

2024 Lake Shelbyville Spring Gobbler Season Results

To obtain information on the status of Lake Shelbyville's wild turkey population as well as information on characteristics, attitudes, and preferences of wild turkey hunters at Lake Shelbyville, annual spring gobbler data collection was initiated in the spring of 2007. Results are helping to focus habitat management in areas of the lake that have low populations of turkeys. Timber stand improvements (TSI) which consist of thinning the timber to enhance mast production and understory growth (1,200+ acres since 2008), nesting cover establishment, prescribed burning (6,000+ acres burned since 2006), wildlife plantings, and invasive species eradication (such as bush honeysuckle and autumn olive), are all being implemented on Lake Shelbyville to enhance the overall habitat.

Participation in these surveys is critical to being able to track population trends and management efforts over time. We are seeing positive trends. Hunters that returned their surveys are greatly appreciated!

METHODS

Each year 10 hunters are drawn per season in Moultrie County and 12 hunters per season in Shelby County. The feedback form is self-administered and distributed to all hunters successfully drawing a Lake Shelbyville turkey permit (n=110). The two-part feedback form requested information from daily hunts, opinions, and other information. Cooperators were asked to record hunting information and return their forms at the end of their season. Follow-up mailings were not attempted. Return rates were 40% (20/50) for Moultrie County and 51.6% (22/60) for Shelby County. Persons who returned their results are referred to as cooperators in the following tables. Results were calculated by county rather than by Lake Shelbyville as a whole due to hunters only being able to hunt portions of the lake.

We would like to see these return percentages higher as the information is invaluable to tracking our management efforts. **PLEASE** take the time to fill out your survey and return it in the Self Addressed Stamped Envelope provided. It takes quite a bit of work for Lake Shelbyville staff to mail out the surveys and compile the data. Your help is greatly appreciated!

RESULTS AND DISCUSSIONS

Hunter Statistics

Effort – Feedback forms were returned by 42 individuals. Moultrie County cooperators (n=20) reported data on 358.5 hours of hunting over 88 hunts. The average Moultrie hunter scouted for 4.2 days prior to the season, hunted 2.35 days, and hunted approximately 4.07 hours/trip. Several cooperators did not miss a day. Hunting effort peaked in 3rd season (5 hours/hunt) followed by 1st season (4.20 hours/hunt). Shelby County cooperators (n=31) reported data on 533.5 hours of hunting over 112 hunts. The average Shelby hunter scouted 2.6 days prior to the season, hunted 2.8 days and averaged 4.76 hours/hunt. Hunting effort peaked in 5th Season (6.05 hours/hunt) followed by 4th season (5.43 hours/hunt).

Decoy use was higher for Moultrie hunters (70%) than Shelby hunters (54%; Table 1).

Table 1. Hunting effort, scouting, and decoy use by County for cooperating wild turkey hunters at Lake Shelbyville.

Year	County	Hunters (n)	*Hunting Days (n)	Average Hunts/ Hunter	Average Hours Hunted/ Day	Average Scouting Days/ Season	% Using Decoys
2024	Moultrie	20	20	4.8	3.58	4.2	70%
2024	Shelby	22	26	5.6	4.76	2.64	54%

Hunter Success. –A total of 16 gobblers were killed in Moultrie County and 14 in Shelby County according to the Illinois Department of Natural Resources (IDNR) Telecheck. Lake Shelbyville Moultrie county hunters had a success rate of 32%, and Shelby county had a 23.3% success rate. Graph 1 shows the turkey harvest from 2007 – 2024 by county as reported to IDNR Telecheck.

The following pertains to the data reported by the cooperators. During the 2024 turkey season Moultrie County had a success rate of 70% (14/20) and Shelby County had a success rate of 59% (13/22). Moultrie county cooperators on average heard 4.7 gobblers, called in 2 gobblers, saw 3, killed 0.70 birds/hunter and missed 0.10 birds/hunter over their season. On a per hunt basis, cooperators heard 1.07 birds, called in 0.45, saw 0.68, killed 0.16 and missed 0.23 birds/hunt (Table 2-5). Forty - Four percent were killed by 7:00 A.M and 55% were killed from 7:30 – 9:30. Age distribution of harvested birds was exactly 42% Jakes/57% Adults (which indicates a decent hatch in 2023). Seventy percent of cooperators said they would/did intentionally pass a Jake (up from 19% in 2011).

Shelby County cooperators heard 8.9 gobblers, called in 3, saw 4.95, killed 0.59 birds/hunter, missed 0.18 birds/hunter and crippled 0.0 birds/hunter over their season (Table 2-5). On a per hunt basis, Shelby cooperators heard 1.75, called in 0.59, saw 0.97, killed 0.12 and missed 0.03 birds/hunt. Only twelve percent were killed by 7:00 A.M. with 87% being killed between 7:30 and 10:20 A.M. The Shelby County harvest was also made up of 42% Jakes and 57% adults. Seventy – seven percent of cooperators said they would intentionally pass a Jake.

