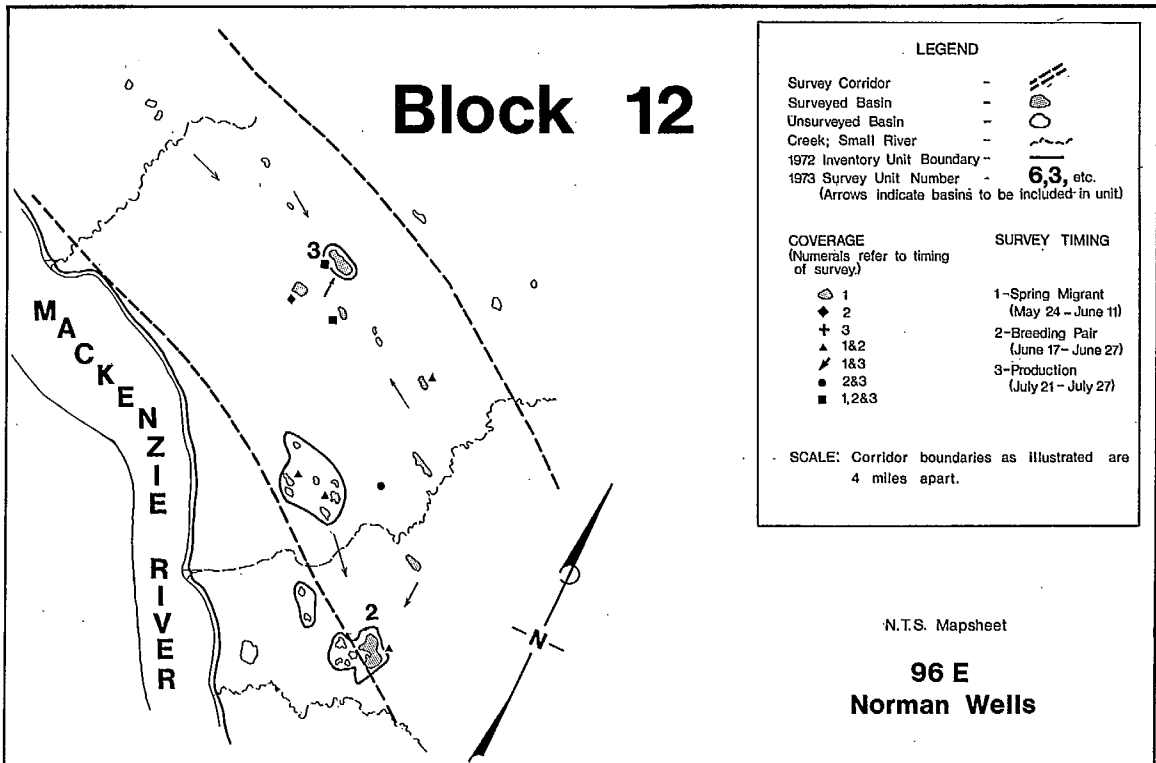
Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others	
				Pair	♂	♀	Flock	Broods	Dab	Div	UID [†]				
12	1	38	1449	9/89 [#]	13/26	1/2	3/136			4	3	42	24:0	17	7:0 Gr 2 SC
	2	4	106	0/14	1/2		3/3				1	7			
	3	4	77	0/14	1/1							7			
Total		46	1632	9/117	15/29	1/2	6/139	--		4	4	56	24:0	17	7:0 Gr 2 SC

[†]Unidentified duck (non-classified)[#]Denotes 9 pair dabblers and 89 pair diver duck speciesSURVEY 2 - Breeding Pair (June 17-June 27)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others	
				Pair	♂	♀	Flock	Broods	Dab	Div	UID				
12	1	38	1456	0/37	2/18	2/1	0/55			1	4	51	24:0	24	7:0 Gr
	2	3	90	0/6	2/0		0/5					65			
	3	4	76	0/6	0/3						4	2			
Total		45	1622	0/49	4/21	2/1	0/60	--		1	8	118	24:0	24	7:0 Gr

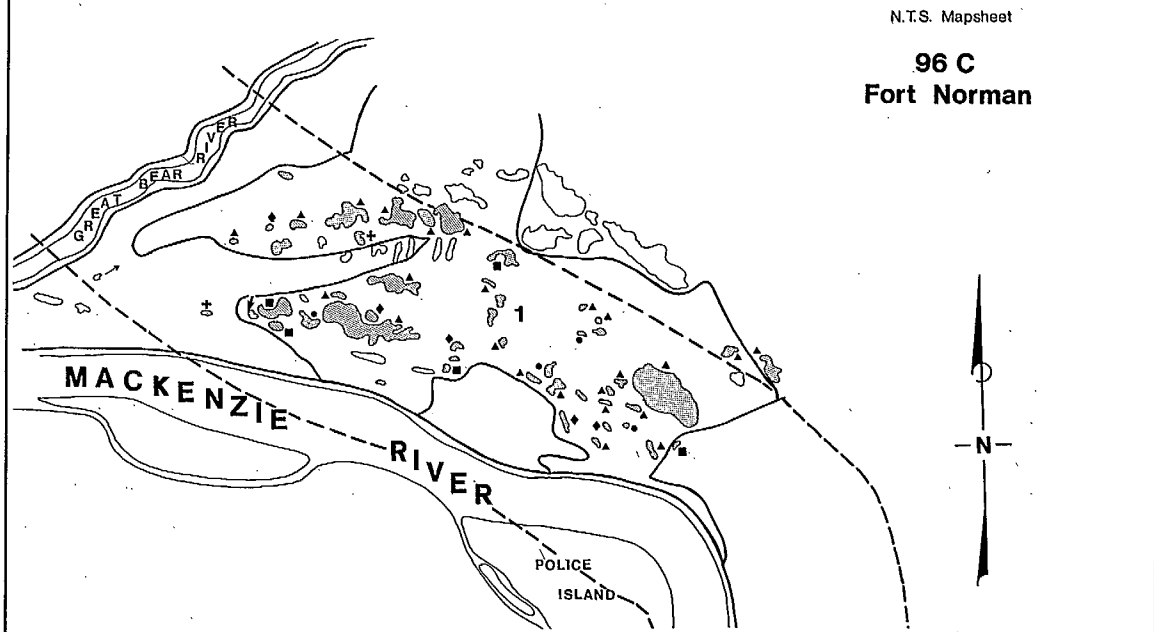
SURVEY 3 - Production (July 21-July 27)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others	
				Pair	♂	♀	Flock	Broods	Dab	Div	UID				
12	1	12	218	3/2	1/0	1/0	18/148	6/3		1	224+1b	8:5	5	8:2 Gr	
	3	2	43			0/4		0/5			1b				
Total		14	261	3/2	1/0	1/4	18/148	6/8		-	1	224+2b	8:5	5	8:2 Gr



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Table 13a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
13	1	5	252	4	185	2	119	6	274
	2	4	106	3	31	2	86	8	59
	3	1	184	-	-	-	-	1	184
	4	2	761	1	153	1	153	3	872
	5	3	315	4	329	1	167	4	329
	6	4	167	2	70	1	59	5	184
	7	3	77	3	67	-	-	5	106
Total		22	1862	18	835	7	584	32	2008

*Refers to "Block" illustration opposite

**Confined to corridor: + 1 surveyed basin, Unit 4

Table 13b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others
				Pair	♂	♀	Flock	Broods	Dab	Div	UID*			
13	1	5	252	2/18#	3/1		10/0			2	14	6:0		
	2	4	106	0/13	1/3				1	13	3:0			
	3	1	184	5/15	1/1		0/15				13		6	
	4	2	761	2/28	6/19		0/5							
	5	3	315	2/41	1/9	0/1	3/33			2	12			2:0 Gr
	6	4	167	4/7	4/1		0/5			2	3			2:0 Gr
	7	3	77	0/18	0/3		0/14				14	2:0		
Total		22	1862	15/140	16/37	0/1	13/72	--	2	8	69	11:0	6	4:0 Gr

*Unidentified duck (non-classified)

#Denotes 2 pair dabblers and 18 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others
				Pair	♂	♀	Flock	Broods	Dab	Div	UID			
13	1	4	185	0/5	3/10		27/0			1	9			2:0 Gr
	2	3	31	0/3	0/4	0/1						1:0	6	
	3	-	-											
	4	1	153		0/1		0/5							
	5	4	329	0/4	2/5	0/1	0/75	1/0			28			2
	6	2	70		0/1						1			
	7	3	67	0/2	0/6						2	5:0	4	
Total		17	835	0/14	5/27	0/2	27/80	1/0	1	31	9	6:0	12	2:0 Gr

SURVEY 3 - Production (July 21-July 27)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others
				Pair	♂	♀	Flock	Broods	Dab	Div	UID			
13	1	2	119				0/6	0/6			1b	0:2		3:3 Gr
	2	2	86		1/0			2/4		1		2:0		
	3	-	-											
	4	1	153			1/0		0/2				1:2	2	
	5	1	167			0/1	7/0							
	6	1	59	0/1				1/0				2:2	4	
Total		7	584	0/1	1/0	1/1	7/6	5/12	-	1	1b	5:6	6	3:3 Gr

Block 13

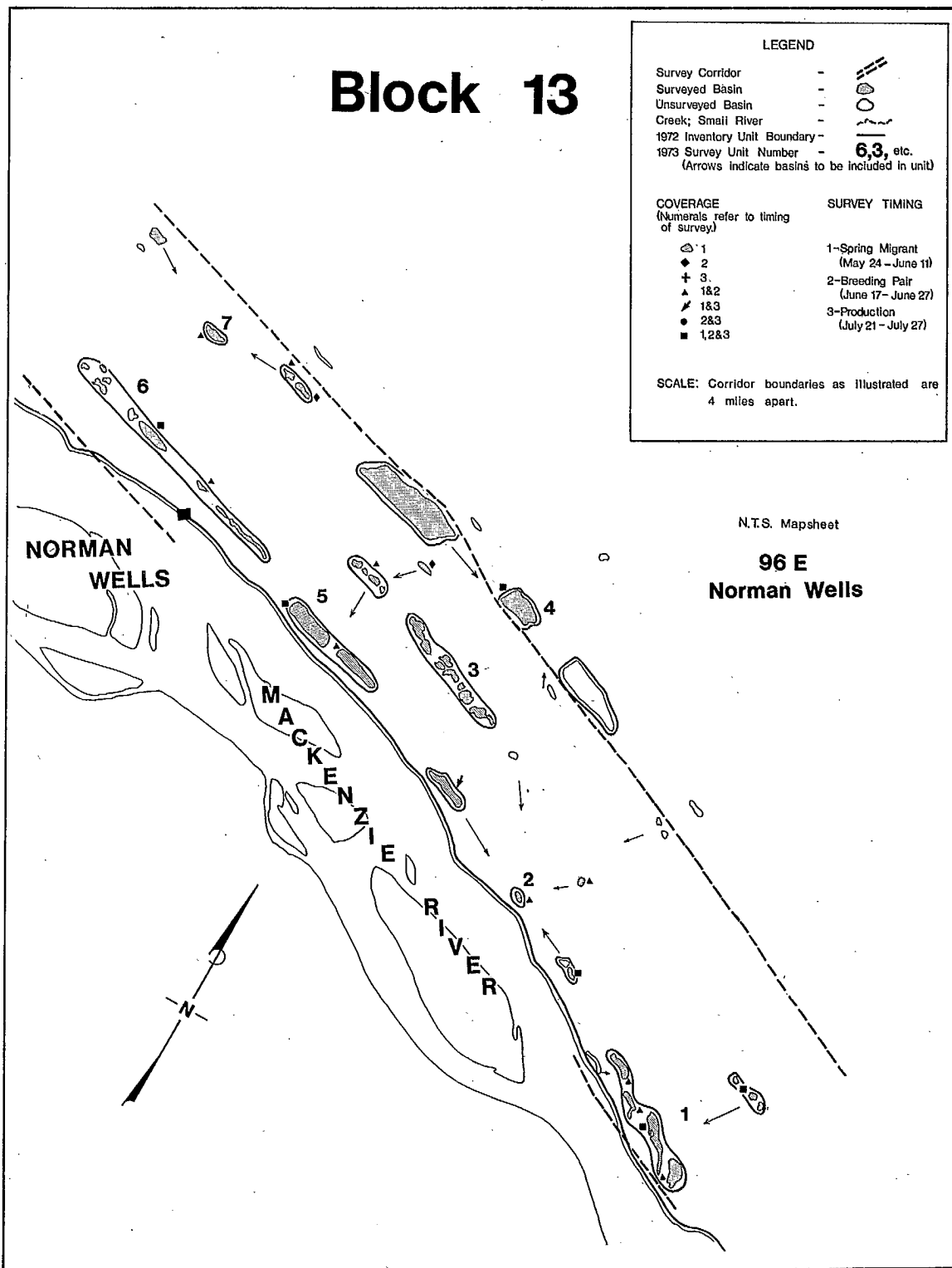


Table 14a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*	Block	Unit	Surveyed Wetlands						Total Wetlands**	
			Survey 1		Survey 2		Survey 3		No.	Acreage
			No.	Acreage	No.	Acreage	No.	Acreage	No.	Acreage
14	1		13	2198	13	1877	3	369	16	2236
	2		3	121	2	41	1	25	5	166
Total			16	2319	15	1918	4	394	21	2402

*Refers to "Block" illustration opposite
 **Confined to corridor

Table 14b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others	
					Pair	♂	♀	Flock	Broods	Dab	Div	UID ⁺				
14	1		13	2198	49/210 [#]	29/25	0/3	50/164			8	3	53	21:0	91	6:0 Gr
	2		3	121	1/21	1/2		0/7						2:0		
Total			16	2319	50/231	30/27	0/3	50/171	--		8	3	53	23:0	91	6:0 Gr

⁺Unidentified duck (non-classified)

[#]Denotes 49 pair dabblers and 210 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)


Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others	
					Pair	♂	♀	Flock	Broods	Dab	Div	UID				
14	1		13	1877	7/15	9/26	2/0	56/291	1/0		5	1	7	17:0	110	8:0 Gr
	2		2	41				3/0			1	1	2	3:0	38	2:0 SC
Total			15	1918	7/15	9/26	2/0	59/291	1/0		6	1	9	20:0	148	8:0 Gr 2:0 SC


SURVEY 3 - Production (July 21-July 27)


Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others	
					Pair	♂	♀	Flock	Broods	Dab	Div	UID				
14	1		3	369			0/1		1/7				3	1:1	20	6:4 Gr
	2		1	25										1:0		
Total			4	394	--	--	0/1	--	1/7	--		3	--	2:1	20	6:4 Gr


Block 14


LEGEND

Survey Corridor - 

Surveyed Basin - 


Unsurveyed Basin - 


Creek; Small River - 


1972 Inventory Unit Boundary - 


1973 Survey Unit Number - **6,3, etc.**
(Arrows indicate basins to be included in unit)


COVERAGE
(Numerals refer to timing of survey)


 1


 2

 3

 1&2

 1&3

 2&3

 1,2&3

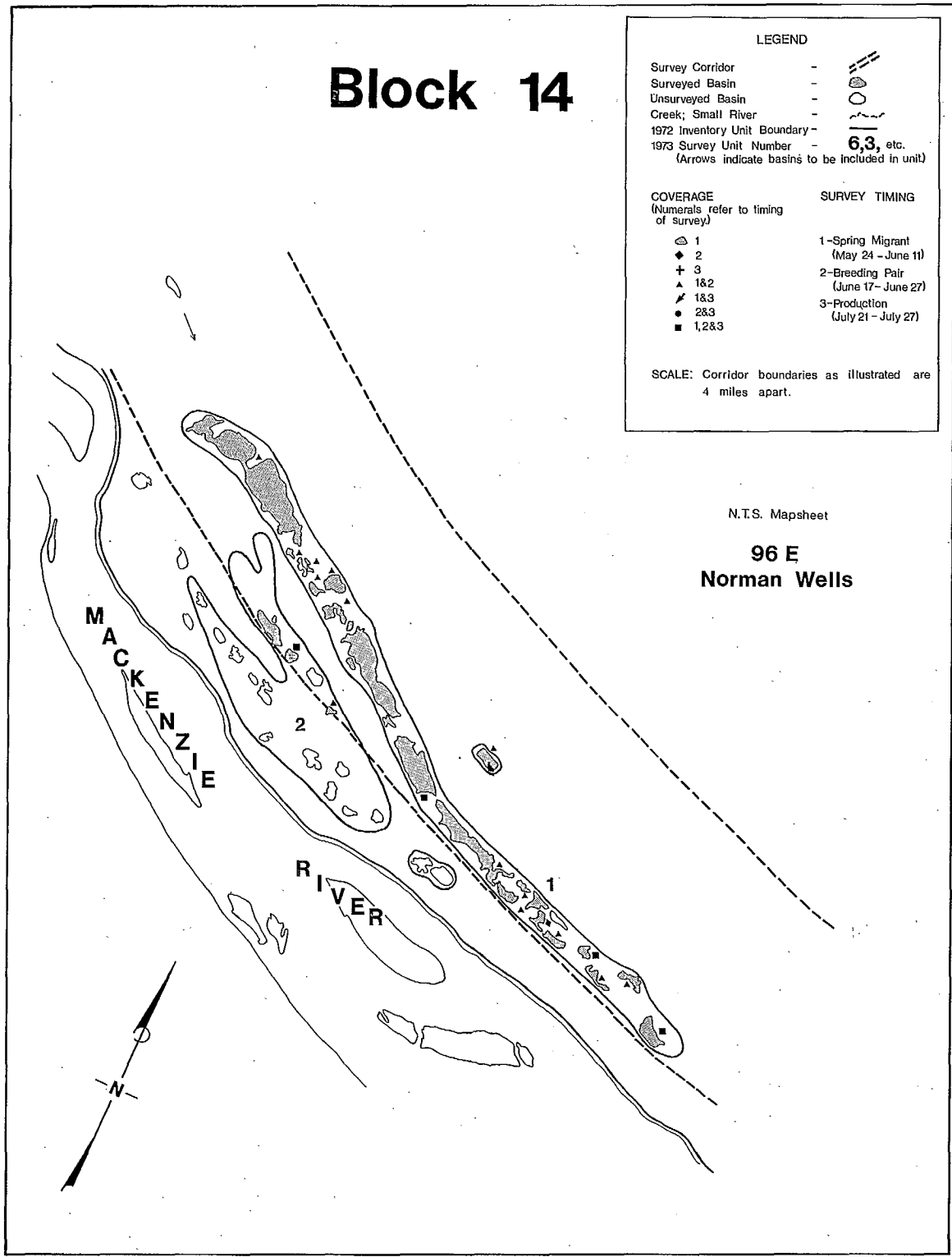
SURVEY TIMING

1 - Spring Migrant
(May 24 - June 1)

2 - Breeding Pair
(June 17 - June 27)

3 - Production
(July 21 - July 27)

SCALE: Corridor boundaries as illustrated are 4 miles apart.



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Table 15a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*	Block	Unit	Surveyed Wetlands						Total Wetlands**	
			Survey 1		Survey 2		Survey 3		No.	Acreage
			No.	Acreage	No.	Acreage	No.	Acreage		
15	1	2	209	1	187	-	-	3	241	
	2	4	205	6	229	1	20	8	270	
	3	2	193	2	261	-	-	3	283	
	4	7	149	4	77	4	86	8	160	
	5	17	238	7	95	6	121	22	349	
	6	2	70	2	70	1	34	2	70	
	Total		34	1064	22	919	12	261	46	1373

*Refers to "Block" illustration opposite

**Confined to corridor: + Unit 6

Table 15b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID ⁺			
15	1	2	209	1/14 [#]	5/0					1	6	2:0		1 UG	
	2	4	205	10/39	3/6	0/2	0/22			1	1	2:0	25		
	3	2	193	5/1	2/1							2:0	5	1:0 Gr	
	4	7	149	2/11	3/2							4:0			
	5	17	238	8/5	7/8	0/1			1	34	7:0		2		
	6	2	70	2/1	2/5					8			2		
	Total		34	1064	28/71	22/22	0/3	0/22	--	3	49	17:0	34	1:0 Gr 1 UG	

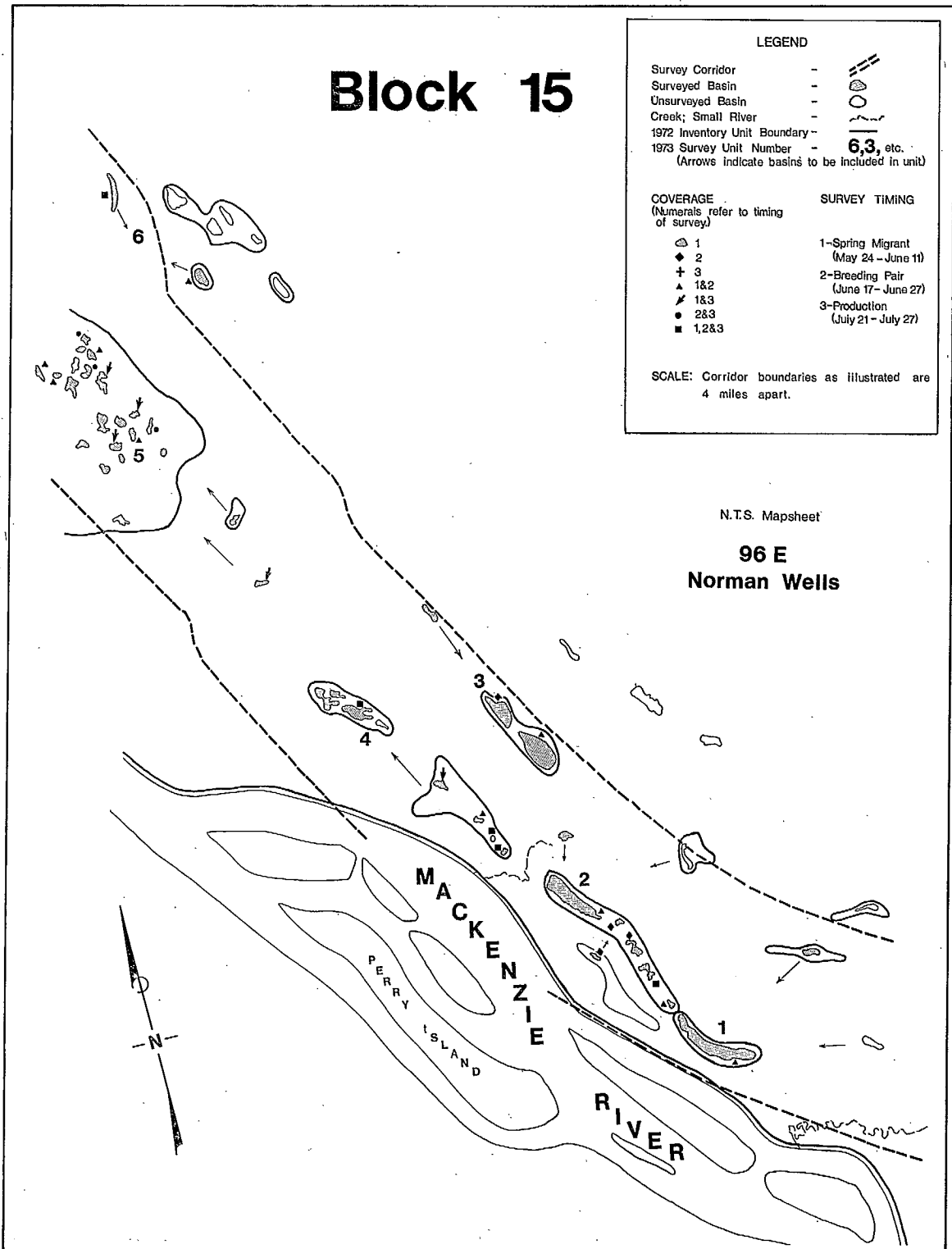
⁺Unidentified duck (non-classified)[#]Denotes 1 pair dabblers and 14 pair diver duck speciesSURVEY 2 - Breeding Pair (June 17-June 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
15	1	1	187							1				12	
	2	6	229	0/3	2/3	1/0	0/8			3	2			6	1:0 Gr
	3	2	261	0/5										3	
	4	4	77	1/0	1/0						1	1:0		14	
	5	7	95	1/0	4/4							5:0		15	
	6	2	70							1	1			4	
	Total		22	919	2/8	7/7	1/0	0/8	--	4	5	4	6:0	54	1:0 Gr

SURVEY 3 - Production (July 21-July 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
15	2	1	20						1/1						
	4	4	86						1/1	1		1:0		4	
	5	6	121	0/1	0/1				5/8			6:3			
	6	1	34	0/1	2/0				2/3		1b				
	Total		12	261	0/2	2/1	--	--	9/13	1	--	1b	7:3	4	--

Block 15



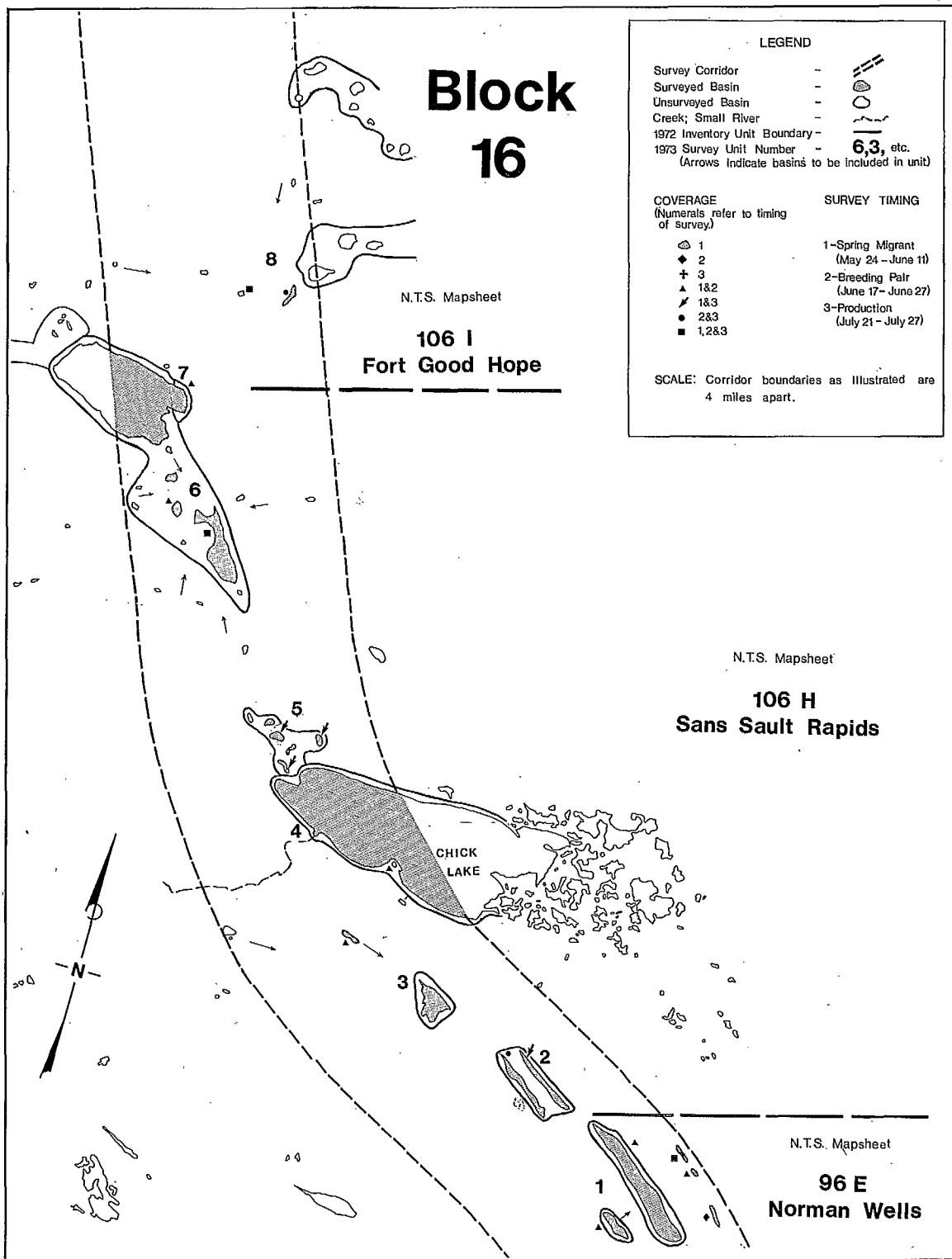


Table 17a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*	Block	Unit	Surveyed Wetlands						Total Wetlands**	
			Survey 1		Survey 2		Survey 3		No.	Acreage
			No.	Acreage	No.	Acreage	No.	Acreage	No.	Acreage
17	1		8	160	3	81	2	27	56	659
	2		13	275	8	239	-	-	18	293
	3		9	311	8	286	2	20	15	356
	4		1	29	1	13	-	-	2	41
	5		15	511	11	509	6	176	47	844
	Total		46	1286	31	1128	10	223	138	2193

