

**FINAL REPORT**  
**SCIENCE-DRIVEN HUNTER RECRUITMENT**  
**FEDERAL AID IN WILDLIFE RESTORATION ACT**

**FEDERAL AID PROJECT NO. W-188-R-1**

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## **EXECUTIVE SUMMARY**

In an effort to identify, prioritize, and refine current research needs; 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) developed the Illinois Learn to Hunt (LtH) program, federally funded by the Federal Aid in Wildlife Restoration Act. LtH provides a comprehensive, hands-on, educational experience for the adult public to learn why, how, and where to hunt wild game in Illinois.

As the spring and summer is the primary workshop season for field course offerings, the Learn to Hunt program was limited by the coronavirus restrictions. In accordance with stay-at-home orders, we cancelled all scheduled in-person events and postponed new events to ensure the safety of the Illinois public, participants, and staff. Prior to Illinois stay-at-home orders, the program hosted 15 field course offerings with 138 participants.

To navigate social distancing guidelines, program staff refined existing e-learning modules and developed curriculums and materials for other virtual learning opportunities (e.g., webinars). The program hosted 23 webinars totaling 541 participants. The e-learning modules developed by the program were attempted 1,072 times by participants during FY20. All participants were distributed surveys to assess the efficacy of the program offerings and to investigate constraints and motivations to hunting in Illinois. Participants who attended an in-person workshop prior to the 2019-2020 hunting season (March 2019-February 2020) were distributed a follow-up survey to assess program efficacy, behavior, and attitudes in respect to Illinois hunting. Additionally, to develop a mitigation strategy aimed at hunter retention and reengagement, the program mailed a 4-page self-administered questionnaire to random sample of 3,000 hunters to query their hunting activities, motivations, constraints and attitudes.

One major theme that continued to present itself is the significance of prior hunting experience and its influence on motivations, constraints, and species interest. Simply put, a singular strategy for communication efforts, R3 programming or programmatic support is not effective. A segmented and targeted approach is needed. While many other themes presented themselves during this study, the LtH program has developed 10 strategic objectives, based on the findings of this study, to drive and guide Illinois R3 efforts:

- 1: Assess the impact of site-specific closures on small game hunting participation.
- 2: Increase hunting opportunity near populated urban centers, particularly small game opportunities.
- 3: Develop and refine communication techniques with the Illinois public with the goal to recruit new hunters.
- 4: Increase communication efforts for lapsed and intermittent hunters.
- 5: Develop hunt-planning tools and resources.

- 6: Develop a framework for events/opportunities aimed at increasing social support among new hunters.
- 7: Increase the number of accessible public shooting ranges for Illinois hunters.
- 8: Develop R3 focused events aimed at young families.
- 9: Education and outreach through contemporary media platforms (e.g., podcasting).
- 10: Utilize waterfowl hunting as a strategic retention and reengagement tool.

## REGISTRANT ANALYSIS

To gain a better understanding of those individuals who expressed interest in LtH workshops and other programs, all applicants (including non-attendees and cancellations due to Covid-19 restrictions) were included in the analyses. The LtH program received 1,320 registrations from 506 individuals during FY20. Previous studies have shown that participation in hunting increases when participants engage in several events, rather than a single instance (Seng et al., 2007). LtH participants registered for an average of 2.6 events during FY20.

Participants are required to pre-register for all LtH events through the program website. This process allows staff to collect demographics and hunting experience of registrants and determine how the registrant was informed about the event. The majority (73%) of registrants were between 25-34 (40%) and 35-44 (33%) years old (Figure 1).

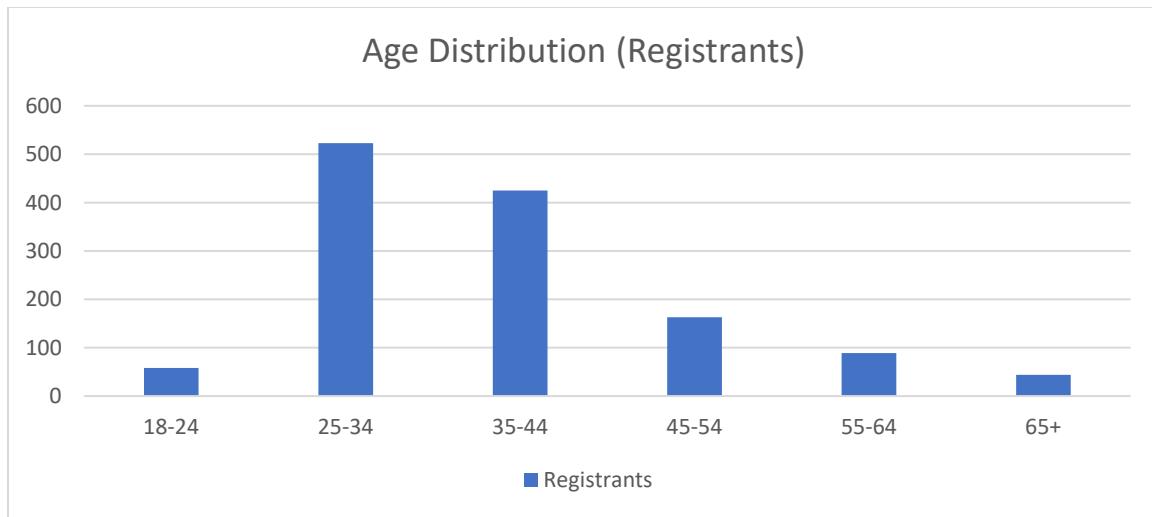


Figure 1: Age distribution of all registrations for LtH program events during FY20.

Of the 1,320 registrants, 35% indicated no hunting experience prior to registration. Of those who hunted previously (n=859), white-tailed deer (49%) was the most hunted species followed by (49%), small game (37%), upland game (34%), turkey (29%), and waterfowl (25%) (Table 1).

Registrants were categorized into three distinct age groups: younger, 18-34 years (n=583), middle-aged, 35-54 years, (n=587), and older, 55+ years (n=149) (Table 1). Younger registrants were significantly more likely to have no hunting experience (43%) than middle-aged registrants (31%;  $\chi^2 = 17.777$ ,  $p < .001$ ). Middle-aged registrants were significantly more likely to have deer hunting experience ( $\chi^2 = 29.203$ ,  $p < .001$ ), turkey hunting experience ( $\chi^2 = 13.641$ ,  $p < .001$ ), small game hunting experience ( $\chi^2 = 9.112$ ,  $p = .003$ ), upland bird hunting experience ( $\chi^2 = 33.999$ ,  $p < .001$ ) and waterfowl hunting experience ( $\chi^2 = 5.951$ ,  $p = .015$ ) than younger registrants.

Table 1: Hunting experience prior to LtH event registration by age category.

<b>Species</b>	<b>Group</b>	<b>%</b>
	<b>Overall</b>	<b>35.0%</b>
<b>No hunting experience</b>	18-34 Years	42.5%
	35-54 Years	30.7%
$\chi^2 = 17.777 ***$		
	<b>Overall</b>	<b>48.5%</b>
<b>Deer</b>	18-34 Years	41.5%
	35-54 Years	57.4%
$\chi^2 = 29.203 ***$		
	<b>Overall</b>	<b>28.5%</b>
<b>Turkey</b>	18-34 Years	23.7%
	35-54 Years	33.5%
$\chi^2 = 13.641 ***$		
	<b>Overall</b>	<b>36.4%</b>
<b>Upland Bird</b>	18-34 Years	24.4%
	35-54 Years	40.4%
$\chi^2 = 33.999 ***$		
	<b>Overall</b>	<b>36.4%</b>
<b>Small Game</b>	18-34 Years	32.4%
	35-54 Years	40.9%
$\chi^2 = 9.112 **$		
	<b>Overall</b>	<b>25.1%</b>
<b>Waterfowl</b>	18-34 Years	21.5%
	35-54 Years	27.6%
$\chi^2 = 5.951 **$		

\*p < .05, \*\*p < .01, \*\*\*p < .001

Registrants come from throughout Illinois but the majority live in Chicago or the surrounding suburbs (Figures 2 & 3). The program also received 68 registrations from individuals not residing in Illinois.

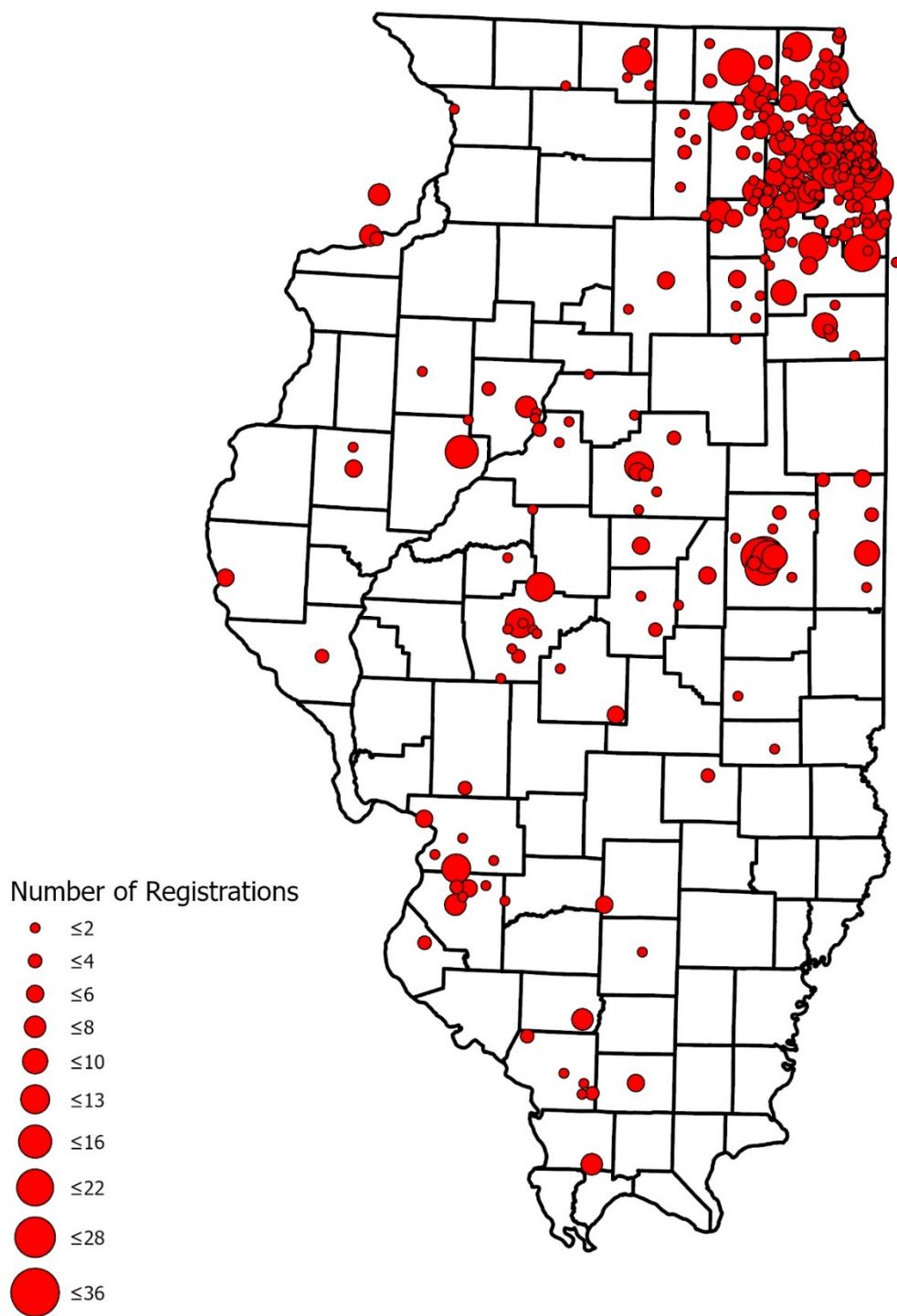


Figure 2: Primary place of residence for LtH registrants (n=1,320)