Graph 1. Turkey Harvest by Year and County for Lake Shelbyville as reported to IDNR Telecheck.

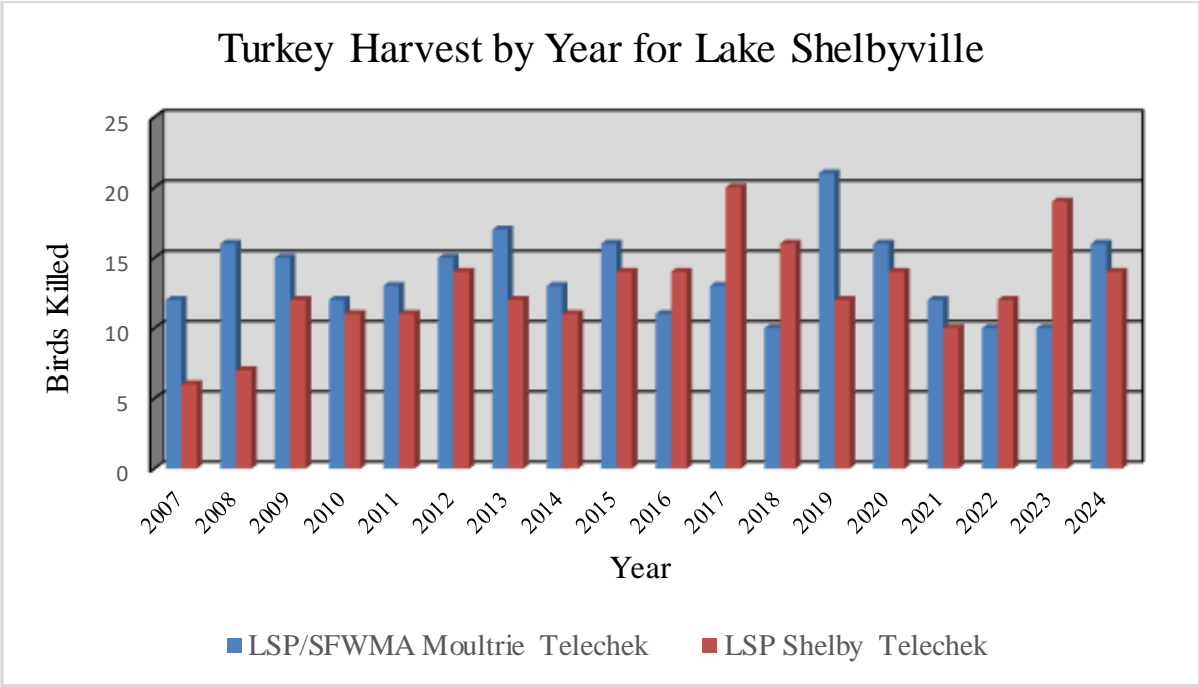


Table 2. Hunting effort (Hours/Hunt) by season for Moultrie and Shelby Counties at Lake Shelbyville.

Year	County	Youth	Season 1	Season 2	Season 3	Season 4	Season 5
2024	Moultrie	NA	4.20	1.5	5.12	3.86	3.64
2024	Shelby	NA	5.18	4.06	4.14	5.54	6.14

Table 3. Season gobbler statistics by County reported by cooperating wild turkey hunters at Lake Shelbyville.

Year	County	Gobblers Heard	Gobblers Called In	Gobblers Seen	Gobblers Killed	Gobblers Missed	Gobblers Crippled
2024	Moultrie	4.7	2	3	0.70	0.10	0.0
2024	Shelby	8.9	3	4.95	0.59	0.18	0.0

Table 4. Per hunt gobbler statistics as reported by cooperating wild turkey hunters by County at Lake Shelbyville.

Year	County	Gobblers Heard	Gobblers Called In	Gobblers Seen	Gobblers Killed	Gobblers Missed	Gobblers Crippled
2024	Moultrie	1.07	0.45	0.68	0.16	0.23	0.0
2024	Shelby	1.75	0.59	0.97	0.12	0.03	0.0

Table 5. Total Gobbler's Killed, Hunter Success, Average Distance, and Season Killed. DNR telecheck data included. * Numbers in parentheses are the number of birds reported by Lake Shelbyville cooperators compared to DNR telecheck data.

