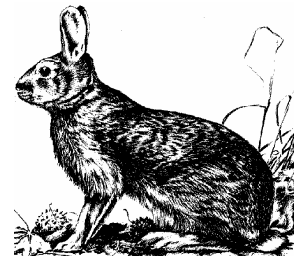


# 2006 IOWA AUGUST ROADSIDE SURVEY

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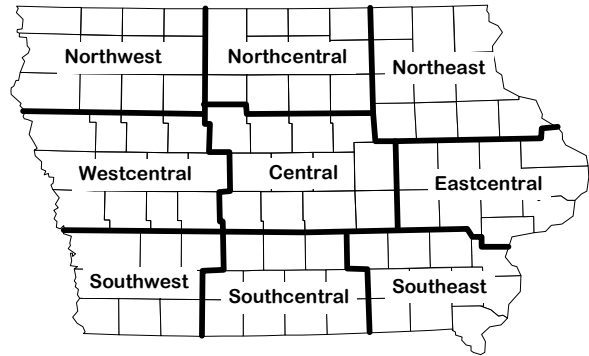


Iowa Department of Natural Resources  
Jeffrey Vonk, Director  
September 2006

## 2006 IOWA UPLAND WILDLIFE POPULATIONS

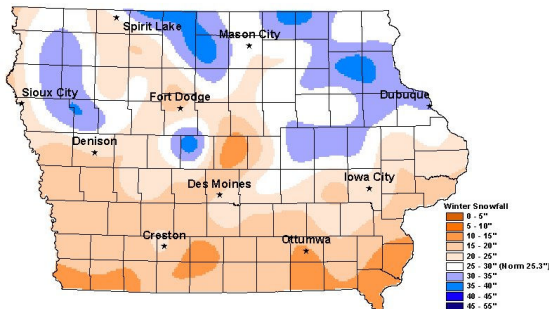
This report is a summary of the 2006 Iowa August roadside survey. The survey is conducted each year by IDNR Enforcement and Wildlife Bureau personnel throughout the state of Iowa during the first half of August. Individuals involved in this survey should be credited for their efforts to collect these data during the early-morning hours. This survey is partially funded by the Pittman-Robertson Act, Federal Aid in Wildlife Restoration Program, Project Number W-115-R.

The August roadside survey generates data from 215, 30-mile routes on ring-necked pheasants, bobwhite quail, gray partridge, cottontail rabbits, and white-tailed jackrabbits. Counts conducted on cool mornings when the sun is shining, with heavy dew, and no wind yield the most consistent results. Comparisons between 2005 and 2006 are based on routes that are directly comparable between years (unmodified routes and routes started with heavy or medium dew). Long-term trends are based on all routes run.



**Figure 1. August Roadside Survey Regions**

### 2005-06 IOWA WEATHER SUMMARY

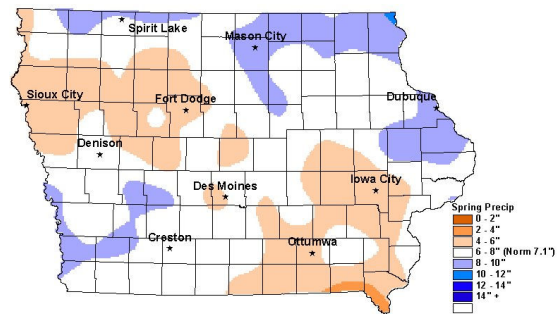


**Figure 2. Total 2005-06 Winter Snowfall**

The winter of 2005-06 was normal by Iowa standards. Statewide an average of 22.7 inches snow fell between 1 December and 31 March. Normal winter snowfall (1961-90) for Iowa is 25.3 inches. Regionally NE and NC Iowa reported the highest snowfall with several counties recording over 3 feet of total snow (Figure 2). The SE region reported the least snow. Only 1 major winter storm hit Iowa in early December, bringing subzero temperatures and dropping 10-20" of fluffy

snow across portions of the state. While the DNR received many calls from concerned hunters that pheasants were very stressed during this storm, temperatures moderated by the end of December and most snow was gone by January. Winter conditions may have reduced hen numbers in the northern two-thirds of Iowa (Figure 1).

Spring weather conditions during the 2006 nesting period (April-May) were also pretty much normal for Iowa (Figure 3). In Iowa, warm and drier than normal springs are generally conducive to good upland game reproduction, whereas cool, wetter than normal springs are detrimental to reproduction. Statewide April-May precipitation averaged 6.78 inches slightly below normal (normal 7.1"), while the mean temperature over the same period was 57.7 degrees, or 2.3 degrees above normal. Moderate to severe drought conditions developed across portions of WC, SW, and SC regions during June, July and August. These conditions may have reduced the survival of young broods in these regions.



**Figure 3. Total April/May Spring Rainfall**

## UPLAND HABITAT TRENDS IN IOWA

Region	1990	1995	2000	2005	Change <sup>b</sup>
NW	705	520	250	283	-60%
NC	612	513	219	294	-52%
NE	1,395	1,169	890	973	-30%
WC	939	768	447	477	-49%
C	712	635	372	435	-39%
EC	963	818	647	637	-34%
SW	746	646	545	591	-21%
SC	1,317	1,246	1,349	1,284	-3%
SE	939	868	867	858	-9%
State	8,328	7,182	5,586	5,832	-30%

<sup>a</sup> Potential habitat includes hay, oats, wheat, and CRP acres.  
<sup>b</sup> Percent change between 2005 and 1990 values.

Two factors determine the abundance and distribution of upland game populations in Iowa - weather and habitat. Past versions of the August Roadside Survey have only included weather trends as they have the most impact on the upland game populations from year to year. Habitat trends are a more gradual change and the influence of these gradual changes on upland populations are only evident after looking at years of surveys.

Information from USDA shows upland habitat in Iowa has declined by 30% over the last 15 years

(Table 1). From an upland game perspective Iowa can not produce the numbers of upland game she did only 15 years ago because of the continued loss of upland habitats.

