#### 1994 Heron Lake Colonial Waterbird Survey

#### I. OBJECTIVES

The objectives of this survey are to:

- Monitor population trends of Colonial Nesting Waterbirds populations, which may indicate the effects of the Heron Lake Area Restoration Project.
- Provide population information to Minnesota Department of Natural Resources for Species of Special Concern.
- Document colony locations to assisting in public use planning for Heron Lake.

#### II. METHODOLOGY

Thirteen counts were conducted from June 24, 1994 through July 20, 1994. The census was conducted by boat and on foot along the shoreline and the populations were counted and/or estimated. Data collected was recorded on a Colonial Bird Survey form which was developed in cooperation with the Minnesota Department of Natural Resources Nongame Bird Specialist in Region 4, the same survey form used for the 1993 census. The data recorded included: count method, nesting stage, total adult population, total active nests, and total broods. Species numbers were obtained by visual estimates, nesting stage was determined, and the number of nests

were counted (see attachment # 1).

The survey route for each count is outlined on the back of the survey form used for that day.

#### III. RESULTS

A summary of data is provided on Table A (see attachment # 2). Late in the Spring there seemed to be a draw down occurring which exposed the vegetation and started drying the soil. This resulted in poor nesting conditions for the Colonial Waterbirds and deterred most of the nesting activities. In mid June there was a drastic bounce in the water level due to frequent rainfalls and this destroyed any benefits that the draw down might of had. Water levels are recorded on Table B (see attachment # 3). Due to the water levels and poor nesting conditions there was a significant decrease in the number of birds and their nesting activities. Most of the bird activity was concentrated on Duck Lake, the North Marsh, and Division Creek. Nesting activities were found only on Duck Lake. See attachment # 4 for the location of the colonies and sightings.

Approximately 120 Black terns were seen and 6 nests were found on Duck Lake. Due to high water, the lack of cover, and wind these nests were later destroyed.

Pied-billed grebe nesting was successful on Duck Lake. Approximately 30 adults, 100 young, and 15 broods were seen. But I am confident that there are more on the lake then what was observed.

Two Cormorant rookeries were found with 15 nests and a population of approximately 720.

There was a significant decrease in the number of Franklin's gulls, Forester's terns, and Black Crowned Night Herons (BCNH). Approximately 160 Franklin's gulls, 115 Forester's terns, and 40 BCNH were seen through out the lake system. No nesting was found by these species except for 3 possible Forester's tern nests on Duck Lake, but these nests were not positively determined.

Western grebe numbers are down and no nests or young were observed. Eleven were seen but four of these sightings are believed to be the same bird.

Other species sighted include: Herring gulls, Ring-billed gulls, Common terns, White pelicans, Great blue herons, and Great egrets.

Near the end of July the numbers of Black tern, Cormorant, Franklin's gull, Ring-billed gull, Great blue heron, and White pelican showed an increase. Great egrets were not seen until 7/20/94. The increase in numbers is believed to be due to the birds annual movements and a large source of food that is available to the birds in the area.

Many American coot with broods were seen on Duck Lake, and about 20 Ruddy duck, and 50 Redheads were also seen. Mallards, Wood ducks, and Canadian geese are all abundant around Division Creek and the North Marsh. Through out the survey there were signs of nesting failure; an abandoned Grebe nest was found with 7 eggs in it and Black tern, Grebe, Mallard, and Canadian goose eggs were also found floating in the water. Near the end of July species of shorebirds began to appear including: Solitary sandpiper, Lesser yellowlegs, Marbled godwit, and species of peeps.

#### IV. MANAGEMENT IMPLICATIONS

The draw down in May was beneficial for controlling the populations of ruff fish and to stimulate growth of new vegetation. The low water levels however provided poor nesting conditions for the Colonial Waterbirds. The bounce in water levels then destroyed the benefits of the draw down and also the nests of the Black terns on Duck Lake. Optimum nesting conditions and successful nesting for the Colonial species would consist of stable water conditions and the cattails and other vegetation need to be flooded. Unfortunately we can not manage water levels the way we would like to at this point. To achieve this the drainage system of the lake should be modified and this could be done by dredging or cleaning out the channels of the lake system. Before anything is attempted there needs to be more hydrologic modeling and studies conducted. Hopefully 1995 will bring us more stable weather conditions and the

populations of Colonial Waterbirds will return and have successful nesting activities.

I would like to thank Lee Carlson, Watershed Ecologist, for his time and efforts during the survey. His assistance was beneficial to the survey and greatly appreciated.

Joseph A Black Joseph A. Black Attachment # 1 MINNESOTA COLONIAL BIRD SURVE: FORM REGION 4 - JACKSON COUNTY - 1994

olony Location (see map)					
olony size (estimated ac	ines)	Site (	Dwnership_		**************************************
est access route (see *	map)				
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#### ATTACHMENT #2

#### 1994 NESTING SUMMARY

#### NUMBERS

Species	See Map Attachment #4	Adult	Young	Nest	Broods
Black Tern	A	120		6	
Pied-billed Gre	be B	30	100		15
Western Grebe		11			
Franklin's Gull		160			
Forester's Term	i	115			
Cormorants	C	720		15	
Black Crowned Night Heron	D	40			

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TOTALS	1992	1993	1994	
Black Tern			120	
Pied-billed Grebe			30	
Western Grebe	140	50	11	
Franklin's Gull	2,000	4,260	160	
Forester's Tern	1,000	645	115	
Cormorants	250		720	
Black Crowned Night Heron	150	1,000	40	

# WATER LEVELS\* NORTH MARSH/STATE DAM

DATE	READING	COMMENTS
05/10/94	4.34	above dam
05/10/94	4.16	below dam
05/17/94	3.78	above dam
05/17/94	3.60	below dam
05/26/94	2.825	below dam
06/01/94	2.44	
06/08/94	2.98	recent rains
06/20/94	7.12	above dam
06/20/94	7.12	below dam
06/27/94	8.44	below dam
06/27/94	1.88	above dam
07/05/94	0.08	gage 150' north of dam
07/07/94	6.46	gage west side of dam (upstream)
07/14/94	4.86	

<sup>\*</sup>Water levels provided by Lee Carlson, Watershead Ecologist.