*Refers to "Block" illustration opposite

**Confined to corridor

Table 17b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID ⁺			
17	1		8	160	0/3 [#]	1/1		2/0		1		3	6:0	4	2 SC
	2		13	275	2/15	3/4		9/8					4:0	12	2:0 Gr
	3		9	311	0/37	8/15		4/21					5:0	6	
	4		1	29	0/4							2			
	5		15	511	3/57	12/28	4/0	4/29		1	4	23	2:0	36	4:0 Gr
	Total		46	1286	5/116	24/48	4/0	19/58	--	2	4	28	17:0	58	6:0 Gr 2 SC

⁺Unidentified duck (non-classified)[#]Denotes 0 pair dabblers and 3 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others	
					Pair	♂	♀	Flock	Broods	Dab	Div	UID				
17	1		3	81								1	2:0	11		
	2		8	239	0/2	1/11				2	1		2:0	36	2 SC	
	3		8	286	0/17	1/15		0/27					4:0	41	1:0 Gr	
	4		1	13		0/3	0/2					2				
	5		11	509	1/27	4/15		8/102				23	10	5:0	66	1:0 Gr 2 SC
	Total		31	1128	1/46	6/44	0/2	8/131	--	2	27	10	13:0	154	2:0 GR 4 SC	

SURVEY 3 - Production (July 21-July 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
17	1		2	27											
	3		2	20											
	5		6	176			1/1	9/14	0/4 4/6	3	4	1+1b	5:3	22	1 SC
	Total		10	223	-	-	1/1	9/14	4/10	3	4	1+1b	8:7	22	1 SC

Block 17

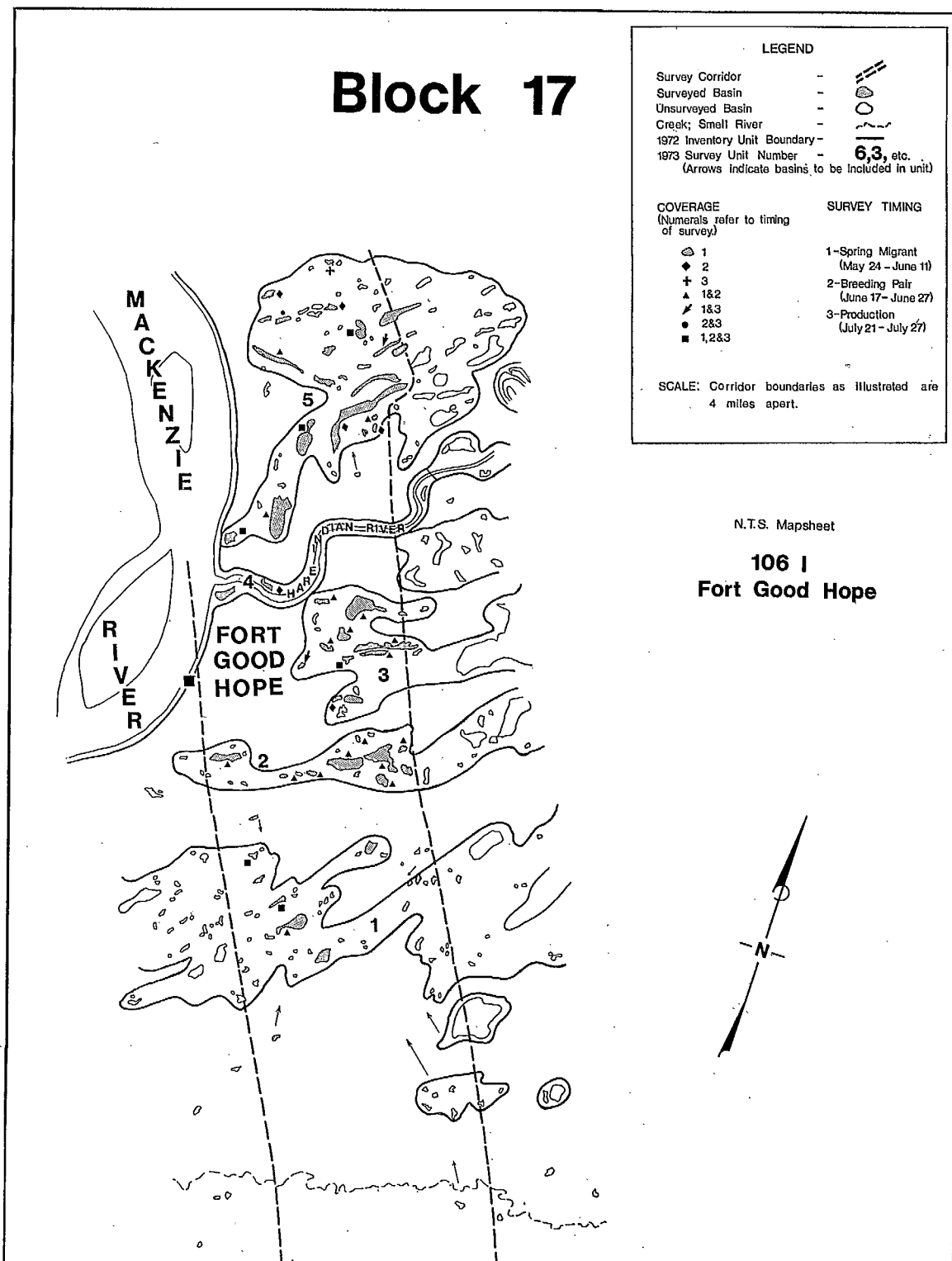


Table 18a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
18	1	-	-	3	23	-	-	7	140
	2	-	-	17	205	4	56	32	315
	3	-	-	9	688	5	142	19	760
	4	-	-	7	65	5	79	22	176
Total		-	-	36	981	14	277	80	1391

*Refers to "Block" illustration opposite

**Confined to corridor

Table 18b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Survey Information Not Available (data collection and recording omissions)

SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others	
				Pair	♂	♀	Flock	Broods	Dab	Div	UID ⁺				
18	1	3	23	0/5 [#]						2			6:0		
	2	17	205	0/3	0/3	0/1	0/15			3			13:0	26	1:0 Gr
	3	9	688	3/27	3/30	1/3	0/105			1	66		5:1	72	
	4	7	65										7:0	5	
Total		36	981	3/35	3/33	1/4	0/120	--		2	4	66	31:1	103	1:0 Gr

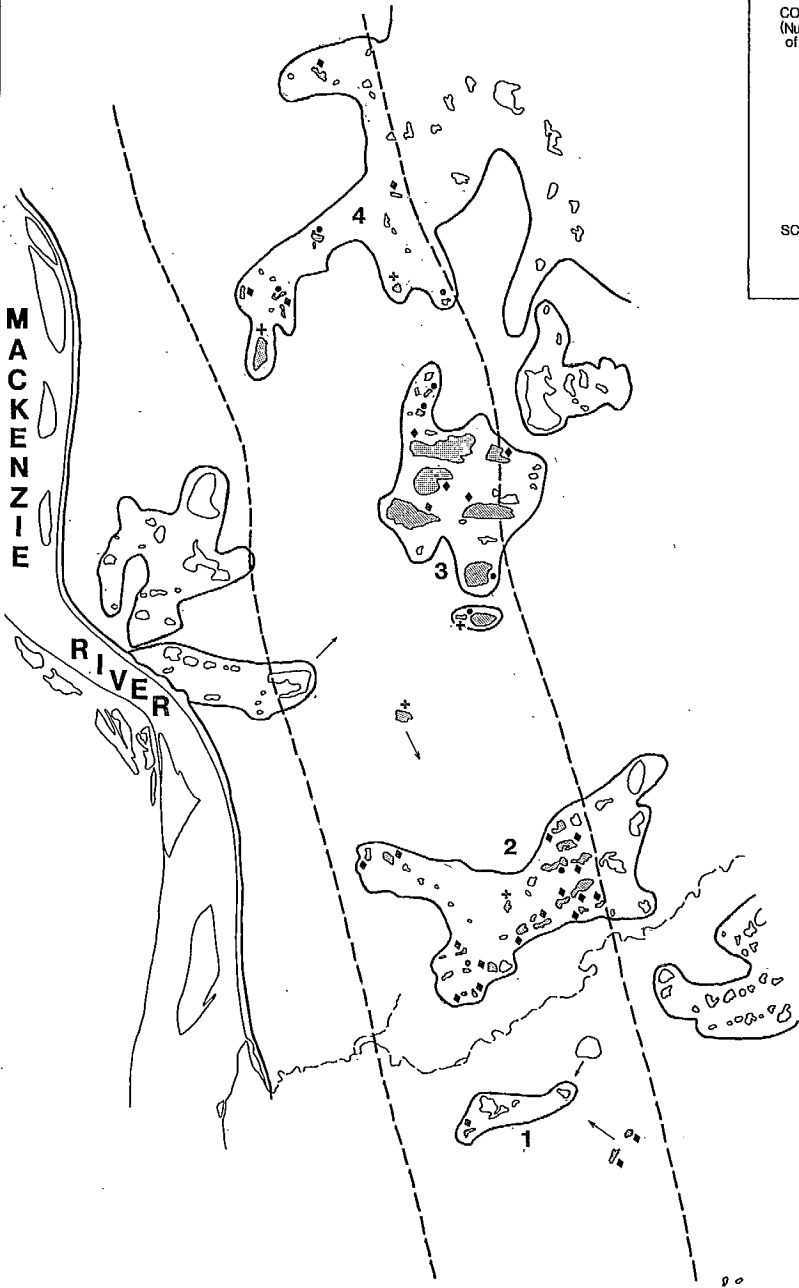
⁺Unidentified duck (non-classified)

[#]Denotes 0 pair dabblers and 5 pair diver duck species

SURVEY 3 - Production (July 21-July 27)

Route segment Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore- birds	Others	
				Pair	♂	♀	Flock	Broods	Dab	Div	UID				
18	2	4	56				0/3	3/1					5:4	13	
	3	5	142					3/9				32+1b		8	
	4	5	79			0/1						1	5:3	18	
Total		14	277	-	-	0/1	0/3	6/10	-	-	33+1b	10:7	39	--	

Block 18



LEGEND

Survey Corridor -

Surveyed Basin -

Unsurveyed Basin -

Creek; Small River -

1972 Inventory Unit Boundary -

1973 Survey Unit Number - **6,3**, etc.
(Arrows indicate basins to be included in unit)

COVERAGE
(Numerals refer to timing of survey.)

- 1
- 2
- 3
- 1&2
- 1&3
- 2&3
- 1,2&3

SURVEY TIMING

- 1-Spring Migrant (May 24 - June 11)
- 2-Breeding Pair (June 17 - June 27)
- 3-Production (July 21 - July 27)

SCALE: Corridor boundaries as illustrated are 4 miles apart.

