

1993 HERON LAKE COLONIAL WATERBIRD SURVEY

I. OBJECTIVES

The objectives of this survey are to:

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

II. METHODOLOGY

Abnormally intense and frequent rainfall events plagued the Heron Lake Watershed along with the rest of the upper Midwest during the Great Flood of 1993. These frequent rainfall events combined with staff limitations enabled one count to be conducted on July 2, 1993. The colonies were visited by boat and the populations were counted and/or estimated. Data was recorded on a Colonial Bird Survey form developed in cooperation with the Minnesota Department of Natural Resources Nongame Bird Specialist in Region 4.

Species data recorded during the survey include: nesting stage; total adult population; total active nests; and total broods. Numbers were determined by visual estimates, and the nesting stage was identified for each species. (See Attachment #1).

Survey route is outlined on Attachment #2.

III. RESULTS

A summary of data is provided on Table A (See Attachment #3). There appears to be a slight increase in Franklin's gull numbers and a noticeable increase in nesting Black Crown Night Herons (BCNH) number. BCNH numbers increased from approximately 150 in 1992 to approximately 1,000 in 1993. The majority of these adult birds were flushed off of nests or out of a nesting area.

Cormorant nests have increased from several in 1992 to approximately 70.

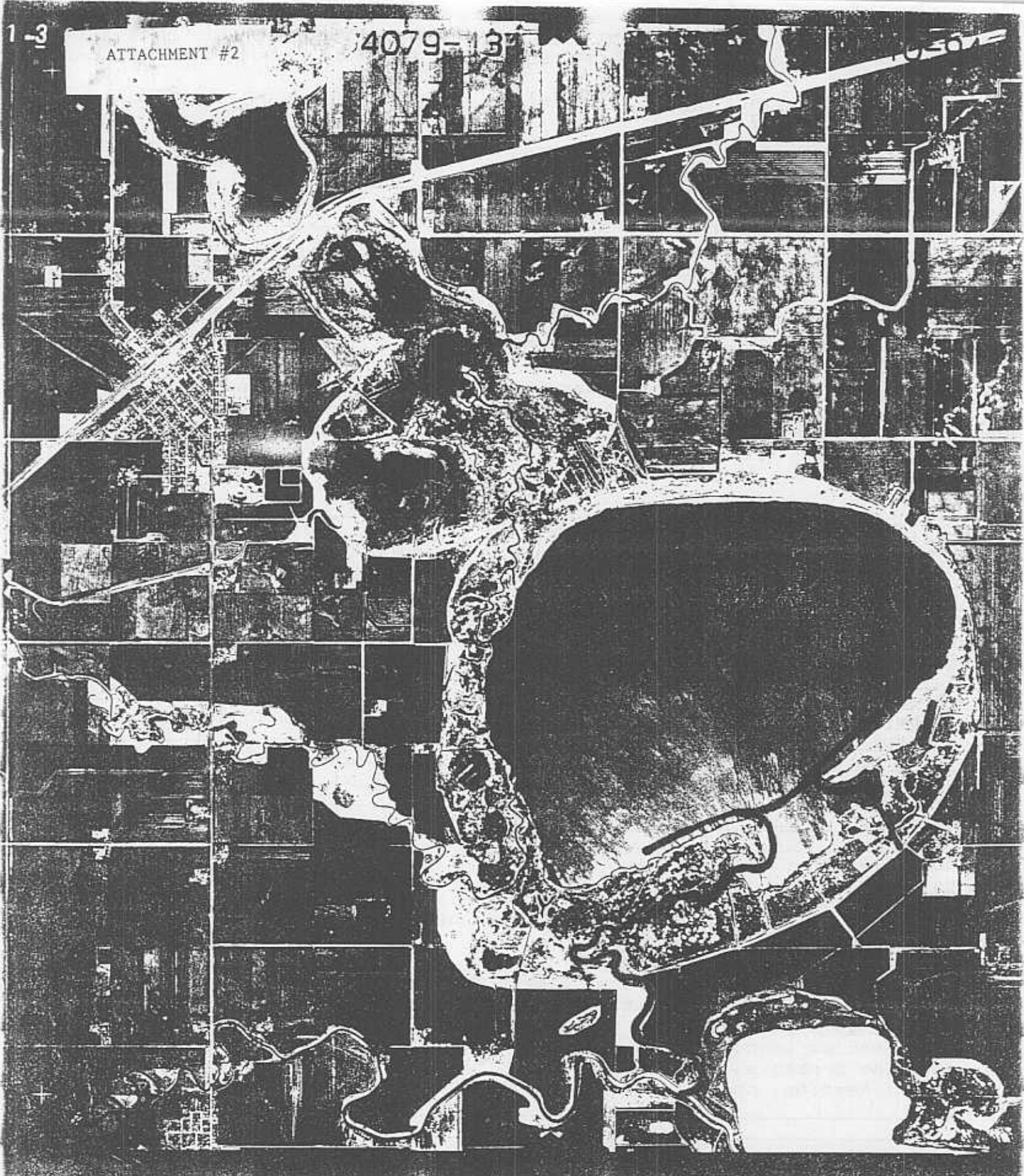
The largest concentration of Franklin's gulls and Forester's tern nests had moved from the North shore of Windsor Bay to a location in Division Creek (See Attachment #4).

