

ILLINOIS

LEARN *to* HUNT



FINAL REPORT

SCIENCE-DRIVEN HUNTER RECRUITMENT

FEDERAL AID IN WILDLIFE RESTORATION ACT

ILLINOIS

FEDERAL AID PROJECT NO. W-188-S-2

July 1, 2018 - June 30, 2019

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EXECUTIVE SUMMARY

ACTIVITIES

- Developed program curricula and schedules
- Scheduled 35 Learn to Hunt events (tables 1 and 2)
 - 18 Field Events
 - 17 Specialty Seminars
- Developed and launched 5 e-learning modules with 594 unique e-learning module attempts by participants
 - Deer hunting 101
 - Turkey hunting 101
 - Waterfowl hunting 101
 - Waterfowl identification 101
 - Upland game hunting 101
- Completed follow-up survey who have had 1 full hunting season since attending a Learn to Hunt event
- Developed and distributed 10 key infographics detailing information about hunting and wildlife

ACCOMPLISHMENTS

- Engaged 243 people in workshops and seminars
- Reach over 260,000 people on social media and gained over 1,000 as followers
- Collaborated with 24 sponsors and partners who assisted in promotion, planning, volunteering, and/or providing equipment for Learn to Hunt events

NOTEWORTHY STATISTICS

- 80% of participants have friends or family who hunt
- Species of greatest interest: deer (72%), turkey (66%), pheasant (49%)
- Access was listed as the biggest constraint to hunting (60%), followed by time (41%)
- 65% of respondents to follow-up survey purchased a hunting license during the 2018-2019 season
- Those who did not purchase a license cited lack of hunting mentor (55%), land access (52%) and time (48%) as constraints toward participation

DISCUSSION

As is often the case with outdoor recreation in general, access is likely the largest constraint to participation (Bissell et al., 1998; McIntyre, Yaun, Payne, & Moore, 2004; Sanna & Pedersen, 2017). Approximately 60% of LtH participants cite access as their greatest constraint to hunting participation. That 62% of LtH registrants came from counties with a metro area of ≥ 1 million (Figure 3), suggests there is need for more sites open to public hunting near urban and densely populated suburban regions (Schulz, Millspaugh, Zekor, & Washburn, 2003). However, as hunting is a social process dependent upon a wide range of societal and group level influences (Larson et al., 2014), simply providing access will not reverse the downward trend in hunter participation.

For recruitment and retention, field courses and mentoring remains the most effective method. As Duda, Bissell, & Young (1995, p. 12) stated, it “take[s] a hunter to make a hunter.” Given that the primary avenue to hunting participation is through early socialization or later introduction by friends or spouse’s family (Hayslette et al., 2001; Responsive Management, 2008; Ryan & Shaw, 2011; Stedman & Heberlein, 2001), it is rather unsurprising that mentoring would be the most beneficial approach for planned recruitment programs. This is not only the key to recruitment, but also to retention because social support and repeated activity is needed for someone to begin to think of themselves as a hunter rather than as someone who has gone hunting (Ryan & Shaw, 2011; Wentz & Seng, 2000).

However, this is not to say that all Americans would be receptive to such mentorship. Younger white males remain the most likely demographic group to be recruited and retained (Gude, Cunningham, Herbert, & Baumeister, 2012); a number of scholars have suggested that hunting is not appealing to many minority groups because it carries little to no cultural relevancy (Adams, Brown, & Higginbotham, 2004; Floyd & Lee, 2002; Larson, Stedman, Decker, Siemer, & Baumer, 2014; Ryan & Shaw, 2011). People who view hunting as inhumane or who have had little or no exposure to hunters are also unlikely to begin hunting (Mehmood et al., 2003). Nevertheless, non-hunters who are embedded in social networks with hunters may be more likely to take up the practice, and hunters are more likely to continue hunting when they know other hunters (Enck et al., 2000; Ryan & Shaw, 2011). Whereas mentoring is becoming a common approach in hunter recruitment and retention, more needs to be known about the perceived benefits and motivations for potential new hunters (Ryan & Shaw, 2011).

MOVING FORWARD

Moving forward, the LtH program will focus efforts to continually refine workshop curricula, structure, and event scheduling utilizing participant feedback from post-event questionnaires. In addition to LtH field workshops, geared towards hunter recruitment (R1), the LtH program will continue to offer specialty events geared towards the retention (R2) of current hunters and will develop a framework of social events towards the reengagement (R3) of lapsed hunters. To further understand hunter motivations, license churn, and constraints the LtH program will develop probabilistic models predicting market segments of potential hunting license - purchasers (Figure 1). These models will test assumptions through workshop attendees, internet surveys, and focus groups. Focus groups will be conducted throughout the state and target past LtH participants, existing hunters, and lapsed hunters. The LtH program has compiled a literature review (Appendix 9) to inform focus group structure, participant selection, and procedures and also developed an interview guide for the focus groups (Appendix 10). The model will be revised based on results of ongoing surveys and focus groups.

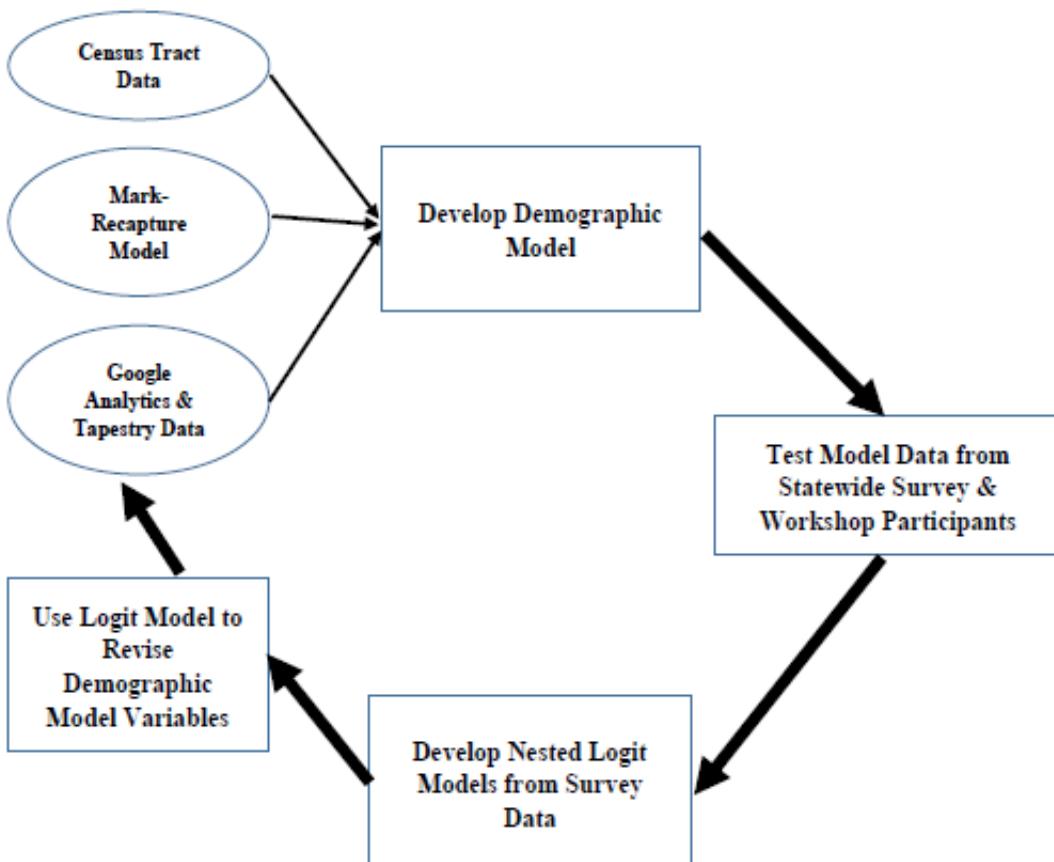
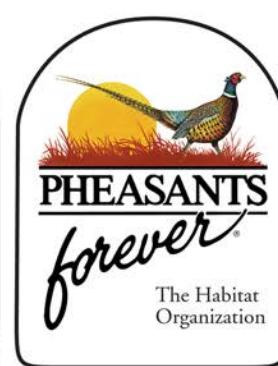


Figure 1: Graphic representation of R3 model development and testing.

PROGRAM SPONSORS AND PARTNERS

The Illinois Hunter Recruitment Program would like to extend a huge thank you to the various organizations who have supported this program. We would also like to thank our wonderful mentors and volunteers! Without our passionate mentors, this year would not have been a huge success!



Aurora Sportsmen's Club

Bass Pro Shops

Camp Loud Thunder (Boy Scouts of America)

Clinton Lake Waterfowl Association

FeraDyne Outdoors

Field Notes

Field & Stream

Frogg Toggs

Hunter's Haven

Illinois Conservation Foundation

Illinois Federation For Outdoor Resources

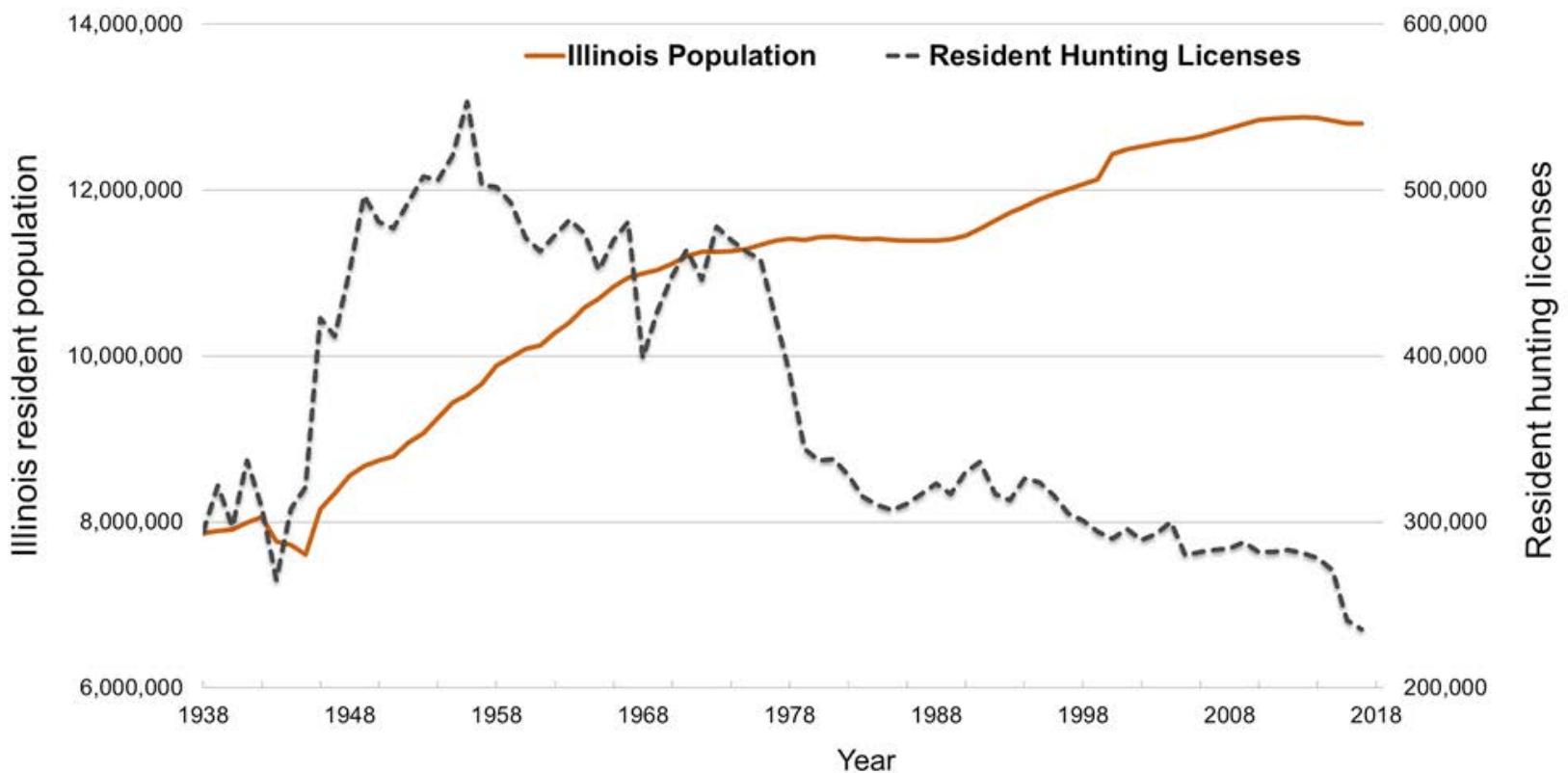
Rite in the Rain

Star Gun Club

Stefanie Fitzsimmons in Honor of Steve Fitzsimmons

Tombstone Gun Range and Training Center

4-H Memorial Camp



Number of resident hunting licenses purchased in Illinois vs. Illinois resident population, 1939-2017 (INHS Human Dimensions Program and IDNR Hunter Heritage Program)

THE NEED FOR HUNTER RECRUITMENT IN ILLINOIS



The Illinois Learn to Hunt (LtH) Program is a cooperative partnership between the Illinois Department of Natural Resources (IDNR) and the Illinois Natural History Survey at the University of Illinois at Urbana-Champaign (UIUC), federally funded by the Federal Aid in Wildlife Restoration Act. LtH provides a comprehensive, hands-on, educational experience for the public to learn why, how, and where to hunt wild game in Illinois. This program was initiated to mitigate a national and statewide decline in hunter numbers, yielding decreased funding for conservation and public recreation opportunities.

Hunter recruitment, retention, and more recently reengagement, have been a significant topic in the peer-reviewed literature for several decades. Illinois' hunters are aging (Alessi & Miller, 2012); however, there is variability among species hunted. Overall, this difference appears to be due to recruitment issues, where younger hunters are being recruited in the hunter population at a rate that is slower than older hunters leaving. Many programs exist for youth to become engaged in hunting and trapping; however, no programs in Illinois exist with their sole target demographic being adults. Recent research in Illinois has indicated that waterfowl hunters do not start waterfowl hunting until their early 20s (Williams, Miller, & Campbell, 2013). This begs the question whether adults should be targeted for recruitment more so than youth, as adults typically have transportation, more disposable income compared to youth, and possibly more free time outside of school or extracurricular activities. Moreover, previous research conducted by Responsive Management showed that ~75% of post-hunter education students indicated they would likely enroll in optional follow-up courses focusing on specific aspects of hunting (Duda et. al, 2012). That research was not conducted in Illinois; however, it is unlikely there would be significant state-specific differences in that response. Previous studies have shown that participation in hunting increases when participants engage in several events, rather than a single instance (Seng et al., 2007). The Learn to Hunt program used this multiple-interaction process to increase the probability of creating life-long hunters.

Recent research in Illinois has also identified that hunting license sales were positively related with a households' age index (Zhang, et al., 2019). In other words, hunting license sales were more likely to be located in homes whose residents were older, on average, than whose residents were younger. The causal relationship is not well understood, but analyses such as this give us the opportunity to strategically attempt to recruit hunters in the state (i.e. identify areas that exhibit appropriate variables and target hunter workshops in those areas). Illinois requires a hunter education course that is mandatory for hunters born after January 15, 1980 (however, exemptions apply to youth hunters). In this course, hunters are taught how to safely use a firearm and how to safely hunt, but there is no follow up after those individuals leave the classroom. Past research has indicated that most hunters come from a "hunting family," where either their parents or grandparents hunted (Duda et. al, 2012). What happens if youth are attending the hunter education course, but there is nobody to mentor them beyond the required safety course? Workshops are conducted on how to buy appropriate equipment, applying for the appropriate licenses and permits, how/where to hunt, the legal aspects of hunting, and post-hunt and harvest cleaning activities (from field to table). The workshops also discuss the research being conducted on wildlife in Illinois and how it is used to strategically target habitat conservation and wildlife management. Hands-on training is emphasized at the workshops.

DID YOU KNOW ILLINOIS HUNTERS ARE CONSERVATIONISTS?

Contributions of Illinois Hunters on local
wildlife populations

WHITE-TAILED DEER

1949 2,550 TODAY → 660,000



WILD TURKEY

1900 0 TODAY → 150,000



WATERFOWL

1900 FEW TODAY → 46,000,000



These and many other species continue to benefit
from the hunter's role in conservation efforts

Hunters and target shooters
purchase firearms and ammunition

THE FEDERAL AID IN WILDLIFE RESTORATION ACT

Manufacturers pay an 11% federal
excise tax

Revenue from this excise tax is
distributed to wildlife state
agencies

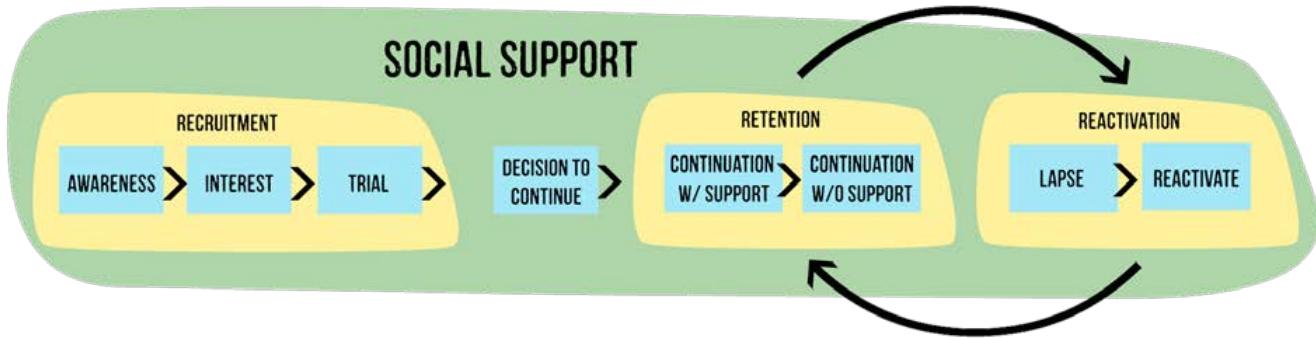


State wildlife agencies use these funds
to purchase land for habitat and to
manage wildlife populations

ILLINOIS HUNTERS SPEND \$1.3 BILLION ANNUALLY
AND SUPPORT OVER 18,000 ILLINOIS JOBS



The Outdoor Recreation Adoption Model



How does The Illinois Learn to Hunt Program fit within the Outdoor Recreation Adoption Model (ORAM)?

Recruitment: Learn to Hunt provides awareness about why, how, and where to hunt. Conservation is emphasized from the very beginning as a pillar of understanding the importance of hunting. We hold interest by providing multiple points of contact throughout the duration of the participant's time as a new or continuing hunter. Participants gain experience as a trial to hunting without having to navigate the regulations and equipment alone.

Decision to Continue: Because Learn to Hunt offers many opportunities around the state and throughout the year, participants have multiple opportunities to continue their education in a safe and inviting environment.

Retention: Once a participant has become aware of the program, been interested enough to try hunting, and made the decision to continue, they may do so with or without support. This ultimately depends on how comfortable the person is with the strategies, equipment, regulations, and possible outcomes. Learn to Hunt encourages most participants to hunt with an experienced friend, family member, or mentor the first few times they venture out, just to make sure they are comfortable continuing their journey through hunting. Eventually, the hunter will get to the point of hunting without support.

Reengagement: In the event that a hunter stops hunting for any reason, they may be reengaged through the Learn to Hunt Program. The seminars and series of workshops are geared toward hunters in every stage of the activity. We offer advanced hunting techniques events for hunters who may have lapsed in their hunting activity but would like to get back into the game.



ILLINOIS LEARN TO HUNT PURPOSE AND OBJECTIVES

The primary purpose of this program is to provide adults with an opportunity to learn about hunting and cleaning game by holding workshops and speciality seminars around the state that focus on how, where, and why to hunt in Illinois. Additionally, how to clean game and equipment post-hunt, the laws specific to hunting in Illinois, and the science behind wildlife management.

ANNUAL OBJECTIVES

- Hold Learn to Hunt workshops that transfer information on how, where, and why to hunt deer/turkey/small game/waterfowl, legal requirements, and post-hunt activities.
- Develop e-learning modules aimed at educating the Illinois public on all specifics of hunting
- Conduct analyses by IDNR Region and county to identify optimal areas for these workshops.
- The results and benefits to this work will relate directly to the IDNR's goals:
 1. Recruit 100 new deer/turkey/small game hunters per year
 2. Recruit 100 new waterfowl hunters per year



FIELD COURSES

We offered four types of field workshops: deer, turkey, small game, and waterfowl. We planned and offered 18 field events (Table 1). Weather and unplanned staffing constraints (personnel changes) limited the number of workshops provided. The program offered 18 field courses, 17 seminars, and developed 5 e-learning modules with half the full-time staff; the number of workshops would have been double had full-time staff been at its full compliment. Additionally, program staff began to see a reduced number of registrations as more events were planned and scheduled. We're investigating market potential, availability, and saturation of priority geographic regions.

Table 1: Breakdown of LTH field event registration numbers and attendance numbers.

Event Title	Date	Location	Registrations	Participants	Notes
Learn to Hunt: Deer	7/22/2018	Aurora Sportsmen's Club	28	11	
Learn to Hunt: Deer	8/4/2018	Des Plaines SFWA	32	16	
Learn to Hunt: Waterfowl	8/25/2018	Des Plaines SFWA	26	14	
Learn to Hunt: Small Game	8/26/2018	Middle Fork	16	12	
Learn to Hunt: Waterfowl	9/8/2018	Clinton Lake SRA	8	1*	Inclement thunderstorms caused 6 cancellations.
Learn to Hunt: Deer	9/9/2018	Hidden Springs SF	12	4	
Learn to Hunt: Small Game	9/30/2018	Touch of Nature (SIU)	17	8	
Learn to Hunt: Deer	3/23/2019	Des Plaines SFWA	31	12	
Learn to Hunt: Turkey	4/7/2019	Clinton Lake	6	4	
Learn to Hunt: Deer	4/27/2019	Goose Lake	17	9	
Learn to Hunt: Small Game	4/27/2019	Middle Fork	4	9	
Learn to Hunt: Turkey	4/28/2019	Goose Lake	10	7	
Learn to Hunt: Waterfowl	4/28/2019	Middle Fork	5	1	
Learn to Hunt: Deer	6/1/2019	Des Plaines	8	4	
Learn to Hunt: Small Game	6/8/2019	Aurora Sportsmen's Club	18	10	
Learn to Hunt: Deer	6/9/2019	Bartlett Nature Center	19	10	
Learn to Hunt: Waterfowl	6/22/2019	Goose Lake	8	3	
Learn to Hunt: Deer	6/23/2019	Goose Lake	13	7	

Twenty slots were open per event and field courses had an average attendance rate of 51% of those registrations, an increase of 8% from last year. These workshops were one-day weekend events and the schedule can be found below. We used pre- and post-workshop questionnaires (Appendices 1 and 2, respectively) to assess demographics, constraints to hunting, motivations for wanting to learn to hunt, and efficacy of the program.

EVENT SCHEDULE

- 9:30 - Introductions, paperwork, and registrations
- 9:45 - Hunters are Conservationists
- 10:00 - Wildlife Ecology
- 10:45 - Hunting Regulations
- 11:15 - Hunting Tactics
- 12:00 - Lunch (Please bring your lunch)
- 12:30 - Deer Hunting Equipment
- 1:15 - Firearm/archery Safety
- 2:00 - Archery and/or Firearm Target Practice
- 2:45 - Field Dressing and Processing
- 3:15 - Q&A and Wrap-Up



SEMINARS

The LtH program developed eight, three hour Learn to Hunt seminars. These seminars allowed participants to attend multiple events, aiding in retention of the participant as a hunter and fostering interest in the program. Additionally, it provides access to individuals who lack the necessary time to attend a full field day event during the weekends.

Table 2: Breakdown LtH seminar registration numbers and attendance numbers.

Event Title	Date	Location	Registrations	Participants	Notes
Women, Wine, and Wild Game*	9/28/2018	Sugar Grove Nature Center	26	14	This event was a collaboration between LtH and Pheasants Forever.
Learn to Process: Deer	11/10/2018	Silver Springs SFWA	30	20	
Remote Scouting Techniques	1/19/2019	Goose Lake Prairie SP	12	N/A	This event was cancelled due to a winter storm event.
Waterfowl ID and Calling 101	1/24/2019	Forbes Natural History	11	8	
Deer Scouting and Shed Hunting	2/16/2019	Kickapoo SRA	21	10	
Remote Scouting Techniques	3/14/2019	Goose Lake Prairie	7	4	
Advanced Deer Scouting	3/27/2019	Clinton Lake SRA	7	6	
Remote Scouting Techniques	3/28/2019	Remote Scouting Techniques	8	N/A	This event was cancelled due to a winter storm event.
Turkey Hunting and Calling 101	1/13/2019	Horseshoe Lake SP	16	N/A	This event was cancelled due to a winter storm event.
Turkey Hunting and Calling 101	1/18/2019	Clinton Lake SRA	10	5	
Turkey Hunting and Calling 101	1/19/2019	Kankakee River SP	29	14	
Turkey Hunting and Calling 101	2/3/2019	Forest Park Nature Center	21	12	
Waterfowl Hunting and ID 101	2/28/2019	Kankakee River SP	7	N/A	This event was cancelled due to a winter storm event.
Deer Hunting 101	3/13/2019	Forbes Natural History	18	10	
Waterfowl Hunting and ID 101	3/26/2019	Hidden Springs State Forest	1	N/A	This event was cancelled due to lack of registrations.
Advanced Deer Hunting and Venison Cooking	4/13/2019	Kankakee River State Park	9	3	Inclement winter weather caused 4 cancellations.
Meat and Greet	4/14/2019	Kankakee River State Park	6	1	Inclement winter weather caused 3 cancellations.

E-LEARNING MODULES

In FY19, the LtH program designed e-learning modules to allow at-home access and supplement additional LtH program offerings. These modules are posted on the LtH program website (Figure 1). These eLearning modules consisted of Deer 101, Turkey 101, Small Game 101, Waterfowl 101, and Waterfowl Identification. Program staff collaborated with the Illinois Hunter Heritage Program, IDNR Biologists, and program partners to develop the course curriculums for the eLearning modules. LtH e-learning modules were attempted 594 times (Table 3). Additionally, LtH staff was able to calculate the average user progress (how much of the module was completed by the user) for each module.

Table 3: Breakdown of LtH e-learning module attempts and average user progress.

E-Learning Module	Attempts	Average User Progress
Deer Hunting 101	199	67.94%
Waterfowl ID 101	110	70.64%
Waterfowl Hunting 101	64	56.5%
Turkey Hunting 101	141	74.34%
Upland Hunting 101	80	70.89%

The Learn to Hunt program has developed FREE eLearning modules that we hope will give you a starting point in your journey to becoming a hunter. Following the conclusion of the course, there will be a knowledge check and a few questions to help us refine and continue designing these courses moving forward, we greatly appreciate your feedback!



Waterfowl Hunting 101



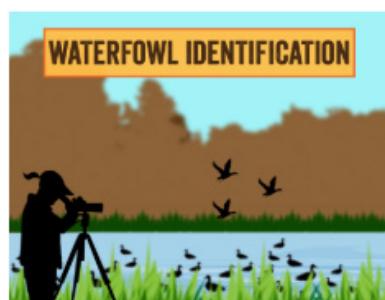
Turkey Hunting 101



Deer Hunting 101



Upland Hunting 101



Waterfowl ID 101

Figure 1: Available e-learning modules on the LtH program website.

LEARN TO HUNT INFOGRAPHICS

The LtH staff utilizes infographics as a main source of representation for data. LtH staff developed 10 infographics that are represented in table 4 and can be seen in detail in Appendix 8. Infographics relay information based on texts and images that present facts and figures in an appealing way. With these infographics, staff's primary objective is to more easily educate followers/participants on all things regarding hunting. The LtH staff utilizes Facebook, Instagram, and the monthly newsletter as distribution channels. The figures in table 4 are based on reach and engagement through Facebook. Reach is based on how many individuals see the post in their feed. Engagement is the combined total likes, comments, and shares on an individual post.

Table 4: Reach and engagement of LtH infographics using Facebook Insights.

Infographic Title	Reach	Engagement
Did You Know Illinois Hunters Are Conservationists?	68,851	2,487
Eat Healthy Eat Local Hunt Illinois	18,441	649
The Federal Migratory Bird Hunting And Conservation Stamp	9,896	293
What's Illinois Waterfowl Worth?	7,251	217
North American Model of Wildlife Conservation	3,979	107
How To Scout For Wild Turkey On Illinois Public Land	3,577	121
Venison Cuts And Uses	3,360	161
Reduce Your Carbon Footprint Hunt Illinois	3,259	131
How To Field Dress White-Tailed Deer	3,126	108
Tips For Hunting Public Land	2,411	60



Published by Dan Stephens · April 22 · [View Post](#)

Happy Earth Day! Hunter contributions to the management and conservation of wildlife are often misunderstood and underrepresented. #LearnToHuntIL

DID YOU KNOW ILLINOIS HUNTERS ARE CONSERVATIONISTS?

Contributions of Illinois Hunters on local wildlife populations

WHITE-TAILED DEER	1949	2,550	TODAY	660,000
WILD TURKEY	1900	0	TODAY	150,000
WATERFOWL	1900	FEW	TODAY	46,000,000

These and many other species continue to benefit from the hunter's role in conservation efforts

Hunters and target shooters purchase firearms and ammunition

THE FEDERAL AID IN WILDLIFE RESTORATION ACT

Manufacturers pay an 11% federal excise tax

Revenue from this excise tax is distributed to wildlife state agencies

State wildlife agencies use these funds to purchase land for habitat and to manage wildlife populations

ILLINOIS HUNTERS SPEND \$1.3 BILLION ANNUALLY AND SUPPORT OVER 18,000 ILLINOIS JOBS

PERFORMANCE FOR YOUR POST

35,935 People Reached

1,219 Reactions, Comments & Shares

858 Like	67 On Post	791 On Shares
27 Love	4 On Post	23 On Shares
1 Haha	0 On Post	1 On Shares
2 Wow	1 On Post	1 On Shares
1 Sad	0 On Post	1 On Shares
1 Angry	0 On Post	1 On Shares
39 Comments	1 On Post	38 On Shares
291 Shares	281 On Post	10 On Shares

1,006 Post Clicks

376 Photo Views	0 Link Clicks	630 Other Clicks
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NEGATIVE FEEDBACK

6 Hide Post 5 Hide All Posts

0 Report as Spam 0 Unlike Page

Reported stats may be delayed from what appears on posts

PRIORITY GEOGRAPHIES

In order to develop an objective strategy to mitigate the decline of hunting participation in Illinois, an analysis of geodemographic segmentation is needed. The most significant application of geodemographic segmentation is for marketing efforts and identifying priority geographies (Troy, 2008). State Fish and Wildlife Agencies and conservation organizations have been attempting to recruit, retain, and reactivate new hunters with some success. However, R3 programs cannot be maximized without the involvement of traditional industry marketing techniques, such as geodemographic segmentation.

Geodemographic datasets were obtained from Environmental System Research Institute's (ESRI, 2014) Tapestry segmentation system at the regional, county, and census tract level. The Tapestry system breaks U.S. residential areas into 14 LifeMode groups and further into 67 Tapestry segments using a combination of data from the 2010 Census, the American Community Survey, and Experian's INSOURCE consumer database and lifestyle data from GfK MRI for segmentation (ESRI, 2014). Because this leaves little consumer variation at the regional or county level, it is often identified as one of the drawbacks of using geodemographic classification. However, even with its adherent limitations, the Tapestry system used for this analysis will provide a unique depiction of the geodemographic correlates of the Illinois public's interest in hunting.

Utilizing registration surveys, workshop participants' dominant tapestry LifeMode (defined in Appendix 11) segment (census tract level) was analyzed. This allowed for the creation of a model using the top five dominant segments found in the analysis (Table 5). This model will allow Illinois R3 efforts to target marketing efforts using geodemographic trends. As R3 programs in Illinois continue, more data can be added to strengthen and refine the model.

The top 5 dominant LifeMode characteristics are consistent with the LtH defined market segments. These tapestry segments define further characteristics for market segmentation (Appendix 11) and allows the program to further refine each segment.

Table 5: Dominant LifeMode (Appendix 11) groups of LtH event registrants.

Tapestry Segment	2018	2019	Totals
	Registrants	Registrants	
Affluent Estates	72	78	150
GenXurban	74	45	119
Scholars and Patriots	65	46	111
Family Landscapes	48	61	109
Upscale Avenues	28	58	86
Cozy Country Living	29	37	66
Ethnic Enclaves	34	29	63
Hometown	23	27	50
Uptown Individuals	12	38	50
Next Wave	10	23	33
Middle Ground	8	21	29
Midtown Singles	1	6	7
Senior Styles	6	3	9
Rustic Outposts	0	1	1

To further define priority geographies, LtH program staff assigned each registrant Rural-Urban Continuum Codes (RUCC) based on the county in which the registrant resides. RUCC codes (Figure 2) are a classification scheme that distinguishes metropolitan counties by degree of urbanization and adjacency to a metro area (USDA, 2018).

Table 6: LtH registrants RUCC Code from participant provided home zip codes.