N.T.S. Mapsheet

106 I
Fort Good Hope

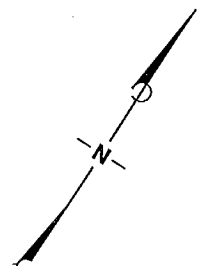


Table 19a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
19	1	-	-	6	184	2	43	21	248
	2	-	-	16	351	5	225	40	634
Total		-	-	22	535	7	268	61	882

*Refers to "Block" illustration opposite

**Confined to corridor

Table 19b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat

SURVEY 1 - Spring Migration (May 24-June 11)

Survey Information Not Available (data collection and recording omissions)

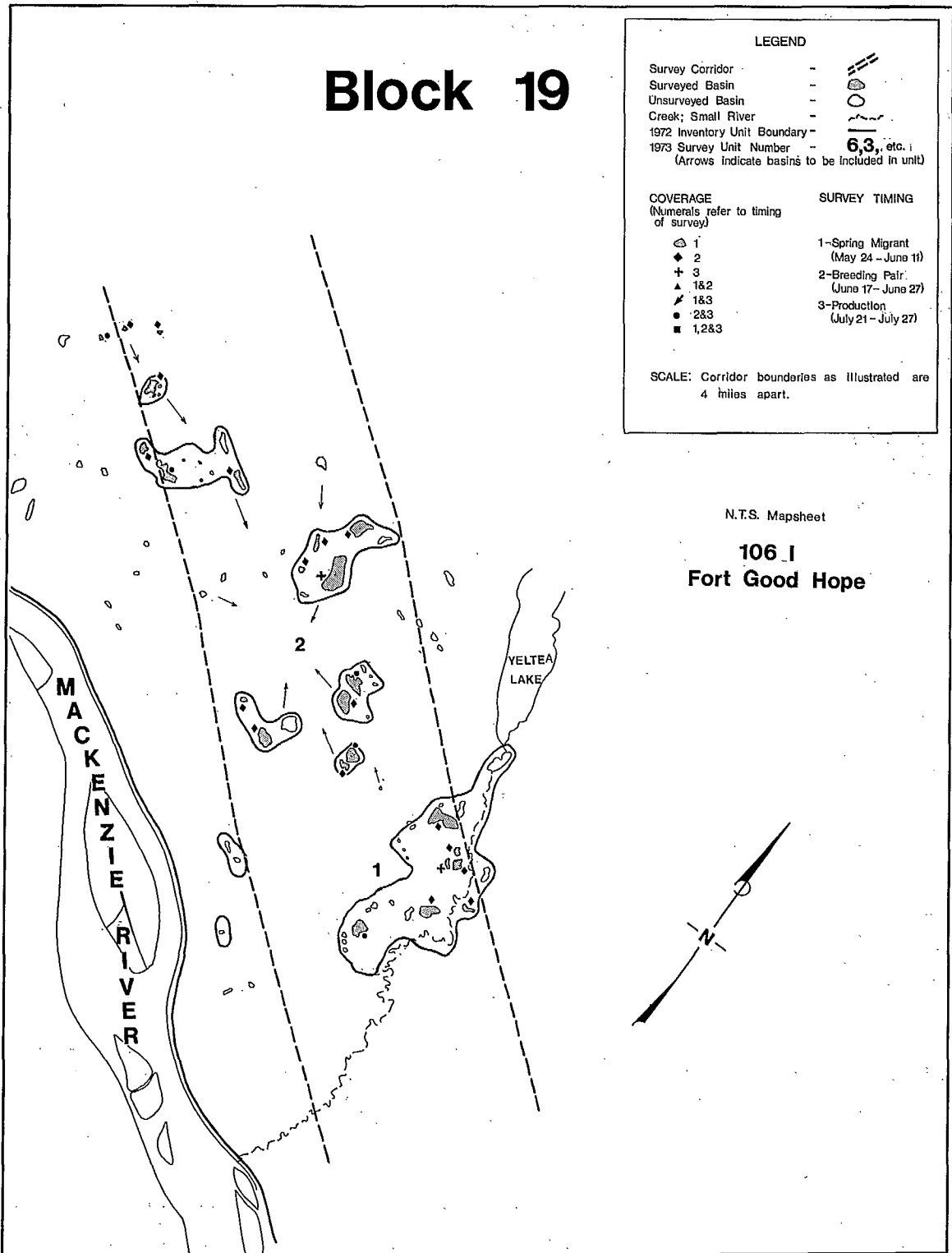
SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment		Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers				Unidentified			Loons Ad:Imm	Shore-birds	Others
Block	Unit			Pair	♂	♀	Flock	Broods	Dab	Div			
19	1	6	184	2/6 [#]	0/8		0/36		1	1	1:0		
	2	16	351	1/19	2/11		0/75		3	15	4:0	64	1:0 Gr
Total		22	535	3/25	2/19		0/111	--	4	16	5:0	64	1:0 Gr

[†]Unidentified duck (non-classified)[#]Denotes 2 pair dabblers and 6 pair diver duck speciesSURVEY 3 - Production (July 21-July 27)

Route segment		Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers				Unidentified			Loons Ad:Imm	Shore-birds	Others
Block	Unit			Pair	♂	♀	Flock	Broods	Dab	Div			
19	1	2	43				0/1				2:1	7	
	2	5	225		0/1	0/1	0/3				5:4	37+	
Total		7	268	-	0/1	0/1	-	0/4	-	-	7:5	44+	--

Block 19



N.T.S. Mapsheet

106.1
Fort Good Hope

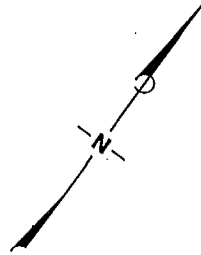


Table 20a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*	Block	Unit	Surveyed Wetlands						Total Wetlands**	
			Survey 1		Survey 2		Survey 3		No.	Acreage
20	1	-	-	7	351	2	252	9	371	
	2	-	-	14	313	8	194	17	333	
	3	-	-	6	178	3	112	14	364	
	4	-	-	11	160	1	5	12	206	
	5	-	-	42	1341	16	326	54	1525	
	6	-	-	4	45	2	31	8	67	
	Total	-	-	84	2388	32	920	114	2866	

*Refers to "Block" illustration opposite

**Confined to corridor: + all surveyed basins Units 2,4

Table 20b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
20		6	2	31									4:0	6	
	Total		2	31	-	-	-	-	--	-	-	-	4:0	6	--

SURVEY 2 - Breeding Pair (June 17-June 27)

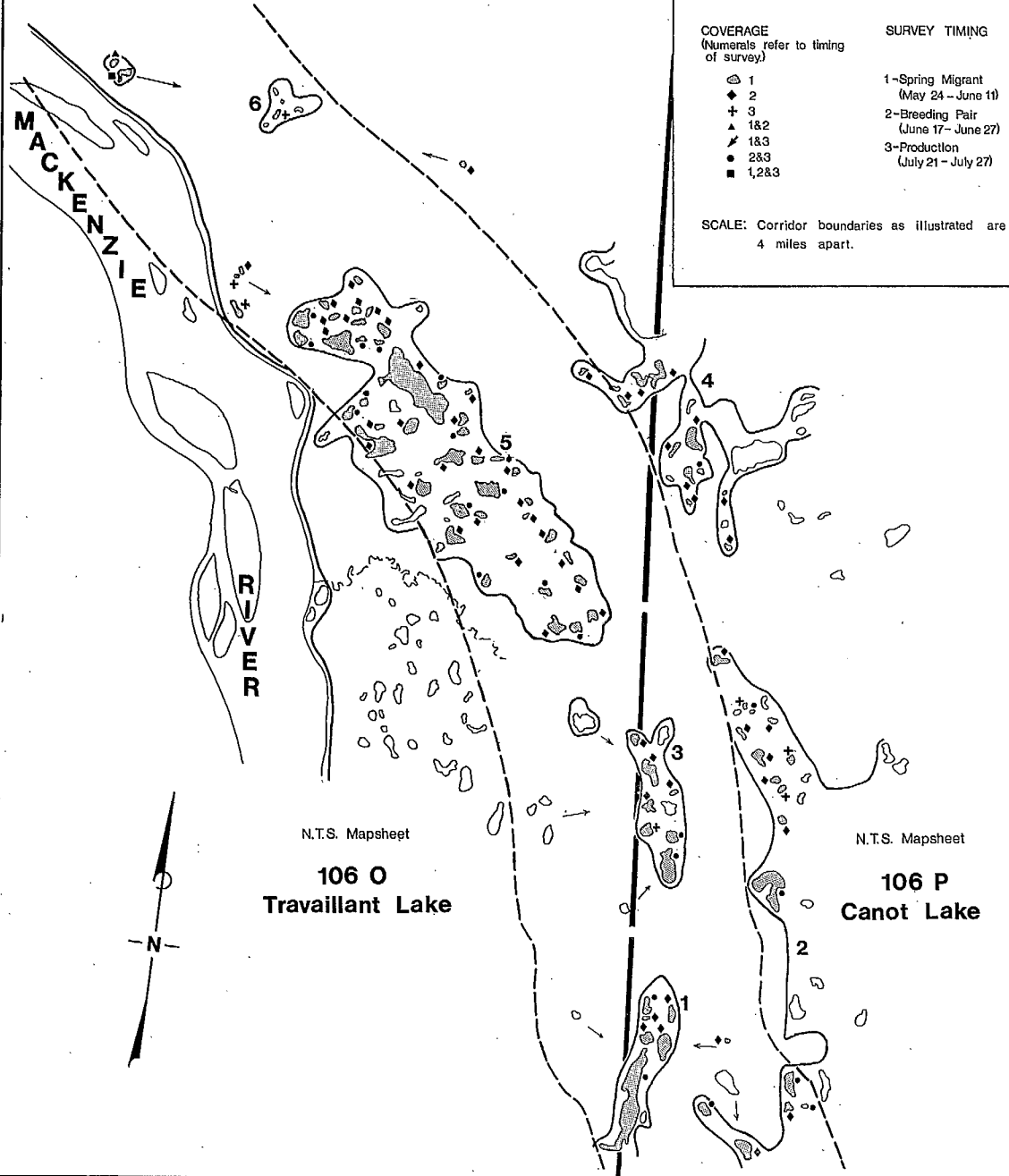
Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID ⁺			
20	1	7	351	0/3 [#]	0/1	1/0				1			2:0	34	
	2	14	313	2/11	4/4		18/28			2			6:0	63	1:0 Gr
	3	6	178	0/2	0/1		0/9			2	1		1:0	38	1:0 SW
	4	11	160	0/8	4/6	2/1	5/22			2	5		7:1	63	
	5	42	1341	2/47	21/33	1/2	21/348			4	5	12	13:0	279	3:0 Gr 2 C
	6	4	45			1/0	0/3						1:0	3	
	Total		84	2388	4/71	30/45	4/3	44/410	--	8	14	12	30:1	480	4:0 Gr 1:0 SW 2 C

⁺Unidentified duck (non-classified)[#]Denotes 0 pair dabblers and 3 pair diver duck species

SURVEY 3 - Production (July 21-July 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID ⁺			
20	1	2	252										4:2	27	
	2	8	194				0/2	0/16	15/20	9		1b	2:0	51	
	3	3	112						4/1				4:2	38	
	4	1	5										2:0	2	
	5	16	326	1/1		0/1	15/8	7/18		3	2	1+2b	22:4	72	
	6	2	31										2:1		
	Total		32	920	1/1	-	0/3	15/24	26/39	12	2	1+3b	36:9	190	--

Block 20



LEGEND

- Survey Corridor - [dashed line]
- Surveyed Basin - [shaded area]
- Unsurveyed Basin - [unshaded area]
- Creek; Small River - [wavy line]
- 1972 Inventory Unit Boundary - [dotted line]
- 1973 Survey Unit Number - **6,3, etc.**
- (Arrows indicate basins to be included in unit)

COVERAGE
(Numerals refer to timing of survey)

- ☉ 1
- ◆ 2
- + 3
- ▲ 1&2
- ▲ 1&3
- 2&3
- 1,2&3

SURVEY TIMING

- 1-Spring Migrant (May 24 - June 1)
- 2-Breeding Pair (June 17 - June 27)
- 3-Production (July 21 - July 27)

SCALE: Corridor boundaries as illustrated are 4 miles apart.

N.T.S. Mapsheet

106 O
Travaillant Lake

N.T.S. Mapsheet

106 P
Canot Lake

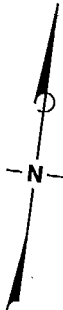


Table 21a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*	Block	Unit	Surveyed Wetlands						Total Wetlands**	
			Survey 1		Survey 2		Survey 3		No.	Acreage
21	1		3	88	4	99	-	-	4	99
	2		14	554	15	596	3	281	35	785
	3		28	922	27	837	7	405	93	1345
	4		24	2558	22	1931	3	86	101	3364
Total			69	4122	68	3463	13	772	233	5593

*Refers to "Block" illustration opposite

**Confined to corridor

Table 21b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID [†]			
21	1		3	88	1/1 [#]	0/7		0/6		1	2	23	7:0	24	
	2		14	554	10/161	13/18		0/83		3	1	64	17:0	149	
	3		28	922	5/114	11/33		0/12		7	149	27:0	105	1 SW	
	4		24	2558	6/215	25/28	0/1	0/160		4	11	334	44:0	204	23:0 Gr
Total			69	4122	22/501	49/86	0/1	0/261	--	8	21	570	95:0	482	23:0 Gr 1 SW

[†]Unidentified duck (non-classified)[#]Denotes 1 pair dabblers and 11 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
21	1		4	99	0/1	2/0		0/27					5:0	8	1:0 Gr
	2		15	596	2/8	6/7		32/477		1	8		17:0	67	4:0 Gr
	3		27	837	0/39	5/33		4/173		3	3	10	20:0	51	2:0 Gr
	4		22	1931	1/50	6/18		0/459		3	85	75	43:1	133	12:0 Gr
Total			68	3463	3/98	19/58		36/1136	--	4	96	85	85:1	259	19:0 Gr

SURVEY 3 - Production (July 21-July 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
21	2		3	281			1/1	0/10	5/17				8:5	29	
	3		7	405				4/40	6/9	1		4+0	11:5	15	
	4		3	86			0/1	0/4					10:3	1	
Total			13	772	-	-	1/2	4/54	11/26	1		4+5b	29:13	45	--

