

Deer Hunter Wildlife Survey

2014

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Abstract

Wisconsin deer hunters were asked to voluntarily submit their observations of deer and other wildlife they observed while afield hunting deer in 2014. Deer hunters were encouraged to submit observations via an online survey form. As done in 2013, a sample of seventeen thousand deer hunters were drawn and mailed a paper survey form in 2014. Approximately 15,000 hunting trips encompassing 66,100 observation hours were reported during the 2014 deer hunting seasons via the online and mailed surveys. Trips were reported from 80 of Wisconsin's 81 new deer management units. Statewide, hunters averaged seeing 0.40 deer per hunting hour, a decrease from 0.43 deer seen per hunting hour in 2013.

Methods

Since deer hunters spend many quiet observation hours waiting for deer; they can be a source for information on species that may be hard to observe. A survey form was developed for hunters to report their wildlife observations while hunting deer. In addition to the online survey method used in previous years, a sample of 17,000 (240 per county) deer hunters were drawn and mailed a paper survey form. Surveys were mailed in early September before the start of the archery deer season. Deer hunters could submit observations directly via the online survey form or by returning the mailed paper survey form. Survey instructions were found on the webpage or on the reverse side of the mailed paper survey form.

As asked in prior survey years, both survey types asked hunters to report the date they hunted, number of hours, a rating of the weather from 1–10 (1=worst 10=best), and the number of deer, turkey, skunk, house cat, ruffed grouse, red fox, gray fox, coyote, wolf, raccoon, porcupine, opossum, badger, bear, bobcat, fisher, elk and otter they saw while hunting. The survey also contained a comment field where hunters could write in any other wildlife not listed that they may have observed. Hunters could also provide their email address to have a personalized summary sent to them at the end of the survey period. Hunters were encouraged to report their hunting activity even if no wildlife was sighted.

Following a two-year evaluation of Wisconsin's deer management program, new deer management zones (DMZs) and deer management units (DMUs) were defined. Formally called regions, the state is now divided into four DMZs (Central Forest, Central Farmland, Northern Forest, and Southern Farmland) and hunters were asked to report the zone they hunted in. DMUs are now designated by county and tribal reservation. Sixty-three DMUs follow county boundaries and nine counties (Adams, Clark, Eau Claire, Jackson, Juneau, Marinette, Monroe, Oconto, and Wood) are split into two DMUs each, totaling 81 DMUs. There are also 5 tribal DMUs. In addition to zone and county, hunters were asked to report the land type they hunted on, public or private.

Hunters who signed up for e-mail updates on deer issues ($\approx 25,000$) were sent an informational e-mail about the survey and a link to the survey's informational web page before the start of the archery and gun deer seasons. A press release was issued about the survey and an informational link was put on the Wisconsin DNR's main web page. Hunters were allowed the option of signing up for e-mail updates that specifically applied to the deer hunter wildlife survey. These hunters ($\approx 1,400$) were sent updates of survey results every month and were reminded to continue to record their observations during the deer hunting season. A tally sheet was made available on the webpage so hunters could record their observations while they were away from a computer for an extended period of time. The survey webpage was anonymous, and allowed any hunter with computer access to report their observations without a user ID or password. A link was provided for deer hunters to send in via e-mail any trail camera pictures of endangered species, or of animals that are not normally seen in their hunting area.

Results

Deer hunters reported 15,142 hunting trips. Trips were reported from 80 deer management units, no reports from tribal units were received. Hunters reported spending 66,165 observation hours in the field, and averaged 4.37 hours per trip. Most trips and observation hours occurred in the Central Farmland Zone followed by the Northern Forest, Southern Farmland, and Central Forest zones (Table and Figure 1).

Deer: Statewide, hunters averaged 0.40 deer seen per hour. This is the first decrease in deer seen per hour since the online version of the survey began in 2009. Deer seen per hour varied between deer management zones with the high being the Central Forest Zone averaging 0.58 deer per hour and the low being the Northern Forest Zone averaging 0.26 deer per hour (Table 1).

Hunters reported hunting activity in 80 of the state's new deer management units; no reports were received from the tribal units. Comparisons between deer management units should be done cautiously due to small sample sizes in several lightly hunted units. Deer seen per hunter hour by deer management unit varied with the lowest deer per hour being 0.08 (Douglas, Northern Forest) and the highest at 1.72 (Winnebago, Central Farmland, Figure 2).