High water conditions did not seem to be as devastating on over water nests as anticipated. High water levels occurred early in the spring and continued throughout July. Perhaps nests were constructed at a relatively high elevation in the vegetation from the onset of the nesting season, which helped to reduce a catastrophic loss of nests later in the season. It is not unusual during a normal nesting season, to experience a sudden increase in water levels (1 to 4 feet) due to moderate rainfall events.

IV. MANAGEMENT IMPLICATIONS

A three sectioned triangular over-water nesting platform was placed on North Heron Lake in 1992 by the MN DNR. This structure costs approximately \$3,000. We re-located this structure in 1993 (see attached photographs) and discovered no nesting attempts by non-game birds. The structure had received significant damage because of muskrats chewing on the styrofoam platform. A fibrous section of the platform was designed to support rooted emergent plants such as cattails. This section did not support vegetation planted on it the previous year. The platform was used by muskrats as a feeding site, as evidenced by ample vegetation which was cut and piled on the platform and the high frequency of muskrat feces.

omments:

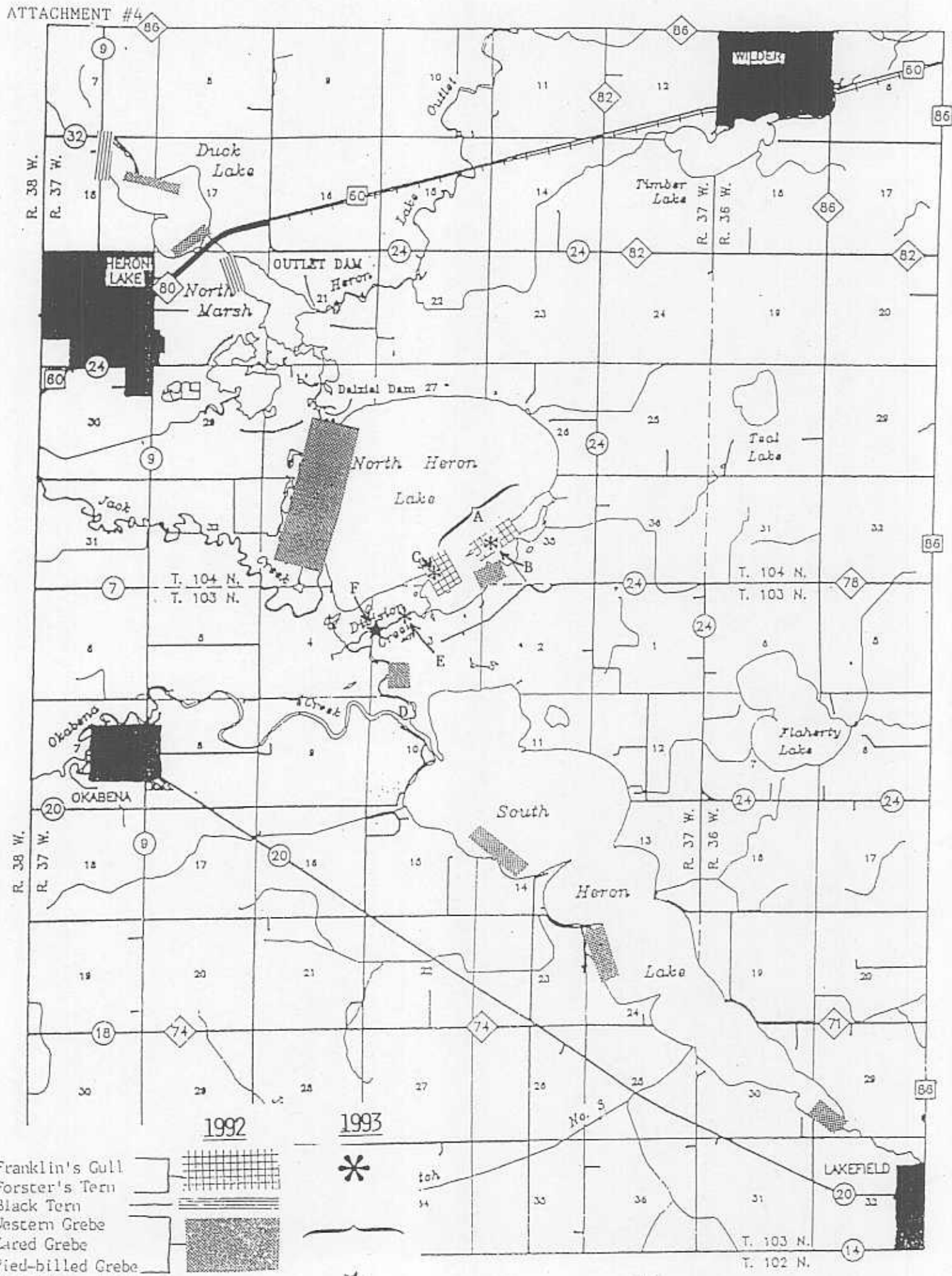


— Survey Route

1993 NESTING SUMMARY

<u>SPECIES</u>	<u>SEE MAP; ATTACHMENT #4</u>	<u>NUMBERS</u>			
		<u>ADULT</u>	<u>YOUNG</u>	<u>NEST</u>	<u>BROODS</u>
Western Grebe	A	50	10		30
Franklin's Gull	B	140			
Forester's Tern	B	75			
Franklin's Gull	C	120			
Forester's Tern	C	70			
Cormorants	D			70	
Franklin's Gull	E	4,000			
Forester's Tern	E	500			
Bl. Crowned Night Heron	F	1,000			
TOTALS	<u>1992</u>	<u>1993</u>			
BCNH	150	1,000			
Franklin's	2,000	4,260			
Forester's	1,000	645			
Cormorants	250				
Western Grebe	140	50			