Year	County	Killed*	Missed/ Crippled	*Success Rate %	Average Shot Distance (Yards)	Season Killed as Reported
2024	Moultrie	(14) 16	2, 0	(30%) 20%	28, (26 - Miss)	1st (6), 2nd (2), 3rd(1), 4th (1), 5th (6)
2024	Shelby	(13) 14	4, 0	(32%) 20%	40, (27 – Miss)	1st (4), 2nd (6), 3rd (2), 4th (0), 5th (2)

Note that the successful hunters are much more likely to return their surveys than cooperators who were unsuccessful.

Season Ratings

Overall, 70% of Moultrie County cooperators opinions of their season were favorable with ratings of fair (5%), good 50%), and excellent (15%). However, 24% of hunters rated their season as poor. Overall favorable ratings for Shelby County were 70% with ratings of fair (4.8%), good (48%), and excellent (19%). However, 28% rated their season as poor (Table 6).

Table 6. Percent of cooperators rating their season by County for Lake Shelbyville.

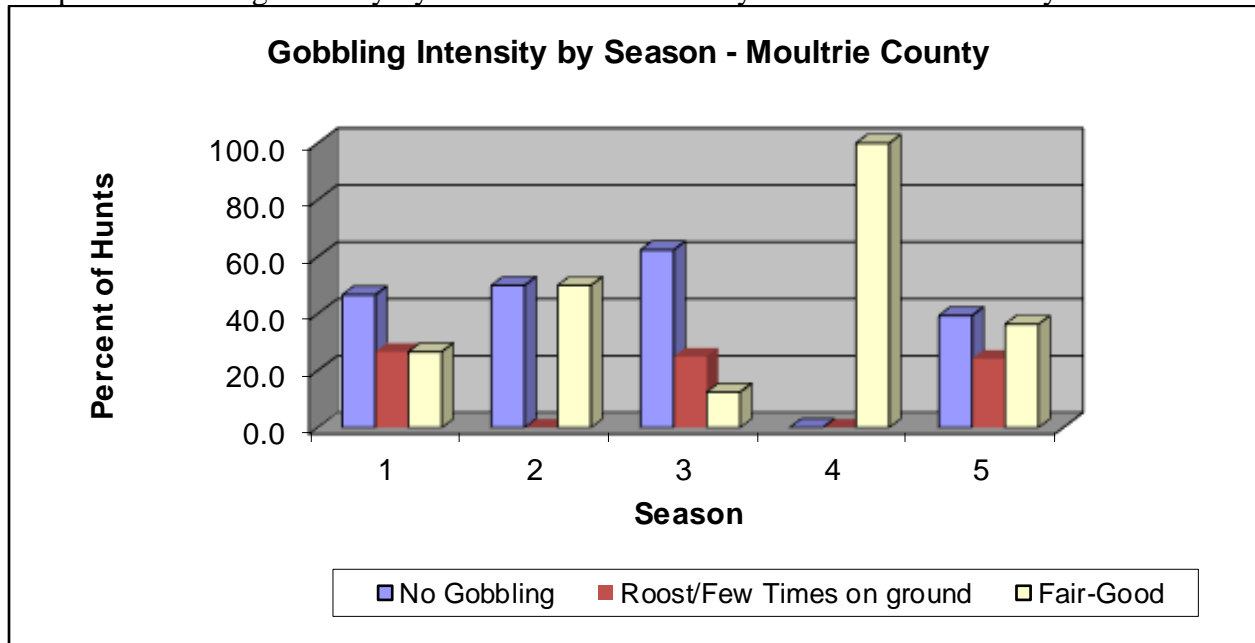
Year	County	Excellent	Good	Fair	Poor	No Opinion
2024	Moultrie	15%	50%	5%	24%	6%
2024	Shelby	19%	48%	4.8%	28%	0.2%