Deer sightings changed as the season progressed; deer seen per hour started at a high of 0.73 during the first week of the archery season (September 13 – September 19). The second week of the deer season, sightings decreased to 0.49 and remained fairly constant until the start of the 9-day gun deer season (November 22 – November 30). Deer seen per hour during the 9-day gun deer season was the second lowest week of deer sightings (0.29). Deer seen per hour increased in the remaining five weeks following the 9-day gun deer season, except for week 14 which was the lowest deer seen per hour (0.25) for the survey period (Figure 3).

Weather rankings fluctuated slightly throughout the season (lowest 5.9; highest 7.5; with 1 being the worst and 10 being the best). The 9-day gun deer season (November 22 – November 30) had the lowest weather ranking of 5.9 by deer hunters (Figure 3).

Other Wildlife: The most frequently observed species other than deer were turkeys. Hunter sightings varied greatly by zone, with most sightings occurring in Wisconsin's primary turkey range, the farmland zones (Table 2). The next most frequently seen animal was the ruffed grouse, with sightings per hour closely matching the species primary and secondary range. Sightings for the other species also closely matched perceived areas of primary and secondary range (Table 2 and Figure 4).

Reporting rates for many of the mesocarnivores (small-medium carnivores) generally followed their perceived ranges, having highest reporting rates in the two farmland zones. Bobcat, otter, and badger had highest reporting rates in the Northern Forest Zone (Figure 4).

Reporting rates for the larger carnivores also generally followed perceived range. Wolves had the highest reporting rate in the Northern Forest Zone. Coyotes had the highest reporting rate in the Southern Farmland Zone. The bulk of the bear observations occurred in the Northern Forest Zone. Caution should be taken when comparing observation rates between species or species groups. No correction for observer bias has been made and it is very likely that larger more mobile species that move more during daylight or twilight hours are more likely to be seen than other more nocturnal animals (Figure 4).

Hunters were also given a chance to list any other species of animal they saw that was not already on the survey. Squirrels were the most commonly reported animal. Other animals reported included owl, song bird, hawk, bald eagle, pheasant, goose, sandhill crane, duck, crow, woodpecker, great blue heron, swan, woodcock, chipmunk, mink, weasel, rabbit, snowshoe hare, dog, beaver, muskrat, American marten, woodchuck and flying squirrel.

Comparisons: This was the sixth concurrent year of the Deer Hunter Wildlife Survey. Despite using the same survey techniques as 2013, mailed paper surveys in combination with the online survey form, deer hunters reported 31% less trips than in 2013.

The 2014 survey year was also the first decrease in the statewide deer seen per hour hunted (0.40). Prior years reported: 0.43 (2013), 0.39 (2012), 0.32 (2011), 0.28 (2010), and 0.19 (2009). Due to boundary changes, comparisons between deer management zones (formally regions) were not made.

Overall, hunters saw more other species per 1000 hours hunted in 2014 than 2013. Turkeys had the greatest increase per 1000 hours hunted in 2014 (261.47, 246.85 in 2013). Only skunk, opossum, bobcat, and fisher were seen slightly less than in 2013.

Trail Camera Photographs: Many hunters from all around Wisconsin sent in interesting and unidentified wildlife photos. Pictures of bobcat, fisher, bear, wolf, badger, fox, radio-collared deer, elk, and many other species will help in the Wisconsin DNR's understanding of the movements and distribution of these animals. Hundreds of trail camera photographs and videos were received from the online e-mail request.

Thank you to all the anonymous hunters from across the state that took the time and interest in Wisconsin's wildlife to fill out the online survey or send in a trail camera photograph! Because of your hard work and awareness, the Wisconsin DNR can have another independent estimate of distribution and abundance of wildlife across the state.

Table 1. Deer hunter wildlife observations of deer by deer management zone.

Deer Management Zone	Trips	Hours	Bucks/ Hour	Does/ Hour	Fawns/ Hour	Unknowns/ Hour	Total Deer/ Hour
Central Farmland	5,870	24,106	0.11	0.24	0.17	0.06	0.45
Central Forest	1,090	5,455	0.06	0.12	0.06	0.03	0.58
Northern Forest	4,453	22,585	0.04	0.15	0.08	0.02	0.26
Southern Farmland	3,729	14,019	0.13	0.25	0.16	0.05	0.29
Statewide	15,142	66,165	0.09	0.20	0.12	0.04	0.40

Table 2. Other species seen by deer hunters by DMZ per 1,000 hours hunted.