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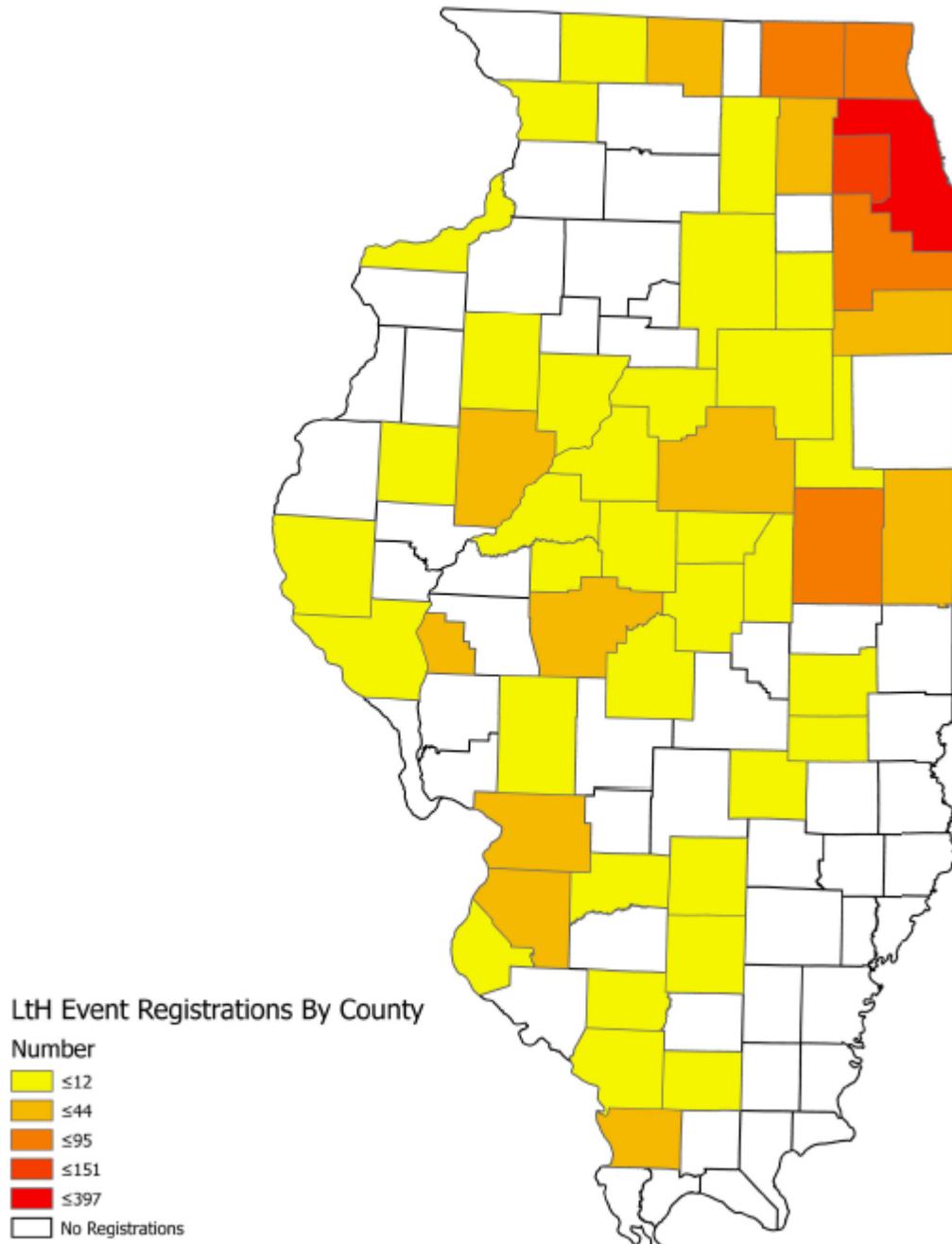


Figure 3: County of residence heat map of LtH FY20 event registrations using natural breaks (Jenks) classification.

Registrants were asked to indicate how they discovered the LtH event they are registering for (Table 2). Due to under-representation, older registrants (n=149) were excluded from this analysis. Younger registrants (n=593) were significantly more likely to indicate that they found out about the event through a physical poster (7%) than middle-aged registrants (n=590) (2%;  $\chi^2 = 14.795$ ,  $p < .001$ ). Middle-aged registrants were significantly more likely to discover an event through the LtH program newsletter (19%) than younger registrants (12%,  $\chi^2 = 9.815$ ,  $p = .002$ ).

Table 2: Acquisition analysis of LtH registrants by age category (n=1,317).

<b>Acquisition Channel</b>	<b>Group</b>	<b>%</b>
	<b>Overall</b>	<b>33.0%</b>
<b>Facebook</b>	18-34 Years	33.2%
	35-54 Years	33.7%
$\chi^2 = 0.034$		
	<b>Overall</b>	<b>16.0%</b>
<b>Learn to Hunt Program Newsletter</b>	18-34 Years	12.6%
	35-54 Years	19.3%
$\chi^2 = 9.815 **$		
	<b>Overall</b>	<b>11.2%</b>
<b>Illinois DNR Website</b>	18-34 Years	12.3%
	35-54 Years	10.3%
$\chi^2 = 1.144$		
	<b>Overall</b>	<b>10.6%</b>
<b>Online Search</b>	18-34 Years	11.8%
	35-54 Years	9.3%
$\chi^2 = 1.929$		
	<b>Overall</b>	<b>8.8%</b>
<b>Word of Mouth</b>	18-34 Years	9.9%
	35-54 Years	8.5%
$\chi^2 = 0.769$		
	<b>Overall</b>	<b>4.9%</b>
<b>Instagram</b>	18-34 Years	4.7%
	35-54 Years	5.9%
$\chi^2 = 0.859$		

\*p < .05, \*\*p < .01, \*\*\*p < .001

Table 3 Continued: Acquisition analysis of LtH registrants by age category (n=1,317).

<b>Acquisition Channel</b>	<b>Group</b>	<b>%</b>
	<b>Overall</b>	<b>4.1%</b>
<b>Poster</b>	18-34 Years	6.6%
	35-54 Years	2.0%
$\chi^2 = 14.795 ***$		

\*p < .05, \*\*p < .01, \*\*\*p < .001

## E-LEARNING MODULES

During FY20, the LtH program refined and redesigned the program e-learning modules. Previously, modules were designed to provide the fundamentals and background information that participants may need to learn before attending in-person program offerings. However, with stay-at-home restrictions, the program refined these modules to be more encompassing.

### Methods

E-learning modules were developed to provide additional learning opportunities to the Illinois public in respect to hunting. Modules were developed through EasyLMS and hosted on the program website.

### Results

These modules were attempted 1,072 times by participants during FY20 (Table 3), an increase of 80% over FY19 module attempts.

Table 3: E-learning module attempts during FY20.

<b>Module</b>	<b>Attempts</b>
<b>Deer Hunting 101</b>	443
<b>Turkey Hunting 101</b>	271
<b>Waterfowl Hunting 101</b>	195
<b>Upland Hunting 101</b>	163

Additionally, new analytical capabilities were added to the modules to further understand how much of the module is completed by each user (Tables 4 - 7).

Table 4: Deer Hunting 101 e-learning module completion rates.

<b>% Completion</b>	<b>Users</b>	<b>% of Users</b>
<b>1-25%</b>	95	21.4%
<b>26-50%</b>	44	9.9%
<b>51-75%</b>	73	16.5%
<b>76-100%</b>	231	52.1%

Table 5: Turkey Hunting 101 e-learning module completion rates.

<b>% Completion</b>	<b>Users</b>	<b>% of Users</b>
<b>1-25%</b>	36	13.3%
<b>26-50%</b>	33	12.2%
<b>51-75%</b>	90	33.2%
<b>76-100%</b>	112	41.3%

Table 6: Waterfowl Hunting 101 e-learning module completion rates.

<b>% Completion</b>	<b>Users</b>	<b>% of Users</b>
<b>1-25%</b>	48	24.6%
<b>26-50%</b>	27	13.8%
<b>51-75%</b>	50	25.6%
<b>76-100%</b>	70	35.9%

Table 7: Upland Hunting 101 e-learning module completion rates.

<b>% Completion</b>	<b>Users</b>	<b>% of Users</b>
<b>1-25%</b>	34	20.9%
<b>26-50%</b>	30	18.4%
<b>51-75%</b>	18	11.0%
<b>76-100%</b>	81	49.7%

Users are required to navigate through the program website to begin an e-learning module allowing for further analysis through Google Analytics, installed in the back end of the program website. To determine how users discovered the e-learning modules, acquisition channels were assessed. For this analysis, *organic search*

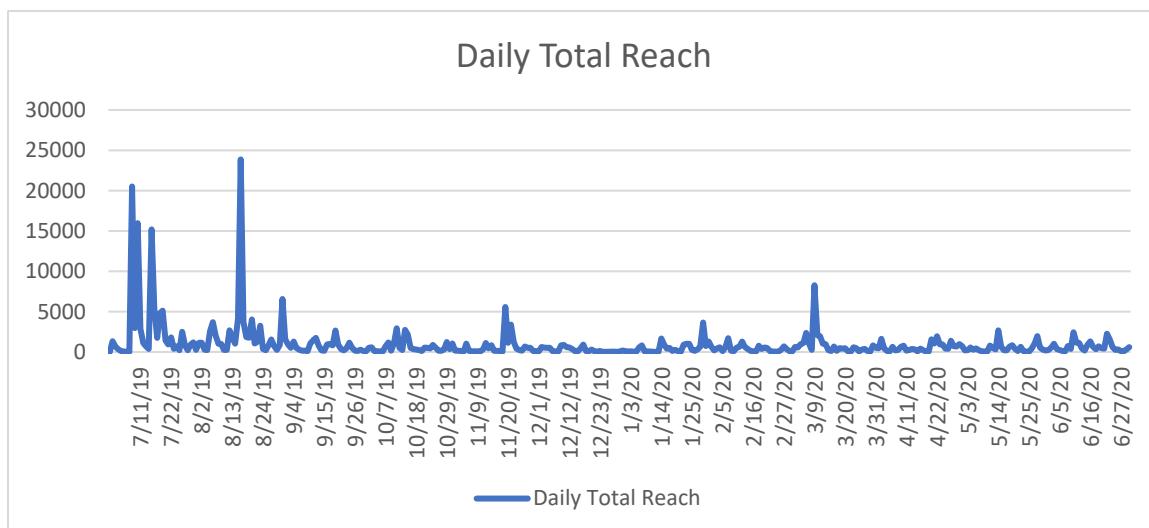
are individuals who use a search engine to access, *direct* are users typing in the URL directly, *social* users come from a social media platform (e.g., Facebook, Instagram), and *referrals* are links hosted on other webpages (e.g., Illinois DNR website). The most frequent (25%) type of users who began an e-learning module initiated their session through an email link; however, email makes up a small portion of overall web-traffic (Table 8).

Table 8: Acquisition channels of e-learning module users.

Acquisition channel	All website users	% e-learning modules
<b>Organic Search</b>	1,573	10.9%
<b>Direct</b>	1,423	10.6%
<b>Social</b>	1,112	5.6%
<b>Referral</b>	631	6.7%
<b>Email</b>	288	24.8%

## LTH COMMUNICATION CHANNELS

The Learn to Hunt program Facebook page ([www.facebook.com/IllinoisLearntoHunt](http://www.facebook.com/IllinoisLearntoHunt)), established in August 2017, currently has 2,370 followers - an increase of 51% from FY 2019. During FY20, the LtH Facebook page reached 343,839 individuals (Figure 4) constituting an increase of 32% over FY19. Facebook posts are made daily (weekdays) to inform potential participants about program offerings, share infographics, and other useful information for potential, new, and existing hunters.



Further analysis of Illinois Learn to Hunt Facebook posts revealed that infographics make up 18 of the top 20 Facebook posts. The program also utilizes Instagram and a monthly newsletter to inform the Illinois public on program offerings and specifics of Illinois hunting. Instagram content is primarily focused on recruiting new hunters and utilizing messaging and imagery for younger audiences.

