

TAMARAC

NARRATIVE REPORTS

JANUARY-DECEMBER 1962

NARRATIVE REPORT ROUTING SLIP

✓

REFUGE TAMARAC

PERIOD September-December 1962

CHIEF'S OFFICE: Mr. Gillett

Mr. Ackerknecht

Mr. Fermanich

Mr. Goldman

WILDLIFE MANAGEMENT: Mr. Banko

Mr. Stiles

WBS

RESOURCE MANAGEMENT: Dr. Morley

Mr. Stollberg

Mr. Lumb

OPERATIONS: Mr. Hickok

Mr. Regan

PUBLIC USE: ~~Mr. Doherty~~

Mr. Monson

ADMINISTRATIVE SERVICES: Miss Baum

TAMARAC NATIONAL WILDLIFE REFUGE
NARRATIVE REPORT
SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER
1962

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF SPORT FISHERIES AND WILDLIFE
ROCHERT, MINNESOTA

REFUGE PERSONNEL

Robley W. Hunt. Refuge Manager
Robert L. Wright Assistant Refuge Manager
James L. Stillings Wildlife Aid
Wayne D. Schmidt Refuge Clerk

TEMPORARY EMPLOYEES

Ned L. Larson Tractor Operator
Thomas Jones Maintenceman
Charles Stone Maintencemen
Clifford C. Boswell. Laborer
Thomas Jones Jr. Laborer
David A. Annette Foreman II Laborer

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TAMARAC NATIONAL WILDLIFE REFUGE
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I. GENERAL

A. Weather Conditions.

	<u>Snowfall</u>	<u>Precipitation</u>		<u>Max.</u>	<u>Min.</u>
		<u>This Month</u>	<u>Normal</u>	<u>Temp.</u>	<u>Temp.</u>
September		3.47	1.96	82	25
October		.65	1.37	80	21
November	2.00	.18	3.00	54	11
December	4.03	.32	.75	57	-20
Total	6.03	4.62	7.08	Extremes 82	-20
Annual					
Total	33.73	25.87	25.59		

Rainfall in September (3.47") was about the same as last year (3.50"). This was 1.51" above normal for the period.

Precipitation in October was less than half that of normal, but was about equal to that of a year ago (.52").

Precipitation for the month of November was far below normal.

December precipitation was about half that of one year ago (1961) (.61") and also about half of normal. Snowfall in December was considerably less than that of December 1961 (11.05").

No data are available from last year with which to compare total snowfall for the year.

B. HABITAT CONDITIONS

1. Water

There was sufficient water throughout the period for waterfowl. Some of the smaller potholes dried up by the end of October.

2. Food and Cover

There was abundant food for the migrants. Ducks and geese used the rye, corn and wheat fields on the south shore of Flat Lake heavily. Deer (as many as 11) were also seen feeding in the corn.

Aquatic foods were heavily utilized by ducks and coot. Wild rice harvest approximated 22,000 lbs. or about one-half of last three year average. Some refuge beds, however, were better than 1961.

II WILDLIFE

A. MIGRATORY BIRDS

Total days' use for ducks and geese was down from 1961. For ducks it was 1,983,212, for geese it was 9,135, and for coot 769,454. These figures are believed to be on the conservative side. Even so, migrants were fewer this year than last.

Peak concentrations of ducks occurred during the week of September 23 - 29, of coot during the week of October 7 - 13 (just prior to duck season). Approximately 200 geese were using the grain fields between October 21 and November 3. This included the estimated 40 - 50 young produced on the refuge, the parent birds, as well as the birds decoyed in.

A flock of about 750 Blue and Snow Geese flew west over headquarters on October 12, but did not stop.

Up until October 4th, there were no migrant flocks of geese observed flying on through. On October 6th, a total count of 90 Canadas on the grain fields at Flat Lake was evidence that there were migrants stopping for our decoy flock.

During the period of September 1 - 20 flocks of 20 and 30, and groups (presumed to be family) of 3, 4, 5, 6, and 7 were observed regularly flying in and out of our captive pens, and flushing from the grain fields at Flat Lake. In our opinion these birds consisted of the 31 geese released in April 1962 (red leg bands observed) and groups of parent birds with young raised in the refuge and refuge vicinity during the summer.

During the period of September 23 - 26 we had numerous reliable reports of flocks of 30, 50, 20, and smaller groups from the Syverson fields, Linden vicinity, Buffalo Lake school area, Ponsford, and our own Flat Lake fields.