RUCC Code	RUCC Description	2018	2019	Total	% of Total Registrations
		Registrants	Registrants	Registrants	
1	Metro - Counties in metro areas of 1 million population or more	211	331	542	61.9%
2	Metro - Counties in metro areas of 250,000 to 1 million population	25	23	48	5.5%
3	Metro - Counties in metro areas of fewer than 250,000 population	138	100	238	27.2%
4	Nonmetro - Urban population of 20,000 or more, adjacent to a metro area	6	16	22	2.5%
5	Nonmetro - Urban population of 20,000 or more, not adjacent to a metro area	7	3	10	1.1%
6	Nonmetro - Urban population of 2,500 to 19,999, adjacent to a metro area	12	2	14	1.6%
7	Nonmetro - Urban population of 2,500 to 19,999, not adjacent to a metro area	0	0	0	0%
8	Nonmetro - Completely rural or less than 2,500 urban population, adjacent to a metro area	0	1	1	.2%

About 88% of LtH registrants reside in counties with RUCC codes of 1 or 3. Identifying counties in Illinois with RUCC codes of 1 or 3 is important to identifying priority geographies (Figure 3).

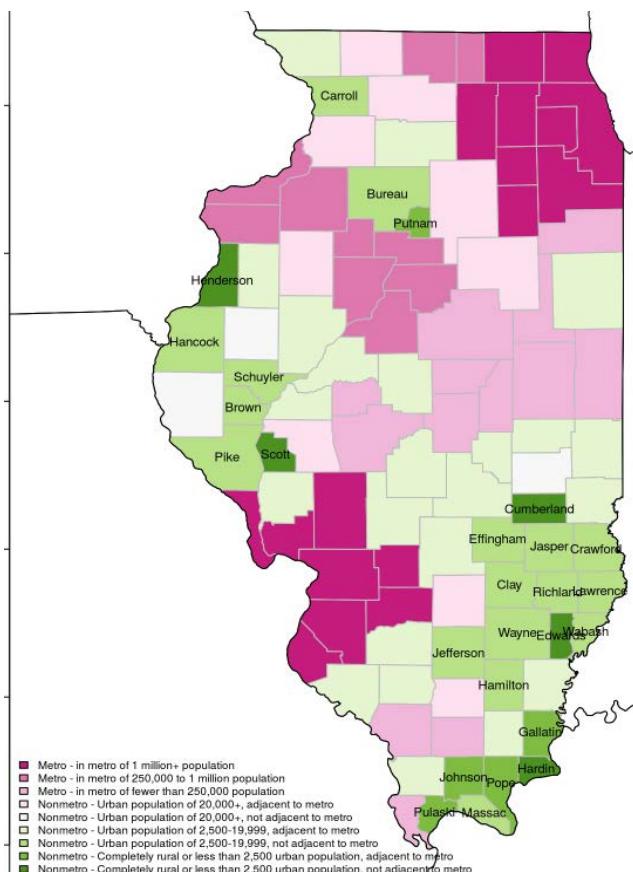


Figure 2: RUCC Codes of all Illinois counties.

Registrant RUCC Code Analysis

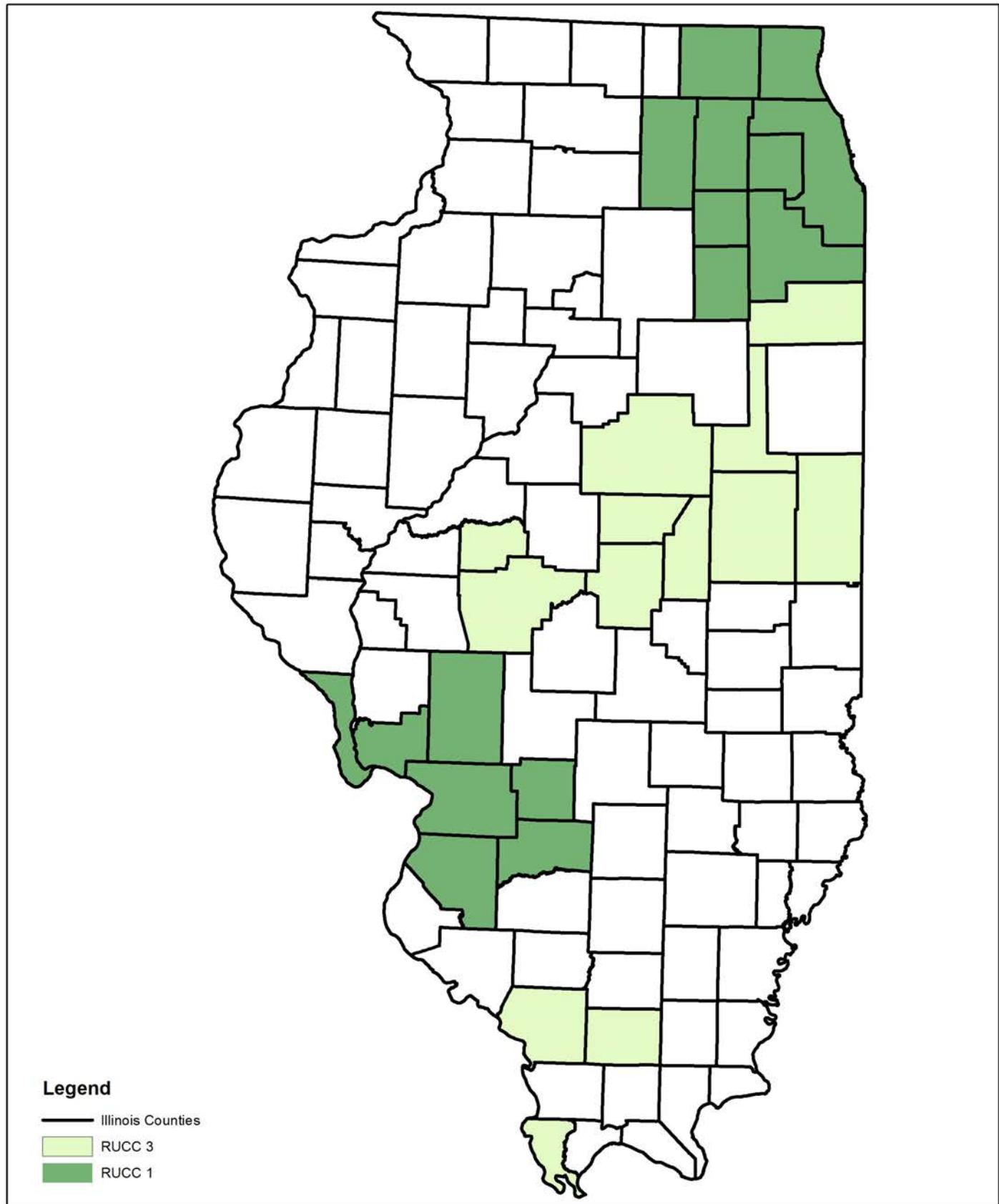


Figure 3: Illinois counties with RUCC Codes of 1 or 3.

To analyze whether LtH programs have reached these counties, LtH registrants were added utilizing their home zip code (Figure 4).

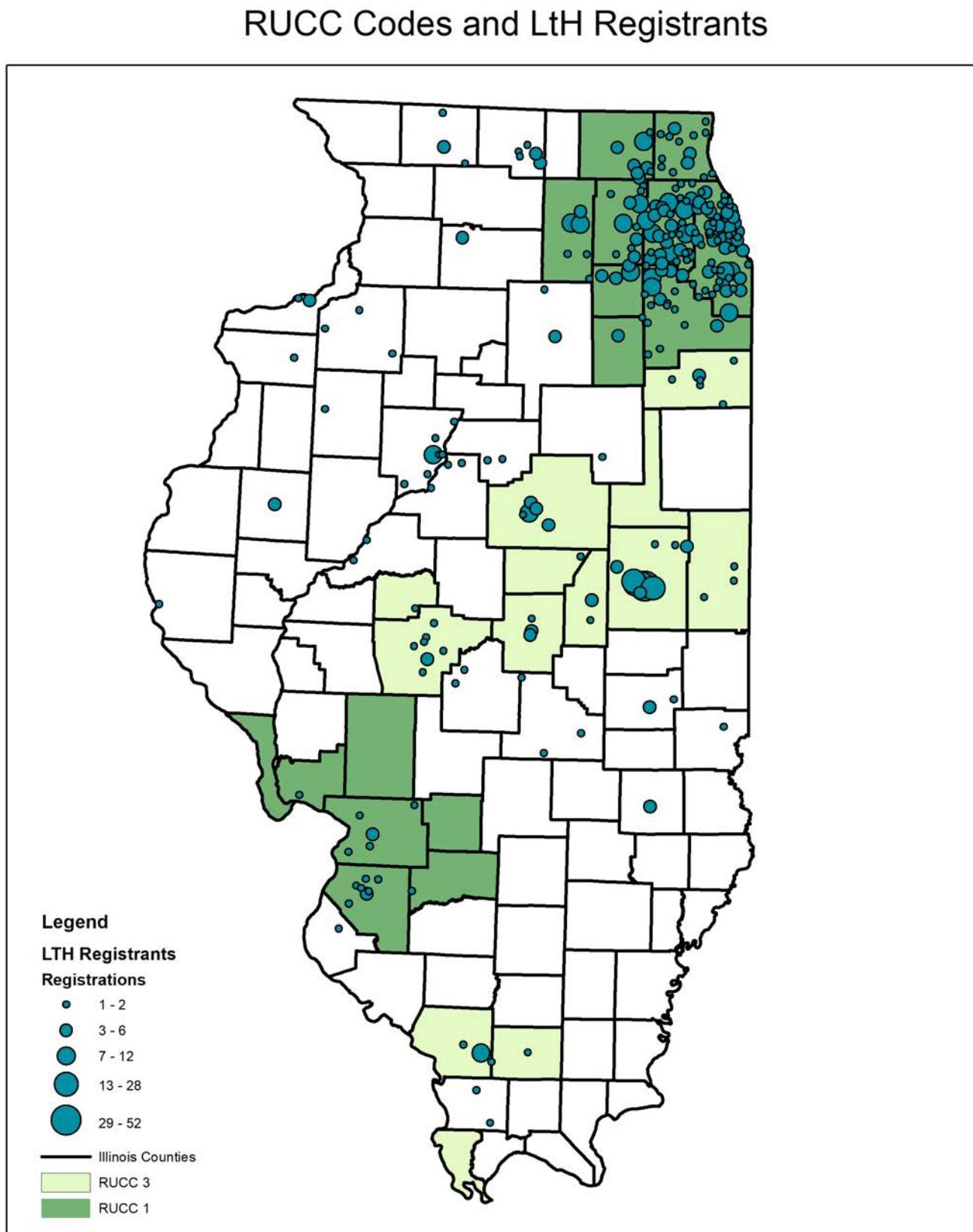


Figure 4: Illinois counties with RUCC Codes of 1 or 3 and all LtH registrant home zip codes (n=543). The Jenks natural breaks classification method was used to cluster registration data.

As it appears, there are multiple counties that fit within the LtH RUCC code model but lack in registration numbers. In an effort to identify why these areas lack registrations, locations of all LtH website users were used to see if the LtH program has market penetration in these areas (Figure 5). This allowed staff to analyze whether existing communication channels and messaging are effectively reaching these specific counties or if expanded communication plans are needed.

RUCC Codes and LtH Website Users

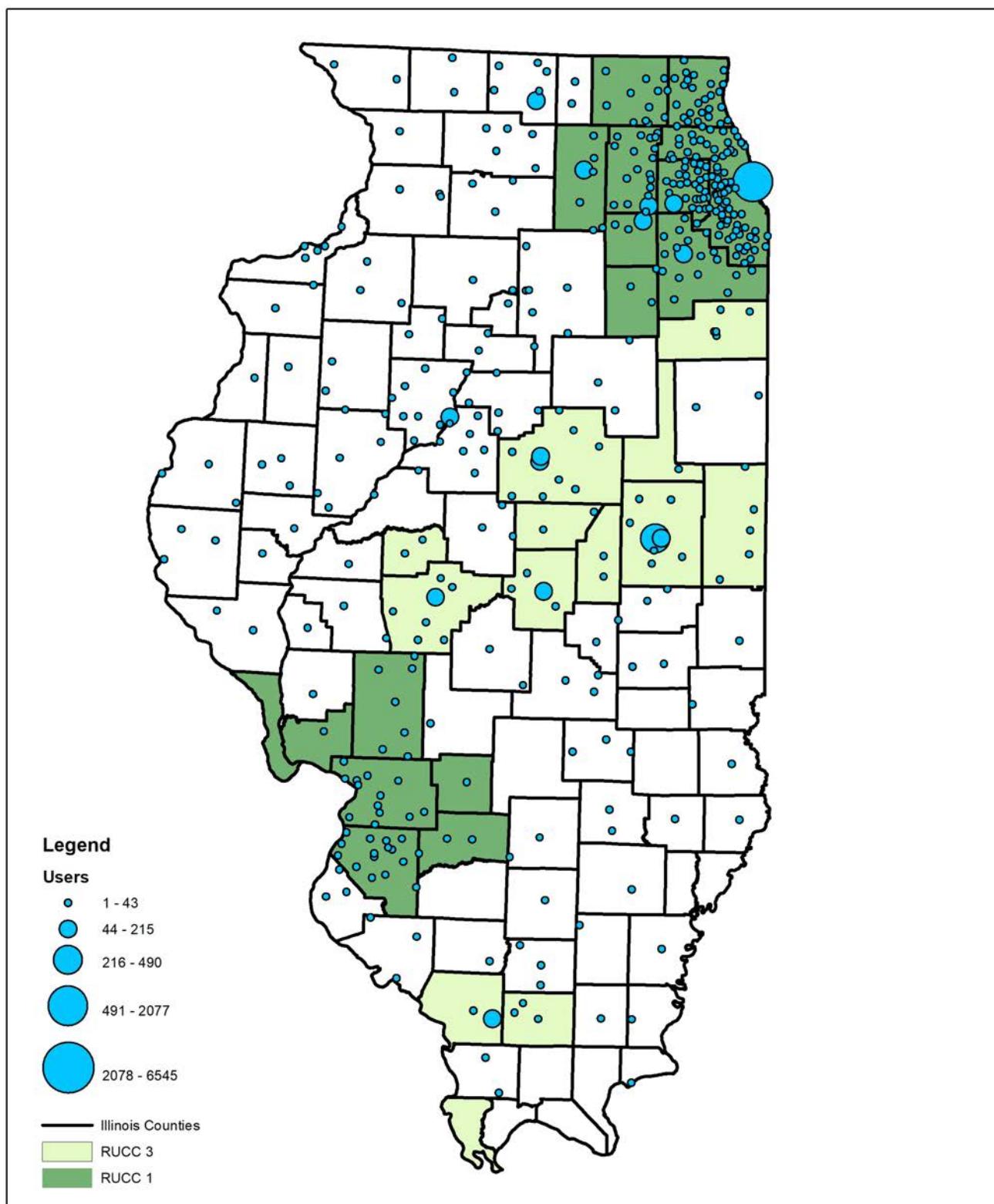


Figure 5: Illinois counties with RUCC Codes of 1 or 3 and LtH website user locations. The Jenks natural breaks classification method was used to cluster website user data.

Based on this analysis, the LtH program's existing communication channels and marketing messaging have not reached several counties as staff expected (Figure 6). Moving forward, staff will refine communication channels to target these areas utilizing RUCC Code analysis, Google Analytics, market segmentation and other research. Additionally, staff is hosting a series of focus groups in FY20 to address reaching participants in untapped areas. Seminars and workshops will also be scheduled in these areas to ensure these areas are represented in future LtH research.

Additionally, counties with an RUCC Code of 2, fit within the LtH priority geography model but do not have many registrations. This analysis shows a gap in program offerings that should be receptive to the same market characteristics as the counties were program offerings have significant market penetration. Staff will target these areas with program offerings.

PRIORITY GEOGRAPHIES

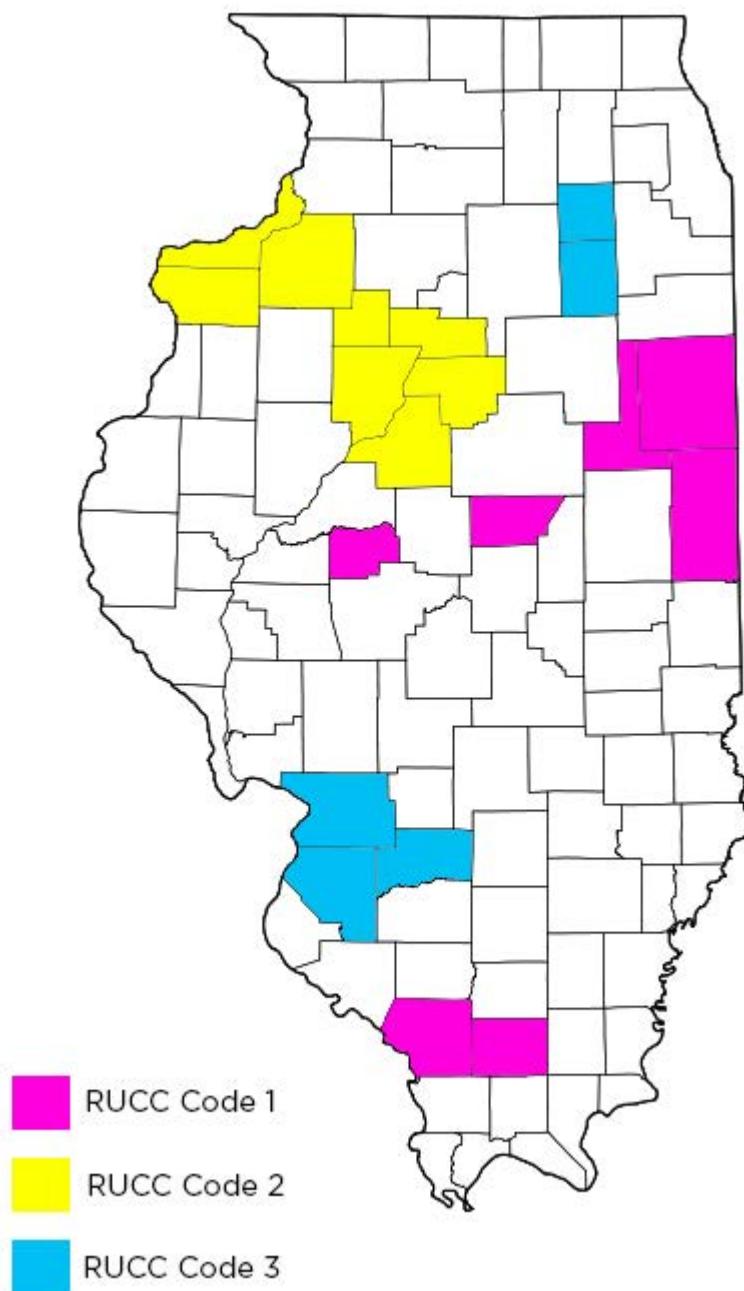


Figure 6: LtH untapped priority geographies.

MARKET SEGMENTATION

The LtH program developed and refined a comprehensive communication plan with objectives and strategies to increase the scope and reach of ongoing R3 efforts. The communication plan is designed to address: defining the target market, what marketing channels will be utilized, and market research to track the efficacy of communication efforts.



TARGET MARKETS

Our target market is Illinois residents over 18 years old who have a desire to Learn to Hunt. They often enjoy being outdoors, spend time procuring their own food, target shoot, or engage in outdoor activities with family and friends.

Using market research through scientific literature, Tapestry segmentation, participant surveys, website and social media analytics, the LtH program has identified 4 market segments: nature lovers, target shooters, social enthusiasts, and food enthusiasts. Though these segments have significant overlap, different marketing strategies appear to be more effective for each segment.

NATURE LOVER

HABITS

This group is comprised of individuals who prioritize their time spent in outdoors. They tend to value solitude and fresh air and are excited by what the natural world has to offer. As hunters, this group derives satisfaction from observing wildlife, even if they do not harvest game.

KEYWORDS

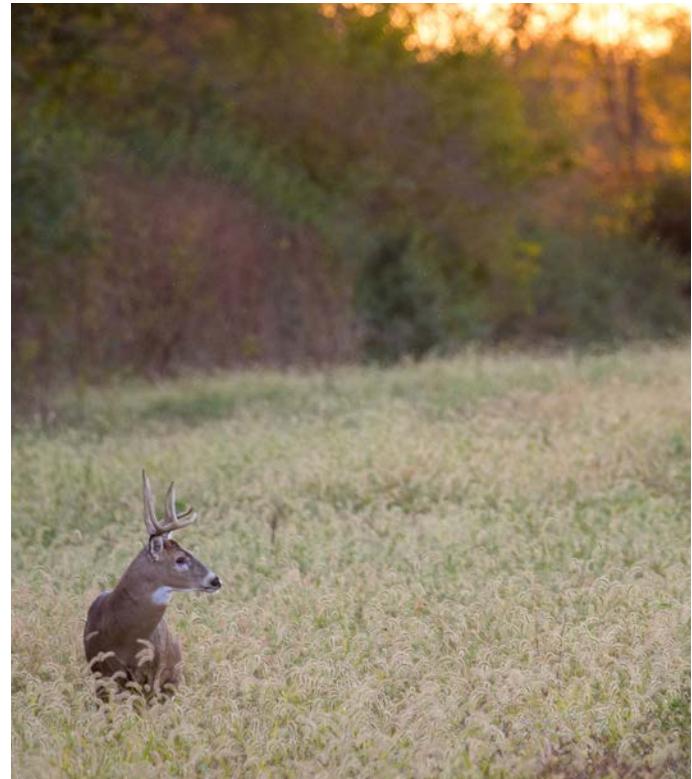
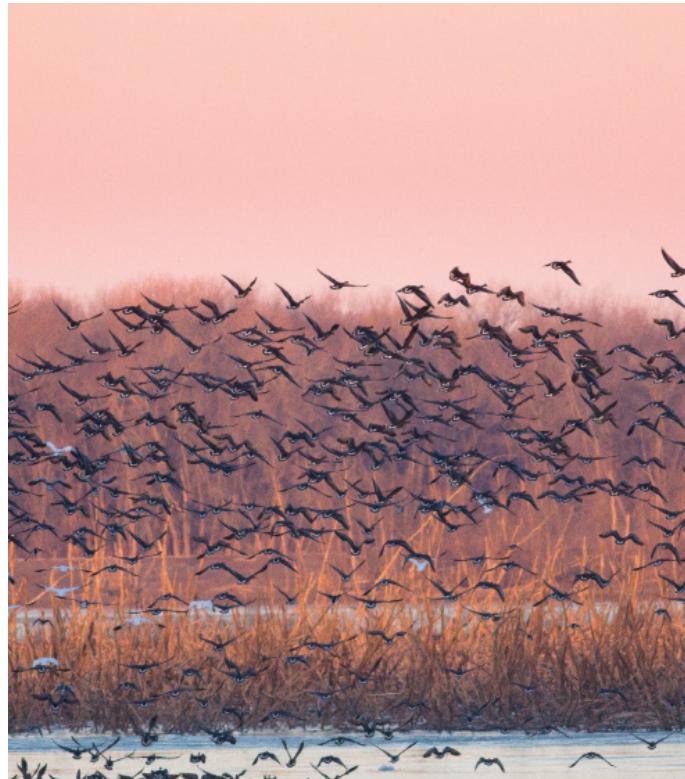
Connect with nature, fair chase, escape, environmental friendly, fresh air, conserve, environment, active, natural, conservation, relaxing, stewardship, outdoor lifestyle, conservation funding, peaceful, quality time, wildlife management, healthy, get outdoors, nature views.

MARKETING THEMES

Connecting with the Nature Lover group depends on being able to educate these individuals about the importance of hunting to conservation. Examples include game species population control, habitat restoration and maintenance, and funding for natural resource research and education.

“CONNECT WITH NATURE, HUNT ILLINOIS.”

EXAMPLE IMAGERY



TARGET SHOOTERS/CHALLENGE-ORIENTED

HABITS

This group is comprised of individuals who engage in competitive or recreational sporting activities involving tests of accuracy, precision, and speed while using a variety of firearms. As hunters, this group may use more primitive equipment, take more difficult shots, hunt in more adverse conditions than an average hunter would, and target trophy animals.

KEYWORDS

Precision, accuracy, firearms, thrill, relaxing, tradition, conservation funding, investment, back-to-basics, fun, excitement, archery (includes traditional archery), pushing yourself, new experiences, challenging, tough, heritage, primitive equipment, difficult, adverse conditions.

MARKETING THEMES

Connecting with the Challenge Oriented group depends on being able to offer different types of challenges or obstacles through hunting. Examples include compound bow hunters trying a recurve or long bow, a shotgun or rifle hunter trying a muzzleloader, and a target shooter trying hunting.

“JOIN THE EXCITEMENT, HUNT ILLINOIS.”

EXAMPLE IMAGERY



SOCIAL ENTHUSIAST

HABITS

This group is comprised of individuals who prioritize time spent with family and friends. As hunters, this group may be more inclined to hunt if they have a hunting partner, enjoy introducing others to hunting, and engage in hunting camp-type events.

KEYWORDS

Comradery, togetherness, family, friendship, tradition, make memories, Illinois heritage, economical, family, conservation, inexpensive, friends, relaxing, investment, roots, quality time, memories, fun, excitement.

MARKETING THEMES

Connecting with the Social Enthusiast group depends on being able to incorporate their friends and family in the experience. Examples include family or partner hunting events and group game cooking events.

“MAKE MEMORIES. TAKE SOMEONE SPECIAL HUNTING.”

EXAMPLE IMAGERY



LOCAVORE/FOOD ENTHUSIAST

HABITS

This group is comprised of individuals who prioritize healthy and local eating. As hunters, this group may be more opportunistic, harvesting game for the main purpose of filling their freezer with ethically- and locally-sustained meat.

KEYWORDS

Natural food, sustainability, organic, local food, locally-sourced, non-GMO, hormone-free, cruelty-free, nutrition, fresh, free range, get active, get healthy, economical, active, natural, conservation, inexpensive, outdoor lifestyle, escape, healthy, ethical eating.

MARKETING THEMES

Connecting with the Food Enthusiast group depends on being able to present the health benefits of eating wild game compared to meat from factory farms. Examples include teaching these individuals how to take the most ethical shot, how to maximize use of all parts of the harvest, and how to properly process and cook wild game meat.

“EAT HEALTHY. EAT LOCAL. HUNT ILLINOIS.”

EXAMPLE IMAGERY



COMPREHENSIVE COMMUNICATION PLAN

1.0 Executive Summary

The Learn to Hunt program is a collaboration between the Illinois Natural History Survey and the Illinois Department of Natural Resources. The goal of the program is to: recruit, retain, and reactivate the Illinois public in hunting. This communication plan will detail the steps program staff to increase reach of communication efforts.

1.1 Objectives

1. Increase awareness of the Illinois Learn to Hunt program offerings
2. Increase participation at Learn to Hunt events
3. Increase communication to past and future Learn to Hunt participants
 - 3.1 Increase monthly newsletter subscribers to 500
 - 3.2 Develop and maintain a compilation of past participant FAQs and address these in communication efforts
4. Develop a social networking campaign to expand communication to new audiences
 - 4.1 Increase Facebook following to 1,000 followers
 - 4.2 Increase Instagram following to 500 followers

2.0 Target Markets

Our target market is Illinois residents between the ages of 18 and 50 who have a desire to Learn to Hunt. They often enjoy being outdoors, spend time procuring their own food, target shoot, or engage in outdoor activities with family and friends.

2.1 Market Definition and Segmentation

We target 4 segments: nature lovers, target shooters, social enthusiasts, and locavores. While these segments have significant overlap, different communication strategies may be more effective for each segment.

- 2.1.1 Nature lover** – These individuals enjoy spending time in the outdoors and observing wild animals and plants.
- 2.1.2 Target shooter** – An individual who engages in competitive or recreational sporting activities involving tests of accuracy, precision, and speed in using a variety of firearms.
- 2.1.3 Social enthusiast** – These individuals yield satisfaction and a large driving force behind their motivations arise from interacting with other people rather than the activity itself.
- 2.1.4 Locavore** – An individual who prefer to eat foods which are grown or harvested relatively close to their place of residence.

3.0 Communication Plan Strategy

Create a unified message to be consistent across communication efforts. It is important to have a unified message, mission, and overall tone on various communication strategies. This document is to be used as a guide to keep these efforts consistent, concise, and effective.

3.1 Emphasize Social, Biological, and Economic Benefits

Since workshop participants will come from a wide range of backgrounds, we will emphasize our focus on the social, economic, and biological benefits of hunting.

3.2 Emphasize Food Procurement

Our goal is to establish a program reputation that promotes the harvest and preparation of wild game using ethical hunting techniques established during Learn to Hunt workshops.

4.0 Social Media Tactics

Use social media to drive internet traffic to program website and increase engagement on various social media platforms. All social media content is to be consistent with program messaging.

4.1 Instagram

Objective: Utilize Instagram to target younger (18-34 years old) demographic that have shifted away from other forms of media. Post a minimum of 1 photo per day with relevant content based on time of year and current events.

4.1.1 Targeted posts - Photo or Videos

- Highlight the products or services that Illinois Learn to Hunt provides
 - Pictures from Learn to Hunt events
 - Flyers with dates of upcoming workshops
 - Gear used at Learn to Hunt events
- Crisp wildlife photography
- Testimonials from past workshop participants
- Hunting pictures from past workshop participants (shows our program in fact did create new hunters)
- Wild game food and recipes

4.1.2 Target Markets - Be seasonally relevant

- Nature lovers
- Locavores
- Target Shooters
- Social enthusiast
- Demographic Targets: college students, females, minorities
- Outdoor recreationists: hikers, photographers, campers, fishers(wo)men

4.1.3 'Reaching' Tactics:

- Use appropriate hashtags to generate related interest in our posts.
- Search related hashtags to "like" and "comment" on photos that have appropriate content
- Reply to or "like" every comment on Illinois Learn to Hunt posts
- Engage every new follower by liking or commenting on their recent posts
- "Comment" or "like" every time somebody uses our #LearnToHuntIL hashtag
- Conduct a product "giveaway" by requiring followers to upload a post taking someone hunting and tagging the Illinois Learn to Hunt page with a unique hashtag
- "Repost" other pages popular and relevant posts when possible (using the Repost Instagram Application)

4.1.4 Program Hashtags: Use 2-5 relevant hashtags in each post and then add 20-30 hashtags in the first comment of the post.

- **Every post:** #LearnToHuntIL, #NaturalFood, #Conservation,
- **Our Partners to tag with hashtags:** #NWTF, #DucksUnlimited, #PheasantsForever, #DeltaWaterfowl, #QUGA, #IFOR, #IDNR, #USFWS, #WhitetailsUnlimited, #4H, #CLWA, #FroggToggs, #CampLoudThunder #HuntersHaven, #ICF, #StarGunClub, #TombstoneGunRange
- **Other popular outdoor companies:** #QDMA, #Cabela's (#WhatGetsYouOutdoors, #It'sInMyNature), #BassProShops, #FieldAndStream, #ATA

- **General Hunting Hashtags:** #Hunting, #BowHunting, #GunHunting, #Bow, #Gun, #Hunt, #Archery, #ProudHunter
 - **Duck Hunters:** #DuckHunting, #Duck, #DuckSeason, #Waterfowl, #Drake, #Hen, #Mallard, #Woodie, #DuckDog, #BirdDog, #GunDog, #Bands, #WingShooting, #FlightsCancelled, #Cupped, #DuckBlind, #Limits
 - **Deer Hunters:** #Deer, #Whitetail, #WhitetailedDeer, #DeerHunting, #DeerSeason, #Buck, #Doe, #Venison, #Backstraps, #BigBuck, #MonsterBuck, #DeerSociety
 - **Shed Hunters:** #ShedHunting, #Sheds, #WhiteGold, #Shedicated, #ShedHead, #Scouting, #ShedDog, #BrownGold, #DeadHead, #PostSeason, #Whitetail, #BoneZone, #BoneYard
- **Nature lover**
 - Broad scale: #Nature, #Adventure, #Nature_obsession, #GetOutside, #Wanderlust, #Outdoors, #TheGreatOutdoors
 - Mid-scale: #WildernessCulture, #LifeOfAdventure, #HikeLife, #ConnectWithNature, #Escape
 - Fine scale: #ExploreIL, #LearnToHuntIL, #Stewardship, #Conservation, #Conserve, #FairChase, #GetAwayFromItAll
- **Target shooter**
 - Broad scale: #Guns, #GunsOfInstagram, #PewPew, #SecondAmendment, #GunsDaily, #GunDay, #Bullseye, #BangBang, #Practice, #Pull, #Shooting, #SafetyFirst
 - Mid-scale: #Gunstagram, #TargetShooting, #PrecisionShooting, #LongRangeShooting, #Shooter, #Shooting, #PracticeMakesPerfect
 - Fine scale: #TightGroups, #ILShooters, #IllinoisFirearms, #Illinois, #IllinoisShooters, #ClayPigeons
- **Social enthusiast**
 - Broad scale: #GetInvolved, #Friends, #Comradarie, #Togetherness, #Family, #Memories, #Friendship, #Hobby
 - Mid-scale: #FamilyFirst, #DadLife, #MomLife, #FamilyAndFriends, #FamilyLife, #FamilyHobby
 - Fine scale: #Conservation, #IllinoisFamily, #IllinoisFriends, #FamilyHobby, #HavingFun, #NatureLove
- **Locavore**
 - Broad scale: #LocalFood, #Harvest, #NaturalFood, #Local, #FoodInstagram, #FoodStylist, #Foodstagram, #Food, #FoodLover, #Cooking
 - Mid-scale: #Locavore, #LocalHarvest, #Homegrown, #Sustainable, #WildGame, #FillTheFreezer, #EatWhatYouKill, #HuntYourFood, #Venison, #EatWild, #HuntHarvestEat
 - Fine scale: #Locavores, #HealthyFoodPorn, #WildGameMeat, #TradLife, #KnowWhereYourFoodComesFrom, #FieldToTable, #WildGameWildGainz
- **Demographics**
 - **College Students:** #College, #CollegeLife, #University, #UIUC, #SIU, #EIU
 - **Females:** #Women, #WomenWhoHunt, #GirlsWhoHunt, #OutdoorsWoman, #WomenInTheOutdoors, #Huntress, #HuntressView, #WildlifeWomen

- **Outdoor Recreationists**
 - **Hiking:** #Hiking, #HikingAdventures
 - **Fishing:** #Fishing, #GoneFishing, #IceFishing
 - **Birding:** #Waterfowl, #Birds, #SongBirds, #TweetTweet
 - **Photography:** #Wildlife, #Photography, #Naturegram, #WildlifePhoto, #WildlifeAddicts
 - **Camping:** #Camping, #Campsite, #Tent, Campfire, #Travel, #Explore
 - **Dog trainers:** #Retrievers, #GunDogs, #DogsOfInstagram, #HuntingDog, #GSP, #Dog, #DogsOfInsta, #Pointer, #PointersOfInstagram, #PheasantHunting

4.1.5 Weekly post themes - Use topics that are relevant during specific times of the year (i.e. turkey season, deer season, scouting, etc.). Determine a time frame to run the promotion and stick through it to build equity in the theme.