## 2006 ROADSIDE SURVEY CONDITIONS

The August Roadside Survey yields the most consistent results when surveys are completed on mornings with heavy dew, no wind, and sunny skies. Weather conditions during the 2006 survey were generally better than reported in 2005. Staff reported 89% of routes were started with heavy dew in 2006 compared to 85% in 2005, while 76% of routes were started under sunny skies this year compared to only 64% in 2005. Temperatures at the start of routes were also significantly warmer than last year. Regionally, dew conditions were similar or much better than in 2005, except in the NW, NC, and C regions where dew conditions were not as good as 2005. The NE and WC regions reported more overcast conditions during 2006 than 2005.

## RING-NECKED PHEASANT

Statewide. This year the statewide average is 27.9 birds/route and represents a significant decrease (22%) from the 2005 population index (Table 2, Figure 6). This year's index is 17% below Iowa's 10-year average of 34 birds/route (Table 3). Statewide the average number of pheasants observed per route is 38% below the long-term average of 45 birds/route (Table 3, Figure 4). Populations declined in all survey regions in 2006. Counts of total pheasants in the NW, NE, WC, and SW, regions are all significantly lower than those reported in 2005 (Table 2, Figure 6). Counts in other regions were also down, but not consistently. From a statewide perspective the number of hens with broods (-21%), total hens (-17%), chicks (-25%), and broods (-19%) were all significantly lower than values reported in 2005 (Table 3). Average brood size also declined significantly (4.3 in 2006 verses 4.5 in 2005). Staff reported many broods were seen without a hen and that generally chicks were quite large this year - pigeon to adult sized young. This information suggests the pheasant hatch was earlier than normal.

This year's counts are very disappointing given Iowa had a "normal" winter and spring this past year. Normal weather conditions would generally provide a status quo in terms of pheasant numbers in most years. Significantly lower hen and chick numbers suggests Iowa lost hens over the winter, while smaller brood size suggests a poor nesting season. Both together would lead to significantly lower bird numbers. What is puzzling regarding this year's pheasant counts is that quail numbers were higher in WC, EC, SE regions, while pheasant numbers were down (Table 2). If Iowa lost pheasant hens due to winter weather then quail numbers should have also declined.

The August Roadside Survey is also not a perfect tool and counts do not always correspond to hunter harvest. The data from 1993-95 are a good example, in 1993 the survey said pheasant numbers were down significantly compared to the previous year, yet hunters reported an excellent harvest in 1993 (Figure 4). In 1994 the survey said pheasant counts were significantly higher, but hunter harvest was mostly unchanged from 1993. This suggests the roadside survey was "wrong" in 1993 - it did not do a good job of surveying pheasant numbers. The August roadside survey is timed to be conducted given a

“normal” hatch. If the hatch was early in 2006 it is possible that this year’s survey was run too late and thus it did a poor job counting the birds. The fact that many broods had no hen, chicks were physically large, and broods were small suggests that the hatch was early and broods were already breaking up when the survey was conducted.

Whether bird numbers are really down or if the survey simply did a poor job counting birds won’t be known until hunters report their kill after the season. If harvest is better than expected then the survey was wrong. Based on this year’s statewide population count, Iowa pheasant hunters should harvest between 700,000 – 750,000 roosters this fall. If this harvest forecast holds true it will mark the fifth time in the last six years Iowa has not harvested 1 million roosters (Figure 4). This trend is directly related to the loss of upland habitats in Iowa (Table 1). Historically Iowa has always harvested 1 million roosters or more (Figure 4) with South Dakota as the only state capable of topping Iowa’s harvest. Hunters can expect to find some very good pheasant hunting in parts of Iowa this year, but unless future habitat trends change Iowa can probably no longer be considered the best pheasant hunting state in the nation.

Northern Regions. Routes in the NW region averaged 50 birds/route in 2006 or 21% lower than 2005 (Table 2, Figure 6). The NW region had the highest bird densities of any region in 2006. Counts in this region are 8% below the 10-year mean, but 23% above the long-term average (Table 3). Excellent habitat and abundant public lands should offer some excellent hunting this fall. Some of the better counts this year came from Dickinson, Emmet, Lyon, Osceola, and Palo Alto counties (Figure 7).

Counts in the NC region declined 14% in 2006, but it was not a significant decline as some routes did show higher bird numbers in the central portion of the region (Table 2, Figure 6). This year’s count is 13% below the 10-year average for the region and 27% below the long-term average (Table 3). Staff reported better bird numbers in Kossuth, Wright, and Winnebago counties (Figure 7).

Staff in the NE region reported 27% fewer birds on routes in 2006, which was a significant decrease from the 2005 count (Table 2, Figure 6). Above normal snowfall and rain this spring are probably responsible for the decline in bird numbers in this region (Figures 2 and 3). This year’s count is 18% below the 10-year average and almost 60% below the historic average for the region (Table 3). Staff reported better counts in Bremer, Howard, and Buchanan counties in 2006.

Central Regions. Staff in the WC region reported an average of 24 birds/route in 2006, 25% lower than the 2005 estimates (Table 2, Figure 6). This year’s count is 13% below the 10-year average and 53% below the historic average for the region (Table 3). Severe drought from June thru August may have reduced chick survival in the WC region particularly areas closer to the Missouri River (Figure 7). However, staff did report higher bird numbers on a few routes in the eastern half of the region. Good bird numbers were reported in Carroll and Greene counties (Figure 7).

The Central region of Iowa reported significantly lower (-23%) bird numbers in 2006 (Table 2, Figure 6). Counts in this region averaged 39 birds/route, which is 14% below the 10-year average and 20% below the long-term average (Table 3). Hunters in the central portion of this region, where good habitat exists, should see good bird numbers this fall. Some of the better counts in 2006 came from Boone, Hamilton, Jasper, Story, and Webster counties (Figure 7).

Counts in the EC region (22 birds/route) were 26% lower when compared to 2005, but the decline was not significant (Table 2 and Figure 6). Counts remain 30-60 below the 10-year and long-term averages (Table 3). Staff reported localized areas of good bird numbers from Cedar, Jones, and Johnson counties (Figure 7).

Southern Regions. Counts in the SW region declined significantly (-30%) when compared to 2005 (Table 2, Figure 6). This year’s count is 9% below the 10-year average and 67% below the long-term average (Table 3). Similar to the WC region severe drought conditions from June thru August in this region likely influenced brood survival. Better counts in 2005 came from Adair, Cass, and Pottawattamie counties (Figure 7).