## **FIELD EVENTS AND WEBINARS**

Given that spring/summer is the primary workshop season for field course offerings, the Learn to Hunt program was limited by the immediacy and severity of coronavirus restrictions. The program, in accordance with the Governor's stay-at-home orders, cancelled all scheduled in-person events and postponed new events to ensure the safety of the Illinois public, participants, and staff. Prior to Illinois stay-at-home orders, the program hosted 15 field course offerings with 138 participants. Additionally, the program had 7 events open for registration at the time of stay-at-home restrictions, these events were cancelled. To navigate social distancing guidelines, program staff developed curriculums and materials for web-based learning opportunities (e.g., webinars). The program hosted 23 webinars totaling 541 participants.

## **Methods**

Field courses are designed to be an introduction into Illinois hunting. These events cover: hunters as conservationists, game ecology, applicable rules and regulations, scouting and hunting tactics, equipment overview, firearm/archery safety, target shooting, and field dressing. The program conducted Learn to Hunt: Deer, Learn to Hunt: Turkey, Learn to Hunt: Waterfowl, Learn to Hunt: Small Game, Deer Processing 101 & Deer Scouting and Stand Placement techniques.

Webinars were designed to mirror similar topics covered at in-person workshops. Curricula was developed and presented for eleven webinars (Appendix A). Webinars ranged from beginner level information, noted with a 101, to more advanced and specialized webinars. Zoom.com (Zoom, 2020) was used to host the webinars.

Participants who attended a LtH event were provided a web-based follow-up survey to assess program efficacy, behavior, and attitudes in respect to hunting in Illinois (Appendix B). The survey was developed in Qualtrics (Qualtrics, 2020) and distributed to participants via the email address provided during registration. Data were coded, entered, and analyzed using SPSS 27.0 (SPSS Inc., 2020). Open-ended questions were coded, entered, and analyzed using NVivo 12 (Nvivo 12, 2020).

## Results

The questionnaire was distributed to 541 participants with 13 undeliverable resulting in a useable sample of 528. The survey had a response rate of 30.3%.

### *Event Satisfaction*

Most respondents indicated that they were extremely satisfied (49.3%) or very satisfied (41.4%) with the webinar they attended (Table 9).

Table 9: Event satisfaction as indicated by post-event questionnaire respondents (n=164).

Satisfaction	Percent
<b>Not satisfied</b>	.7%
<b>Under satisfied</b>	2.0%
<b>Satisfied</b>	6.6%
<b>Very satisfied</b>	41.4%
<b>Exceeded expectations</b>	49.3%

Respondents were asked to provide any additional feedback or suggestions for future events. Comments sentiment were assessed through NVivo 12 (Table 10).

Table 10: Summary of open-ended feedback and suggestions for future webinars.

Number of Comments	Sentiment
3	Very Negative
3	Moderately Negative
31	Moderately Positive
21	Very Positive

All negative comments mentioned that the course was too basic and that clarification over course-content should have been better explained.

## *Background Information*

The section will address background information about respondents to understand more about the participants involved in LtH webinars. On average, respondents were 41 years old (Figure 5) and 71.7% were male (n=164).

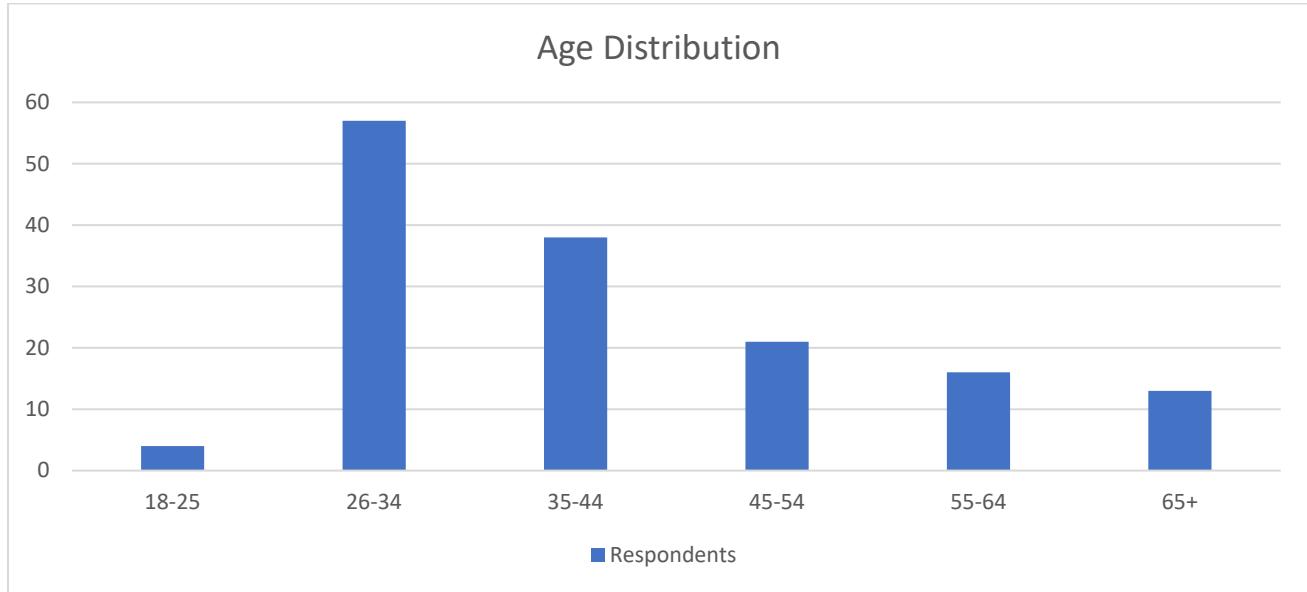


Figure 5: Age distribution of post-webinar questionnaire respondents.

The majority (73%) of respondents have children (Table 11 & 12) and have a gross household income over \$61,000 (77%) (Table 16). In 2018, the reported median annual household income for Illinois residents is \$63,575 (U.S. Census, 2018).

Table 11: Child dependency of post-webinar questionnaire respondents (n=164).

Child Dependency	Percent of Respondents
0	21.7%
1	19.2%
2	32.4%
3	11.3%
4+	9.9%

Table 12: Child dependency of post-webinar questionnaire respondents and previous hunting experience (n=164).

<b>Number of Children</b>	<b>% Did Not Hunt</b>	<b>% Hunted</b>
<b>0</b>	26.8%	73.2%
<b>1</b>	51.7%	48.3%
<b>2</b>	49.0%	51.0%
<b>3</b>	23.5%	76.5%
<b>4+</b>	20.0%	80.0%
$\chi^2 = 10.594, p = .032$		

Table 13: Gross household income of post-webinar questionnaire respondents (n=164).

<b>Gross Household income</b>	<b>Percent</b>
<b>&lt;40K</b>	7.3%
<b>41-60K</b>	15.3%
<b>61-80K</b>	23.4%
<b>81-100K</b>	19.0%
<b>101K+</b>	35.0%

The majority of respondents indicate utilizing public land in Illinois (94%). (Table 14). Of those who utilize public land, most used public land for hiking (64%), camping (45%), and fishing (43%).

Table 14: Public land usage by respondents

<b>Utilizing of Illinois Public Land</b>	<b>Percent</b>
<b>Never</b>	6.4%
<b>Rarely</b>	21.7%
<b>Sometimes</b>	29.3%
<b>Often</b>	39.5%

## *Hunting Experience*

Most respondents shot a firearm (90%) and/or shot a bow (58%) prior to taking part in a LtH event; however, crossbow use was the least experienced of all options (32%). Respondents were asked to indicate how long they have been interested in hunting. The majority (52%) of respondents indicated they have been interested in hunting for longer than 5 years (Table 15).

Table 15: Length of interest in hunting as indicated by post-event questionnaire respondents (n=164).

Years Interested	Percent
<b>Less than a year</b>	4.5%
<b>1 year</b>	14.0%
<b>2 years</b>	15.3%
<b>3 years</b>	.1%
<b>4 years</b>	6.1%
<b>5 years+</b>	51.7%

Respondents were asked to indicate how long since they last hunted. The majority of respondents with prior hunting experience hunted less than 1 year ago (Table 16).

Table 16: Hunting experience of post-event questionnaire respondents. (n=164).

Years Since Last Hunt	Percent
<b>Never Hunted</b>	37.9%
<b>Less than 1 year</b>	38.6%
<b>1 year</b>	3.9%
<b>2 years</b>	4.6%
<b>3 years</b>	1.3%
<b>4 years</b>	0.7%
<b>5 years+</b>	13.1%

Most (90%) respondents have eaten wild game prior to attending a LtH event. The majority (77%) of respondents indicated that they have friends or family that hunt; however, most respondents (57%) have not accompanied another hunter while not hunting themselves. Individuals with friends or family who hunt were significantly more likely to have previous hunting experience than those without ( $\chi^2 = 9.822$ ,  $p = .003$ ) (Table 17).

Table 17: Participants with friends and family who hunt and prior hunting participation before attending event (n=152).

<b>Friends or Family That Hunt</b>	<b>Hunted Prior to Webinar</b>	<b>Not Hunter Prior to Webinar</b>
<b>No</b>	60.0%	40.0%
<b>Yes</b>	30.8%	69.2%

Respondents were asked to identify their constraints to hunting participation in Illinois. Word frequency and weighted percentage of responses was assessed (Table 18).

Table 18: Word frequency and weighted percentage of respondent's constraints to hunting participation in Illinois.

<b>Word</b>	<b>Word Count</b>	<b>Weighted Percentage</b>
<b>Access</b>	40	5.8%
<b>Land</b>	37	5.4%
<b>Knowledge</b>	39	4.7%
<b>Time</b>	32	4.7%
<b>Interest</b>	15	2.2%
<b>Opportunity</b>	15	2.2%
<b>Mentor</b>	12	1.8%
<b>Family</b>	13	1.7%

Respondents were asked to identify their motivations to hunting participation in Illinois. Word frequency of responses was assessed (Table 19).

Table 19: Word frequency and weighted percentage of respondent's motivations to hunting participation in Illinois.

<b>Word</b>	<b>Word Count</b>	<b>Weighted Percentage</b>
<b>Meat</b>	48	5.6%
<b>Food</b>	44	5.2%
<b>Outdoors</b>	39	4.6%
<b>Hunt</b>	31	3.6%

<b>Enjoy</b>	31	2.9%
<b>Family</b>	23	2.6%
<b>Nature</b>	18	2.1%
<b>Conservation</b>	16	1.9%

### *Hunting Interest*

Respondents were asked to indicate what species they are interested in hunting (Table 20). Interest in deer hunting was significantly higher among male respondents (87.1%) than female respondents (58.1%;  $\chi^2 = 15.62$ ,  $p < 0.001$ ). Interest in turkey hunting was significantly higher among male respondents (78.9%) than female respondents (60.5%;  $\chi^2 = 5.40$ ,  $p = .020$ ). Interest in squirrel hunting was significantly higher among male respondents (55.0%) than female respondents (34.9%;  $\chi^2 = 5.02$ ,  $p = .025$ ). Gender comparisons of other species were not significant.

Table 20: Species interest among all respondents. Species interest among males and females.

<b>Species</b>	<b>Percent interest of all respondents</b>	<b>% of males interested</b>	<b>% of females interested</b>
<b>Deer</b>	78.4%	87.1%	58.1%
<b>Turkey</b>	73.2%	78.9%	60.5%
<b>Pheasant</b>	57.5%	59.6%	53.5%
<b>Squirrel</b>	49.0%	55.0%	34.9%
<b>Goose</b>	48.4%	48.6%	48.8%
<b>Rabbit</b>	47.7%	52.2%	37.2%
<b>Duck</b>	45.1%	47.7%	39.5%
<b>Dove</b>	38.6%	38.5%	39.5%
<b>Quail</b>	37.3%	38.5%	34.9%

Younger respondents were significantly more likely to have interest in hunting several species than middle-aged or older respondents: (1) deer ( $\chi^2 = 10.605$ ,  $p = .005$ ,  $V = 0.267$ ), (2) squirrel ( $\chi^2 = 17.613$ ,  $p < .001$ ,  $V = 0.344$ ), and (3) rabbit ( $\chi^2 = 14.976$ ,  $p = .001$ ,  $V = 0.317$ ) (Table 21). On average, males indicated interest in hunting more species (5.06) than females (4.07).