- “Wildlife Wednesday”
- “Workshop Wednesday”
- “Wild game Wednesday”
- “Trail cam Tuesday”

4.1.6 Instagram Stories

- Workshops
- Hunting license, permits, and regulation reminders
- Cooking wild game processes
- Setting up gear/cleaning gear

4.1.7 Instagram Evaluation

Evaluation of Instagram social media efforts will be evaluated using the analytics data within the application. By using the communication tactics listed above, the program aims to gain ~50 new followers per month, while increasing overall follower engagement. The Illinois Learn to Hunt Instagram page should exponentially increase the number of impressions it has per week, in conjunction with the increase of Followers. Lastly, the Instagram page should be actively promoting followers to click the website link and/or email link to inquire about Learn to Hunt workshops.

4.2 Facebook

Objective: Utilize Facebook as the main communication platform between program staff and the public.

4.2.1 Post Events and Activities

As new program events are developed they are to be added to the program page as an official Facebook Event. All corresponding information should be filled out for the event and a program photograph should be added.

4.2.2 Cross-program Communication

Encourage the promotion of program events and posts by partners. Reciprocate the promotion of related partner events.

4.2.3 Facebook Messages

Respond in a timely fashion to messages received from the public by the program Facebook page. Add relevant questions to program FAQ documents.

5.0 Program Website

The program website will be maintained to reflect the goals of the program. The website is to be user-friendly, aesthetic, and mobile responsive.

5.1 SEO Optimization

Search Engine Optimization (SEO) encompasses both the technical and creative elements required to improve rankings, drive traffic, and increase awareness in search engines.

5.1.1 SEO Best Management Practices

- Content – update and be consistent within the text on the page, titles, and webpage descriptions
- Website performance – optimize website to be more responsive
- Authority – create strong enough content that other websites link to our site
- User experience – analyze website bounce rate and adjust website navigation to ensure a seamless user experience

5.1.2 SEO Practices to Avoid

- Keyword stuffing – do not overuse keywords
- Poor user experience

5.2 Monthly Newsletter Archives

Build and maintain an online archive of past program newsletters. These archives are a useful resource for new hunters and contain valuable information.

5.3 Additional Resources

Build and maintain a catalog of additional resources for various types of hunting. Categories are to include: deer, turkey, small game, upland bird, and waterfowl. This should be designed to be an evolving catalog and new resources should be added as they are discovered or published.

5.4 Participant FAQ

Maintain a database of participant questions pertaining to workshop specifics. Make this database visible to website visitors to ensure that program staff is not receiving the same questions over and over.

COMMUNICATION CHANNELS

SOCIAL MEDIA

Social media is used to drive internet traffic to program website and increase engagement between the public and LtH program offerings. The LtH program currently uses Facebook and Instagram.

FACEBOOK

Facebook is used as the main communication platform between program staff and the public. The Learn to Hunt program Facebook page (www.facebook.com/IllinoisLearnToHunt), established in August 2017, currently has 1,569 followers - an increase of 162% from last year. During FY19, the LtH Facebook reach was 274,605 an increase of 56% from last year. Facebook posts are made daily (weekdays) to inform potential participants about program offerings, share infographics, and other useful information for new and existing hunters alike.



Monthly evaluations are developed by program staff (utilizing Facebook Insights) to evaluate response of Facebook methodology, and to determine the viability of the previously defined market segments. This allows program staff to refine this marketing strategy as laid out in the Adaptive Resource Management concept. A detailed audience distribution (Figure 7) showed program staff has been effectively reaching targeted age groups.

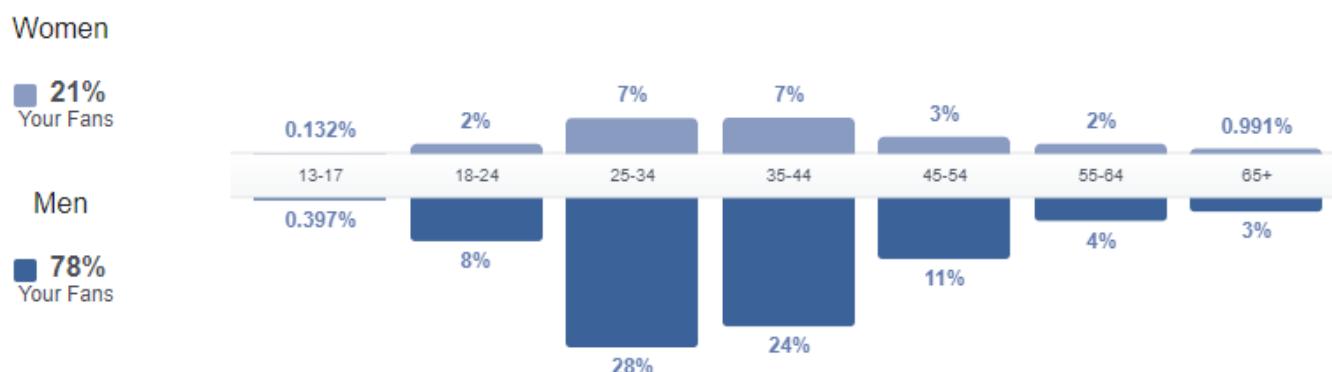


Figure 7: Age and gender distribution of Facebook followers (n=1569)

MONTHLY NEWSLETTER

The LTH program distributed a monthly newsletter containing important dates (e.g. application deadlines, season dates), upcoming events, wild game recipes, participant hunting stories, and useful hunting tips and techniques. During FY19 the monthly newsletter saw an increase from 392 to 653 total recipients, a 67% increase. The newsletter averaged a 47.5% open rate this year, well above the industry standard for newsletters distributed for outreach programs of 18% (Figure 8). Roughly 10% of event registrations indicated that they learned about the event from the LtH newsletter. Staff did not notice any content themes, design changes, or newsletter offerings corresponding with higher open rates.

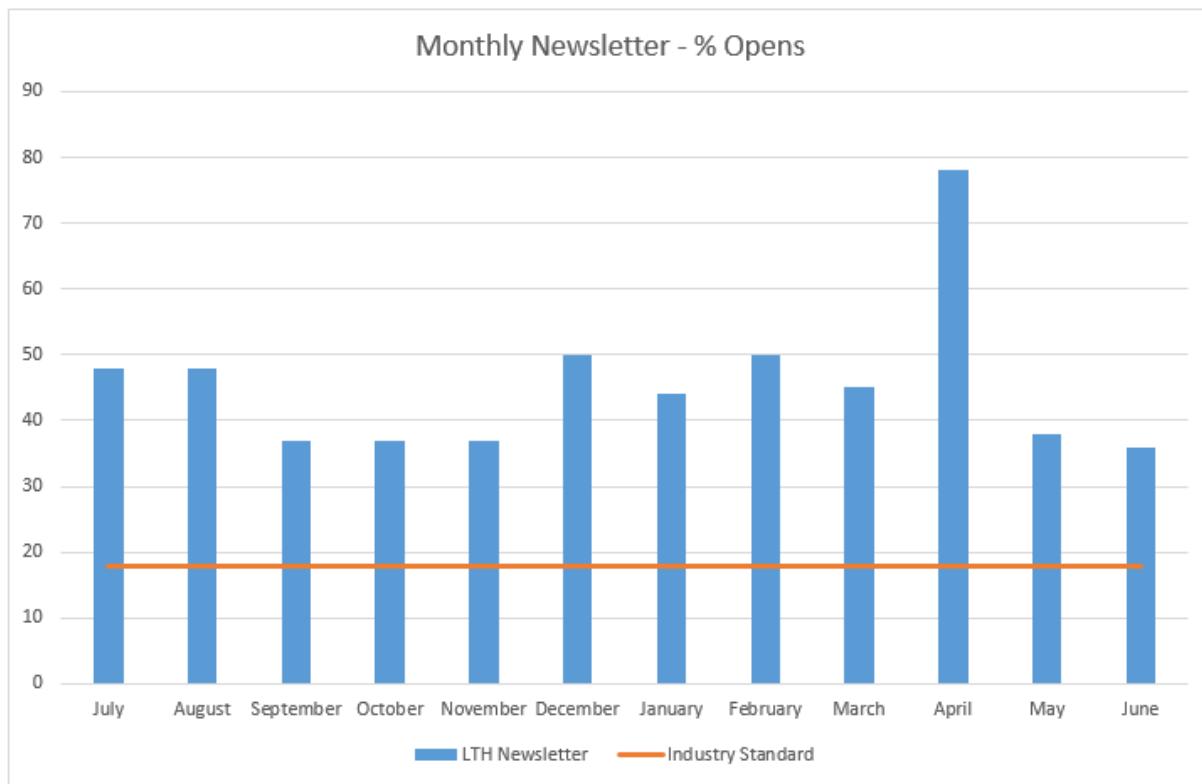


Figure 8: Percent open rate of LtH monthly newsletter compared to the industry standard open rate.

INSTAGRAM

Instagram is used as the secondary communication platform between program staff and the public and is aimed at targeting younger (18-24 year old) demographics. The Learn to Hunt program Instagram page, established in 2018, currently has 294 followers and 120 posts. Due to the lack of Instagram analytic capabilities, staff cannot determine relevant data about followers and users. Since Instagram became a priority for the LtH program (January, 2019), the program averages 459 post engagements/month (Table 7). Instagram posts with higher engagement rates were high-quality wildlife photographs.

Table 7: Monthly engagement from LtH Instagram postings.

Month	Monthly Post Engagement
January	225
February	574
March	209
April	791
May	579
June	376

PROGRAM WEBSITE

The program website www.learntohunt.com is used as a central hub for all information regarding the program and for all event registrations. In addition to information about upcoming events and registration, the program website has a collection of various resources, both external and internal, that a new hunter may find useful. The program has developed a series of Learn to Hunt manuals designed to supplement LtH events and provide useful information to new hunters. The program has also created an ongoing database of wild game recipes and formatted a Learn to Hunt Wild Game recipe book that is available for free on our website. Google Analytics has been installed on the back-end of the website and allows program staff to understand how the public navigates the website and which resources they find most useful. This information was vital for re-designing the website to a more aesthetic and easy to use interface. In addition to providing information about user experience and onsite content; Google Analytics provides unique datasets about the users interacting with the website both in the aggregate and individually (Figures 9 and 10). Google Analytics estimates this user data by analyzing browsing history, location, and often times user-submitted age and gender.

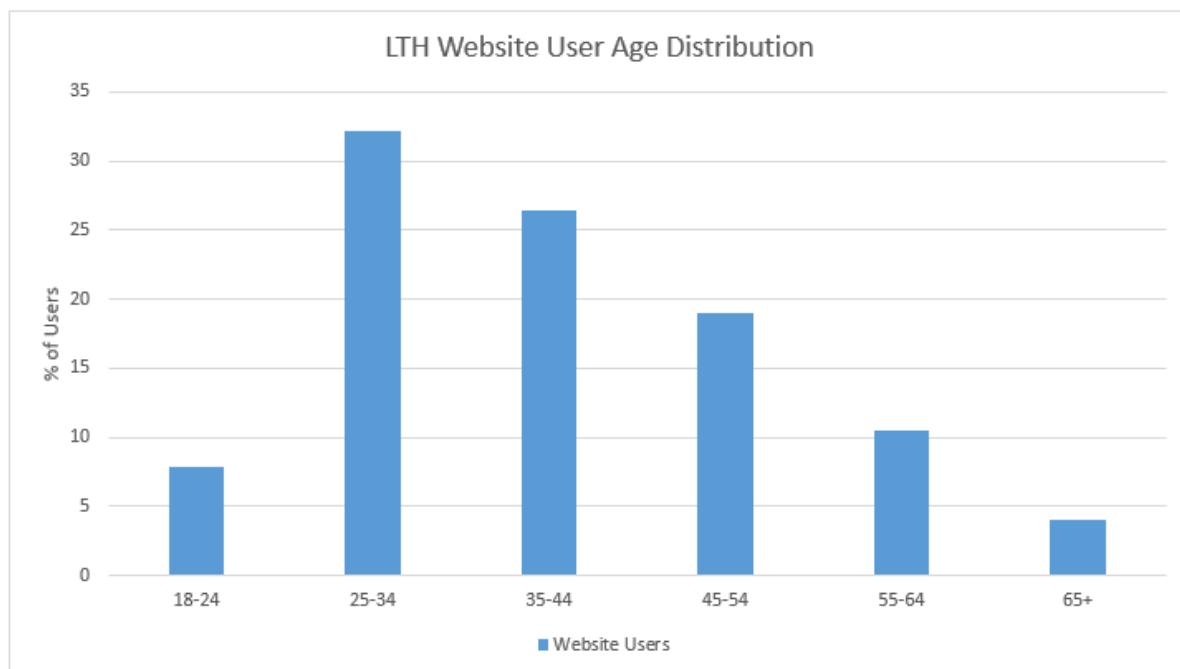


Figure 9: Age distribution of LtH program website users.

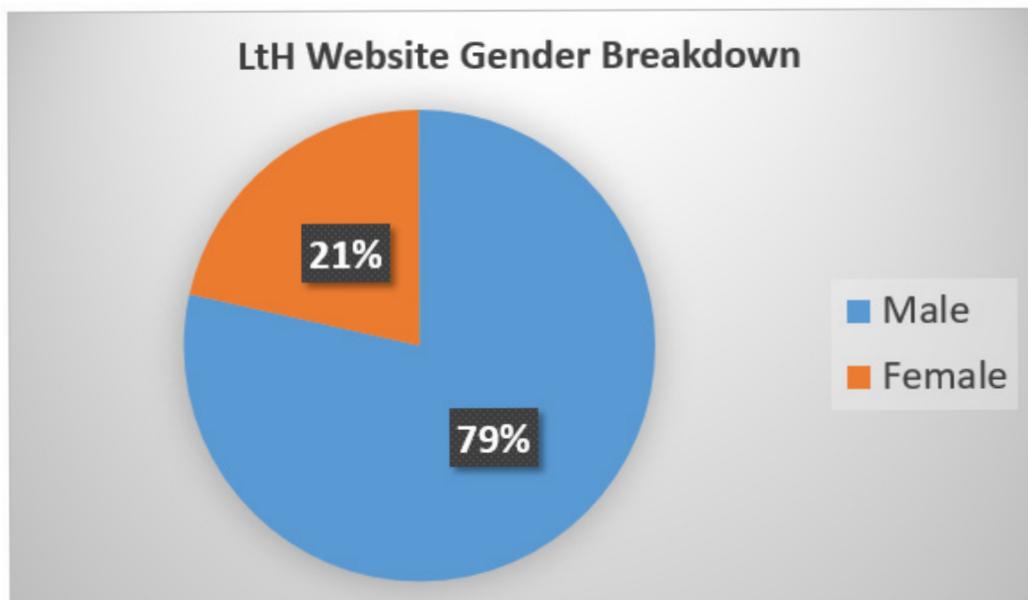


Figure 10: Gender breakdown of LtH program website users.

Google Analytics data sets not only include basic demographic information but also assumptions based on a user's search history, social media activity, and content consumption patterns. Google Analytics data is collected regardless of the users operating system, device, or browser. These assumptions are referred to as Affinity Categories and Other Categories. Affinity Categories are broad categorizations and are often referred as individuals higher in the "purchase funnel". Other categories are users lower in the "purchase funnel", meaning they are more likely to use your service. In context of the LtH program, this means register for an event, utilize an e-learning module or view the upcoming calendar. These three conversion goals can be analyzed individually. Users can be included into multiple Affinity and Other categories.

In conjunction with Affinity Categories and Other Categories, conversion rates (Tables 8 and 9) can be used to analyze which Affinity Category completes a certain action (i.e., register for an event, view event calendar). Conversion rates tell staff what percentage of users in an individual Affinity or Other category completes an action. This information is useful to refine market segmentation and better understand our target audience.

The top segments are consistent with the defined LtH market segments and is used to refine characteristics of each segment. Viewing the event calendar has a much greater conversion rate than registering for an event for all segments. This shows staff that perhaps program offerings are not within potential users geographic area or that users are unable to attend an event due to scheduling conflicts. Future analysis was geographically isolate website users who view the event calendar but do not register for an event. This will give new insight into additional priority geographies for LtH program offerings.

Table 8: Google Analytics' Affinity Categories and conversion rate analysis.

Affinity Categories	Users	Conversion Rate (eLearning Module)	Conversion Rate (Register for event)	Conversion Rate (View Event Calendar)
Do-It-Yourselfers	1130	8.87%	6.06%	12.35%
Outdoor Enthusiasts	1073	9.56%	5.98%	12.43%
30 Minute Chefs	1063	9.51%	7.36%	13.31%
Value Shoppers	1057	9.20%	7.29%	11.83%
Business Professionals	891	8.96%	6.25%	13.43%
Avid Investors	890	10.98%	6.25%	12.90%
Auto Enthusiasts	830	8.52%	6.15%	11.75%
Technophiles	823	9.24%	7.11%	10.51%
Sports Fans	815	9.32%	7.24%	12.40%
Pet Lovers	766	9.46%	8.21%	10.79%

Table 9: Google Analytics' Other Categories and conversion rate analysis.

Other Categories	Users	Conversion Rate (eLearning Module)	Conversion Rate (Register for event)	Conversion Rate (View Event Calendar)
Weather	411	11.89%	6.17%	15.57%
Celeb and Entertainment News	388	8.97%	9.16%	12.71%
Online Video	324	9.82%	6.92%	10.04%
Cooking and Recipes	319	8.04%	7.48%	21.50%
Hunting and Shooting	312	11.87%	6.12%	15.21%
American Football	248	8.31%	7.67%	11.82%
Social Networks	221	11.48%	6.83%	15.57%
Sports News	216	8.82%	5.88%	13.07%
Politics	199	10.13%	5.88%	14.38%
Residential Sales	190	10.86%	6.37%	12.73%

PARTICIPANT SURVEY RESULTS

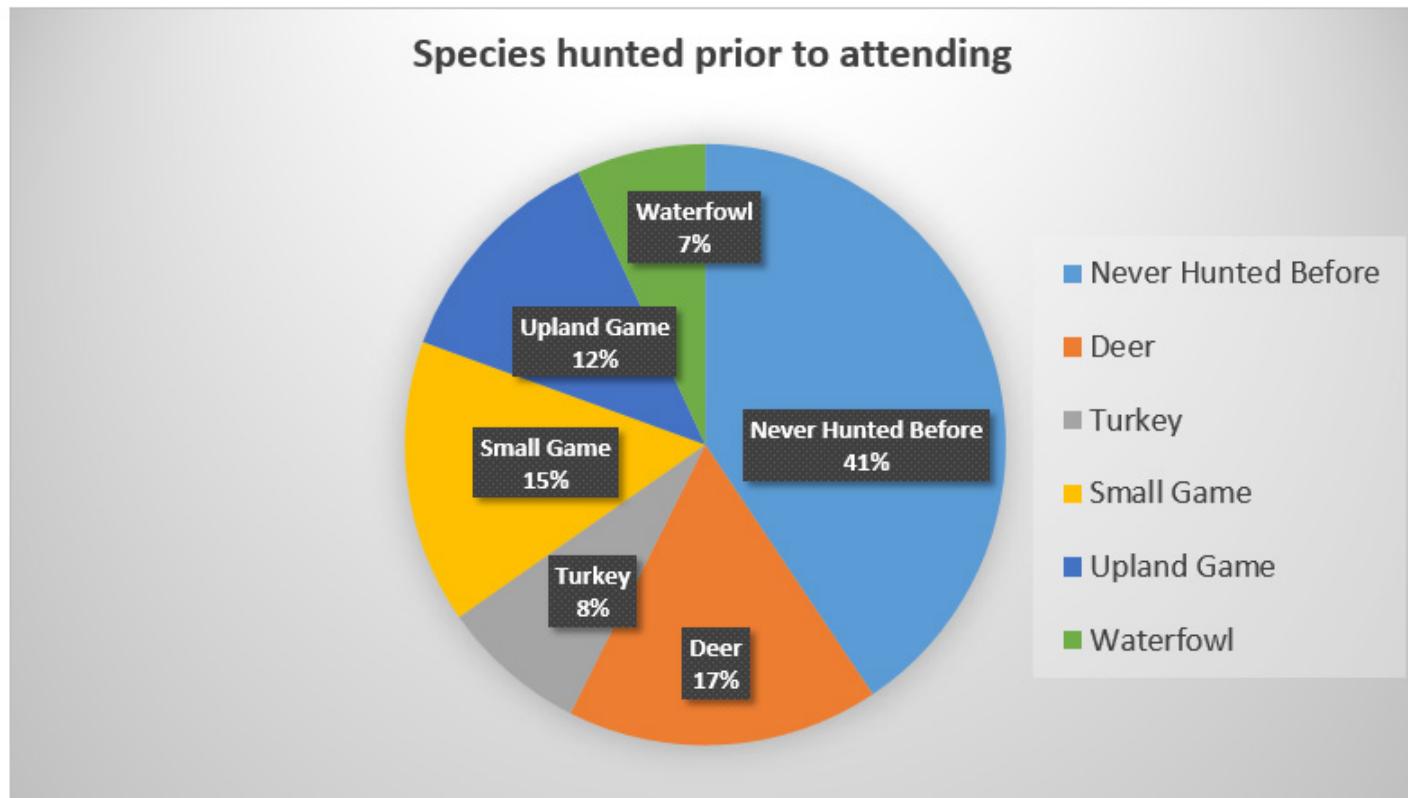
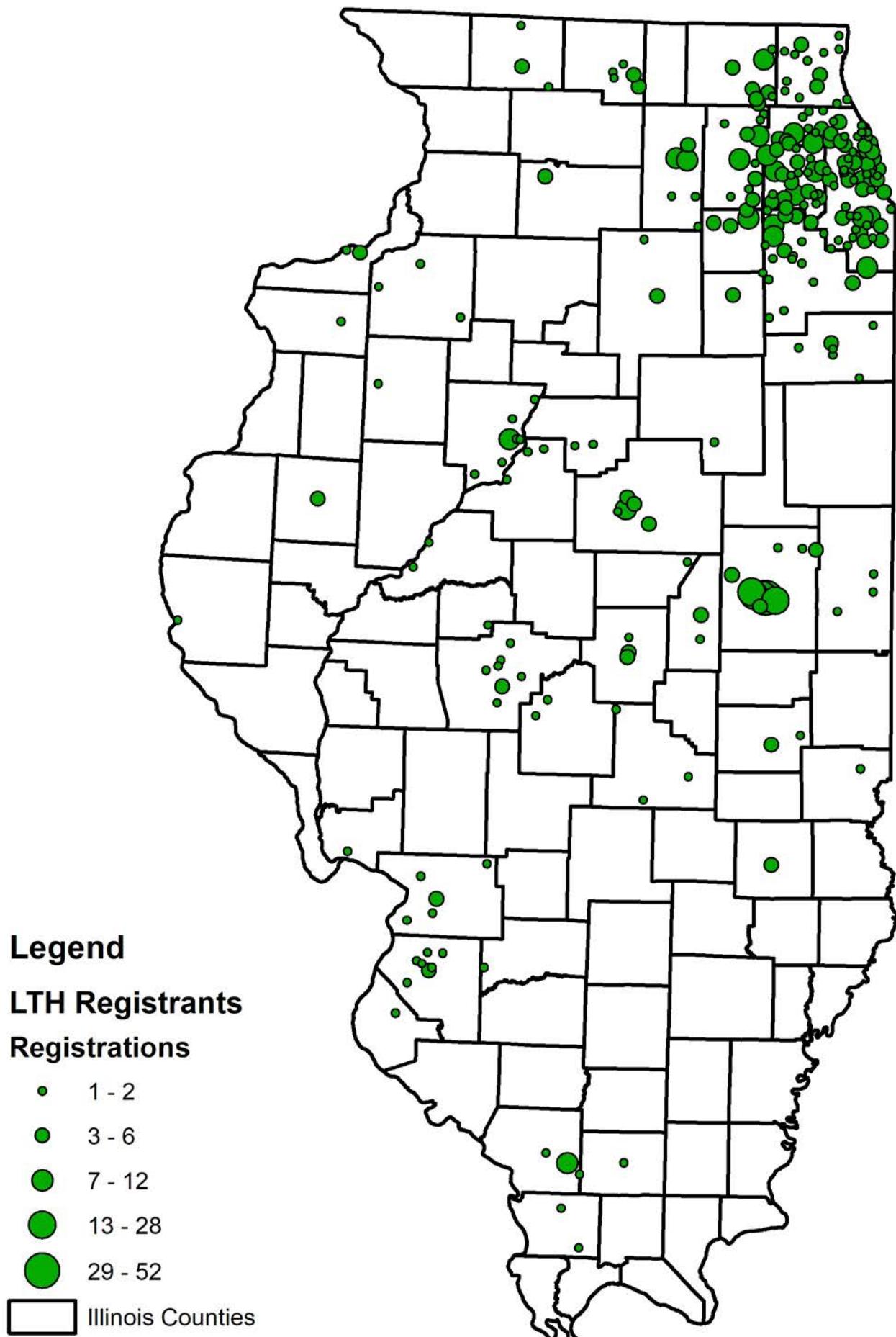


Figure 11: Percentage of workshop participants with prior hunting experience (n=249).



Figure 12: Percentage of workshop participants who have accompanied somebody else hunting but not hunted themselves (n=249).



40 Figure 13: Locations of all LtH event registrants (n=543). The Jenks natural breaks classification
method was used to cluster registration data.

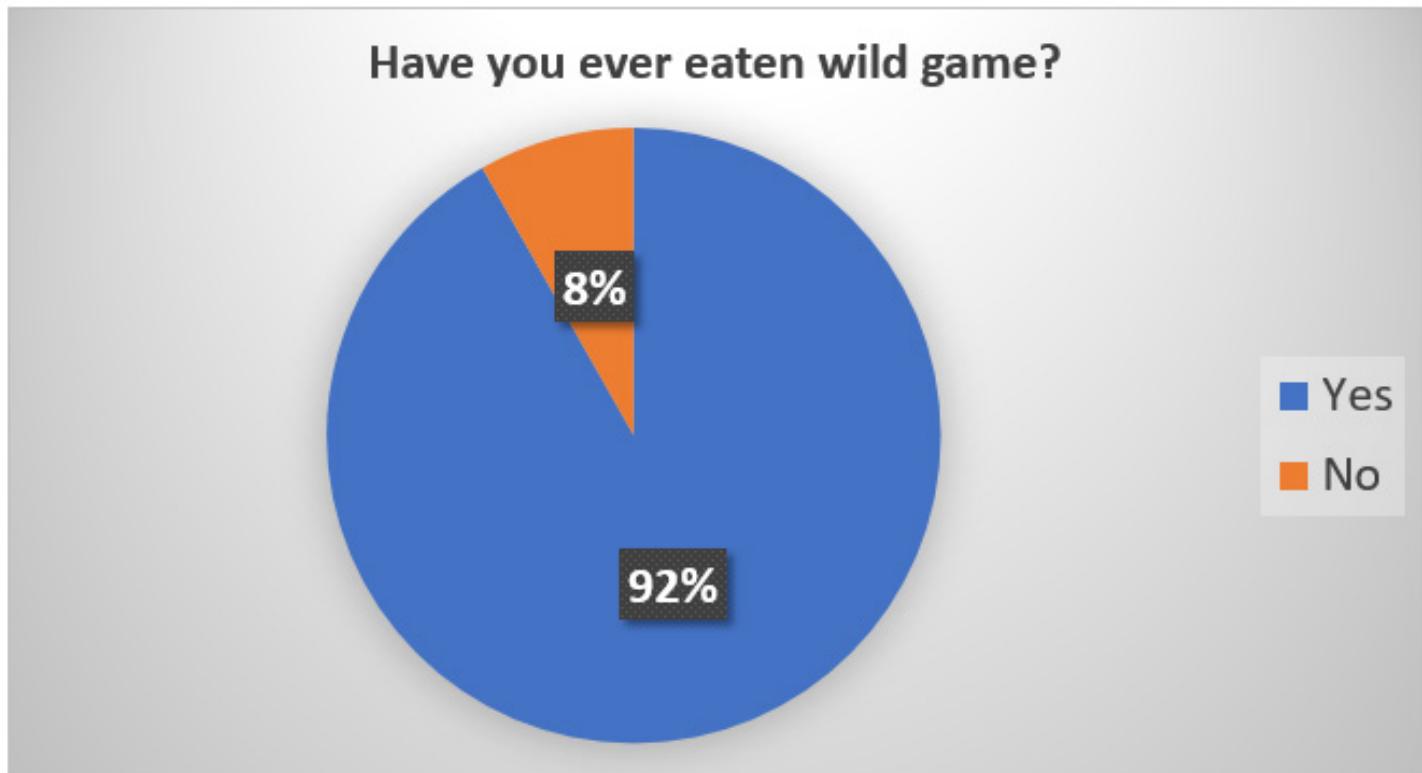


Figure 14: Wild game consumption among workshop participants (n=249).

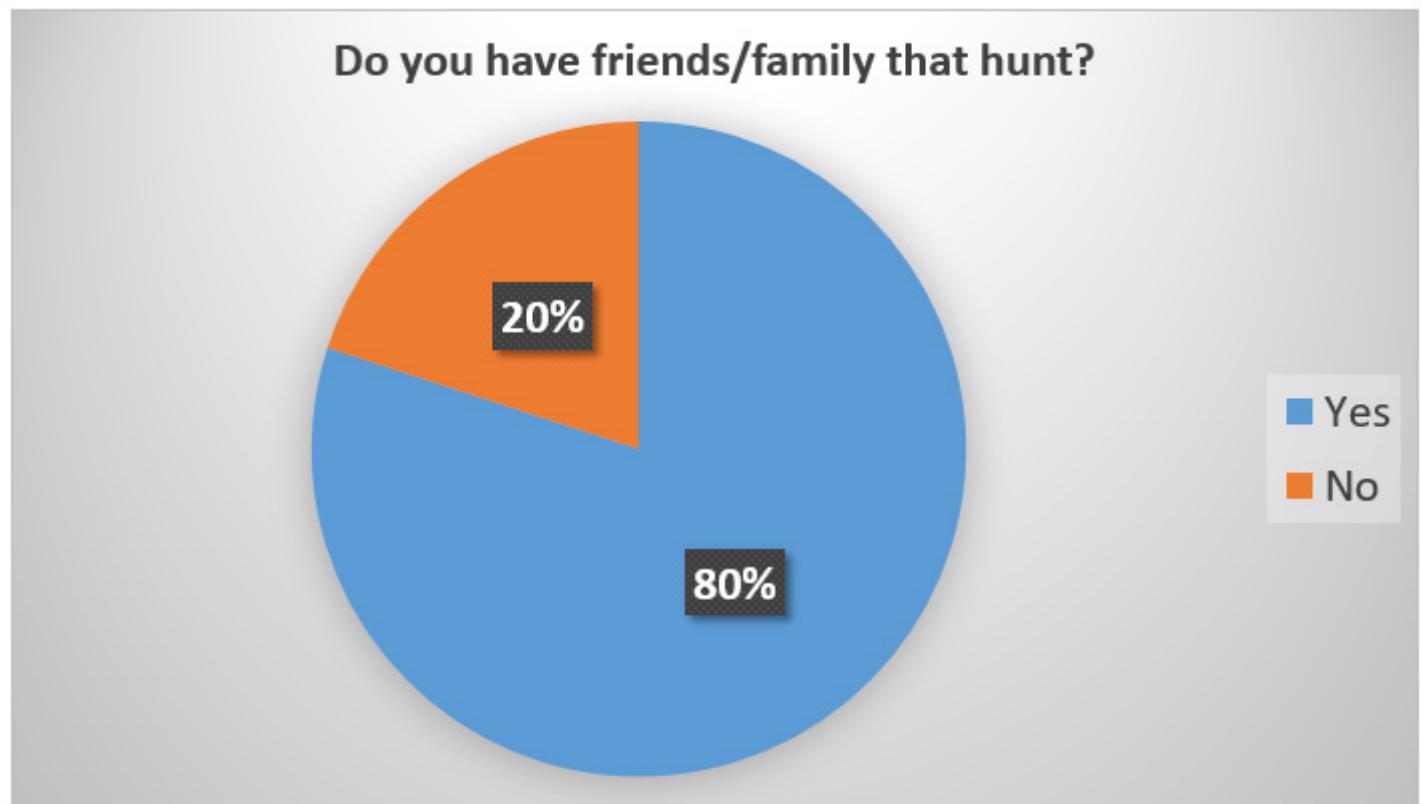


Figure 15: Percentage of workshop participants who have friends or family that hunt (n=249).