Zone	Turkey/ 1000 Hours	Skunk/ 1000 Hours	House Cat/ 1000 Hours	Ruffed Grouse/ 1000 Hours	Red Fox/ 1000 Hours	Gray Fox/ 1000 Hours	Coyote/ 1000 Hours	Wolf/ 1000 Hours	Raccoon/ 1000 Hours	Porcupine/ 1000 Hours	Opossum/ 1000 Hours	Badger/ 1000 Hours	Bear/ 1000 Hours	Bobcat/ 1000 Hours	Fisher/ 1000 Hours	Otter/ 1000 Hours	Elk/ 1000 Hours
Central Farmland	308.23	0.83	6.97	16.84	4.36	2.61	7.80	0.91	15.43	1.08	0.79	0.21	1.12	0.87	1.87	1.04	0.0
Central Forest	184.97	0.37	1.10	21.27	1.65	0.18	10.08	6.05	9.53	1.83	0.18	0.00	2.02	0.37	1.28	0.92	0.0
Northern Forest	105.82	1.11	5.09	78.37	0.93	0.80	8.68	9.52	4.92	5.14	0.22	0.53	10.76	1.28	1.28	1.82	2.08
Southern Farmland	461.60	3.14	10.06	9.13	4.14	9.20	18.26	7.42	26.47	0.43	1.00	0.07	7.35	0.21	0.07	0.64	7.13
Statewide	261.47	1.38	6.50	36.58	2.92	3.19	10.50	5.65	13.69	2.39	0.59	0.27	5.80	0.83	1.24	1.21	2.22

