

1979

**Form D1 –
Waterfowl Production
Surveys
Units 1-23**

Field Form

Unit No. 1

WATERFOOT PRODUCTION SURVEY DUCK & COOT NESTING DATA

Year: 1979

Unit No.	Transect No.	First Observation			Nest Status						Cover Type											Fate													
		Date	Nest No.	Species	No. Eggs	Laying	Incub.	Covered	Desert.	Destr.	Flooded	Unknown	Sx	Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded	Date	Hatched	No. Hatch.	Desert.	Destr.	Flooded	Unknown	Remarks (No. & expl. on back)
1	63	5/23	51	Pintail	5																							5/23							
1	71	5/23	4	Unknown	0																							5/23							
				5/23																															
				5/23																															
1	65	6/21	68	BWT	7	1																						7/24							

Field Form

Unit No. 2

WATERFOWL PRODUCTION SURVEY DUCK & COOT NESTING DATA

Year:

[illegible]

Observer: _____

WATERFOWL PRODUCTION SURVEY DUCK & COOT NESTING DATA

Year: 1979

Unit No.	Transect No.	First Observation			Nest Status							Cover Type												Fate											
		Date	Nest No.	Species	No. Eggs	Laying	Incub.	Covered	Desert.	Destr.	Flooded	Unknown	Sx	Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded	Date	Hatched	No. Hatch.	Desert.	Destr.	Flooded	Unknown	Remarks (No. & expl. on back)
3	93	5/24	206	Co. Duck	1	✓														✓								6/22	No eggs						
3	93	5/24	207	Pintail	8	✓														✓								6/22	No eggs						
3	99	5/24	111	Pintail	5					✓										✓								5/24							
		Finished 6/24																																	
3	89	6/20	155	GWT	9	✓														✓								8/12	No eggs						

Unit No.

Year:

[illegible]

Field Form

WATERFOOT PRODUCTION SURVEY DUCK & COOT NESTING DATA

Year:

171

[illegible]

Unit No.

Year: 1979

[illegible]

Year: 1979

Unit No.	Transect No.	First Observation			Nest Status							Cover Type										Fate														
		Date	Nest No.	Species	No. Eggs	Laying	Incub.	Covered	Desert.	Destr.	Flooded	Unknown	Sx	Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded	Date	Hatched	No Hatch.	Desert.	Destr.	Flooded	Unknown	Remarks (No. & expl. on back)	
755	6/19	115	Grackle	10			V						V						V									7/24	644							

Unit No. 8

Year: 1979

[illegible]

Observer: _____

WATERFOUL PRODUCTION SURVEY DUCK & COOT NESTING DATA

Year: 1979

Unit No.	Transect No.	First Observation			Nest Status							Cover Type										Fate															
		Date	Nest No.	Species	No. Eggs	Laying	Incub.	Covered	Desert.	Destr.	Flooded	Unknown	Sx	Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded	Date	Hatched	No. Hatch.	Desert.	Destr.	Flooded	Unknown	Remarks (No. & expl. on back)		
9	91	5/24	203	Mallard	4	✓														✓							6/26/79										
9	93	5/24	204	GWT	4	✓														✓							6/20/78										
9	93	5/24	205	Pintail	9	✓														✓							6/20/78	✓									
9	87	5/24	107	BWT	8	✓														✓							6/25/79	✓									
9	89	5/24		Mallard	3															✓							5/24										
9	89	5/24	108	Mallard	9	✓														✓							6/20										
9	89	5/24	109	BWT	8	✓														✓							6/20 still incubating - 2.										
9	99	5/24	110	Mallard	2															✓							5/24										
9	57	5/24	205	Pintail	4															✓							5/24										
9	91	5/24	206	C. Teal	6															✓							5/24										
9	87	6/20	218	Chowrac	8	✓														✓							7/24	71									
9	91	6/20	44	C Teal	4				✓											✓							6/20										
9	91	6/20	116	Redhead	11	✓														✓							7/24	92									
9	93	6/20	158	BWT	10	✓														✓							7/24	91									
9	93	6/20	157	Pintail	7	✓														✓							7/24	52									
9	93	6/20	158	du	du																						6/20	✓									
9	93	6/20	159	du	5																						6/20	✓									
9	95	6/20	160	Mallard	3	✓														✓							7/24	41									

included
- 2 more eggs

Unit No. 10

Year: _____

[illegible]

248.00

Year: 1979

Unit No.	Transect No.	First Observation						Nest Status							Cover Type										Fate										
		Date	Nest No.	Species	No. Eggs	Laying	Incub.	Covered	Desert.	Destr.	Flooded	Unknown	Sx	Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded	Date	Hatched	No. Hatch.	Desert.	Destr.	Flooded	Unknown	Remarks (No. & expl. on back)
14	33	5/21	103	BWT	5	✓																					6/18/79								
14	33	5/21	104	Mallard	6	✓																					6/18/79								
14	39	5/21	251	BWT	11	✓													✓								6/25								
14	33	6/20	65	GWT	10	✓															✓						7/25								

Year: 1977

[illegible]