From this date on refuge records reveal daily observations of separate flocks and groups: September 28 - flocks of 20, 30, and 8 over captive pens; flocks of 55, 8, 5, and 3 at Flat Lake; October 3 - 16, 30, plus 30 plus (Flat Lake) and 40 plus at Height & Land; October 4 - 9, 4, and 25 over buildings at Headquarters; by October 4th the Canada geese using Flat Lake fields were up to 140 plus; on October 11 - 12 a number of large migrant flocks (100 - 200) were observed flying over.

During the period of October 17 - 25, a total of 170 geese were feeding regularly in the Flat Lake fields - breaking into groups of 4, 7, 8, 30 plus, and 40 plus when flushed - by October 28th slightly over 200 Canadas were using the fields.

Sometime during the period of November 5 - 10 about 170 fliers left. As of December 31, there were still about 30 fliers (banded with red leg bands) staying with our captive wing-clipped geese, and we expect they will remain until spring break-up.

Our records indicate that Tamarac has had resident Canada geese fairly well established for the past several years. The problem now is to increase annual production to the point where it can gain on annual natural and hunting losses. We further believe that the best current solution to the problem is to install a large number of predator-proof nesting platforms. Success of these will result in the successful hatching of refuge-produced goslings.

We believe that the parent birds will do a good job of protecting and rearing the goslings once they are safely hatched.

The good success of these nesting platforms experienced on a number of other areas augurs well for the results we are hoping for on Tamarac.

In brief, while we are getting some production, we must do everything possible to reduce predation - perhaps a combination of predator-proof nesting platforms along with intensive trappings - and poisoning, where poisoning can be restricted to a definite area, such as the captive pen areas, release areas, etc.

B. UPLAND GAME BIRDS

The Ruffed Grouse population is about the same as last year. Hunting pressure was not great. Cover throughout most of the refuge is good.

Pheasants continue in low numbers. One group of 7 (2males and 5 females) were sighted on the grain fields at Flat Lake this fall.

C. BIG GAME ANIMALS

Late spring snows may have caused some loss in the fawn crop, but no evidence of this was seen at the time. Fewer were seen in the Flat Lake fields this fall, possibly due to less rye being grown.

Details of the harvest are reported in that section.

A bear was seen crossing Bruce Boulevard about 10:00 pm on August 30.

One, possibly two, moose was seen on the Tea Cracker trail during deer season.

D. FUR ANIMALS, PREDATORS, RODENTS, AND OTHER MAMMALS

Beaver were present in large enough numbers that we allowed three trappers to obtain special permits to trap them. The beaver continue to plug dams, bridges, culverts, etc.

Muskrat are reported by the trappers to be scarce. Only two of the trappers made any effort to trap them. Tamarac Refuge does not support a high population, due to the shallowness of the marshes.

Mink are apparently fewer this year. Only six have been turned in this season (refuge share). Prices for pelts range from \$10 - \$25.

Fox are frequently seen around the refuge. Trappers are permitted and encouraged to take them but few are taken (none this year).

Coyote are present on the refuge but in very small numbers. As with fox, trappers are encouraged to remove them but as of the end of the period only two have been reported.

Raccoon are still present in excessive numbers. Trappers are required to take them as a condition of being allowed to trap. 47 have been taken this season. The trappers received about \$2.75 apiece in the round.

Skunk are present but present no serious problem. Two have been removed this year.

Snowshoe rabbits are abundant enough to allow them to be removed by the timber cutters - in cutting areas.

Porcupine continue to do damage to trees and are removed when seen. About 33 have been removed this period.

HAWKS, EAGLES, OWLS, CROWS, RAVENS, AND MAGPIES

Bald eagles were seen as late as November 8 on Wauboose and over the goose pens.

Golden eagles were present during the deer season. One was chased out of the goose pens on December 8.

Two sparrow hawks were sitting on wire into Headquarters on September 10.

F. OTHER BIRDS

Nothing to report.

G. FISH

Fishing was fairly good at Chippewa bridge and Mitchell dam until the middle of October.

H. REPTILES

Nothing to report.

I. DISEASE

Nothing to report.

III. REFUGE MAINTENANCE AND DEVELOPMENT

A. PHYSICAL DEVELOPMENT

Physical accomplishments for the period are listed as follows:

1. Constructed cement landing and sidewalk to rear door of Residence No. 13.
2. Bell Telephone Company completed installation of underground cable to refuge residences and office.
3. Indian Bureau donated labor, supervision, and transportation of 30 Indian residents - brushed and cleared Bruce Boulevard right-of-way 50' from centerline.
4. Same agency donated 50 Indian residents for same job on township road (Round Lake trail) used as refuge trail.
5. Constructed new kitchen cabinets and refinished kitchen in Residence No. 13 - new linoleum on floor.
6. Posted newly acquired tracts prior to hunting season.
7. Salvaged "lean-to" on old building.
8. Constructed platforms for goose nesting.
9. Dozed 16 potholes on Norman Syverson tract.