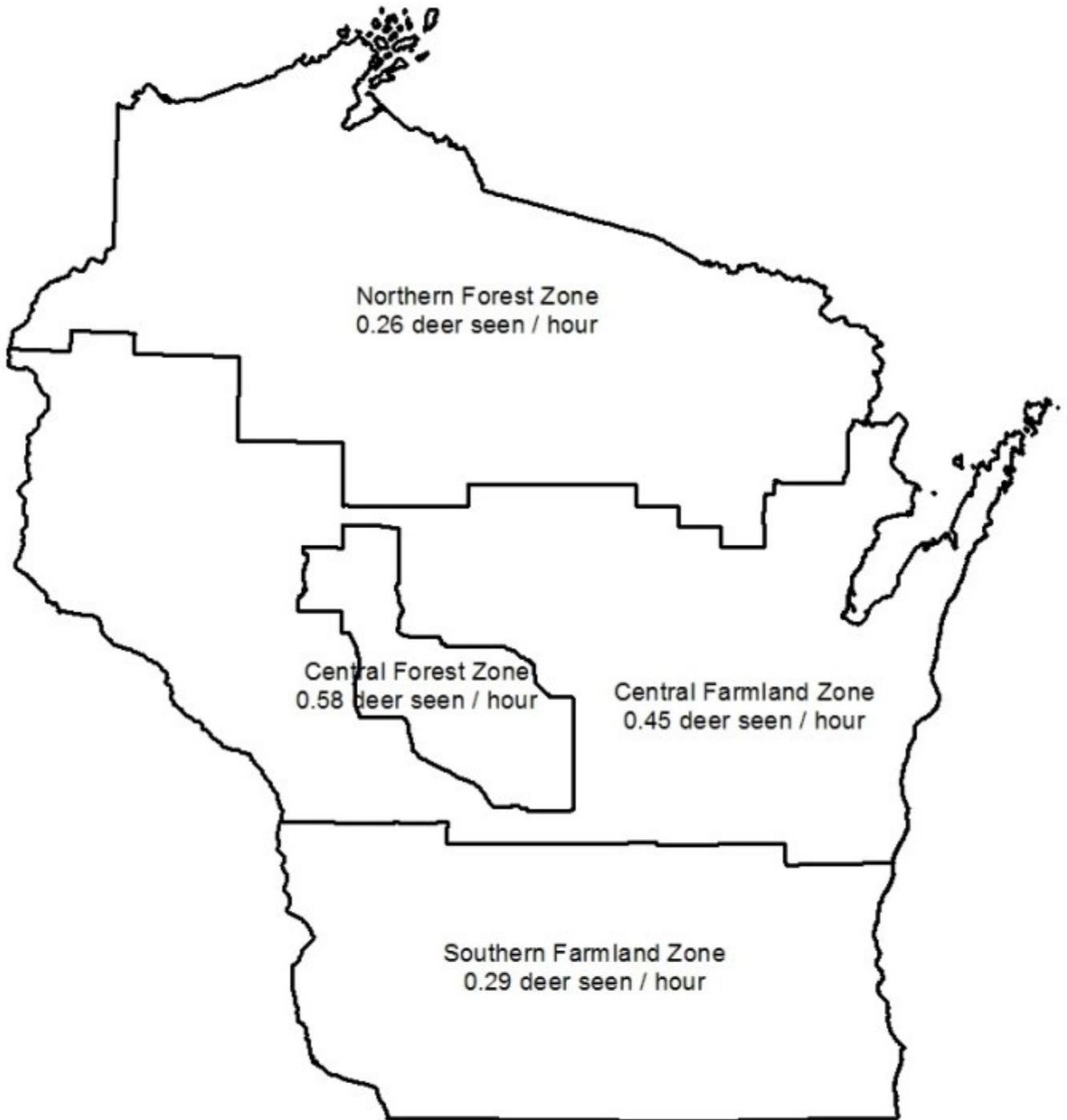


Figure 1. *Deer seen per hour by deer management zone.*

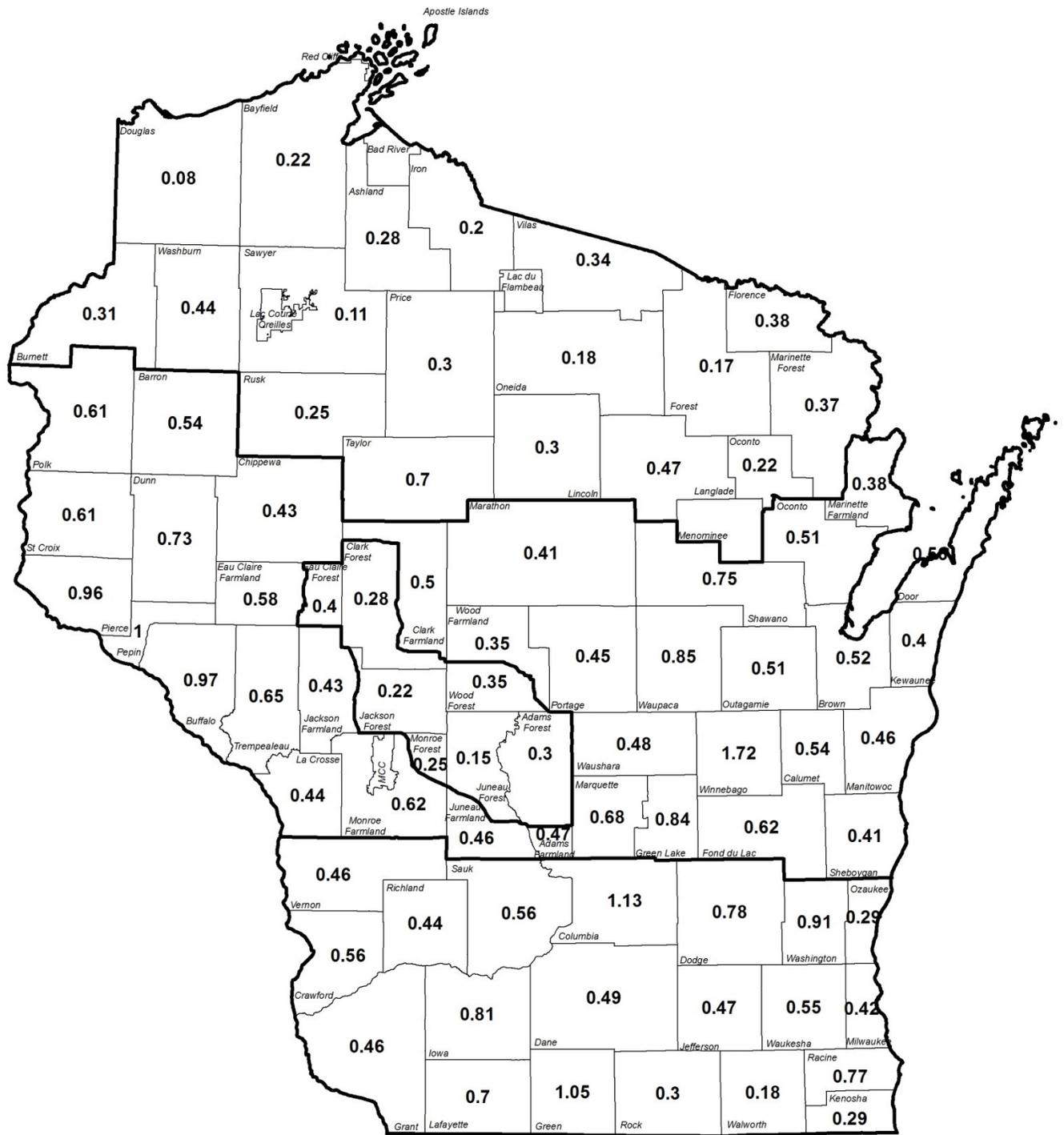


Figure 2. Deer seen per hour by deer management unit.