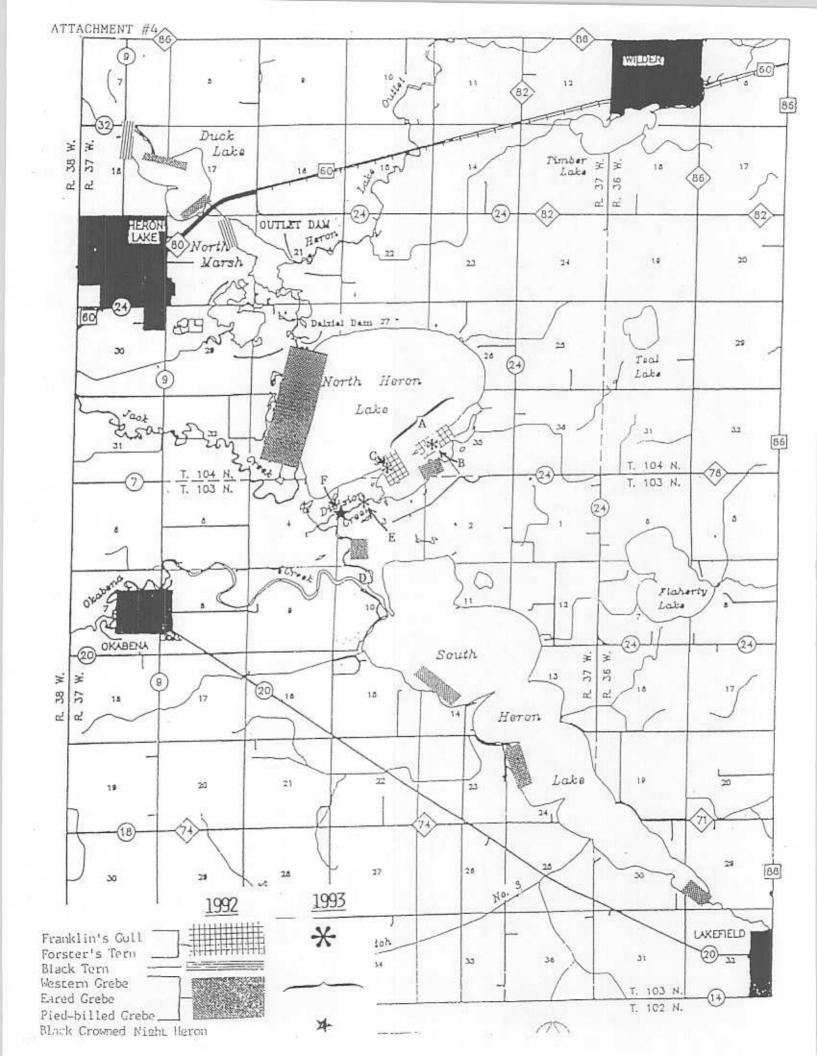
### WATER LEVELS\* DUCK LAKE

DATE	READING	COMMENTS
05/10/94	8.16	
05/17/94	7.945	
05/26/94	7.92	
06/01/94	7.76	
06/06/94	8.00	
06/08/94	8.24	
06/15/94	8.66	
06/27/94		<pre>1" from top of board over staff gage</pre>
07/04/94	9.62	
07/17/94	8.45	
07/19/94	8.40	

<sup>&#</sup>x27;Water levels provided by Lee Carlson, Watershead Ecologist.

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T. 102 N.



#### SURVEY INSTRUCTIONS AND ROUTES

- 1. Review pervious survey reports completed on Heron Lake.
- 2. Obtain and check needed equipment:
  - Vehicle
  - Boat, trailer, motor, gas can, oars, push-pull
  - Trolling motor and battery
  - Camera, high band radio and/or mobile telephone
  - Minnesota Colonial Bird Survey Form with map (data sheet)
  - Plastic bags, rubber gloves, and rain suit for collection of dead and dying waterbirds and waterfowl
- Arrange for co-workers or volunteers to assist/accompany you during the survey.
- Personally contact private land owners and receive permission each time you access the water by their property.
- Conduct the water survey of Colonial nesters and take photographs.
- 6. A daily itinerary should be completed prior to each survey and should include: location of survey, location of water access, and departure and return times.
- 7. Summarize data and complete a final report. The report should include photographs of noteworthy wildlife and aerial photos showing locations of sightings and colony boundaries.

# SURVEY ROUTES AND ACCESS POINTS (See attachment # 5 and 6) Access Points:

- 1. Duck Lake (A): Contact Dean Schmacher
- 2. North Marsh (B): Contact Bill Fest
- 3. North Heron Lake (C): Contact Dave Pohlman
- 4. Division Creek (D): Contact Tony Thompson
- 5. South Heron Lake: Sandy Point County Park (E)
  - : Public Access, carry in (F)

#### MINNESOTA COLONIAL BIRD SURVEY FORM REGION 4 - MACKSON COUNTY - 1994

Colony Location (see mag	Duck Lake	Parcel	Section	Loge.	
Colony size (estimated :	acres)	Site (	Jwnership_	1 -	10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -
Best access route (see +					
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Description of habitat,	site, & nes	ting substr	rate: Emerg	ant and sub	niera ent veg
			V	5157610	0
Threats to colony High w	rater				
		rvev Detail	c		
		The state of the s			
Date_6-24-94 Time:_	1:30 pm - 3:00 pm	bservers:	J. Black	WHATE WAS COLUMN	in senior
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series w		7			
Photos: yes kept at	: Windem Wetla	nd Mon. Dist.	Census	technique_/	poat
Species	Count	Nesting	Total	1 Town	Total
pherica	Method	Stage	adult	Total	
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White Pelican	7	K	10	TOBER	
Dbl-crest cormorant			10		
Great Blue Heron					
Great Egret					
31-crwnd night heron					
Horned Grebe				100	
Eared Grebe					
Western Grebe			September -	The state of the s	I (white works)
Ring-billed Gull					
Herring Gull		K	15		
Common Tern		K	as		
Franklin's Gull					
Forster's Term		K	40		
Other (details in			60		
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& Tann	1	Tr)	45		
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describe				C + F-V = 2	
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colony; K) Species seen,	pasting pol	determine	d. I) Aban	doned duri	na nestina
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robable; N) Nesting, co	unt unavaila	able: O) Si	enificant	nesting fa	ilure.
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#### "HERON LAKE" COLONIAL WATERBIRDS (as of 1994)