Counts in the SC region declined 13% when compared to 2005 (Table 2, Figure 6), but the decline was not statistically significant, indicating some observers did count more birds than last year.

Counts in this region are 40-80% below 10-year and historic averages (Table 3). Why counts declined in this region is puzzling to staff as generalized winter and spring weather summaries for region don't indicate any detrimental weather. This particular region boasts the most "potential" upland habitat of any region in the state (Table 1). However, the region also has a lot of pasture, timber and unmanaged (old sod bound) CRP. A better mixture of cropland with habitat would likely improve counts in this region.

Observers in the SE region reported seeing slightly fewer birds in 2006 (Table 2, Figure 6). The decline (-16%) was not significant indicating better bird numbers were seen on some routes. This year's count is 22% and 30% below the 10-year and long-term averages for the region (Table 3). According to this year's survey better populations can be found in Henry, Keokuk, and Louisa counties (Figure 7).

### **BOBWHITE QUAIL**

Statewide bobwhite quail numbers increased (+32%) in 2006 but the increase was not statistically significant indicating that some regions were up while others were down (Table 2, Figure 6).

This year's index is 30% above the 10 year average of 0.7 quail per route, but well below the historic figure of 1.5 quail per route (Table 3). In Iowa's primary quail range, SW, SC, and SE regions, populations increased significantly in the SE region, but declined slightly in the SW and SC regions (Table 2). Iowa's quail population remains in a long-term decline (Figure 5). Changing land-use, mainly intensified agriculture, is a leading factor in the decline. Unfortunately, this a trend that is likely to continue in the future, unless programs like CRP can be modified to provide for the habitat needs of quail. Only pockets of quail will likely be found across the southern 3 regions this fall (Figure 7). Better counts in 2006 came from Adams, Wayne, Appanoose, Lee, Davis, Van Buren, and Wapello counties.

### **GRAY PARTRIDGE**

The 2006 gray partridge count was 2.0 birds/route, 29% below the 2005 count, but higher counts were reported in some regions, thus the statewide decline was not significant (Table 2, Figure 5). This year's statewide estimate is -35% below the 10-year mean and -52% below the long-mean (Table 3, Figure 5). Regionally counts increased in the NC and NE regions and declined in the NW and EC regions in 2006, although only the decline in the NW region was statistically significant (Table 2, Figure 6). Typically partridge recruitment is highest in Iowa when precipitation is well below normal. Years with average to above average rainfall generally are not conducive to good partridge reproduction. The NC and C regions offer the best partridge numbers in 2006. Better counts came from Lyon, Sioux, Dickinson, Humboldt, Kossuth, Wright, Franklin, Calhoun, Hardin, Boone, and Hamilton counties (Figure 7).

### **COTTONTAIL RABBIT**

This year's cottontail index of 6.5 rabbits/route is unchanged from than last year's estimate of 6.2 rabbits/route (Table 2, Figure 5). The cottontail numbers are right at the 10-year and historical averages (Table 3). Regionally rabbit numbers increased significantly in only the EC and a higher trend was also reported in the SC region (Table 2). Non significant declines in cottontail numbers were reported in the NW, NC, and SW (Table 2, Figure 6). The SC region reported the highest overall cottontail index followed by SW region (Table 2). Cottontail hunters should focus their efforts in Montgomery, Adair, Adams, Taylor, Clarke, Decatur, Lucas, Wayne, Davis, Jefferson, and VanBuren counties (Figure 7).

### **WHITE-TAILED JACKRABBIT**

The 2006 statewide jackrabbit index increased 150% when compared to 2005 (Table 2). This year's index is right at the 10-year average for jackrabbits in Iowa, but it remains 70% below the historic numbers (Table 3, Figure 5). Jackrabbit numbers have declined over time with the loss of their preferred habitats (i.e., small grains, pasture, hayfields) in the NW, NC, WC and C regions

Table 2. Mean numbers of wildlife observed per 30-mile route on the August roadside survey in 2005 and 2006. Only routes run under heavy to moderate dew conditions, in both years, are used for statistical comparisons.