Table 21: Species interest among respondents by age group.

<b>Species</b>	<b>Group</b>	<b>% Interest</b>
	<b>Overall</b>	<b>79.2%</b>
	18-34 Years	91.8%
<b>Deer</b>	35-54 Years	72.9%
	55+ Years	65.5%
	$\chi^2 = 10.605 ^*, V = 0.267$	
	<b>Overall</b>	<b>73.8%</b>
	18-34 Years	82.0%
<b>Turkey</b>	35-54 Years	67.8%
	55+ Years	69.0%
	$\chi^2 = 3.557, V = 0.155$	
	<b>Overall</b>	<b>58.4%</b>
	18-34 Years	65.6%
<b>Pheasant</b>	35-54 Years	50.8%
	55+ Years	58.6%
	$\chi^2 = 2.678, V = 0.134$	
	<b>Overall</b>	<b>49.7%</b>
	18-34 Years	67.2%
<b>Squirrel</b>	35-54 Years	45.8%
	55+ Years	20.7%
	$\chi^2 = 17.613 ***, V = 0.344$	
	<b>Overall</b>	<b>49.0%</b>
	18-34 Years	54.1%
<b>Goose</b>	35-54 Years	50.8%
	55+ Years	34.5%
	$\chi^2 = 3.161, V = 0.146$	

\*p < .05, \*\*p < .01, \*\*\*p < .001

Table 21 Continued: Species interest among respondents by age group.

<b>Species</b>	<b>Group</b>	<b>% Interest</b>
<b>Rabbit</b>	Overall	48.3%
	18-34 Years	63.9%
	35-54 Years	45.8%
	55+ Years	20.7%
$\chi^2 = 14.976 ***$ , $V = 0.317$		
<b>Duck</b>	<b>Overall</b>	<b>45.6%</b>
	18-34 Years	47.5%
	35-54 Years	52.5%
	55+ Years	57.6%
$\chi^2 = 5.032$ , $V = 0.184$		
<b>Dove</b>	<b>Overall</b>	<b>38.9%</b>
	18-34 Years	49.2%
	35-54 Years	32.2%
	55+ Years	31.0%
$\chi^2 = 4.579$ , $V = 0.175$		
<b>Quail</b>	<b>Overall</b>	<b>37.6%</b>
	18-34 Years	39.3%
	35-54 Years	39.0%
	55+ Years	31.0%
$\chi^2 = 0.660$ , $V = 0.067$		

\*p < .05, \*\*p < .01, \*\*\*p < .001

## PARTICIPANT FOLLOW UP SURVEY

LtH participants were distributed a follow-up survey to assess program efficacy, behavior, and attitudes in respect to Illinois hunting.

### Methods

Participants who attended an in-person workshop prior to the 2019-2020 hunting season (March 2019-February 2020) were distributed a follow-up survey to assess program efficacy, behavior, and attitudes in respect to Illinois hunting. The survey was developed in Qualtrics (Qualtrics, 2020) and distributed to 22

participants via the email address provided during registration using unique links. We emailed participants a cover letter (Appendix C), and a unique link to the web-based survey (Appendix D). Reminder emails were distributed to non-respondents 1 week apart for a total of 4 mailings. Data were coded, entered, and analyzed using SPSS 27.0 (SPSS Inc., 2020).

## Results

The survey was distributed to 374 participants with 21 undeliverable resulting in a useable sample of 353 individuals. The survey had a response rate of 31%.

### *Background Information*

The section will address background information about respondents to understand more about the participants involved in the LtH program. Most respondents (68%) indicated that social media advertisements do not influence their purchases or participation in hunting-related activities. A majority reported attending a single LtH event (57%), with 22.1% attending 2 events, 9.6% attended 3 events, and 11.5% attended 4 or more events. All respondents who attended 4+ LtH events reported hunting during the 2019-20 hunting season (Table 22).

Table 22: Respondent hunting experience and the number of LtH program events attended (n=109).

LtH Events Attended	Did not hunt	Hunted
1	50.8%	49.2%
2	56.5%	43.5%
3	10.0%	90.0%
4+	0%	100%

### *Hunter Experience*

A majority (68%) of participants responded that they purchased an Illinois hunting license during the 2019-20 hunting season. The majority (88%) of those who purchased a license, hunted during the 2019-20 hunting season. Of respondents who hunted, 43.1% hunted public land exclusively, 20.7% hunted private land exclusively, and 36.2% hunted both land types. Of those who hunted both land types (n=21), public land was hunted more often (66%) than private land (33%). Most respondents (71%) did not purchase a federal duck stamp. Less than half (34%) of respondents indicated that they applied for a permit (e.g., duck blind, free upland hunt, firearm deer) through the Illinois DNR's lottery. Of those who applied, 94% were awarded a permit. As meat procurement is a motivating factor for many of LtH participants, respondents were asked three questions

related to wild game consumption. Most respondents indicated that they have actively searched for wild game recipes (72.1%) since attending a LtH event. Additionally, 51.5% of respondents indicated that they have prepared wild game dishes since attending a LtH event and 84.3% of those respondents utilized wild game they personally harvested.

### *Constraints to Hunting Participation*

Respondents were asked to indicate reasons that kept them from hunting as often as they would like (Table 23). Of the 15 statements evaluated, the main reasons were: (1) access to public hunting land close to home (49%), (2) access to hunting opportunities close to home (49%), (3) work/family commitments (36%), (4) lack of people to hunt with (27%), and (5) lack of hunting skills/knowledge (26%). The least common reasons for not hunting were: (1) health problems (4%), (2) lack of transportation to hunting sites (4%), (3) lack of motivation (5%), (4) safety concerns (5%), (5) hunting regulations are too confusing (6%), (6) cost of hunting licenses and permits (9%), and (7) costs of hunting equipment (9.6%).

Table 23: Constraints to hunting participation (n=104).

Constraint to Hunting Participation	Not at all	A little	A moderate amount	A lot	A great deal	Mean <sup>1</sup>
<b>Access to public hunting land close to home</b>	20.8%	7.3%	18.8%	15.6%	37.5%	3.42
<b>Access to hunting opportunities close to home</b>	21.9%	9.4%	15.6%	16.7%	36.5%	3.36
<b>Work/family commitments</b>	14.7%	21.1%	24.2%	22.1%	17.9%	3.07
<b>Lack of people to hunt with</b>	30.2%	20.8%	19.8%	10.4%	18.8%	2.67
<b>Hunting skills/knowledge</b>	26.0%	31.3%	14.6%	16.7%	11.5%	2.56
<b>Crowding at public sites</b>	49.5%	17.2%	16.1%	8.6%	8.6%	2.10
<b>Other recreational activities take up my free time</b>	41.1%	32.6%	15.8%	8.4%	2.1%	1.98
<b>Cost of hunting equipment</b>	56.3%	14.6%	18.8%	6.3%	4.2%	1.88
<b>Hunting regulations are too confusing</b>	55.8%	25.3%	12.6%	3.2%	3.2%	1.73
<b>Childcare obligations</b>	67.4%	13.7%	8.4%	4.2%	6.3%	1.68
<b>Lack of motivation</b>	66.3%	28.4%	2.1%	3.2%	0%	1.42
<b>Safety concerns</b>	74.5%	16.0%	4.3%	4.3%	1.1%	1.41

<sup>1</sup> Based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

Table 23 Continued: Constraints to hunting participation (n=104).

<b>Constraint to Hunting Participation</b>	<b>Not at all</b>	<b>A little</b>	<b>A moderate amount</b>	<b>A lot</b>	<b>A great deal</b>	<b>Mean<sup>1</sup></b>
<b>Cost of license/permits</b>	78.1%	12.5%	5.2%	4.2%	0%	1.35
<b>Health problems</b>	86.3%	4.2%	5.3%	1.1%	3.2%	1.31
<b>Lack of transportation</b>	87.4%	8.4%	3.2%	0%	1.1%	1.19
<b>My friends/family don't approve of me hunting</b>	89.5%	8.4%	2.1%	0%	0%	1.13

<sup>1</sup> Based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

Respondents who did not hunt during the 2019-20 Illinois Hunting Season were significantly more likely to respond: (1) the cost of hunting equipment ( $t = .164$ ,  $p = .011$ ), (2) safety concerns ( $t = 2.365$ ,  $p = .020$ ), (3) lack of knowledge ( $t = 3.522$ ,  $p = .001$ ), (4) lack of people to hunt with ( $t = 1.028$ ,  $p < .001$ ), (5) friends and family don't approve of me hunting ( $t = 3.325$ ,  $p = .002$ ), and (6) hunting regulations are too confusing ( $t = 2.091$ ,  $p = .040$ ) as constraints to hunting participation than respondents who hunted (Table 24). There was no observed statistical correlation between the gender of respondents and constraints to hunting participation.

Table 24: Constraints and hunting participation during the 2019-20 hunting season (n=104).

<b>Constraint to Hunting Participation</b>	<b>Mean<sup>1</sup> Overall</b>	<b>Mean<sup>1</sup> Did not hunt (n=44)</b>	<b>Mean<sup>1</sup> Did Hunt (n=60)</b>	<b>Mean<sup>1</sup> Males</b>	<b>Mean<sup>1</sup> Females</b>
<b>Access to public hunting land close to home</b>	3.42	3.20	3.25	3.47	3.21
<b>Access to hunting opportunities close to home</b>	3.36	3.32	3.08	3.36	3.40
<b>Work/family commitments</b>	3.07	2.98	2.83	3.09	3.00
<b>Lack of people to hunt with</b>	2.67	3.20	2.05	2.53	3.20
<b>Hunting skills/knowledge</b>	2.56	2.98	2.05	2.47	2.90
<b>Crowding at public sites</b>	2.10	1.86	2.07	2.21	1.70
<b>Other recreational activities take up my free time</b>	1.98	1.89	1.90	2.03	1.80

<sup>1</sup> Based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

Table 24 Continued: Constraints and hunting participation during the 2019-20 hunting season (n=104).

<b>Constraint to Hunting Participation</b>	<b>Mean<sup>1</sup></b> <b>Overall</b>	<b>Mean<sup>1</sup></b> <b>Did not hunt (n=44)</b>	<b>Mean<sup>1</sup></b> <b>Did Hunt (n=60)</b>	<b>Mean<sup>1</sup></b> <b>Males</b>	<b>Mean<sup>1</sup></b> <b>Females</b>
<b>Cost of hunting equipment</b>	1.88	2.16	1.55	1.89	1.80
<b>Hunting regulations are too confusing</b>	1.73	1.91	1.48	1.80	1.45
<b>Childcare obligations</b>	1.68	1.64	1.62	1.72	1.53
<b>Lack of motivation</b>	1.42	1.41	1.37	1.41	1.45
<b>Safety concerns</b>	1.41	1.59	1.22	1.30	1.85
<b>Cost of license/permits</b>	1.35	1.34	1.32	1.33	1.45
<b>Health problems</b>	1.31	1.30	1.27	1.27	1.45
<b>Lack of transportation</b>	1.19	1.23	1.13	1.21	1.10
<b>My friends/family don't approve of me hunting</b>	1.13	1.27	1.00	1.13	1.10

<sup>1</sup> Based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

### *Motivations to Hunting Participation*

Respondents were asked to evaluate 10 statements and indicate how much each statement influences their hunting participation (Table 25). All respondents indicated that they are motivated by enjoying nature and developing their skillset.

Table 25: Respondents motivations to hunting participation (n=104).