What species are you interested in hunting?

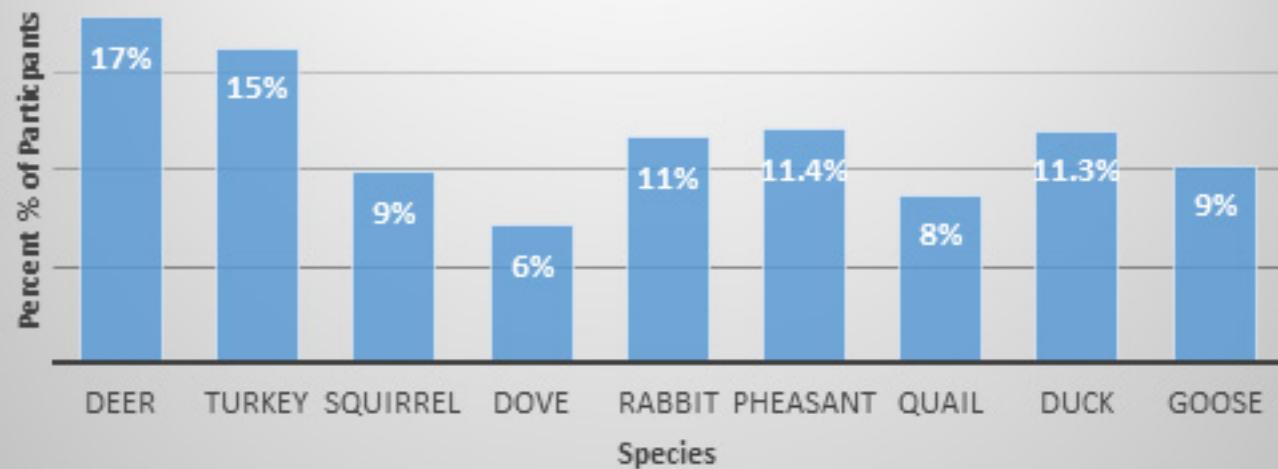


Figure 16: Workshop participant's response to species interested (n=249).

Table 10: Percentage of LtH participants interested in hunting specific species that the attended event covered (n=249).

Species	Species	% Interest
Deer Event	Deer	94%
Turkey Event	Turkey	96%
Small Game Event	Rabbit	77%
	Squirrel	64%
	Pheasant	63%
	Quail	46%
	Dove	38%
Waterfowl Event	Duck	77%
	Goose	74%



Figure 17: Percentage of workshop participants who have shot a firearm prior to the LtH workshop (n=249).

Table 11: Percentage of registrants that attended the event by workshop type (n=249).

Event Species	% of Registrants Attended
	Attended
Specialty Events	59%
Turkey	54%
Small Game	50%
Deer	48%
Waterfowl	43%

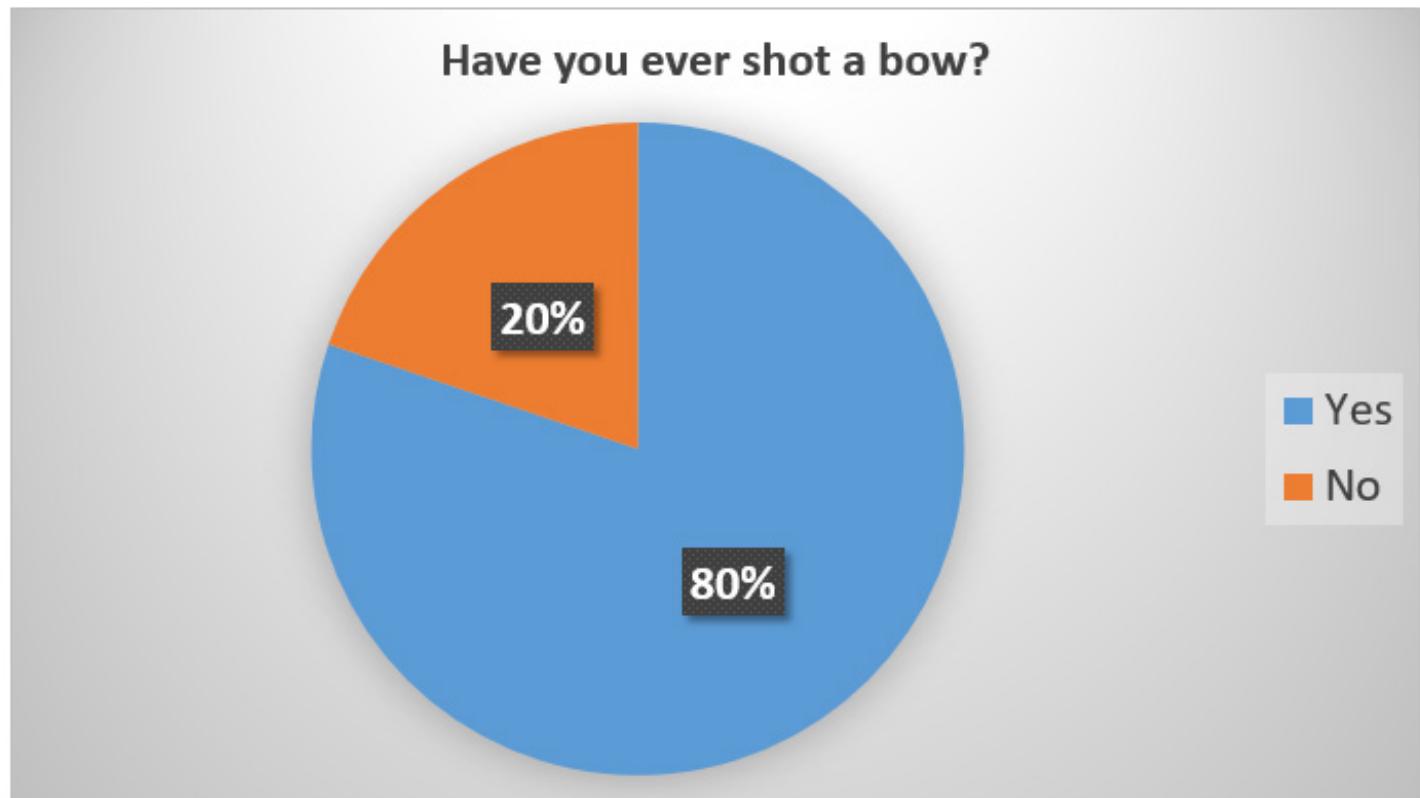


Figure 18: Percentage of workshop participants who have shot a bow prior to the LtH workshop (n=249).

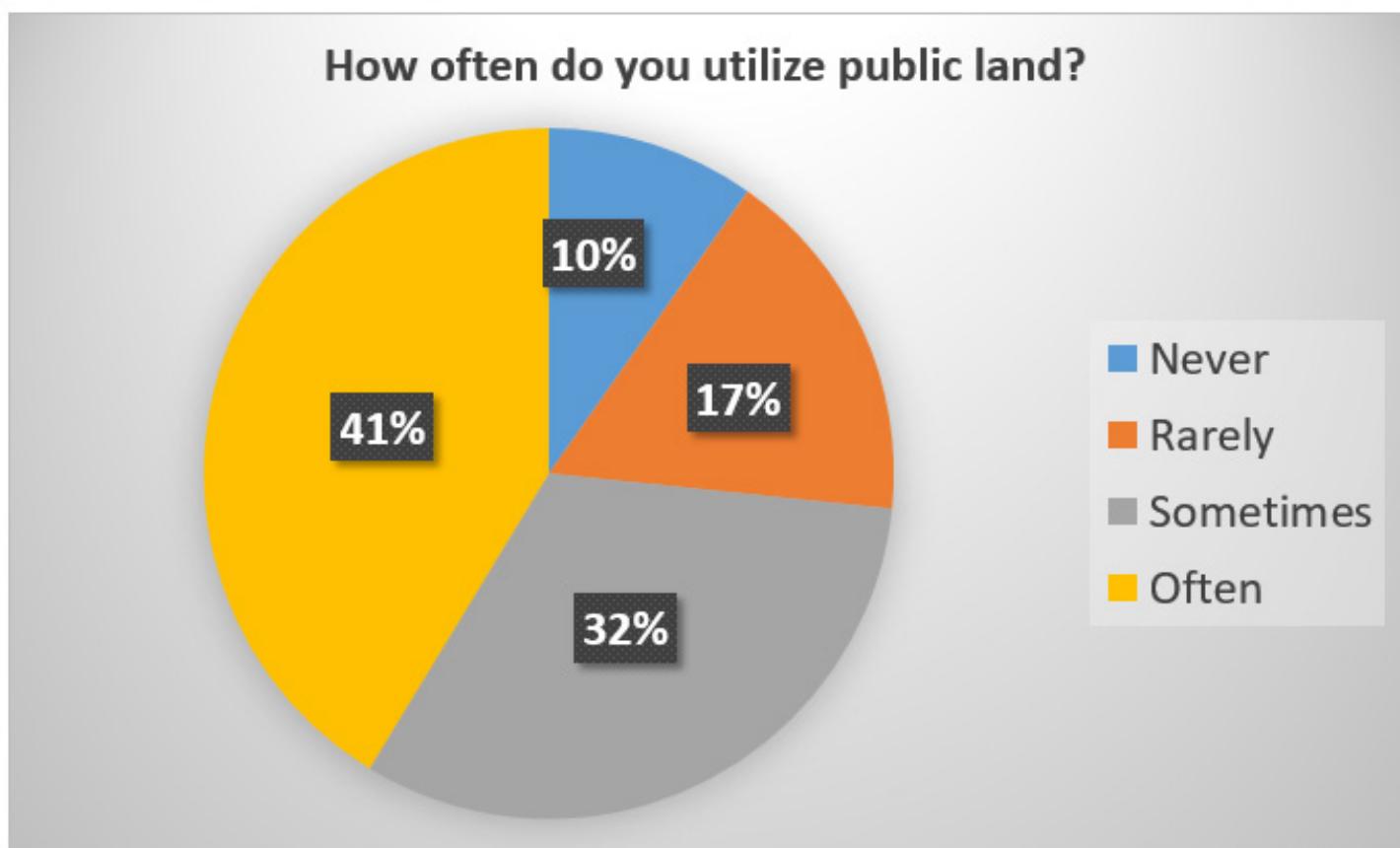


Figure 19: LtH participants public land usage (n=249).

Age Distribution of LtH Registrants

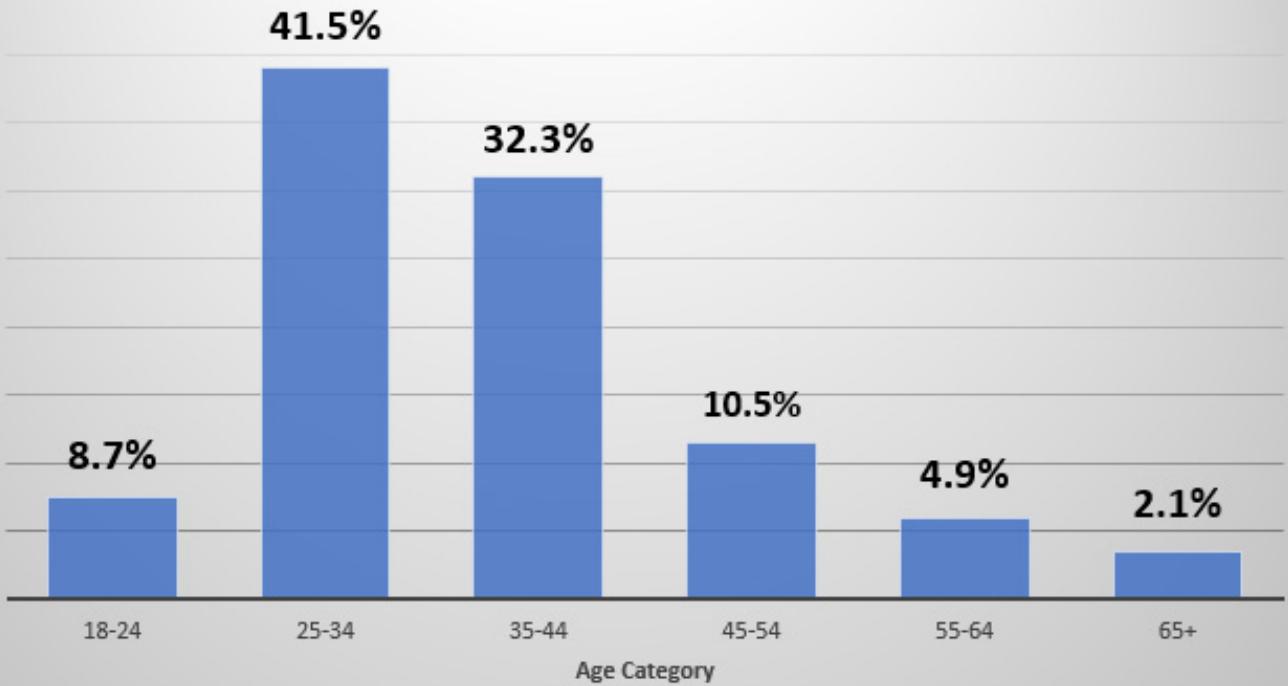


Figure 20: Age distribution of LtH event participants (n=249).

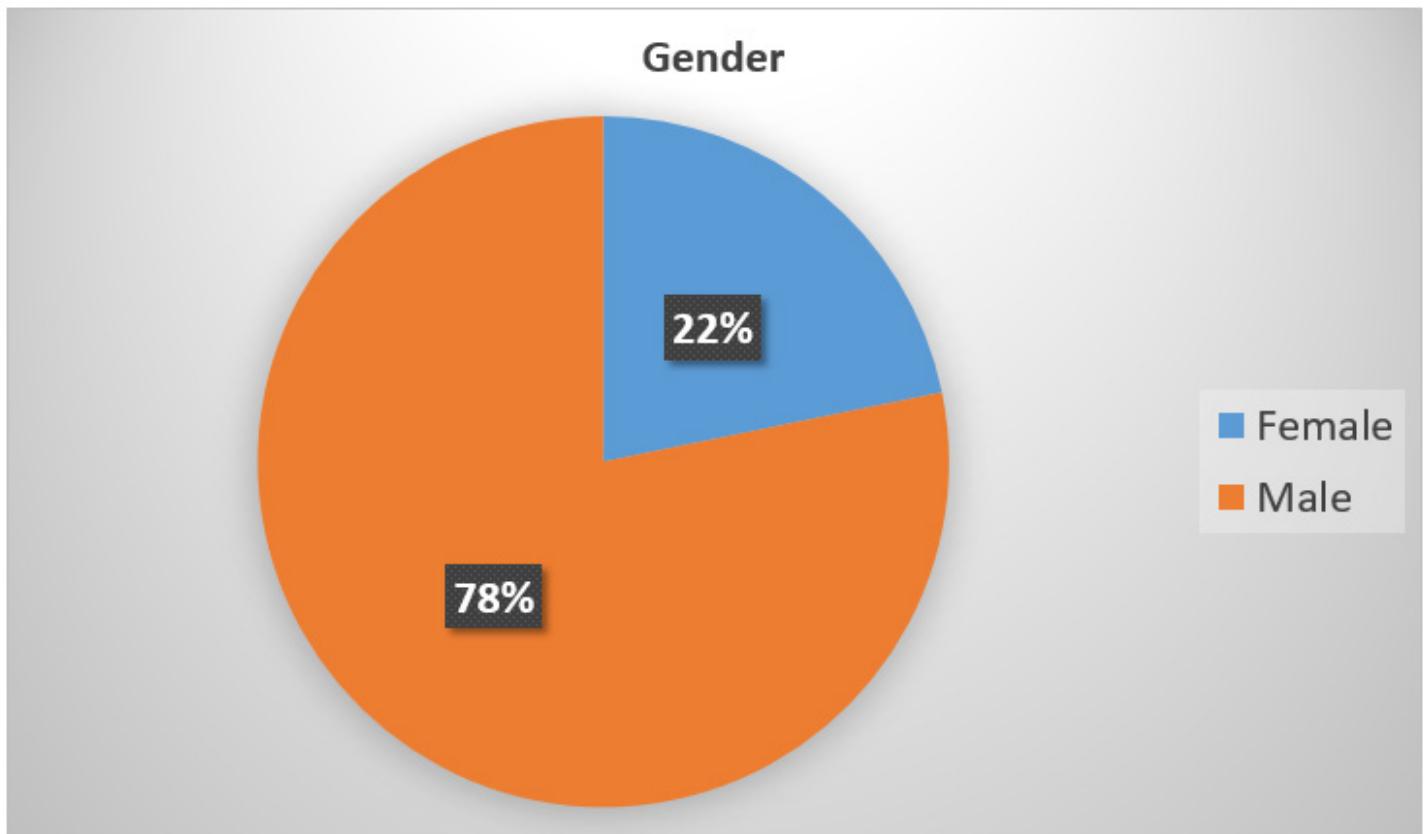


Figure 21: Gender breakdown of workshop participants. (n=249)

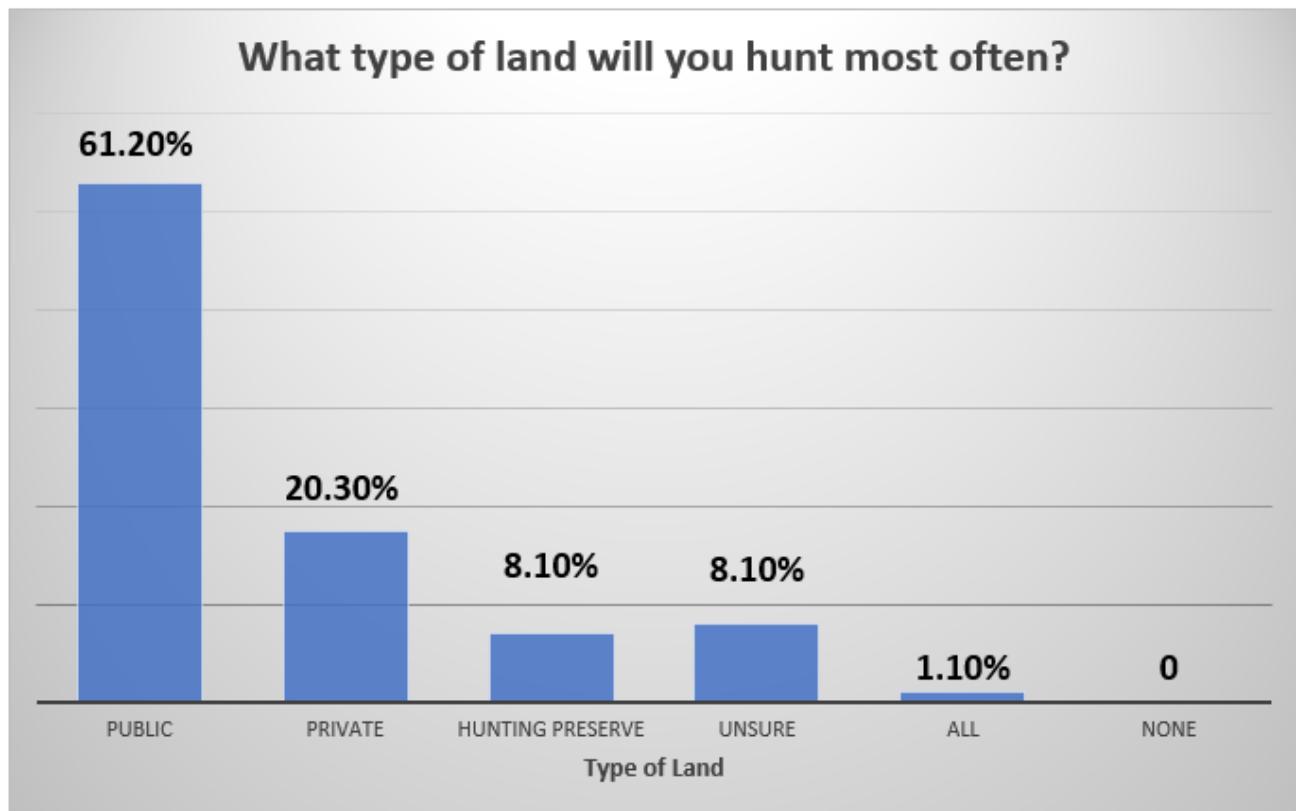


Figure 22: Preferred hunting land type of workshop participants (n=249).

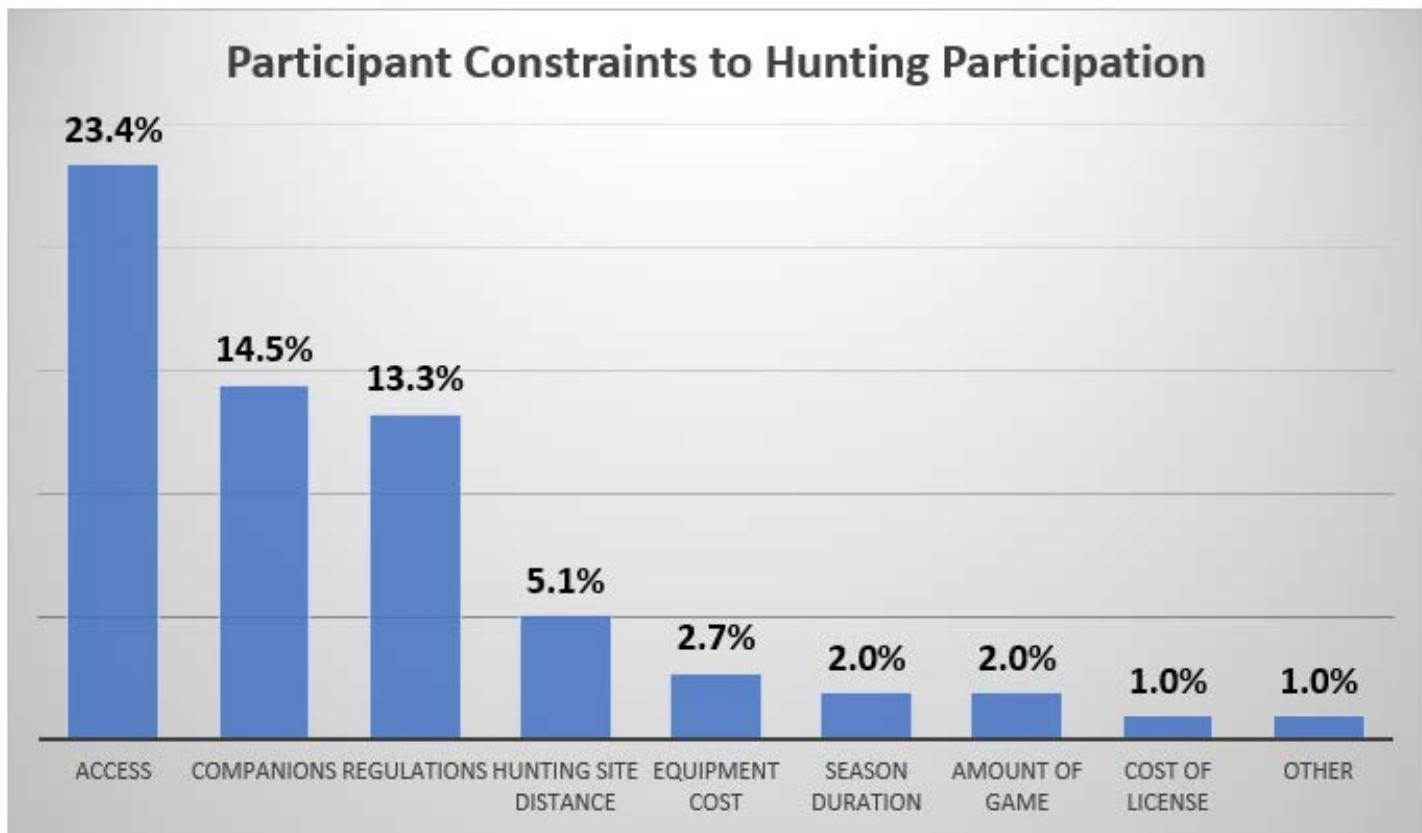


Figure 23: Workshop participants' identified constraints to hunting (n=249).

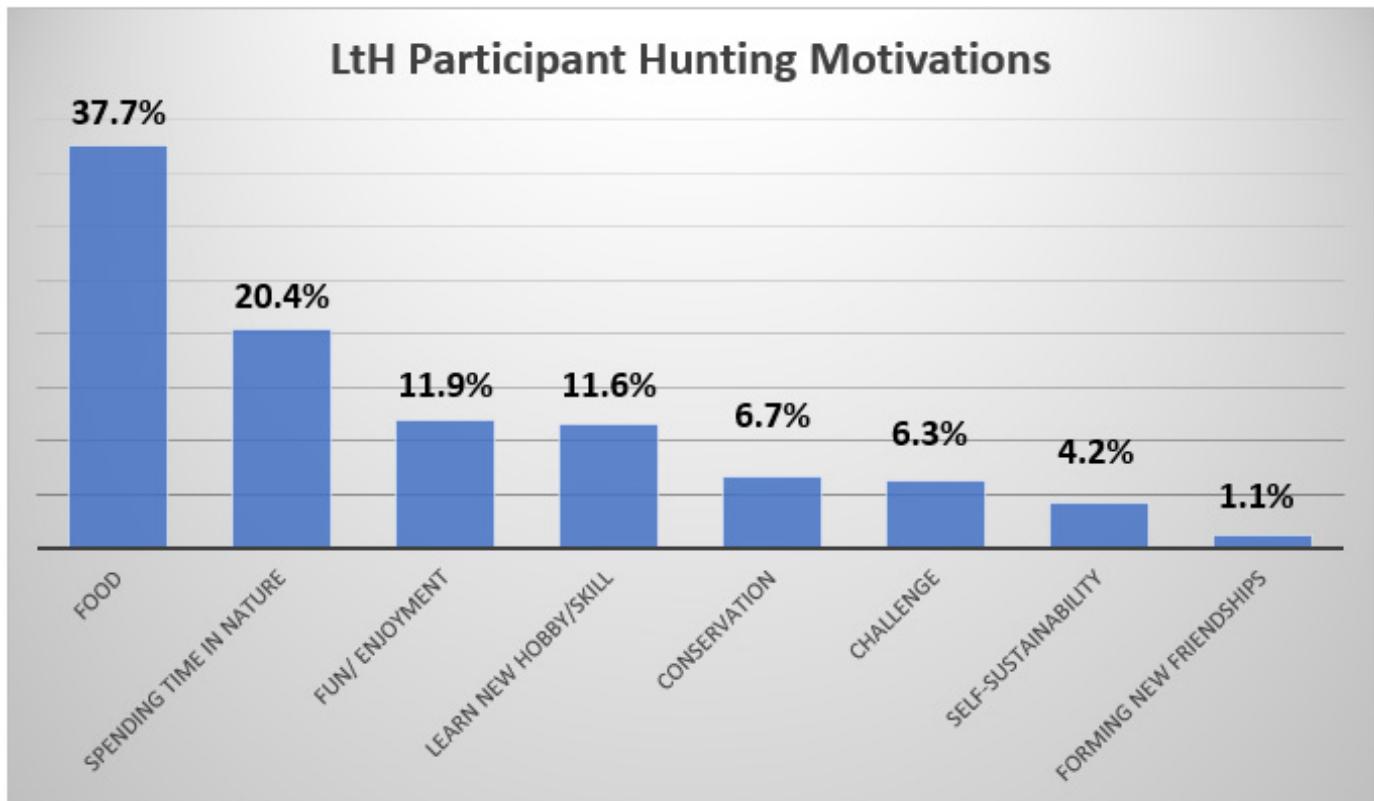


Figure 24: LtH participant motivations for hunting (n=249).

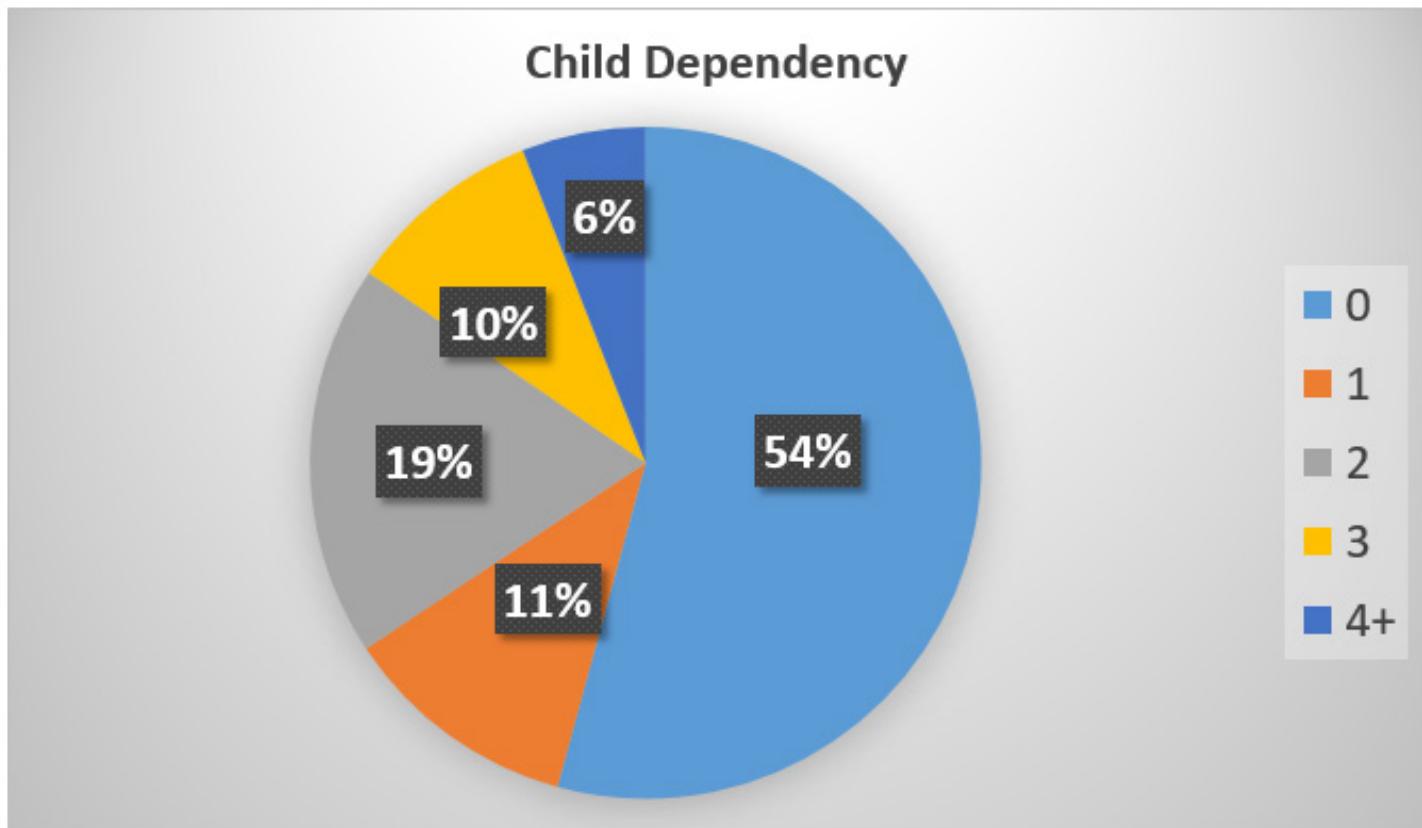


Figure 25: Number of children living at home of LtH participants (n=249).

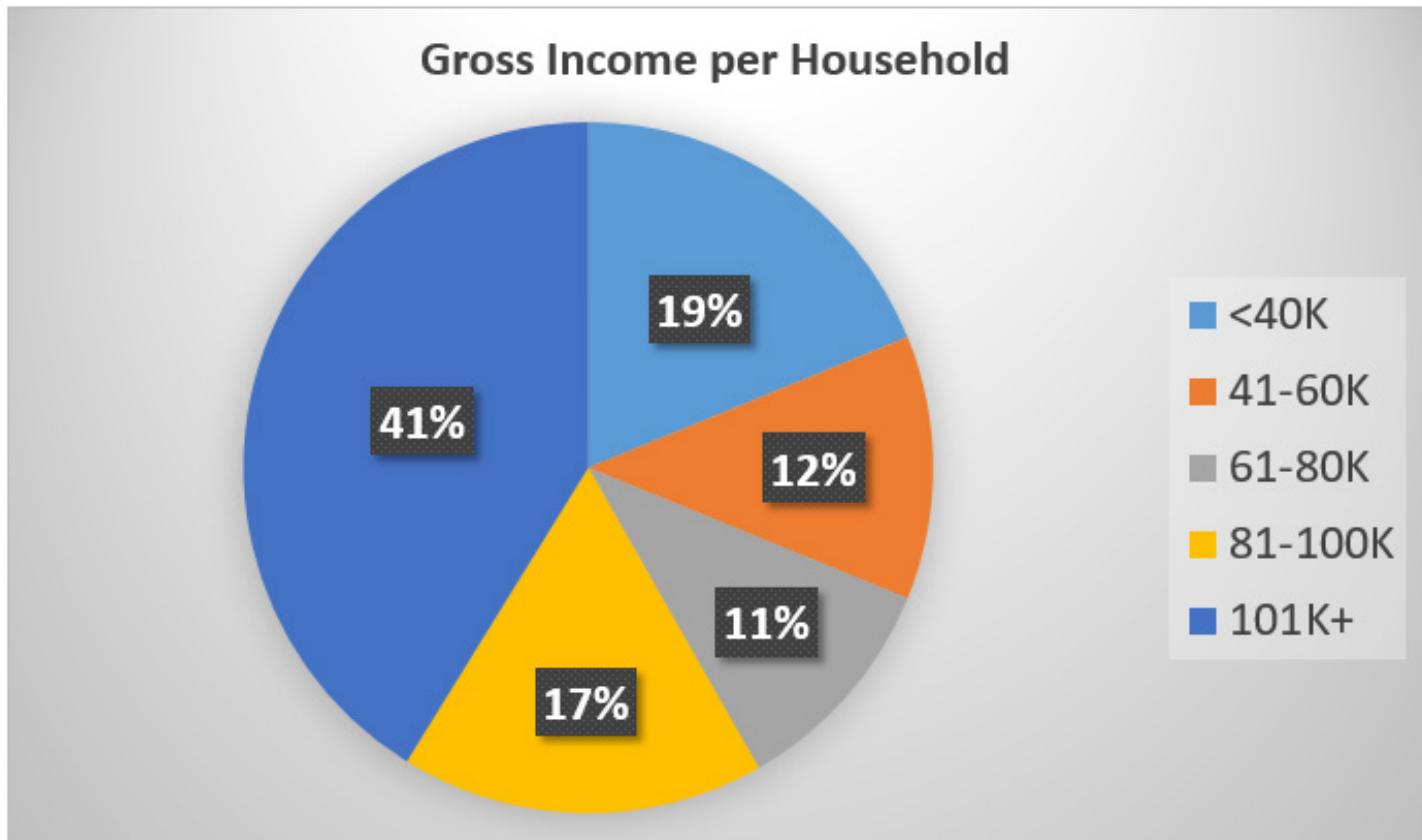


Figure 26: Annual household income for LtH participants (USD) (n=249).