#### NESTING

FOTE

BLTE

BCNH

WEGR

FRGU

DCCO

#### OBSERVED

HEGU

RBGU

COTE

WHPE

**GBHE** 

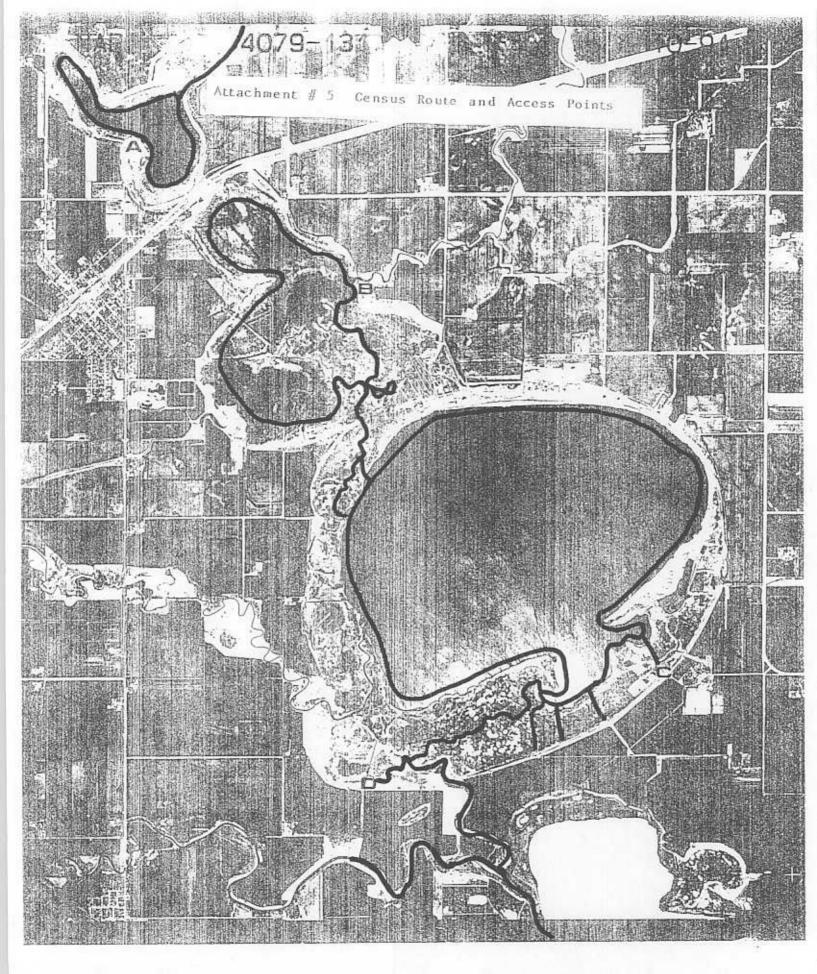
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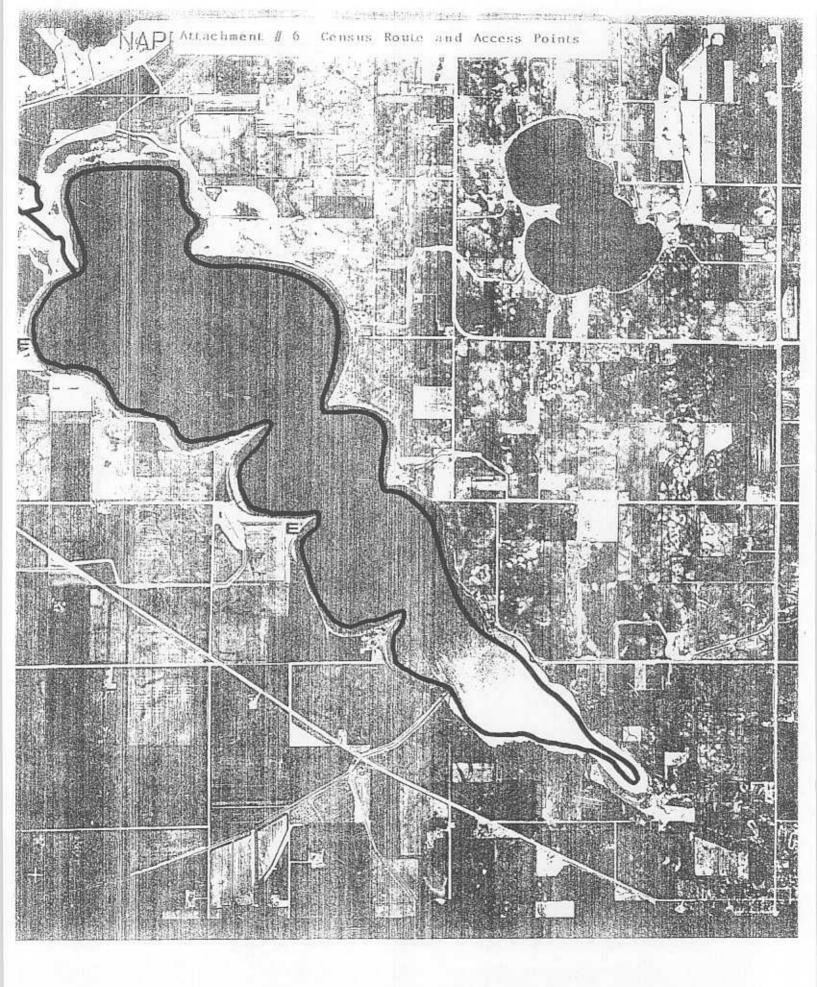
#### NORTH HERON LAKE

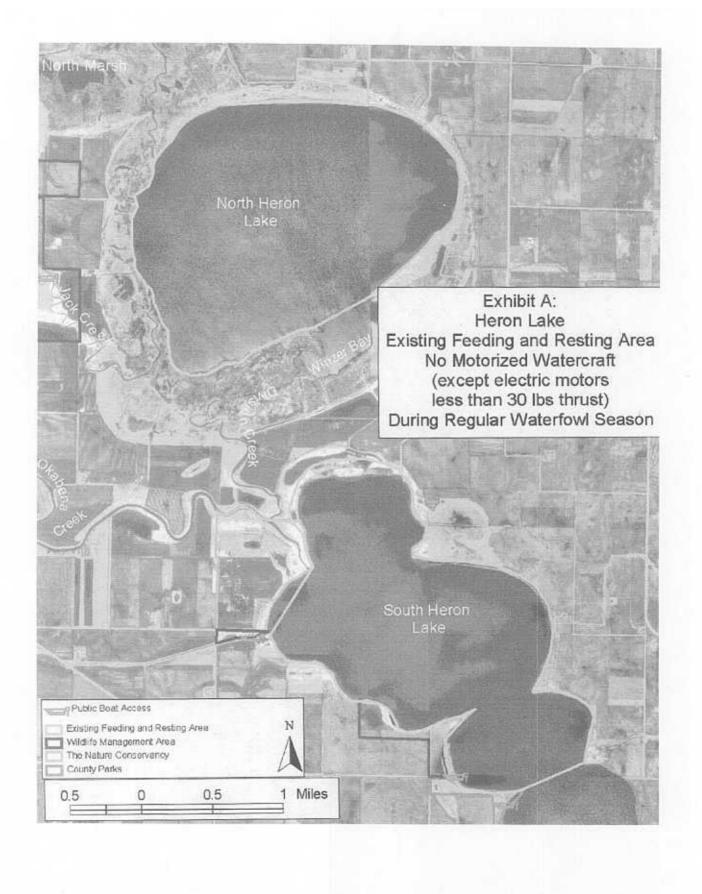
1992: WEGR, EAGR, PBGR (West side of North Heron Lake)

