

*Original*

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THE 1987 RURAL MAIL CARRIER WINTER PHEASANT SURVEY

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The 1987 Rural Mail Carrier Winter Pheasant Survey was conducted during February 16-21 and 23-28, 1987. Compared to 1986, the number of hen sightings was 26 percent lower, cock sightings declined 3 percent, and the total number of pheasant sightings declined 13 percent (Table 1). The number of carriers and miles surveyed also declined 1 and 2 percent, respectively.

The number of pheasant sightings per 1,000 survey miles was calculated (Table 2), and counties were evaluated by density groups (high, moderate, and low) determined with the DNR pheasant density map (Figure 1). Total pheasant sightings for all counties declined 11 percent, from 3.92 to 3.47 per 1,000 survey miles. The number of hen observations declined 25 percent, from 1.71 to 1.29, but the number of cocks declined only slightly, from 2.21 to 2.19. Greatest declines were in counties with higher pheasant densities (Table 2).

Most (24 of 43) surveyed counties actually had an increase in pheasant observations by mail carriers. Greatest increases were found in counties with the fewest sightings in 1986 (Table 2). When the percent change (from 1986 to 1987) for each county was averaged by group, only counties with normally high densities revealed a decline. Pheasant sightings in the moderate and low density counties increased an average of 60 and 125 percent, respectively (Table 2).

Counties with a high vs. low number of observations per survey mile (Figure 2) were not necessarily the counties with traditionally high and low pheasant densities (Figure 1). Because of limitations in the mail carrier survey technique, results may not accurately represent relative densities of county pheasant populations.

There was, however, a similar trend in the average percent change in pheasant sightings between counties with various pheasant densities and observation rates. Counties with high pheasant densities and those with more than 3 sightings per 1,000 survey miles both had an average decline in observations (Tables 2 and 3). Counties with moderate and low densities and those with fewer than 3 sightings per 1,000 miles had an average increase in pheasant sightings.

Most (8 of 12) counties with less than 1 pheasant observed per 1,000 miles had increases, and many (9 of 26) counties with less than 2 sightings per 1,000 miles had major (+200 percent) increases (Table 3). Because of increases in most "low observation rate" counties, the average change in pheasant sightings for all counties was an increase of 89 percent (Table 3).

In summary, the 1987 Rural Mail Carrier Winter Pheasant Survey revealed a decline in total pheasant sightings from 1986. This decline was evident in the raw data and also in calculations of sightings per 1,000 survey miles. Decreased sightings occurred primarily in counties with high pheasant densities and high observation rates. Of 43 counties surveyed, 24 actually had an increase in observations; counties with the fewest sightings in 1986 had the greatest increases. Whereas there was a -11 percent change in total pheasant observations, the average percent change for all counties was +89.

The presence or absence of snow cover on survey routes can influence bird visibility, thus survey results. February in Michigan was extremely mild this year, and less snow may have caused fewer pheasant sightings in some areas. Future surveys should include snow conditions (i.e., no snow, moderate snow, complete snow cover, and blizzard-no visibility) to better grasp this visibility factor.

A 36 percent increase in turkey sightings ( $n = 800$ ) from 1986 to 1987 indicates (1) turkey visibility was apparently high, (2) carriers have increased efforts on the turkey portion of the survey, and/or (3) turkey numbers dramatically increased in survey areas.

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Table 1. Comparison of data collected from Rural Mail Carrier Winter Pheasant Surveys during 1986 and 1987. \*