Block 21

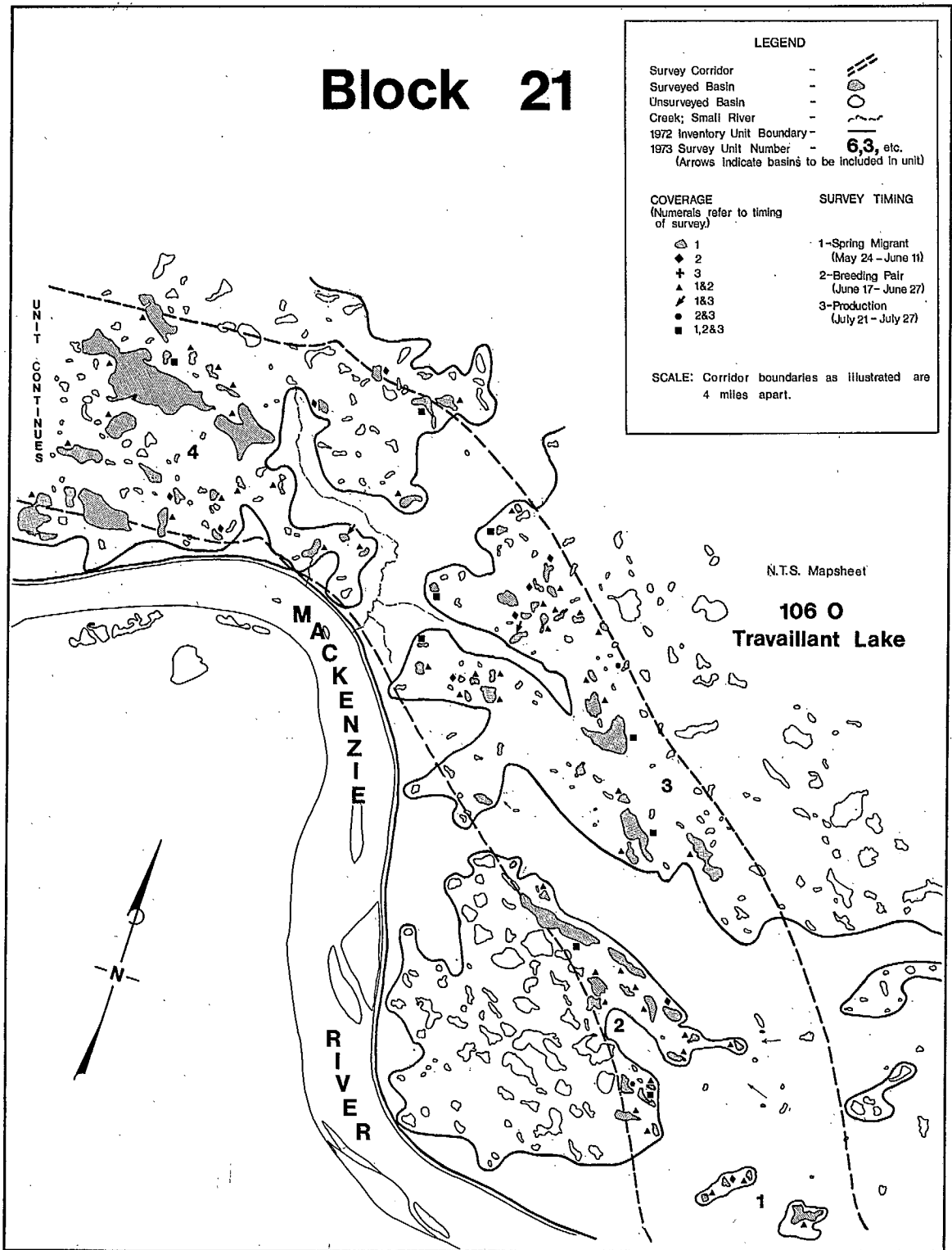


Table 22a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
Block	Unit	Survey 1		Survey 2		Survey 3		No.	Acreage
		No.	Acreage	No.	Acreage	No.	Acreage		
22	1	23	1253	18	990	5	293	46	1688
	2	7	301	40	1193	9	299	74	2102
	3	1	61	31	1069	9	401	53	1647
Total		31	1615	89	3252	23	993	173	5437

*Refers to "Block" illustration opposite

**Confined to corridor

Table 22b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Wetlands	Acreage	No's. of Dabblers/Divers					Unidentified			Loons	Shore-	Others		
			Block	Unit	Surveyed	Surveyed	Pair	♂	♀	Flock				Broods	Dab
22	1	23	1253	12/229 [#]	30/41	0/1	3/258			3	8	148	31:0	100	4:0 Gr
	2	7	301	1/63	4/11	0/2	0/82			4	3	12	3:0	14	4 SW
	3	1	61									2:0			
Total		31	1615	13/292	34/52	0/3	3/340	--		7	11	160	36:0	114	4:0 Gr 4 SW

⁺Unidentified duck (non-classified)[#]Denotes 12 pair dabblers and 229 pair diver duck speciesSURVEY 2 - Breeding Pair (June 17-June 27)


Route segment	Wetlands	Acreage	No's. of Dabblers/Divers					Unidentified			Loons	Shore-	Others		
			Block	Unit	Surveyed	Surveyed	Pair	♂	♀	Flock				Broods	Dab
22	1	18	990	0/23	9/11	3/0	18/342			1	11	10	35:0	104	9:0 Gr
	2	40	1193	0/50	6/42	0/4	0/234				6	2	27:0	143	33:0 Gr
	3	31	1069	5/20	13/19	3/2	18/365			6	12		17:1	183	32:0 Gr
Total		89	3252	5/93	28/72	6/6	36/941	--		7	29	12	79:1	430	74:0 Gr


SURVEY 3 - Production (July 21-July 27)


Route segment	Wetlands	Acreage	No's. of Dabblers/Divers					Unidentified			Loons	Shore-	Others		
			Block	Unit	Surveyed	Surveyed	Pair	♂	♀	Flock				Broods	Dab
22	1	5	293		0/1	1/1	0/110	11/14				4b	12:4	102	
	2	7	299	1/0		2/2	5/34	7/11	29+1b	4	3		9:2	20	
	3	7	401		0/1	1/1	38/66	21/19	4	1	29+	7b	20:7	44	1:0 Gr
Total		23	993	1/0	0/2	4/4	43/210	39/47	33+1b	5	32+11b		41:13	166	1:0 Gr


Block 22


LEGEND

Survey Corridor - 








Surveyed Basin - 

Unsurveyed Basin - 

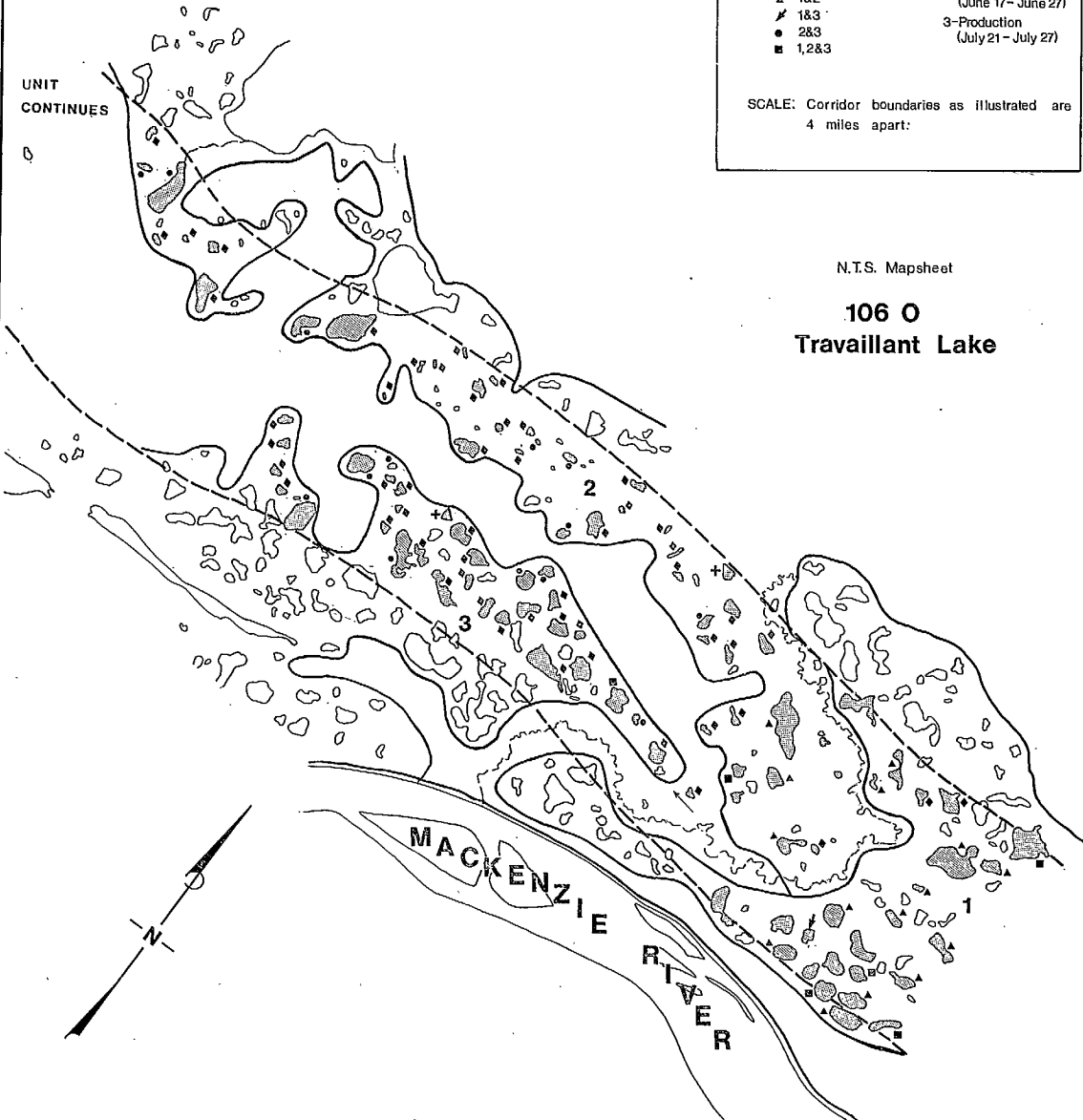
Creek; Small River - 

1972 Inventory Unit Boundary - 

1973 Survey Unit Number - **6,3, etc.**
(Arrows indicate basins to be included in unit)

COVERAGE (Numerals refer to timing of survey.)	SURVEY TIMING
 1	1-Spring Migrant (May 24 - June 11)
 2	
 3	2-Breeding Pair (June 17 - June 27)
 1&2	
 1&3	3-Production (July 21 - July 27)
 2&3	
 1,2&3	

SCALE: Corridor boundaries as illustrated are 4 miles apart:



N.T.S. Mapsheet

106 O
Travailant Lake

Table 23a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*	Block	Unit	Surveyed Wetlands						Total Wetlands**	
			Survey 1		Survey 2		Survey 3		No.	Acreage
			No.	Acreage	No.	Acreage	No.	Acreage	No.	Acreage
23	1		-	-	5	115	1	88	9	243
	2		6	724	30	4145	10	779	85	4885
	3		1	414	7	830	2	256	12	927
Total			7	1138	42	5090	13	1123	106	6055

*Refers to "Block" illustration opposite

**Confined to corridor

Table 23b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID ⁺			
23	2		6	724	1/6 [#]	7/4		0/9			1	89	8:0		
	3		1	414								50			
Total			7	1138	1/6	7/4	-	0/9	--	-	1	139	8:0	--	--

⁺ Unidentified duck (non-classified)[#] Denotes 1 pair dabblers and 6 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
23	1		5	115	0/4	1/0					1	5	3:0	18	2:0 Gr
	2		30	4145	1/58	6/33	1/3	50/508		1	8	347	26:2	101	11:0 Gr
	3		7	830	2/5	7/12	3/0	6/9				100	5:0	20	1 SW 2 SW
Total			42	5090	3/67	14/45	4/3	56/517	--	1	9	452	34:2	139	13:0 Gr 3 SW

SURVEY 3 - Production (July 21-July 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
23	1		1	88											
	2		10	779			2/1	12/0	4/1	2b	1+1b	11:5	55		
	3		2	256								3:0			
Total			13	1123	-	-	2/1	12/0	4/1	2b	1+1b	14:5	55	--	--

Block 23

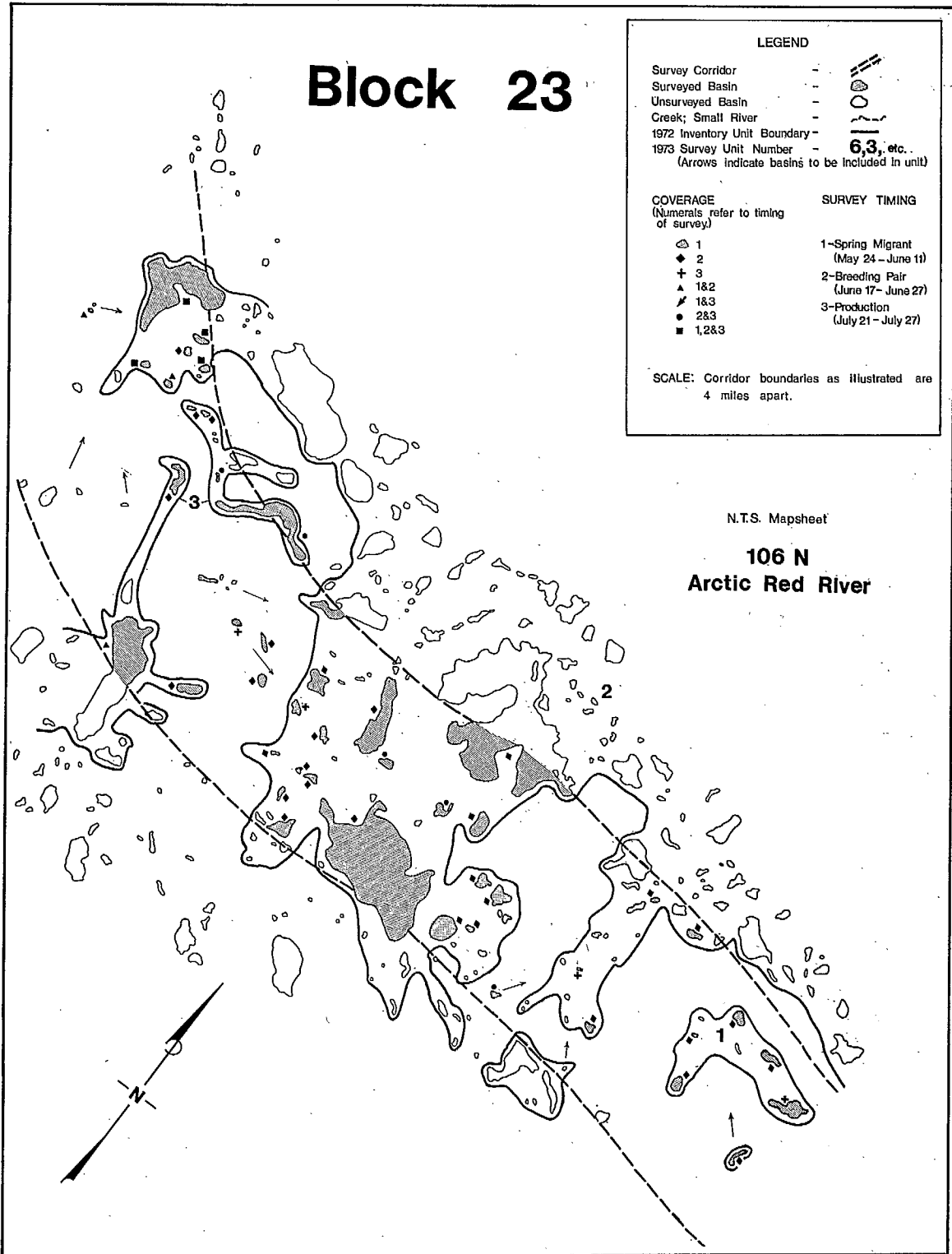


Table 24a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*	Block	Unit	Surveyed Wetlands						Total Wetlands**	
			Survey 1		Survey 2		Survey 3		No.	Acreage
			No.	Acreage	No.	Acreage	No.	Acreage	No.	Acreage
24	1		10	238	8	115	3	160	18	272
	2		34	351	21	238	10	106	64	508
	3		4	117	4	117	1	68	7	130
	4		36	522	-	-	6	86	63	817
	5		12	297	-	-	3	108	24	517
Total			96	1525	33	470	23	528	176	2244