10. Dozed haul roads for forestry project.
11. Trip to DeSoto Refuge for corn.
12. Trip to McConnell AFB, Kansas for tractor.
13. Bladed Bruce Boulevard four times (3 by County patrol as refuge patrol inoperable).
14. Operated deer checking station for five days.
15. Operated forestry project November 15 - December 31.
16. Stored equipment for the winter.
17. Commenced land clearing operations under S&M.
18. Constructed loafing bar for geese and ducks (banding) 800 yards of fill and 31.5 yards of gravel.
19. Moved geese to winter pens.
20. Painted Egg Lake cabin, garage, and toilet.
21. Painted barn, chicken coops at Quarters 4.
22. Painted doors equipment shed.
23. Painted dining room and living room Quarters 13.
24. Removed partition, sanded floors, painted walls living-dining room Quarters 4.
25. Sanded and refinished floors Quarters 13.
26. Replaced hydraulic rams on loader on 300 tractor.

B. PLANTINGS

1. Aquatic and Marsh Plants

1,021 pounds of wild rice were planted this period.

344 pounds of rice were planted in Big Flat Lake along the south shore.

308 pounds were planted in Landrum pond (about 2/3 miles north of Ponsford road on Tea Cracker trail. This is an area that responded well to planting in 1961).

Mud Lake was planted with 192 pounds of rice. Lowered water levels should make this lake a good producer.

177 pounds of rice were planted in Stillings marsh.

2. Trees and Shrubs

None planted this period.

3. Upland Herbaceous Plants

None planted this period.

4. Cultivated Crops

Cultivated crops did well this year

C. COLLECTIONS AND RECEIPTS

1. Seed and Other Propagules

22,845 pounds of wild rice were harvested by the Indians.

A breakdown of the harvest by day and by lake is given below:

	8/28	8/30	9/1	9/3	9/4	9/5	9/6	9/7	9/10	Total
Big Flat	733	2029	1385	762	722	663			173	6467
Little Flat	888	2004	1776	1151	901	610				7330
Hdqrs.	213	439	657	174	512	324	132	440	149	3040
Chippewa	716	1648	1271		891	1007		475		6008
Total	2550	6120	5089	2087	3026	2604	132	915	149	22845

Indians who riced on Two Island, part of Big Flat, Egg Lakes checked in at headquarters.

Lakes without figures on certain dates were not riced by decision of the Indian ricing committee.

Approximately 88 Indians participated in the rice harvest. The number fluctuated because some permittees changed partners during the season.

2. Specimens

None collected.

D. CONTROL OF VEGETATION

None during this period.

E. PLANNED BURNING

None planned.

F. FIRES

None during this period.

IV. RESOURCE MANAGEMENT

A. GRAZING

None on the refuge

B. HAYING

Hay yields were good this year. 434 tons of tame hay, 442 tons of wild hay and 20 tons of marsh hay were harvested. Total income from the hay harvest was \$1,541.10.

C. FUR HARVEST

Three permits were issued this past season. As in the past, the trapper was allowed to keep all raccoon, fox, wolf, coyote, weasel, and skunk that he trapped. The trapper was to share 50-50 on mink and muskrat. In addition, each trapper was allowed to take 10 beaver under a Special Permit from the State on a trapper take all basis.

As of December 31, one trapper had taken 10 mink, one had taken two mink, and the third none.

32 beaver, 47 raccoon, 2 coyote, 1 bobcat, 7 weasels, 2 skunk, and 33 porcupine were removed.

D. TIMBER REMOVAL

Details of the timber harvest are listed on NR-11.

Presently 5 - 6 former welfare clients plus 6 - 8 local "whites" are working on the Becker County Welfare project cutting pulp and posts. Many of the people who usually would be working on the program are now employed on the Accelerated Public Works Program.

Currently, spruce and balsam are in demand for pulp, while some tamarack rails and aspen sawlogs are being cut.

Rabbits and porcupine are being removed from the cutting areas by the people cutting and refuge personnel respectively.

Skidding trails opened by our bulldozer this winter can also be used next fall for hunter access, as well as for control of fires during the fire season, access for brush control operations, reforestation access, pothole reclamation access, wildlife observation access and public "show me" trips.

E. COMMERCIAL FISHING

None on the refuge.

F. OTHER USES

Nothing to report.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

A. Progress Reports

Nothing to report.