COUNTY	# CARRIERS		MILES		HENS		COCKS		TOTAL	
	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987
Allegan	16	19	9,442	10,788	0	10	1	4	1	14
Barry	11	12	7,265	7,201	1	0	7	7	8	7
Bay	7	6	4,520	3,746	4	1	3	4	7	5
Berrien	20	17	9,186	7,506	0	1	2	9	2	10
Branch	10	11	6,570	6,871	1	11	7	16	8	27
Calhoun	17	15	10,757	9,370	2	11	6	15	8	26
Cass	9	11	5,896	7,691	0	7	2	4	2	11
Clinton	14	15	10,129	10,558	4	8	13	24	17	32
Eaton	26	24	16,460	13,468	52	29	57	36	109	65
Genesee	23	22	8,145	7,992	3	9	19	17	22	26
Gladwin	7	6	6,410	5,652	10	6	7	5	17	11
Gratiot	12	15	8,547	10,674	7	7	26	11	33	18
Hillsdale	15	17	10,824	12,425	7	22	23	61	30	83
Huron	17	13	14,478	11,238	29	12	37	30	66	42
Ingham	13	12	7,792	7,399	23	7	12	19	35	26
Ionia	14	18	10,023	11,739	34	41	33	36	67	77
Isabella	6	6	4,280	4,643	0	8	6	4	6	12
Jackson	19	16	10,134	8,731	6	9	9	17	15	26
Kalamazoo	13	11	6,732	5,697	0	3	3	11	3	14
Kent	21	21	10,696	10,574	5	5	10	5	15	10
Lapeer	20	18	11,904	9,966	5	6	27	12	32	18
Lenawee	27	24	17,343	15,312	70	39	99	120	169	159
Livingston	18	18	8,728	8,459	104	26	150	63	254	89
Macomb	9	7	4,125	3,126	1	1	2	2	3	3
Mecosta	9	8	7,698	6,742	4	3	10	14	14	17
Midland	6	7	3,896	4,612	3	13	20	5	23	18
Monroe	17	18	8,059	8,803	9	20	10	21	10	41
Montcalm	17	16	13,003	13,127	6	12	14	15	20	27
Muskegon	9	8	5,402	3,824	7	6	10	6	27	12
Newaygo	8	8	6,662	6,246	0	2	2	4	2	6
Oakland	13	14	4,715	4,494	8	19	11	15	19	34
Oceana	5	4	3,653	3,674	1	2	2	1	3	3
Osceola	6	7	5,898	6,480	2	7	3	12	5	19
Ottawa	14	15	7,428	8,133	8	3	8	17	16	20
Saginaw	19	19	10,151	10,173	8	12	12	10	20	22
St. Clair	13	17	8,143	8,404	20	29	20	39	40	68
St. Joseph	12	14	1,634	8,172	0	1	2	4	2	5
Sanilac	21	22	18,008	17,833	57	7	24	17	81	24
Shiawassee	13	14	8,682	7,822	7	19	12	11	19	30
Tuscola	27	26	17,918	17,150	27	9	35	27	62	36
Van Buren	26	25	15,560	15,178	10	9	19	28	29	37
Washtenaw	18	14	8,381	7,350	82	19	43	24	125	43
Wayne	5	5	1,837	1,617	18	7	15	8	33	15
Totals	622	615	377,114	370,660	645	478	833	810	1,479	1,288
%Change		-1		-2		-26		-3		-13

\*Rural Mail Carriers also reported a total of 800 (+36% from 1986) wild turkeys seen on their routes.

Table 2. Change in the number of pheasant sightings per 1000 Carrier Survey miles in county groups which traditionally have different pheasant densities. \*