Figure 27: Distribution channels for LtH registrants (n=543).

E-LEARNING MODULES

In FY19, the LtH program designed e-Learning modules to allow at-home access and supplement additional LtH program offerings. These eLearning modules consist of Deer 101, Turkey 101, Small Game 101, Waterfowl 101, and Waterfowl Identification. Program staff collaborated with the Illinois Hunter Heritage Program, IDNR Biologists, and program partners to develop the course curriculums for the eLearning modules. Time is one of the largest participant constraint responses for cancelling prior reservations. In turn, the eLearning courses are an excellent resource for individuals who could not attend a field course but are still motivated to learn hunting techniques. Deer Hunting 101 was the most utilized module (Figure 28).

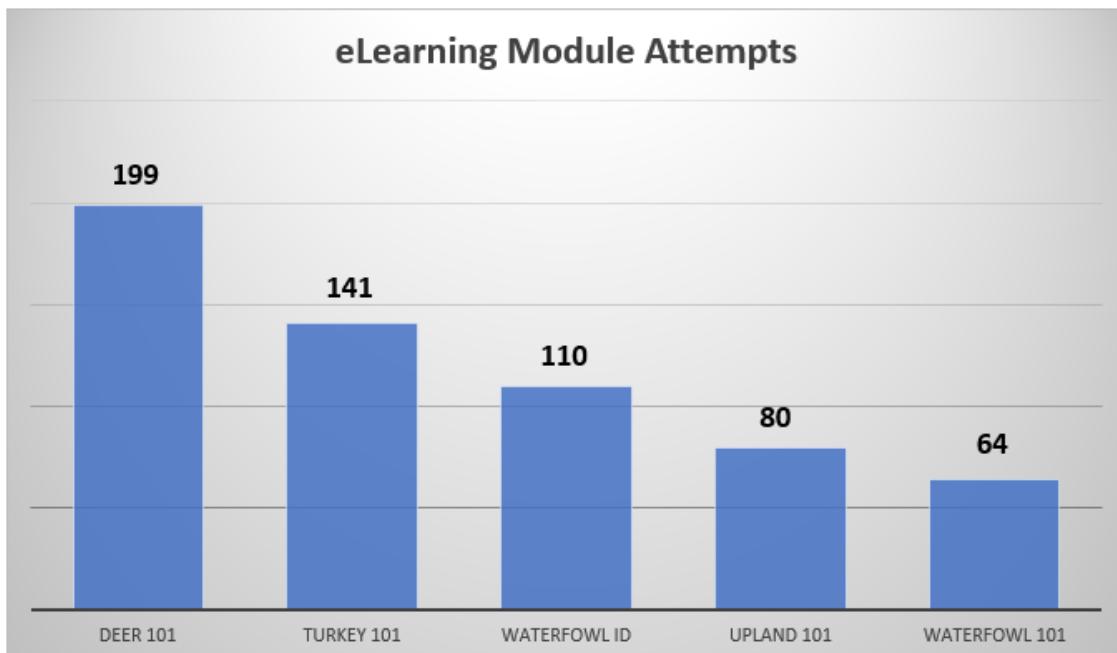


Figure 28: E-learning module usage.

Analyzing the average percent completion of eLearning modules (Table 12) shows that average users made it further through the Waterfowl ID, Turkey Hunting 101, and Upland Hunting 101 modules than Waterfowl Hunting 101 and Deer Hunting 101. Program staff will continue to refine these based on e-learning literature, in turn, bolstering module completions. Program staff will continually monitor progress.

Table 12: Average user progress for e-learning modules.

eLearning Course	Avg. Progress
Deer Hunting 101	67.9%
Waterfowl ID 101	70.6%
Waterfowl Hunting 101	56.5%
Turkey Hunting 101	74.3%
Upland Hunting 101	70.8%

The eLearning modules were developed in conjunction with Google Analytics and allow program staff to analyze demographics, use, and other information about eLearning module users. Analyzing the conversion rates for top 10 Google Affinity categories allows staff to understand who is utilizing the e-learning modules. Conversion rate is the percentage of website users that complete a desired goal, in this case, begin an e-learning module.

Table 13: Top 10 Google Analytics' Affinity Categories e-learning module conversion rate.

Affinity Categories	Users	Conversion Rate (eLearning Module)
Avid Investors	890	10.98%
Outdoor Enthusiasts	1073	9.56%
30 Minute Chefs	1063	9.51%
Pet Lovers	766	9.46%
Sports Fans	815	9.32%
Technophiles	823	9.24%
Value Shoppers	1057	9.20%
Business Professionals	891	8.96%
Do-It-Yourselfers	1130	8.87%
Auto Enthusiasts	830	8.52%

Additionally, comparing the acquisition channels between all program website traffic (Figure 29) and users that utilize e-learning modules (Figure 30) allows staff to understand how users are learning about the modules. While only making up 3% of all website traffic, email is the primary method for users learning about the modules with an acquisition rate of 77%. Comparatively, organic search and direct make up the majority of web traffic (29% each) but only account for 10% e-learning users. Using this information, staff will continue to distribute e-learning modules through email but spend more time distributing through other communication channels.

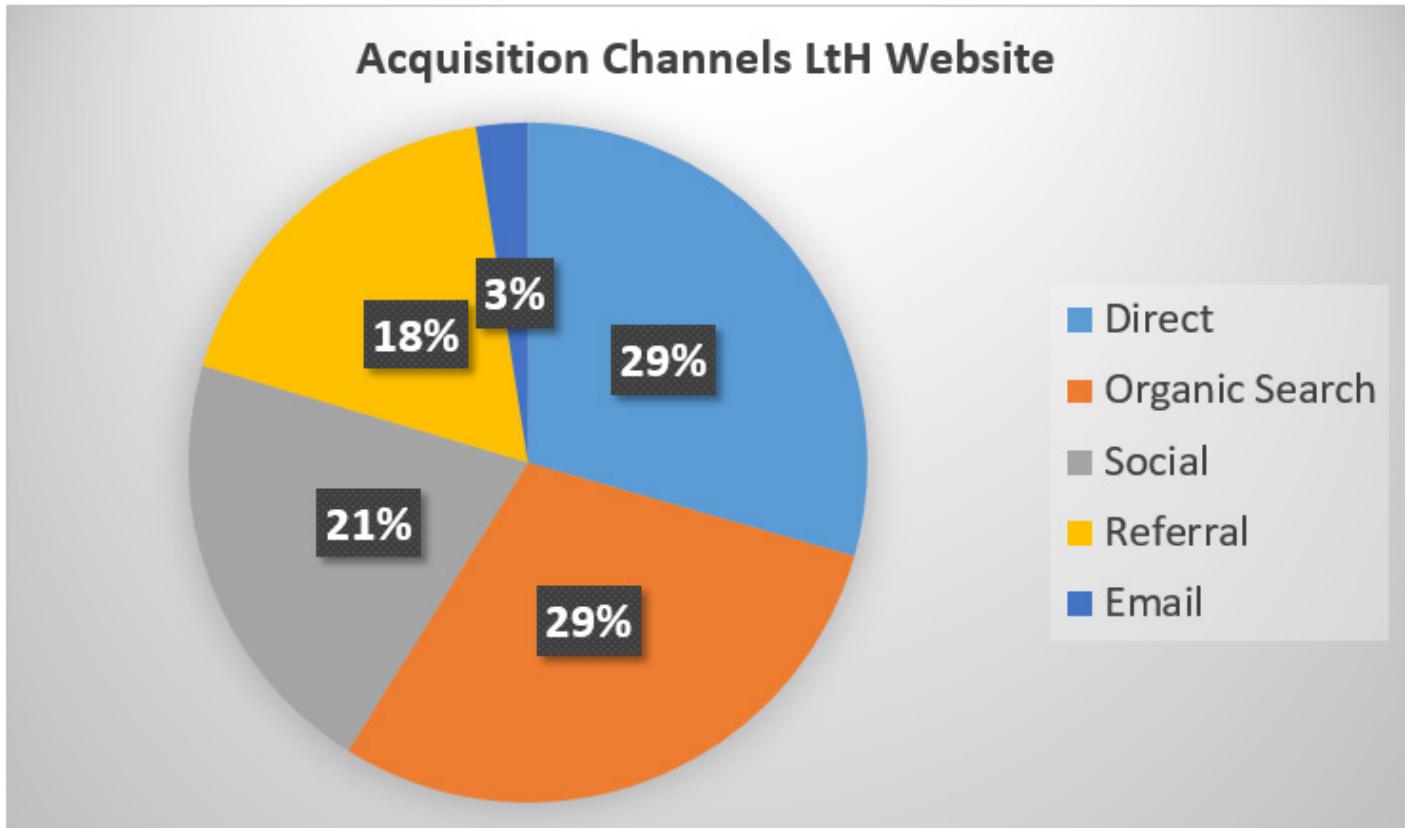


Figure 29: Acquisition channels of all LtH website program users.

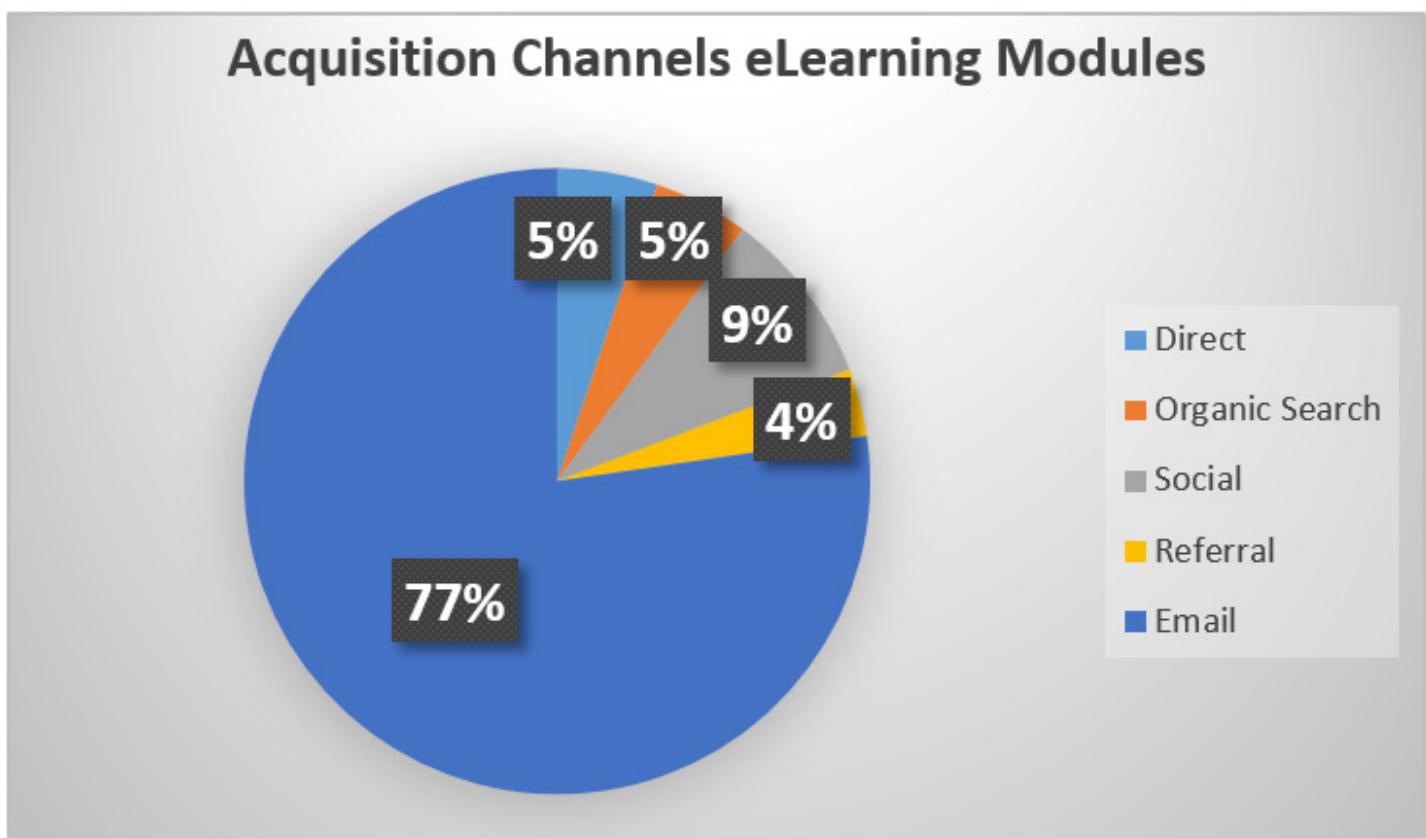


Figure 30: E-learning module acquisition channels.

ACCESSIBILITY OF REGION 2 SMALL GAME HUNTING OPPORTUNITIES

Small game hunting is often cited by R3 practitioners as a critical tool for hunter R3 efforts. Small game hunting can be done frequently, easily, and allows for a great entry point to hunting. Illinois hunters start hunting small game at a younger age and participate in big game and waterfowl hunting at a later age (Table 14). This helps illustrate that the traditional pathway to becoming a hunter for many Illinoisans is starting with small game and transitioning to other species as they age. Since Illinois DNR Region 2 has been the most successful region for the LtH program, staff analyzed small game opportunities in Region 2. Moving forward this analysis will be conducted on all Illinois DNR Regions and all huntable game species. Additionally, in order to develop a strategy to bolster small game hunting numbers in Illinois an analysis of small game public land hunting opportunities is needed. A substantial portion of Illinois' small game hunters exclusively rely on public land for small game hunting opportunities.

Table 14: Average age Illinois hunters started hunting a specific species and percent of hunters that hunt that species (Williams et al., 2018).

Species	Average Age Started	% Hunted Species	% Reliant on Public Land
	Hunting Species		
Rabbits	13.9	64.1%	14.9%
Squirrels	14.3	63.6%	18.5%
Quail	15.6	44.3%	26.5%
Pheasants	17.2	53.4%	23.9%
Doves	18.9	50.5%	21.6%
Ducks	20.8	37.6%	6.5%
Deer (Firearm)	21.6	80.1%	N/A
Geese	21.7	36.1%	4.6%
Deer (Archery)	24.7	61.9%	N/A
Deer (Muzzleloader)	30.4	27.2%	N/A
Turkey	30.9	40.8%	11.5%

Illinois hunters, on average, traveled less than 30 miles to hunt small game (Williams et al., 2018). Roughly 39% of all LtH registrants reside further than 30 miles of an Illinois IDNR site that allows squirrel hunting (Figure 31).

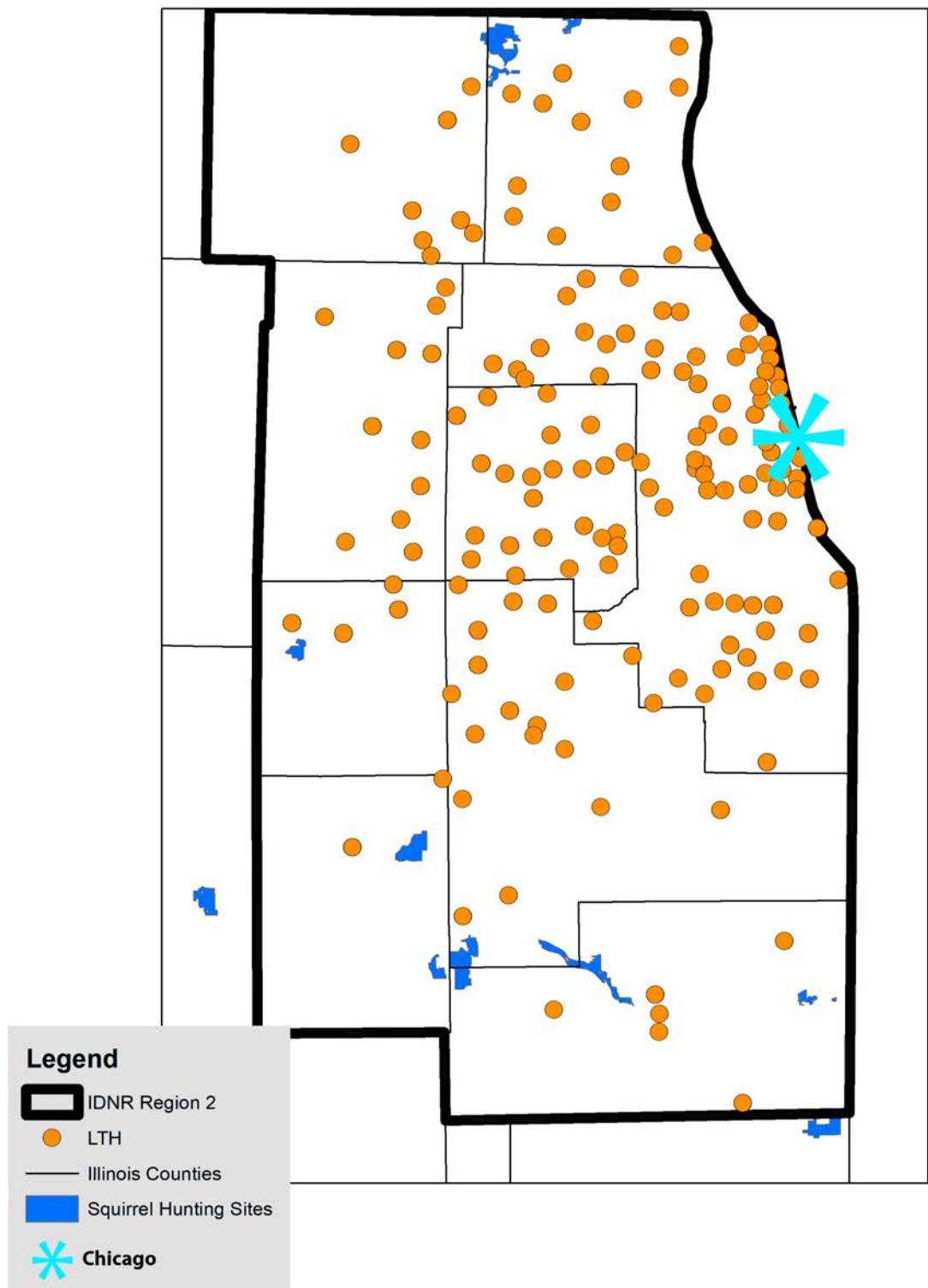


Figure 31: LtH registrants, that reside within Region 2, accessibility to Illinois DNR public land open for squirrel hunting.

While the majority of LtH registrations reside within 30 miles of a public Illinois DNR site that allows squirrel hunting, site-specific regulations limit hunting opportunities. In region 2, there are no Illinois DNR sites that allow squirrel hunting through the totality of the statewide season with the majority only accessible for a few weeks (Table 15). In addition to squirrel hunting, other small game opportunities are also further reduced by site-specific seasons being greatly reduced from the statewide season.

Table 15: Small game hunting opportunities in Illinois DNR Region 2.

IDNR Region 2			
Site Name	Squirrel %Season Huntable	Rabbit %Season Huntable	Dove %Season Huntable
Adeline Jay Geo-Karis Illinois Beach	-	-	-
Braidwood Lake SFWA	-	-	-
Chain O' Lakes SP	1.6%	2.9%	5.6%
Des Plaines SFWA	-	3.8%	33.3%
Des Plaines Propogation Center	-	-	-
Goose Lake Prairie SNA	31.8%	-	-
Heidecke Lake SFWA	-	-	-
I & M Canal ST	-	-	-
James Pate Phillip SP	-	-	-
Kankakee River SP	13.0%	43.3%	33.3%
Mazonia SFWA	21.4%	-	-
Midewin National Tallgrass Prairie	-	-	-
Momence Wetlands	13.0%	-	-
Moraine Hills SP	-	-	-
Redwing Slough/Deer Lake SNA	-	-	-
Silver Springs SFWA	13.0%	3.8%	33.3%
Vesel/Wilmington Shurb Prairie SNA	-	-	-
Volo Bog SNA	-	-	-
William W. Powers SRA	-	-	-

With small game hunting being a critical component of hunter R3, it is imperative to increase small game hunting opportunities throughout the state. Moving forward, program staff will complete this analysis for all Illinois DNR regions and all game species.

LTH PARTICIPANT FOLLOW UP SURVEY

In collaboration with the Illinois DNR Hunter Heritage Program, LtH participants who have had one full hunting season since attending a program event were sent a follow up web survey (n=259). Participants were sent a unique link to a web survey hosted through Qualtrics. Non-respondents were sent three reminder emails spaced one week from the first survey delivery. The survey had a response rate of 33.5% (Figures 32-52). Full surveys responses are showed in Appendix 7.

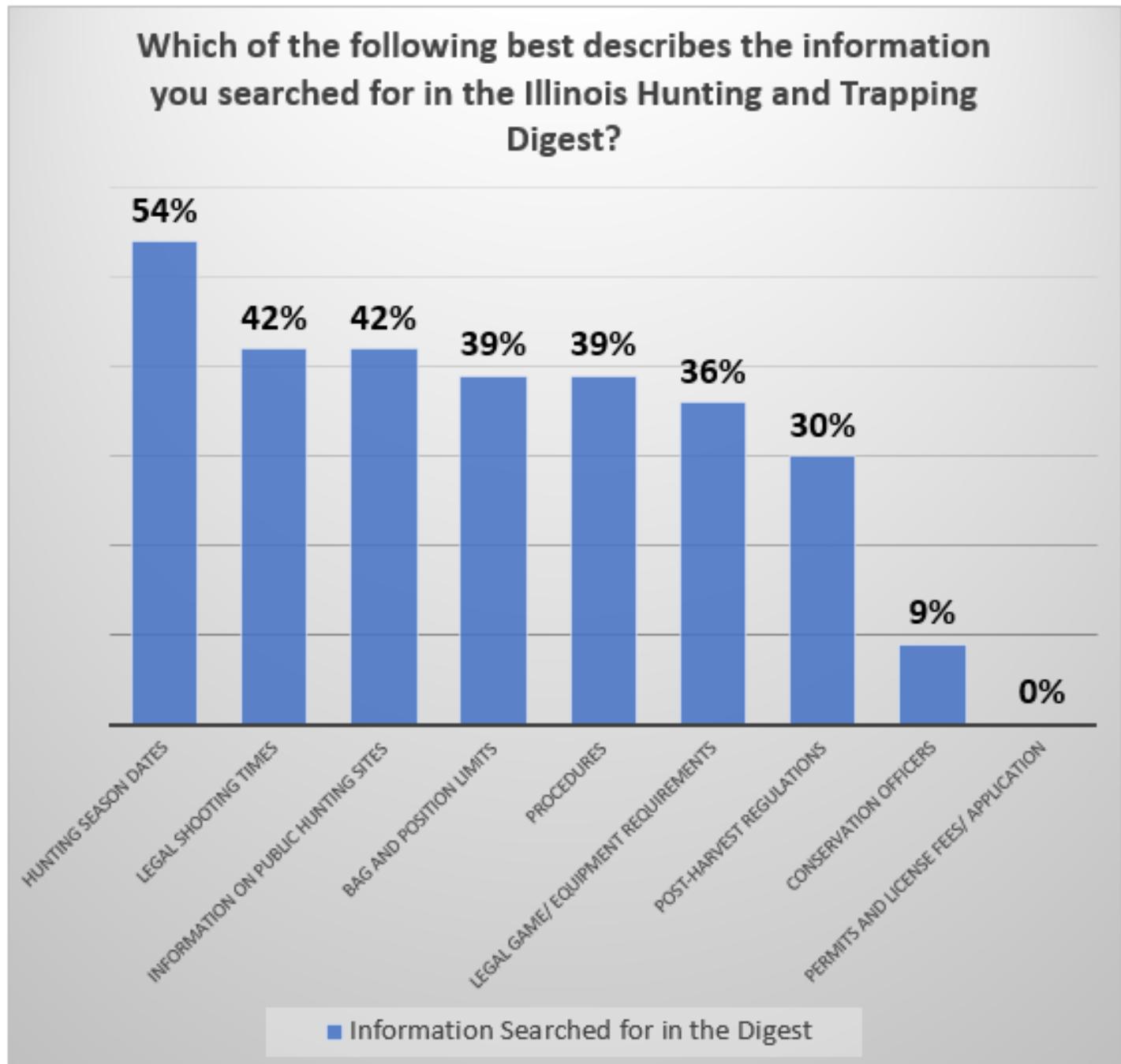


Figure 32: Past LtH participants categorical use of the Illinois DNR Hunter Digest of Hunting and Trapping Regulations (n=107).

Have you attended multiple Learn to Hunt events?

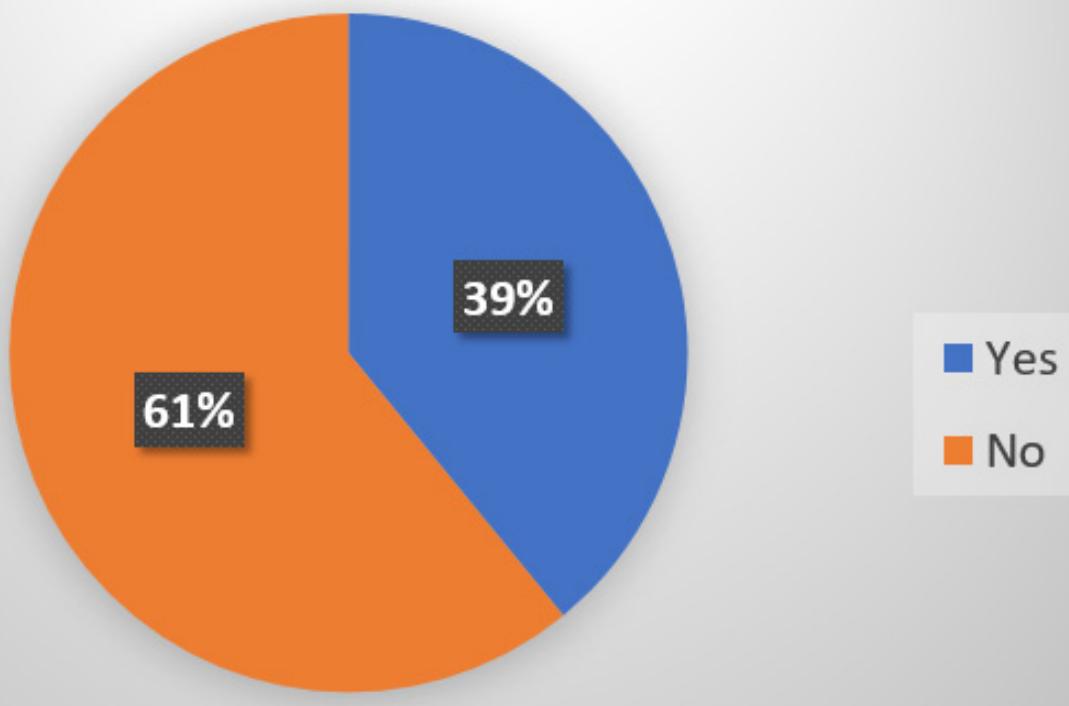


Figure 33: Past LtH participants event attendance (n=107).

Have you utilized the Illinois Learn to Hunt eLearning modules?

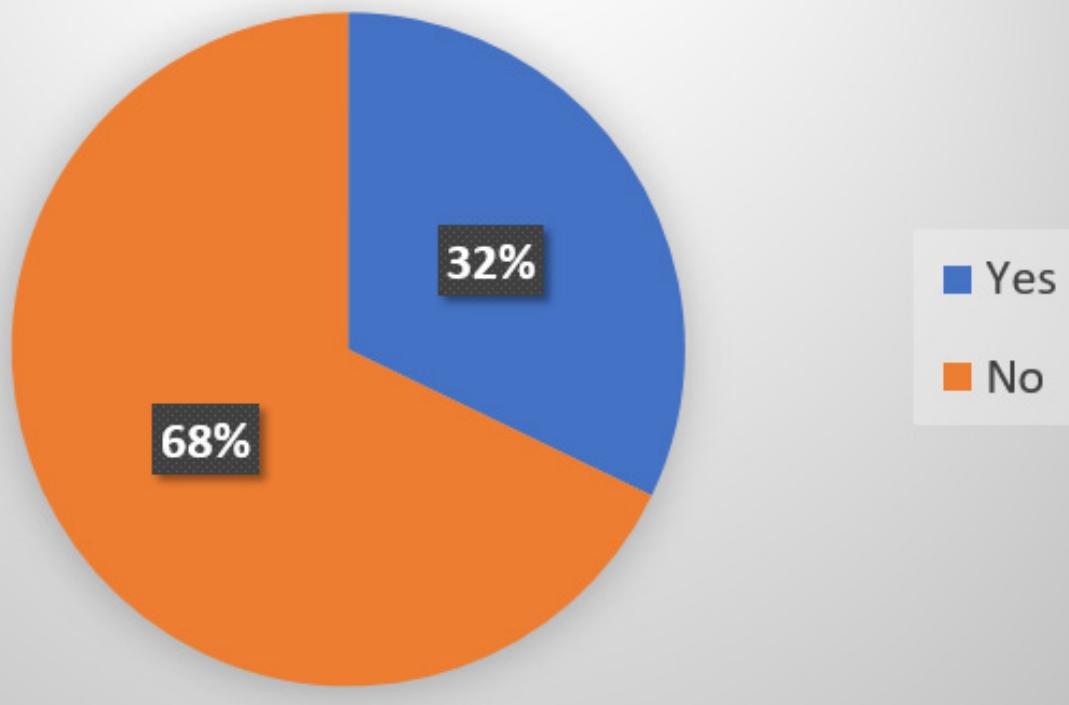


Figure 34: Past LtH participants e-learning module use (n=107).

Did you purchase a hunting license for the 2018-2019 hunting season?

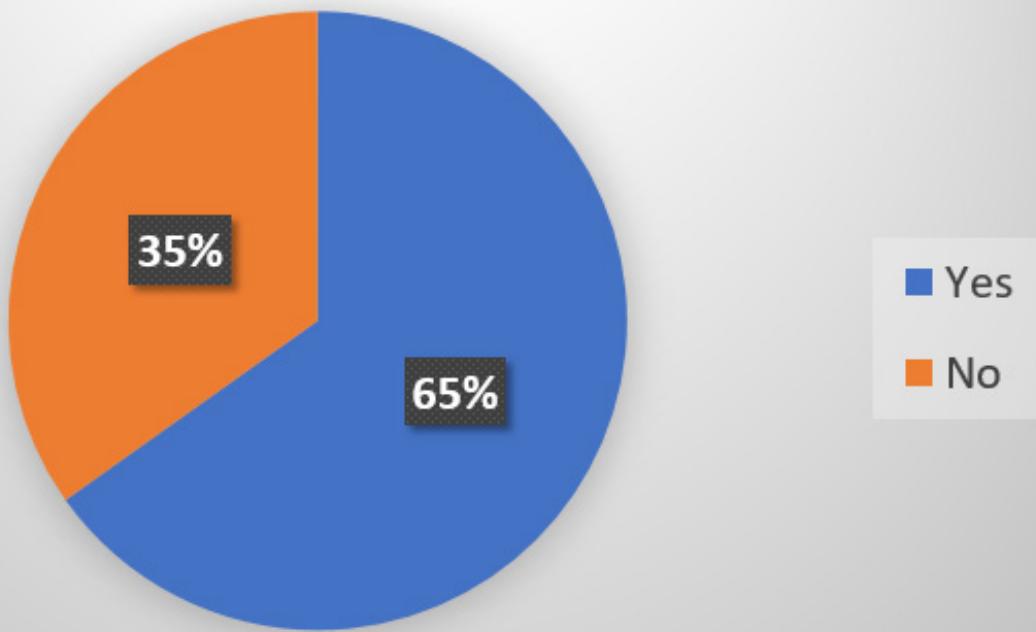


Figure 35: Past LtH participants license buying behavior (n=107).

Did you purchase a federal duck stamp during the 2018-2019 season?