Deer Hunter Wildlife Survey Weather and Deer Seen 2009-2014

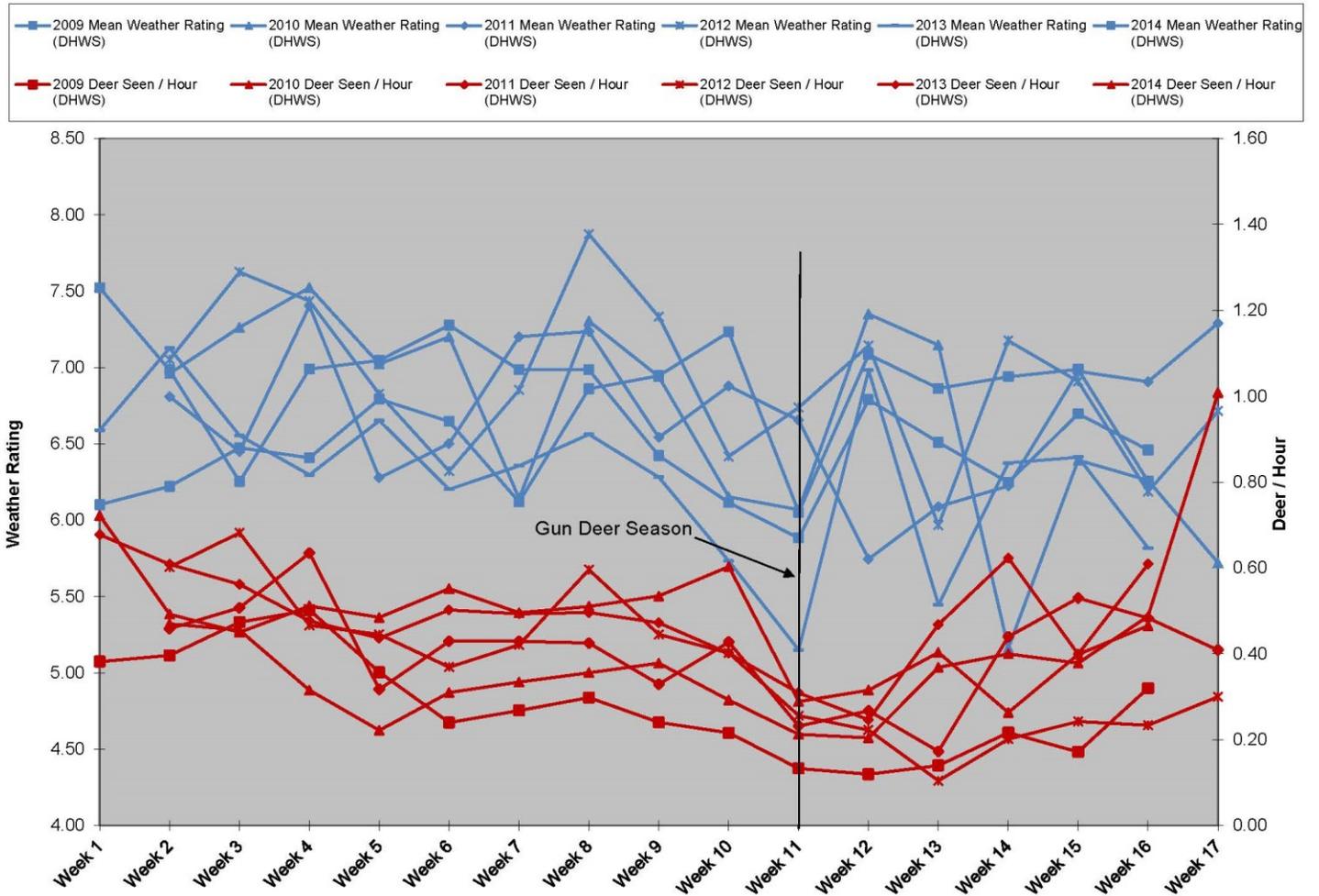


Figure 3. Deer seen per hour and mean weather rating by week.