ATTACHMENT #4



ATTACHMENT #5

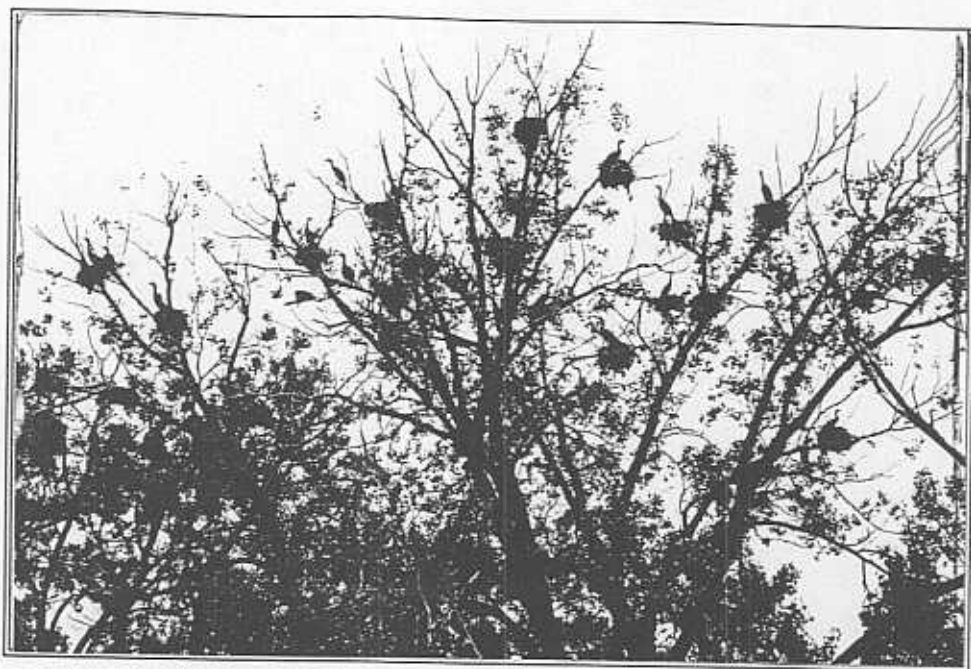
PHOTOGRAPHS



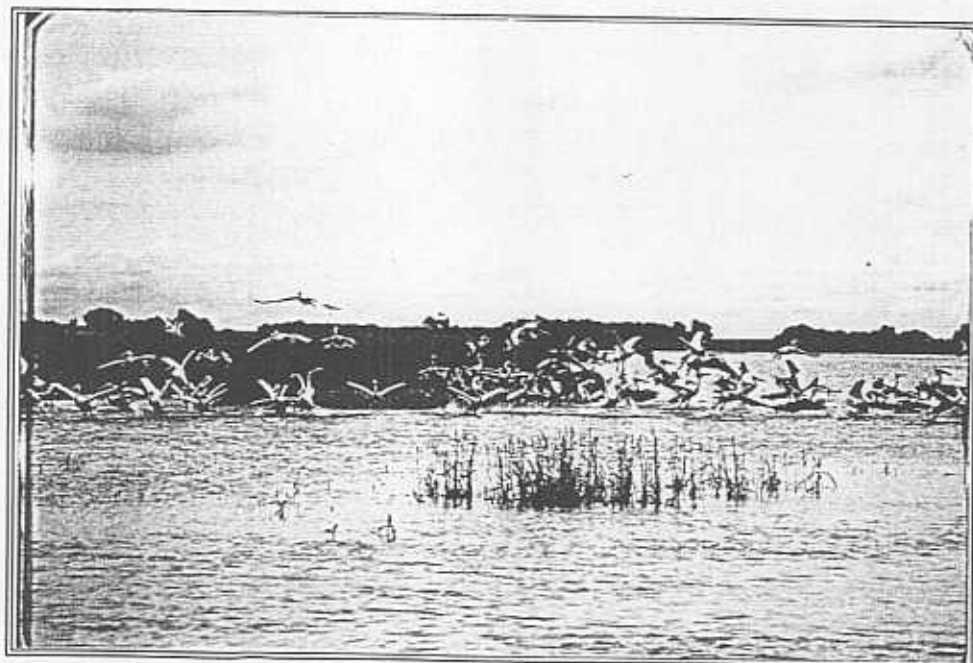
1. Franklin's Gull nest on