REGION	n	RINGNECKED PHEASANTS										BOBWHITE QUAIL			GRAY PARTRIDGE			RABBITS		
		TOTAL		HENS W/O BROODS		HENS W/ BROODS		CHICKS BROODS		CHICKS/ BROOD		TOTAL	COVEYS		TOTAL	COVEYS		EASTERN COTTONTAIL	WHITE-TAILED JACKRABBIT	
		PHEASANT	COCKS	BROODS	BROODS	BROODS	BROODS	HENS	CHICKS	BROODS	BROOD	BIRDS	BIRDS	COVEYS	BIRDS	COVEYS	COVEYS			
<b>Northwest</b>	25	50.04	5.12	2.52	6.04	8.56	36.36	8.04	4.80	4.80				2.32	0.20	3.80	0.12			
2006		63.48	3.64	2.88	7.80	10.68	49.16	11.76	4.23	4.23			8.56	1.00	4.52	0.04				
2005		<b>-21.2%</b>	<b>40.7%</b>	<b>-12.5%</b>	<b>-22.6%</b>	<b>-19.9%</b>	<b>-26.0%</b>	<b>-31.6%</b>	<b>13.5%</b>				<b>-72.9%</b>	<b>-80.0%</b>	<b>-15.9%</b>	<b>200.0%</b>				
% CHG																				
<b>Northcentral</b>	25	36.96	3.60	1.76	4.92	6.68	26.68	7.12	4.13	4.13			5.16	0.48	2.52	0.08				
2006		42.83	3.22	1.57	5.87	7.43	32.17	7.35	4.32	4.32			4.17	0.48	2.83	0.09				
2005		<b>-13.7%</b>	<b>11.8%</b>	<b>12.1%</b>	<b>-16.2%</b>	<b>-10.1%</b>	<b>-17.1%</b>	<b>-3.1%</b>	<b>-4.4%</b>				<b>23.7%</b>	<b>0.0%</b>	<b>-11.0%</b>	<b>-11.1%</b>				
% CHG																				
<b>Northeast</b>	20	18.40	1.40	1.00	1.80	2.80	14.20	3.40	4.03	4.03			2.10	0.25	5.20	0.13				
2006		25.30	1.70	1.15	2.50	3.65	19.95	4.20	4.69	4.69			1.80	0.20	5.70	0.03				
2005		<b>-27.3%</b>	<b>-17.6%</b>	<b>-13.0%</b>	<b>-28.0%</b>	<b>-23.3%</b>	<b>-28.8%</b>	<b>-19.0%</b>	<b>-14.1%</b>				<b>16.7%</b>	<b>25.0%</b>	<b>-8.8%</b>					
% CHG																				
<b>West Central</b>	21	23.86	1.95	1.10	3.29	4.38	17.52	4.76	3.90	3.90			0.33	0.29	5.62	0.10				
2006		31.60	2.65	1.65	3.55	5.20	23.75	6.15	3.93	3.93			0.10	0.25	5.35	0.00				
2005		<b>-24.5%</b>	<b>-26.4%</b>	<b>-33.3%</b>	<b>-7.3%</b>	<b>-15.8%</b>	<b>-26.2%</b>	<b>-22.6%</b>	<b>-0.8%</b>				<b>230.0%</b>	<b>16.0%</b>	<b>5.0%</b>					
% CHG																				
<b>Central</b>	30	38.50	3.40	1.97	4.90	6.87	28.23	6.87	4.25	4.25			0.03	0.47	4.40	0.13				
2006		50.17	4.07	1.77	6.53	8.30	37.80	8.37	4.46	4.46			0.07	0.43	4.80	0.03				
2005		<b>-23.3%</b>	<b>-16.5%</b>	<b>11.3%</b>	<b>-25.0%</b>	<b>-17.2%</b>	<b>-25.3%</b>	<b>-17.9%</b>	<b>-4.7%</b>				<b>-57.1%</b>	<b>9.3%</b>	<b>-8.3%</b>	<b>333.3%</b>				
% CHG																				
<b>Eastcentral</b>	18	22.17	2.00	0.94	2.61	3.56	16.61	4.28	4.11	4.11			0.61	0.06	6.11	0.13				
2006		30.06	2.17	0.89	3.56	4.44	23.44	4.00	5.50	5.50			0.00	0.00	3.33	0.03				
2005		<b>-26.2%</b>	<b>-7.8%</b>	<b>5.6%</b>	<b>-26.7%</b>	<b>-19.8%</b>	<b>-29.1%</b>	<b>7.0%</b>	<b>-25.3%</b>				<b>-57.7%</b>	<b>-72.7%</b>	<b>83.5%</b>					
% CHG																				
<b>Southwest</b>	17	20.29	2.06	0.76	2.47	3.24	15.00	4.06	3.93	3.93			1.65	0.06	8.35	0.13				
2006		28.94	1.94	1.88	3.18	5.06	21.94	4.94	4.21	4.21			1.71	0.06	12.65	0.03				
2005		<b>-29.9%</b>	<b>6.2%</b>	<b>-59.6%</b>	<b>-22.3%</b>	<b>-36.0%</b>	<b>-31.6%</b>	<b>-17.8%</b>	<b>-6.7%</b>				<b>-3.5%</b>	<b>0.0%</b>	<b>-34.0%</b>					
% CHG																				
<b>Southcentral</b>	23	9.65	0.74	0.96	1.09	2.04	6.87	1.52	4.46	4.46			2.35	0.09	15.61	0.08				
2006		11.05	0.67	0.43	0.86	1.29	9.10	1.86	4.54	4.54			2.86	0.24	11.71	0.09				
2005		<b>-12.7%</b>	<b>10.4%</b>	<b>123.3%</b>	<b>26.7%</b>	<b>58.1%</b>	<b>-24.5%</b>	<b>-18.3%</b>	<b>-1.8%</b>				<b>-17.8%</b>	<b>-62.5%</b>	<b>33.3%</b>					
% CHG																				
<b>Southeast</b>	23	20.04	2.26	0.74	1.78	2.52	15.26	3.09	5.11	5.11			0.39	0.04	7.78	0.13				
2006		23.71	2.29	0.67	2.19	2.86	18.57	4.00	4.61	4.61			0.38	0.05	6.95	0.09				
2005		<b>-15.5%</b>	<b>-1.3%</b>	<b>10.4%</b>	<b>-18.7%</b>	<b>-11.9%</b>	<b>-17.8%</b>	<b>-22.8%</b>	<b>10.8%</b>				<b>2.6%</b>	<b>-20.0%</b>	<b>11.9%</b>					
% CHG																				
<b>Statewide</b>	202	27.85	2.62	1.38	3.37	4.75	20.49	4.98	4.33	4.33			0.87	0.05	6.45	0.05				
2006		35.78	2.61	1.48	4.25	5.73	27.45	6.15	4.48	4.48			2.89	0.32	6.21	0.02				
2005		<b>-22.2%</b>	<b>0.4%</b>	<b>-6.8%</b>	<b>-20.7%</b>	<b>-17.1%</b>	<b>-25.4%</b>	<b>-19.0%</b>	<b>-3.3%</b>				<b>-29.4%</b>	<b>-31.3%</b>	<b>3.9%</b>					
% CHG																				

**BOLD** numbers indicate a mathematically significant change from the previous year ( $P < 0.10$ , Wilcoxon Signed Rank Test). Changes in covey numbers are not tested.

Table 3. Historical upland wildlife numbers from the August Roadside Survey. Numbers represent the average number of animals counted on 30-mile routes<sup>a</sup>.