*Refers to "Block" illustration opposite

**Confined to corridor

Table 24b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others	
					Pair	♂	♀	Flock	Broods	Dab	Div	UID ⁺				
24	1		10	238	6/72 [#]	7/6		0/27			2		13	16:0	16	1 SW
	2		34	351	6/48	10/5	1/1	0/8			3	3	28	39:0	58	
	3		4	117	2/10	4/2					3	2		4:0	7	
	4		36	522	14/37	15/13	1/0	5/43			3		23	42:0	26	1 SW
	5		12	297	5/11	13/4	1/1	0/35			2	1	19	8:0	26	2 SW 2 SC
Total			96	1525	33/178	49/30	3/2	5/113	--		10	9	83	110:0	133	4 SW 2 SC

⁺Unidentified duck (non-classified)[#]Denotes 6 pair dabblers and 72 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others	
					Pair	♂	♀	Flock	Broods	Dab	Div	UID				
24	1		8	115	0/17	0/6	1/3	0/24			7		2	8:0	52	4:0 Gr 2:0 SW
	2		21	238	0/6	3/6	1/1				4	10		10:0	68	3:0 Gr
	3		4	117	0/1			4/23			1	3		3:0	18	
Total			33	470	0/24	3/12	2/4	4/47	--		12	15		21:0	138	7:0 Gr 2:0 SW

SURVEY 3 - Production (July 21-July 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others	
					Pair	♂	♀	Flock	Broods	Dab	Div	UID				
24	1		3	160		1/0	3/1	9/15	15/7		11			2:2	23	4:0 SW
	2		10	106					1/3			1	3	7:2	4	
	3		1	68		0/1	0/1		7/5		3					
	4		6	86				0/3	0/2					5:4	7	
	5		3	108								1		7:2	8	
Total			23	528	-	1/1	3/6	9/18	23/17		14	1	4	21:10	42	4:0 SW

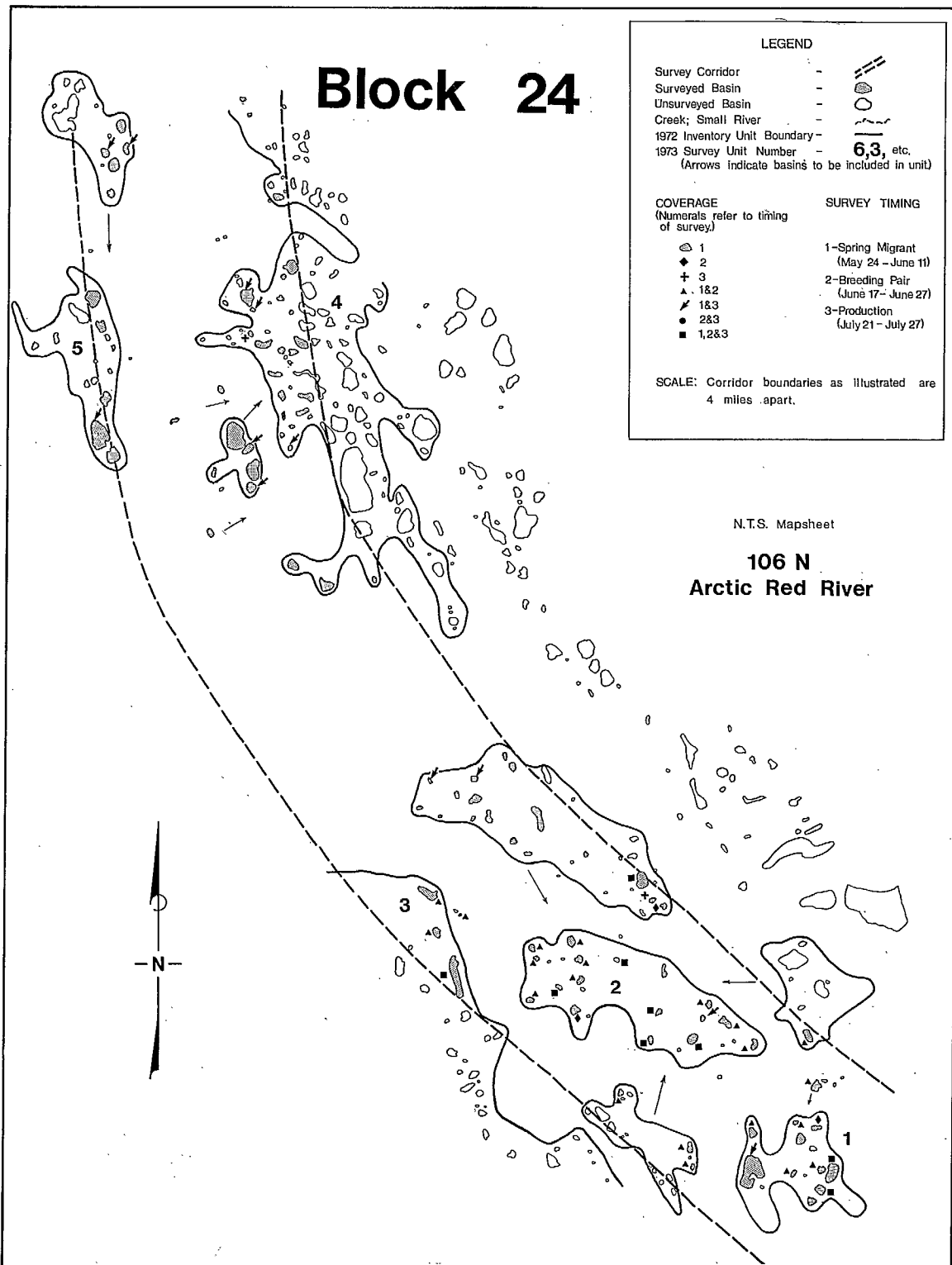


Table 25a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*		Surveyed Wetlands						Total Wetlands**	
		Survey 1		Survey 2		Survey 3		No.	Acreage
Block	Unit	No.	Acreage	No.	Acreage	No.	Acreage		
25	1	29	1303	1	11	13	668	44	1972
	2	2	40	-	-	3	70	3	70
	3	1	1093	-	-	-	-	1	1093
	4	17	1255	-	-	7	401	29	1683
Total		49	3691	1	11	23	1139	77	4818

*Refers to "Block" illustration opposite

**Confined to corridor

Table 25b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment		Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
Block	Unit			Pair	♂	♀	Flock	Broods	Dab	Div	UID ⁺			
25	1	29	1303	18/45 [#]	26/24	1/0	16/34	5	4	28	20:0	92	4 UG 10 SW	
	2	2	40		1/0					2	2:0			
	3	1	1093	1/1						1		1		
	4	17	1255	13/59	38/17	1/0	15/152	8		111	9:0	43	1:0 Gr 1 SW	
Total		49	3691	32/105	65/41	2/0	31/186	--	13	4	142	31:0	136	1:0 Gr 11 SW 4 UG

⁺Unidentified duck (non-classified)

[#]Denotes 18 pair dabblers and 45 pair diver duck species

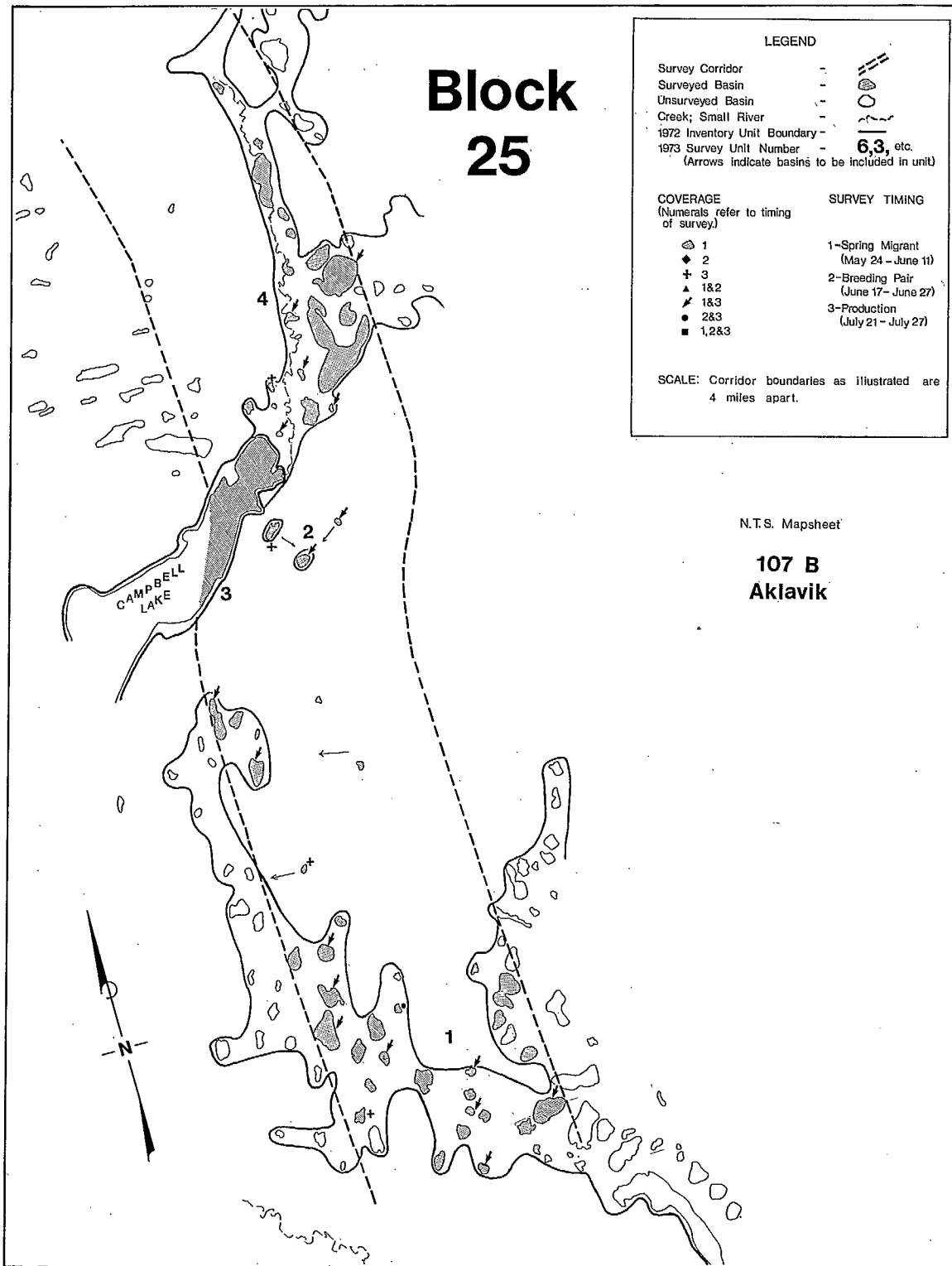
SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment		Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
Block	Unit			Pair	♂	♀	Flock	Broods	Dab	Div	UID			
25	1	1	11							2				
Total		1	11	-	-	-	-	-	-	2	--	--	--	

SURVEY 3 - Production (July 21-July 27)

Route segment		Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
Block	Unit			Pair	♂	♀	Flock	Broods	Dab	Div	UID			
25	1	13	668	0/2	1/2	0/40	23/14	8	1+1b	47+11b	8:2	160	8:9 SW	
	2	3	70				0/1				2:0			
	4	7	401				2328/0	1/0	25	7+4 ^{tb}	3:0	5	6:0 SW	
Total		23	1139	0/2	-	1/2	2328/40	24/15	33	1+1b	54+15 ^{tb}	13:3	165	14:9 SW

Block 25



LEGEND

Survey Corridor - - - - -

Surveyed Basin - - - - -

Unsurveyed Basin - - - - -

Creek; Small River - - - - -

1972 Inventory Unit Boundary - - - - -

1973 Survey Unit Number - **6,3**, etc.
(Arrows indicate basins to be included in unit)

COVERAGE
(Numerals refer to timing of survey.)

- 1
- ◆ 2
- + 3
- ▲ 1&2
- ▲ 1&3
- 2&3
- 1,2&3

SURVEY TIMING

- 1-Spring Migrant
(May 24 - June 11)
- 2-Breeding Pair
(June 17 - June 27)
- 3-Production
(July 21 - July 27)

SCALE: Corridor boundaries as illustrated are 4 miles apart.