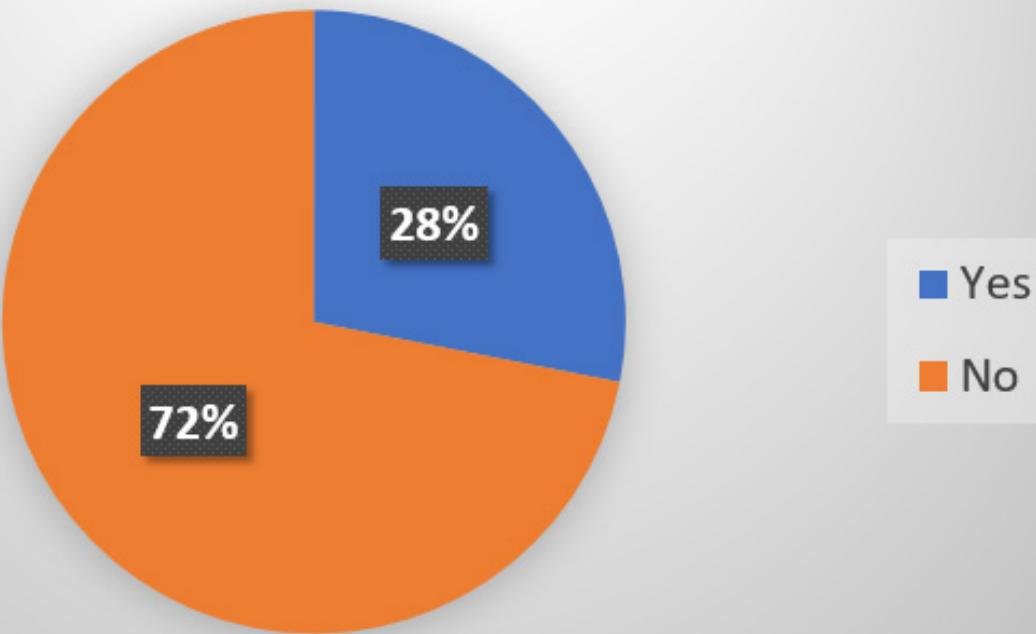


Figure 36: Past LtH participants Federal Duck Stamp buying behavior (n=107).

Did you apply for a permit for the 2018-2019 hunting season?

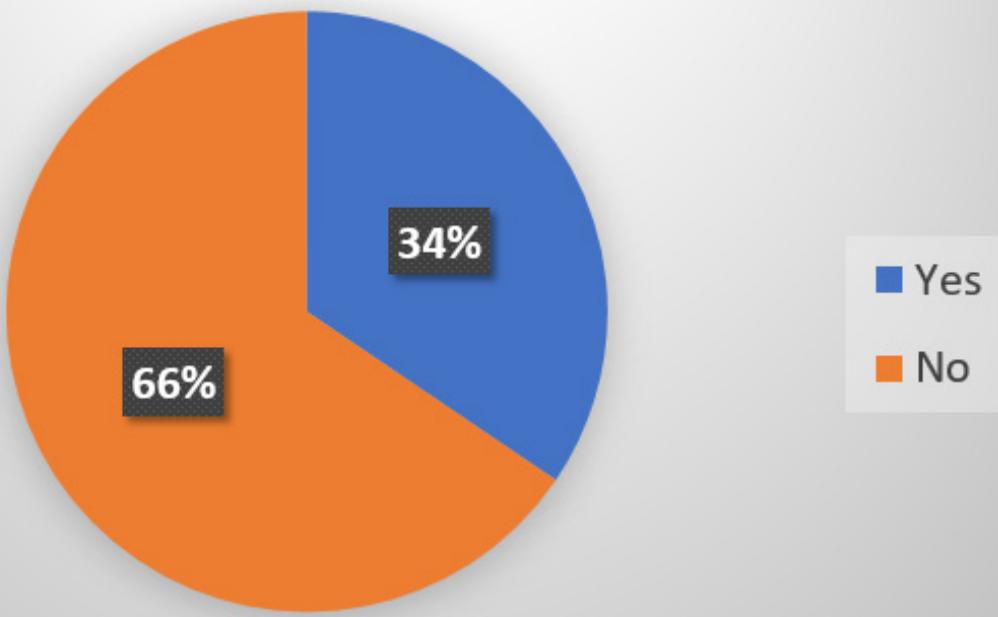


Figure 37: Past LtH participants lottery hunting permit applications (n=107).

Were you successful in drawing a permit?

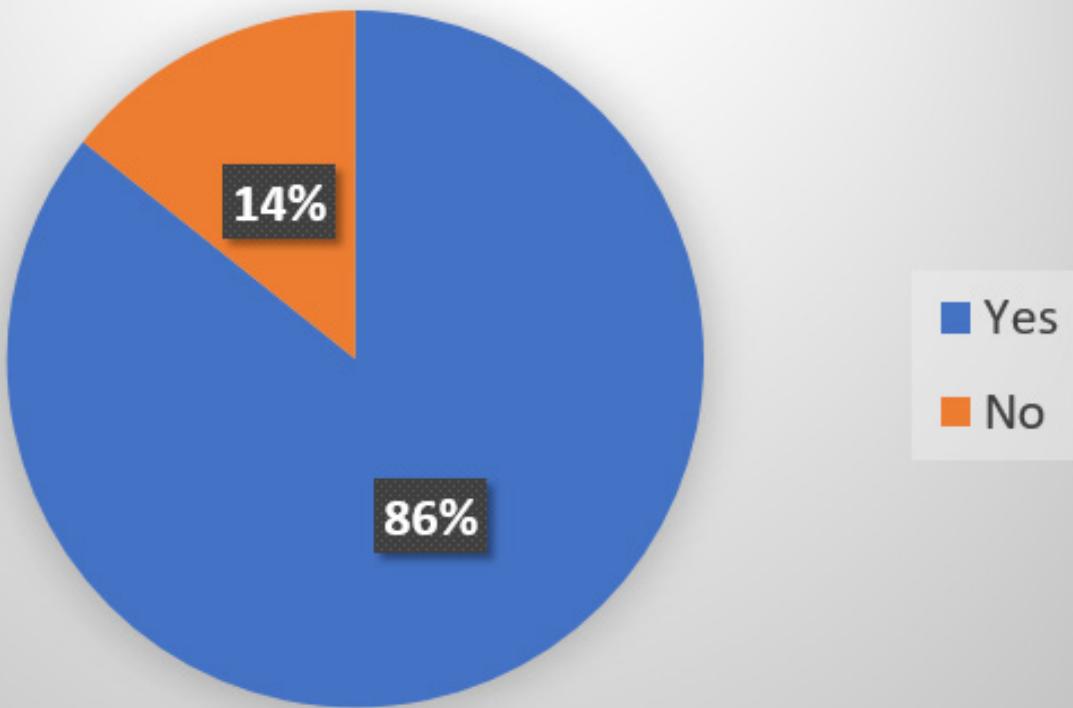


Figure 38: Past LtH participants, who applied for a lottery permit, success in drawing a permit (n=28).

Did you hunt during the 2018-2019 season?

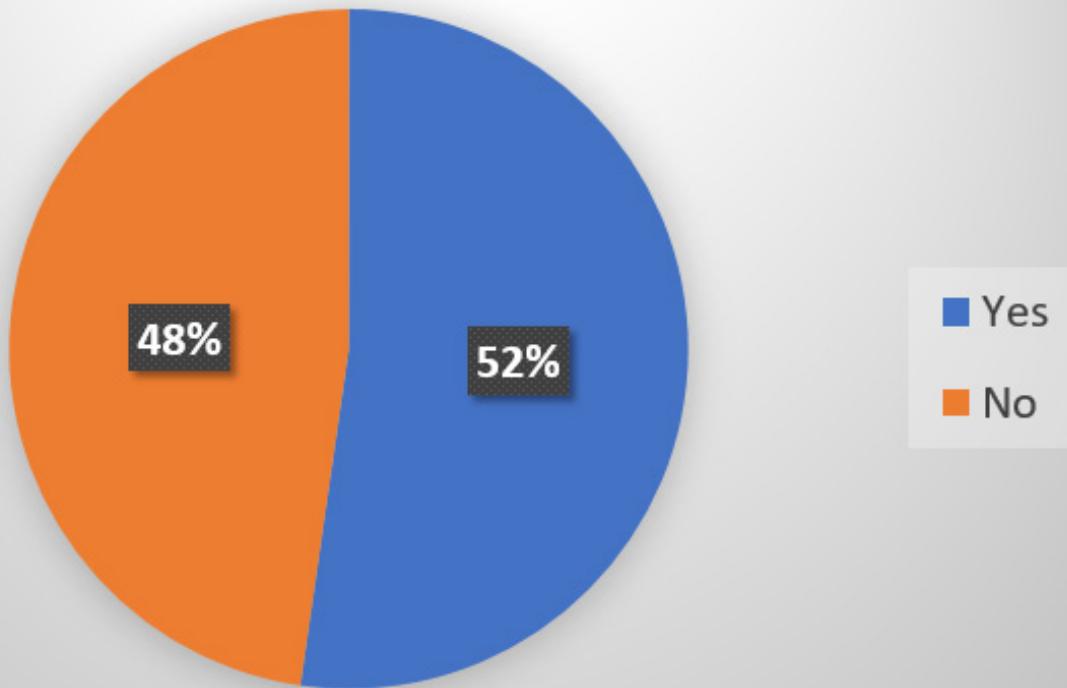


Figure 39: Past LtH participants who hunted during the 2018-2019 season (n=107).

Did you hunt private or public land most often during the 2018-2019 season?

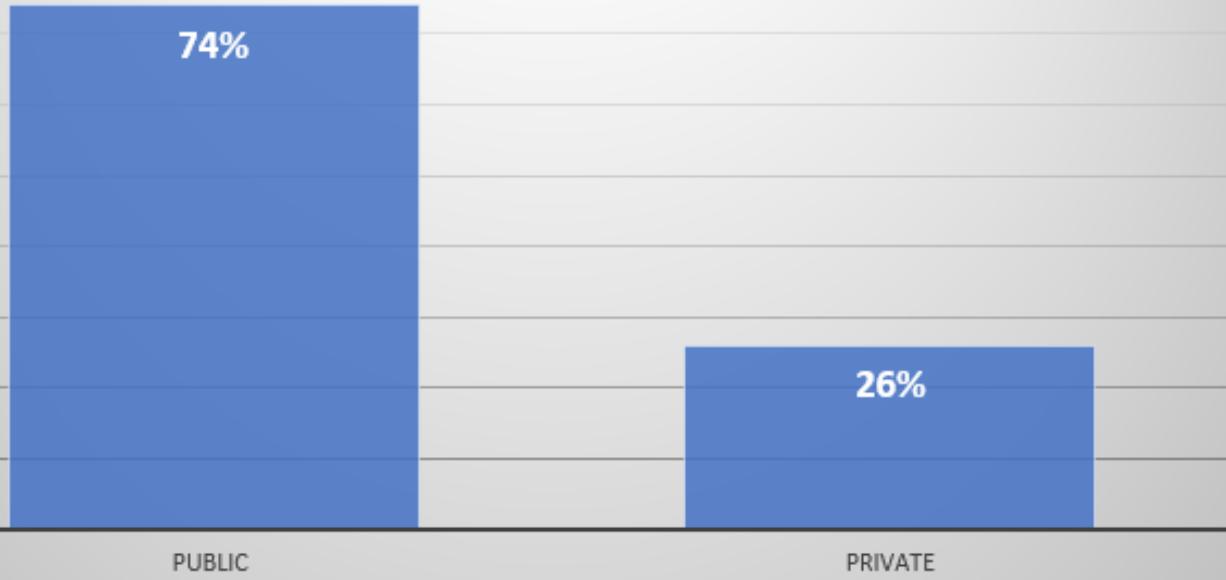


Figure 40: Past LtH participants who hunted public or private during the 2018-2019 season (n=46).

About how many hours did you spend hunting and scouting during the 2018-2019 season?

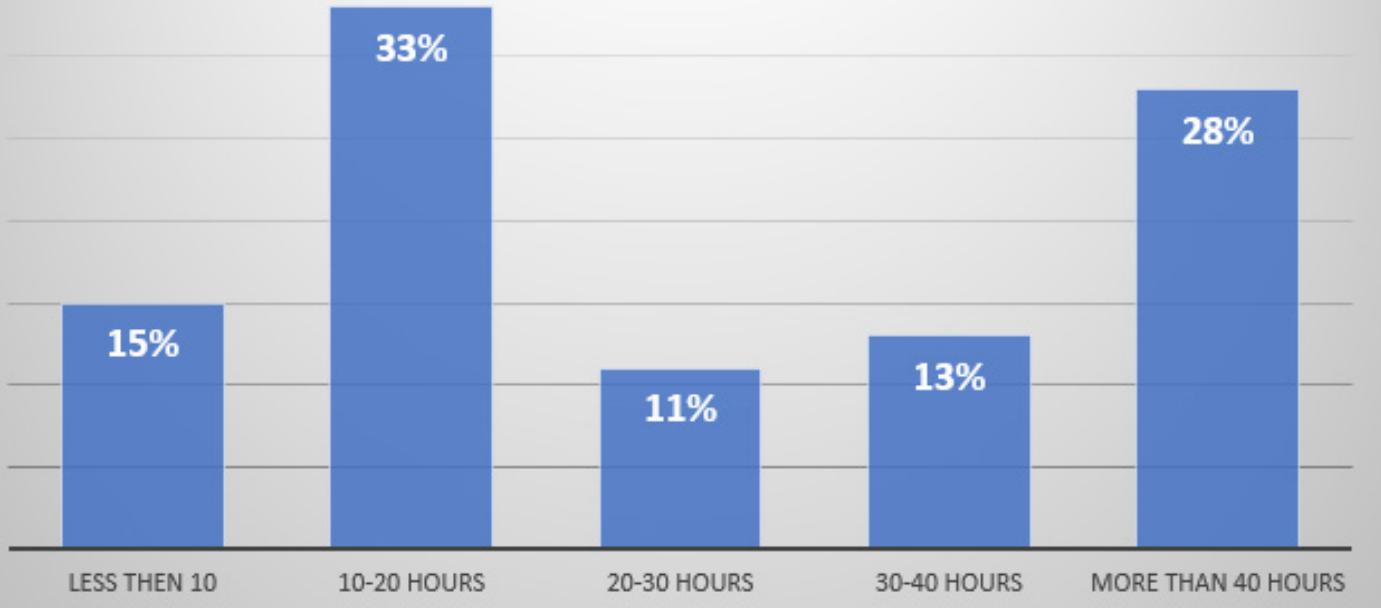


Figure 41: Past LtH participants who hunted during the 2018-2019 season, time spent afield hunting and scouting (n=46).

What kept you from hunting during the 2018-2019 hunting season?



Figure 42: Past LtH participants who did not hunt during the 2018-2019 season, identified constraints (n=42).

Would you be willing to assist with habitat management activities on public hunting sites if you were provided additional hunting access to that specific site?

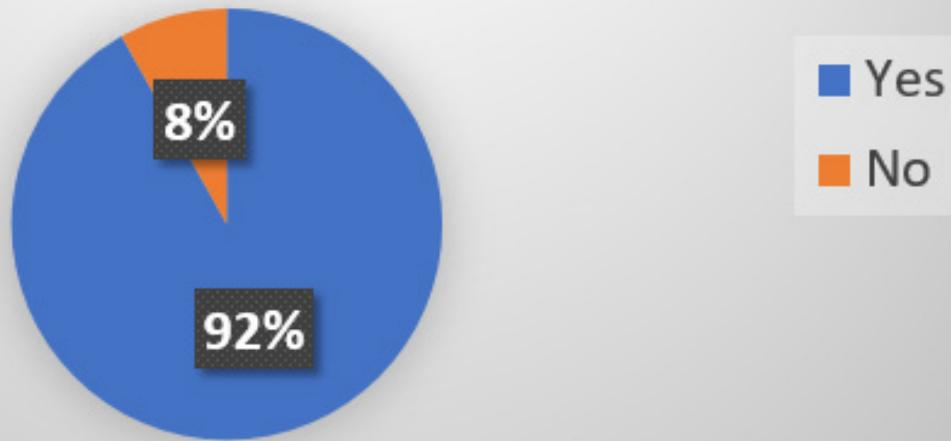


Figure 43: Past LtH participants willingness to assist with habitat management activities on public hunting sites for additional hunting access (n=107).

How many hours would you be willing to assist per year on habitat activities for additional hunting access?

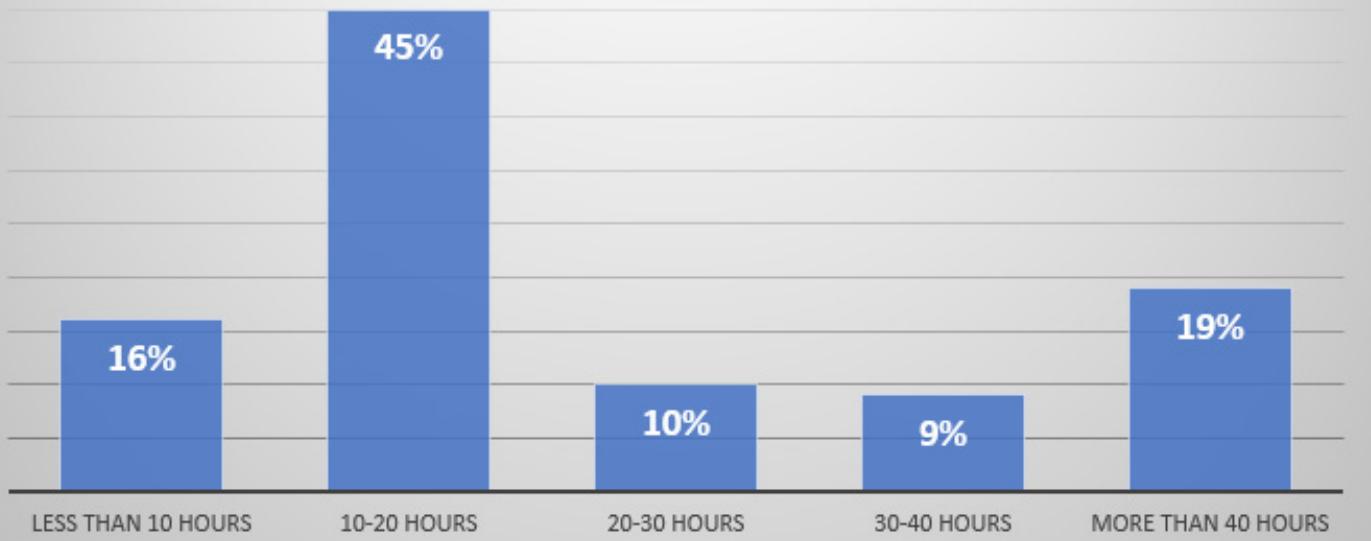


Figure 44: Past LtH participants willing to assist with habitat management activites for additional hunting access, desired volunteer time (n=107).

Did you purchase any new hunting equipment since taking a Learn to Hunt event?

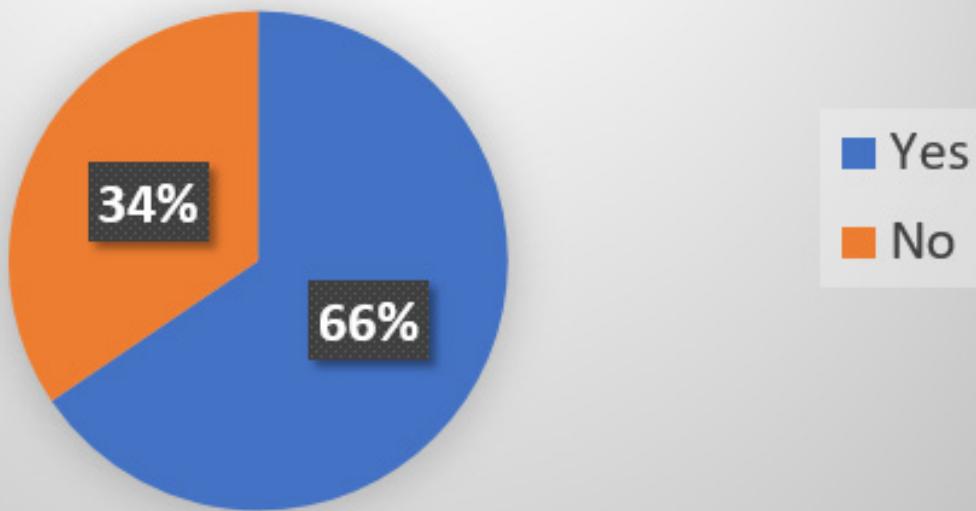


Figure 45: Past LtH participants hunting equipment purchases (n=107).

How much did you spend on hunting equipment since attending an LTH event?

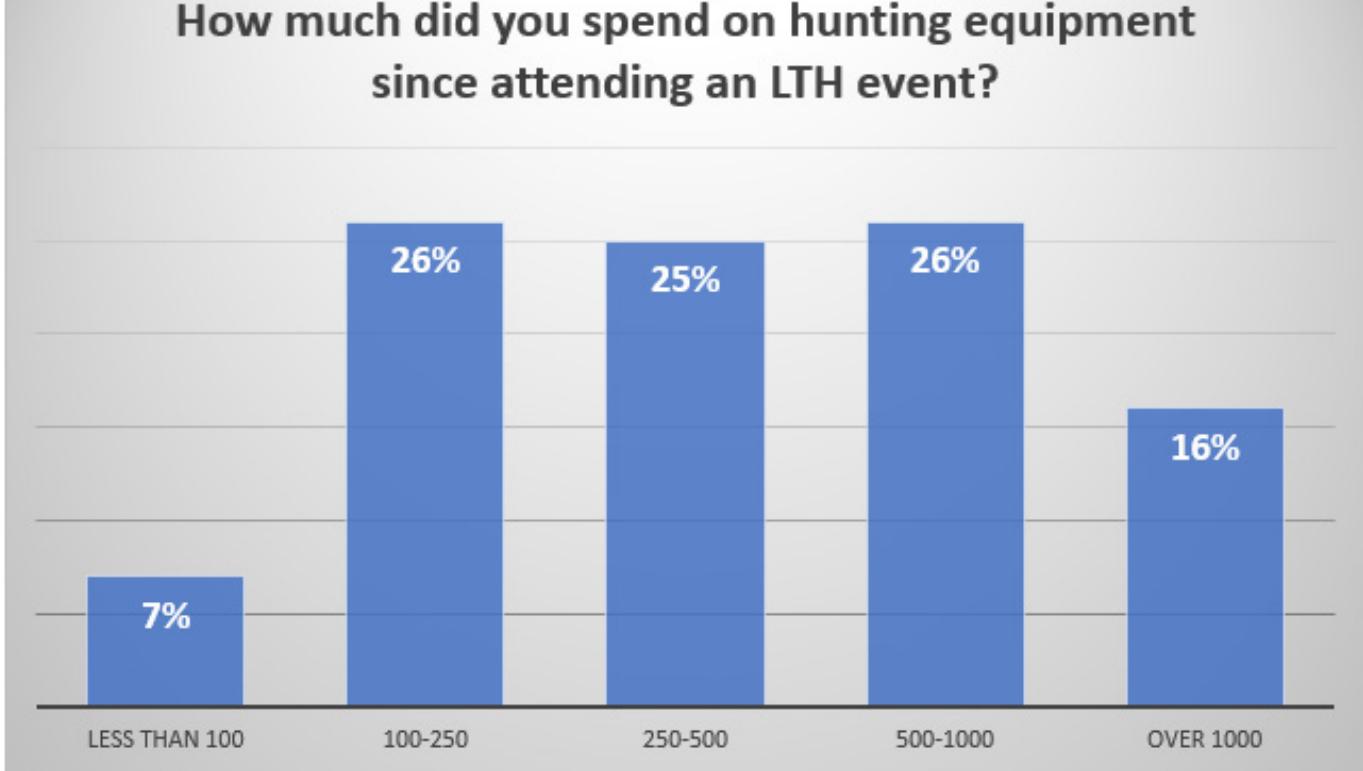


Figure 46: Past LtH participants that purchased hunting equipment since taking a LtH event spending behavior (USD) (n=57).

Did you join a conservation or hunting organization this past year?

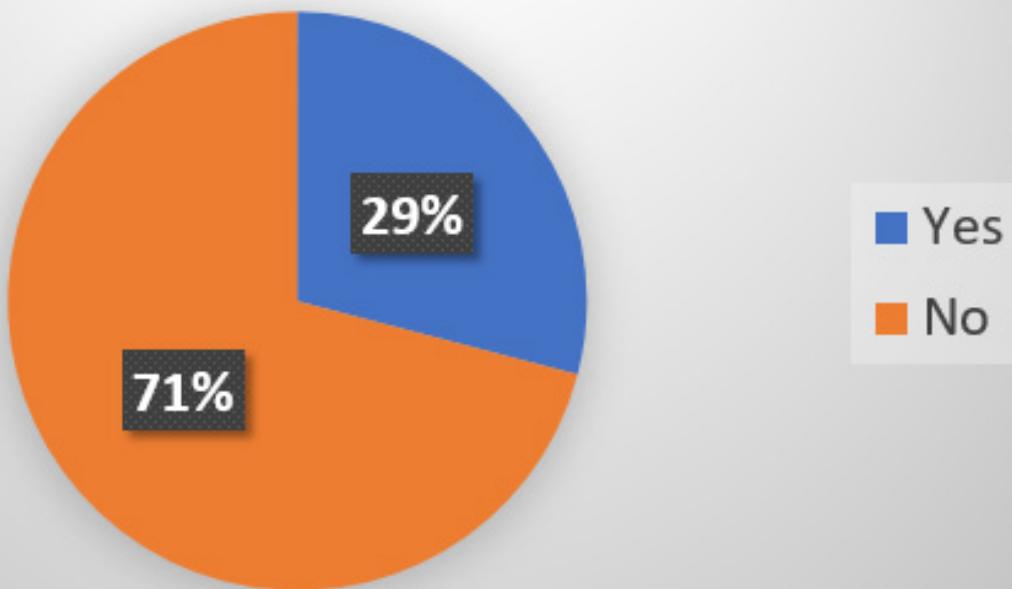


Figure 47: Past LtH participants joining a conservation or hunting organization this past year (n=107).

Have you considered joining a conservation organization?

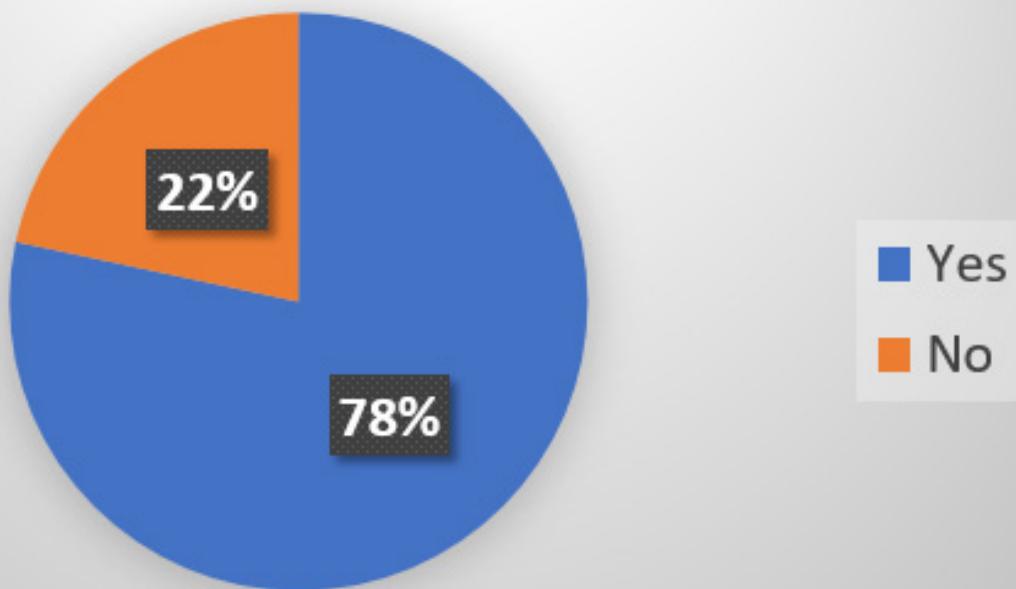


Figure 48: Past LtH participants that did not join a conservation or hunting organization, willingness to consider joining such organizations (n=60).

Did you search for a wild game recipes since attending a Learn to Hunt event?

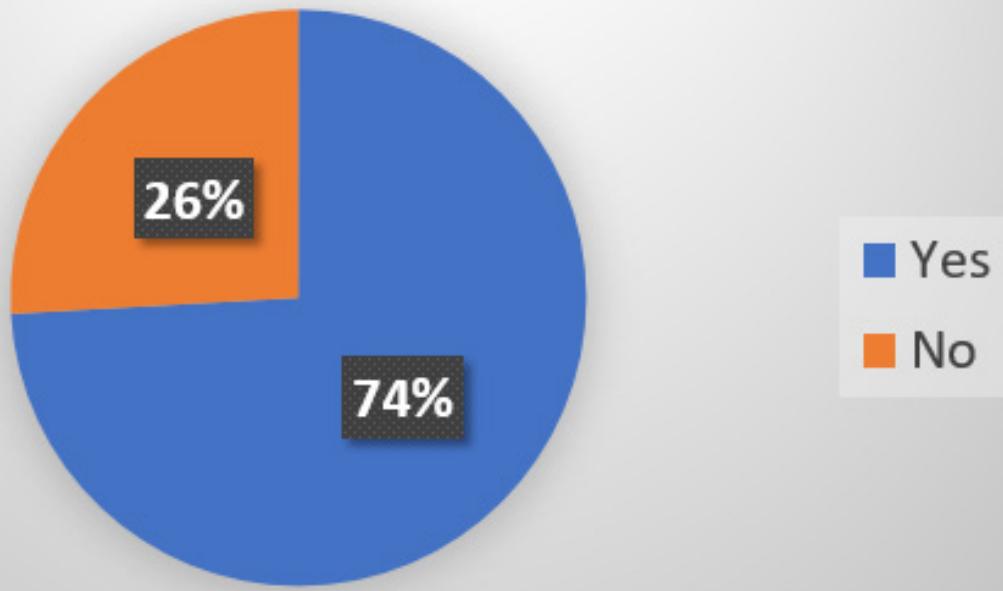


Figure 49: Past LtH participants wild game recipe search behavior (n=107).

Did you prepare any wild game meals since attending a Learn to Hunt event?

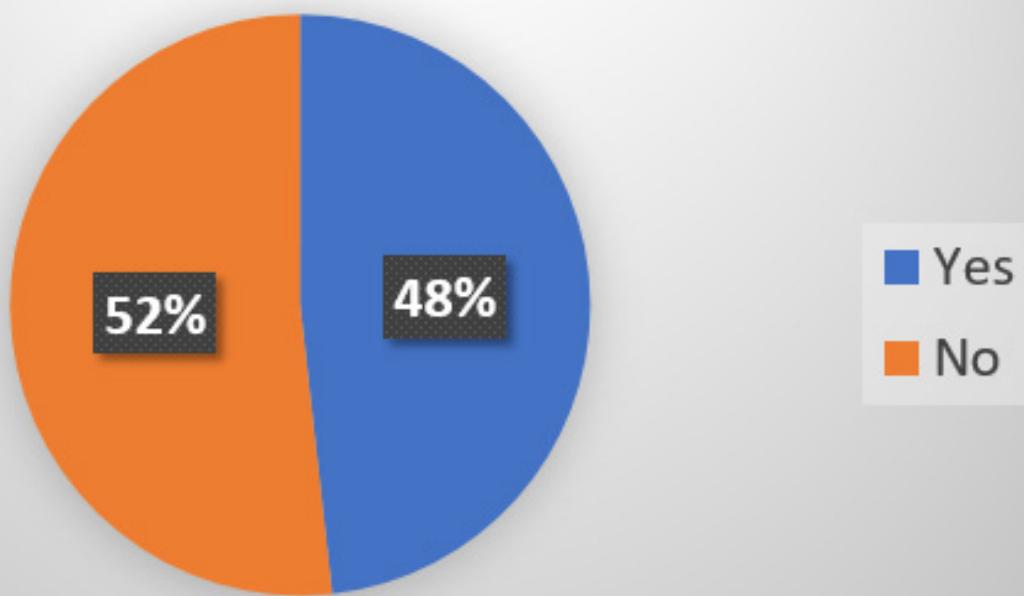


Figure 50: Past LtH participants wild game cooking since attending a LtH event (n=107).

Did you prepare any meals using wild game you harvested?