PHEASANT DENSITY	COUNTY	HENS		COCKS		TOTAL		TOTAL CHANGE	%CHANGE
		1986	1987	1986	1987	1986	1987		
High	Huron	2.00	1.07	2.56	2.67	4.56	3.74	-0.82	-18.0
	Sanilac	3.17	0.39	1.33	0.95	4.50	1.35	-3.15	-70.1
	Tuscola	1.51	0.52	1.95	1.57	3.46	2.10	-1.36	-39.3
	Lapeer	0.42	0.60	2.27	1.20	2.69	1.81	-0.88	-32.8
	Shiawassee	0.81	2.43	1.38	1.41	2.19	3.84	1.65	75.3
	Average	1.58	1.00	1.90	1.56	3.48	2.56	-0.91	-17.0
	%Change			-37		-18		-26	
Moderate	Livingston	11.92	3.07	17.19	7.45	29.10	10.52	-18.58	-63.8
	Lenawee	4.04	2.55	5.71	7.84	9.74	10.38	0.64	6.6
	Ionia	3.39	3.49	3.29	3.07	6.68	6.56	-0.13	-1.9
	Midland	0.77	2.82	5.13	1.08	5.90	3.90	-2.00	-33.9
	St. Clair	2.46	3.45	2.46	4.64	4.91	8.09	3.18	64.7
	Ingham	2.95	0.95	1.54	2.57	4.49	3.51	-0.98	-21.8
	Hillsdale	0.65	1.77	2.12	4.91	2.77	6.68	3.91	141.0
	Genesee	0.37	1.13	2.33	2.13	2.70	3.25	0.55	20.4
	Saginaw	0.79	1.18	1.18	0.98	1.97	2.16	0.19	9.8
	Van Buren	0.64	0.59	1.22	1.84	1.86	2.44	0.57	30.8
	Clinton	0.39	0.76	1.28	2.27	1.68	3.03	1.35	80.6
	Macomb	0.24	0.32	0.48	0.64	0.73	0.96	0.23	32.0
	Berrien	0.00	0.13	0.22	1.20	0.22	1.33	1.11	511.9
	Average	2.20	1.71	3.40	3.12	5.60	4.83	-0.76	59.7
%Change			-22		-8		-14		
Low	Wayne	9.80	4.33	8.17	4.95	17.96	9.28	-8.69	-48.4
	Washtenaw	9.78	2.59	5.13	3.27	14.91	5.85	-9.06	-60.8
	Eaton	3.16	2.15	3.46	2.67	6.62	4.83	-1.80	-27.1
	Muskegon	1.30	1.57	1.85	1.57	5.00	3.14	-1.86	-37.2
	Oakland	1.70	4.23	2.33	3.34	4.03	7.57	3.54	87.7
	Gratiot	0.82	0.66	3.04	1.03	3.86	1.69	-2.17	-56.3
	Gladwin	1.56	1.06	1.09	0.88	2.65	1.95	-0.71	-26.6
	Ottawa	1.08	0.37	1.08	2.09	2.15	2.46	0.31	14.2
	Mecosta	0.52	0.44	1.30	2.08	1.82	2.52	0.70	38.6
	Bay	0.88	0.27	0.66	1.07	1.55	1.33	-0.21	-13.8
	Montcalm	0.46	0.91	1.08	1.14	1.54	2.06	0.52	33.7
	Jackson	0.59	1.03	0.89	1.95	1.48	2.98	1.50	101.2
	Kent	0.47	0.47	0.93	0.47	1.40	0.95	-0.46	-32.6
	Isabella	0.00	1.72	1.40	0.86	1.40	2.58	1.18	84.4
	Monroe	1.12	2.27	1.24	2.39	1.24	4.66	3.42	275.3
	St. Joseph	0.00	0.12	1.22	0.49	1.22	0.61	-0.61	-50.0
	Branch	0.15	1.60	1.07	2.33	1.22	3.93	2.71	222.7
	Barry	0.14	0.00	0.96	0.97	1.10	0.97	-0.13	-11.7
	Osceola	0.34	1.08	0.51	1.85	0.85	2.93	2.08	245.9
	Oceana	0.27	0.54	0.55	0.27	0.82	0.82	0.00	-0.6
	Calhoun	0.19	1.17	0.56	1.60	0.74	2.77	2.03	273.1
	Kalamazoo	0.00	0.53	0.45	1.93	0.45	2.46	2.01	451.4
	Cass	0.00	0.91	0.34	0.52	0.34	1.43	1.09	321.6
	Newaygo	0.00	0.32	0.30	0.64	0.30	0.96	0.66	220.0
Allegan	0.00	0.93	0.11	0.37	0.11	1.30	1.19	1125.3	
Average	1.37	1.25	1.59	1.63	2.99	2.88	-0.11	125.2	
%Change			-9		+3		-4		
All Counties		1.71	1.29	2.21	2.19	3.92	3.47	-0.45	
%Change			-25		-2		-11		

\*Density groups were determined using the distribution map (Figure 1).