Observer: _____

WATERFOUL PRODUCTION SURVEY DUCK & COOT NESTING DATA

Year: 1979

Unit No.	Transect No.	First Observation			Nest Status										Cover Type										Fate											
		Date	Nest No.	Species	No. Eggs	Laying	Incub.	Covered	Desert.	Destr.	Flooded	Unknown	Sx	Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded	Date	Hatched	Nb. Hatch.	Desert.	Destr.	Flooded	Unknown	Remarks (No. & expl. on back)	
18	93	5/21	101	Mallard	11	✓														✓								6/19/79	101							
18	91	5/21	102	RWT	7	✓													✓									6/22/79								
18	97	5/21	1	GWT																		✓						5/21								
18	97	5/21	2	Pital	3	✓																✓						6/19/79	1							
18	95	5/21	3	C.T.	9	✓																						6/19/79	3							
18	91	6/19	216	Redhead	10	✓																						7/25	Unknown							
18	93	6/19	151	AN	4	✓																						7/25	7							
18	93	6/19	152	AN	7	✓																						7/25	7							
18	97	6/19	153	Mallard	40																							6/19	✓							

Year: 1979

[illegible]

Year: 1971

[illegible]

Year: 1979

Unit No.	
Transect No.	
First Observation	Date
	Nest No.
Nest Status	Species
	No. Eggs
Cover Type	Laying
	Incub.
	Covered
	Desert.
	Destr.
	Flooded
	Unknown
	Sx
	Sve
	Crx
	Dst
	Gx
	Mof
	Wx
	Jba
	Cx
Ex	
Tla	
Sva	
Dike	
Ditch	
Flooded	
Fate	Date
	Hatched
	No Hatch.
	Desert.
	Destr.
	Flooded
	Unknown
Remarks (No. & expl. on back)	
	Finished 5/22
	2nd block finished 6/19

Field Form

Unit No. Unit 23

WATERFOOT PRODUCTION SURVEY DUCK & COOT NESTING DATA

Year: 1967

[illegible]

**Form D2 –
WPS Wildlife Trend
Data**

Form D-2
Unit No: 19

Field Form
WATERFOWL PRODUCTION SURVEY--WILDLIFE TREND DATA

Obs:

Year: 77

Species	Record Data on Trans. Series:			Total Nests, Dens, or Houses Obs.	Active Nests, Dens, & Houses on Trans.	Map Symbol	Trans. No.	Date 1st Obs.	No. Eggs	Rate					Cover Type																
	1	2	3							Hatched	No. hatch.	Desert.	Destr.	Floded	Unknown	Sx	Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flood.	
Pheasant	X	X	X	XXXXX	XXXXXXX																										
Snowy Egret		X		XXXXX	XXXXXXX																										
B.C. Night Her.		X		XXXXX	XXXXXXX																										
Avocet		1		XXXXX	XXXXXXX																										
Phalarope		X		XXXXX	XXXXXXX																										
Short-ear. Owl		X		XXXXX	XXXXXXX																										
Marsh Hawk		1		XXXXX	XXXXXXX																										
P.-T. Hawk		X		XXXXX	XXXXXXX																										
G.H. Owl		X		XXXXX	XXXXXXX																										
Magpie		X		XXXXX	XXXXXXX																										
Blackbird		X		XXXXX	XXXXXXX																										
Muskrat		X		XXXXX	XXXXXXX																										
Beaver		X		XXXXX	XXXXXXX																										
Skunk		X		XXXXX	XXXXXXX																										
Cottontail		X			XXXXXX																										
Jack Rabbit		X			XXXXXX																										
Mourn. Dove		X			XXXXXX																										

1 nest

Forms D3 – D9

D3 – WPS Duck Brood Sample Data

D4 – WPS Duck Nesting Transects Individual Unit Summary

D5 – WPS Duck Nesting Transects Refuge Annual Summary

D6 – Calculations for Determination of Corrected Species
Composition

D6a – Calculations For Determination of Ducks Produced by
Species

D-9 – WPS Primary Duck Nesting Cover Types Refuge Annual
Summary

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 1Recorder: KaufleldYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Primary Cover Type (No. of nests in each primary type)														
		No. Hatched	% Hatched						Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded	
Mallard																							
Pintail	1			1																			
Gadwall																							
Shoveller																							
Teal																							
B-W & Cinn.	1			1											1								
G+W Teal																							
Ruddy																							
Unknown	1			1																			
Total	3	0	0	3											1								
Coot																							

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 2Recorder: KaupfleYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Primary Cover Type (No. of nests in each primary type)													
		No. Hatched	% Hatched						Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded
Mallard																						
Pintail																						
Gadwall																						
Shoveller																						
Teal																						
B-W & Cinn.																						
G-W Teal																						
Ruddy																						
Unknown																						
Total	0																					
Coot																						

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 3Recorder: KAUFFELDYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Primary Cover Type (No. of nests in each primary type)													
		No. Hatched	% Hatched						Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded
Mallard																						
Pintail	2				2										2							
Gadwall	1				1										1							
Shoveller																						
Teal																						
B-W & Cinn.																						
G-W Teal	1				1										1							
Ruddy																						
Unknown																						
Total	4	0			4										4							
Coot																						

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 4Recorder: KAUFFELDYear: 79