VI. PUBLIC UTILITIES

A. RECREATIONAL USES

No accurate figures are available for use of picnic areas, but use is estimated to be about the same as last year.

About 300 Boy Scouts from the Fargo area held a two day camporee in September on the north side of Pine Lake. While there they spent several Boy Scout-hours digging large rocks out of the road and filling the holes with dirt.

The Boy Scouts from the Many Point Scout Camp made extensive use of the refuge. A breakdown of the use as made by Jim Seeden, Program Director of the Scout camp is given below:

Destination	<u>Type of Trip</u>						Overnight		Bus	
	Day Hike		Over-		Day Canoe		Canoe		or	
	Grp.	Boys	Grp.	Boys	Grp.	Boys	Grp.	Boys	Grp.	Boys
Icecracking Lake	1	16	1	19	8	145	18	357	-	-
Indian Graves	1	16	1	20	1	19	4	62	-	-
Egg Lake	-	-	-	-	-	-	1	29	-	-
Headquarters	-	-	-	-	-	-	-	-	2	66
TOTALS	2	32	2	39	9	164	23	448	2	66

Grand Total - 38 groups - 749 Scouts and leaders

<u>Date</u>	<u>Name</u>	<u>Organization</u>	<u>Purpose</u>
9/3/62	Warden Boerning	Minn. Cons. Dept.	See Refuge
9/3/62	Danish Biologist	Danish Govt.	"
9/6	M. Paterson	Minn. Cons. Dept.	Refuge operations
9/7/62	Grady Mann	Fergus Falls AAO	Wetland acquisition
9/8/62	H. Basford	State Rep.	Township road
9/10/62	Dave Fisher	GMA Fergus Falls	Property
9/10 & 13/62	E. Hanson	USFS Cass Lake	See Refuge
9/15/62	Adult leaders	Red River Valley Scouts	Camp on refuge
9/19/62	Carl Nelson	Becker County Engineer	Check gravel
9/26/62	Ted Abrahamson	State warden	Patrol
10/4-5/62	Mr. Doeling	RO Engineer	Master plan
10/10/62	Mr. Sanders	GMA	Patrol
10/10/62	Mr. Lee	GMA	"
10/20-20/62	Walt Price	GMA	"
10/16/62	George Gard	Fergus Falls AAO Biologist	Wetland Mgt. Plan
10/17/62	Harvey Nelson	RO, Mpls., Minn.	Canada Geese Mgt.
10/17/62	H. Hanson	Washington office	Canada Geese Mgt.
11/8/62	H. Nelson	RO, Mpls., Minn.	" " "
11/8/62	H. Nelson	RO, Mpls., Minn.	" " "
11/8/62	Forrest Lee	Minn. Cons. Dept.	" " "
11/14/62	N. Ordal	Minn. Cons. Dept.	See refuge operations
11/14/62	Mr. Alm	Danish biologist	" " "
12/4/62	Carl Nelson	Becker Co. Engineer	Road survey
12/7/62	Clair Rollings	RO, Mpls., Minn.	S&M program
12/7/62	Mr. Lumb	CO, Washington, D.C.	" "
12/10/62	Mr. Stanley	Indian Bureau, Bemidji	Brushing roads
12/27/62	John Dahl	Upper Souris Refuge	See refuge

B. REFUGE VISITORS

C. REFUGE PARTICIPATION

Date	Organization	Material Used	Attendance	Presented by
9/13/62	Becker Co. Sportsmen	Film & talk	50	Hunt
10/1/62	DL Quarterback Club	-	90	
10/8/62	Izaak Walton	-	15	
10/22/62	DL Quarterback Club	-	90	Hunt
12/13/62	Becker Co. Sportsmen	Talk	40	Hunt

D. HUNTING

The deer harvest this past season (325) was about twice as successful as last season (166). Listed below is a day by day breakdown of the take:

Date	Buck	Doe	Fawn Buck	Fawn Doe	Total
11/10/62	40	19	5	8	72
11/11/62	10	12	6	5	33
11/12/62	4	4	0	1	9
11/13/62	5	1	0	0	6
11/14/62	1	0	0	1	2
Total	60	36	11	15	122

Fawn/Doe Ratio = 72/100

Buck/Doe Ratio = 139/100

Two reasons could account for the poor fawn/doe ratio: (1) A possible spring loss as mentioned earlier (2) hunters are more apt to bring in big animals for weighing. Only one checking station was in operation thus many hunters were not checked.

1600 hunter days were required to remove an estimated 325 deer. in 1961, 1365 days were required to remove 166 deer.