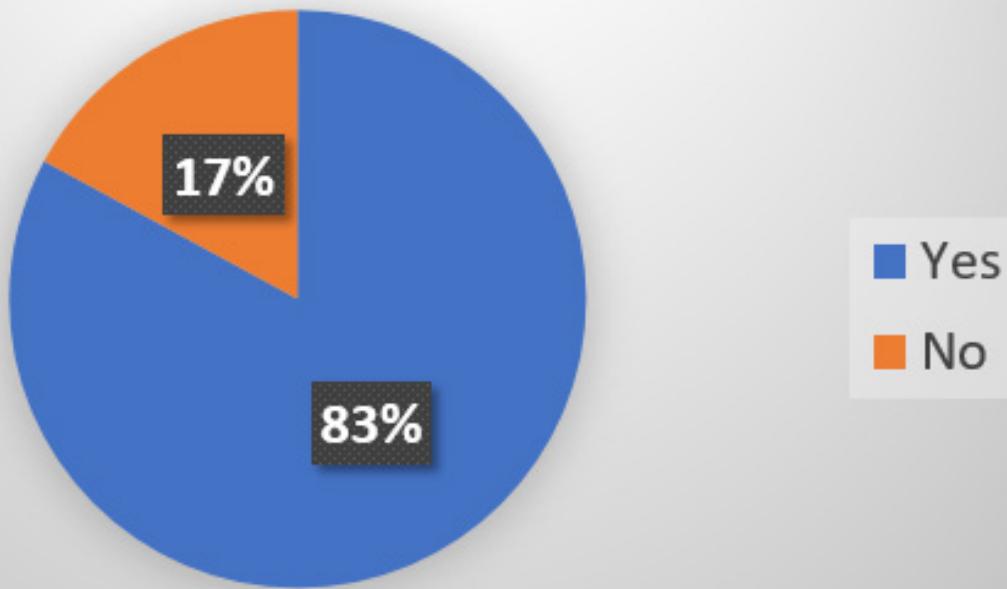


Figure 51: Past LtH participants wild game cooking, utilizing game they personally harvested, since attending a LtH event (n=41).

Did you refer to the Illinois Hunting and Trapping Digest during the 2018-2019 hunting season?

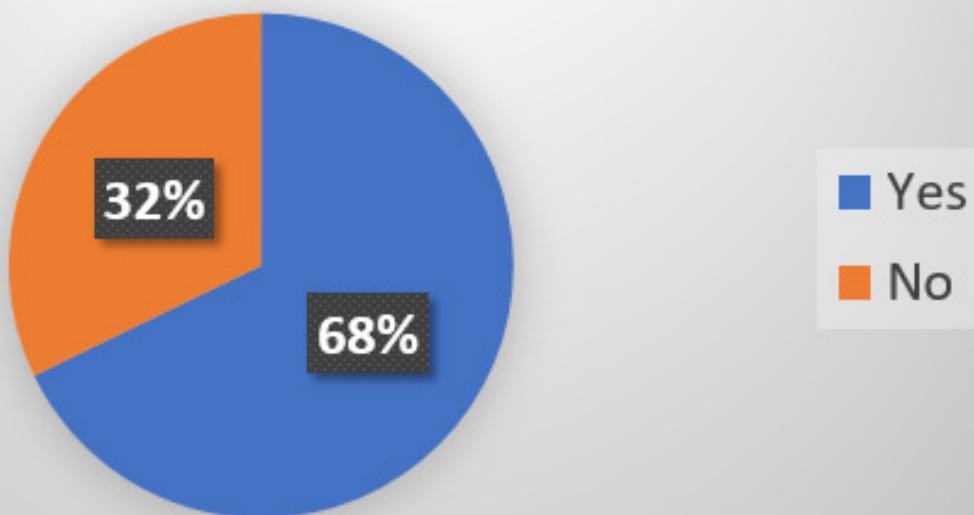


Figure 52: Past LtH participants Hunter Digest use (n=107).

If the Illinois DNR had a program that could allow hunters to rent hunting equipment (e.g. decoys, treestands) at DNR public sites, would you utilize this program?

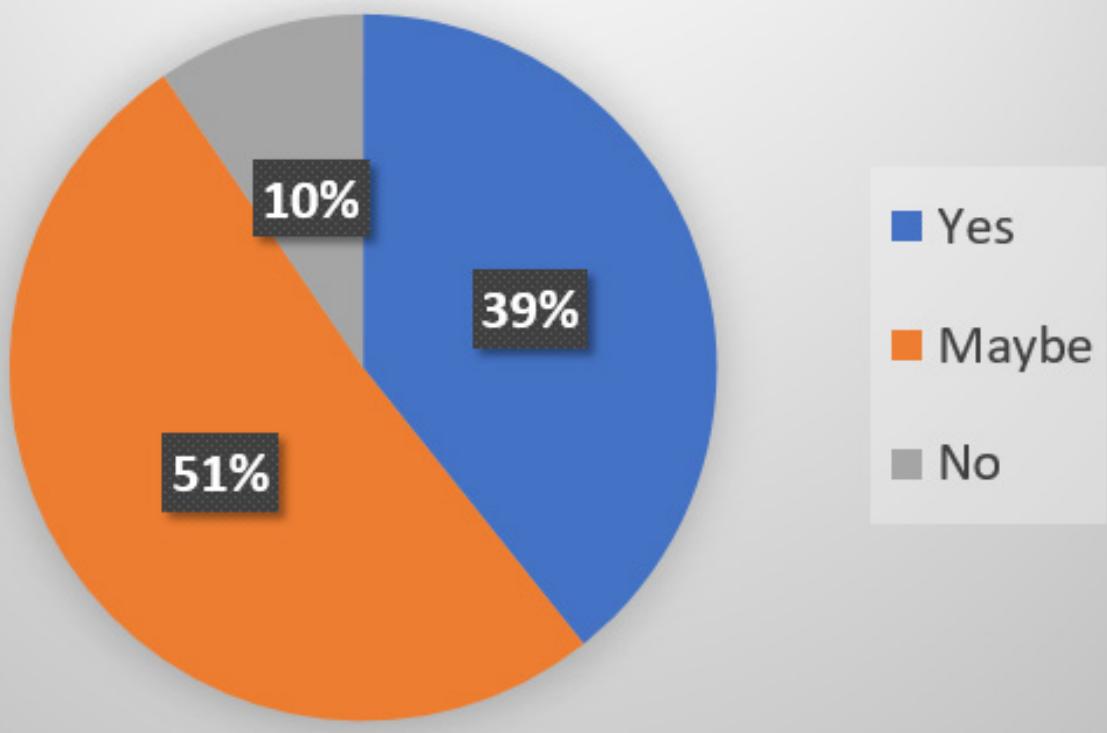


Figure 52: Past LtH participants willingness to utilize a hunting equipment rental program (n=107).

CONCLUSION

Decreased sales of hunting licenses and interest in wildlife conservation suggest negative trends for future conservation programs and agency operations through declining revenues. A profound need exists to understand what segments of the population may be recruited into hunting, predict hunter attrition and retention, and determine factors related to reengaging lapsed hunters. Communication between the program and the public about program offerings relies on the ability to further understand and refine market segments. The LtH program has identified 4 key market segments: nature lover, food motivated, social enthusiast, and challenge oriented individuals. While overlap occurs, monitoring program communications indicates that different segments respond to unique messaging themes and imagery. Further understanding of market segmentation will inform program communication efforts in an effort to bolster event attendance rates.

Additionally, post-workshop questionnaires allowed program staff to analyze the species of interest for new hunters. While 94% of participants who attend a deer workshop are interested in hunting deer, only 77% and 74% of waterfowl workshop attendees are interested in hunting duck and goose respectively.

With waterfowl workshops attendance rates low and an interest in hunting waterfowl from event attendees, it is hypothesized that beginning hunters have a low interest in hunting waterfowl. With significant equipment required, advanced ID skills needed, and reduced opportunity in Illinois to hunt waterfowl it can be viewed as an advanced hunting specialization. Thus, the program will focus more efforts on deer, turkey, and small game moving forward and less on waterfowl events.

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PARTICIPANT HARVEST PHOTOS





APPENDICES



Learn to Hunt Registration

Participants must be at least 18 years of age and are required to supply their own boots and appropriate outdoor clothing. Each workshop is limited to 20 participants and registration will be open until spots are filled.

* Which event are you registering for?

* Name

<input type="text"/>	<input type="text"/>
----------------------	----------------------

First Last

* Phone Number

* Email Address

This will be used for further communication about the event.

* Zip Code

What is the zip code of your current residence?

* What is your current age?

You must be 18 or older to attend.

* Will you have an Illinois driver's license at the start of the workshop?

- Yes
 No

* Have you taken Hunter Education (This is NOT a requirement for this workshop)

- Yes
 No

* How did you hear about the Learn to Hunt program?

- Poster
- News article
- Facebook
- Learn to Hunt Newsletter
- Word of mouth
- Instagram
- IDNR Website
- Online search
- Other

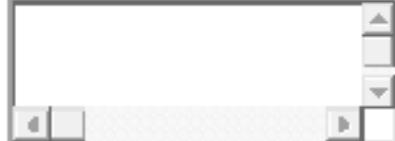
Please be specific

What species of game have you previously hunted?

- I have never hunted before
- Deer
- Turkey
- Upland Bird (pheasant or quail)
- Small game
- Waterfowl

Please select only the species you have hunted.

Comments or questions



Please let us know if you have any further questions or comments.

[Submit Form](#)

Hunter Pre-Workshop Questionnaire

Information is voluntary. Responses will help us improve workshops for future participants.

Name: _____ Address: _____

1. Have you ever accompanied someone hunting, but not hunted yourself? Yes No

2. Have you ever eaten wild game meat? Yes No I don't know

3. Do you have friends or family that hunt? Yes No I don't know

4. What species are you interested in hunting? (circle all that apply)

Deer Turkey Pheasant Dove Quail Squirrel Rabbit Duck Goose

Other: _____

5. Why do you want to hunt? _____

6. How long have you been interested in hunting? _____ years

7. What has kept you from hunting in the past? _____

8. If you have hunted before, how long has it been since you last hunted? _____ years

9. Have you ever shot a firearm? Yes No

10. Have you ever shot a bow? Yes No

11. How often do you use public land? (circle one) Never Rarely Sometimes Often

If so, for what activities? _____

12. In what other outdoor activities do you participate? _____

13. What is your age? _____ years

14. What is your gender? (circle one) Male Female

15. How many years have you lived in Illinois? _____ years

16. Do you intend to live in Illinois for at least the next 5 years? Yes No I don't know

17. How many children do you have? 0 1 2 3 4+

18. In what range is the combined gross income of you and all members of your household? (circle one)

<\$40K \$41-60K \$61-80K \$81-100K \$100K+

Thank you for your feedback!

Appendix 3: Spring 2018 Learn to Hunt: Deer post-workshop questionnaire

Learn to Hunt Deer – Post-workshop Evaluation

1. Please rate the overall quality of the following workshop activities by circling the corresponding number below.

	Very Poor	Poor	Fair	Good	Excellent
Highlighted the importance of hunting	1	2	3	4	5
How to buy an Illinois hunting license/description	1	2	3	4	5
Exposure to basic hunting equipment	1	2	3	4	5
Thorough explanation of field techniques	1	2	3	4	5
Sufficient amount of hands on activities	1	2	3	4	5
Information was conveyed clearly	1	2	3	4	5
Professionalism of mentors	1	2	3	4	5
Stressed the importance of firearm safety	1	2	3	4	5
Overall quality of live shooting experience	1	2	3	4	5
Field dressing demonstration	1	2	3	4	5
The value of obtaining wild game	1	2	3	4	5
The opportunity to try a wild game recipe	1	2	3	4	5
Overall quality of the workshop	1	2	3	4	5

2. Please circle the number below that corresponds with your attitude toward the following statements.

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
I feel comfortable explaining the benefits of hunting to others.	1	2	3	4	5
I understand what basic equipment is necessary for deer hunting in Illinois.	1	2	3	4	5
I learned scouting techniques for deer in Illinois.	1	2	3	4	5
I understand the importance of simulating different deer vocalizations using various calls.	1	2	3	4	5
I improved my ability to safely handle a firearm.	1	2	3	4	5
I improved my ability to safely handle a bow.	1	2	3	4	5
I feel comfortable field processing a deer.	1	2	3	4	5
I am interested in trying wild game recipes.	1	2	3	4	5
I feel more comfortable harvesting my own wild game.	1	2	3	4	5

3. Following this workshop, please rate your likelihood of performing the following activities by circling the corresponding number below.

	Very Unlikely	Unlikely	Unsure	Likely	Very Likely
Recommend this workshop to someone else	1	2	3	4	5
Take another Illinois Learn to Hunt workshop	1	2	3	4	5
Take an advanced Learn to Hunt course (i.e. Remote Scouting, Processing, Wild Game Cooking)	1	2	3	4	5
Join a hunting club or organization (i.e. Pheasants Forever, NWTF, Whitetails Unlimited)	1	2	3	4	5
Purchase a firearm in the next year	1	2	3	4	5
Purchase a bow in the next year	1	2	3	4	5
Go hunting sometime in the future	1	2	3	4	5
Seek a mentor to take you hunting	1	2	3	4	5
Introduce someone new to hunting	1	2	3	4	5
Volunteer as a mentor for an Illinois Learn to Hunt workshop	1	2	3	4	5

4. If you plan to hunt in the future, what species would you like to hunt? (Check all that apply)

Ducks Geese Deer Turkeys Pheasants
 Doves Quail Squirrels Rabbits Unsure None

5. If you plan to hunt in the future, what type of land will you hunt MOST often? (Check only one)

Public Private Hunting preserve Unsure None

6. How far would you travel to hunt in Illinois? _____ Miles

7. From the list below, please select any barriers you foresee restricting you from hunting in the future. (Check all that apply)

Free time Money Land access Shooting range Regulations
 Hunting companions Travel Distance Other (Please identify): _____

8. What aspects of the workshop could be improved? _____

9. What was your favorite part of the workshop? _____

10. What additional trainings and/or resources will be helpful to continue your path to becoming a hunter?

Learn to Hunt Small Game – Post-workshop Evaluation**1. Please rate the overall quality of the following workshop activities by circling the corresponding number below.**

	Very Poor	Poor	Fair	Good	Excellent
Highlighted the importance of hunting	1	2	3	4	5
How to buy an Illinois hunting license/description	1	2	3	4	5
Exposure to basic hunting equipment	1	2	3	4	5
Thorough explanation of field techniques	1	2	3	4	5
Sufficient amount of hands on activities	1	2	3	4	5
Information was conveyed clearly	1	2	3	4	5
Professionalism of mentors	1	2	3	4	5
Stressed the importance of firearm safety	1	2	3	4	5
Overall quality of live shooting experience	1	2	3	4	5
Field dressing demonstration	1	2	3	4	5
The value of obtaining wild game	1	2	3	4	5
The opportunity to try a wild game recipe	1	2	3	4	5
Overall quality of the workshop	1	2	3	4	5

2. Please circle the number below that corresponds with your attitude toward the following statements.

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
I feel comfortable explaining the benefits of hunting to others.	1	2	3	4	5
I understand what basic equipment is necessary for small game hunting in Illinois.	1	2	3	4	5
I learned scouting techniques for small game in Illinois.	1	2	3	4	5
I feel comfortable identifying areas where small game may be found.	1	2	3	4	5
I understand the importance of shooting zones while field hunting for upland game.	1	2	3	4	5
I expanded my knowledge of techniques to hunt small game species while using a dog.	1	2	3	4	5
I improved my ability to safely handle a firearm.	1	2	3	4	5
I feel comfortable field processing a small game animal.	1	2	3	4	5
I am interested in trying wild game recipes.	1	2	3	4	5
I feel more comfortable harvesting my own wild game.	1	2	3	4	5

3. Following this workshop, please rate your likelihood of performing the following activities by circling the corresponding number below.

	Very Unlikely	Unlikely	Unsure	Likely	Very Likely
Recommend this workshop to someone else	1	2	3	4	5
Take another Illinois Learn to Hunt workshop	1	2	3	4	5
Take an advanced Learn to Hunt course (i.e. Remote Scouting, Processing, Wild Game Cooking)	1	2	3	4	5
Join a hunting club or organization (i.e. Pheasants Forever, NWTF, Ducks Unlimited)	1	2	3	4	5
Purchase a firearm in the next year	1	2	3	4	5
Purchase a bow in the next year	1	2	3	4	5
Go hunting sometime in the future	1	2	3	4	5
Seek a mentor to take you hunting	1	2	3	4	5
Introduce someone new to hunting	1	2	3	4	5
Volunteer as a mentor for an Illinois Learn to Hunt workshop	1	2	3	4	5

4. If you plan to hunt in the future, what species would you like to hunt? (Check all that apply)

Ducks Geese Deer Turkeys Pheasants
 Doves Quail Squirrels Rabbits Unsure None

5. If you plan to hunt in the future, what type of land will you hunt MOST often? (Check only one)

Public Private Hunting preserve Unsure None

6. How far would you travel to hunt in Illinois? _____ Miles

7. From the list below, please select any barriers you foresee restricting you from hunting in the future. (Check all that apply)

Cost of equipment too high Too many regulations No access to land
 Hunting sites too far from home Too much equipment needed Not enough game
 Seasons not long enough No one to hunt with Cost of license
 Other (Please identify): _____

8. What aspects of the workshop could be improved? _____

9. What was your favorite part of the workshop? _____

10. What additional trainings and/or resources will be helpful to continue your path to becoming a hunter?

Appendix 5: Spring 2018 Learn to Hunt: Turkey post-workshop questionnaire

Learn to Hunt Turkey – Post-workshop Evaluation

1. Please rate the overall quality of the following workshop activities by circling the corresponding number below.

	Very Poor	Poor	Fair	Good	Excellent
Highlighted the importance of hunting	1	2	3	4	5
How to buy an Illinois hunting license/description	1	2	3	4	5
Exposure to basic hunting equipment	1	2	3	4	5
Thorough explanation of field techniques	1	2	3	4	5
Sufficient amount of hands on activities	1	2	3	4	5
Information was conveyed clearly	1	2	3	4	5
Professionalism of mentors	1	2	3	4	5
Stressed the importance of firearm safety	1	2	3	4	5
Overall quality of live shooting experience	1	2	3	4	5
Field dressing demonstration	1	2	3	4	5
The value of obtaining wild game	1	2	3	4	5
The opportunity to try a wild game recipe	1	2	3	4	5
Overall quality of the workshop	1	2	3	4	5

2. Please circle the number below that corresponds with your attitude toward the following statements.

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
I feel comfortable explaining the benefits of hunting to others.	1	2	3	4	5
I understand what basic equipment is necessary for turkey hunting in Illinois.	1	2	3	4	5
I learned scouting techniques for wild turkeys in Illinois.	1	2	3	4	5
I feel comfortable using different decoy strategies depending on the hunting situation.	1	2	3	4	5
I understand the importance of simulating different turkey vocalizations using various calls.	1	2	3	4	5
I improved my ability to safely handle a firearm.	1	2	3	4	5
I improved my ability to safely handle a bow.	1	2	3	4	5
I feel comfortable field processing a wild turkey.	1	2	3	4	5
I am interested in trying wild game recipes.	1	2	3	4	5
I feel more comfortable harvesting my own wild game.	1	2	3	4	5

3. Following this workshop, please rate your likelihood of performing the following activities by circling the corresponding number below.

	Very Unlikely	Unlikely	Unsure	Likely	Very Likely
Recommend this workshop to someone else	1	2	3	4	5
Take another Illinois Learn to Hunt workshop	1	2	3	4	5
Take an advanced Learn to Hunt course (i.e. Remote Scouting, Processing, Wild Game Cooking)	1	2	3	4	5
Join a hunting club or organization (i.e. Pheasants Forever, NWTF, Ducks Unlimited)	1	2	3	4	5
Purchase a firearm in the next year	1	2	3	4	5
Purchase a bow in the next year	1	2	3	4	5
Go hunting sometime in the future	1	2	3	4	5
Seek a mentor to take you hunting	1	2	3	4	5
Introduce someone new to hunting	1	2	3	4	5
Volunteer as a mentor for an Illinois Learn to Hunt workshop	1	2	3	4	5

4. If you plan to hunt in the future, what species would you like to hunt? (Check all that apply)

Ducks Geese Deer Turkeys Pheasants
 Doves Quail Squirrels Rabbits Unsure None

5. If you plan to hunt in the future, what type of land will you hunt MOST often? (Check only one)

Public Private Hunting preserve Unsure None

6. How far would you travel to hunt in Illinois? _____ Miles

7. From the list below, please select any barriers you foresee restricting you from hunting in the future. (Check all that apply)

Cost of equipment too high Too many regulations No access to land
 Hunting sites too far from home Too much equipment needed Not enough game
 Seasons not long enough No one to hunt with Cost of license
 Other (Please identify): _____

8. What aspects of the workshop could be improved? _____

9. What was your favorite part of the workshop? _____

10. What additional trainings and/or resources will be helpful to continue your path to becoming a hunter?

Learn to Hunt Waterfowl – Post-workshop Evaluation**1. Please rate the overall quality of the following workshop activities by circling the corresponding number below.**

	Very Poor	Poor	Fair	Good	Excellent
Highlighted the importance of hunting	1	2	3	4	5
How to buy an Illinois hunting license discussion	1	2	3	4	5
Exposure to basic hunting equipment	1	2	3	4	5
Thorough explanation of field techniques	1	2	3	4	5
Sufficient amount of hands on activities	1	2	3	4	5
Information was conveyed clearly	1	2	3	4	5
Professionalism of mentors	1	2	3	4	5
Stressed the importance of firearm safety	1	2	3	4	5
Overall quality of live shooting experience	1	2	3	4	5
Field dressing demonstration	1	2	3	4	5
The value of obtaining wild game	1	2	3	4	5
The opportunity to try a wild game recipe	1	2	3	4	5
Overall quality of the workshop	1	2	3	4	5

2. Please circle the number below that corresponds with your attitude toward the following statements.

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
I feel comfortable explaining the benefits of hunting to others.	1	2	3	4	5
I understand what basic equipment is necessary for waterfowl hunting in Illinois.	1	2	3	4	5
I learned scouting techniques for waterfowl in Illinois.	1	2	3	4	5
I feel comfortable using different decoy strategies depending on the hunting situation.	1	2	3	4	5
I understand the importance of simulating different waterfowl vocalizations using various calls.	1	2	3	4	5
I improved my ability to safely handle a firearm.	1	2	3	4	5
I feel comfortable field processing a duck or goose.	1	2	3	4	5
I am interested in trying wild game recipes.	1	2	3	4	5
I feel more comfortable harvesting my own wild game.	1	2	3	4	5

Appendix 7: LtH follow-up survey results.

LTH Follow-up Survey Prelim Analysis – 33.5% Response Rate (259 surveys distributed)

Background Information

What type of Learn to Hunt events have you attended? (Choose all that apply)

Workshop	83	78%
Seminar	13	12%
Mentored hunt	11	10%

Have you attended multiple Learn to Hunt events?

Yes	34	39%
No	53	61%

Have you utilized the Illinois Learn to Hunt eLearning modules?

Yes	27	32%
No	57	68%

2018-2019 Hunting Season

Did you purchase a hunting license for the 2018-2019 hunting season?

Yes	58	65%
No	31	35%

Did you purchase a duck stamp during the 2018-2019 hunting season?

Yes	25	28%
No	64	72%

Did you apply for a permit?

Yes	30	34%
No	57	66%

Were you successful in drawing a permit?

Yes	24	86%
No	4	14%

Did you hunt during the 2018-2019 hunting season?

Yes	46	52%
No	42	48%

Did you hunt public or private land during the 2018-2019 season?

Public	21	46%
Private	5	11%
Both	20	43%

Did you hunt private land or public land most often during the 2018-2019 season?

Public	32	74%
Private	11	26%
Equally	0	0%

About how many hours did you spend hunting & scouting during the 2018-2019 season?

Less than 10	7	15%
10-20 Hours	15	33%
20-30 Hours	5	11%
30-40 Hours	6	13%
More than 40 hours	13	28%

Constraints

What kept you from hunting during the 2018-2019 hunting season?

Time	20	22%
Land access	22	24%
Money	8	9%
Regulations	2	2%
Lack of knowledge	10	11%
Lack of hunting mentor	23	25%
Other	7	8%

Would you be willing to assist with habitat management activities on public hunting sites if you were provided additional hunting access to that specific site?

Yes	79	92%
No	7	8%

How many hours would you be willing to assist per year on habitat activities for additional hunting access?

Less than 10 hours	12	16%
10 - 20 hours	35	45%
20 - 30 hours	8	10%
30 - 40 hours	7	9%
More than 40 hours	15	19%

What is the minimum number of weeks you would want to be allowed additional hunting rights?

1 week	48	62%
2 weeks	17	22%
3 weeks	4	5%
4 weeks	4	5%
5 weeks	4	5%

Expenditures

Did you purchase any new hunting equipment since taking a Learn to Hunt event?

Yes	57	66%
No	30	34%

How much did you spend on hunting equipment since attending a LTH event?

Less than 100	4	7%
100-250	15	26%
250-500	14	25%
500-1000	15	26%
Over 1000	9	16%

Have you considered paying to lease private land for hunting access?

Yes	36	42%
No	50	58%

Did you join a conservation or hunting organization this past year?

Yes	25	29%
No	61	71%

Have you considered joining a conservation organization?

Yes	47	78%
No	13	22%

Motivations and Associated Behaviors

Did you search for a wild game recipes since attending a Learn to Hunt event?

Yes	63	74%
No	22	26%

Did you prepare any wild game meals since attending a Learn to Hunt event?

Yes	41	48%
No	44	52%

Did you prepare any meals using wild game you harvested?

Yes	34	83%
No	7	17%

Illinois DNR Requested Questions

Did you refer to the Illinois Hunting and Trapping digest during the 2018-2019 hunting season?

Yes	59	68%
No	28	32%

Which of the following best describes the information you searched for in the Illinois Hunting and Trapping Digest? (Choose all that apply)

Hunting season dates	54
Legal shooting times	42
Bag and position limits	39
Information on public hunting sites	42
Legal game/equipment requirements	36
Post-harvest regulations	30
Permits and license fees/application procedures	39
Conservation officers	9

If the Illinois DNR had a program that could allow hunters to rent hunting equipment (e.g., decoys, treestands) at DNR public sites, would you utilize this program?

Yes	33	39%
Maybe	43	51%
No	8	10%

HOW TO SCOUT FOR WILD TURKEY ON ILLINOIS PUBLIC LAND

OBJECTIVE: Educate the public on the importance of scouting for turkeys when hunting public land.

BACKGROUND: Scouting has been proven to be one of the most important pre-season hunting techniques. Effective scouting is often a question that arises at Learn to Hunt: Turkey events.

HOW TO SCOUT

FOR WILD TURKEY ON ILLINOIS PUBLIC LAND

CHOOSING A LOCATION

Identifying a potential hunting site can be a daunting task. Utilizing technology and a variety of online resources allows hunters to maximize time afield.



Utilize hunter fact sheets

IDNR hunter fact sheets give details about every public hunting site in the state. Including: what species, where, and when you can hunt.

Utilize harvest reports

IDNR hunter harvest reports detail harvest and hunter effort for all public sites. This can give an indication of a productive site.

Communicate with others

Other passionate hunters can have valuable insight into which public sites are more productive than others.

IDENTIFY KEY AREAS TO HUNT THROUGH SCOUTING EFFORTS

Diligent and consistent scouting is a crucial part of turkey hunting. Continue to scout through turkey season as behavior and locations of birds can change throughout the season. While scouting, look for:

01 ROOSTING TREES

Understanding turkey roosting habits on your hunting ground is imperative. East and north-east facing slopes make prime roosting areas, protecting birds from prevailing westerly winds. Focus on riparian areas. Look for feathers, droppings and tracks.

02 FOOD SOURCES

Toms don't feed heavily in the spring, however, they will follow the feeding hens. If hens are feeding in the timber, you will notice a disturbance in the leaves as turkeys scratch the leaves to expose food. Also, scan open fields to search for feeding hens.

03 STRUTTING AREAS

Watch open fields and pastures for strutting toms. In the woods, look along logging roads, ridgetops, flats, or in bottomland timber stands. If active strutting is not occurring, you can often find drag marks (created by a strutting bird's wings) and figure-eight disturbances in the leaves.

THE FEDERAL MIGRATORY BIRD HUNTING AND CONSERVATION STAMP

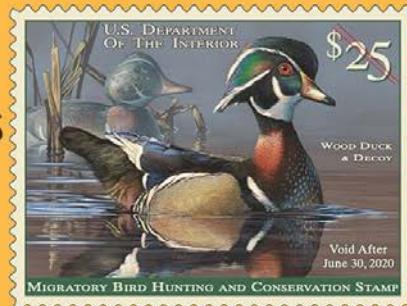
OBJECTIVE: Educate the Illinois public and hunters on the importance of the Federal Migratory Bird Hunting and Conservation Stamp.

BACKGROUND: A recent survey, in Illinois, showed that more than 60% of waterfowl hunters did not know how funding from the Federal Duck Stamp was used (Miller, 2003). The Federal Duck Stamp is often referred to as the greatest success story in modern conservation, thus educating the public on this topic is extremely important.

THE FEDERAL MIGRATORY BIRD HUNTING AND CONSERVATION STAMP

“DUCK STAMP”

THE FEDERAL DUCK STAMP IS
REQUIRED TO HUNT ANY
WATERFOWL SPECIES IN
THE UNITED STATES



98% OF FUNDS ARE USED TO PURCHASE AND
ENHANCE CRITICAL HABITAT

SINCE THE DUCK STAMPS INCEPTION IN 1934
MORE THAN
\$1,000,000,000 HAS BEEN PRODUCED

RESULTING IN THE PROTECTION OF MORE THAN

6,000,000 ACRES

OF CRITICAL HABITAT BENEFITING DUCKS, GEESE
AND **MANY** NON-GAME SPECIES!

MANY OF THESE ACRES ARE NATIONAL WILDLIFE
REFUGES OPEN FOR HUNTING AND BIRDING OPPORTUNITIES

Data from the U.S. Fish and Wildlife Service

ILLINOIS
LEARNTO HUNT
WWW.LEARNTOHUNTIL.COM

DID YOU KNOW ILLINOIS HUNTERS ARE CONSERVATIONISTS?

OBJECTIVE: Educate the public on how hunters impact on the local economy and conservation efforts.

BACKGROUND: Many new and current hunters, as well as the general public, are unaware of the impacts hunting has towards Illinois conservation efforts.

DID YOU KNOW ILLINOIS HUNTERS ARE CONSERVATIONISTS?

Contributions of Illinois Hunters on local
wildlife populations

WHITE-TAILED DEER

1949 **2,550** TODAY **660,000**



WILD TURKEY

1900 **0** TODAY **150,000**



WATERFOWL

1900 **FEW** TODAY **46,000,000**



These and many other species continue to benefit
from the hunter's role in conservation efforts

Hunters and target shooters
purchase firearms and ammunition

THE FEDERAL AID IN WILDLIFE RESTORATION ACT



Manufacturers pay an 11% federal
excise tax

Revenue from this excise tax is
distributed to wildlife state
agencies



State wildlife agencies use these funds
to purchase land for habitat and to
manage wildlife populations

ILLINOIS HUNTERS SPEND **\$1.3 BILLION** ANNUALLY
AND SUPPORT OVER **18,000** ILLINOIS JOBS

WHAT'S ILLINOIS WATERFOWL WORTH?

OBJECTIVE: Educate the public on the economic impact of waterfowl hunting

BACKGROUND: Waterfowl hunting has long been cited by waterfowl hunters as a significant boon to the local economy. However, the vast majority of hunters do not know the totality of the economic impact.

WHAT'S ILLINOIS WATERFOWL WORTH?

EVERY DOLLAR SPENT WATERFOWL
HUNTING GENERATES **\$1.86** TO THE LOCAL ECONOMY¹

TRIP EXPENDITURES

\$37,446,350



DURABLE GOODS

\$105,556,350



TOTAL EXPENDITURES

\$142,972,855



2012-2013 Illinois Waterfowl Season Economic Impact

EMPLOYMENT

2,556 JOBS



FEDERAL TAXES

\$21,246,945



STATE AND LOCAL TAXES

\$20,451,789



THE TOTAL **ECONOMIC IMPACT**
FROM ILLINOIS WATERFOWL HUNTERS EXCEEDS
\$261,000,000/year

1- Data from the 2012-13 Illinois Waterfowl Hunter Survey, INHS Human Dimensions Program

ILLINOIS

LEARNtoHUNT

WWW.LEARNTOHUNTIL.COM

VENISON CUTS AND USES

OBJECTIVE: Educate the public as to the importance of the correct butcher cuts and uses of venison

BACKGROUND: As food is a major motivation for hunters, understanding the unique cuts of venison and how each cut can be prepared is incredibly useful.

ILLINOIS **LEARntoHUNT**

VENISON CUTS AND USES

FIELD DRESSING YOUR OWN ANIMAL IS A BIG PART OF HARVESTING IT. MANY HUNTERS LOOK FORWARD TO BUTCHERING AND SERVING THEIR OWN FRESH MEAT!

A diagram of a deer carcass showing various cuts of meat. The cuts are labeled as follows:

- SHOULDER/ARM**: ROAST, SOUP, STEW, GROUND
- NECK**: ROAST
- BACKSTRAP/LOIN**: STEAKS, FILETS
- SHOULDERRIB**: ROAST, ARM ROAST
- SIDE RIB**
- FLANK**: GROUND
- RIBS**
- SIRLOIN**: TOP, SPARERIBS, STEAKS, ROAST
- RUMP**: ROAST, ROUND STEAKS
- SHANK**: SHANK, SHANK
- RUMP ROAST**
- ROUND STEAKS**
- SHANK**
- SOUP**
- STEW**
- BURGER JERKY**

UNDERSTANDING THE CUTS OF MEAT AND THE PROPER WAY TO BUTCHER IS IMPORTANT TO NOT ONLY HAVE THE FRESHEST MEAT, BUT ALSO THE MOST DELICIOUS!

NORTH AMERICAN MODEL OF WILDLIFE CONSERVATION

OBJECTIVE: Educate the public on the importance of the North American Model of Conservation and its history.

BACKGROUND: The North American Model of Conservation is a unique model that exemplifies the importance of regulations and conservation in North America. The principles outlined in the model are pillars for how natural resources are sustainably managed. This is an important concept to understand when learning how to hunt because most regulations are embedded in the model.