Transect Coverage in % _____ (All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Primary Covery Type (No. of nests in each primary tvne)													
		No. Hatched	% Hatched						Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded
Mallard	2	1	50		1										2							
Pintail																						
Gadwall																						
Shoveller																						
Teal																						
B-W & Cinn.																						
G+W Teal																						
Ruddy																						
Unknown																						
Total	2	1	50		1										2							
Coot																						

*Obtain data from Field Form D-1

WATERFOWL PRODUCTION SURVEY

Unit No. 5

Recorder: Kautfeld

Year: 77[illegible]

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 6Recorder: KAUFFECYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Primary Covery Type (No. of nests in each primary tvpe)														
		No. Hatched	% Hatched						Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded	
Mallard	2	1	50	1											2								
Pintail																							
Gadwall																							
Shoveller	1				1										1								
Teal																							
B-W & Cinn.	1			1											1								
G-W Teal																							
Ruddy																							
Unknown																							
Total	4	1	25	2	1										4								
Coot																							

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS----INDIVIDUAL UNIT SUMMARY*

Unit No. 7Recorder: RauppYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Primary Covery Type (No. of nests in each primary tvpe)															
		No. Hatched	% Hatched						Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded		
Mallard																								
Pintail																								
Gadwall	1	1							1															
Shoveller																								
Teal																								
B-W & Cinn.																								
G+W Teal																								
Ruddy																								
Unknown																								
Total	1	1	100						1															
Coot																								

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 8Recorder: KayfieldYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Sve	Primary Covery Type (No. of nests in each primary tvpe)												
		No. Hatched	% Hatched							Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded
Mallard																						
Pintail																						
Gadwall																						
Shoveller																						
Teal																						
B-W & Cinn.																						
G-W Teal																						
Ruddy																						
Unknown																						
Total	0																					
Coot																						

*Obtain data from Field Form D-1

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 9Recorder: KaufeldYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Primary Covery Type (No. of nests in each primary tvpe)													
		No. Hatched	% Hatched						Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded
Mallard	5	1	20	1	2		1								5							
Pintail	3	2	67		1										2				1			
Gadwall	1	1	100												1							
Shoveller																						
Teal																						
B-W & Cinn.	5	3	60		2										5							
G-W Teal	1	0	0			1									1							
Ruddy																						
Redhead	1	1	100												1							
Unknown	2	2	100																			
Total	18	10	56	1	5	1	1								15				1			
Coot																						

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 10Recorder: KAUFFELDYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Sve	Primary Cover Type (No. of nests in each primary type)												
		No. Hatched	% Hatched							Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded
Mallard																						
Pintail																						
Gadwall																						
Shoveller																						
Teal																						
B-W & Cinn.																						
G+W Teal																						
Ruddy																						
Unknown	10					1																
Total	100					1																
Coot																						

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 11Recorder: KaufeldYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Primary Cover Type (No. of nests in each primary type)													
		No. Hatched	% Hatched						Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded
Mallard																						
Pintail	1	0	0				1		1					1								
Gadwall	1	1	100																			
Shoveller																						
Teal																						
B-W & Cinn.	1	0	0		1						1											
G-W Teal																						
Ruddy																						
Unknown																						
Total	3	1	33		1		1		1		1			1								
Coot																						

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 14Recorder: Karl FeldYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

Transect Coverage in % <u>50</u> (All transects=100%, every 1000 ft)																								
	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Primary Covery Type (No. of nests in each primary tvpe)															
		No. Hatched	% Hatched						Sve	Grx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded		
Mallard	1	0	0		1										1									
Pintail																								
Gadwall																								
Shoveller																								
Teal															2									
B-W & Cinn.	2	0	0		1	1																		
G-W Teal	1	1	100															1						
Ruddy																								
Unknown																								
Total	4	1	25		2	1									3		1							
Coot																								

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 15Recorder: KaupfeldYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

Transect Coverage in % <u>50</u> (All transects=100%, every cover type)										Primary Cover Type (No. of nests in each primary type)												
	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded
		No. Hatched	% Hatched																			
Mallard	1	0	0		1										1							
Pintail																						
Gadwall																						
Shoveller																						
Teal																						
B-W & Cinn.																						
G-W Teal																						
Ruddy																						
<u>Redhead</u>	1	1	100						1													
Unknown																						
Total	2	1	50		1				1							1						
Coot																						

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 16Recorder: KanfieldYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded
		No. Hatched	% Hatched																			
Mallard	1	0			1												1					
Pintail																						
Gadwall																						
Shoveller																						
Teal																	1					
B-W & Cinn.	1	1	100																			
G-W Teal																						
Ruddy																						
Unknown																						
Total	2	1	50		1												2					
Coot																						

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 17Recorder: RanfieldYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Sve	Primary Covery Type (No. of nests in each primary tvpe)													
		No. Hatched	% Hatched							Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded				
																				Crx	Dst	Gx	
Mallard																							
Pintail																							
Gadwall																							
Shoveller																							
Teal																							
B-W & Cinn.																							
G-W Teal																							
Ruddy																							
Unknown																							
Total	0																						
Coot																							

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 18Recorder: KanfieldYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