1993 FRGU, FOTE, (SE Side of North Heron Lake)

1994 BLNH nesting on North Marsh N/NW side of North Heron Lake and on south side of the North Heron Lake

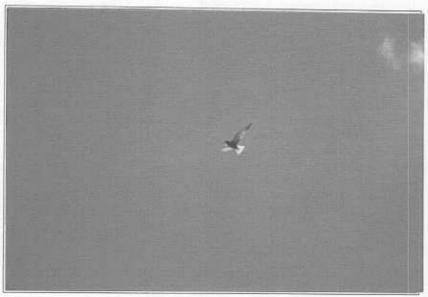




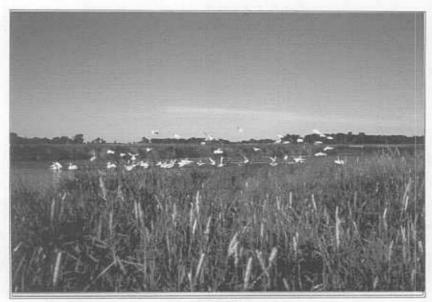


#### Attachment # 7

#### PHOTOGRAPHS



1. Black tern, Duck Lake. 06/24/94



 White pelicans along Division Creek. 07/01/94



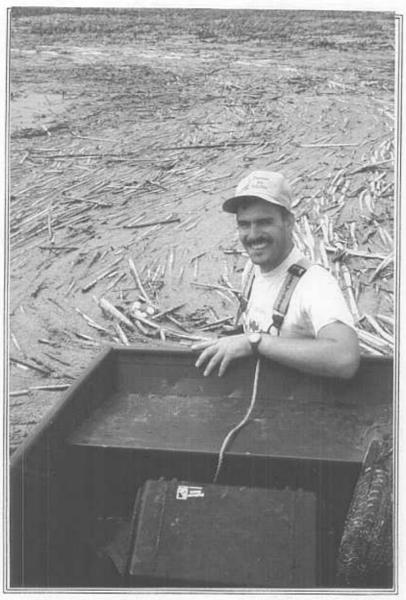
3. Franklin's gull, Duck Lake. 07/07/94



4. Cormorant rookery on the North end of South Heron Lake. 07/12/94



5. White pelican near the Dalzial Dam. 07/20/94



 Joe Black, Temporary Biological Technician, and an abandoned Pied-billed grebe nest on Duck Lake. 07/07/94

#### MINNESDIA COLONIAL BIRD SURVE COOP-RESION 4 - INCUSON COUNTY 1994

Colony Location (see map	· Duck Lake	Farcel	Section	Top	Rg 1
Colony size (estimated a					
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Horned Grebe					
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Ring-billed Gull		K	7	HILLEDNIN OF HEALTH	<del> </del>
Herring Gull	1	<del> </del>			<del> </del>
Common Tern	-		Hill Shaw San		
Franklin's Gull				19.24	Annual Control of the
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Other (details in * comments					
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<u>Co</u>	wada Geose				

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Threats to colony					
	Su	rvev Detail	5	***************************************	
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Dbl-crest cormorant		-			
Great Blue Heron			<del></del>	ļ	
Great Egret			<del></del>		
81-crwnd night heron				-	
Horned Grebe					
Eared Grebe Western Grebe	-33				
Ring-billed Gull					-
Herring Gull		the management	din sania sana	Action of the Market	
Common Tern					
Franklin's Gull		K	4		
orster's Tern					
Other (details in					
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	Method	Stage	adult	active	broods
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White Pelican		5	25		
<u>Dbl-crest cormorant</u> Great Blue Heron			15		-
Great Egret					
Bl-crwnd night heron				ļ	-
Horned Grebe					<del> </del>
Eared Grebe	and the same of th				-
Western Grebe		K	2		
Ring-billed Gull			- a		1
Herring Gull					
Common Tern					III WEE THE THE REAL PROPERTY.
Franklin's Gull					
Forster's Tern	1 7	K	5		
Other (details in					
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Feathered young; H) Newly					
colony; K) Species seen,					
season/nesting probable,					
probable; N) Nesting, cou Comments:	iit tillevelle	die; di bi	HILL I Lettic	DESCINA 197	rure.
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### MINNESOTA COLONIAL BIRD SURVEY CORRESTON 4 - MACESON COUNTY - 1994