N.T.S. Mapsheet

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Aklavik**

Table 26a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*	Block	Unit	Surveyed Wetlands						Total Wetlands**	
			Survey 1		Survey 2		Survey 3		No.	Acreage
			No.	Acreage	No.	Acreage	No.	Acreage	No.	Acreage
	26	1	28	1694	33	1834	10	499	47	2041
		2	-	-	1	2117	1	2117	1	2117
		3	11	2123	29	2927	5	536	42	3100
		4	12	455	-	-	4	27	26	578
		5	1	454	-	-	-	-	2	461
		Total	52	4726	63	6878	20	3179	118	8297

*Refers to "Block" illustration opposite

**Confined to corridor

Table 26b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
	26	1	28	1694	11/24 ¹	17/40	0/2	8/285		2	17	139	19:0	49	5 SW
		3	11	2123	1/73	10/5	0/12			1	10	26	5:0		1 SW
		4	12	455	0/38	1/8	0/3			1	14	6	4:0		1 SW
		5	1	454	0/10	1/0	0/3				3	6	1:0		
		Total	52	4726	12/362	29/53	0/2	8/303	--	4	44	177	29:0	49	7 SW

⁺Unidentified duck (non-classified)

#Denotes 11 pair dabblers and 241 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
	26	1	33	1834	6/42	23/35	2/6	38/165		15	193		27:2	135	9:1 SW
		2	1	2117	0/1	1/0					1	2		4	2:0 Gr
		3	29	2927	1/15	10/11	3/1	58/143		11	198		31:0	22	1:0 Gr
		Total	63	6878	7/58	34/46	5/7	96/308	--	27	393		58:2	161	17:2 SW
															3:0 Gr

SURVEY 3 - Production (July 21-July 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
	26	1	10	499	0/1		2/2	5/20	10/15	3	2	1	9:4	40	2:0 SW
		2	1	2117						1				47	
		3	5	536				3/0	1/1	1		3	6:2	39	4:2 SW
		4	4	27			1/0						1:0	7	
		Total	20	3179	0/1	-	3/2	8/20	11/16	5	2	4	16:6	133	6:2 SW

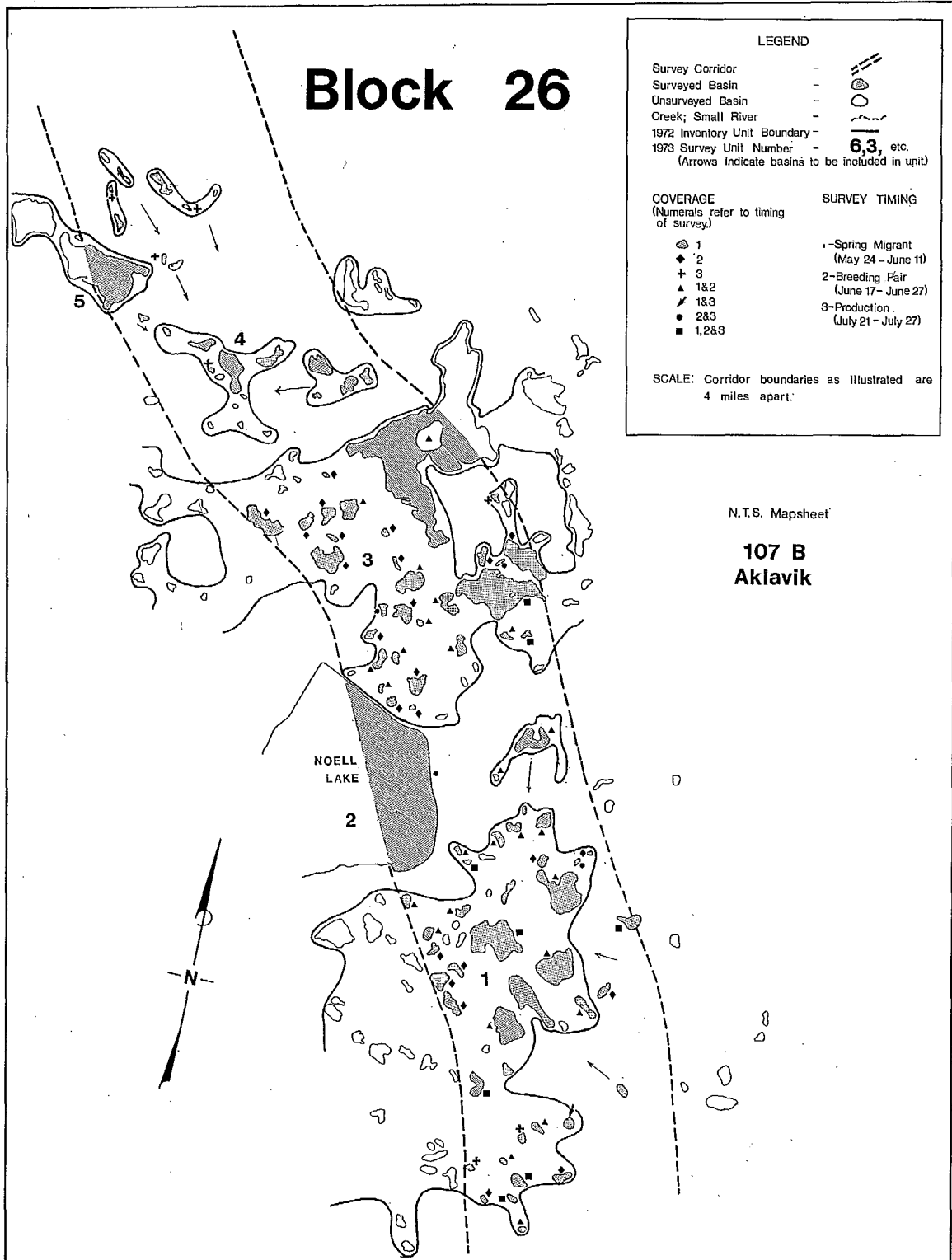


Table 27a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*	Block	Unit	Surveyed Wetlands				Total Wetlands**			
			Survey 1		Survey 2		Survey 3		No.	Acreage
27	1	4	70	-	-	1	7	6	93	
	2	4	68	-	-	1	7	10	155	
	3	4	115	12	254	4	41	20	376	
	4	10	874	13	1094	1	79	35	1469	
Total			22	1127	25	1348	7	134	71	2093

*Refers to "Block" illustration opposite

**Confined to corridor

Table 27b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers				Unidentified			Loons Ad:Imm	Shore-birds	Others	
					Pair	♂	♀	Flock	Broods	Dab	Div				UID
27	1	4	70	2/9#						2	2	3:0		3 UG	
	2	4	68	0/13							6			3 UG	
	3	4	115								1				
	4	10	874	0/5	0/1						5	20	9:0	1	
Total			22	1127	2/27	0/1	-	-	-	-	7	29	12:0	1	6 UG

+Unidentified duck (non-classified)

#Denotes 2 pair dabblers and 9 pair diver duck species

SURVEY 2 - Breeding Pair (June 17-June 27)

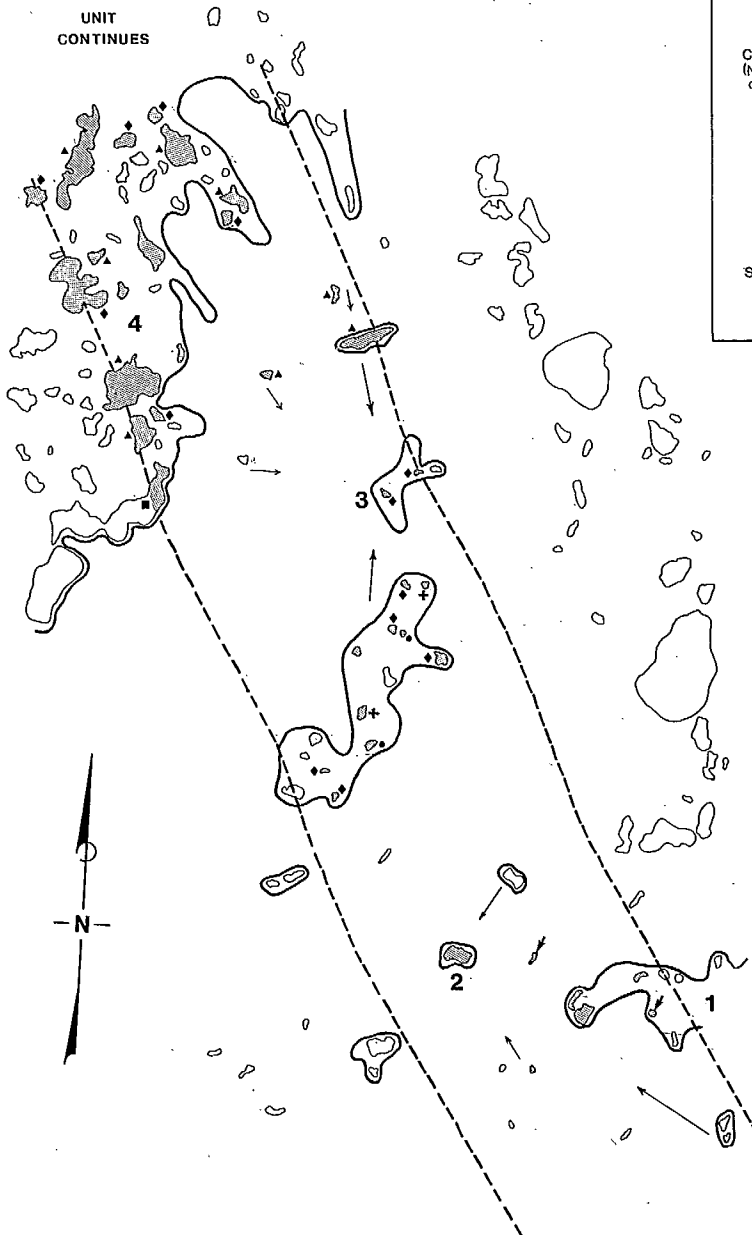
Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers				Unidentified			Loons Ad:Imm	Shore-birds	Others	
					Pair	♂	♀	Flock	Broods	Dab	Div				UID
27	3	12	254								2	5:0	26	8:D SW 2 UG	
	4	13	1094	0/7	2/3		22/30				3	1	13:0	149	7:0 SW
Total			25	1348	0/7	2/3	-	22/30	--	-	3	3	18:0	175	15:0 SW 2 UG

SURVEY 3 - Production (July 21-July 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers				Unidentified			Loons Ad:Imm	Shore-birds	Others	
					Pair	♂	♀	Flock	Broods	Dab	Div				UID
27	1	1	7											2	
	2	1	7												
	3	4	41				0/3			2	2	1	5:2	13	
	4	1	79												
Total			7	134	-	-	-	-	0/3	2	2	1	5:2	15	--

Block 27

UNIT
CONTINUES



LEGEND

- Survey Corridor - - - - -
- Surveyed Basin - - - - -
- Unsurveyed Basin - - - - -
- Creek; Small River - - - - -
- 1972 Inventory Unit Boundary - - - - -
- 1973 Survey Unit Number - **6,3, etc.,**
- (Arrows indicate basins to be included in unit)

COVERAGE

(Numerals refer to timing of survey)

- 1
- ◆ 2
- + 3
- ▲ 1&2
- * 1&3
- 2&3
- 1,2&3

SURVEY TIMING

- 1-Spring Migrant (May 24 - June 11)
- 2-Breeding Pair (June 17 - June 27)
- 3-Production (July 21 - July 27)

SCALE: Corridor boundaries as illustrated are 4 miles apart.

N.T.S. Mapsheet

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Aklavik

Table 28a. Wetland Numbers and Acreage Covered by Three 1973 Aerial Waterfowl Surveys in the Mackenzie Valley, N.W.T., Compared to Total Wetlands (Indexed by Route Segment).

Route segment*	Block	Unit	Surveyed Wetlands						Total Wetlands**	
			Survey 1		Survey 2		Survey 3		No.	Acreage
			No.	Acreage	No.	Acreage	No.	Acreage		
28	1	21	1589	30	1856	12	634	71	4754	
	2	1	131	1	68	1	22	7	326	
	3	7	245			2	47	12	1017	
	4	9	931	7	715	5	207	29	1310	
	Total	38	2896	38	2639	20	910	119	7407	

*Refers to "Block" illustration opposite

**Confined to corridor

Table 28b. Waterfowl and Aquatic Birds Observed during each of three Surveys of the above-defined Wetland Habitat.

