

Memorandum

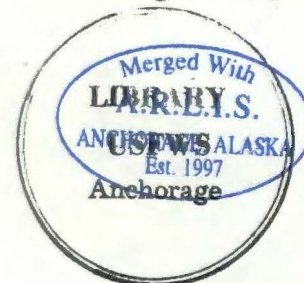
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TO :Area Director, FWS, Anchorage

DATE: August 24, 1977

FROM :Waterfowl Supervisor, FWS, Juneau



SUBJECT:1977 Waterfowl Breeding Population Figures

The attached eleven tables show the adjusted duck breeding population indexes for the 14 year average 1957 to 1970 compared with 1977 figures for each stratum. We no longer survey stratum 7, the Copper Delta, so that is not included. The eleventh table is a total for all Alaska.

These tables can be used to compute the number of ducks expected in the breeding population for any size area in these habitats. The tables give a total figure for ducks per square mile for each stratum. This can be multiplied by the number of square miles in any refuge, park or forest proposal to get the expected breeding population for that area. Birds per square mile is calculated by dividing the number of birds in each stratum by the square miles there and this can be done for each species if needed.

Birds from the Interior strata (1 - 6) are assumed to produce one young per adult and birds from the coastal strata (8 - 11) are assumed to produce .8 young per adult on average. As 1977 is not an average year, it would be dubious to use these figures to calculate a fall flight for this year.

Surveys have been continuous since 1957, but it seems appropriate to continue to use the 1957 - 1970 average which has been used in all the literature related to section D2 of the ANCSA. Averages change slightly with each additional year but such changes are not significant since 1970.

Also included is my 1972 memo discussing peak populations occurring in the 1957 - 1970 period. This indicates that there is nothing unique about the 1977 situation but that it is a normal occurrence about once each decade.



Tom King

US FISH & WILDLIFE SERVICE--ALASKA



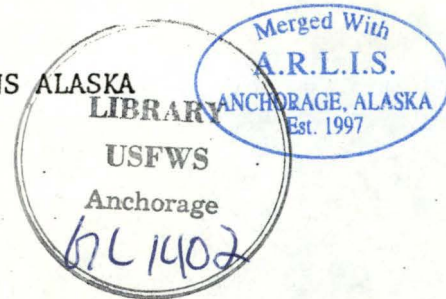
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ADJUSTED DUCK BREEDING POPULATIONS ALASKA

Stratum 1 Kenai Susitna

2,200 Square Miles



	Average	1977	1977 % of Average
Mallard	4,300	12,200	284
American Widgeon	1,600	5,300	331
Green-winged Teal	1,800	5,200	289
Shoveler	100	1,300	1300
Pintail	7,300	6,800	93
Blue-winged Teal	-	-	-
Subtotal Dabblers	15,100	30,800	204
Canvasback	Tr.	8,000	8000
Scaup	5,200	29,700	571
Goldeneye	3,600	4,200	117
Bufflehead	900	1,500	167
Redhead	-	-	-
Subtotal Divers	9,700	43,400	447
Old Squaw	200	-	00
Eider	-	-	-
Scoter	1,600	5,900	369
Merganser	100	2,100	2100
Subtotal Misc.	1,900	8,000	421
TOTAL DUCKS	26,700	82,200	308
Ducks per Square Mile	12.1	37.4	

ADJUSTED DUCK BREEDING POPULATIONS ALASKA

Stratum 2 Nelchina

3,900 Square Miles

	Average	1977	1977 % of Average
Mallard	3,800	6,600	174
American Widgeon	5,900	28,600	485
Green-winged Teal	2,900	2,700	93
Shoveler	400	1,600	400
Pintail	7,100	10,800	152
Blue-winged Teal	-	-	-
Subtotal Dabblers	20,100	50,300	250
Canvasback	Tr.	-	00
Scaup	46,300	65,000	140
Goldeneye	3,700	3,100	84
Bufflehead	7,700	8,600	112
Redhead	-	-	-
Subtotal Divers	57,700	76,700	133
Old Squaw	2,600	11,800	453
Eider	-	-	-
Scoter	13,600	13,200	97
Merganser	Tr.	-	00
Subtotal Misc.	16,200	25,000	154
TOTAL DUCKS	94,000	152,000	162
Ducks per Square Mile	24.1	38.97	