	ls under
Description of habitat, site, & nesting substrate: high water, many catalog at the colony.  Threats to colony.  Survey Details  Date 7-1-99	ls under
Threats to colony  Survey Details  Date 7-1-94	ls under
Threats to colony  Survey Details  Date 7-1-94	
Survey Details  Date 7-1-99 Time: 2:20gm-12:30pm Observers: 5 Black 1. Corlow  Address & Telephone Window WMD 831-2220  Photos: yes kept at: Window WMD Census technique book  Species Count Nesting Total Fotal adult active pop. nests  White Pelican I K 30  DbN-crest cormonant I N 70 13  Great Blue Heron I K 15  Great Egret Bl-crwnd night heron I K 25  Horned Grebe Eared Grebe Western Grebe I K I Ring-billed Gull Herring Gull Common Tern  Franklin's Gull I K 5  Forster's Tern  Other (details in comments	
Date 7-1-94   Time: 2:20gm-12:20pm Observers: 5 Black 1. Carlson	
Address % Telephone Windom WIND 831-2220  Fhotos: yes kept at: Windom WIND Census technique boat  Species Count Nesting Total Fotal adult active pop. nests  White Pelican I K 80  Don-crest cormonant I N 70 /3  Great Blue Heron K 15  Great Egret Bli-crwind in 1ght heron I K 25  Horned Grebe Western Grebe Western Grebe K I K I K I K I K I K I K I K I K I K	
Species  Count Nesting Total Total Method Stage adult active pop. nests  White Felican  Dbl-crest cormonant   N 70 /3  Great Blue Heron   K 15  Great Egret  Bl-crwnd night heron   K 25  Horned Grebe  Eared Grebe  Western Grebe   K 1  Ring-billed Gull   K 5  Franklin's Guil  Forster's Tern  Other (details in comments)	
Species  Count Method Stage adult active pop. nests  White Pelican  Doll-crest cormonant  Great Blue Heron  Great Egret  Bl-crwind night heron  Horned Grebe Eared Grebe Western Grebe  Ring-billed Gull  Herring Gull  Common Tern  Franklin's Gull  Forster's Tern  Other (details in comments)	
White Felican   K 80   DBN-crest cormonant   N 70   /3   Great Blue Heron   K 15   Great Egret   BN-crwind night heron   K 25   Horned Grebe   Eared Grebe   Eared Grebe   K 1   K 5   Herring Gull   Herring Gull	
White Felican	Total
White Pelican           K         80           DbN-crest cormonant           N         70         /3           Great Blue Heron           K         /5           Great Egret           Earet	broods
Great Blue Heron K J5 Great Egret B1-crwnd night heron   K 25 Horned Grebe Eared Grebe Western Grebe   K   Ring-billed Gull   K 5 Herring Gull Common Tern Franklin's Gull Forster's Tern Other (details in comments	
Great Egret B1-crwnd night heron Horned Grebe Eared Grebe Western Grebe Ring-billed Gull Herring Gull Common Tern Franklin's Gull Other (details in comments	
B1-crwnd*night heron   K 25  Horned Grebe Eared Grebe Western Grebe   K   Ring-billed Gull   K 5  Herring Gull Common Tern Franklin's Gull   K   Forster's Tern Other (details in comments	
Horned Grebe Eared Grebe Western Grebe Ring-billed Gull Herring Gull Common Tern Franklin's Gull Forster's Tern Other (details in comments	
Eared Grebe  Western Grebe  Ring-billed Gull  Herring Gull  Common Tern  Franklin's Gull  Forster's Tern  Other (details in comments	
Western Grebe   K   King-billed Gull	
Ring-billed Gull Herring Gull Common Tern Franklin's Gull Forster's Tern Other (details in comments	The state of the s
Ring-billed Gull Herring Gull Common Tern Franklin's Gull Forster's Tern Other (details in comments	
Common Tern Franklin's Guff	
Franklin's Guñ	
Forster's Tern Other (details in comments	
Other (details in )	
comments	
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extrapolation:  describe  Nesting Stage: A) not present (lete summer, fall or winter): B) pairing	
nesting stage: A/ not present (rete summer, fail or winter), by pair in building; C) Egg laying; D) Incubation; E) Hatching; F) Downy Young; (Feathered young; H) Newly flying young; I) Renesting; J) Laving on or colony; K) Species seen, nesting not determined; L) Abandoned during reason/nesting probable, no young produced: M) Adult behavior suggests	G) near nesting
probable: N) Nesting, count unavailable: D) Significant nesting failur	
I. Wood Duck:	
2 Mallard:	
3. C. Goose: 200, broad number undetermined	
- SKK C Goose	
4. I Block Term	
	Period Ment Service Of

# MINNESOTA COLUMNAL BIFTH SHEST COLUMN 1994

Colony Location (see man	D : A,B,G,H	Parcel	Section	Torn	Rg
Colony size (estimated					
				7/22/01/20/20/20/20/20/20/20/20/20/20/20/20/20/	
Best access route (see	* map)				
Description of habitat,	site, & nes	ting subst	rate:		
Threats to colony		to the second			
	Su	urvey Detail	5		
Date 7-6-94 Time:		C Application of the control of the			
	78		n contra		n in the same
Address & Telephone Www	dom wmo	131- 2220	11177-1171	4	
Photos: kept at			Census	technique /	2004
100000000000000000000000000000000000000	A - Gira				IOU.
Species	Course to	Nesting	Table 2.3	1 727 7	
ODECTES.	Method	Stage	Total adult	Total   active	Total
,	riecitod	STERE			broods
White Pelican	1	V	10 ·	nests	M MALLON MARKET AND THE STREET
Dbl-crest cormonant		2	7		-
Great Blue Heron	TO THE RESERVE OF THE PERSON NAMED IN	- K	1		
Great Egret			^		-
B1-crwnd night heron					-
Horned Grebe				<del></del>	
Eared Grebe		-		100	
		V .			-
Western Grebe .		K +			
Ring-billed Gull *		A	5		-
Herring Gull Page					
Common Tern 🗽		(4)		-	
Franklin's Gull *	A	K.			
Forster's Tern 🐧				<del>                                     </del>	-
Other (details in					
comments **		11			
			The second of the		
Count method: 1) visual	estimate ZA	total grou	nd count .	i) Fartial (	rount with
extrapolation:		Tit to			
describe		**************************************			
Nesting Stage: A) not pr					
building; C) Egg laying;					
Feathered young: H) Newl					
colony; K) Species seen,					The state of the s
season/nesting probable,					
probable; N) Nesting, co	unt unavaila	able; O) Sig	gnificant	nesting fai	lure.
Comments:					
1. Cavada Goose: 40					THE CHARLES
- Water level dioped about	- 2 Seet Since	7-1-94			
- Sogo showing on N. L	ake and WINZE	er Bay			
J www.mars.	Stemani Protestina to come				
			V222		
		o poser Bellielli	er verne W = Will		
					ALIKS THE PARTY OF THE