<b>I hunt to...</b>	<b>Not at all</b>	<b>A little</b>	<b>A moderate amount</b>	<b>A lot</b>	<b>A great deal</b>	<b>Mean<sup>1</sup></b>
<b>Enjoy nature</b>	0%	1.7%	3.4%	28.8%	66.1%	4.59
<b>Develop my skills</b>	0%	1.7%	25.4%	27.1%	45.8%	4.17
<b>Experience challenge</b>	1.7%	1.7%	20.0%	31.7%	45.0%	4.17
<b>Test my abilities</b>	3.4%	6.8%	23.7%	32.2%	33.9%	3.86
<b>Provide meat from a sustainable source</b>	1.7%	11.7%	28.3%	18.3%	40.0%	3.83
<b>Provide wild game for my family</b>	5.0%	13.3%	30.0%	13.3%	38.3%	3.67
<b>Get away from crowded areas</b>	6.7%	16.7%	26.7%	28.3%	20.3%	3.39
<b>Share quality time with friends and family</b>	18.3%	13.3%	16.7%	26.7%	25.0%	3.27
<b>I hunt to be away from the everyday routine of home</b>	13.3%	16.7%	23.3%	28.3%	18.3%	3.22
<b>Provide wild game for friends</b>	15.3%	33.9%	23.7%	6.8%	20.3%	2.83

<sup>1</sup> Based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

### *Involvement of Hunting*

Most respondents indicated they have discussed hunting (83.7%) with non-hunting friends, family, or acquaintances since taking a LtH program event. Of those respondents who discussed hunting with non-hunters, 56.4% indicated they convinced someone else to hunt.

Respondents were asked how likely they were to discuss the benefits of hunting to friends, family, or acquaintances (Table 26). Of the five statements evaluated, respondents were most likely to discuss: (1) hunting is a critical tool to manage wildlife populations (63.5%), and (2) hunting provides a sustainable source of food (63.5%).

Respondents who hunted during the 2019-20 hunting season were significantly more likely to discuss each of the statements than those who did not hunt: (1) hunters make important contributions to wildlife conservation ( $t = -2.585$ ,  $p = .012$ ), (2) recruiting the next generation of hunters is important for the future of hunting ( $t = -2.683$ ,  $p = .009$ ), (3) hunting is a critical tool to manage wildlife populations ( $t = -2.508$ ,  $p = .014$ ), (4) hunting provides a sustainable source of food ( $t = -2.683$ ,  $p = .009$ ), and (5) hunters play an important role as advocates for wild things and wild spaces ( $t = -3.083$ ,  $p = .003$ ) (Table 26).

Table 26: Respondents were asked to evaluate 5 statements regarding the benefits of hunting and respond how likely they are to discuss each statement with friends, family, or acquaintances.

<b>Statement</b>	<b>Mean<sup>1</sup> Did not hunt (n=44)</b>	<b>Mean<sup>1</sup> Did Hunt (n=60)</b>
<b>Hunters make important contributions to wildlife conservation</b>	2.93	3.75
<b>Recruiting the next generation of hunters is important for the future of hunting</b>	2.91	3.77
<b>Hunting is a critical tool to manage wildlife populations</b>	3.14	3.93
<b>Hunting provides a sustainable food source of food</b>	3.16	4.02
<b>Hunters play an important role as advocates for wild things and wild spaces</b>	2.98	3.95

<sup>1</sup> Based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

### *Hunter Resources*

Respondents were asked a variety of questions related to potential hunter resources that state wildlife agencies and other R3 programs can offer to increase hunter participation. Respondents were asked to pick one type of shooting range they would like to see developed in their area (Table 27).

Table 27: Respondents choice for 1 range to be developed in their area (n=95).

<b>Range Type</b>	<b>% of Respondents</b>
<b>Archery</b>	41.05%
<b>Shotgun/muzzleloader</b>	43.16%
<b>Handgun</b>	15.79%

Respondents were asked to rank the usefulness of 7 hunting-related resources (rank 1 = most useful; rank 7 = least useful) (Table 31).

Table 28: Ranking of hunting-related resources used by respondents (rank 1 = most useful; rank 7 = least useful).

<b>Resource</b>	<b>Rank</b>							<b>Mean<sup>1</sup></b>
	1	2	3	4	5	6	7	
<b>Annual Illinois Digest of Hunting and Trapping Regulations (online version)</b>	29.3%	34.2%	9.8%	12.2%	4.9%	9.8%	0%	2.59
<b>Annual Illinois Digest of Hunting and Trapping Regulations (paper version)</b>	39.0%	12.2%	17.1%	9.8%	7.3%	7.3%	7.3%	2.85
<b>Formal Instruction (e.g., learn to hunt workshop)</b>	22.0%	19.5%	26.8%	12.2%	7.3%	7.3%	4.9%	3.05
<b>General Web Search</b>	2.4%	14.6%	19.5%	29.3%	12.2%	21.2%	0%	4.0
<b>Informal Instruction (e.g., hunting mentor)</b>	0%	14.6%	17.1%	19.5%	22.0%	17.1%	9.8%	4.39
<b>Word-of-mouth</b>	7.3%	2.4%	2.4%	17.1%	36.6%	34.2%	0%	4.76
<b>Other</b>	0%	2.4%	7.3%	0.0%	9.8%	2.4%	78.1%	6.37

<sup>1</sup> Based on scale: 1 = rank 1, 2 = rank 2, 3 = rank 3, 4 = rank 4, 5 = rank 5, 6 = rank 6, 7 = rank 7.

## **HUNTER R3 MAIL SURVEY**

A random sample of 3,000 hunters was selected from adult 2019 Illinois resident hunting license holders. Selected individuals were mailed a 4-page self-administered questionnaire designed to query hunters about their hunting activities, motivations, and constraints to hunting in Illinois. We received 1,572 questionnaires for a 54% response rate.

### **Methods**

A random sample of 3,000 hunters was selected from the Illinois resident hunting license database to receive questionnaires. All Illinois resident license types were included in the sample frame except for Youth License Holders. Methods for survey questionnaire mailings and follow-up reminders followed those of Miller et al. (1999). We mailed recipients a self-administered, 4-page questionnaire (Appendix E), cover letter (Appendix F), and postage-paid return envelope (hereafter referred to as a survey packet). Data were coded, entered, and analyzed using SPSS 27.0 (SPSS Inc. 2020).

### **Results**

We sampled 3,000 Illinois resident hunters and received 1,591 useable questionnaires for a 54% response rate. Most respondents (96.8%) reported that they purchase a hunting license during 2019-20 and 87.5% indicated that they hunted during the 2019-20 hunting season (March 2019 – February 2020). Most respondents (84.7%) indicated that they purchase a hunting license every year.

#### *Background Information*

This section will address background information about respondents to understand more about the people involved in hunting in Illinois. On average, respondents were 52.3 years old and 92.8% were male. On average, respondents started hunting at 15.5 years old and have hunted 31.8 years in Illinois, on average. Younger respondents (17.3%) were significantly more likely to be female than middle-aged (5.4%) or older respondents (4.8%,  $\chi^2 = 55.285$ ,  $p < .001$ ).

#### *Hunter Experience*

Most respondents (96.8%) indicated that they purchased an Illinois hunting license during the 2019-20 hunting season. The vast majority (84.7%) responded that they purchase an Illinois hunting license every year. Most respondents (87.5%) hunted during the 2019-20 Illinois hunting season with deer hunting being the most prominent. Most respondents did not purchase a Federal Duck Stamp (82.1%). Less than half of respondents (33.0%) indicated that they applied for a permit through the Illinois DNR's lottery system. Of those who applied ( $n=525$ ), most were awarded a permit (88.2%).

Respondents were asked to indicate which species they hunted for during the 2019-20 hunt season. Of the 9 species listed, most hunters hunted for: (1) deer (75.2%), (2) squirrel (22.3%), (3) turkey (21.5%), (4) rabbit (14.3%), and (5) pheasant (12.5%). The least hunted species were: (1) quail (5.0%), (2) goose (9.6%), (3) duck (11.4%), and (4) dove (11.8%). Of those who hunted deer (n=1,195), respondents were asked to identify which methods of take they utilized during the 2019-20 deer season: (1) shotgun (76.2%), (2) compound bow (35.8%), (3) crossbow (28.0%), (4) muzzleloader (19.1%), and (5) traditional bow (3.0%).

Younger hunters were significantly more likely to hunt deer ( $\chi^2 = 46.745$ ,  $p < .001$ ), geese ( $\chi^2 = 7.966$ ,  $p = .018$ ), and ducks ( $\chi^2 = 7.424$ ,  $p = .024$ ) than middle-aged or older hunters (Table 31).

Table 29: Species hunted by age group of respondents.

<b>Species</b>	<b>Group</b>	<b>% Hunted</b>
<b>Deer</b>	<b>Overall</b>	<b>75.2%</b>
	18-34 Years	83.8%
	35-54 Years	82.1%
	55+ Years	67.9%
$\chi^2 = 46.745$ ***, $V = .172$		
<b>Squirrel</b>	<b>Overall</b>	<b>22.3%</b>
	18-34 Years	24.6%
	35-54 Years	23.5%
	55+ Years	20.7%
$\chi^2 = 2.412$ n.s., $V = .039$		
<b>Turkey</b>	<b>Overall</b>	<b>21.6%</b>
	18-34 Years	18.5%
	35-54 Years	24.0%
	55+ Years	20.9%
$\chi^2 = 3.548$ n.s., $V = .047$		
<b>Rabbit</b>	<b>Overall</b>	<b>14.3%</b>
	18-34 Years	15.8%
	35-54 Years	15.6%
	55+ Years	13.0%
$\chi^2 = 2.243$ n.s., $V = .038$		

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , n.s. = not significant

Table 29 Continued: Species hunted by age group of respondents.

<b>Species</b>	<b>Group</b>	<b>% Hunted</b>
	<b>Overall</b>	<b>12.5%</b>
	18-34 Years	11.2%
<b>Pheasant</b>	35-54 Years	13.8%
	55+ Years	12.1%
	$\chi^2 = 1.380$ n.s. , $V = .029$	
	<b>Overall</b>	<b>11.8%</b>
	18-34 Years	12.7%
<b>Dove</b>	35-54 Years	13.8%
	55+ Years	10.3%
	$\chi^2 = 4.053$ n.s. , $V = .051$	
	<b>Overall</b>	<b>11.5%</b>
	18-34 Years	15.4%
<b>Duck</b>	35-54 Years	12.5%
	55+ Years	9.5%
	$\chi^2 = 7.424$ * , $V = .068$	
	<b>Overall</b>	<b>9.6%</b>
	18-34 Years	13.5%
<b>Goose</b>	35-54 Years	10.6%
	55+ Years	7.8%
	$\chi^2 = 7.996$ * , $V = .071$	
	<b>Overall</b>	<b>4.9%</b>
	18-34 Years	4.2%
<b>Quail</b>	35-54 Years	5.8%
	55+ Years	4.6%
	$\chi^2 = 1.261$ n.s. , $V = .028$	

\*p < .05, \*\*p < .01, \*\*\*p < .001, n.s. = not significant

Of the respondents that hunted (n=1,391), more respondents hunted private land exclusively (74.1%) than public land exclusively (8.4%). Of respondents that hunted both public and private land (17.5%), most respondents hunted private land more often (74.0%).

Respondents were asked three questions related to wild game consumption. Most respondents indicated that they have not actively searched for wild game recipes (60.7%) this past year. During the past year, most respondents indicated that they prepared meals using wild game they harvested (70.6%). During the past year, most respondents (53.3%) indicated sharing their harvest with non-hunting friends. Younger respondents were significantly more likely to search for wild game recipes (48%) than middle-aged (46%) or older respondents (32%;  $\chi^2 = 36.386$ ,  $p < 0.001$ ). Younger respondents were more likely to prepare a meal using wild game they harvested (75%) than middle-aged (74%) or older respondents (67%;  $\chi^2 = 11.041$ ,  $p = 0.004$ ). There were no significant differences among genders.