ADJUSTED DUCK BREEDING POPULATIONS ALASKA

Stratum 3, Tanana-Kuskokwim

9,300 Square Miles

	Average	1977	1977 % of Average
Mallard	57,100	92,000	161
American Widgeon	59,300	111,800	189
Green-winged Teal	50,400	52,900	105
Shoveler	8,100	32,800	405
Pintail	110,500	238,300	216
Blue-winged Teal	100	-	00
Subtotal Dabblers	285,500	527,800	185
Canvasback	19,200	34,900	182
Scaup	217,300	217,100	100
Goldeneye	23,500	35,500	151
Bufflehead	29,500	32,800	111
Redhead	200	14,500	7250
Subtotal Divers	289,700	334,800	116
Old Squaw	11,500	28,300	246
Eider	-	-	-
Scoter	34,600	37,000	107
Merganser	300	600	200
Subtotal Misc.	46,400	65,900	142
TOTAL DUCKS	621,600	928,500	149
Ducks per Square Mile	66.8	99.8	

ADJUSTED DUCK BREEDING POPULATIONS ALASKA

Stratum 4 Yukon Flats

10,800 Square Miles

	Average	1977	1977 % of Average
Mallard	63,700	117,400	184
American Widgeon	140,800	258,000	183
Green-winged Teal	80,500	48,900	61
Shoveler	53,300	81,900	154
Pintail	188,300	525,200	279
Blue-winged Teal	-	2,800	2,800
Subtotal Dabblers	526,600	1,034,200	196
Canvasback	50,500	96,600	191
Scaup	376,700	557,400	148
Goldeneye	12,100	31,200	258
Bufflehead	17,600	22,600	128
Redhead	-	-	-
Subtotal Divers	456,900	707,800	155
Old Squaw	26,100	214,100	820
Eider	-	-	-
Scoter	63,700	32,500	51
Merganser	100	500	500
Subtotal Misc.	89,900	247,100	275
TOTAL DUCKS	1,073,400	1,989,100	185
Ducks per Square Mile	99.4	184.2	

ADJUSTED DUCK BREEDING POPULATIONS ALASKA

Stratum 5 Innoko River

3,400 Square Miles

	Average	1977	1977 % of Average
Mallard	13,800	19,600	142
American Widgeon	21,100	44,200	209
Green-winged Teal	13,000	10,300	79
Shoveler	4,000	16,600	415
Pintail	79,300	296,700	374
Blue-winged Teal	-	-	-
Subtotal Dabblers	131,200	387,400	295
Canvasback	200	4,900	2450
Scaup	28,600	29,300	102
Goldeneye	8,600	2,600	30
Bufflehead	3,100	1,300	42
Redhead	100	-	00
Subtotal Divers	40,600	38,100	94
Old Squaw	600	2,000	333
Eider	-	-	-
Scoter	6,900	4,400	64
Merganser	100	-	00
Subtotal Misc.	7,600	6,400	84
TOTAL DUCKS	179,400	431,900	241
Ducks per Square Mile	52.8	127.0	

ADJUSTED DUCK BREEDING POPULATIONS ALASKA

Stratum 6 Koyukuk Valley

4,100 Square Miles

	Average	1977	1977 % of Average
Mallard	6,100	18,200	298
American Widgeon	16,000	31,000	194
Green-winged Teal	6,400	10,700	167
Shoveler	1,400	10,200	729
Pintail	28,400	34,800	123
Blue-winged Teal	-	-	-
Subtotal Dabblers	58,300	104,900	180
Canvasback	400	1,400	350
Scaup	49,600	39,500	80
Goldeneye	3,100	1,700	55
Bufflehead	2,800	1,400	50
Redhead	-	800	800
Subtotal Divers	55,900	44,800	80
Old Squaw	2,800	3,300	118
Eider	-	-	-
Scoter	15,900	9,300	58
Merganser	Tr.	-	-
Subtotal Misc.	18,700	12,600	67
TOTAL DUCKS	132,900	162,300	122
Ducks per Square Mile	32.4	39.6	

ADJUSTED DUCK BREEDING POPULATIONS ALASKA

Stratum 8 Bristol Bay

9,900 Square Miles

	Average	1977	1977 % of Average
Mallard	13,300	17,700	133
American Widgeon	10,200	19,800	194
Green-winged Teal	10,200	8,200	80
Shoveler	500	8,300	1660
Pintail	48,400	167,600	346
Blue-winged Teal	-	-	-
Subtotal Dabblers	82,600	221,600	268
Canvasback	100	2,100	2100
Scaup	87,100	168,600	194
Goldeneye	10,000	19,500	195
Bufflehead	1,300	1,200	92
Redhead	-	-	-
Subtotal Divers	98,500	191,400	194
Old Squaw	53,400	69,900	131
Eider	1,700	-	00
Scoter	74,400	117,900	158
Merganser	6,600	4,300	65
Subtotal Misc.	136,100	192,100	141
TOTAL DUCKS	317,200	605,100	191
Ducks per Square Mile	32.0	61.1	