#### MINNESOTA COLONIAL BIRD SURVEY FORM FESTON A - GYCLSON COUNTY 1994

Colony size (estimated		- Navada	Historia de la Salva de Carta		
Best access route (see	* map)		w man manage	tale to the meaning of the	
Description of habitat,	site, & nes	ting subst	rate: Ope	under co	Hails
			,	(1) the	222113
		nica-w- versemen		1	
Threats to colony			200	y'	
			200	<i>d</i>	
	5.0	rvey Detayi	15		
Date_7-7-94 Time:	9.45 12.20 D	**	1= n. 1 1		
race ////	8:45cm-12:39n0	oservers:	P. Black C.	Carlson	
Address & Telephone الم	dom WMD 8	31-2229		A L	
			0		**
Photos: yes kept a	: WINDOM WI	IN COUNTY	Census .	technique_&	097
			1		
Species	Count	Nesting	Totat	1 fotal	Total
	Method	Stage?	adult	active	broods
11 14 Pr 1 1		Ţ.	pop.	nests	
Unite Pelican		K	25		
bl-crest cormorant  reat Blue Heron		K,0	220	2	
reat Egret		K	r/O		
1-crwnd night heron		K	2	-	
orned Grebe			X		
ared Grebe					
estern Grebe	1	K	1		
ing-billed Gull	1	K	10		
erring Gull			100000000000000000000000000000000000000		
ommon Tern					
ranklin's Gull orster's Tern		K.	20		
ther (details in			30		-
omments					
				-	
ount method: 1) visual	estimate 2)	total grou	nd count 5	3) Partial c	ount with
xtrapolation:					
escribe				φ	
esting Stage: A) not pr	esent (late	summer. fa	ll or wint	er): B) pai	ring and
uilding; C) Egg laying;	m) incubati	on; E) Hati	ching: F)	Downy Young	; (3)
eathered young: H) Newl Dlony; K) Species seen,	v fiving vou	ng; I) Ken	25ting; U)	Laving on	or near
eason/nesting probable,	nesting not	oduced: M)	Adult bob	doned durin	g nesting
robable; N) Nesting, co	unt unavaila	ble: O) Sig	nodic ben	nesting fai	lune
omments:	and the control was to be a first of	0, 0, 0,	JIII I LLEINE	nesering rar	i di e .
1. Black Tern : 15					- 100 - 20 - 20 - 20 - 20 - 20 - 20 - 20
2. Cormorant rookery:	R Nests . lead	2 - 2 sloke	ś		
	, ,				
			Heritage and the second	and the second s	The comment of the same
	The state of the s				

# MINNESOTA COLONIAL BIFT SURVEY PARA

Colony Location (see map	· Duck Lake	Parcel	Section	- tot	Ra
Colony size (estimated a					
Best access route (see +				العمراً أ	***************************************
			-	1 8	.,
Description of habitat,	site, & nes	ting subst	rate:_qpev	water callo	11/5, 37,90
X					
Threats to colony Skeding	, wind (bock	of caver)			
	Su	rvev Detai	15		
Date <u>7-7-94</u> Time: 1	1011-1		100000	arkon	
Address & Telephone Wind	m WMD	831- 2220			
Photos: yes kept at	:_Windom_W	m D	Census	technique_b	cat /Siom shore
Species	-r	7		na anna	
Species	Count	Nesting	Total	Total	Total
	Method	Stage	adult	active	broods
White Felican		K	10	nests	
Db1-crest cormorant	W		10	ļ	· · · · · · · · · · · · · · · · · · ·
Great Blue Heron	7	K	10		<del> </del>
Great Egret		/\text{\dagger}			
RI-crwnd night heron		K	1		
Horned Grebe					
Eared Grebe					No. of Street Control
Vestern Grebe				William Commence and the	
(ing-billed Gull		K	5		
Herring Gull					
Common Tern			- 1000 1000 000 000 000 000 000 000 000		
ranklin's Gull		K	a0		
Forster's Tern	1	K	10		
Other (details in					
comments				0 - 10 - 10 - 10 - 10	
		of contract of		and the same of the same of	
Count method: 1) visual e	stimate 2)	total groun	nd count 3	) Fartial c	ount with
extrapolation:					
describe					
Westing Stage: A) not pre	sent (late	summer, fa	ll or wint	er): B) pai	ring and n
uilding; C) Egg laying;					
eathered young: H) Newly					
olony; K) Species seen,		oduced: M)	Adult beh	avior sugge	sts nestin
olony; K) Species seen, eason/nesting probable,	uo Aomua bu				
olony; K) Species seen, eason/nesting probable, robable; N) Nesting, cou	no young pr nt unavaila	ble; O) Sig	gnificant	nesting tai	lure.
olony; K) Species seen, eason/nesting probable, robable; N) Nesting, cou omments:	no young pr nt unavaila	ble; O) Sig	gnificant	nesting +ai	lure.
olony; K) Species seen, eason/nesting probable, robable; N) Nesting, cou omments: ! Redhead : 50	no young pr nt unavaila	ble; O) Sig	gnificant	nesting +ai	lure.
olony; K) Species seen, eason/nesting probable, robable; N) Nesting, cou omments:  ! Redhead : 50 2 Rudy duck: 3	no young pr nt unavaila	ble; O) Sig	gnificant	nesting +ai	Ture.
colony; K) Species seen, eason/nesting probable, probable; N) Nesting, coun comments:  I. Redhend: 50 2. Rudy duck: 3 3. Back Tern: 20	nt unavaila	ble; 0) Sig		nesting +ai	rure.
colony; K) Species seen, season/nesting probable, probable; N) Nesting, cou comments:  I. Redhead: SD  2. Ruddy duck: 3  3. Back Tern: 20  * All G neds on	nt unavaila west shore de	ble; 0) Sig	doved		rure.
colony; K) Species seen, season/nesting probable, probable; N) Nesting, coun comments:  I. Redhend: SD  2. Rudy duck: 3  3. Black Tern: 20  * All G Meds on 4. Abondenced grets at	nt unavaila west shore de	ble; 0) Sig	doved		rure.
colony; K) Species seen, season/nesting probable, probable; N) Nesting, count comments:  1. Redhead : SD 2. Rudy duck : 3 3. Back Tern : 20 * All G neds on	nt unavaila  west shore de  est on NE.	ble; 0) Sig	doved		rure.