On the basis of hunter days required to kill one deer, 1962 (4.9) was a more successful year than 1961 (8.2).

59% of the deer were taken on opening day in 1962, while only 40% were taken on opening day in 1961. One fact that may account for the higher percentage on opening day was the presence of enough snow for tracking. This snow, which fell on the sixth, was gone by the afternoon of opening day.

The total taken between 1951 and 1962 was approximately 3600, averaging 200-300 per year.

E. VIOLATIONS

<u>Name of Violator</u>	<u>Violation</u>	<u>Disposition</u>	<u>Warden</u>
Harold Warren Detroit Lakes, Minn.	Hunting ducks w/shotgun capable more than 3 shells	\$15.00/4.00	Abrahamson, Buchanan, Price, and Wright
Jack Neuman Minneapolis, Minn.	Hunting ducks after sunset	\$15.00/4.00	"
Virgil Isrealson Wolverton, Minn.	Loaded firearm in vehicle	\$20.00 bond forfeited	"
Quentin Isrealson Wolverton, Minn.	"	"	"
Carl P. Peterson Wolverton, Minn.	"	"	"
Richard Teiken Waubun, Minn.	Uncased shotgun in closed portion of refuge	\$10.00/5.00	Wright
Robert Theodorson Minneapolis, Minn.	Taking ruffed grouse in closed part of refuge	\$20.00 bond forfeited	Schmidt, Stillings, & Wright
George Martodon Perham, Minn.	Uncased firearm in motor vehicle	\$25.00/4.00	"
Arthur Braun Detroit Lakes, Minn.	" "	\$25.00/4.00 (\$10.00 susp.)	" & Hunt
Elmo Nelson Ulen, Minnesota	"	"	"
Orlyn Nelson Ulen, Minnesota	"	"	"
Charles Braun Callaway, Minn.	"	"	"
George Peake Ponsford, Minn.	Trapping in closed portion of refuge	20 days	Hunt
George Rock Ponsford, Minn.	"	"	"

F. SAFETY

1. Fire siren installed.
2. Two safety meetings held.

VII. OTHER ITEMSA. ITEMS OF INTEREST

Criticism of land acquisition is presently at a minimum. Criticism may be expected, however, when news of the taking of the remaining lands becomes public. We hope to combat this criticism by news releases describing the public use to be provided on these lands.

B. PHOTOGRAPHS

Pictures of some of the activities during the past year are attached.

SIGNATURE PAGE

Submitted by:

R. W. Hunt
(Signature)

Date: January 15, 1963

Robley W. Hunt, Refuge Manager
Title

Approved, Regional Office:

Date: 1-23-63

James H. Carpenter
(Signature)

Regional Refuge Supervisor

3-1750
Form NR-1
(Rev. March 1953)

W A T E R F O W L

REFUGE Tamara National Wildlife Refuge

MONTHS OF September TO December, 1962

(1) Species	(2) Weeks of reporting period									
	: 9/2-8	: 9/9-15	: 9/16-22	: 9/23-29	: 9/30-10/6	: 10/7-13	: 10/14-20	: 10/21-27	: 10/28-11/3	: 11/4-10
	: 1	: 2	: 3	: 4	: 5	: 6	: 7	: 8	: 9	: 10
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada	60	60	60	120	120	130	130	200	200	35
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
Ducks:										
Mallard	8895	13025	14000	14100	13290	8070	2672	500	1710	
Black		10				12				
Gadwall					100					
Baldpate	145	20		400	500	600	1500	150		
Pintail	15		60				50			
Green-winged teal	105									
Blue-winged teal	5505	1725	2000	900	20					
Cinnamon teal										
Shoveler	85									
Wood	6405	650	1800	2500	1120	120	35	25		
Redhead						30	100	25		
Ring-necked	1215	800	12200	25000	7000	14150	16374	25	960	
Canvasback					30					
Scaup	270		3500		20	200	15100	1000	2500	135
Goldeneye	115								20	
Bufflehead							20			
Ruddy										
Other Unknown		9500	15000	12680	6580	25900	8424	2000	1024	
Coot:	1628	5000	4000	28400	28520	29250	12800	300		24
			5000x	28400	28520	29250	12800	300		

Int. Dup. Sec.,
Wash.. D. C. 37944

3 -1750a
 Cont. NR-1
 (Rev. March 1953)

WATERFOWL
 (Continuation Sheet)