YEAR	PHEASANTS												BOBWHITE QUAIL			GRAY PARTRIDGE			EASTERN COTTONTAIL			WHITETAILED JACKRABBIT	
	NORTH		NORTH		WEST		CENTRAL		CENTRAL		EAST		SOUTH		SOUTH		EAST		STATEWIDE		STATEWIDE		
	WEST	EAST	WEST	EAST	WEST	EAST	WEST	EAST	WEST	EAST	WEST	EAST	WEST	EAST	WEST	EAST	WEST	EAST	STATEWIDE	STATEWIDE	STATEWIDE	STATEWIDE	
1962	84.7	95.5	85.3	85.3	85.0	74.6	32.3	44.4	44.4	12.8	65.9	0.62	1.13	5.2	0.45								
1973	47.0	56.9	65.4	65.4	66.3	88.7	103.5	72.4	54.3	30.2	65.8	2.54	1.87	5.8	0.20								
1974	46.6	53.2	52.5	52.5	60.5	40.0	55.9	90.1	49.6	16.8	49.7	2.11	1.82	4.1	0.07								
1975	10.5	28.7	52.3	52.3	34.3	43.2	64.3	51.0	45.4	27.4	38.8	1.98	1.98	3.2	0.11								
1976	14.8	42.2	68.1	68.1	44.8	54.9	75.4	49.2	49.2	28.7	48.2	2.19	2.14	6.4	0.11								
1977	26.9	44.2	86.7	86.7	56.9	50.8	78.5	61.7	44.3	24.4	51.7	2.69	4.70	4.3	0.08								
1978	36.3	26.1	68.8	68.8	67.8	50.5	63.2	76.7	45.3	30.5	49.7	1.87	3.73	6.2	0.14								
1979	40.1	29.6	44.8	44.8	49.4	39.2	39.6	80.9	51.5	21.8	42.4	0.66	5.59	3.6	0.16								
1980	51.2	61.7	81.2	81.2	98.7	72.2	63.5	82.1	68.9	37.2	67.0	2.05	8.81	4.2	0.15								
1981	66.4	53.5	83.6	83.6	92.9	57.8	72.9	97.1	57.8	35.2	65.9	2.60	8.08	7.8	0.31								
1982	26.7	27.9	38.9	38.9	55.5	23.1	20.9	47.7	19.3	6.4	32.3	0.79	4.21	6.4	0.10								
1983	9.6	12.8	21.7	21.7	21.6	13.3	25.3	42.6	51.1	27.5	23.7	1.44	2.65	6.8	0.05								
1984	8.8	11.1	19.2	19.2	22.1	14.4	24.5	23.8	38.5	26.4	20.6	0.66	4.22	5.6	0.08								
1985	21.6	28.0	36.4	36.4	40.0	32.7	26.0	59.2	72.6	42.0	34.8	1.37	9.75	7.4	0.07								
1986	27.5	20.4	48.2	48.2	31.2	24.8	29.0	49.7	65.2	27.2	38.9	1.42	9.62	7.7	0.12								
1987	40.2	36.8	59.7	59.7	61.4	41.1	33.2	58.5	64.2	39.0	46.8	2.70	14.93	8.6	0.12								
1988	33.6	35.0	45.1	45.1	60.8	29.6	26.0	45.7	49.8	29.8	38.1	1.96	19.00	4.5	0.17								
1989	25.3	36.5	52.1	52.1	69.9	57.1	35.3	38.6	40.0	39.0	43.2	1.91	17.27	5.4	0.22								
1990	34.3	49.4	63.9	63.9	57.9	44.3	24.7	44.5	31.7	27.3	41.2	1.48	8.75	9.2	0.19								
1991	37.3	45.3	48.8	48.8	77.6	41.6	33.3	61.2	49.4	41.6	46.8	1.34	4.59	5.5	0.07								
1992	24.4	50.5	30.5	30.5	44.0	42.1	37.8	29.4	23.6	34.2	35.8	1.07	3.58	6.0	0.14								
1993	15.8	21.4	15.2	15.2	55.2	23.8	25.0	34.3	24.0	28.1	25.9	0.96	0.85	5.5	0.03								
1994	45.0	74.1	33.3	33.3	83.3	53.6	67.8	47.3	46.0	56.7	56.9	1.58	6.17	6.3	0.15								
1995	26.0	63.2	37.6	37.6	44.7	54.3	54.3	43.7	27.8	43.2	44.6	1.37	2.47	7.0	0.06								
1996	54.7	61.8	29.5	29.5	45.2	49.8	59.4	29.8	19.5	28.2	43.4	0.51	2.37	6.2	0.09								
1997	46.1	62.0	41.2	41.2	37.3	54.7	47.4	31.7	28.8	41.3	44.8	0.77	5.10	4.9	0.10								
1998	74.2	56.7	43.1	43.1	33.9	49.6	53.9	18.1	15.7	41.7	44.6	0.72	6.42	5.1	0.09								
1999	42.7	33.6	21.6	21.6	19.5	37.9	36.0	17.5	12.9	27.0	29.1	0.57	2.83	5.9	0.06								
2000	60.6	33.3	14.9	14.9	29.0	50.3	37.0	25.5	19.3	22.0	34.3	0.57	2.53	6.4	0.03								
2001	22.4	16.0	6.2	6.2	8.4	22.0	19.0	12.0	7.3	4.6	13.9	0.29	1.90	3.8	0.05								
2002	47.0	42.9	13.6	13.6	32.0	49.9	32.0	15.7	11.7	22.6	31.7	0.39	2.82	5.3	0.03								
2003	81.2	67.3	20.7	20.7	36.1	61.2	35.6	29.3	21.8	28.2	44.9	0.89	2.76	8.8	0.03								
2004	54.4	34.4	19.0	19.0	21.5	35.6	24.4	24.9	19.6	24.4	29.7	0.93	2.12	8.1	0.03								
2005	63.5	42.3	25.3	25.3	32.0	49.9	25.9	28.9	12.6	23.5	35.1	0.69	2.79	6.2	0.02								
2006	50.0	37.0	18.4	18.4	23.9	38.5	22.2	20.3	9.7	20.0	27.9	0.87	2.04	6.5	0.05								

**Statistics:**

10 Year Avg.	54.2	42.6	22.4	22.4	27.3	45.0	33.3	22.4	15.9	25.5	33.6	0.7	3.1	6.1	0.05							
Long-term Avg.	40.6	50.5	45.1	45.1	51.1	48.4	48.4	62.1	39.0	28.6	45.1	1.52	4.26	6.3	0.17							
<b>Percent Change from:</b>																						
10 Year Avg.	-7.7%	-13.2%	-17.8%	-17.8%	-12.7%	-14.4%	-33.5%	-9.4%	-39.4%	-21.5%	-17.1%	30.3%	-34.9%	6.0%	1.0%							
Long-term Avg.	23.3%	-26.8%	-69.2%	-69.2%	-53.3%	-20.4%	-54.2%	-67.3%	-75.3%	-30.0%	-38.2%	-42.6%	-52.2%	3.1%	-70.3%							

<sup>a</sup> Values do not match those in Table 1 because historical data is based on ALL routes completed, whereas values in Table 1 are calculated only between directly comparable routes.