Gobbling Statistics

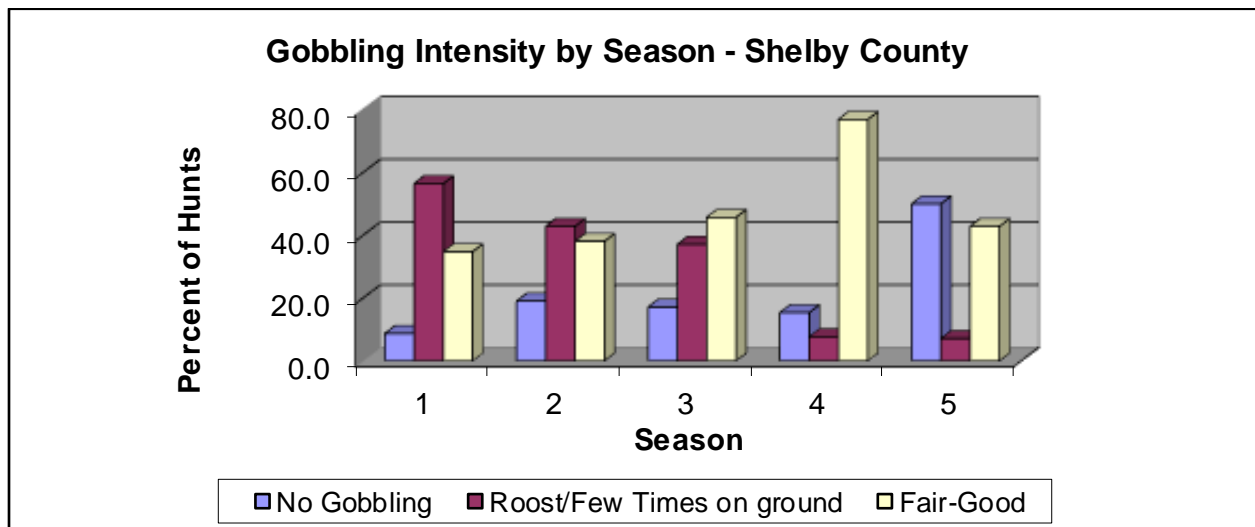
Gobbling is thought to have 2 peak periods through the season. The first peak comes as gobblers attempt to attract hens. Gobbling declines during peak mating. A second peak may occur as hens leave the gobblers to begin incubating nests.

Moultrie County showed the best gobbling activity on the ground during Season 4, followed by season 2. Season 5 was third best and season 1 was fourth best. Season 3 reported the least amount of gobbling activity on the ground in 2024. Shelby County cooperators heard the most fair – good gobbling activity during season 4 as well, followed by season 3. Seasons 2 and 5 reported very close to the same amount of gobbling activity on the ground. 1st season was reported as having the least amount of gobbling activity on the ground in Shelby County during 2024. (Graph 3).

Graph 2. Gobbling intensity by season for Lake Shelbyville - Moultrie County.



Graph 3. Gobbling intensity by season for Lake Shelbyville - Shelby County.



Weather and Gobbling

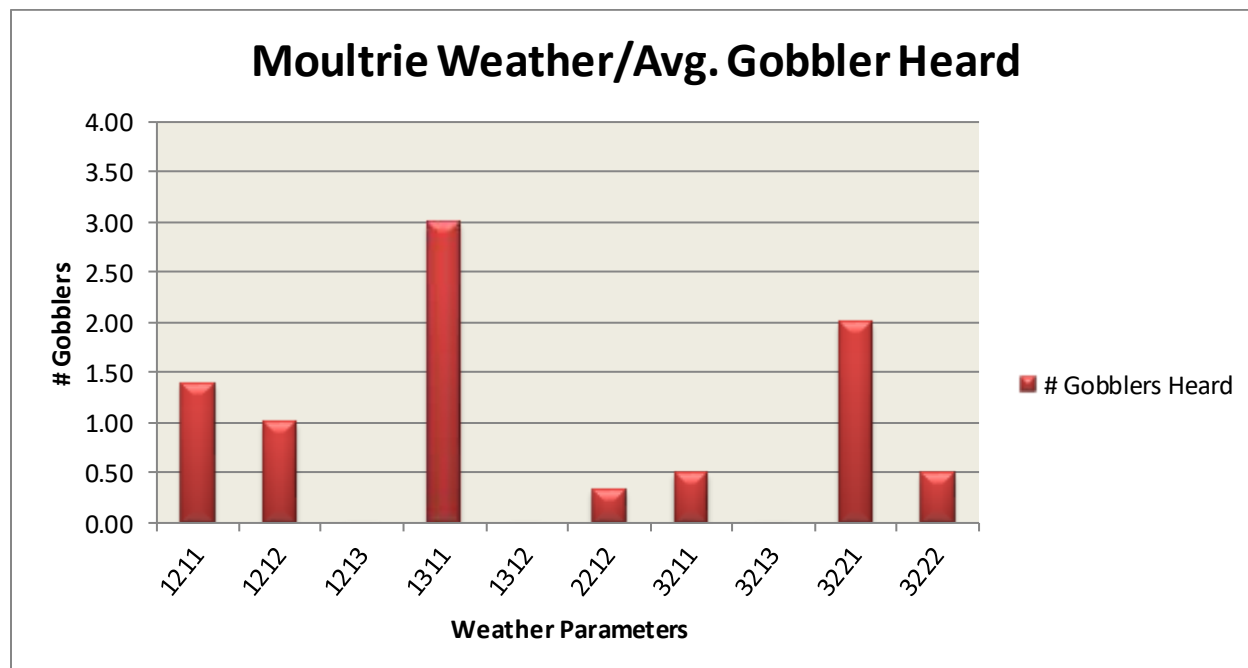
National Weather Service (NWS) weather data was consulted for each day during the season and the cloud cover, wind, precipitation, and temperature recorded. These parameters were used to graph the average number of gobblers heard (# gobblers heard divided by the number of hunts for each weather pattern; see Table 8 for weather parameters). The two counties were analyzed separately and together to determine the weather parameters that best induced gobbling.