SURVEY 1 - Spring Migration (May 24-June 11)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID ⁺			
28	1	21	1589	19/56 [#]	6/2					1	390	22:0	4	21 SW	
	2	1	131	5/28	15/7		9/0				10	10:0	3		
	3	7	245	1/4	8/1		15/3			3	1	6:0	104	7 UG	
	4	9	931	32/59	9/0		55/75			5	4	26	70	8 SC 7 UG 6 SW	
	Total	38	2896	57/147	38/10	-	79/78	--		8	5	427	50:0	181	27 SW 14 UG 8 SC

⁺Unidentified duck (non-classified)[#]Denotes 19 pair dabblers and 56 pair diver duck speciesSURVEY 2 - Breeding Pair (June 17-June 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
28	1	30	1856	7/29	30/11	1/2	76/26			1	3	33	36:0	372	85:0 SW
	2	1	68	1/4	2/1		0/3						5:0	15	1:0 SW
	4	7	715	3/7	8/6		0/6			1	1	9	3:0	39	3:0 SW
	Total	38	2639	11/40	40/18	1/2	76/35	--		2	4	42	44:0	426	89:0 SW

SURVEY 3 - Production (July 21-July 27)

Route segment	Block	Unit	Wetlands Surveyed	Acreage Surveyed	No's. of Dabblers/Divers					Unidentified			Loons Ad:Imm	Shore-birds	Others
					Pair	♂	♀	Flock	Broods	Dab	Div	UID			
28	1	12	634		2/0	15/3	67/16	11/1		11	2	6+2b	2:1	148	12:5 SW
	2	1	22					2/0				1			
	3	2	47			2/0						1+1b	3:0	12	2:0 SW
	4	5	207				5/45	2/2		1	1	1		8	
	Total	20	910	-	2/0	17/3	72/61	15/3		12	4	9+3b	5:1	168	14:5 SW 2 UG

Block 28

LEGEND

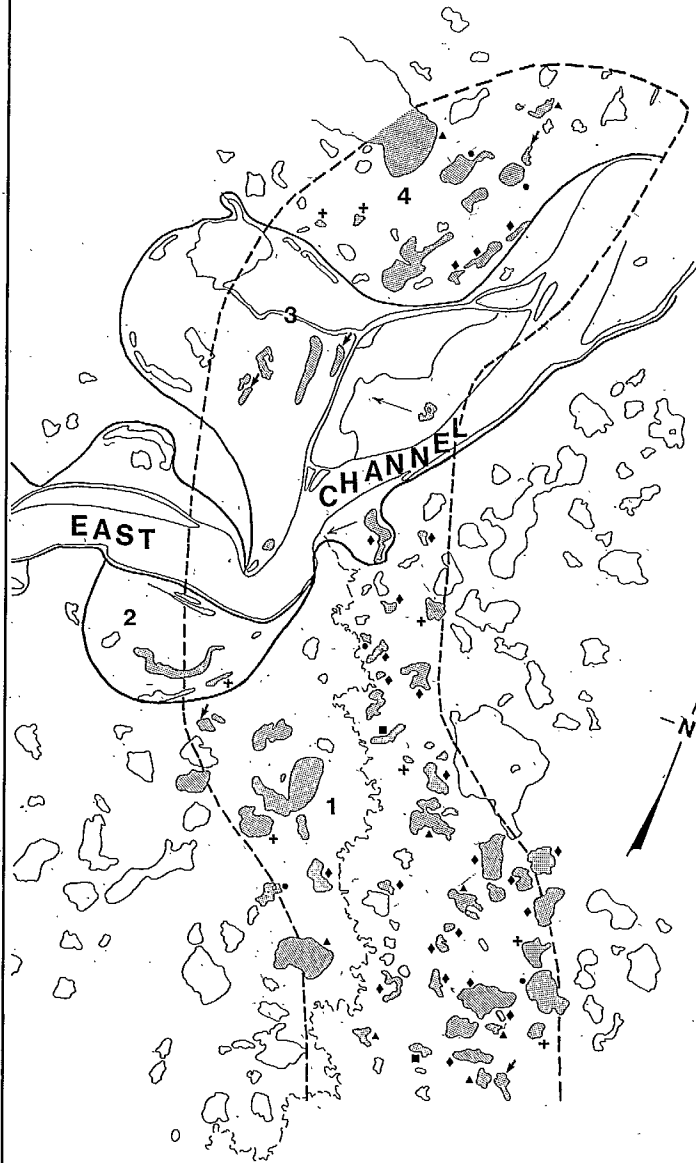
Survey Corridor - - -
 Surveyed Basin -
 Unsurveyed Basin -
 Creek; Small River -
 1972 Inventory Unit Boundary -
 1973 Survey Unit Number - **6,3**, etc.
 (Arrows indicate basins to be included in unit)

COVERAGE
 (Numerals refer to timing of survey)

SURVEY TIMING

△ 1	1-Spring Migrant (May 24 - June 11)
◆ 2	2-Breeding Pair (June 17 - June 27)
+ 3	3-Production (July 21 - July 27)
▲ 1&2	
⋈ 1&3	
● 2&3	
■ 1,2&3	

SCALE: Corridor boundaries as illustrated are 4 miles apart.



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Mackenzie Delta

Table 29. Comparative Unit Importance Based On Estimated Minimum Densities of Waterfowl During the Nesting. (Breeding Pair) Period Along the Route of Survey, 1973.

Location Block	Unit	Waterfowl/Square Mile of Wetlands Surveyed				RANK ORDER#	Surveyed Wetlands		Total Wetlands	
		Ducks		Loons,	TOTAL		No. of Basins	Acreage	No. of Basins	Acreage
		Breeding Pairs*	Flocks & UID**	Others†	(individuals)					
1	1	22.8	121.2	2.8	169.6	50	11	2306	30	2441
	2	10.6	311.6	-	332.8	16	1	421	1	421
	3	53.3	26.7	17.8	151.1	55	1	72	1	72
	4	36.8	6.3	7.2	87.1	76	24	713	47	957
	5	32.7	65.4	-	130.8	65	1	313	1	313
Total		25.4	114.6	3.3			38	3825	80	4204
2	1	50.5	202.1	-	303.1	21	2	76	3	106
	2	33.9	68.8	9.4	146.0	57	11	679	14	889
	3	158.6	125.8	5.5	448.5	9	8	234	18	330
	4	27.2	72.0	25.6	152.0	54	7	400	8	423
	5	16.9	7.3	4.8	45.9	85	7	529	9	554
Total		43.8	64.8	10.7			35	1918	52	2302
3	1	19.4	59.9	4.8	103.5	72	9	1057	9	1057
	2	51.6	450.6	23.0	576.8	6	5	446	5	446
	3	90.8	111.2	9.1	301.9	22	6	564	7	905
Total		45.9	158.4	9.9			20	2067	21	2408
4	1	42.7	56.9	7.1	149.4	56	4	90	4	90
	2	47.5	31.6	19.3	145.9	59	6	364	9	411
	3	56.9	56.9	170.7	341.4	13	2	45	2	45
Total		47.5	38.5	30.8			12	499	15	546
5	1	48.3	31.8	4.4	132.8	64	9	583	10	599
	2	24.5	73.4	-	122.4	66	3	157	6	274
	3	-	-	-	-	-	-	-	8	97
	4	-	-	-	-	-	-	-	6	234
Total		43.3	40.7	3.5			12	740	30	1204
6	1	-	-	-	-	-	-	-	8	65
	2	-	-	-	-	-	-	-	1	34
	3	-	-	-	-	-	-	-	22	158
	4	-	-	-	-	-	-	-	6	29
	5	-	-	-	-	-	-	-	5	108
	6	-	-	-	-	-	-	-	6	328
	7	-	-	-	-	-	-	-	18	169
Total		-	-	-	-	-	-	-	66	891
7	1	-	-	-	-	-	-	-	2	32
	2	-	-	-	-	-	-	-	3	74
	3	-	-	-	-	-	-	-	4	20
	4	-	-	-	-	-	-	-	14	124
	5	3.8	15.2	-	22.8	94	2	168	53	811
	6	-	-	-	-	-	-	-	2	122
Total		?	?	?			2	168	78	1183
8	1	-	-	-	-	-	-	-	3	34
	2	49.2	238.4	-	336.8	14	2	247	4	266
	3	91.4	-	-	182.8	45	2	14	7	333
	4	67.4	-	11.2	146.0	57	3	57	9	104
	5	120.2	84.5	6.5	331.4	19	12	197	41	368
Total		79.6	146.7	3.7			19	515	64	805
9	1	84.4	209.4	20.4	398.6	10	7	220	25	314
	2	39.4	135.4	11.6	225.8	36	9	276	26	364
	3	86.0	66.9	-	238.9	33	2	67	19	175
Total		62.5	155.8	13.6			18	563	70	853
10	1	116.1	540.4	19.3	791.9	1	21	463	24	592
	2	-	24.6	-	24.6	90	1	52	1	52
	3	37.6	28.2	-	103.4	73	1	68	1	68
Total		96.6	434.8	15.4			23	583	26	712
11	1	80.0	5.5	5.5	171.0	49	1	232	1	232
	2	69.6	7.0	13.9	160.1	52	6	92	7	101
	3	22.7	173.5	-	218.9	40	1	310	1	310
	4	29.4	29.4	18.7	106.9	71	22	718	34	853
	5	29.3	130.2	29.3	218.1	41	35	983	54	2002
	6	-	-	77.8	77.8	78	4	74	9	140
Total		34.0	85.4	21.0			69	2409	106	3638

*includes pairs, ♂ or ♀ (Table 1)

**total birds, flocked or unidentified

†total Swans, Geese, Cranes, Grebes, or Coot

#based on waterfowl density/surveyed wetlands (#1 high to low #97)

Table 29 continued

Location Block Unit	Waterfowl/Square Mile of Wetlands Surveyed				RANK ORDER	Surveyed Wetlands		Total Wetlands	
	Ducks		Loons, Others	TOTAL		No. of Basins	Acreage	No. of Basins	Acreage
	Breeding Pairs	Flocks & UID		(individuals)					
12	1	26.4	53.2	13.6	67	38	1456	63	1807
	2	56.9	497.8	-	5	3	90	9	142
	3	75.8	50.5	-	42	4	76	12	151
	Total	30.4	73.9	12.2		45	1622	84	2100
13	1	62.3	128.0	6.9	29	4	185	6	274
	2	165.2	-	20.6	11	3	31	8	59
	3	-	-	-	-	-	-	1	184
	4	4.2	20.9	-	88	1	153	3	872
	5	25.3	200.3	-	31	4	329	4	329
	6	9.1	9.1	-	89	2	70	5	184
	7	76.4	19.1	47.8	38	3	67	5	106
Total	36.8	113.4	6.1		18	835	32	2008	
14	1	20.5	122.8	8.5	47	13	1877	16	2236
	2	-	93.7	78.1	48	2	41	5	166
	Total	20.0	122.2	10.0		15	1918	21	2402
15	1	-	3.4	-	97	1	187	3	241
	2	25.2	47.5	2.8	74	6	229	8	270
	3	12.3	-	-	90	2	261	3	283
	4	16.6	8.3	8.3	84	4	77	8	160
	5	60.6	-	33.7	53	7	95	22	349
	6	-	18.3	-	95	2	70	2	70
Total	17.4	15.3	4.9		22	919	46	1373	
16	1	45.4	232.0	9.6	17	5	535	5	535
	2	81.9	476.3	7.4	3	1	86	2	173
	3	-	-	-	-	1	18	2	158
	4	5.5	125.7	-	63	1	2574	3	2583
	5	-	-	-	-	-	-	6	74
	6	48.4	113.7	12.6	37	2	304	13	373
	7	1.3	32.7	2.5	87	1	1019	2	1022
	8	-	-	55.7	83	2	23	7	103
Total	13.4	122.2	2.9		13	4559	40	5021	
17	1	-	7.9	15.8	92	3	81	56	659
	2	37.5	8.0	10.7	75	8	239	18	293
	3	73.9	60.4	11.2	39	8	286	15	356
	4	246.2	196.9	-	2	1	13	2	41
	5	59.1	179.8	10.1	20	11	509	47	844
Total	56.1	112.3	10.8		31	1128	138	2193	
18	1	139.1	55.7	167.0	8	3	23	7	140
	2	21.9	56.2	43.7	61	17	205	32	315
	3	62.3	160.0	4.7	25	9	688	19	760
	4	-	-	68.9	80	7	65	22	176
Total	51.5	125.2	20.9		36	981	80	1391	
19	1	55.6	132.2	3.5	32	6	184	21	248
	2	60.2	169.5	9.1	23	16	351	40	634
	Total	58.6	156.7	7.2		22	535	61	882
20	1	9.1	1.8	3.6	93	7	351	9	371
	2	42.9	98.2	12.3	44	14	313	17	333
	3	10.8	43.2	10.8	79	6	178	14	364
	4	84.0	136.0	28.0	18	11	160	12	206
	5	50.6	186.0	8.6	24	42	1341	54	1525
	6	14.2	42.6	14.2	77	4	45	8	67
Total	41.2	130.8	9.9		84	2388	114	2866	
21	1	19.4	174.6	38.8	30	4	99	4	99
	2	24.7	556.3	22.6	4	15	596	35	785
	3	58.9	145.4	16.8	26	27	837	93	1345
	4	24.8	205.9	18.2	27	22	1931	101	3364
Total	32.9	251.0	19.2		68	3463	233	5593	
22	1	29.7	246.8	28.4	15	18	990	46	1688
	2	54.7	129.7	32.2	28	40	1193	74	2102
	3	37.1	240.2	29.4	12	31	1069	53	1647
Total	41.4	201.9	30.1		89	3252	173	5437	

Table 29 continued

Location Block	Unit	Waterfowl/Square Mile of Wetlands Surveyed				RANK ORDER	Surveyed Wetlands		Total Wetlands	
		Ducks		Loons, Others	TOTAL (individuals)		No. of Basins	Acreage	No. of Basins	Acreage
		Breeding Pairs	Flocks & UID							
23	1	27.8	33.4	27.8	116.8	68	5	115	9	243
	2	15.7	140.8	5.9	178.1	46	30	4145	85	4885
	3	22.4	88.7	5.4	138.9	62	7	830	12	927
	Total	17.1	130.4	4.7			42	5090	106	6055
24	1	150.3	183.6	77.9	564.8	7	8	115	18	272
	2	45.7	37.6	35.0	164.0	51	21	238	64	508
	3	5.5	169.6	16.4	197.0	43	4	117	7	130
	4	-	-	-	-	-	-	-	63	817
	5	-	-	-	-	-	-	-	24	517
Total	61.3	106.2	40.9			33	470	176	2244	
25	1	-	116.4	-	116.4	70	1	11	44	1972
	2	-	-	-	-	-	-	-	3	70
	3	-	-	-	-	-	-	-	1	1093
	4	-	-	-	-	-	-	-	29	1683
Total	?	?				1	11	77	4818	
26	1	39.8	143.4	13.3	234.5	35	33	1834	47	2041
	2	6.0	.9	-	12.9	96	1	2117	1	2117
	3	9.0	89.8	8.8	116.6	69	29	2927	42	3100
	4	-	-	-	-	-	-	-	26	578
	5	-	-	-	-	-	-	-	2	461
Total	14.6	76.6	7.3			63	6878	118	8297	
27	1	-	-	-	-	-	-	-	6	93
	2	-	-	-	-	-	-	-	10	155
	3	-	5.0	37.8	42.8	86	12	254	20	376
	4	7.0	32.8	11.7	58.5	82	13	1094	35	1469
Total	5.7	27.6	16.6			25	1348	71	2093	
28	1	27.6	48.0	41.7	144.9	60	30	1856	71	4754
	2	75.3	28.2	56.5	235.3	34	1	68	7	326
	3	-	-	-	-	-	-	-	12	1017
	4	21.5	15.2	5.4	63.6	81	7	715	29	1310
Total	27.2	38.6	32.3			38	2639	119	7407	

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