<sup>b</sup> All data is used to compute long-term averages, but first 10 years of historical data is not show in table because of limited space.

# Statewide Pheasant Trends

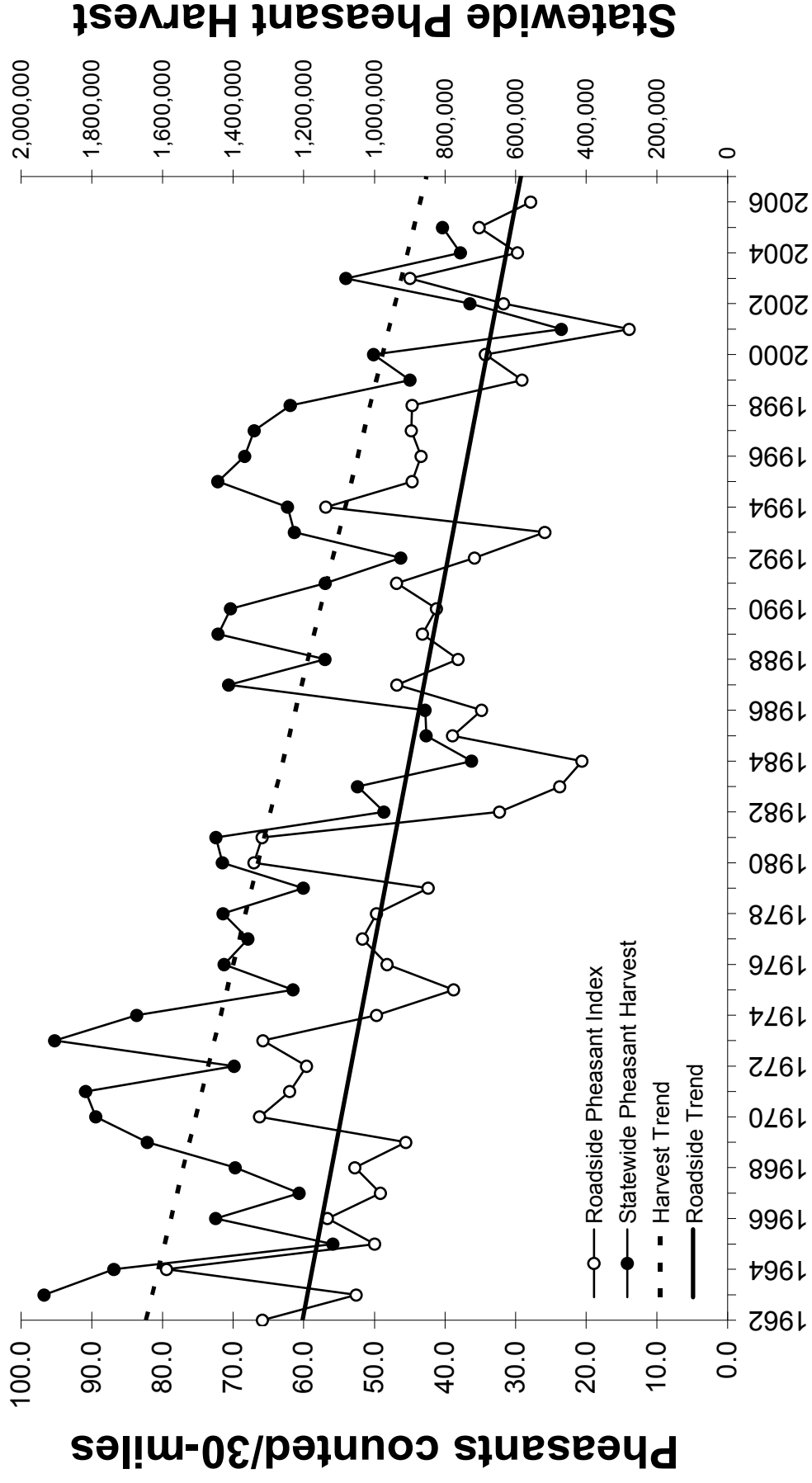


Figure 4. Mean number of pheasants counted on 30-mile August roadside survey routes, statewide, 1962-present compared to total statewide pheasant harvest.