Table 8. Numbers indicating the measured weather parameter. Note: The numbers are in this order in the graphs below.

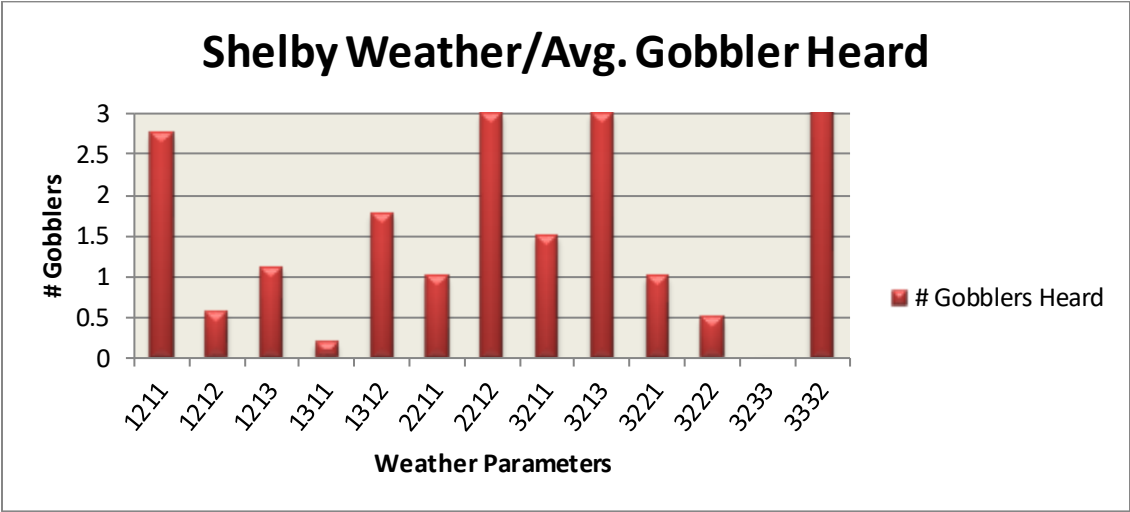
Cloud Cover	Temperature	Precipitation	Wind
1. Clear	1. Hot (70°+)	1. None	1. Light (0-10 mph)
2. Partly Cloudy	2. Mild (50 - 69°)	2. Drizzle	2. Breezy (10-20 mph)
3. Overcast	3. Cool (30-49°)	3. Moderate	3. Strong (20-30 mph)
		4. Downpour	
		5. Snow	

Example: 1311 = Clear, cool, no precipitation, and light winds.

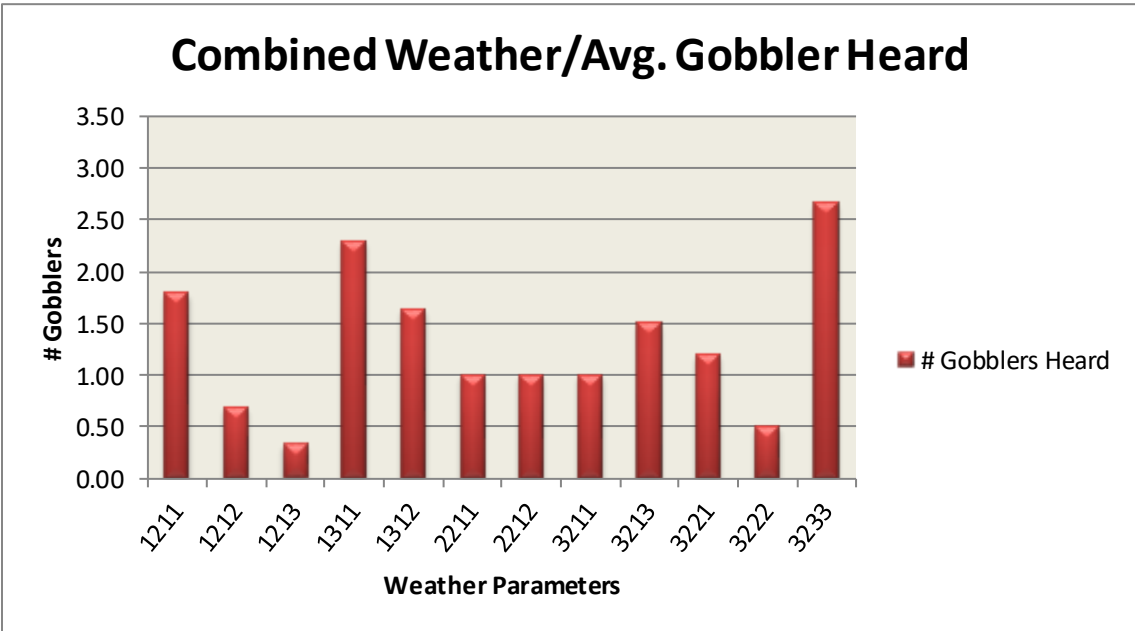
Graph 4. Weather's effect on average number of gobbler's heard per day in Moultrie County. Clear, cool, no rain, and light winds (10 - 20 mph) produced the best gobbling in 2024.