### *Constraints to Hunting Participation*

Respondents were asked to indicate reasons that kept them from hunting as often as they would like (Table 30). Of the 15 statements evaluated, the main reasons were: (1) work/family commitments (68.6%), (2) access to hunting opportunities close to home (49.6%), (3) other recreational activities take up my free time (45.3%), (4) access to public hunting land close to home (42.5%), and (5) cost of hunting equipment (31.8%). The least common reasons were: (1) my friends/family don't approve of me hunting (3.8%), (2) lack of hunting skills/knowledge (11.9%), (3) safety concerns (13.8%), (4) childcare obligations (17.9%), and (5) health problems (20.2%).

Several constraints had significantly more impact on individuals who purchase hunting licenses intermittently ( $n=223$ ) than those who purchase a license every year ( $n=1,276$ ): (1) access to hunting opportunities near home ( $t = 2.874$ ,  $p = .004$ ), (2) lack of hunting skills ( $t = 2.802$ ,  $p = .005$ ), (3) lack of people to hunt with ( $t = 3.434$ ,  $p = .001$ ), (4) other recreational activities take up free time ( $t = 4.785$ ,  $p < .001$ ), and (5) lack of motivation ( $t = 3.136$ ,  $p = .002$ ).

The cost of hunting equipment had significantly more impact on hunting participation among younger respondents (42%) than middle-aged (38%) or older respondents (28%;  $\chi^2 = 25.906$ ,  $p = .001$ ). Work/family commitments had significantly more impact among middle-aged respondents (85%) than younger (82%) or older respondents (61%;  $\chi^2 = 125.573$ ,  $p = < 0.001$ ). Safety concerns had significantly more impact on hunting participation among older respondents (18%) than middle-aged (13%) or younger respondents (9%);  $\chi^2 = 22.938$ ,  $p = .003$ ). The lack of people to hunt with had significantly more impact among younger respondents (30%) than middle-aged (23%) and older respondents (29%;  $\chi^2 = 24.990$ ,  $p = .005$ ). Childcare obligations had significantly more impact among hunting participation on middle-aged respondents (32%) than younger (25%) or older respondents (8%);  $\chi^2 = 126.509$ ,  $p = < 0.001$ ). Other recreational activities had significantly more impact on hunting participation among younger respondents (57%) than middle-aged (54%) or older respondents (41%);  $\chi^2 = 34.344$ ,  $p = < 0.001$ ). Health issues had significantly more impact on hunting participation among older

respondents (34%) than middle-aged (10%) or younger respondents (5%;  $\chi^2 = 163.672$ ,  $p < 0.001$ ). The lack of motivation had significant more impact among older respondents (33%) than middle-aged (25%) or younger respondents (19%;  $\chi^2 = 30.075$ ,  $p < 0.001$ ).

Several constraints had significantly more impact among public land exclusive hunters than private land exclusive hunters towards hunting participation: (1) access to public hunting land close to home ( $t = 7.933$ ,  $p < .001$ ), (2) access to hunting opportunities close to home ( $t = 7.202$ ,  $p < .001$ ), (3) crowding at public sites ( $t = 4.587$ ,  $p < .001$ ), and (4) lack of hunting skills/knowledge ( $t = 2.292$ ,  $p = .024$ ).

To assess specific constraints of waterfowl hunters, individuals who purchased a Federal Migratory Bird Stamp ( $n=301$ ) were compared to respondents who did not purchase a Federal Migratory Bird Stamp ( $n=1,186$ ). Several constraints had significantly more impact among stamp purchasers (i.e. waterfowl hunters): (1) access to public hunting land close to home ( $t = -4.582$ ,  $p < .001$ ), (2) access to hunting opportunities close to home ( $t = -4.252$ ,  $p < .001$ ), and (3) crowding at public sites ( $t = -2.920$ ,  $p = .004$ ).

Table 30: Constraints to hunting participation.

	<b>Group</b>	<b>n</b>	<b>A</b>					<b>Mean<sup>1</sup></b>
			<b>Not at All</b>	<b>A Little</b>	<b>Moderate Amount</b>	<b>A Lot</b>	<b>Deal</b>	
<b>Costs of licenses/permits</b>	<b>Overall</b>	<b>1499</b>	<b>73.5%</b>	<b>13.1%</b>	<b>8.8%</b>	<b>2.3%</b>	<b>2.3%</b>	<b>1.47</b>
	18-34 Years	255	68.2%	15.7%	10.6%	2.7%	2.7%	1.56
	35-54 Years	505	70.7%	15.6%	8.7%	3.0%	2.0%	1.50
	55+ years	737	77.2%	10.6%	8.3%	1.6%	2.3%	1.41
$\chi^2 = 14.484$ n.s., $V = .070$								
<b>Costs of hunting equipment</b>	<b>Overall</b>	<b>1494</b>	<b>66.1%</b>	<b>16.1%</b>	<b>11.1%</b>	<b>4.4%</b>	<b>2.2%</b>	<b>1.60</b>
	18-34 Years	255	57.6%	17.6%	15.7%	6.7%	2.4%	1.78
	35-54 Years	502	62.2%	18.5%	12.2%	4.8%	2.4%	1.67
	55+ years	735	71.8%	14.0%	8.7%	3.4%	2.0%	1.50
$\chi^2 = 25.906$ *, $V = .093$								
<b>Access to public hunting land close to home</b>	<b>Overall</b>	<b>1486</b>	<b>54.6%</b>	<b>9.9%</b>	<b>14.2%</b>	<b>10.3%</b>	<b>11.0%</b>	<b>2.13</b>
	18-34 Years	252	51.2%	12.3%	14.3%	9.9%	12.3%	2.20
	35-54 Years	504	52.4%	11.5%	14.3%	11.5%	10.3%	2.16
	55+ years	728	57.1%	8.0%	14.1%	9.6%	11.1%	2.10
$\chi^2 = 9.073$ n.s., $V = 0.55$								

<sup>1</sup> Mean based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

\*p < .05, \*\*p < .01, \*\*\*p < .001, n.s. = not significant

Table 30 Continued: Constraints to hunting participation.

	Group	n	A					Mean <sup>1</sup>	
			Not at		Moderate		A great		
			All	A Little	Amount	A Lot	Deal		
<b>Access to hunting opportunities close to home</b>	<b>Overall</b>	<b>1505</b>	<b>47.6%</b>	<b>11.9%</b>	<b>15.7%</b>	<b>12.4%</b>	<b>12.3%</b>	<b>2.30</b>	
	18-34 Years	254	45.7%	13.0%	16.1%	13.0%	12.2%	2.33	
	35-54 Years	507	46.0%	13.0%	15.8%	14.8%	10.5%	2.31	
	55+ years	742	49.3%	10.8%	15.6%	10.6%	13.6%	2.28	
$\chi^2 = 9.227$ n.s., $V = .055$									
<b>Crowding at public sites</b>	<b>Overall</b>	<b>1393</b>	<b>72.9%</b>	<b>7.6%</b>	<b>8.8%</b>	<b>5.7%</b>	<b>5.0%</b>	<b>1.62</b>	
	18-34 Years	238	76.9%	6.3%	8.4%	3.4%	5.0%	1.53	
	35-54 Years	484	73.6%	7.2%	10.3%	5.2%	3.7%	1.58	
	55+ years	669	70.9%	8.4%	7.9%	6.9%	6.0%	1.69	
$\chi^2 = 10.984$ n.s., $V = .063$									
<b>Work/family commitments</b>	<b>Overall</b>	<b>1504</b>	<b>27.5%</b>	<b>13.5%</b>	<b>23.7%</b>	<b>16.8%</b>	<b>18.6%</b>	<b>2.86</b>	
	18-34 Years	255	18.4%	10.6%	25.5%	23.5%	22.0%	3.20	
	35-54 Years	511	14.7%	13.3%	29.2%	19.4%	23.5%	3.24	
	55+ years	736	39.5%	14.7%	19.2%	12.8%	13.9%	2.47	
$\chi^2 = 125.573$ ***, $V = .204$									
<b>Safety concerns</b>	<b>Overall</b>	<b>1496</b>	<b>85.3%</b>	<b>8.0%</b>	<b>3.9%</b>	<b>1.3%</b>	<b>1.5%</b>	<b>1.26</b>	
	18-34 Years	254	90.9%	6.3%	1.6%	0.4%	0.8%	1.14	
	35-54 Years	507	87.4%	7.5%	3.6%	1.2%	0.4%	1.20	
	55+ years	733	81.9%	8.9%	5.0%	1.6%	2.6%	1.34	
$\chi^2 = 22.938$ **, $V = .088$									
<b>Hunting skills/knowledge</b>	<b>Overall</b>	<b>1490</b>	<b>87.3%</b>	<b>6.7%</b>	<b>3.4%</b>	<b>1.3%</b>	<b>1.3%</b>	<b>1.23</b>	
	18-34 Years	255	83.9%	9.8%	3.5%	1.6%	1.2%	1.26	
	35-54 Years	505	89.1%	6.3%	3.0%	1.0%	0.6%	1.18	
	55+ years	728	87.4%	5.8%	3.6%	1.4%	1.9%	1.25	
$\chi^2 = 10.136$ n.s., $V = .058$									

<sup>1</sup> Mean based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

\*p < .05, \*\*p < .01, \*\*\*p < .001, n.s. = not significant

Table 30 Continued: Constraints to hunting participation.

		A						
		Not at		Moderate		A great		
	Group	n	All	A Little	Amount	A Lot	Deal	Mean <sup>1</sup>
<b>Lack of people to hunt with</b>	<b>Overall</b>	<b>1492</b>	<b>73.2%</b>	<b>14.1%</b>	<b>8.4%</b>	<b>2.4%</b>	<b>1.7%</b>	<b>1.47</b>
	18-34 Years	254	70.1%	18.1%	7.1%	3.9%	0.8%	1.47
	35-54 Years	504	77.8%	12.5%	7.1%	1.8%	0.6%	1.38
	55+ years	732	71.0%	13.9%	9.8%	2.3%	2.9%	1.52
$\chi^2 = 24.990^{**}, V = .092$								
<b>Childcare obligations</b>	<b>Overall</b>	<b>1482</b>	<b>80.8%</b>	<b>6.4%</b>	<b>6.0%</b>	<b>3.6%</b>	<b>3.1%</b>	<b>1.42</b>
	18-34 Years	255	75.3%	5.9%	7.8%	5.5%	5.5%	1.60
	35-54 Years	507	68.2%	9.3%	10.7%	6.3%	5.5%	1.72
	55+ years	718	91.9%	4.5%	1.9%	1.1%	0.6%	1.14
$\chi^2 = 126.509^{***}, V = .207$								
<b>Other recreational activities take up my free time</b>	<b>Overall</b>	<b>1499</b>	<b>52.0%</b>	<b>22.6%</b>	<b>16.3%</b>	<b>5.3%</b>	<b>3.8%</b>	<b>1.86</b>
	18-34 Years	256	43.0%	26.6%	18.4%	6.6%	5.5%	2.05
	35-54 Years	508	46.1%	23.8%	19.3%	6.5%	4.3%	1.99
	55+ years	733	59.3%	20.2%	13.6%	4.0%	2.9%	1.71
$\chi^2 = 34.344^{***}, V = .107$								
<b>My friends/family don't approve of me hunting</b>	<b>Overall</b>	<b>1493</b>	<b>95.9%</b>	<b>2.5%</b>	<b>1.1%</b>	<b>0.4%</b>	<b>0.1%</b>	<b>1.06</b>
	18-34 Years	255	96.9%	2.4%	0.4%	0.0%	0.4%	1.05
	35-54 Years	507	96.4%	2.6%	0.8%	0.2%	0.0%	1.05
	55+ years	729	95.2%	2.5%	1.5%	0.7%	0.1%	1.08
$\chi^2 = 7.841^{\text{n.s.}}, V = .051$								
<b>Health problems</b>	<b>Overall</b>	<b>1520</b>	<b>77.0%</b>	<b>11.2%</b>	<b>7.2%</b>	<b>2.5%</b>	<b>2.1%</b>	<b>1.45</b>
	18-34 Years	255	95.3%	2.4%	1.6%	0.0%	0.8%	1.09
	35-54 Years	506	90.3%	4.7%	2.2%	1.6%	1.2%	1.19
	55+ years	757	65.7%	13.3%	9.8%	3.7%	7.5%	1.74
$\chi^2 = 163.672^{***}, V = .232$								

<sup>1</sup> Mean based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

\*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001, n.s. = not significant

Table 30 Continued: Constraints to hunting participation.