Table 3. Change in the number of pheasants sighted with counties grouped by different observation rates from data collected during the Rural Mail Carrier Winter Pheasant Surveys conducted in 1986 and 1987.

COUNTY	PHEASANTS SIGHTED PER 1000 MILES				%CHANGE FOR GROUPS AT DIFFERENT OBSERVATION RATES *			
	1986	1987	CHANGE	%CHANGE	>1 Bird	>2 Birds	>3 Birds	>5 Birds
Lenawee	9.74	10.38	0.64	6.6	6.6	6.6	6.6	6.6
Ionia	6.68	6.56	-0.13	-1.9	-1.9	-1.9	-1.9	-1.9
Wayne	17.96	9.28	-8.69	-48.4	-48.4	-48.4	-48.4	-48.4
Washtenaw	14.91	5.85	-9.06	-60.8	-60.8	-60.8	-60.8	-60.8
Livingston	29.10	10.52	-18.58	-63.8	-63.8	-63.8	-63.8	-63.8
Oakland	4.03	7.57	3.54	87.7	87.7	87.7	87.7	
St. Clair	4.91	8.09	3.18	64.7	64.7	64.7	64.7	
Huron	4.56	3.74	-0.82	-18.0	-18.0	-18.0	-18.0	
Ingham	4.49	3.51	-0.98	-21.8	-21.8	-21.8	-21.8	
Eaton	6.62	4.83	-1.80	-27.1	-27.1	-27.1	-27.1	
Midland	5.90	3.90	-2.00	-33.9	-33.9	-33.9	-33.9	
Muskegon	5.00	3.14	-1.86	-37.2	-37.2	-37.2	-37.2	
Hillsdale	2.77	6.68	3.91	141.0	141.0	141.0		
Shiawassee	2.19	3.84	1.65	75.3	75.3	75.3		
Genesee	2.70	3.25	0.55	20.4	20.4	20.4		
Ottawa	2.15	2.46	0.31	14.2	14.2	14.2		
Tuscola	3.46	2.10	-1.36	-39.3	-39.3	-39.3		
Monroe	1.24	4.66	3.42	275.3	275.3			
Branch	1.22	3.93	2.71	222.7	222.7			
Jackson	1.48	2.98	1.50	101.2	101.2			
Isabella	1.40	2.58	1.18	84.4	84.4			
Clinton	1.68	3.03	1.35	80.6	80.6			
Mecosta	1.82	2.52	0.70	38.6	38.6			
Montcalm	1.54	2.06	0.52	33.7	33.7			
Van Buren	1.86	2.44	0.57	30.8	30.8			
Saginaw	1.97	2.16	0.19	9.8	9.8			
Bay	1.55	1.33	-0.21	-13.8	-13.8			
Gladwin	2.65	1.95	-0.71	-26.6	-26.6			
Lapeer	2.69	1.81	-0.88	-32.8	-32.8			
Gratiot	3.86	1.69	-2.17	-56.3	-56.3			
Sanilac	4.50	1.35	-3.15	-70.1	-70.1			
Allegan	0.11	1.30	1.19	1125.3				
Berrien	0.22	1.33	1.11	511.9				
Kalamazoo	0.45	2.46	2.01	451.4				
Cass	0.34	1.43	1.09	321.6				
Calhoun	0.74	2.77	2.03	273.1				
Osceola	0.85	2.93	2.08	245.9				
Newaygo	0.30	0.96	0.66	220.0				
Macomb	0.73	0.96	0.23	32.0				
Oceana	0.82	0.82	0.00	-0.6				
Barry	1.10	0.97	-0.13	-11.7				
Kent	1.40	0.95	-0.46	-32.6				
St. Joseph	1.22	0.61	-0.61	-50.0				
Average				88.9	23.7	3.4	-12.8	-33.7

\*Including counties with more than one, two, three, and five pheasant sightings per 1000 survey miles during both years.