Graph 5. Weather’s effect on average number of gobbler’s heard per day in Shelby County. Overcast, cold, moderate rain, and breezy winds (10 - 20 mph) produced the best gobbling in 2024



Graph 6. Weather’s effect on average number of gobbler’s heard per day in Moultrie and Shelby County combined. Combining all 200 hunter attempts, the weather that produced the best gobbling was overcast, mild, moderate rain, and strong winds (20 - 30 mph).



Hen Statistics

Hen statistics were looked at on a per hunter basis for the season and reflect an average for each cooperator. Moultrie cooperators heard 2.21, saw 1.17, called in 0.42 hens/season. Shelby cooperators heard 2.39, saw 2.13 hens/season, and called in 0.42 hens/season. Cooperators flushed 0.0 hens/season off nests in Moultrie County and 0.10 hens/season in Shelby County (Table 9).

Table 9. Per season hen observations by County per cooperating wild turkey hunter for Lake Shelbyville.

Year	County	Hens Heard	Hens Seen	Hens Called In	Hens Flushed off Nest
2024	Moultrie	2.21	1.17	0.42	0.0
2024	Shelby	2.39	2.13	0.42	0.10

Interference

Hunters. – In Moultrie County, 40% of cooperators reported seeing at least one other hunter and 43% of Shelby County cooperators encountered at least one other hunter. The percentage of hunts disturbed by other hunters was 2.2% in Moultrie and 1.7% in Shelby County. In Moultrie County, 0% of hunters reported seeing dogs. In Shelby County, 0% of hunters reported seeing dogs. Non-hunters disturbed 5% of the hunters in Moultrie County and 14% of hunters in Shelby County. The majority were mushroom hunters with one fisherman. At least one predator was called in by 6% of the Moultrie hunters and 13% of Shelby County cooperators (Table 10). A mix of bobcat, coyotes, and a fox were the species called in.

Table 10. Interference reported by County by cooperating wild turkey hunters at Lake Shelbyville.

Year	County	% Hunters Encountering Other Hunters	% Hunts Disturbed By other hunters	Avg. # of Hunters Seen/Hunter	% Of Hunters Disturbed by Dogs	% Hunters Disturbed by Non-Hunters	% Hunters Calling in Predators
2024	Moultrie	40%	2.2%	0.64	0 %	5% *	6% ***
2024	Shelby	33%	1.7%	0.55	0%	14% *	13% ***

* Mushroom hunting, fishing.

** Fox.

*** Coyotes, and 1 bobcat.

Illegal Activity

In 2024, one instance of trespassing was reported in Moultrie County. If you see any illegal activity, please report it to a Conservation Police Officer (CPO) immediately. After the fact often makes it hard to catch the perpetrator. Below are the names and phone numbers of the CPO's that work Moultrie and Shelby County Lake Shelbyville Project.

Moultrie County CPO Jason Moody – Cell # (217) 720-2903.
Shelby County CPO Brandon Barnes – Cell # (217) 685-1542
 CPO Matthew Viverito – Cell # (217) 685-3969

Remarks

Cooperators provided a variety of comments on their observations, preferences, and opinions of the 2024 season. A summary of these remarks is included and are unedited along with the county, the rating of their season, and whether they killed a bird (Table 11).

Table 11. Comments are broken down by County. Comments are unedited for cooperating turkey hunters at Lake Shelbyville.

County	Rating	Killed Bird?	Comment
Moultrie	Poor	No	Lack of hunter pressure was fantastic, but there are just too few of birds we hunted
Moultrie	Poor	No	very few turkeys. Saw one on adjacent private property and heard one gobble all weekend which was far away.
Moultrie	Fair	No	Hunter came in on private property on Monday 5/13 and shot the gobbler I was after.
Moultrie	Excellent	Yes	Sorry for late response thank you or efforts
Moultrie	Poor	No	Due to work, couldn't hunt until late in the 5th season, that made it tough
Moultrie	Fair	No	Population seems to be good, saw lots of gobblers with hens. 2 nests destroyed
Moultrie	Fair	No	I did not harvest a bird but still had a great time hunting the lake I did pass on a jake and a bearded hen
Moultrie	Fair	No	weather was good except one windy day. Area I hunted looked great, birds not interested. No return envelope received.