Transect Coverage in % <u>52</u> (All transects-100%, 52%)										Primary Cover Type (No. of nests in each primary type)													
	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded	
		No. Hatched	% Hatched																				
Mallard	2	2	100												1								
Pintail	1	1	100														1						
Gadwall																							
Shoveller																							
Teal															1								
B-W & Cinn.	2	2	100														1						
G-W Teal	1	0	0		1																		
Ruddy																							
<u>Redhead</u>	1	0	0				1												1				
Unknown	2	0		1	1										2								
Total	9	5	56	1	2		1								4		2	1					
Coot																							

*Obtain data from Field Form D-1

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 19Recorder: KaufeldYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

Transect Coverage in % <u>52</u> (All transects)										Primary Cover Type (No. of nests in each primary type)													
	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded	
		No. Hatched	% Hatched																				
Mallard																							
Pintail																							
Gadwall																							
Shoveller																							
Teal																							
B-W & Cinn.	1	1	100															1					
G-W Teal																							
Ruddy																							
Unknown																							
Total	1	1	100															1					
Coot																							

*Obtain data from Field Form D-1

DUCK NESTING TRANSECTS----INDIVIDUAL UNIT SUMMARY*

Recorder:

Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

*Obtain data from Field Form D-1

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 21Recorder: RampellYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Sve	Primary Cover Type (No. of nests in each primary type)																		
		No. Hatched	% Hatched							Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded						
Mallard																												
Pintail																												
Gadwall																												
Shoveller																												
Teal																												
B-W & Cinn.																												
G+W Teal																												
Ruddy																												
Unknown																												
Total	0																											
Coot																												

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 22Recorder: KanfieldYear: 79Transect Coverage in % 50 (All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Primary Cover Type (No. of nests in each primary type)													
		No. Hatched	% Hatched						Sve	Crx	Dst	Gx	Mof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded
Mallard																						
Pintail																						
Gadwall																						
Shoveller																						
Teal																						
B-W & Cinn.																						
G-W Teal																						
Ruddy																						
Unknown																						
Total	0																					
Coot																						

*Obtain data from Field Form D-1

Form D-4

WATERFOWL PRODUCTION SURVEY

DUCK NESTING TRANSECTS-----INDIVIDUAL UNIT SUMMARY*

Unit No. 23Recorder: KaufeldYear: 79Transect Coverage in % 50 All transects=100%, every other transect = 50%, etc.)

	Total Nests on Transects	Nests		No. Deserted	No. Destroyed	No. Flooded	Unknown	Sx	Sve	Primary Cover Type (No. of nests in each primary type)												
		No. Hatched	% Hatched							Crx	Dst	Gx	Mof	Nx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded
Mallard																						
Pintail																						
Gadwall																						
Shoveller																						
Teal																						
B-W & Cinn.																						
G+W Teal	1	0		1													1					
Ruddy																						
Unknown																						
Total	1	0	0	1													1					
Coot																						

*Obtain data from Field Form D-1

Recorder: Kau Feld

Year: 79

Transect Coverage in % 50 (All transects 100%, every other transect 50%, etc.)

- * Obtain data from Summary Form D-4

CALCULATIONS FOR DETERMINATION OF CORRECTED SPECIES COMPOSITION

(1) Species	Species Composition of Transect Data (2)			Species Composition of Breeding Population (5)			(3)	Corrected Sp. Comp. of Nests	
	No. Nests From Form D-5	Sp. Comp. Known Nests in %	Weight (Col. 3 x 2)	No. Breeding Ducks	Sp. Comp. in %	Weight (Col. 6 x 1)		Sp. Comp. in % (Col. 8) (5)	Sp. Comp. in Nos. (Col. 9) x total nests (10)
Mallard	14	29	58	1200	26.9	26.9	84.9	28.3	551
Pintail	8	16	32	180	4.0	4.0	36.0	12.0	233
Gadwall	4	8	16	937	20.9	20.9	36.9	12.3	239
Shoveller	1	2	4	480	10.1	10.1	14.1	4.9	95
Cinn. Teal	14	29	58	1250	28.0	28.0	86.0	28.1	558
G.W. Teal	5	10	20	245	5.6	5.5	25.5	8.5	165
Redhead	3	6	12	180	4.0	4.0	16.0	5.3	103
Ruddy	0	0	0						
(Total)	49								
Unknown	6								
TOTAL		100%	200%	4472	100%	100%	300%	100%	1944
Coot									

(1944)

CALCULATIONS FOR DETERMINATION OF DUCKS PRODUCED BY SPECIES

Species	Hatching Success of Nests				Average Class I & III Broods			Sp. Comp. of Ducks Produced to Flight Age	
	(10) Sp. Comp. in Nos. (Col. 9 x total)	(11) No. Nests Hatched on Transects (From Form D-5)	(12) Hatching Success in % (Col. 11 / Col. 2)	(13) Total Nests Hatched (Col. 10 x Col. 12)	(14) No. Broods Recorded (From Form D-3)	(15) No. Ducklings Recorded (From Form D-3)	(16) Average Brood Size (Col. 15 / Col. 14)	(17) No. Ducks Produced (Cols. 13 x 16)	(18) Sp. Comp. in %
Mallard	551	5	35.7	197	13	93	7.2	1418	25
Pintail	233	3	(37.5) 41.8	97	8	55	6.9	669	12
Gadwall	239	3	(75.0) 41.8	100	9	59	6.6	660	12
Shoveller	95	0	- 41.8	40	17	105	6.2	248	4
B.W. Teal									
Cinn. Teal	558	7	50%	279	11	72	6.5	1814	32
G.W. Teal	165	1	(20%) 41.8	69	5	36	7.2	497	9
Redhead	103	2	(67%) 41.8	43	15	117	7.8	335	6
Ruddy									
Unknown	—	2							
TOTAL	1944	23		825	78	537	6.9	5641	100%