NORTH AMERICAN MODEL OF *wildlife conservation*

Wildlife as public trust resources		Wildlife is held by the public through state and federal governments.
Elimination of markets for game		Commercial hunting and the sale of wildlife is prohibited to ensure the sustainability of wildlife populations.
Allocation of wildlife by law		Wildlife is allocated to the public by law, as opposed to market principles, land ownership or other status.
Wildlife can only be killed for legitimate purposes		The killing of wildlife must be done only for food, fur, self-defense, or the protection of property.
Wildlife is considered an international resource		Effective management of wildlife is done through international treaties and the cooperation of agencies.
Science is the proper tool for discharge of wildlife policy		Science is the basis for informed management and decision-making processes.
Democracy of hunting		Every citizen has an equal opportunity to hunt.

ILLINOIS **LEARNTOHUNT**

EAT HEALTHY, EAT LOCAL, HUNT ILLINOIS

OBJECTIVE: Educate the public that hunting is healthy and local.

BACKGROUND: With the recent rise of local, organic, and sustainable food many participants cite healthier food as a primary motivation of hunting. However, the majority of participants do not know the specifics about the health benefits of wild game.

The infographic features a central yellow background with a white border. At the top, the slogan "EAT HEALTHY EAT LOCAL HUNT ILLINOIS" is displayed in large, bold, black and orange letters, flanked by white clouds. Below this, a central message reads: "WILD GAME TASTES BETTER, IS MORE HUMANE, AND IS FAR MORE NUTRITIOUS THAN MEAT PURCHASED FROM THE GROCERY STORE." The infographic is divided into four main sections, each featuring a comparison between a wild game animal and its domesticated counterpart, separated by a large orange "VS" symbol. Each section includes a small orange silhouette of the animal and a nutritional table per 3 oz. serving.

Animal	Calories	Protein (g)	Fat (g)
WHITE-TAILED DEER	149	23.6	1.4
COW	180	22.0	6.0
PHEASANT	126	22	0.5
CHICKEN	141	26.5	3.4
MALLARD	130	19.8	1.8
DOMESTIC DUCK	172	19.1	9.2

Wild game nutritional guide (per 3 oz. serving)

ILLINOIS LEARNtoHUNT

HOW TO FIELD DRESS WHITE-TAILED DEER

OBJECTIVE: Educate the public on the steps taken to field dress a deer.

BACKGROUND: Field dressing is an important part of deer hunting. Because the LtH staff can't demonstrate field dressing an entire deer every workshop, learning the basic concepts through an infographic is a good alternative resource to provide.

HOW TO FIELD DRESS

WHITE-TAILED DEER

Field dressing is the process of removing the internal organs of harvest game. Field dressing prevents bacterial contamination, ensures rapid heat loss, and reduces the overall weight of the animal.

Step 1
Position the deer with the hind legs downhill and begin making an incision in the skin. Begin between the hind legs and continue all the way up through the chest area.



Step 2
Tease open the abdominal cavity to expose the entrails. Take extra caution to avoid puncturing the stomach.



Step 3
Follow the deeper incision along the first shallower incision, using your fingers to pull the skin away from the entrails as you cut to keep from puncturing them.



Step 4
Allow the entrails to fall out of the body cavity. Cut through one side of the rib cage to expose the chest cavity.



Step 5
Cut the connective tissues and diaphragm away from the inner body wall to free the entrails from the body cavity.



Step 6
Cut around the anus to detach the excretory tract.



Step 7
Remove all entrails from the deer and dispose of according to landowner preference. You may want to save the heart, liver, and kidneys to eat!



Step 8
Transport your deer out of the woods. Removing the entrails reduces the weight of the deer substantially.



REDUCE YOUR CARBON FOOTPRINT, HUNT ILLINOIS

OBJECTIVE: Educate the public on how to reduce their carbon footprint on the environment through hunting.

BACKGROUND: Greenhouse gas imissions are becoming a substantial topic in the mainstream media and in peoples daily lives. Explaining the environmental benefits of hunting vs factory-farming operations is important.

REDUCE YOUR CARBON FOOTPRINT

Hunt Illinois

Illinois Deer Harvest 2016-2017

123,834 deer hunters



144,303 deer harvested



estimated 8,554,712 lbs
of edible venison



IL deer hunters produce
an average of 588 lbs of
CO₂e per season



8,554,712 lbs

of edible meat

Greenhouse Gas Emissions for 8,554,712 pounds of edible meat

Venison vs Beef



venison 36,454 tons of CO₂e

beef 159,336 tons of CO₂e

Venison vs Pork



venison 36,454 tons of CO₂e

pork 62,520 tons of CO₂e

Venison vs Chicken



venison 36,454 tons of CO₂e

chicken 41,397 tons of CO₂e

HOW TO SCOUT FOR WHITE-TAILED DEER ON PUBLIC LAND

OBJECTIVE: Educate the public on how to hunt public land.

BACKGROUND: Informing the public on how to scout public land is a great resource especially if people are new to hunting or new to hunting public land.



HOW TO SCOUT

FOR WHITE-TAILED DEER ON PUBLIC LAND

CHOOSING A LOCATION

Identifying a potential hunting site can be a daunting task. Utilizing technology and a variety of online resources allows hunters to maximize time afield.



1 Utilize hunter fact sheets

IDNR hunter fact sheets give details about every public hunting site in the state. Including: what species, where, and when you can hunt.

2 Utilize harvest reports

IDNR hunter harvest reports detail harvest and hunter effort for all public sites. This can give an indication of a productive site.

3 Communicate with others

Other passionate hunters can have valuable insight into which public sites are more productive than others.

IDENTIFY KEY AREAS TO TARGET SCOUTING EFFORTS

With advancements in satellite imagery, hunters can theorize how animals will move across the landscape. This will give a valuable starting point when beginning field scouting. Primarily look for:

01 PINCH POINTS

Generally terrain or man-made features that channel deer movement

02 TRAVEL CORRIDORS

Routes of cover, such as tree lines or streams, that allow deer to move safely across the landscape

03 BEDDING AREAS

Areas of thick wooded or grassy cover that have access to multiple escape routes

04 FOOD SOURCES

Areas of oak acorns or other mast crops, grassy areas and agriculture crops that contain adequate browse

05 WATER SOURCES

Streams, creeks, and small ponds that provide deer access to water while remaining in cover

Review of Literature Hunter Recruitment, Retention, and Reengagement

Despite the fact that Americans show high overall support for hunting as a recreation and food harvesting activity (77% approval) (Ryan & Shaw, 2011) (see also Duda, Jones, & Criscione, 2010), hunting is on the decline across the country in general (Dizard, 2003; U.S. Fish and Wildlife Service, 2007; Winkler & Warnke, 2013) and in Illinois specifically (Robison & Ridenour, 2012). With the average age of the active hunter climbing (Alessi & Miller, 2012), there has been a significant effort to create programs that involve youth in hunting and trapping, but adult hunter recruitment programs remain rare (Miller, Black, & Stephens, 2018). Because sale of hunting licenses and private donations by hunters are the primary source of financial support of conservation efforts in North America, and because outdoor recreationists are comparatively stronger advocates for conservation efforts (Cooper, Larson, Dayer, Stedman, & Decker, 2015; Heffelfinger, Geist, & Wishart, 2013; Vrtiska, Gammonley, Naylor, & Raedeke, 2013), the decline in hunting poses problems for the protection, maintenance, and expansion of public and protected lands (Enck, Decker, & Brown, 2000; Winkler & Warnke, 2013). Thus, this literature review seeks to explore three subsets of the outdoor recreation literature: (1) reasons for the decline in hunting in Illinois and, more broadly, the United States; (2) the appeal of hunting for potential “new hunters” amidst a changing social and demographic landscape; (3) hunter recruitment and retention.

Explaining the Decline

The decline of hunting and hunting license sales is well documented, thanks in large part to annual publications from the U.S. Fish and Wildlife Service. Using records published by the Fish and Wildlife Service, Winkler and Warnke (2013) report that hunting license sales peaked at

16.7 million in 1982. By 2010, that number had declined to 14.4 million. Meanwhile, the percentage of Americans engaging in hunting activities dropped from 7.2% in 1980 to just 4.7% in 2010. There are a number of explanations for this decline, and it is important that hunting participation be viewed not only as an individual decision but as the result of social processes and structural constraints (Larson, Stedman, Decker, Siemer, & Baumer, 2014). While individual and group level values, beliefs, attitudes, etc. are useful predictors of hunting participation, these orientations are themselves shaped by macro level forces of modernization (Manfredo, Teel, & Henry, 2009). Oft cited explanations of hunting decline include urbanization, demographic changes, competing demands on time (e.g., family, work, alternative forms of recreation, and increased availability of digital media), access to land and hunting opportunities, and increasing costs of hunting.

In the past, most Americans held and promoted a value orientation of wildlife domination. Indeed, the domination of nature – an entity conceptualized in the West as “a realm of unfreedom and hostility that needed to be subdued and controlled” (Macnaghten & Urry, 1995, pp. 204-205) – was central to the founding and expansion of the United States. Coupled with ideas about the free market, such values continue to inform American behavior and policy regarding use of the environment (e.g., for natural resource extraction) (Brulle, 1996; Macnaghten & Urry, 1995). As Ingold (2002) contends, the move away from hunter-gatherer society meant (at least in Western societies) was accompanied by a shift in values. Rather than see society as part of a mutually sustaining relationship with wildlife and nature, wildlife and nature were to be subordinated for the benefit of society. *However*, there is some evidence that American value orientations are again shifting, this time back to wildlife mutualism. Perhaps spurred by the proliferation of egalitarian ideals, mutualism supposes that wildlife and humans

exist in a shared ecosystem in which all members have rights and are deserving of respect. In turn, those of mutualist bent are “less likely to support actions resulting in death or harm to wildlife” (Manfredo et al., 2009, p. 412). When viewed in these terms, it is rather unsurprising that outdoor recreation has moved toward non-consumptive activities (Cordell, 2004; Larson et al., 2014) and that the general public is typically more supportive of hunting as a means of sustenance or as a wildlife management tool than they are of trophy hunting and hunting solely for recreation (Bissell, Duda, & Young, 1998; Campbell & Mackay, 2003; DiCamillo, 1995; Urbanek, Nielsen, Davenport, & Woodson, 2012).

One of the primary structural constraints (indirectly) responsible for the change in wildlife values and hunting participation is urbanization. As the United States has urbanized, the context in which most Americans live their lives has changed dramatically. Interactions with nature have decreased, and the interactions that urbanites do have with wildlife differ in nature from those experienced by their rural counter parts (e.g., dealing with garden pests, hiking or birdwatching trips *out to nature*) (Manfredo et al., 2009). Furthermore, as cities sprawl, previously accessible hunting land decreases as does demand for hunting opportunities. For example, Poudyal, Cho, & Hodges (2008) found that in the Southeast, every 1% increase in proportion of urban population of a county resulted in a 12% in hunting demand. And because hunting participation is heavily correlated with rural backgrounds (Heberlein & Ericsson, 2005) and family tradition (Hayslette, Armstrong, & Mirarchi, 2001; Ryan & Shaw, 2011; Stedman & Heberlein, 2001), the problem of decline in hunting participation will likely continue if urban sprawl continues without planning for the protection of forest land (Poudyal et al., 2008). Exacerbating this effect, those who hunt typically learn to hunt early and often from a family member (typically one’s father) (Hayslette et al., 2001; Larson et al., 2014; Stedman &

Heberlein, 2001). So, while urban residence strongly predicts hunting participation, it also predicts the availability of family mentors. The two status positions work in tandem (Stedman & Heberlein, 2001), and thus the hunting participation is likely to continue decline with each passing generation (Winkler & Warnke, 2013).

In addition to the urbanization of the United States, the decline in hunting participation has been linked to changes in available recreation opportunities. In particular, research has pointed to the growth of indoor, at-home activities enabled by the rise of television and the internet. Pergams and Zaradic (2006) argue that a downturn in national park attendance can be explained by increased consumption of movies and video games, as well as increased use of the internet. While it seems not all outdoor activities have been negatively affected by the increased use of modern entertainment – wildlife watching/tourism has risen in popularity (Knight, 2009) and outdoor recreation in general is shifting towards nonconsumptive activities (Cordell, 2004; Winkler & Warnke, 2013) – hunting certainly has been. Robison and Ridenour (2012) find a significant, negative correlation between time spent watching television and using the internet and hunting participation. Meanwhile, the media consumed by Americans may also be discouraging them from hunting. Some argue that an anti-hunting ethos is present in some modern media, slowing pushing American culture away from pro-hunting attitudes (Hastings, 1996). Others argue that media fixates on trophy hunting to which, as already stated, the general public is less receptive (Alessi, Miller, & Harper, 2013; Kalof & Fitzgerald, 2003; Knezevic, 2009).

Last, there are a number of practical constraints that limit hunting participation in the 21st century. Perhaps the largest problem is lack of access to public and private hunting lands. Time and again, scholars have shown that hunting participation is tied to available hunting grounds,

overcrowding and poor hunter behavior, and perceived lack of game (Bissell et al., 1998; Heberlein & Kuentzel, 2002; Mehmood, Zhang, & Armstrong, 2003; Miller & Vaske, 2003; Montgomery & Blalock, 2010). Other studies have found that many would-be hunters cite lack of time as reason for nonparticipation (Bissell et al., 1998; Miller & Vaske, 2003; Montgomery & Blalock, 2010; Winkler & Warnke, 2013). In fact, Miller and Vaske (2003, p. 268) found that hunters “who reported lack of time as a constraint were 155 times more likely to have decreased hunting participation compared to those who did not feel constrained by time.” Likewise, increased time dedicated to activities like long work commutes and organized sports leagues, leave less time for hunting (Robison & Ridenour, 2012; Winkler & Warnke, 2013). Other would-be hunters claim that poor health and aging prevent them from hunting (Mehmood et al., 2003; Miller & Vaske, 2003). Because younger hunters are not replacing those who age out, this problem is not likely to abate in the coming years unless significant changes occur (Brown, Decker, Siemer, & Enck, 2000; Winkler & Warnke, 2013).

Hunters as a Value Driven Actors

While more nuanced understanding of the perceived benefits and motivations of new hunters is needed, the hunting and outdoor recreation literature does offer a general framework. One thing that is known is that successful harvest is not the only component of a successful hunting experience – nor is it the most important component (Decker, Brown, & Gutierrez, 1980; Hayslette et al., 2001). For several decades, now, scholars have recognized (1) that hunters evaluate their experience based on multiple satisfactions, and (2) that psychological benefits needed to be taken into consideration (Hammitt, McDonald, & Patterson, 1990). The literature suggests that a desire to “get in touch with nature”/“get away from it all,” spend time with

friends and family, feel like one is of overcoming a challenge, and contribute to the American conservation effort may also be important value based predictors of hunting participation.

Desire to spend time in nature is, perhaps, the most common motivation. Likely because nature is conceptualized as the opposite of built human society (Sanna & Pedersen, 2017), it is common for people to view outdoor activities as “getting away from it all” (Breunig, O’Connell, Todd, Anderson, & Young, 2010, p. 561). While it is often hard for people to describe exactly why such excursions are beneficial or valued, nature is generally presumed to be a source of “goodness,” authenticity, healing, and “beauty, magic, and movement” (Sanna & Pedersen, 2017, p. 5). More specifically, hunters report that satisfaction is more readily tied to relaxing and witnessing wildlife than it is to harvesting wildlife (Decker et al., 1980; Hayslette et al., 2001). Hunters also display stronger pro-environmental behaviors (e.g., donating conservation efforts, participating in environmental groups) than nonhunters (Cooper et al., 2015). The fact that being in nature is rated as more important than meeting a bag limit is possibly tied to the image of the hunter as a conservationist. Indeed, it is commonly pointed out that many of the United States’ prominent, early conservations, including Theodore Roosevelt, John James Audubon, and Jack Miner, were also avid hunters (Knezevic, 2009), and the North American Conservation Model still today relies on the contributions made by hunters (Heffelfinger et al., 2013).

Beyond the desire to be outside, hunting and outdoor recreation more generally are appealing because they speak to traditional values like spending time with family and friends. It is also known that outdoor enthusiasts derive satisfaction from overcoming the challenges presented to them by outdoor activities like backpacking, hiking, hunting, ect. For example, focus group interviews with wilderness trip participants revealed that group activities, helping each other, preparing meals together, overcoming challenges as a group, group reflection, and

“getting away from it all” contributed to a heightened sense of community (Breunig et al., 2010). Likewise, when waterfowl hunters report that they enjoyed spending time with the people they hunt alongside and/or that they feel their skills as a hunter are tested, their overall satisfaction with the hunt significantly increases (Vaske, Fedler, & Graefe, 1986). However, it is worth noting that measure of satisfaction occurs *after* the actors have engaged in the activity. So, while we know that outdoor enthusiasts appreciate the sense of community and accomplishment gained through outdoor recreation, actors must be drawn to outdoor activities like hunting for other reasons. Again, structural conditions must be considered alongside values because the outdoor activity itself needs to be appealing as the benefits derived from the activity (Larson et al., 2014; Yuen, Pedlar, & Mannell, 2005). Hunting must be seen as a desirable leisure activity *before* value can be derived from participation.

Recruitment and Retention

Admittedly, a number of scholars have concluded that the outlook for hunter recruitment in the 21st century is bleak. Again, the increased lack of hunting tradition in families means that the next generation of hunters is not be socialized into the activity, and in turn, Hayslette, Armstrong, and Mirarchi (2001), suggest that this may limit the success of youth programs. Furthermore, Mahmood and colleagues (2003) find that, in general, people who have not hunted have little interest in the activity or believe the practice to be cruel, suggesting that resources would be better spent on hunter retention, rather than hunter recruitment. However, such a solution does not address the problem of the aging hunter population, nor does it grapple with successes and positive leads documented in the hunter recruitment, retention, and reactivation literature.

Research by Responsive Management has shown that when adults(?) take hunter education courses, about 75% report that would take an optional follow course (Duda et al. 2012), and previous work has shown that hunting participation increases when recruited hunters participate in multiple planned events and/or workshops rather than in just one (Seng, Byrne, Sanders, & McCool, 2007). Put differently, workshops and seminars designed to recruit and retain new hunters have potential, but these programs are understudied, under evaluated, and are often in need of better developed approach and goals (Byrne, 2009; Ryan & Shaw, 2011). Current research suggests that for such programs to be successful, a number of conditions need to be met.

As is often the case with outdoor recreation in general, access is likely the largest barrier to participation (Bissell et al., 1998; McIntyre, Yaun, Payne, & Moore, 2004; Sanna & Pedersen, 2017). In particular, there is need for more hunting grounds near urban centers (Schulz, Millspaugh, Zekor, & Washburn, 2003). Beyond access, Schulz and colleagues (2003) argue that there must also be a reasonable expectation of harvest. Real or imagined, the perception is that many public hunting grounds are overhunted and that game is scarce (Heberlein & Kuentzel, 2002). But because hunting is a social process, dependent upon a wide range of societal and group level influences (Larson et al., 2014), simply providing access will not reverse the downward trend in hunter participation.

For recruitment and retention, mentoring remains the most effective method. As Duda, Bissell, & Young (1995, p. 12) put it, it “take[s] a hunter to make a hunter.” Given that the primary avenue to hunting participation is through early socialization or later introduction by friends or spouse’s family (Hayslette et al., 2001; Responsive Management, 2008; Ryan & Shaw, 2011; Stedman & Heberlein, 2001), it is rather unsurprising that mentoring would be the most

beneficial approach for planned recruitment programs. This is not only the key to recruitment, but also to retention because social support and repeated activity is needed for someone to begin to think of themselves as a hunter rather than as someone who has gone hunting (Ryan & Shaw, 2011; Wentz & Seng, 2000).

This is not to say that all Americans would be receptive to such mentorship. Younger white males remain the most likely demographic group to be recruited to hunting participation and retained (Gude, Cunningham, Herbert, & Baumeister, 2012), and a number of scholars have suggested that hunting is not appealing to many minority groups because it carries little to no cultural relevancy (Adams, Brown, & Higginbotham, 2004; Floyd & Lee, 2002; Larson, Stedman, Decker, Siemer, & Baumer, 2014; Ryan & Shaw, 2011). People who view hunting as inhumane or who have had little or no exposure to hunting are also unlikely to begin hunting (Mehmood et al., 2003). However, nonhunters who are embedded in social networks with hunters may be more likely to take up the practice, and hunters are more likely to continue hunting when they know other hunters (Enck et al., 2000; Ryan & Shaw, 2011). But while mentoring is becoming a common approach in hunter recruitment and retention, more needs to be known about the perceived benefits and motivations for potential new hunters (Ryan & Shaw, 2011).

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LTH Focus Group Interview Guide

Background

The research team will conduct focus group interviews with groups of six to 12 people who have previously signed up to attend an Illinois Learn to Hunt workshop. Participants will be recruited by email and phone call using information provided to Illinois Learn to Hunt at the time of workshop registration. We will first send an invitation email. Those who do not respond will get a follow up email approximately one week later, again inviting them to participate. Last phone calls will be made to those who do not respond to either email. Recruitment materials will include information about the research project, contact information, information about the time and location of the focus group interview, expected time commitment, and information about the participation incentive – a \$50 gift card to Bass Pro Shop.

Consent Process

Consent forms for focus group participants are completed in advance by all those seeking to participate. Below is a summary of the information in the consent form that focus group organizers and facilitators should use to make sure participants understand the information in the consent form.

- The purpose of this study is to better understand the challenges you face as a new hunter so the Illinois Learn to Hunt Program can better serve you.
- The information you give us is completely confidential, and we will not associate your name with anything you say in the focus group.
- We will be recording the focus groups so that we can make sure to capture the thoughts, opinions, and ideas we hear from the group. No names will be attached to the focus groups and the tapes will be destroyed as soon as they are transcribed.
- You may refuse to answer any question or withdraw from the study at any time.
- We understand how important it is that this information is kept private and confidential. We will ask participants to respect each other's confidentiality.
- If you have any questions now or after you have completed the questionnaire, you can always contact a study team member like me, or you can call the Learn to Hunt program leader whose name and phone number is on this form.
- Please check the boxes on page 2 and sign to show you agree to participate in this focus group.

Introduction

1. Welcome

Introduce yourself and the note taker, and send the Sign-In Sheet with a few quick demographic questions (age, gender,) around to the group while you are introducing the focus group.

2. Explanation of the process

Ask the group if anyone has participated in a focus group before. Explain that focus groups are being used more and more often in social science research.

About focus groups

- We learn from you (positive and negative)
- Not trying to achieve consensus, we're gathering information
- Briefing on their rights as a participant

- Risk involved in participation
- Assured that receipt of the gift card is not contingent upon answering questions that make them feel uncomfortable or upon completion of the interview if they choose to exit early

Logistics

- Focus group will last about one hour
- Feel free to move around
- Where is the bathroom? Exit?
- Help yourself to refreshments

3. Ground Rules

Ask the group to suggest some ground rules. After they brainstorm some, make sure the following are on the list.

- Everyone should participate.
- Information provided in the focus group must be kept confidential
- Stay with the group and please don't have side conversations
- Turn off cell phones if possible

4. Assistant Moderator Will Turn on Tape Recorder

5. Ask the group if there are any questions before we get started, and address those questions.

6. Introductions

Discussion begins, use the probes to make sure that all issues are addressed, but move on when you feel you are starting to hear repetitive information.

Questions:

1. Let's start the discussion by talking about what interested you in hunting. What is your primary motivation for wanting to hunt?
 - a. Follow-up: Why is [X motivation] important to you?
2. Hunting has been declining in the United States since the 1980s, and now, just about 4% of the U.S. population hunts. What makes you different? Why have you decided to start hunting while most of your peers have chosen abstain from hunting?
3. What motivated you to register for a Learn to Hunt event?
 - a. Follow-up: The program has many registrants that do not attend the event. What motivated you, after registering, to actually attend the event?
4. Looking at Illinois Learn to Hunt's marketing materials, what do you think about the design and content?
 - a. Follow-up: What about these materials appeals to you, if anything?
 - b. Follow-up: What about these materials would you change, if anything?
5. If you were inviting a friend/family member to attend a Learn to Hunt workshop, what would you say in the invitation?
6. What constraints have you faced as a new hunter?
7. What tools, relationships, opportunities, etc. have been useful to you as a new hunter?
8. What level of social support do you need to continue your path as a hunter?
 - a. Follow-up: How can the Illinois Learn to Hunt program foster this support?
9. Suppose you were in charge and could make one change that would make the Illinois Learn to Hunt program better. What would you do?

Probes for Discussion:

That concludes our focus group. Thank you so much for coming and sharing your thoughts and opinions with us. We have a short evaluation form that we would like you to fill out if you have time. If you have additional information that you did not get to say in the focus group, please feel free to write it on this evaluation form.

Materials and supplies for focus groups

- Sign-in sheet
- Consent forms (one copy for participants, one copy for the team)
- Evaluation sheets, one for each participant
- Name tents
- Pads & Pencils for each participant
- Focus Group Discussion Guide for Facilitator
- 1 recording device
- Batteries for recording device
- Extra tapes for recording device
- Permanent marker for marking tapes with FGD name, facility, and date
- Notebook for note-taking
- Refreshments

Appendix 11: ESRI Tapestry LifeMode segment characteristics and demographics.

LifeMode groups represent markets that share a common experience—born in the same generation or immigration from another country—or a significant demographic trait, like affluence. Tapestry Segments are classified into 14 LifeMode groups. Click a link to view a PDF summary:

LifeMode

LifeMode 1 Affluent Estates

- Established wealth—educated, well-traveled married couples
- Accustomed to "more": less than 10% of all households, with 20% of household income
- Homeowners (almost 90%), with mortgages (65.2%)
- Married couple families with children ranging from grade school to college
- Expect quality; invest in time-saving services
- Participate actively in their communities
- Active in sports and enthusiastic travelers

LifeMode 2 Upscale Avenues

- Prosperous married couples living in older suburban enclaves
- Ambitious and hard-working
- Homeowners (70%) prefer denser, more urban settings with older homes and a large share of townhomes
- A more diverse population, primarily married couples, many with older children
- Financially responsible, but still indulge in casino gambling and lotto tickets
- Serious shoppers, from Nordstrom's to Marshalls or DSW, that appreciate quality, and bargains
- Active in fitness pursuits like bicycling, jogging, yoga, and hiking
- Subscribe to premium movie channels like HBO and Starz

LifeMode 3 Uptown Individuals

- Young, successful singles in the city
- Intelligent (best educated market), hard-working (highest rate of labor force participation) and averse to traditional commitments of marriage and home ownership
- Urban denizens, partial to city life, high-rise apartments and uptown neighborhoods
- Prefer credit cards over debit cards, while paying down student loans
- Green and generous to environmental, cultural and political organizations
- Internet dependent, from social connections to shopping for fashion, tracking investments, making travel arrangements, and watching television and movies
- Adventurous and open to new experiences and places

LifeMode 4 Family Landscapes

- Successful young families in their first homes
- Non-diverse, prosperous married-couple families, residing in suburban or semirural areas with a low vacancy rate (second lowest)
- Homeowners (79%) with mortgages (second highest %), living in newer single-family homes, with median home value slightly higher than the U.S.
- Two workers in the family, contributing to the second highest labor force participation rate, as well as low unemployment

LifeMode

- Do-it-yourselfers, who work on home improvement projects, as well as their lawns and gardens
- Sports enthusiasts, typically owning newer sedans or SUVs, dogs, and savings accounts/plans, comfortable with the latest technology
- Eat out frequently at fast food or family restaurants to accommodate their busy lifestyle
- Especially enjoy bowling, swimming, playing golf, playing video games, watching movies rented via Redbox, and taking trips to a zoo or theme park

LifeMode 5 GenXurban

- Gen X in middle age; families with fewer kids and a mortgage
- Second largest Tapestry group, comprised of Gen X married couples, and a growing population of retirees
- About a fifth of residents are 65 or older; about a fourth of households have retirement income
- Own older single-family homes in urban areas, with 1 or 2 vehicles
- Live and work in the same county, creating shorter commute times
- Invest wisely, well-insured, comfortable banking online or in person
- News junkies (read a daily newspaper, watch news on TV, and go online for news)
- Enjoy reading, renting movies, playing board games and cards, doing crossword puzzles, going to museums and rock concerts, dining out, and walking for exercise

LifeMode 6 Cozy Country Living

- Empty nesters in bucolic settings
- Largest Tapestry group, almost half of households located in the Midwest
- Homeowners with pets, residing in single-family dwellings in rural areas; almost 30% have 3 or more vehicles and, therefore, auto loans
- Politically conservative and believe in the importance of buying American
- Own domestic trucks, motorcycles, and ATVs/UTVs
- Prefer to eat at home, shop at discount retail stores (especially Walmart), bank in person, and spend little time online
- Own every tool and piece of equipment imaginable to maintain their homes, vehicles, vegetable gardens, and lawns
- Listen to country music, watch auto racing on TV, and play the lottery; enjoy outdoor activities, such as fishing, hunting, camping, boating, and even bird watching

LifeMode 7 Ethnic Enclaves

- Established diversity—young, Hispanic homeowners with families
- Multilingual and multigenerational households feature children that represent second-, third- or fourth-generation Hispanic families
- Neighborhoods feature single-family, owner-occupied homes built at city's edge, primarily built after 1980
- Hard-working and optimistic, most residents aged 25 years or older have a high school diploma or some college education
- Shopping and leisure also focus on their children—baby and children's products from shoes to toys and games and trips to theme parks, water parks or the zoo

LifeMode

- Residents favor Hispanic programs on radio or television; children enjoy playing video games on personal computers, handheld or console devices
- Many households have dogs for domestic pets

LifeMode 8 Middle Ground

- Lifestyles of thirtysomethings
- Millennials in the middle: single/married, renters/homeowners, middle class/working class
- Urban market mix of single-family, townhome, and multi-unit dwellings
- Majority of residents attended college or attained a college degree
- Householders have ditched their landlines for cell phones, which they use to listen to music (generally contemporary hits), read the news, and get the latest sports updates of their favorite teams
- Online all the time: use the Internet for entertainment (downloading music, watching YouTube, finding dates), social media (Facebook, Twitter, LinkedIn), search for employment
- Leisure includes night life (clubbing, movies), going to the beach, some travel and hiking

LifeMode 9 Senior Styles

- Senior lifestyles reveal the effects of saving for retirement
- Households are commonly married empty nesters or singles living alone; homes are single-family (including seasonal getaways), retirement communities, or high-rise apartments
- More affluent seniors travel and relocate to warmer climates; less affluent, settled seniors are still working toward retirement
- Cell phones are popular, but so are landlines
- Many still prefer print to digital media: Avid readers of newspapers, to stay current
- Subscribe to cable television to watch channels like Fox News, CNN, and The Weather Channel
- Residents prefer vitamins to increase their mileage and a regular exercise regimen

LifeMode 10 Rustic Outposts

- Country life with older families in older homes
- Rustic Outposts depend on manufacturing, retail and healthcare, with pockets of mining and agricultural jobs
- Low labor force participation in skilled and service occupations
- Own affordable, older single-family or mobile homes; vehicle ownership, a must
- Residents live within their means, shop at discount stores and maintain their own vehicles (purchased used) and homes
- Outdoor enthusiasts, who grow their own vegetables, love their pets and enjoy hunting and fishing
- Technology is cost prohibitive and complicated. Pay bills in person, use the yellow pages, read newspapers, magazines, and mail-order books

LifeMode 11 Midtown Singles

- Millennials on the move—single, diverse, urban
- Millennials seeking affordable rents in apartment buildings
- Work in service and unskilled positions, usually close to home or public transportation
- Single parents depend on their paycheck to buy supplies for their very young children

LifeMode

- Midtown Singles embrace the Internet, for social networking and downloading content
- From music and movies to soaps and sports, radio and television fill their lives
- Brand savvy shoppers select budget friendly stores

LifeMode 12 Hometown

- Growing up and staying close to home; single householders
- Close knit urban communities of young singles (many with children)
- Owners of old, single-family houses, or renters in small multi-unit buildings
- Religion is the cornerstone of many of these communities
- Visit discount stores and clip coupons, frequently play the lottery at convenience stores
- Canned, packaged and frozen foods help to make ends meet
- Purchase used vehicles to get them to and from nearby jobs

LifeMode 13 Next Wave

- Urban denizens, young, diverse, hard-working families
- Extremely diverse with a Hispanic majority, the highest among LifeMode groups
- A large share are foreign born and speak only their native language
- Young, or multigenerational, families with children are typical
- Most are renters in older multi-unit structures, built in the 1960s or earlier
- Hard-working with long commutes to jobs, often utilizing public transit to commute to work
- Spending reflects the youth of these consumers, focus on children (top market for children's apparel) and personal appearance
- Also a top market for movie goers (second only to college students) and fast food
- Partial to soccer and basketball

LifeMode 14 Scholars and Patriots

- College and military populations that share many traits due to the transitional nature of this LifeMode Group
- Highly mobile, recently moved to attend school or serve in military
- The youngest market group, with a majority in the 15 to 24 year old range
- Renters with roommates in nonfamily households
- For many, no vehicle is necessary as they live close to campus, military base or jobs
- Fast-growing group with most living in apartments
- Part-time jobs help to supplement active lifestyles
- Millennials are tethered to their phones and electronic devices, typically spending over 5 hours online every day tweeting, blogging, and consuming media
- Purchases aimed at fitness, fashion, technology and the necessities of moving
- Highly social, free time is spent enjoying music, being out with friends, seeing movies
- Try to eat healthy, but often succumb to fast food