North Heron Lake. 7/2/93



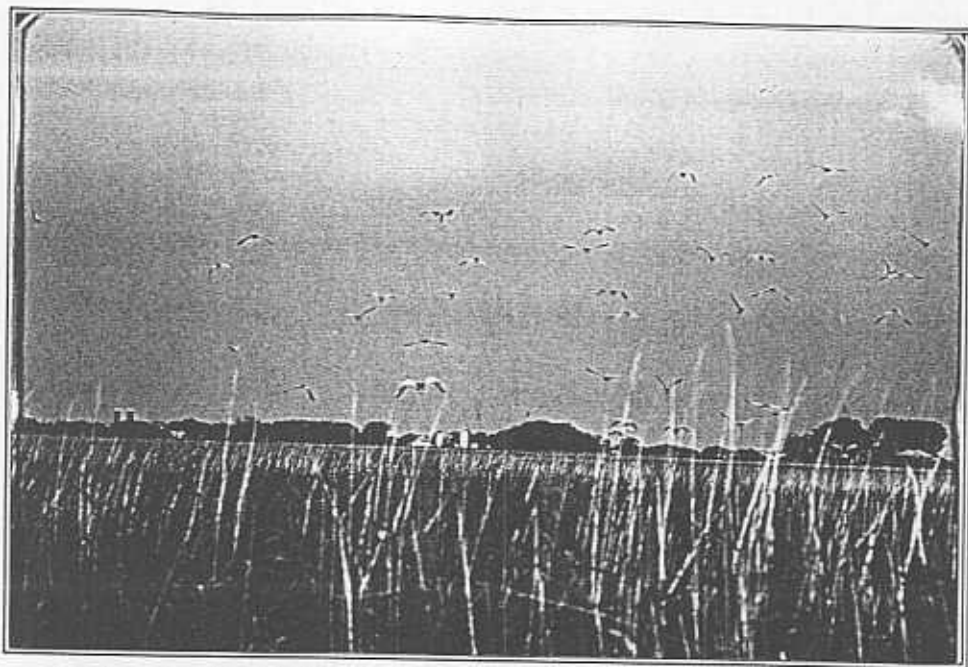
2. Franklin's Gulls and Forrester's Terns mobbing boat
on Diversion Creek. 7/2/93