WATERFOWL PRODUCTION SURVEY

PRIMARY DUCK NESTING COVER TYPES-----REFUGE ANNUAL SUMMARY*

Recorder: KauffeldYear: 1979

(1) No. Nests	(2) % in Primary Type	Primary Type															TOTAL
		Sx	Sve	Crx	Dst	Gx	Nof	Wx	Jba	Cx	Ex	Tla	Sva	Dike	Ditch	Flooded	
<u>Mallard</u>	(1)								12		1						13
	(2)								92		8						
<u>Pintail</u>	(1)		1						4		1		1				7
	(2)		14						57		14		14				
<u>Gadwall</u>	(1)		1						2								3
	(2)		33						67								
<u>Shoveller</u>	(1)								1								1
	(2)								100								
<u>B-W & Cinn. Teal</u>	(1)				1				10		2					1	13
	(2)				8				77		15					8	
<u>G.W. Teal</u>	(1)								2	1	2					1	5
	(2)								40	20	40					20	
<u>Redhead</u>	(1)		1						1			1					3
	(2)		33						33			33					
<u>Ruddy</u>	(1)																
	(2)																
<u>Unknown</u>	(1)															1	
	(2)																
	(1)																
	(2)																
<u>Total</u>	(1)		3		1				32	1	6	1	1				
	(2)		7		2				71	2	13	2	2				
<u>Coot</u>	(1)																
	(2)																

* Obtain data from Summary Form D-4

Field Notes/Raw Data

Unit 19 - 5 Class II

14 - 1 Class III, 1

22 - 1 Class II

2 - 3 destroyed nest

18 - 11 Class 1A BWT

Unknown number "

6 - 2 3 week old Canada Geese

1 - 8 broods (5 BWT) (2 or 1-11)

3 - Pintail (2 slender - 1 BWT)

9 - Pintail - 11 young
Mallard

BWT

18 - Pintail Brood - TN 89

TN - 3

18 - BWT Brood

14 - 11

BWT - no young seen

Unit 10

2 jacks

5 mourning doves

Unit 11

3 jacks

6 mourning doves

70-21

2¹⁴ Mammals deer

31- w. Goshawk

37 - 2 whitehead

37 - Mammals deer - 2 young

73 - 1 w. Goshawk

67 - w. Goshawk

6/18

4 20, 21, 22,

23,

Nests found on 1879 Transeer wicks

	<u>1st walk</u>	<u>2nd walk</u>	<u>Total</u>
Purral - 7 nests			8
Grouse - 1	1	3	4
Shouler - 1	3	0	1
Bur - 6	3	3	9
Mallard - 7	6	3	13
Bur - 2	3	3	5
C. Teal - 2	3	2	3
Redhead - 1	2	2	7
Unknown - 2	<u>54</u>	<u>26</u>	<u>55</u>
	29		

Nests found on 1878

	<u>1st</u>	<u>2nd walk</u>	<u>total</u>
Mallard	9	12	21
Teal	1	9	10
Purral	2	7	9
Unknown	4	12	18
Shouler	0	1	1
Redhead	<u>0</u>	<u>1</u>	<u>1</u>
	18	42	60

1st

Unknown - ~~||||~~ 1
1 Mallard - ~~||||~~ ||||
1 Teal - 1
Pintail - 11

6
9
1
2

18

2nd

1 Mallard ~~||||~~ ~~||||~~ |||
1 Teal ~~||||~~ ||||
Unknown ~~||||~~ ~~||||~~ ||
Sander 1
1 Pintail ~~||||~~ ||
Redhead 1

12
9
12
1
7
1

42

Maillard	Tool	Pintail	Shander	Redhead	Unknown	Total
III	III	II			II	
5	6	2			2	15
III						20
4					1	5
III	III	III	1	1		38
12	4	4	1	1	14	38
III	III	III			III	58
1		1				1
Flooded					1	
Unknown					1	60
21	10	9	1	1	18	

First walk

	<u>Nest Totals</u>			
Species	<u># Hatched</u>	Survived	<u>Dead</u>	<u>Left</u>
Pintail	11		1	1
Unknown				1
Gadwall			1	1
Shoveler			1	1
BWT	111		1	1
Mallard	1		1	1
GWT				
C. Teal	1*		1	
Redhead	1			
	<u>8</u>	<u>3</u>	<u>11</u>	<u>3</u>
				<u>4</u>

2nd walk

Pintail - 1	1
BWT - 111	3
GWT - 111	3
Mallard - 1111	4
Gadwall - 111	3
C Teal - 111	3
Redhead - 11	2
Un - 111	5