		A						
		Not at		Moderate		A great		
	Group	n	All	A Little	Amount	A Lot	Deal	Mean <sup>1</sup>
<b>Hunting regulations are too confusing</b>	<b>Overall</b>	<b>1495</b>	<b>72.2%</b>	<b>17.2%</b>	<b>6.9%</b>	<b>2.1%</b>	<b>1.5%</b>	<b>1.42</b>
	18-34 Years	254	79.9%	9.8%	7.1%	1.6%	1.6%	1.35
	35-54 Years	507	79.9%	9.1%	6.9%	2.4%	1.8%	1.37
	55+ years	732	74.0%	13.0%	7.5%	2.9%	2.6%	1.47
$\chi^2 = 9.093$ n.s. , $V = .055$								
<b>Lack of motivation</b>	<b>Overall</b>	<b>1508</b>	<b>72.2%</b>	<b>17.2%</b>	<b>6.9%</b>	<b>2.1%</b>	<b>1.5%</b>	<b>1.44</b>
	18-34 Years	254	81.5%	11.8%	3.9%	1.6%	1.2%	1.29
	35-54 Years	507	75.5%	17.0%	4.9%	1.8%	0.8%	1.35
	55+ years	745	66.8%	19.2%	9.3%	2.6%	2.1%	1.54
$\chi^2 = 30.075$ ***, $V = .100$								

<sup>1</sup> Mean based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

\*p < .05, \*\*p < .01, \*\*\*p < .001, n.s. = not significant

### *Motivations to Hunting Participation*

Respondents were asked to evaluate nine statements and indicate how much each statement influences their hunting participation (Table 31). Of the nine statements evaluated, the most influential statements were: (1) share quality time with friends and family (93%), (2) experience challenge (93%), (3) develop my skills (88%), (4) provide wild game for my family (87%), and (5) test my abilities (86%). The least influential statements were: (1) provide wild game for friends (65%), (2) be away from the everyday routine of home (78%), (3) get away from crowded areas (80%), and (4) provide meat from a sustainable source (85%).

Of the nine statements evaluated, younger respondents were significantly more likely to hunt to: (1) be away from the everyday routine of home (87%;  $\chi^2 = 40.917$ , p < 0.001), (2) test my abilities (95%;  $\chi^2 = 38.178$ , p < 0.001), (3) develop my skills (97%;  $\chi^2 = 66.310$ , p < 0.001), (4) experience challenge (97%;  $\chi^2 = 42.281$ , p < 0.001), (5) share quality time with friends and family (98%,  $\chi^2 = 21.150$ , p = .007), (6) provide wild game for my family (94%;  $\chi^2 = 66.441$ , p < 0.001), (7) provide wild game from a sustainable source (94%;  $\chi^2 = 79.288$ , p < 0.001), and (8) provide wild game for friends (76%;  $\chi^2 = 41.164$ , p < 0.001) than older or middle-aged respondents. Whether a respondent hunted public land or private land exclusively had no significant impact on motivations.

Table 31: Motivations to hunting participation among age groups.

<b>I hunt to ...</b>		<b>A</b>						
	<b>Group</b>	<b>n</b>	<b>Not at all</b>	<b>A Little</b>	<b>Moderate amount</b>	<b>A Lot</b>	<b>A great deal</b>	<b>Mean<sup>1</sup></b>
<b>...be away from the everyday routine of home</b>	<b>Overall</b>	<b>1512</b>	<b>22.1%</b>	<b>19.9%</b>	<b>23.5%</b>	<b>15.5%</b>	<b>19.0%</b>	<b>2.90</b>
	18-34 Years	256	13.3%	18.8%	26.2%	18.0%	23.8%	3.20
	35-54 Years	513	17.2%	21.4%	23.6%	17.5%	20.3%	3.02
	55+ years	743	28.4%	19.2%	22.6%	13.3%	16.4%	2.70
$\chi^2 = 40.917 ***$ , $V = .116$								
<b>...get away from crowded areas</b>	<b>Overall</b>	<b>1505</b>	<b>19.8%</b>	<b>14.1%</b>	<b>20.0%</b>	<b>20.0%</b>	<b>25.8%</b>	<b>3.21</b>
	18-34 Years	256	11.3%	13.3%	22.3%	20.7%	32.4%	3.50
	35-54 Years	512	18.2%	13.9%	20.1%	22.7%	25.2%	3.23
	55+ years	737	23.9%	14.7%	19.1%	18.0%	24.0%	3.09
$\chi^2 = 28.073$ n.s., $V = .097$								
<b>...test my abilities</b>	<b>Overall</b>	<b>1516</b>	<b>13.6%</b>	<b>13.6%</b>	<b>28.0%</b>	<b>22.5%</b>	<b>22.3%</b>	<b>3.26</b>
	18-34 Years	256	5.5%	10.5%	26.2%	27.0%	30.9%	3.67
	35-54 Years	514	12.5%	13.6%	30.5%	21.2%	22.2%	3.27
	55+ years	746	17.2%	14.7%	26.8%	21.8%	19.4%	3.12
$\chi^2 = 38.178 ***$ , $V = .112$								
<b>...develop my skills</b>	<b>Overall</b>	<b>1514</b>	<b>12.1%</b>	<b>12.9%</b>	<b>26.5%</b>	<b>25.0%</b>	<b>23.5%</b>	<b>3.35</b>
	18-34 Years	254	3.1%	9.1%	22.4%	29.5%	35.8%	3.86
	35-54 Years	514	9.5%	12.6%	28.8%	26.7%	22.4%	3.40
	55+ years	746	17.0%	14.3%	26.3%	22.1%	20.2%	3.14
$\chi^2 = 66.310 ***$ , $V = .148$								
<b>...experience challenge</b>	<b>Overall</b>	<b>1514</b>	<b>7.7%</b>	<b>8.5%</b>	<b>23.4%</b>	<b>29.7%</b>	<b>30.7%</b>	<b>3.67</b>
	18-34 Years	254	2.8%	5.9%	19.3%	31.5%	40.6%	4.01
	35-54 Years	513	6.8%	5.8%	24.6%	32.4%	30.4%	3.74
	55+ years	747	10.0%	11.2%	23.8%	27.4%	27.4%	3.51
$\chi^2 = 44.281 ***$ , $V = .118$								

<sup>1</sup> Mean based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

\*p < .05, \*\*p < .01, \*\*\*p < .001, n.s. = not significant

Table 31 Continued: Motivations to hunting participation among age groups.

<b>I hunt to ...</b>		<b>A</b>						
	<b>Group</b>	<b>n</b>	<b>Not at all</b>	<b>A Little</b>	<b>Moderate amount</b>	<b>A Lot</b>	<b>A great deal</b>	<b>Mean<sup>1</sup></b>
<b>...share quality time with friends and family</b>	<b>Overall</b>	<b>1526</b>	<b>7.5%</b>	<b>8.4%</b>	<b>19.0%</b>	<b>24.4%</b>	<b>40.7%</b>	<b>3.83</b>
	18-34 Years	757	2.0%	8.7%	17.7%	24.0%	47.6%	4.07
	35-54 Years	515	7.0%	7.8%	18.6%	26.0%	40.6%	3.85
	55+ years	254	9.8%	8.6%	19.7%	23.4%	38.6%	3.72
$\chi^2 = 21.150 **, V = .083$								
<b>...provide wild game for my family</b>	<b>Overall</b>	<b>1519</b>	<b>12.8%</b>	<b>18.1%</b>	<b>23.4%</b>	<b>17.6%</b>	<b>28.1%</b>	<b>3.30</b>
	18-34 Years	256	5.5%	13.7%	20.7%	20.3%	39.8%	3.75
	35-54 Years	514	10.1%	15.0%	24.3%	18.9%	31.7%	3.47
	55+ years	749	17.2%	21.8%	23.8%	15.6%	21.6%	3.03
$\chi^2 = 66.441 ***, V = .148$								
<b>...provide meat from a sustainable source</b>	<b>Overall</b>	<b>1520</b>	<b>14.9%</b>	<b>18.2%</b>	<b>22.5%</b>	<b>17.1%</b>	<b>27.3%</b>	<b>3.24</b>
	18-34 Years	255	5.5%	9.8%	25.5%	20.0%	39.2%	3.78
	35-54 Years	514	11.5%	17.5%	21.8%	19.5%	29.8%	3.39
	55+ years	751	20.4%	21.6%	21.8%	14.6%	21.6%	2.95
$\chi^2 = 79.288 ***, V = .161$								
<b>...provide wild game for my friends</b>	<b>Overall</b>	<b>1510</b>	<b>35.4%</b>	<b>27.8%</b>	<b>20.7%</b>	<b>7.1%</b>	<b>9.1%</b>	<b>2.27</b>
	18-34 Years	255	24.3%	24.7%	26.3%	9.8%	14.9%	2.66
	35-54 Years	513	33.1%	32.2%	19.1%	6.8%	8.8%	2.26
	55+ years	742	40.7%	25.9%	19.8%	6.3%	7.3%	2.14
$\chi^2 = 41.164 ***, V = .117$								

<sup>1</sup> Mean based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

\*p < .05, \*\*p < .01, \*\*\*p < .001, n.s. = not significant

Respondents were asked how likely they were to discuss the benefits of hunting to friends, family, or acquaintances (Table 32). Of the five statements evaluated, respondents were most likely to discuss: (1) hunting is a critical tool to manage wildlife populations (93%), and (2) hunters play an important role as advocates for wild things and wild spaces (92%), and (3) recruiting the next generation of hunters is important for the future

of hunting (91%). Younger respondents were significantly more likely to discuss that hunting provides a sustainable source of food (95%) than middle-aged (90%) or older respondents (87%;  $\chi^2 = 67.463$ ,  $p < .001$ ).

Table 32: Likelihood of discussing statements related to hunting with friends, family, or acquaintances among age groups.