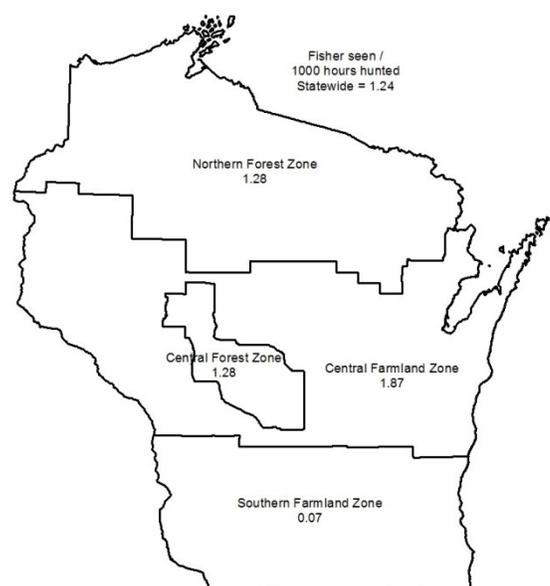
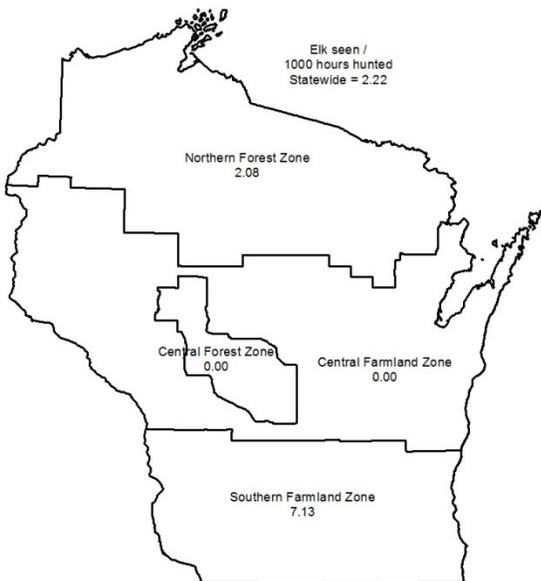
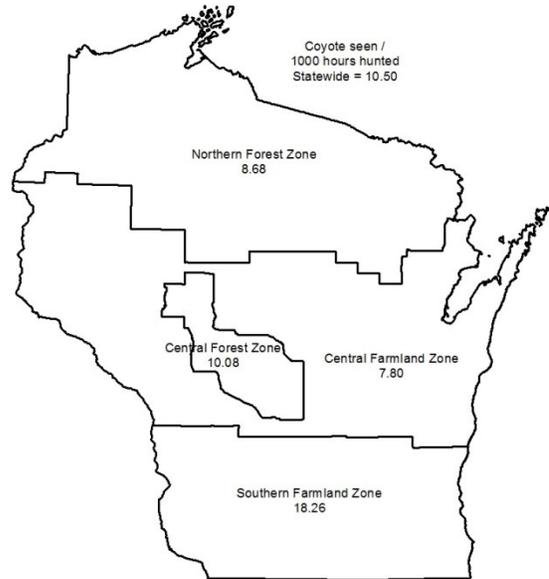
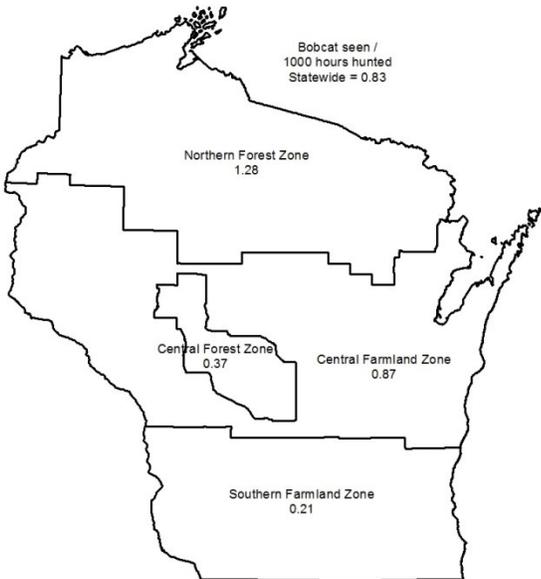
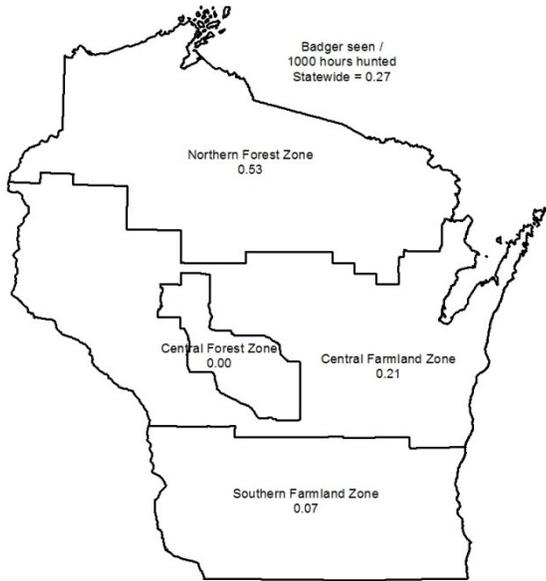


Figure 4. Other species seen by deer hunters per 1,000 hours hunted by DMZ.

