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1990 WATERFOWL PRODUCTION ON ALAMOSA-MONTE VISTA NWR

Monte Vista NWR

Summary of waterfowl nesting data as determined from transect surveys

<u>Species</u>	<u># Nests Hatched</u>	<u># Nests Destroyed</u>	<u># Nests Abandoned</u>	<u># Nests Flooded</u>	<u>Status Unknown</u>	<u>% Species Composition</u>
Mallard	23	26	4	1	3	63%
Gadwall	15	2	0	0	2	21
C/B Teal	3	4	0	1	0	9
Shoveler	1	1	1	0	0	3
Pintail	0	2	0	0	0	3
Total #	42	35	5	2	6	

84 nests of known fate + 6 = 90 nests found

- * 50% of nests with known fate **hatched** (vs. 58.5% in 1989)
- * 42% of nests with known fate were **destroyed**

- * 336.6 total acres were searched in May & June along all transect lines
- * Nesting density = 90 nests/336.6 = 0.26 nests/ac x 100 = 26 nests/100 ac
- * **Density of successful nests** = 26/100 ac x 0.50 = 13 **successful nests/100 ac**
(vs. 23 successful nests/100 ac in 1989)
- * Average brood size of Class IIc and III broods = 4.86 (Range 1-14)
- * For total # nests over entire refuge, expansion figure is 0.0261418

90 nests/0.0261418 = 3442 total nests x 0.50 = 1721 successful nests
 and thus
 1721 successful nests x 4.86 ducklings = 8,366 ducks produced in 1990
 (vs. 17,243 ducks produced in 1989)

- * Baltic rush accounted for 74% of cover types at 87 nest sites

Alamosa NWR

Summary of waterfowl nesting data as determined from chain-drag method

<u>Species</u>	<u># Nests Hatched</u>	<u># Nests Destroyed</u>	<u># Nests Abandoned</u>	<u># Nests Flooded</u>	<u>Status Unknown</u>	<u>% Species Composition</u>
Mallard	5	2	1	0	0	40%
Gadwall	0	1	0	0	0	5
C/B Teal	6	4	0	0	0	50
Shoveler	0	0	0	0	1	5
Total #	11	7	1	0	1	

19 nests of known fate + 1 = 20 nests found

* 58% of nests with known fate had **hatched** (vs. 43.5% in 1989)

* 37% of nests with known fate were **destroyed**

* 432.56 total acres were searched in May (1/2 grazed, 1/2 ungrazed area)

* Nesting density = 20 nests/432.56 = 0.046 nests/ac x 100 = 4.6 nests/100 ac

* **Density of successful nests = 4.6/100 ac x .58 = 2.7 successful nests/100 ac**
(vs. 9.9 successful nests/100 ac in 1989)

* Average brood size of Class IIc and III broods = 5.81

0.046 nests/ac x 9018 ac nesting habitat = 415 nests on entire refuge

415 nests x .58 = 241 successful nests x 5.81 ducklings = **1,398 ducks produced in May of 1990**

* In 1989, searches conducted in both May and June revealed 165 nests, with 48% of all nests found in May and 52% in June. Therefore, we can assume that if we had searched a second time in June of 1990, we would have found an additional 22 nests for a total of 42 nests. Consequently, I adjusted the production figures upwards to reflect this difference.

$$\frac{20 \text{ nests found in May}}{42 \text{ potential total}} = \frac{1,398 \text{ ducks produced in May}}{X \text{ total produced}}$$

$$= 2,936 \text{ ducks produced in 1990}$$

(vs. 5,614 ducks produced in 1989)

* Baltic rush accounted for 60% of cover types at 20 nest sites

Comparison of waterfowl nesting data in ungrazed vs. grazed areas

Ungrazed Area $\frac{9 \text{ nests hatched}}{14 \text{ nests found}} = 64\% \text{ success,}$ $\frac{4 \text{ successful nests}}{100 \text{ ac}}$

Grazed Area $\frac{2 \text{ nests hatched}}{6 \text{ nests found}} = 33\% \text{ success,}$ $\frac{1 \text{ successful nest}}{100 \text{ ac}}$