# Statewide Upland Game Trends

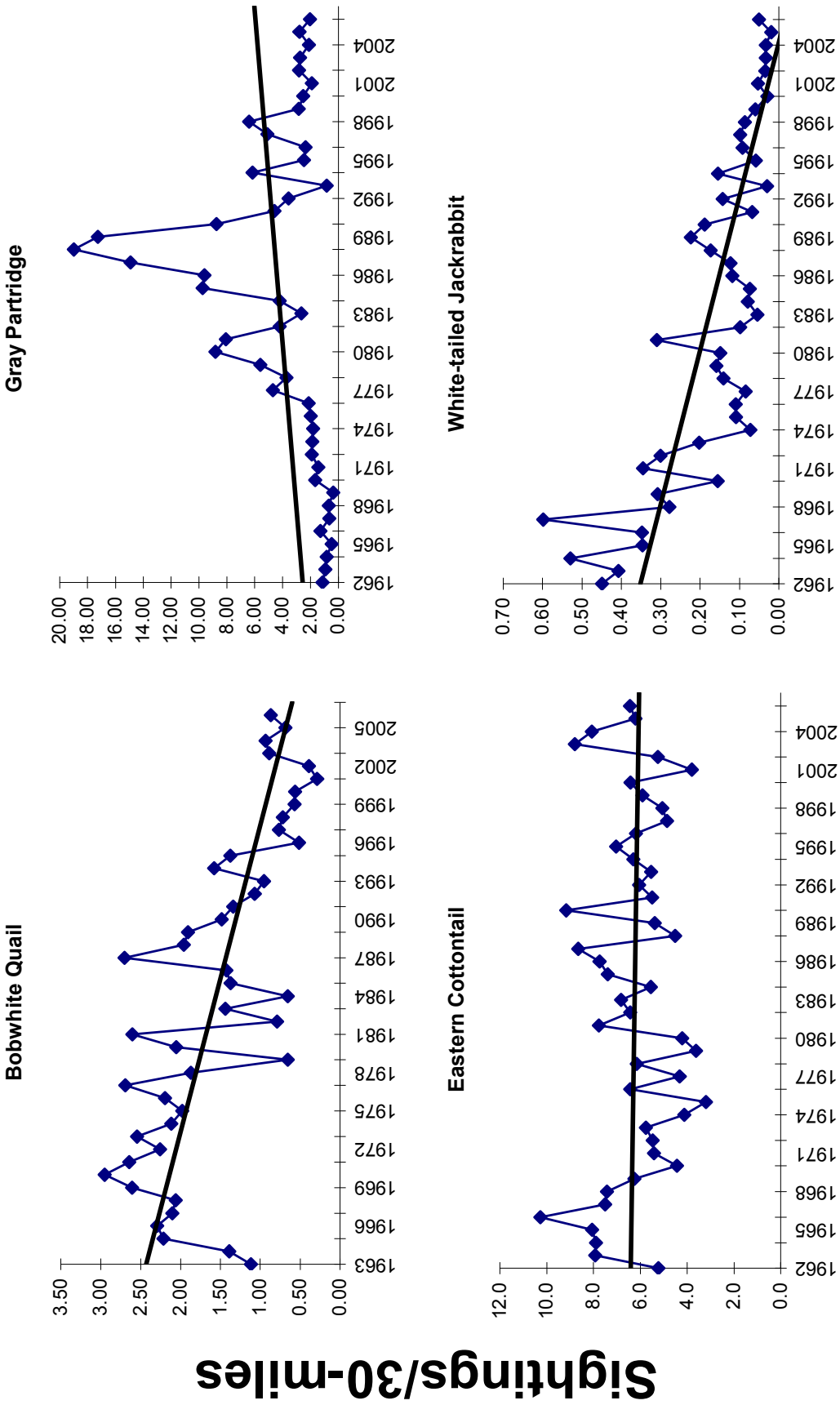


Figure 5. Mean number of quail, partridge, cottontails, and jackrabbits sighted per 30 mile route on the August roadside survey, statewide, 1962 to the present.

# 2006 August Roadside Survey

### Statewide

	2005	2006	Change
Pheasant	35.8	27.9	-22.2%
Quail	0.66	0.87	31.8%
Partridge	2.9	2.0	-29.4%
Cottontail	6.2	6.5	3.9%

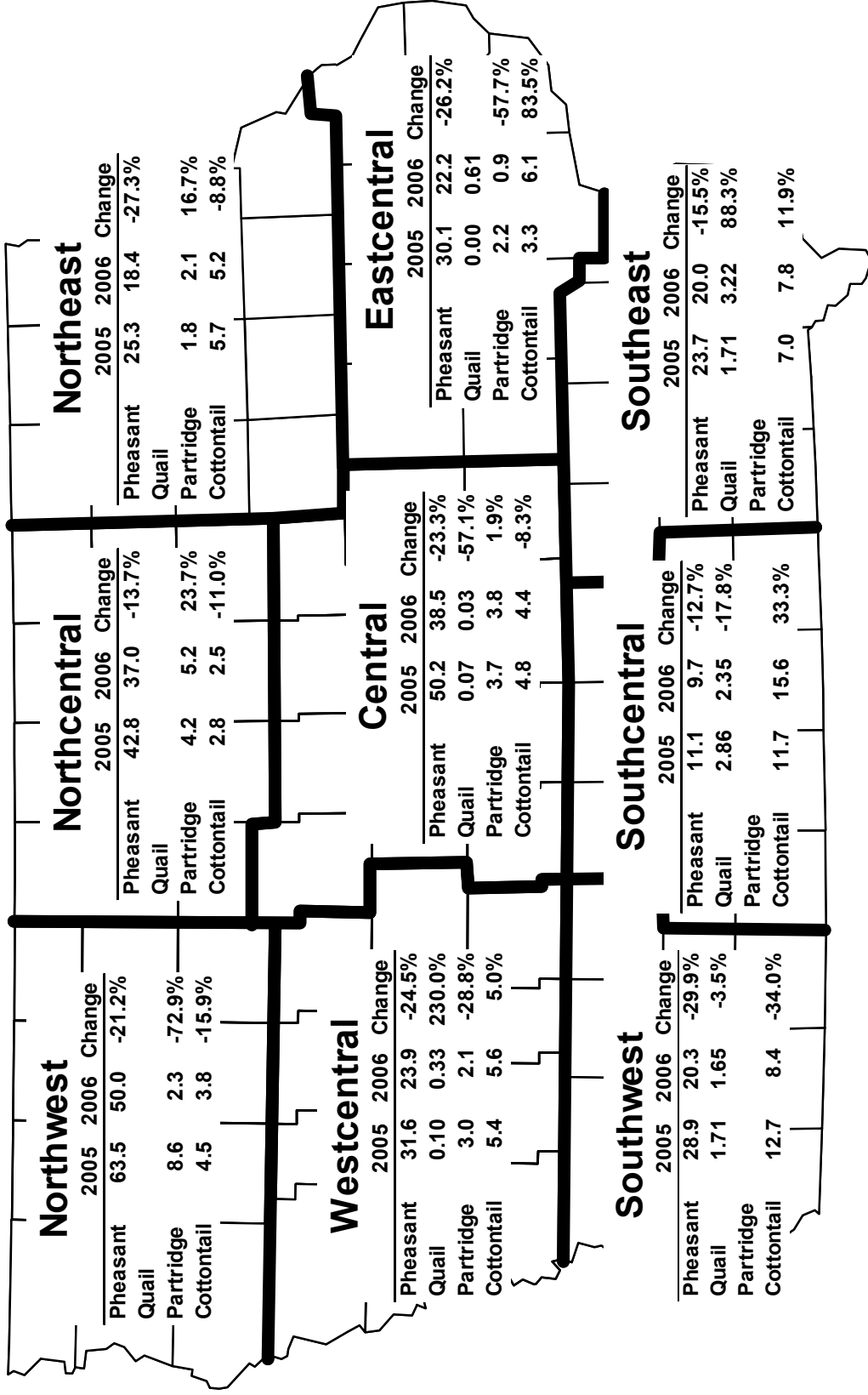
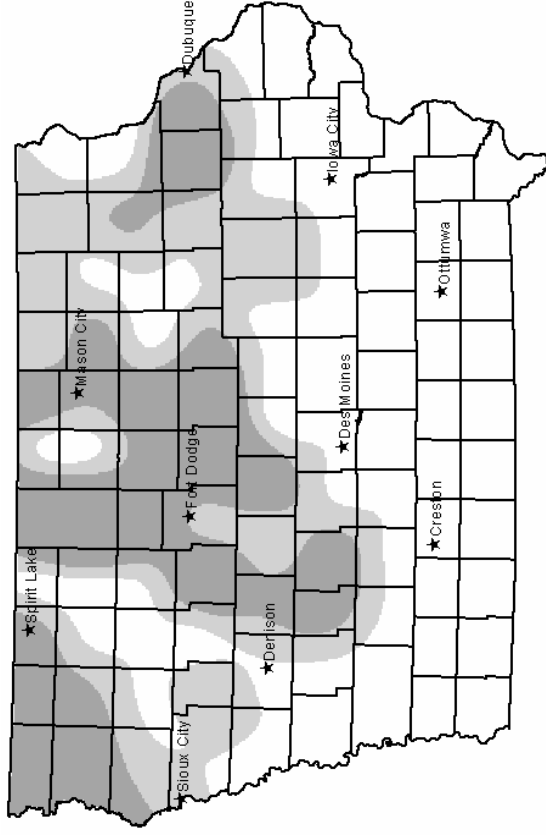
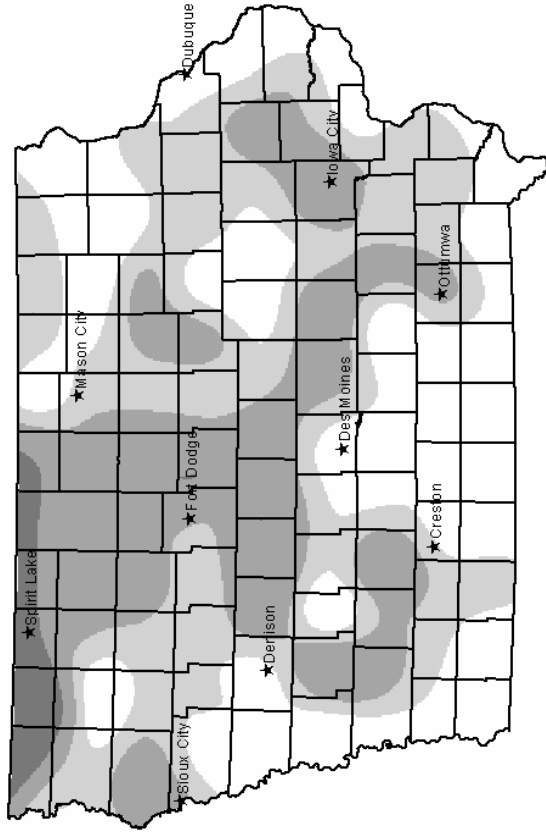