#### MINNESOTA COLONIAL BIRD SURVEY FORM RESION 4 - JACKSON COUNTY - 1994

ony Location (see map)	SHOW J,K,L	Farcel	Section	riTispi	Rg
ony size (estimated ac					
st access route (see *					
				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A TANAMANTA
scription of habitat, s	ite, & nes	sting subst	rate: open	water, subjects	ed catteria
					1
				-	4
eats to colony	100000000000000000000000000000000000000			- E	- i
	Su	rvev Detai	15	The second of th	
7 12 9//			*		,
e <u>7-12-94</u> Time: 9:0	10am - 12:30pm 0	bservers:_	J.*Black		
ress & Telephone Vivale	n wan x	31-2220	•		
	0-	51_ 57. 19	- (		
tos: <u>yes</u> kept at:	Windom W	mD	Çensus	technique Be	rat 1845
		0.3%	Oct Spone		1
Species	Count	Nesting	Total (	Total &	Total
Special	Method	Staget	adult	active	broods
	1		pop.	nests	0,0003
te Pelican		K. 1	350	1	
-crest cormorant	1	J.K	25	12	#UAS
at Blue Heron	1	₩ K	Manual se		
at Egnet		3	No.		
crwnd night heron		4	\$		
ned Grebe		ž.	1		
ed Grebe		A	#		
tern Grebe	7		1		
g-billed Gull	1 30	14-2	125		
ring Gull	1	1 1	450		
mon Tern	AS .				
nklin's Gull		K!	5		
ster's Tern .	1	- Are production			
er (details in	1				THE REAL PROPERTY OF THE PARTY
ments #	للمحيد				
	2				<del>/////////////////////////////////////</del>
nt method: 1) y symmet	stimate 2)	total grou	ind count	3) Partial c	count with
rapolation: مراسم					
ribe 📞					
ting Stage: A) not pres	sent (late	summer. fa	11 or win	ter): B) pai	ring and no
lding; C) Egg laying; I					
thered young; H) Newly	flying you	ıng: I) Ren	esting: J	Laving on	or near
ony; K) Species seen, r					
son/nesting probable, r					
pable; N) Nesting, cour	it unavaila	hle: D) Si	anificant	nesting fai	lure.
ments:	ie cirrer v er z i e		31141466116	110222119 1012	1 -11 -1
1. C. Goose : 250					***
2. Black Tern: 1			10-10-10-10-10-10-10-10-10-10-10-10-10-1	We we mean the	
		2-2-2-11			
3 Cormorant Kookery			11-11-11-12-12-12-12-12-12-12-12-12-12-1		
	Z-M-MARKATIK S				

#### MINNESOTA COLONIAL BIRD SURVEY FORM REGION 4 - JACKSON COUNTY - 1994

Colony Location (see map	NE Duck L.	Parcel	Section	Tipp	Rg
Colony size (estimated a	cres)	Site (	Dwnership_	****	
Best access route (see *	map)		***************************************		
Description of habitat,					
reservable and industrial	sace, while	cities adopti	ace. //ar	5/)	
Threats to colony	- vizini - i - i - i - i - i - i - i - i - i	No. 18 1972 1980 - 1			
	Su	rvev Detail	5		
Date 7-19-94 Time:	<i>Ι:00.ρm</i> 0	bservers:	J. Black 1	Corlson	· · · · · · · · · · · · · · · · · · ·
Address & Telephone <u>Wiw</u> d	om WMO 8	131- 2220			
Photos: kept at	:		_ Census	technique £	rom shore
6		( No. 1	Telesi	T +22.3	1 7-4-3
Species	Count   Method	Nesting Stage	Total adult pop.	Total active nests	Total broods
White Pelican					
Obl-crest cormonant			HITTER DESCRIPTION OF THE PARTY		
Breat Blue Heron	1	K	10		
Great Egret					
31-crwnd night heron				The state of the s	
Horned Grebe					
Eared Grebe	The state of the s				
Western Grebe					
Ring-billed Gull					
Herring Gull					
Common Tern					
ranklin's Gull					
Forster's Tern					
Other (details in					
comments		1		1	HAW HIM HAW
Count method: 1) visual e extrapolation: describe	estimate 2)	total groun	nd count 3	Partial (	count with
Westing Stage: A) not pro	esent (late	summer, fa	ll or wint	en); B) pa	iring and
uilding; C) Egg laying;	D) Incubat:	ion; E) Hato	ching; F)	Downy Young	9; G)
eathered voung: H) Newly	flying you	ing; I) Rene	esting; J)	Laying on	or near
olony; K) Species seen,	nesting not	determined	d; L) Aban	doned durin	ng nesting
eason/nesting probable,	no young pr	roduced; M)	Adult beh	avior sugge	ests nesti
robable; N) Nesting, cou	int unavaila	able; O) Sig	gnificant	nesting fa	llure.
omments:					A CONTRACTOR OF THE PARTY OF TH
Shorebirds return:					
	Lesser' Yellowle				31 200 1
	Morhled godwit	15			
	Peops"	: 10			
	exps"	: 10			

#### MINNESOTA COLONIAL BIRD SURVEY FORM REGION 4 - JACKSON COUNTY - 1994

Colony Location (see man	5. Duck L.	Parcel	Section	7.00	Rg_
Colony size (estimated	acres)	Site	Ownership_		
Best access route (see					
Description of habitat,	site & nes	ting subst	cate.		
	1			N. The state of th	THE SECTION
<u> </u>				•	
Threats to colony	Termina and an analysis and an				
	Su	rvev Detai	l s		
Date 7-19-94 Time:	2:00pm 0	bservers:_	J. Block L	. Carlon	
Address & Telephone_ <i>Win</i>	don wmo	831- 2220			
Photos: kept at	·		_ Census	technique_{	rom shore
Species	1 5 1	7 80 83	T 1 1		1
Species	Count	Nesting	Total	Total	Total
	Method	Stage	adult	active	broods
White Pelican		K	80	nests	1111111
Db1-crest cormorant	<del></del>	<u>\$</u>	25		<del> </del>
Great Blue Heron	1	R	15		<del> </del>
Great Egret		A	/->		
31-crwnd night heron		<del> </del>			
Horned Grebe					
Eared Grebe Western Grebe					
					W. W. C. W.
Ring-billed Gull	<del></del>	0.0000000000000000000000000000000000000		- Control of the cont	
Herring Gull				<del></del>	
Common Tern		K	15		-
Franklin's Gull			13		
Forster's Tern		-			-
Other (details in comments					
Count method: 1) visual extrapolation:	estimate 2)	total grou	nd count 3	3) Partial c	ount with
describe	Township of the second of	Victoria de la companya della companya della companya de la companya de la companya della compan		and the second	
Nesting Stage: A) not pro	esent (late	summer, fa	11 or wint	er): B) pai	ring and
ouilding; C) Egg laying;					
eathered young; H) Newl					
olony; K) Species seen,					
eason/nesting probable,					
robable; N) Nesting, co					
Comments:					₹4,0 ≥0
Solitary soundpiper	: 15				
Survey surveyer	44				
	1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987				
				CHENCOLINA .	
				V/10=19/19/3/19/1===========================	
	***************************************				
	THE RESERVE OF THE PARTY OF THE				