REFUGE Tamarac National Wildlife Refuge

MONTHS OF September TO December, 19 62

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production Broods: Estimated seen : total
	11/11-17 11	11/18-24 12	11/25-12/1 13	12/2-8 14	12/9-15 15	12/16-22 16	12/23-29 17	18		
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada	35	35	35	25	20	20	20		9135	
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
Ducks:										
Mallard									533834	
Black									154	
Gadwall									700	
Baldpate									23205	
Pintail									875	
Green-winged teal									735	
Blue-winged teal									71050	
Cinnamon teal										
Shoveler									795	
Wood									78585	
Redhead									1085	
Ring-necked									544068	
Canvasback									210	
Scaup									159075	
Goldeneye									945	
Bufflehead									140	
Ruddy										
Other Unknown									567756	
Coot:									769454	

(over)

	(5)	(6)	(7)
	<u>Total Days Use</u>	<u>Peak Number</u>	<u>Total Production</u>
Swans			
Geese	9135	200	
Ducks	1,983,212	57,080	
Coots	769,451	29,250	

<u>SUMMARY</u>	
Principal feeding areas	Tamarac, Egg Lakes, Chippewa
Principal nesting areas	
Reported by	Robert L. Wright

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

3-1751

Form NR-1A
(Nov. 1945)

MIGRATORY BIRDS

(other than waterfowl)

Refuge Tamarac National Wildlife Refuge Months of September to December 1962

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Common Loon					1	10/8				
Pied-billed Grebe			50	9/28						
Amer. Merganser			50	10/19	10	11/3				
Red Breasted Merganser			20	10/19	20	11/3				

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons</u> : Mourning dove White-winged dove					
IV. <u>Predaceous Birds</u> : Golden eagle Duck hawk Horned owl Magpie Raven Crow			1 12/8		
				Reported by <u>Robert L. Wright</u>	

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

UPLAND GAME BIRDS

Refuge Tamarac National Wildlife Refuge Months of September to December, 19 62

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Ring-necked Pheasant	1000					0			80-100	
Ruffed Grouse	24000					200			5000	
Wild Turkey										None seen for quite some time

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

3-1753

BIG GAME

Form NR-3

(June 1945)

Refuge Tamarac National Wildlife Refuge Calendar Year 1962

(1) Species	(2) Density	(3) Young Produced	(4) Removals				(5) Losses			(6) Introductions		(7) Estimated Total Refuge Population		(8) Sex Ratio
			Hunting	For Re- stocking	Sold	For Research	Predation	Disease	Winter Loss	Number	Source	At period of Greatest use	As of Dec. 31	
Common Name	Cover types, total Acreage of Habitat	Number												
White-tail Deer	27,500		325											
Black Bear	27,500		0									10	10	
Moose	27,500		0									1 - 2		

Remarks:

Reported by _____

INSTRUCTIONS

Form NR-3 - BIG GAME

- (1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.
- (2) DENSITY: Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge: once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated total number of young produced on refuge.
- (4) REMOVALS: Indicate total number in each category removed during the year.
- (5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.
- (6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.
- (7) TOTAL REFUGE POPULATION: Give the estimated population of each species on the refuge at period of its greatest abundance and also as of Dec. 31.
- (8) SEX RATIO: Indicate the percentage of males and females of each species as determined from field observations or through removals.

DISEASE

Refuge Tamarac National Wildlife Refuge Year 1962

Botulism None

Lead Poisoning or other Disease None

Period of outbreak _____

Period of heaviest losses _____

Losses:

	Actual Count	Estimated
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Number Hospitalized	No. Recovered	% Recovered
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Areas affected (location and approximate acreage) _____

Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.) _____

Condition of vegetation and invertebrate life _____

Remarks _____

Kind of disease _____

Species affected _____

Number Affected Species	Actual Count	Estimated
_____	_____	_____
_____	_____	_____
_____	_____	_____

Number Recovered _____

Number lost _____

Source of infection _____

Water conditions _____

Food conditions _____

Remarks _____

3-1756

Form NR-6

(April 1946)

FISH

Refuge.

Tamarac National Wildlife Refuge

..Year 194

62

Species	Relative Abundance	Sport Fishing		Commercial Fishing		Restocking		Number removed for Restocking
		Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	
Northern Pike	Abundant (in Chippewa Lake)	Unk.			None		None	None
Walleye Pike	Present	Unk.						
Bullhead	Abundant	Unk.						

REMARKS:

PUBLIC USE

Refuge Tamarac National Wildlife RefugeCalendar Year 1962Total Use
Visitor-Days
17,850Hunting
Use
2,450Fishing
Use
200Miscellaneous
Use
15,200

Where practical, by means of occasional spot checks, or other methods, show by percent and visitor-days the breakdown of the above figures and other related information:

Hunting (on refuge lands):	Percent	Visitor-Days	Acres	Miscellaneous	Percent	Visitor-Days
Waterfowl	<u>3</u>	<u>600</u>	<u>3200</u>	Recreation*	<u>56</u>	<u>10,050</u>
Upland Game	<u>1</u>	<u>250</u>	<u>9000</u>	Official	<u>1</u>	<u>150</u>
Big Game	<u>9</u>	<u>1600</u>	<u>26,000</u>	Economic Use	<u>28</u>	<u>5,000</u>
Supervised by Refuge <u>x</u>		By State	No. of Blinds	Other	<u>1</u>	<u>200</u>

Hunting (off
refuge Lands: Estimated man-days of hunting on lands

Comments:

Adjacent to the refuge 1500 (These figures
should not be included in hunting-use totals above).

All figures are estimatesFishing:

Acres of ponds or lakes 3,150 and miles of streams
_____ open to fishing.

*including picnicking, swimming, boating, camping,
viewing wildlife, and photographing.

3-1757
Form NR-7
(April 1946)

PLANTINGS
(Marsh - Aquatic - Upland)

Refuge.....Tamarac National Wildlife Refuge.....Year 194⁶²

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature of Propagules	Date of Planting	Survival	Cause of Loss	Remarks
Wild Rice	Little Rice Lake			605 lbs.	8/28 & 31			Scattered throughout lake
"	Flat Lake			344 lbs.	9/1			South shore between goose pen and "T" in lake
"	Marsh on Tea Cracker Road			233 lbs.	9/5			In marsh on both sides of road
"	Marsh on Tea Cracker Road			75 lbs.	9/6			
"	Mud Lake			192 lbs.	9/6			Center of lake
"	Stillings marsh			177 lbs.	9/11			Throughout marsh

TOTAL ACREAGE PLANTED:

Marsh and aquatic.....1626 lbs.*
Hedgerows, cover patches.....
Food strips, food patches.....
Forest plantings.....

*Difference between this total and that of 1621 on NR-9 is due to weight of bags

3-1758
Form NR-8
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

PERMITTEE

CULTIVATED CROPS - HAYING - GRAZING

Refuge Tamarac National Wildlife Refuge

County Becker

State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage	
	Acres	Bu./Tons	Harvested		Unharvested					
			Acres	Bu./Tons	Acres	Bu./Tons				
Oats	122.75	3720 bu.	47.25	1240 bu.			170			
Barley	21.0	330 bu.	7.0	110 bu.			28			
Corn	11.2	0*	2.8*				<u>14</u> 212			
*Crop failed, none harvested										
									Fallow Ag. Land	

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only the number of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested - Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested - Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

3-1758
Form NR-8
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

REFUGE PERSONNEL CULTIVATED CROPS - HAYING - GRAZING

Refuge Tamarac National Wildlife Refuge County Becker State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./Tons	Acres	Bu./Tons			
Corn					8			Fall Rye	84
Spring Wheat					10			Winter Wheat	28
Oats					34			Alfalfa	12
Oats, Wheat, Barley					20				<u>124</u>
					<u>72</u>				
								Fallow Ag. Land	

No. of Permittees: Agricultural Operations _____ Haying Operations _____ Grazing Operations _____

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
				1. Cattle				
				2. Other				
				1. Total Refuge Acreage Under Cultivation				408
Hay - Wild				2. Acreage Cultivated as Service Operation				196

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only the number of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested - Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested - Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

REFUGE GRAIN REPORT

Refuge Tamarac National Wildlife RefugeMonths of September through December, 1962

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
Oats	755	300	1055			402	402	653	x	x	
Spring Wheat	0	0	0					0			
Winter Wheat	32				32			0			
Corn (ear)	20	0	20			20	20	0			
Corn (shelled)	70	150	220			5	5	215		x	
Buckwheat	10	0	10				0	10	x		
Millet	11	0	11				0	11	x		
Rye	212	0	212					212	x		
Barley-oats mix	356	0	356			65	65	291		x	

(8) Indicate shipping or collection points _____

(9) Grain is stored at Headquarters and Moser granaries(10) Remarks 150 bushels shelled corn received from DeSoto Refuge

*See instructions on back.

REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share cropping, or harvest from food patches.
- (4) A total of columns 2 and 3.
- (6) Column 4 less column 5.
- (7) This is a proposed break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters granary," etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

COLLECTIONS AND RECEIPTS OF PLANTING STOCK
(Seeds, rootstocks, trees, shrubs)

1620

Refuge Tamarac National Wildlife Refuge Year 1942

Species	Collections				Receipts		Total Amounts on Hand	Amount Surplus
	Amount	Date or Period or Collection	Method	Unit Cost	Amount	Source		
Wild Rice	1592	8/28-9/10	Harvested by Indians					
Wild Rice	<u>29</u>	8/28	Confiscated					
All Rice Seeded	1621							

TIMBER REMOVAL

Refuge Tamarac National Wildlife Refuge

Year 195⁶²

Permittee	Permit No.	Unit or Location	Acreage	No. of Units Expressed in B. F., ties, etc.	Rate of Charge	Total Income	Reservations and/or Diameter Limits	Species Cut
E.J. Larson	37967			7 cords	1.00	7.00		Aspen bolts
				6.25 cords	4.00	25.00		Jackpine bolts
E.J. Larson	35717			7.94 MBF	10.00	79.40		Jackpine sawlogs
				31.75 cords	4.00	127.00		Jackpine bolts
				5.5 cords	3.00	10.50		Jackpine pulp
				1.0 cords	.75	.75		Aspen pulp
				18.42 cords	3.00	55.26		Balsam pulp
Elder Rishof	35709			1.93 MBF	5.00	9.65		Elm sawlogs
				1.61 MBF	4.00	6.44		Aspen sawlogs
				10.14 MBF	8.00	81.12		Balsam sawlogs
Bernard Cloud	35719			46.12 MBF	4.00	184.48		Aspen sawlogs
				13.24 MBF	10.00	132.40		Jackpine sawlogs
				14.11 MBF	10.00	141.10		Spruce sawlogs
				18.3 cords	1.50	27.45		Jackpine pulp
				.55 MBF	8.00	4.40		Balsam sawlogs
James Thompson	35720			19.95 cords	4.00	79.80		Spruce pulp
				.36 MBF	4.00	1.44		Aspen sawlogs
				11.55 MBF	10.00	115.50		Jackpine sawlogs
				17.5 cords	1.50	26.25		Jackpine pulp
Victor Norcross	35723			2.07 MBF	10.00	20.70		Spruce sawlogs
				2.21 MBF	8.00	17.68		Tamarack sawlogs
				1.39 MBF	5.00	6.95		Skidding
Wilbur Wilkins	35721			13.397 MBF	10.00	133.97		Jackpine sawlogs
				.26 MBF	4.00	1.04		Aspen sawlogs
George Stone	35722			9.972 MBF	10.00	99.72		Jackpine sawlogs
				1.13 MBF	4.00	4.52		Aspen sawlogs

Total acreage cut over.....

Total income.....

No. of units removed B. F.

Method of slash disposal.....

Cords.....

Ties.....

TIMBER REMOVAL

Refuge.....Tamarac National Wildlife Refuge..... Year 1962.....

Permittee	Permit No.	Unit or Location	Acreage	No. of Units Expressed in B. F., ties, etc.	Rate of Charge	Total Income	Reservations and/or Diameter Limits	Species Cut
Peter Linden	37963			18.95 MBF	10.00	189.95		Jackpine sawlogs
Carl Jenson	35718			6.29 MBF	10.00	62.90		Jackpine sawlogs
				5.38 MBF	8.00	43.04		Tamarack sawlogs
				1.11 MBF	4.00	4.44		Aspen sawlogs
				.39 MBF	10.00	3.90		Spruce sawlogs
				31.0 cords	2.00	62.00		Tamarack rails
Becker County Welfare Board	Co-operative Agreement			71.1 cords	1.50	106.65		Jackpine posts #1
				14.0 cords	.50	7.00		Jackpine posts #2
				Handling		471.43		Cull posts
				11.0 cords	4.00	44.00		Hauling charges
				53.5 cords	3.00	160.50		Balsam-jackpine pulp

Total acreage cut over..... Total income.....2,555.33.....

No. of units removed B. F. 170,100..... Method of slash disposal...lopped and scattered.....
Cords 239.77.....
Ties.....



1. View of pothole area before reclaiming (looking east). This is located on a recently purchased tract on the south part of the refuge.



2. Same area as in number 1, after re-claiming.



3. View looking north of completed pothole.



4. This pothole, as well as those in the background, was one of 15 reclaimed on the same tract.



AUG • 62

5. Dr. W.Green and refuge personnel made aquatic transects on several lakes this past summer. This was taken on Flat Lake.



SEP • 62

6. Refuge personnel completed a crossing on the Chippewa river this summer, making access to fields easier.



AUG • 62

7. A ditch between Mud and Tamarac Lakes was started this summer. Eventually a control will be put ^{between} the two lakes.