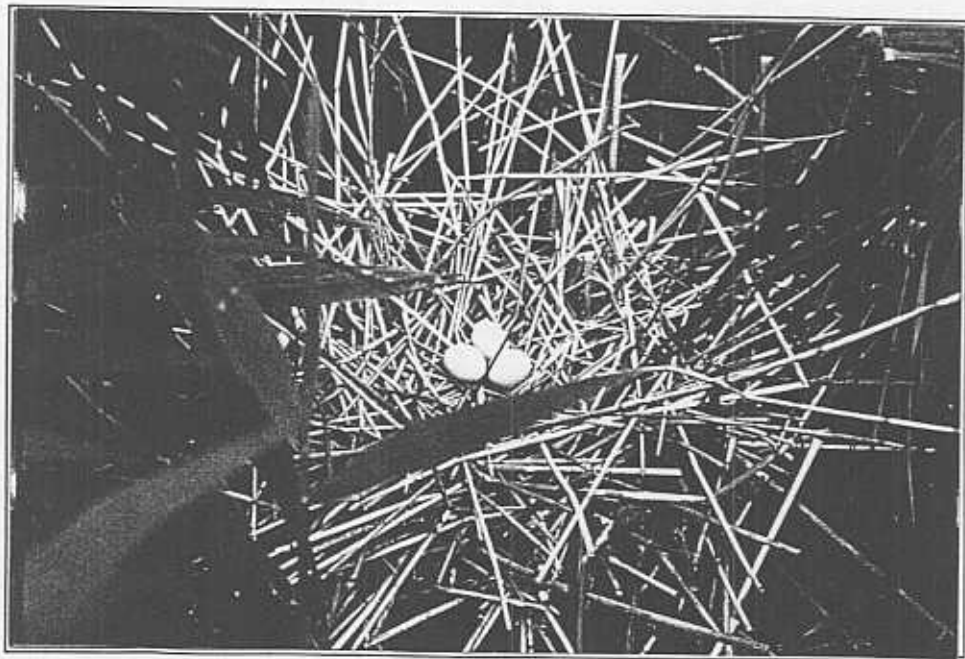
3. Double Crested Cormorant rookery along Diversion Creek. 7/2/93