Figure 6. Numbers indicate the average number of animals counted on 30 mile routes in each region (e.g., the northwest region counted an average of 50.0 pheasants on 30-mile survey routes in 2006). Data from 202 of 215 total routes.

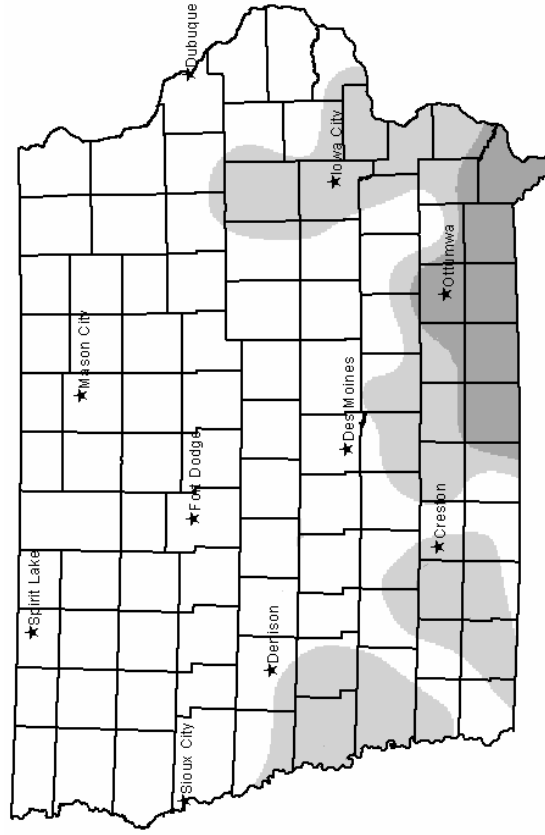
# 2006 GAME DISTRIBUTION

## GRAY PARTRIDGE

### PHEASANT



### QUAIL



### COTTONTAIL

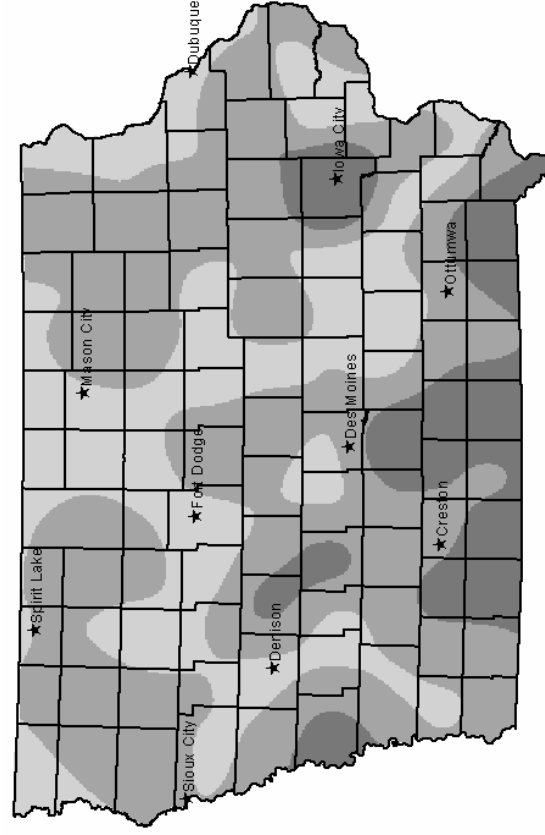


Figure 7. Iowa 2006 small game distribution maps represent generalized game abundance. There can be areas of low game abundance in regions with "high" counts and vice versa.