Nest Fate Comparison of Nests found on transects during 1978 and May 1979

YEAR	HATCHED	DESERTED	DESTROYED	FLOODED	UNKNOWN	TOTAL
1978	15	5	38	1	1	60
%	25	8.3	63.3	1.6	1.6	
MAY 1979	8	3	11	3	4	29
%	27.6	10.3	37.9	10.3	13.8	

Nest Fate Comparison of Nests found on transects during 1978 and May 1979

YEAR	HATCHED	DESERTED	DESTROYED	FLOODED	UNKNOWN	TOTAL
1978	15	5	38	1	1	60
%	25	8.3	63.3	1.6	1.6	
MAY 1979	8	3	11	3	4	29
%	27.6	10.3	37.9	10.3	13.8	

$$1.45 \times 468$$

$$54/468 =$$

A) 322 acres sampled
54 nests on transects

$$\frac{54}{322} = 0.168 \text{ nests/acre}$$

B) $0.168 (11,570 \text{ acres}) = 1944 \text{ nests on refuge}$
0.115 1330 nest

C) Reliability of sample

$$s = \sqrt{\frac{94}{321}}$$

$$= \sqrt{0.292}$$

$$= 0.541$$

$$sx = \frac{0.541}{\sqrt{0.322}}$$

$$= \frac{0.541}{17.94}$$

$$= 0.030$$

$$0.115 \pm 1.96(0.025)$$

$$0.115 \pm 0.049$$

$$1330 \pm 567$$

$$CL = 0.168 \pm 1.96(0.03)$$

$$CL = 0.168 \pm 0.168$$

$$= 0.168 \pm 0.367$$

$$\approx 35.7\%$$

$$= 0.168 \pm 0.06$$

$$= 0.168 (11,570) \pm 0.06 (11,570)$$

$$= 1944 \pm 694.2$$

Wakarusa 1 Production Estimates

	<u>Mont Vista</u>	<u>Alamosa</u>
Mallard	1418	651
Pintail	669	75
Canada	660	320
Shoveller	248	98
BW/GT	1814	523
GT	497	97
Redhead	335	205
Ruddy	20	10
Canvasback	10	12
<u>Widgeon</u>	<u>10</u>	<u>8</u>
TOTAL DUCKS	5,681 ± 35.7%	1999 - no conf. limits