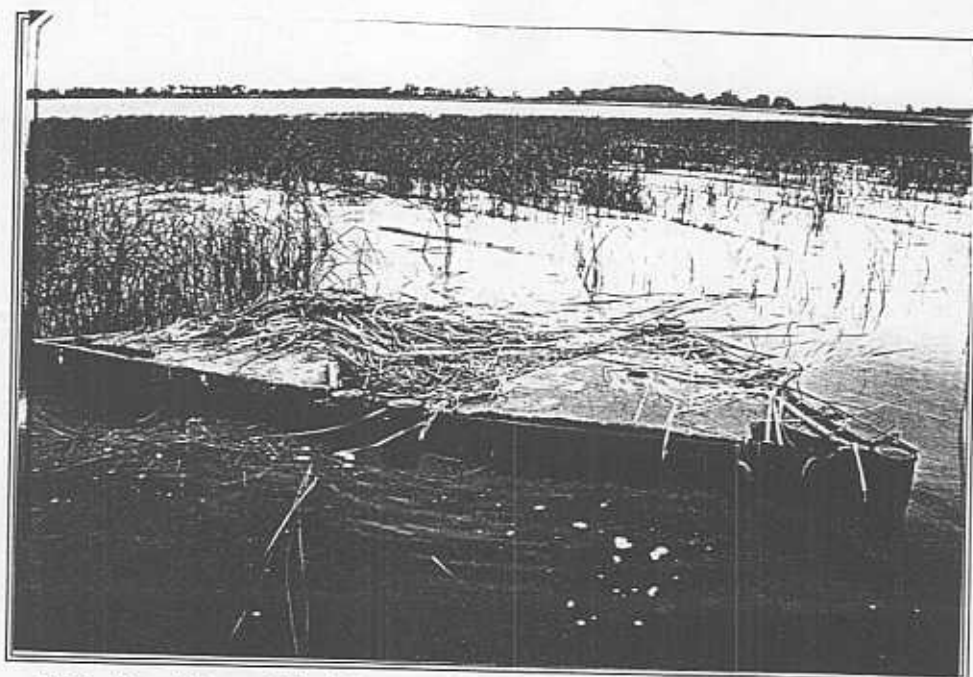
4. White Pelicans flush from their loafing site along Diversion Creek. 7/2/93



5. Black Crowned Nigh Herons flush from colony along
Diversion Creek. 7/2/93



6. Black Crowned Night Heron Nest on Diversion Creek. 7/2/93



7. DNR Nesting Platform installed in 1993. 7/2/93



8. Close up of DNR Nesting Platform. Note vegetation and holes due to muskrat activity. 7/2/93

Location - A

Colony Location (see map) _____ Parcel _____ Section _____ Twp _____ Rg _____

Colony size (estimated acres) _____ Site Ownership _____

best access route (see * map) _____

Description of habitat, site, & nesting substrate: Open water - N. Heron Lake

Threats to colony _____

Date: 7/2/93 Time: 10:00 AM Observers: Kallon, Schladowiler, McCarty

Address & Telephone _____

photos: _____ kept at: _____ Census technique

Species	Count Method	Nesting Stage	Total adult pop.	Total active nests	Total broods
White Pelican					
Bl-crest cormorant					
great Blue Heron					
great Egret					
l-crowned night heron					
orned Grebe					
ared Grebe					
estern Grebe	21		50+40		30+10 young of year
ing-billed Gull					
erring Gull					
ommon Tern					
runklin's Gull					
orster's Tern					
ther (details in					
omments					

count method: 1) visual estimate 2) total ground count 3) Partial count with extrapolation:

escribe
esting Stage: A) not present (late summer, fall or winter); B) pairing and nest
uilding; C) Egg laying; D) Incubation; E) Hatching; F) Downy Young; G)
eathered young; H) Newly flying young; I) Renesting; J) Laying on or near
olony; K) Species seen, nesting not determined; L) Abandoned during nesting
eason/nesting probable, no young produced; M) Adult behavior suggests nesting
robable; N) Nesting, count unavailable; O) Significant nesting failure.

Comments:

nesting Stage: A) not present (late summer, fall or winter); B) pairing and nest building; C) Egg laying; D) Incubation; E) Hatching; F) Downy Young; G) feathered young; H) Newly flying young; I) Renesting; J) Laying on or near colony; K) Species seen, nesting not determined; L) Abandoned during nesting season/nesting probable, no young produced; M) Adult behavior suggests nesting probable; N) Nesting, count unavailable; O) Significant nesting failure.
Comments:

MINNESOTA COLONIAL BIRD SURVEY FORM
REGION 4 - JACKSON COUNTY - 1992

C

ATTACHMENT #6

Colony Location (see map) _____ Parcel _____ Section _____ Twp _____ Rg _____
Colony size (estimated acres) _____ Site Ownership _____
Best access route (see * map) _____
Description of habitat, site, & nesting substrate: _____

Threats to colony _____

Survey Details

Date 1/2/93 Time: 10:30 AM Observers: Kallm, Schladowiler, McCarty
Address & Telephone _____
Photos: _____ kept at: _____ Census technique _____