County	Rating	Killed Bird?	Comment
Moultrie	Excellent	Yes	Loved seeing the habitat improvements around the area keep up the good work.
Moultrie	Fair	Yes	Cold and windy. Appreciate all the hard work staff has done to provide me with this outdoor encounter. Clean, maintained, trashed free. Scouting allowed me to determine increased number of birds and their talking. Will there ever be a season for handicap hunters?
Moultrie	Fair	Yes	very grateful for all the hard work the state and corp puts in to improve turkey habitat. I can tell an increase in birds on WMA and Corp property. If a person does not fill out the survey sheet they should not be allowed to hunt for 5 years
Shelby	Excellent	Yes	none, perfect weather
Shelby	NA	No	I decided I was only going to shoot a mature tom, only called in jakes. Had fun. Found more gobblers preseason scouting than during hunting. Only one morning experienced good gobbling. Birds quiet after hitting the ground.
Shelby	Fair	Yes	Spent several mornings pre scouting in zones 1 2 4 - very few birds heard
Shelby	Fair	Yes	Tough season with early spring, birds quiet. Was able to get into some birds due to being able to move around, thanks for the opportunity.
Shelby	Excellent	No	Enjoyed this hunt very much
Shelby	Fair	No	Very warm 4th season, birds seemed extra cautious. Would not come to decoy, juvenile eagle came into decoy twice.

County	Rating	Killed Bird?	Comment
Shelby	Fair	No	Thanks for the work you guys do. Coyote spooked bird working to me
Shelby	Poor	No	Out of state hunter from Indiana hunting 1st season. First time ever seeing this
Shelby	Poor	No	Poor weather all 3 days. Windy. One morning heard birds gobble on the roost but then nothing.
Shelby	Excellent	No	Heard plenty of birds, could not get a shot at one
Shelby	Poor	No	good weather, wish I had more time, 5 days is not enough for the little number of birds here. Not like hunting Missouri
Shelby	Fair	Yes	Frustrating to have a hunt ruined by mushroom hunters when you wake up at 3am and take a boat out to go hunt. Need to announce to public there should be no mushroom hunting until after hours.
Shelby	Fair	No	Heard birds every day just didn't talk sweet enough
Shelby	Fair	Yes	Kicked turkeys off the roost walking in before daylight
Shelby	Poor	No	seems that most of the hunters pile up in area 7 near our place on the wolf creek road and in area 6. 8 out of 12 hunters beat the crap out of those two areas.
Shelby	NA	No	only had time to hunt one day. Scouted 3 days and hunted where I heard birds but they never talked.
Shelby	Excellent	Yes	3rd season, birds were henned up. Weather did not help either. Good hatch in 2023. definitely more birds on corps ground. Keep up the good work. Don't think it would hurt to add 2 more tags per season, as some hunters only hunt 2 days.

A FEW QUESTIONS/COMMENTS ANSWERED

This portion was added in response to some of the comments or questions in Table 1 from 2025 and years past that are commonly asked.

Comment: Put more signs up for no mushroom hunting until after 1 P.M. and enforce the issue.

A: Only the West Okaw Unit and the Kaskaskia Unit of the Shelbyville Fish and Wildlife Management Area in Moultrie County (northern portion of the lake managed by Illinois Department of Natural Resources) have the 1 P.M. mushroom hunting restriction. All US Army Corps of Engineers managed lands in Moultrie and Shelby Counties do NOT have this rule in effect. Mushroom hunting is a very popular past time to many in the spring and Corps managers do not feel the small number of turkey hunters (10 in Moultrie, 12 in Shelby per season) should lock up 1000's of acres of public lands for 7 hours a day during turkey season. Lake Shelbyville is managed as a multi-use project and will always have user conflicts of one kind or another.

Comment: Wish they (biologist) would stop ringing trees in the woods. It's a mess to hunt in and I can't see any benefit.

A: Timber stands that are overly dense not only slow down the growth of the trees but also decreases mast production and often eliminate understory plants that many wildlife species depend on for food and nesting cover. By killing undesirable species or poorly formed trees, the remaining tree crowns will be able to expand, thus increasing mast production, increase growth rates, and allow sunlight to stimulate plant growth in the understory. This undergrowth and downed brush also provide excellent nesting cover for turkeys and other species of wildlife.

Comment: Include a "Caution: Turkey Hunting in Progress" paper in pack so hunters can place in windshield informing other hunters and non-hunters why vehicle in parking lot.

A: Good idea – done and included in this year's packet.

Comment: We had to stop hunting by area 5 because mushroom hunters drive 4 wheelers onto Federal property first thing in the morning ruining the area for the day and when you call the Corps nobody shows up.