ADJUSTED DUCK BREEDING POPULATIONS ALASKA

Stratum 9 Yukon Delta

26,600 Square Miles

	Average	1977	1977 % of Average
Mallard	33,500	43,400	130
American Widgeon	43,300	66,300	153
Green-winged Teal	44,000	35,100	80
Shoveler	5,000	22,800	456
Pintail	287,700	767,500	267
Blue-winged Teal	-	-	-
Subtotal Dabblers	413,500	935,100	226
Canvasback	1,200	7,900	658
Scaup	335,500	377,300	112
Goldeneye	20,500	35,400	173
Bufflehead	2,500	2,800	112
Redhead	100	1,100	1100
Subtotal Divers	359,800	424,500	118
Old Squaw	292,300	441,600	151
Eider	51,000	20,300	40
Scoter	157,000	134,300	86
Merganser	200	4,300	2150
Subtotal Misc.	500,500	600,500	120
TOTAL DUCKS	1,272,800	1,960,100	154
Ducks per Square Mile	47.8	73.7	

ADJUSTED DUCK BREEDING POPULATIONS ALASKA

Stratum 10, Seward Peninsula

3,850 Square Miles

	Average	1977	1977 % of Average
Mallard	2,600	12,200	469
American Widgeon	6,900	17,300	251
Green-winged Teal	4,300	30,600	712
Shoveler	700	7,400	1057
Pintail	87,000	310,800	357
Blue-winged Teal	900	-	00
Subtotal Dabblers	102,400	378,300	369
Canvasback	500	3,100	620
Scaup	50,000	57,400	115
Goldeneye	2,500	-	00
Bufflehead	300	-	00
Redhead	-	-	00
Subtotal Divers	53,300	60,500	114
Old Squaw	49,200	73,000	148
Eider	4,900	2,300	47
Scoter	20,700	18,100	87
Merganser	200	-	00
Subtotal Misc.	75,000	93,400	125
TOTAL DUCKS	230,700	532,200	231
Ducks per Square Mile	59.9	138.2	

ADJUSTED DUCK BREEDING POPULATIONS ALASKA

Stratum 11 Kotzebue Sound

5,350 Square Miles

	Average	1977	1977 % of Average
Mallard	4,700	40,200	855
American Widgeon	23,000	73,400	319
Green-winged Teal	7,900	21,200	268
Shoveler	1,100	30,800	2800
Pintail	67,800	222,800	.329
Blue-winged Teal	-	-	-
Subtotal Dabblers	104,500	388,400	372
Canvasback	600	3,200	533
Scaup	83,800	91,400	109
Goldeneye	300	2,500	833
Bufflehead	300	-	00
Redhead	-	600	600
Subtotal Divers	85,000	97,700	115
Old Squaw	25,600	88,400	345
Eider	-	-	-
Scoter	18,600	25,600	138
Merganser	TR.	-	-
Subtotal Misc.	44,200	114,000	258
TOTAL DUCKS	233,700	600,100	257
Ducks per Square Mile	43.7	112.2	

ADJUSTED DUCK BREEDING POPULATIONS ALASKA

Stratum 1 - 6 and 7 - 11

79,400 Square Miles

	Average	1977	1977 % of Average
Mallard	202,900	379,500	187
American Widgeon	328,100	655,700	200
Green-winged Teal	221,400	225,800	102
Shoveler	74,600	213,700	286
Pintail	911,800	2,581,300	283
Blue-winged Teal	1,000	2,800	280
Subtotal Dabblers	1,739,800	4,058,800	233
Canvasback	72,700	162,100	223
Scaup	1,280,100	1,632,700	128
Goldeneye	87,900	135,700	154
Bufflehead	66,000	72,200	109
Redhead	400	17,000	4250
Subtotal Divers	1,507,100	2,019,700	134
Old Squaw	464,300	932,400	201
Eider	57,600	22,600	39
Scoter	407,000	398,200	98
Merganser	7,600	11,800	155
Subtotal Misc.	936,500	1,365,000	146
TOTAL DUCKS	4,182,400	7,443,500	178
Ducks per Square Mile	52.7	93.7	

Library
 U.S. Fish & Wildlife Service
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