Species	Count Method	Nesting Stage	Total adult pop.	Total active nests	Total broods
White Pelican					
Bl-crest cormorant					
Great Blue Heron					
Great Egret					
Bl-crowned night heron					
Horned Grebe					
Hooded Grebe					
Western Grebe					
Ring-billed Gull					
Herring Gull					
Common Tern					
Franklin's Gull	1	B,C,D	120		
Forster's Tern	1	B,C,D	70		
Other (details in comments)					

Count method: 1) visual estimate 2) total ground count 3) Partial count with extrapolation:
Describe _____

Nesting Stage: A) not present (late summer, fall or winter); B) pairing and nest building; C) Egg laying; D) Incubation; E) Hatching; F) Downy Young; G) Feathered young; H) Newly flying young; I) Renesting; J) Laying on or near colony; K) Species seen, nesting not determined; L) Abandoned during nesting season/nesting probable, no young produced; M) Adult behavior suggests nesting probable; N) Nesting, count unavailable; O) Significant nesting failure.
Comments: _____

omments:

MINNESOTA COLONIAL BIRD SURVEY FORM
REGION 4 - JACKSON COUNTY - 1992

E

ATTACHMENT #6

Colony Location (see map) _____ Parcel _____ Section _____ Twp _____ Rg _____

Colony size (estimated acres) _____ Site Ownership _____

Best access route (see * map) _____

Description of habitat, site, & nesting substrate: _____

Threats to colony _____

Survey Details

Date 7/2/93 Time: 11:15 AM Observers: Kellin, Schladweiler, McCarty

Address & Telephone _____

Photos: _____ kept at: _____ Census technique _____

Species	Count Method	Nesting Stage	Total adult pop.	Total active nests	Total broods
White Pelican					
Bl-crest cormorant					
Great Blue Heron					
Great Egret					
Bl-crowned night heron					
Crowned Grebe					
Hooded Grebe					
Western Grebe					
Ring-billed Gull					
Herring Gull					
Common Tern					
Franklin's Gull	1		4000	B, C, D	
Forster's Tern	1		1500	B, C, D	
Other (details in comments)					

Count method: 1) visual estimate 2) total ground count 3) Partial count with extrapolation:
Describe _____

Nesting Stage: A) not present (late summer, fall or winter); B) pairing and nest building; C) Egg laying; D) Incubation; E) Hatching; F) Downy Young; G) Feathered young; H) Newly flying young; I) Renesting; J) Laying on or near colony; K) Species seen, nesting not determined; L) Abandoned during nesting season/nesting probable, no young produced; M) Adult behavior suggests nesting probable; N) Nesting, count unavailable; O) Significant nesting failure.
Comments: _____

MINNESOTA COLONIAL BIRD SURVEY FORM
REGION 4 - JACKSON COUNTY - 1992

F

ATTACHMENT #6

Colony Location (see map) _____ Parcel _____ Section _____ Twp _____ Rg _____

Colony size (estimated acres) _____ Site Ownership _____

Best access route (see * map) _____

Description of habitat, site, & nesting substrate: _____

Threats to colony _____

Survey Details

Date 7/2/93 Time: 11:30am Observers: Kallie Schlodewer, Mc Carthy

Address & Telephone _____

Photos: _____ kept at: _____ Census technique _____

Species	Count Method	Nesting Stage	Total adult pop.	Total active nests	Total broods
White Pelican					
Bl-crest cormorant					
Great Blue Heron					
Great Egret					
Bl-crowned night heron	1	B,C,D	1000		
Horned Grebe					
Hairy Grebe					
Western Grebe					
Ring-billed Gull					
Herring Gull					
Common Tern					
Franklin's Gull					
Forster's Tern					
Other (details in comments)					

Count method: 1) visual estimate 2) total ground count 3) Partial count with extrapolation:

Describe

Nesting Stage: A) not present (late summer, fall or winter); B) pairing and nest building; C) Egg laying; D) Incubation; E) Hatching; F) Downy Young; G) Feathered young; H) Newly flying young; I) Renesting; J) Laying on or near colony; K) Species seen, nesting not determined; L) Abandoned during nesting season/nesting probable, no young produced; M) Adult behavior suggests nesting probable; N) Nesting, count unavailable; O) Significant nesting failure.

Comments: