

QUARTERLY NARRATIVE REPORTS FOR THE  
BEAR RIVER WILDLIFE REFUGE  
1939

BEAR RIVER

QUARTERLY NARRATIVE REPORTS    FEBRUARY 1939 - JANUARY 1940



R-Bear River  
Quarterly Report

February 10, 1940

Regional Director  
Bureau of Biological Survey  
576 Custom House  
Denver, Colorado

Dear Sir:

We are transmitting herewith our quarterly narrative report on the Bear River Refuge for the period of November, December, 1939, and January, 1940.

If you have any comments or suggestions to offer on this report we will be pleased to receive them.

Very truly yours,

Vanez T. Wilson,  
Superintendent.



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Superintendent.





UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF BIOLOGICAL SURVEY

BEAR RIVER MIGRATORY BIRD REFUGE  
BOX ELDER COUNTY, UTAH

--NARRATIVE REPORT--

PERIOD - NOVEMBER, DECEMBER, 1939, AND JANUARY, 1940

By: Vanez T. Wilson

1 - General Conditions

The weather at the Bear River Refuge during the month of November was mild and warm, with abnormal temperature and subnormal moisture. The highest temperature for the month was 66 degrees Fahrenheit on the 2nd, the lowest 24 degrees on the 10th, with a mean for the month of 42.4 degrees. The precipitation was only .03 of an inch. The duck hunters complained of the mild, summer-like weather, and blamed the poor shooting on the weather man.

The first part of December was abnormally warm and mild with no precipitation. The latter part was more seasonable. The maximum temperature for the month was 58 degrees, the minimum, minus 3 degrees, with a mean of 34.8 degrees. The precipitation for the month was .27 of an inch.

The weather during the month of January has been abnormally mild for this locality. While we have had considerable moisture we have had a maximum of but 4 inches of snow at one time, this being on January 5th. During part of the month the ground has been free of

*fwc*

snow, which is unusual for this area. The maximum temperature for the month was 48 degrees on the 28th, and the minimum zero on the 22nd. The total precipitation for the month was 2.01 inches.

The flow of water in the Bear River for the period covered by this report was about normal, fluctuating from 500 to 1200 c.f.s. due to regulating of flow by the Hydro-electric plant above the Refuge. General water conditions on the Refuge have been very good. Due to the mild open weather, water was held up in all five units until the 6th of December, when the flashboards were pulled from all spillboxes except the two large boxes in Unit 1, the four large boxes in Unit 2, and the two large boxes in Unit 5. These large spillways were opened up on the 14th and 15th of December, and the units flushed out.

During the latter part of December and the first part of January the remaining water in the units was frozen over. However, the Bear River and distribution canals remained partly open. By the end of January the river and overflow channels were completely free of ice.

## II - Wildlife

Due to the mild open weather, a considerable number of birds have remained on the Refuge all winter. We estimate that between 4,000 and 4,500 Whistling Swan wintered here. At the peak of our fall migration we estimated our Swan population at from 15,000 to 20,000.

The low point in our bird population was probably reached during the latter part of January, at which time we estimated we had 400 Mallards, 10 Gadwall, 800 Baldpate, 50 Pintails, 20 Redheads,

I-4  
1-8

Saw 2 snow geese, 2 snow geese, 23  
Canada geese Stanton



10 Canvasback, 80 Canada Geese, 80 Coots, 4500 Whistling Swan, 250 American Mergansers, 25 Western Grebes, 40 Pied-billed Grebes, 38 Treganza's Herons, 570 Black-crowned Night Herons, 500 California Gulls, also a number of Short-eared Owls, Marsh Hawks, Northern Bald Eagles, Prairie Falcons, and Ring-necked Pheasants. *What about peak populations?*

It is usually necessary to do some winter feeding in this area. However, this was not the case this winter and all the birds remaining here appeared to winter through in good condition.

The Canada Geese have already started to return to this area and are pairing off for the nesting season. On the sixth of February 491 Geese were counted along the river bank just above Refuge headquarters.

We have just recently completed our bird banding operations for the past year and have submitted the banding schedules to the Washington office. During the past season the following birds were banded at the Bear River Refuge:

Green-winged Teal . . . . .	2,038 ✓
Pintail . . . . .	1,692 ✓
Mallard . . . . .	257 ✓
Shoveler. . . . .	135 ✓
Baldpate. . . . .	100 ✓
Gadwall . . . . .	10 ✓
Wood Duck . . . . .	1 ✓
Redhead . . . . .	10 ✓
Cinnamon Teal . . . . .	49 ✓
White-faced Glossy Ibis . . . . .	1 ✓
Canada Geese. . . . .	<u>1,240</u> ✓

Total . . . . 5,533

At the present time we have four pair of Beaver on the Refuge. Their lodges are located on the channel banks a short distance below the Refuge headquarters and are constructed of Black-Willow cuttings and rushes.

During the past year we have had a marked increase in our muskrat population. In parts of Unit 2 the muskrat houses look like hay cocks in a hay meadow. During the fall trapping season 5,050 rats were taken by private trappers.

Last year a special effort was made to keep the skunk population on the Refuge to a minimum. During the past fall and winter 20 skunks were taken.

On the 15th of last November a five-point Mule deer was seen on the main dike of Unit 2 by Refuge employees. This is the first record of a deer on the Refuge, and he had in all probability been chased or drifted in from the nearby mountains.

### III - Hunting

The following is a report, with accompanying tables, on the 1939 hunting season, October 22 to December 5, on the area of the Refuge open to public hunting. As in previous years, all persons hunting on the open area of the Refuge were required to register in, and check out, at the Checking Station.

During the past season a total of 4,247 hunters were registered in and checked out. This is 1,210 more hunters than we had last year



and the largest number of hunters during any one season since the Refuge was placed under administration in 1932.

The total kill of waterfowl for the past season was 11,581, as compared with 13,598 for the previous year with a smaller number of hunters. The average kill of birds per hunter per day was only 2.727, as compared with 4.477 for the previous year.

The following tables present a rather interesting story of hunting conditions at the Bear River Refuge over the past eight years. Table No. 1 shows the number of the various species of waterfowl taken for each year from 1932 to 1939, the total kill, the number of hunters, and the average kill per man per day; also the time and length of the hunting season and the daily bag limit.

Table No. 2 shows the relative order of abundance of the various species of waterfowl taken over the past eight years, also the sex ratio of the ducks by species for last year. Out of a total of 37,862 ducks of the various species checked during the past four years 17,702 were males and 20,160 were females, or a sex ratio of approximately 47% males to 53% females.

Table No. 3 shows the number of hunters and the total kill of each species of waterfowl for each day during the past hunting season.

Survey note -  
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Comparative Table of Waterfowl Killed  
Seasons of 1932-3-4-5-6-7-8-9  
Bear River Migratory Bird Refuge, Utah

Table No. 1

*Hunting Season  
Oct. 22 to Dec. 5,*

SPECIES	TOTAL KILL							
	1932	1933	1934	1935	1936	1937	1938	1939
Pintail ✓	3185	4193	2296	571	2106	2873	4012	3477 ✓
Mallard ✓	692	858	952	658	854	1519	2483	1673 ✓
Widgeon ✓	801	772	516	356	150	360	441	604 ✓
Golden-eye ✓	133	302	187	62	48 ✓	80 ✓	64 ✓	28 ✓
Gadwall ✓	735	620	272	145	302	750	785	1133 ✓
Shoveler ✓	150	1877	1311	271	733	692	1541	1367 ✓
Cinnamon Teal ✓	292	48	22	12	57	38	171	66 ✓
Green-winged Teal ✓	3090	2678	1533	455	1082	1343	2689	2748 ✓
Scaup	57	204	50	64	59	71	110	26 ✓
Redhead ✓	460	210	52	61	--	--	472	75 ✓
Canvasback ✓	159	123	136	43	--	--	444 ✓	101 ✓
Merganser						36	53	57 ✓
Canada Goose ✓	36	67	28	19	11	25	66	23 ✓
Snow Goose ✓	78	363	134	24	10	16	70	92 ✓
Lesser Canada Goose							5	-- ✓
Ruddy Duck ✓							55 ✓	10 ✓
Bufflehead ✓							121	75 ✓
Miscellaneous		46	50	29	76	6	16	26 ✓
Grand Total	11,218	12,361	7,559	2,770	5,488	7,809	13,598	11,581 ✓
Number of Hunters	2332	3839	2298	912	1316	2532	3037	4247 ✓
Average kill per man per day	4.814	3.220	3.289	3.037	4.170	3.084	4.477	2.727 ✓

PERIOD OF OPEN SEASONS AND EXTENT OF BAG LIMITS

Year	Length of Season	Dates Open	Bag	Mixed Bag
1932 ✓	60 days - continuous	Oct. 1 - Nov. 30	15	10 and 5
1933 ✓	60 days - continuous	Oct. 16 - Dec. 15	12	8 and 4
1934 ✓	30 days. Split Fri-Sat-Sun.	Oct. 12 - Dec. 16	12	7 and 5
1935 ✓	30 days - continuous	Oct. 21 - Nov. 19	10	
1936 ✓	30 days - continuous	Nov. 1 - Nov. 30	10	
1937 ✓	30 days - continuous	Nov. 1 - Nov. 30	10	
1938 ✓	45 days - continuous	Oct. 15 - Nov. 28	10	7 and 3
1939 ✓	45 days - continuous	Oct. 22 - Dec. 5	10	7 and 3 ✓



Comparative Table of Waterfowl Killed  
Seasons of 1932-3-4-5-6-7-8-9  
Bear River Migratory Bird Refuge, Utah

Table No. 2

	ORDER OF ABUNDANCE							
	1932	1933	1934	1935	1936	1937	1938	1939
Pintail	1st	1st	1st	2nd	1st	1st	1st	1st
Mallard	6th	4th	4th	1st	3rd	2nd	3rd	3rd
Widgeon	4th	5th	5th	4th	6th	6th	8th	6th
Golden-eye	10th	8th	7th	8th	9th	7th	14th	13th
Gadwall	5th	6th	6th	6th	5th	4th	5th	5th
Shoveler	3rd	3rd	3rd	5th	4th	5th	4th	4th
Cinnamon Teal	8th	13th	13th	13th	8th	9th	9th	11th
Green-wing Teal	2nd	2nd	2nd	3rd	2nd	3rd	2nd	2nd
Scaup	12th	10th	11th	7th	7th	8th	11th	14th
Redhead	7th	9th	10th	9th	---	---	6th	9th
Canvasback	9th	11th	8th	10th	---	---	7th	7th
Merganser						10th	16th	12th
Canada Goose	13th	12th	12th	12th	10th	11th	13th	15th
Snow Goose	11th	7th	9th	11th	11th	12th	12th	8th
Lesser Canada Goose							17th	--
Ruddy Duck							15th	16th
Bufflehead							10th	10th

Sex Ratio of Ducks Killed at  
Bear River Migratory Bird Refuge, Utah  
Season October 22 to December 5, 1939

SPECIES	MALE	FEMALE	TOTAL	SEX RATIO	
				MALE	FEMALE
Pintail	1164	2313	3477	33	: 67
Mallard	816	857	1673	49	: 51
Widgeon	212	392	604	35	: 65
Golden-eye	7	21	28	25	: 75
Gadwall	545	588	1133	48	: 52
Shoveler	589	778	1367	43	: 57
Cin. Teal	33	33	66	50	: 50
G. W. Teal	1660	1088	2748	60	: 40
Scaup	16	10	26	60	: 40
Redhead	46	29	75	61	: 39
Canvasback	54	47	101	53	: 47
Ruddy	1	9	10	10	: 90
Bufflehead	21	54	75	28	: 72
Totals	5164	6219	11383	45	: 55



TABULATED REPORT HUNTING SEASON 1939  
BEAR RIVER MIGRATORY BIRD REFUGE, UTAH  
PUBLIC SHOOTING AREA OCTOBER 22 to DECEMBER 5

Table No. 3

DATE	No. Hunters	Pintail	Mallard	Widgeon	Golden-eye	Gadwall	Shoveler	Cin. Teal	G. W. Teal	Scaup	Redhead	Canvasback	Canada Goose	Snow Goose	Bufflehead	Ruddy	Merganser	Miscellaneous	Total Bag
Oct 22	564	579	470	129		303	365	51	444	4	18	6	3	18	1	1	5	4	2401
23	51	59	53	18		25	9		30		1	1	1	7					204
24	49	63	52	12		128	28	1	20			1	2	10					317
25	57	73	40	24	1	53	57	2	14	1	11	25	3	6	6	1			317
26	71	93	62	26		57	34	1	48		4	8		4		1			338
27	23	20	12	10		6	1		16			1	3		1				70
28	89	135	40	50		58	77		70	1	4	19		1	3		2	2	462
29	364	218	103	66	2	54	99	2	160	5	21	10	2	5	13	1	19	2	782
30	29	21	17	17		4	4		33		1	1	2	2					102
31	49	33	30	8		2	14		37	3		1		2			1		131
Nov. 1	33	39	12	4	1	3	14		17					1	2				93
2	46	49	20	6		23	15		37	2		1		3	4				160
3	43	81	9	32		6	5	1	31	2		7	1		1				176
4	75	87	30	27	2	41	41	1	30	5	3	1		5	3		1	1	278
5	53	43	20	10		11	21	1	89			2		1				1	199
6	13	5	1	1		9	4	1	38									2	61
7	16	30	10	5		21	6		32										104
8	27	37	6	1		25	30		22			1			1				123
9	51	122	53	5	2	37	39		19	1	2	4		4	1	3	2		294
10	47	77	18	11		47	24		108		1								286
11	195	240	118	21	1	27	98		185		4		3	9	5		3	1	715
12	290	188	49	26	6	23	55		210		2	1	1	5	7	1	3	1	578
Carried Forward	2235	2292	1225	509	15	963	1040	61	1690	24	72	90	21	83	48	8	36	14	8191

(Continued on next page)



TABULATED REPORT HUNTING SEASON 1939 (Continued)

Table No. 3 (Cont'd)

DATE	No. Hunters	Pintail	Mallard	Widgeon	Golden-eye	Gadwall	Shoveler	Cin. Teal	G. W. Teal	Scaup	Redhead	Canvasback	Canada Goose	Snow Goose	Bufflehead	Ruddy	Merganser	Miscellaneous	Total Bag
Brought forward	2235	2292	1225	509	15	963	1040	61	1690	24	72	90	21	83	48	8	36	14	8191
Nov 13	39	27	6	3	1	3	13		49								1		103
14	50	26	18	1		5	14		41			1			2	1	1		110
15	35	19	5	2		1	14		44										85
16	62	41	11	5		10	23		38								4	4	136
17	44	67	9	4	1	15	16		36		1				1		1		151
18	93	66	49	5		6	32		117					2	4			8	289
19	340	163	49	16	2	38	60		181			2		2	5	1	2		521
20	13	4	2			2	1		4										13
21	42	29	11	5		11	6	1	15			1			1				80
22	33	27	5	2		6	7		32		1				2				82
23	42	35	21			5	13		11						1				86
24	65	73	33	5	1	9	21		12					3	1				158
25	81	40	15	5		6	11		29		1	2	1				5		115
26	231	85	40	12	4	9	31	1	55			1			4		4		246
27	53	13	2	2			1		23			2							43
28	50	25	21	4		4	13		18					1	1				87
29	75	92	26	3		12	8		10	1		1		1			1		155
30	50	16	9			1	3		3										32
Dec 1	47	13	5			1	3	2	48										72
2	128	72	27	5		4	10		35				1						154
3	299	103	31	10	4	5	14	1	106	1		1			5		2		283
4	40	24	12	4		1	4		44										89
5	100	125	41	2		16	9		107										300
TOTAL	4247	3477	1673	604	28	1133	1367	66	2748	26	75	101	23	92	75	10	57	26	11581



#### IV - Refuge Development and Maintenance Work

As the development and improvement work is being carried on at the present time by our CCC Camp, and the work accomplished has been reported on in detail by the Camp, we will only attempt to summarize some of the principal jobs.

Assisted by the mild open weather this past fall, good progress was made on grading and graveling the "H" Line, or partition dike between Units No. 2 and 3. Approximately one mile, or  $1/3$  of the length of this dike, has been completed. The completed part has also been planted with salt grass sod.

The large flat rocks, or flagstones, required for the construction of walkways at Refuge headquarters have been secured and hauled to the Refuge. The rock rip-rapping of river banks in the vicinity of Headquarters has been practically completed and a stock pile provided. Stock piles of rock for rip-rapping are now being placed at the intersections of the main and partition dikes for future use.

During the past fall 5,200 pounds of Sago Pondweed seed and 1,240 pounds of *Scirpus Paludosus* seed were gathered. This seed has now been dried, threshed, and cleaned, and is ready for shipment.

In the north-western part of the Refuge we have several large knolls covered with grease wood and some sage-brush. These knolls are used to some extent as feeding grounds for Canada Geese. In order to make them more attractive and accessible to the geese strips 100 to 200 feet wide were cleared of the grease wood and dead brush. Altogether

approximately  $18\frac{1}{2}$  acres were cleared, and on one knoll some experimental planting was done. This consisted of 3 acres of rye,  $1\frac{1}{2}$  acres of winter wheat,  $1\frac{1}{2}$  acres of barley, and 2 acres of crested wheat grass. If this experimental planting is successful we propose to do more on some of the other knolls this coming fall.

All the improvements at Refuge headquarters, including the buildings, culinary water system, sewer system, electric power plant, gas wells and distribution system, and river control structures have gone through the winter in good condition.

All the Refuge boats have been repaired when needed and repainted. With the exception of the dragline and fire pump, which are now down for repairs, the balance of the Refuge equipment is in good condition.