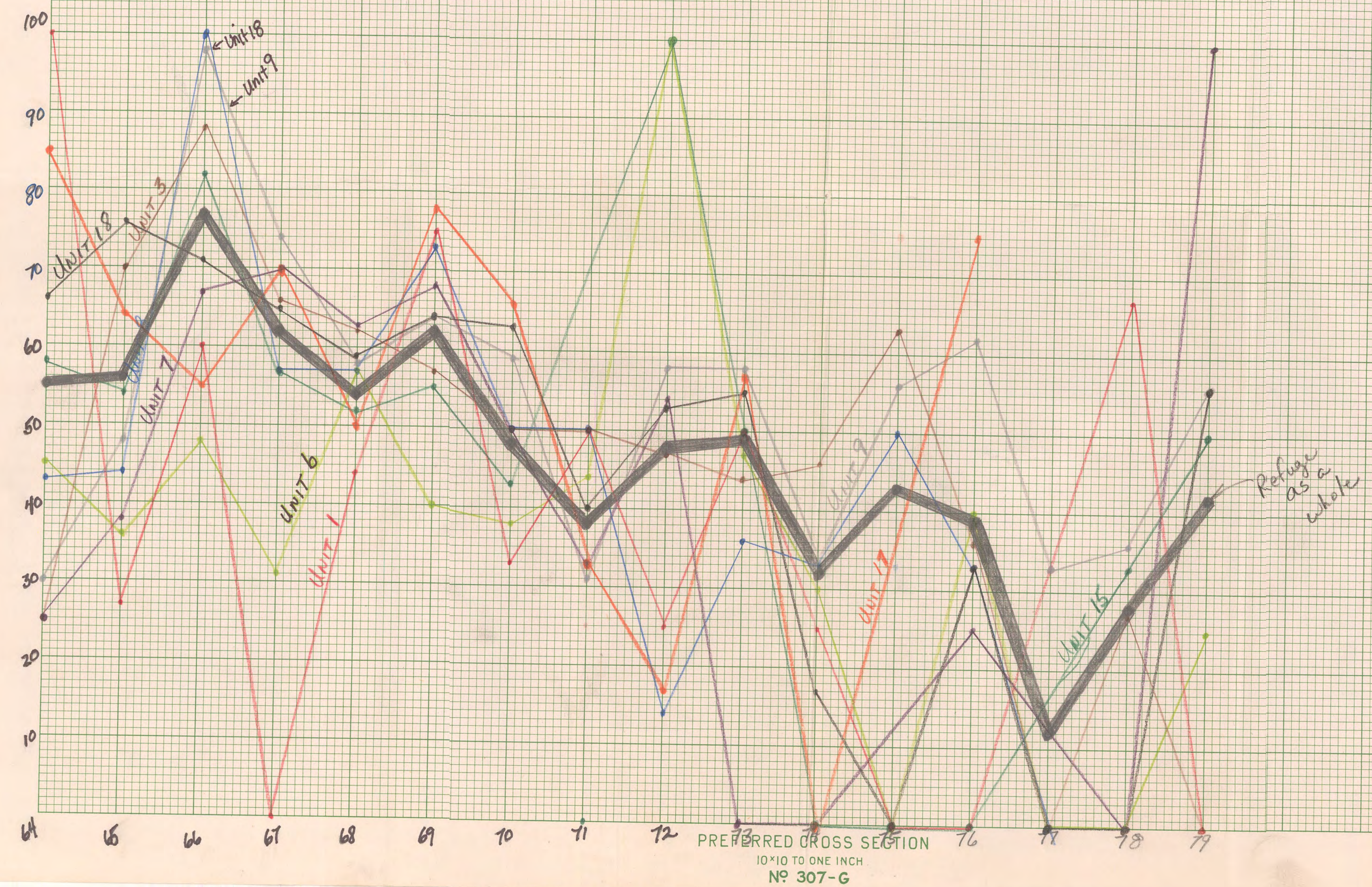
FATE OF NESTS ON TRAVERSETS 1979

<u>Species</u>	<u>Number</u> <u>Hatched</u>	<u>Number</u> <u>DESTROYED</u>	<u>Number</u> <u>DESERTED</u>	<u>Number</u> <u>Flashed</u>	<u>Number</u> <u>Unknown</u>
Pintail	III	III	I		1 ✓ 8
Bu/OT	THH	III	II	I	✓ 14
Unknown	II	I	II	I	✓ 4
Cootonel	III	I			✓ 4
CU T	I	II	I	I	✓ 5
Mallard	THH	THH	II		1 ✓ 14
Shoreline		I			✓ 1
Redhead	II				1 ✓ 3

Graphs:

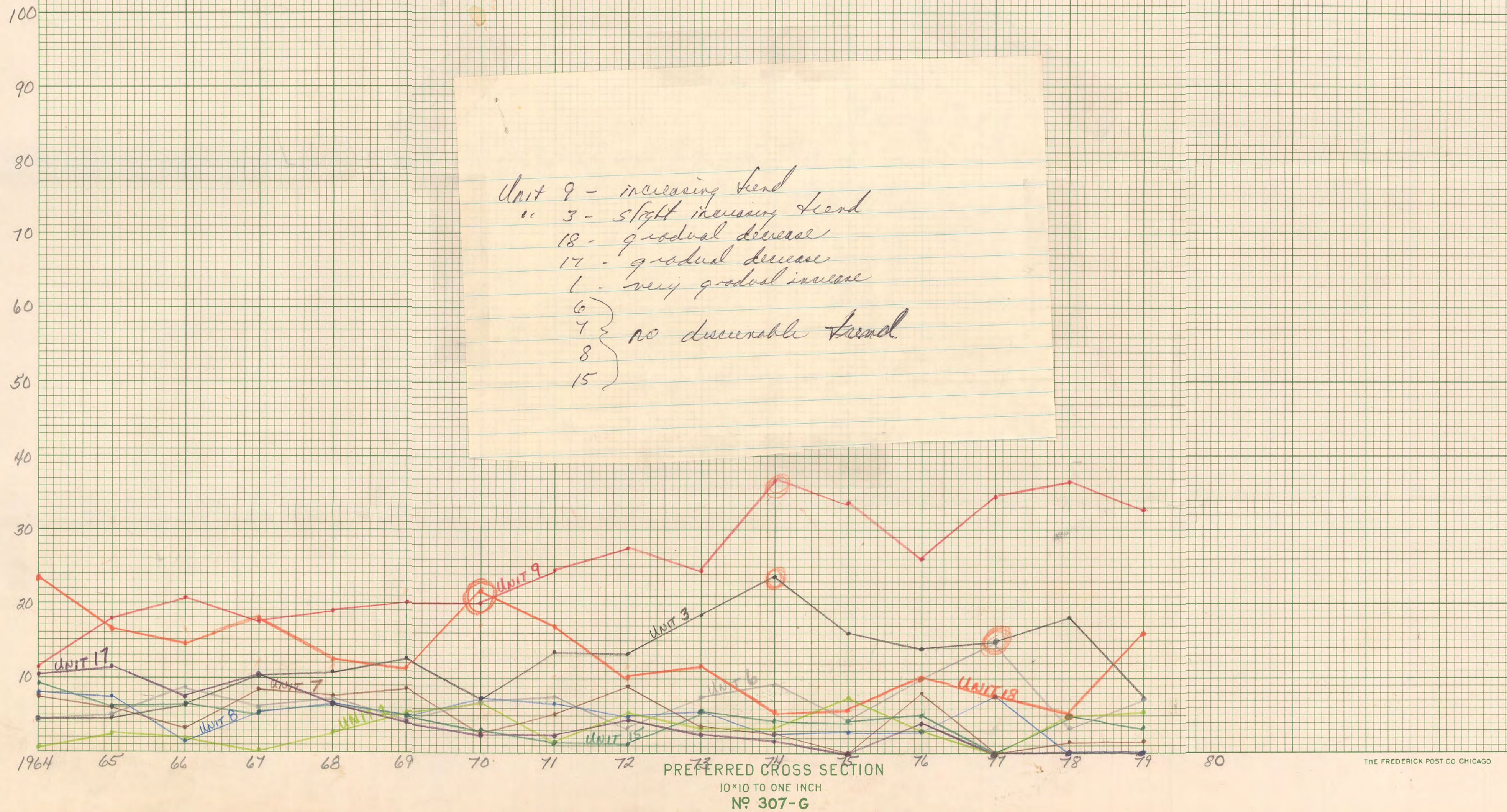
- 1) % of Successful Nests by Unit
- 2) % of Nests Found in 9 Units Which
Comprise 5% or More of Total Nests Found
in 5 Years of 15 Year Data
- 3) % Nests Found in Vegetative Nests
- 4) Unscanned (no title)