A: Corps Rangers do their very best to enforce Title 36, the rules and regulations that govern Federal lands around Lake Shelbyville. Often calls are not timely and/or witnesses are unwilling to name the violator, making the task of catching a violator difficult. As Lake Shelbyville is landlocked by private lands in many areas of the lake, frequently the 4-wheeler is driven up to the boundary and parked on private land – which is perfectly legal. If you experience problems, please do not hesitate to call. The direct line to the Environmental Stewardship department is

(217) 774-3951 ext. 7049. If the line is not answered, please leave a detailed message and a Ranger WILL return your call.

Comment: Came across 3 deer stands that had not been taken down.

A: While Corps Rangers are diligent in enforcing Lake Shelbyville's Tree stand Policy, some are missed. We ask hunters that come across stands still in the woods to report them to the Environmental Stewardship department at (217) 774-3951 ext. 7049. Coordinates off your GPS and the sticker color and number (if present) are very helpful to us when reporting them. You do not need to leave your name or number unless you would like a call back. We will handle it appropriately from there.

Comment: Consider rewording Question 16. Would you intentionally pass a "Jake"? On the first day or two of a season I'm likely to let a Jake go but after several days of getting up at 3 am and with not much time left to hunt Jakes start to look very tasty.

A: This is simply a yes or no question. Just because you eventually kill a Jake doesn't mean you weren't willing to pass one early on. You might start off with the intent of only taking a Tom but end up taking a Jake due to one reason or another. Once hunters have a few turkeys under their belt they often shift their attitude from just wanting to kill a bird to wanting to take a mature bird. For example, when we started these surveys in 2007 only 19% of hunters were willing to pass a Jake. In 2022 that mark was 62%. This shift is often seen as seasons become established and the hunting experience becomes more important than the kill. A mature bird is tougher to kill and typically puts on much more of a show than a Jake.

Comment: Fall bow turkey at \$5.00 a pop is an insult to the resource and results in unnecessary hen mortality, particularly on public land where the number of bowhunters is high per acre. I realize this is a DNR matter but Corps property could be regulated to not allow.

A: This comment caught my eye since two similar comments were made on the 2020 survey. Personally, I don't buy a fall turkey tag as I enjoy the Spring gobble too much to shoot one in the fall. However, I did not know what type of impact the archers were having in the fall. From experience I know it is tough to kill a bird out of a tree as they pick you off so easy and I just assumed harvest was negligible. You know what they say about assume...!

I reached out to Luke Garver, the Illinois Department of Natural Resources Turkey Biologist for the state of IL, to see if the fall archery harvest could be negatively impacting the hen population on the lake. Luke provided the Fall harvest data for the lake broken down by County and Site from 2010 – 2019; a period of 10 years. The total kill over a decade for Moultrie County was 8 birds and 7 birds for Shelby County. Luke stated “As you can see, there aren't many birds reported harvested with archery equipment in either county total. We typically see around 50% being reported female, so I wouldn't consider fall harvest a threat to turkey populations at this time”. After looking over the data, I agree with Luke's comments. Going forward, I will monitor the Fall archery harvest, but at this time I see no need to change the regulations on the lake.

Table 12. Fall turkey archery totals for Lake Shelbyville Project, Shelby and Moultrie Counties, from 2010 – 2019.

County	Site	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Moultrie	SFWMA	0	0	0	0	0	3	0	0	0	0
Moultrie	Corps of Engineers	1	2	0	0	0	0	0	0	0	2
Shelby	Eagle Creek SP	1	0	0	0	0	0	0	0	0	0
Shelby	Corps of Engineers	1	2	3	0	0	0	0	0	0	0

Comment: There are not many turkeys. I almost always hunt Carroll County, have hunted both Lee and Jo Davies. The turkey are disappearing and I hunted Shelby to check it out. The turkey season should be cut back or closed! I have shot numerous turkeys in Carroll County and know.

A. Unfortunately, Lake Shelbyville is an island of habitat in a sea of agriculture. In fact, there is so little habitat around the lake that the US Army Corps of Engineers boundary can easily be delineated from satellite imagery! The only contiguous habitat around the lake is to the south of Illinois Route 16. This leaves little avenue for turkeys to make their way to Lake Shelbyville which means most birds found on the lake were hatched on the lake. In years of wet, cool, springs, especially in late May/early June the hatch is typically poor with warm, dry springs typically producing a good hatch. This is easy to see by looking at the number of Jakes harvested each spring – there are some years where ONLY adult gobblers are harvested. String

together a few years of cool, wet weather in the late May/early June timeframe and we see a noticeable dip in the population and a decrease in hunter success rates. In 2024, the weather was favorable for a good hatch, and Park Rangers saw numerous broods. This bodes well for the upcoming season.