# MINNESOTA COLONIAL BIRD SURVEY FORM FREGION 4 - JACKSON COUNTY - 1994

Colony size (estimated a	cres)	Farcel Section Twp Ro				
Best access route (see *	map)					
Description of habitat,	site, & nes	ting substr	rate:			
			-	DE IL IS WINDOWS		
					CHIRL THE CONTRACT	
Threats to colony						
edg to corony						
	Su	rvev Detail	5			
Date <u>7-19-94</u> Time:_	7. 30 m	hearvone.	Tabek 1	Coolean		
Wa was	ix sopri	Daer ver a	L. DAKA Z.	Carson		
Address & Telephone <u>Wiw</u>	tom WMD	831-2220	)			
Photos:			F-2-1		-1	
Photos: kept at	*		_ census '	recupidne 7	om store	
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -						
Species	Count	Nesting	Total	Total	Total	
	Method	Stage	adult	active	broods	
			pop.	nests		
Mhite Pelican						
bl-crest cormorant		K	8			
reat Blue Heron		K	10			
reat Egret						
1-crwnd night heron						
lorned Grebe						
ared Grebe						
Jestern Grebe		SOURCE HE SHOW THE	Control of the Contro	New York Control of the Control of t		
ing-billed Gull	1	K	15			
Merring Gull			1100000			
Common Tern						
ranklin's Gull	1	K	70	Company and the second	and the second second	
orsten's Tern	1	K	10	VOCAL DE LA COMPANIA	A HARMAN AND AND AND AND AND AND AND AND AND A	
ther (details in				COMMON SECTION OF THE PERSON O		
omments					1	
	10.2					
ount method: 1) visual e	stimate 2)	total groun	nd count 3	) Fartial o	count with	
xtrapolation:						
escribe					oversion and well the	
esting Stage: A) not pre						
uilding; C) Egg laying;	D) Incubati	on; E) Hat	ching; F)	Downy Young	ı; G)	
eathered young; H) Newly	flying you	ing; I) Ren	esting; J)	Laving on	or near	
olony; K) Species seen,	nesting not	determine	d; L) Aban	doned durir	g nesting	
eason/nesting probable,						
robable; N) Nesting, cou	nt unavaila	ble; D) Sig	gnificant	nesting fai	lure.	
omments:				6 I 1891 - MI 770		
Block Tern: 30			C. C. William			
Pierr- Billed Grebe:	60 (40 voura					
The state of the s	- /-					
American Cont: 7	3 (30 MANG)				CONTRACTOR OF STREET	
American Coot: Z	> (so hung)			110011111-2-11	and the second second second	
American Cont: 7	> (30 young)					

#### MINNESOTA COLONIAL BIRD SURVEY FORM REGION 4 - JACKSON COUNTY - 1994

Colon'> Location (see map	WORLD LIGISO	41.751	- SEETION	1145	107.77
					1,4
Colony size (estimated a	acres)	Site	Ownership_		
Best access route (see )	( map)				
Description of babitat	site & post	inn subsets			
Description of habitat,	site, a nest	ing subst	rate:		
	www.comessure.com				
Threats to colony					
		and the same			
	Sur	vev-Dëtai	5		
Date <u>7-20-94</u> Time:_	9: 70m-1/1/2mnh	service 1	V Rlock 1	Carlenn	
		A. Carrier	Ä.		
Address & Telephone Wind	nn WMO 83	1 22 20	<i></i>		
Photos: <u>ycs</u> kept at				technique_/	mt
7-2	Contraction was an annual of	903	-0	- Landing de _ A	
Spaciae	P==== 1:	3	ితి	I manager	T + 1 +
Species		Mesting	Total	Total	Total
	Method	Stage	adult	active	broods
W-14- 5-11		Ai <sub>K</sub>	pop.	nests	
White Pelican		-5	450		
Obl-crest cormorant		K	350		
Breat Blue Heron		K	60		o de la companya della companya della companya de la companya della companya dell
Great Egret		K	30	<del> </del>	
31-crwnd night heron		K	10		-
dorned Grebe		A SHIP WAS THE PROPERTY OF			
Eared Grebe		14			+
Western Grebe		K	2		
Ring-billed Gull		K	150		
Herring Gull					
Common Tern		77	20		
ranklin's Gull		K	30	-	
forster's Tern		_ K	10		
Other (details in					
comments					
Count method: 1) visual	estimate 2) t	otal grou	nd count 3	B) Partial o	count with
extrapolation:					
describe					
Westing Stage: A) not pro	esent (late s	ummer. fa	11 or wint	er): B) pa:	iring and
	D) Incubatio	n: E) Hat	ching; F)	Downy Young	9; 6)
uilding: C) Egg laving:		a. I) Sen	esting: J)	Laving on	or near
uilding; C) Egg laving;	v flving voun	And the second of the second o			and the second second
uilding; C) Egg laying; eathered young; H) Newly	y flying youn	determine	d: L) Aban	doned durin	ig nesting
uilding; C) Egg laving; eathered young; H) Newly olony; K) Species seen,	y flying youn nesting not	determine	d; L) Abar	idoned durin	ng nestino ests nest
uilding; C) Egg laving; eathered young; H) Newl; olony; K) Species seen, eason/nesting probable,	y flying youn nesting not no young pro	determine duced: M)	d; L) Abar Adult beh	avior sugge	ests nest
uilding; C) Egg laving; eathered young; H) Newly olony; K) Species seen, eason/nesting probable, robable; N) Nesting, co	y flying youn nesting not no young pro	determine duced: M)	d; L) Abar Adult beh	avior sugge	ests nest
ouilding; C) Egg laving; Feathered young; H) Newly colony; K) Species seen, season/nesting probable, probable; N) Nesting, cou	y flying youn nesting not no young pro	determine duced: M)	d; L) Abar Adult beh	avior sugge	ests nest
building; C) Egg laving; Feathered young; H) Newly colony; K) Species seen, season/nesting probable, probable; N) Nesting, cou Comments:	y flying youn nesting not no young pro	determine duced: M)	d; L) Abar Adult beh	avior sugge	ests nest
ouilding; C) Egg laving; Feathered young; H) Newly colony; K) Species seen, season/nesting probable, probable; N) Nesting, cou	y flying youn nesting not no young pro	determine duced: M)	d; L) Abar Adult beh	avior sugge	ests nest
ouilding; C) Egg laving; Teathered young; H) Newly colony; K) Species seen, season/nesting probable, probable; N) Nesting, cou	y flying youn nesting not no young pro	determine duced: M)	d; L) Abar Adult beh	avior sugge	ests nest
ouilding; C) Egg laving; Teathered young; H) Newly Tolony; K) Species seen, Teason/nesting probable, Probable; N) Nesting, conting	y flying youn nesting not no young pro	determine duced: M)	d; L) Abar Adult beh	avior sugge	ests nest