% Successful nests by unit 1979

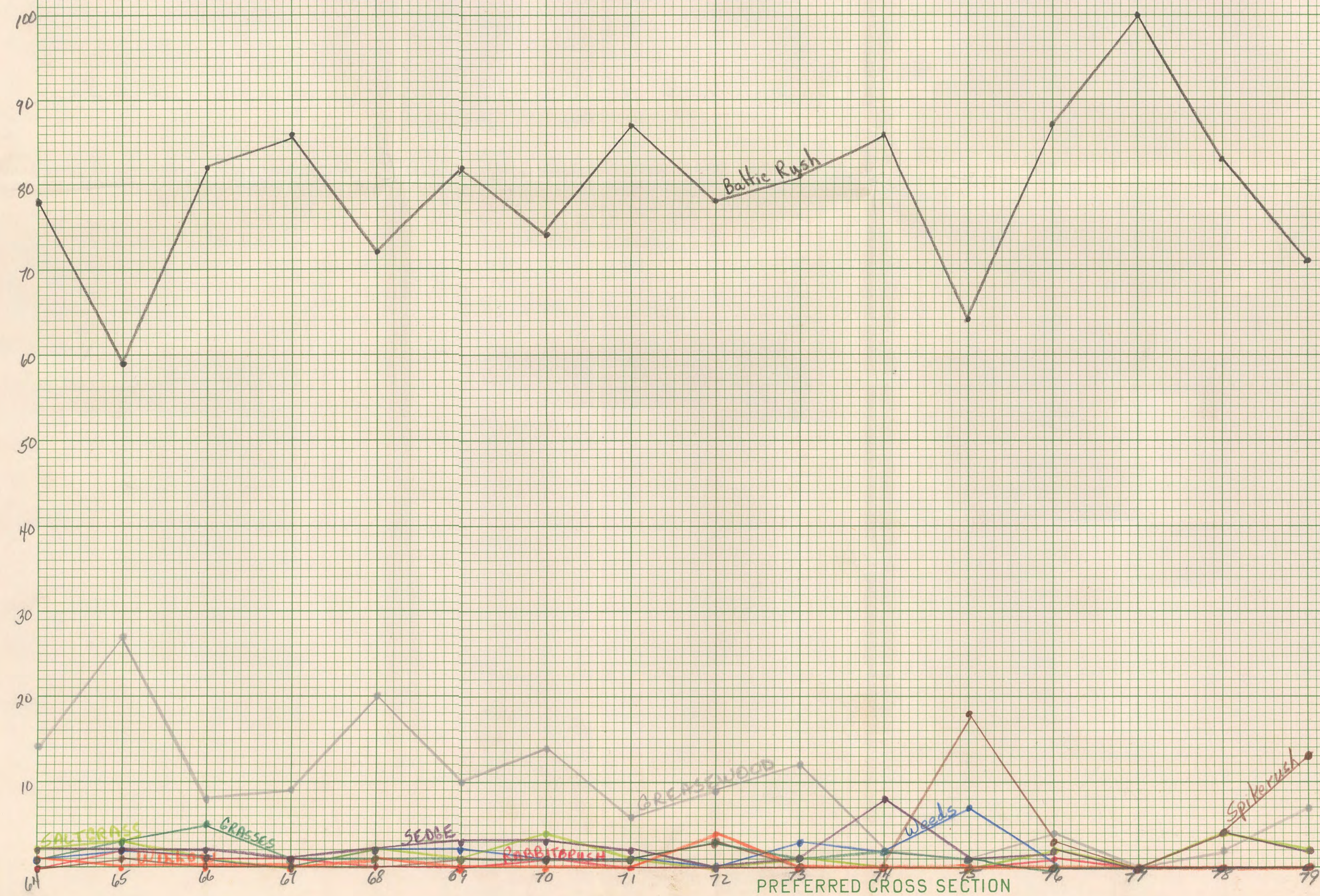


% of Nests Found in 9 units which comprise 5% or more of
Total Nests Found in 5 yrs of 15 year data

Unit 9 - increasing trend
 " 3 - slight increasing trend
 18 - gradual decrease
 17 - gradual decrease
 1 - very gradual increase
 6 }
 7 } no discernable trend
 8 }
 15 }



% Nests found in
Vegetative types



PREFERRED CROSS SECTION
10x10 TO ONE INCH
No 307-G

THE FREDERICK POST CO CHICAGO