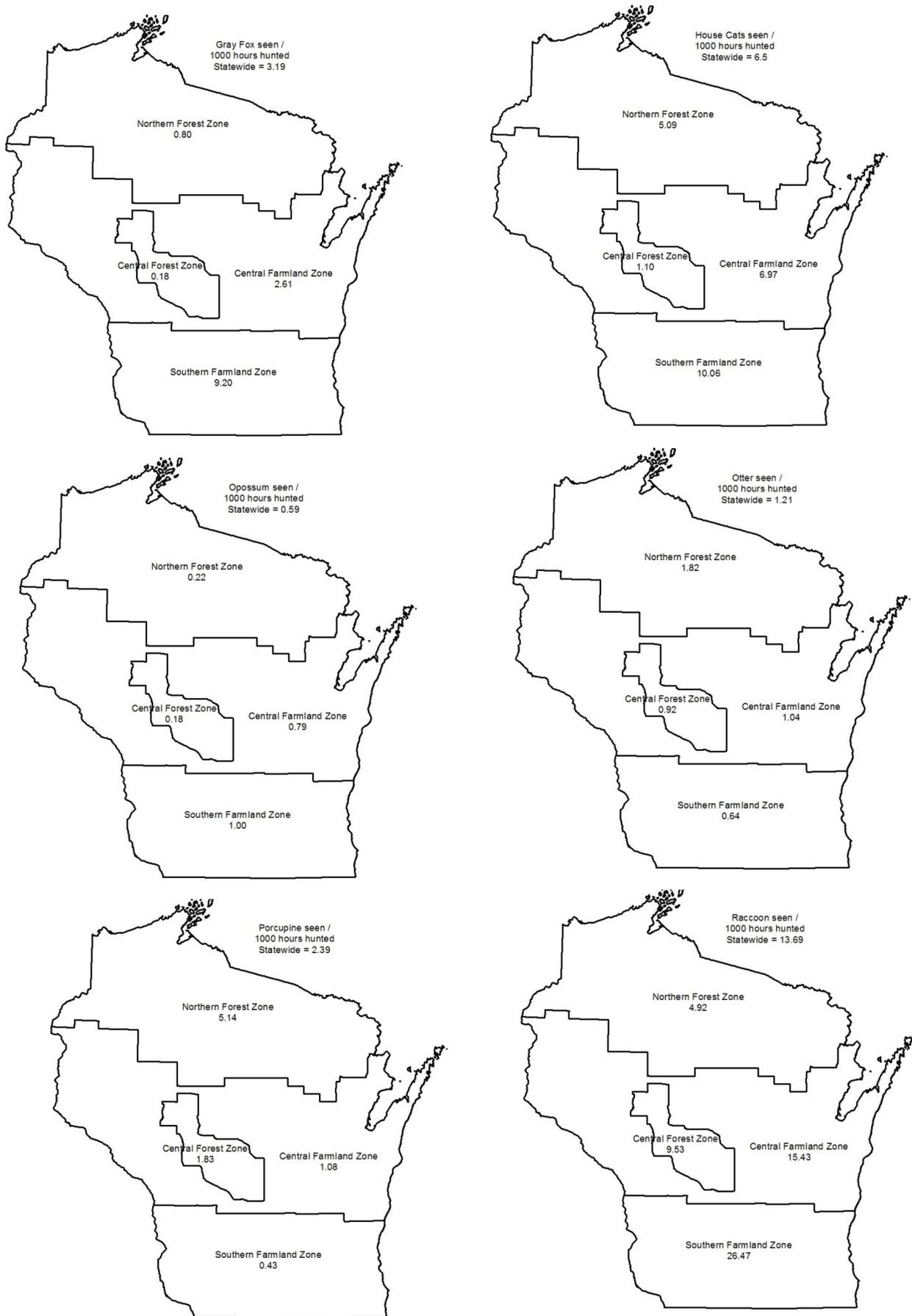


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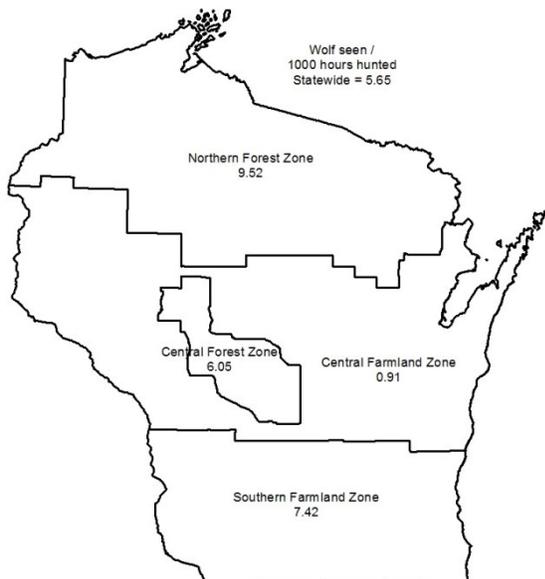
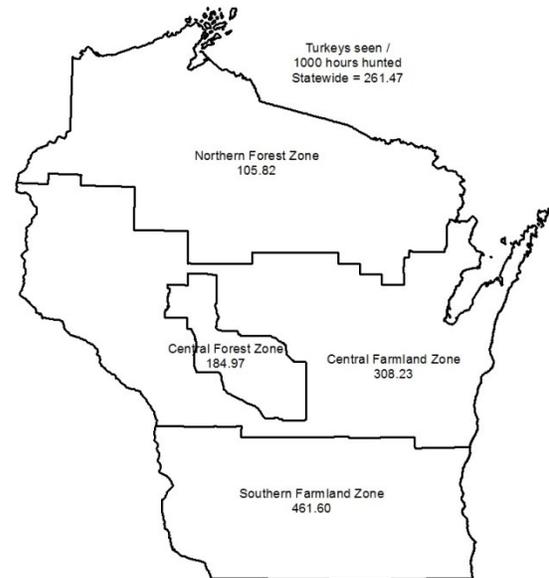
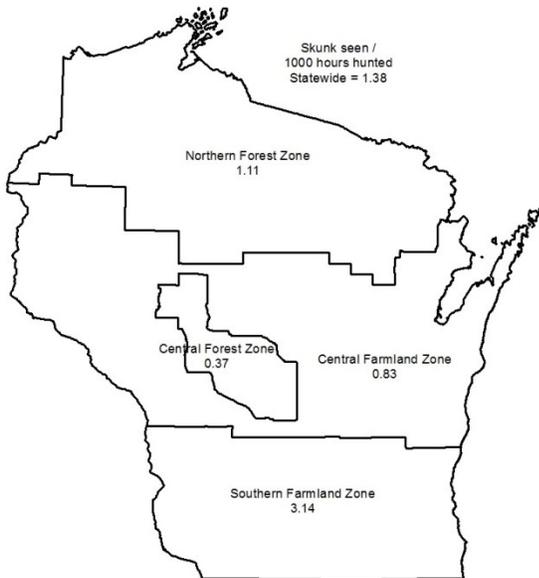
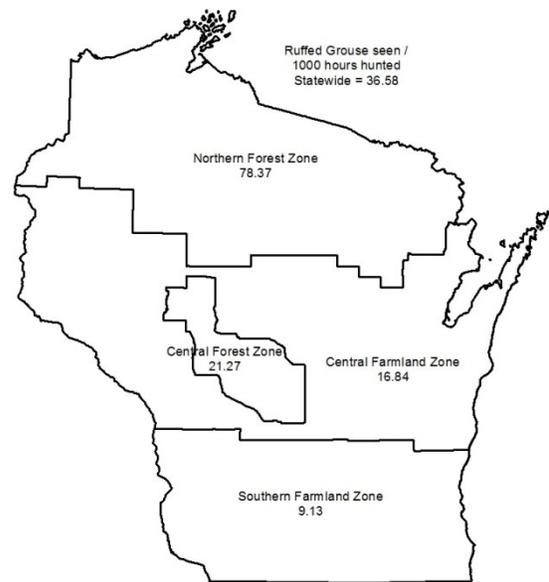
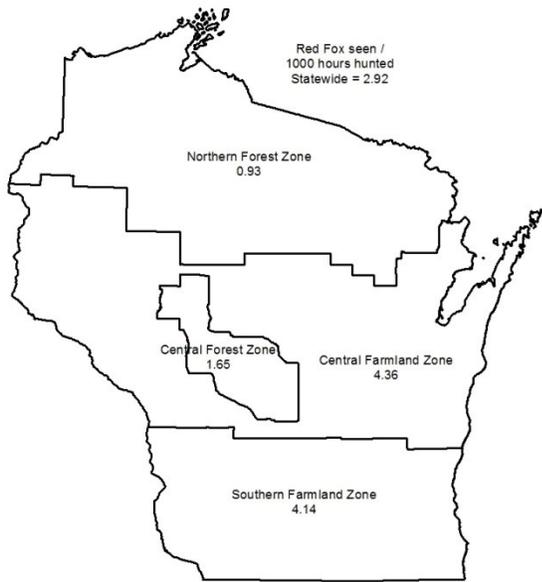


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