Statement	Group	n	Not at		A Moderate		A great	
			All	A Little	Amount	A Lot	Deal	Mean <sup>1</sup>
<b>Hunters make important financial contributions to wildlife</b>	<b>Overall</b>	<b>1554</b>	<b>15.6%</b>	<b>21.9%</b>	<b>25.7%</b>	<b>16.3%</b>	<b>20.5%</b>	<b>3.04</b>
	18-34 Years	253	13.0%	20.6%	29.2%	16.2%	20.9%	3.11
	35-54 Years	517	16.4%	23.8%	25.5%	14.9%	19.3%	2.97
	55+ years	784	15.9%	21.0%	24.7%	17.2%	21.0%	3.06
$\chi^2 = 5.698$ n.s., $V = .043$								
<b>Recruiting the next generation of hunters is important for the future of hunting</b>	<b>Overall</b>	<b>1552</b>	<b>9.0%</b>	<b>13.7%</b>	<b>22.7%</b>	<b>22.0%</b>	<b>32.5%</b>	<b>3.55</b>
	18-34 Years	254	5.9%	13.8%	23.2%	22.4%	34.6%	3.66
	35-54 Years	516	7.4%	13.6%	25.4%	21.5%	32.2%	3.58
	55+ years	782	11.1%	13.7%	20.8%	22.3%	32.1%	3.51
$\chi^2 = 11.515$ n.s., $V = .061$								
<b>Hunting is a critical tool to manage wildlife populations</b>	<b>Overall</b>	<b>1555</b>	<b>6.9%</b>	<b>11.3%</b>	<b>22.4%</b>	<b>23.0%</b>	<b>36.5%</b>	<b>3.71</b>
	18-34 Years	255	4.3%	9.8%	24.3%	20.8%	40.8%	3.84
	35-54 Years	517	7.4%	12.2%	24.6%	22.6%	33.3%	3.62
	55+ years	783	7.4%	11.1%	20.3%	24.0%	37.2%	3.72
$\chi^2 = 10.625$ n.s., $V = .058$								
<b>Hunting provides a sustainable source of food</b>	<b>Overall</b>	<b>1553</b>	<b>10.9%</b>	<b>16.0%</b>	<b>23.6%</b>	<b>19.8%</b>	<b>29.7%</b>	<b>3.41</b>
	18-34 Years	256	5.1%	8.2%	21.5%	21.1%	44.1%	3.91
	35-54 Years	516	9.9%	14.3%	21.3%	21.7%	32.8%	3.53
	55+ years	781	13.4%	19.7%	25.7%	18.2%	22.9%	3.17
$\chi^2 = 67.463$ ***, $V = .147$								
<b>Hunters play an important role as advocates for wild things and wild spaces</b>	<b>Overall</b>	<b>1554</b>	<b>8.4%</b>	<b>11.1%</b>	<b>20.5%</b>	<b>20.9%</b>	<b>39.1%</b>	<b>3.71</b>
	18-34 Years	254	6.7%	11.4%	20.5%	17.3%	44.1%	3.81
	35-54 Years	517	8.7%	11.8%	21.5%	21.7%	36.4%	3.65
	55+ years	783	8.8%	10.6%	19.8%	21.6%	39.2%	3.72
$\chi^2 = 44.281$ n.s., $V = .045$								

<sup>1</sup> Mean based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

\*p < .05, \*\*p < .01, \*\*\*p < .001, n.s. = not significant

## **LEARN TO HUNT PARTICIPANT AND ILLINOIS HUNTER COMPARISON**

### **Methods**

A random sample of 3,000 hunters was selected from the Illinois resident hunting license database to receive questionnaires. All Illinois resident license types were included in the sample frame except for Youth License Holders. Methods for survey questionnaire mailings and follow-up reminders followed those of Miller et al. (1999). We mailed recipients a self-administered, 4-page questionnaire (Appendix A), cover letter (Appendix B), and postage-paid return envelope (hereafter referred to as a survey packet). Data were coded, entered, and analyzed using SPSS 27.0 (SPSS Inc. 2020). This survey had a response rate of 54%.

Participants who attended an in-person workshop prior to the 2019-2020 hunting season (March 2019–February 2020) were distributed a follow-up survey to assess program efficacy, behavior, and attitudes in respect to Illinois hunting. The survey was developed in Qualtrics (Qualtrics, 2020) and distributed to participants via the email address provided during registration using unique links. We emailed participants a cover letter (Appendix C), and a unique link to the web-based survey (Appendix D). Reminder emails were distributed to non-respondents 2 weeks apart for a total of 4 mailings. Data were coded, entered, and analyzed using SPSS 27.0 (SPSS Inc., 2020). This survey had a response rate of 31%.

### **Results**

#### *Constraints to Hunting Participation*

Of the 15 statements assessed (Table 33), LtH participants on average, indicated that all statements were more of a constraint than Illinois hunters except the cost of licenses/permits, health problems, and lack of motivation. LtH participants were significantly more likely to indicate: (1) access to public hunting land close to home ( $t = -6.700$ ,  $p < .001$ ), (2) access to hunting opportunities close to home ( $t = -5.349$ ,  $p < .001$ ), (3) crowding at public sites ( $t = -2.706$ ,  $p = .008$ ), (4) lack of knowledge/skills ( $t = -9.058$ ,  $p < .001$ ), (5) lack of people to hunt with ( $t = -7.239$ ,  $p < .001$ ), and (6) hunting regulations are too confusing ( $t = -2.477$ ,  $p = .015$ ) as constraints to hunting participation than Illinois hunters.

Table 33: Comparison of constraints to hunting participation among past LtH participants and random sample of Illinois hunters.

<b>Constraint to Hunting Participation</b>	<b>Mean<sup>1</sup> LtH Participants<sup>2</sup> (n=109)</b>	<b>Mean<sup>1</sup> Illinois Hunters<sup>3</sup> (n=1499)</b>
<b>Cost of license/permits</b>	1.33	1.47
<b>Cost of hunting equipment</b>	1.81	1.60
<b>Access to public hunting land close to home</b>	3.23	2.13
<b>Access to hunting opportunities close to home</b>	3.18	2.30
<b>Crowding at public sites</b>	1.98	1.62
<b>Work/family commitments</b>	2.89	2.86
<b>Safety concerns</b>	1.38	1.26
<b>Hunting skills/knowledge</b>	2.44	1.23
<b>Lack of people to hunt with</b>	2.54	1.47
<b>Childcare obligations</b>	1.63	1.42
<b>Other recreational activities take up my free time</b>	1.89	1.86
<b>My friends/family don't approve of me hunting</b>	1.12	1.06
<b>Health problems</b>	1.28	1.45
<b>Hunting regulations are too confusing</b>	1.66	1.42
<b>Lack of motivation</b>	1.38	1.44

<sup>1</sup> Mean based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

<sup>2</sup> Qualtrics follow up survey of Participants who attended an in-person LtH workshop prior to the 20192020 hunting season (March 2019–February 2020).

<sup>3</sup> Mail survey of a random sample of 3,000 hunters selected from the Illinois resident hunting license database.

### *Involvement in Hunting*

Respondents were asked to indicate the likelihood of discussing 5 statements about hunting with friends, family, or acquaintances. Of the 5 statements evaluated, LtH participants were significantly more likely to discuss: (1) hunters make important financial contributions to wildlife conservation ( $t = -5.935$ ,  $p < 0.001$ ), (2) 42

hunting is a critical tool to manage wildlife populations ( $t = -2.380$ ,  $p = 0.019$ ), and (3) hunting provides a sustainable source of food ( $t = -5.508$ ,  $p = < 0.001$ ) than Illinois hunters (Table 34).

Table 34: Comparison of statements regarding hunting among past LtH participants and random sample of Illinois hunters.

<b>Statement</b>	<b>Mean<sup>1</sup> LtH Participants<sup>2</sup> (n=109)</b>	<b>Mean<sup>1</sup> Illinois Hunters<sup>3</sup> (n=1499)</b>
<b>Hunters make important financial contributions to wildlife conservation</b>	3.77	3.04
<b>Recruiting the next generation of hunters is important for the future of hunting</b>	3.77	3.55
<b>Hunting is a critical tool to manage wildlife populations</b>	3.98	3.71
<b>Hunting provides a sustainable source of food</b>	4.04	3.41
<b>Hunters play an important role as advocates for wild things and wild spaces</b>	3.91	3.71

<sup>1</sup> Mean based on scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot, 5 = a great deal.

<sup>2</sup> Qualtrics follow up survey of Participants who attended an in-person LtH workshop prior to the 2019-2020 hunting season (March 2019–February 2020).

<sup>3</sup> Mail survey of a random sample of 3,000 hunters selected from the Illinois resident hunting license database.

## FOCUS GROUPS

### Methods

The research team conducted focus group interviews with past LtH participants. Participants were recruited via phone calls using information provided to Illinois Learn to Hunt at the time of workshop registration. Recruitment materials included 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. Interview guides (Appendix G) and consent forms (Appendix H) were discussed and signed prior to interviews beginning.

## Results

The program, in accordance with stay-at-home orders, cancelled all scheduled in-person events and postponed new events to ensure the safety of the Illinois public, participants, and staff. The program hosted 4 focus groups with 15 participants before stay-at-home orders required the program to postpone future focus groups.

### *Motivations*

At some point during the interview, all participants indicated that some combination of adventure, skill acquisition, and the challenge of hunting was an important motivator. This was the strongest theme to emerge from the groups, along with access to information/public hunting ground and the need for mentorship. A few excerpts from the focus groups speak to this theme:

“For me, it’s just something new. I wanted to try new things, and I think hunters are – it plays a big part in conservation. It’s just that ability to hunt, kill something, take it home and eat it, that whole process is something I’m interested in. I’m not in it for trophies or anything of that nature.”

“For my motivation is sort of been almost like self-reliance in hunting. Not having to rely on store bought stuff, and that pride in, like you said [Subject 4], in harvesting your own protein. So that sort of the motivation I’ve had. Also, lookin’ at it, it’s really a life skill if you think about, you know kind of surviving off the land... thought it’d be a good skill to learn.”

“I agree with everything, I think, that’s been said so far. I just like learning new skills, so being able to hunt, being able to do something new, you know, learn just a new skill. The food aspect of it -- being able to kind of, for one, seeing the whole process from a live animal all the way to something that I’m eating. As well as just, we like to garden, my wife and I, and it’s kind of just the other side of gardening right. Instead of raising plants, you’re also harvesting protein, as well.”

“I want to get into it for a lot of the same things: skill. I’m an avid outdoorsman. I kayak. I’ve fished my whole life, so this was always on the plate for me... but it is for the sport of it, not sport for trophy, but sport for just enjoying the nature outside and getting your own food and resources and learning.”

Regarding skill acquisition, interviewees remained vague. When the idea was first introduced, we expected subjects to digress into a conversation about sustainably harvesting food, but they never made that leap. When we followed up on this point, asking specifically why these concepts motivated them, their answer

responses ranged from “knowledge doesn’t hurt” to “self-reliance.” A few excerpts from the focus groups speak to this theme:

“Knowledge doesn’t hurt... so I didn’t want to learn this stuff in the hopes of a zombie apocalypse, but I think it’s just a skill that the vast majority has no knowledge of or very limited.”

“I think to me, most of it to, you used the word self-reliant. Just being able to learn a new skill and do something on my own, you know, just out in the woods with a gun and tracking. You know I’m trying to overcome a challenge, but I’m also trying to feed my family without, you know, supply chain, all these other things that are in the process. Most of it probably ties back to the problem solving, self-reliance, trying to do something on my own.”

“Honestly, I was gonna say zombie apocalypse. I say that jokingly, but there’s that “in case something happens” in the back of your mind. What if something happens and you’re stuck out there to fend for yourself. In my mind, it’s nice to have that skill and ability in your pocket.

Subjects mentioned the conservation of wildlife is a motivating factor, however, participants who made mention of this did so in passing. When we followed up on this point, several participants were very honest in saying that this was more of a justification (used to “socially justify”) for hunting and less a motivation. Their role in conservation played no real motivating factor in their decision to hunt:

“To me, I guess just to be frankly honest, it doesn’t impact me at all. I don’t ever think about it. If it were the opposite, and it was seriously detrimental to deer, and like a really bad thing. Then I’d feel bad and I’d rethink some things. I’m happy that it’s a good thing, but I guess I don’t – that doesn’t factor into my decision to go hunting. Just like I’m not doing a bad thing, so I’m happy for that, but that’s as far as it touches me I guess.”

### *Access to Learning Opportunities*

When asked what set them apart from the 98% of people who don’t hunt, interviewees agreed that it was simply their ability to find the opportunities like Learn to Hunt. As one subject described:

“For me it was just I wasn’t lazy. And what I mean by that is I know a lot of people that would get into this. The only problem is it wasn’t accessible to us. I mean, I’ve read the hunting regulations probably two years prior before I could find a hunter safety class that wasn’t two hours from my house and I live in the city. And even then it was just really confusing. So I know a lot of people that want to get into it, and they either start ass, backwards in a sense where it took me a while to understand what the learning – like I tried doing it online, and it was something like online, but you needed to go in person. Even that was confusing, so I know some people that backed away from it because they’re like, “Ah. I don’t want to put the effort in... they’ll want to do it [LtH] if it’s within reason or within close range. I think a lot of people would do it, it’s just hard to come by, and the fact that I only found that when I was on the website, and even then when I clicked it to find certain dates, it was confusing to get to it, and I almost didn’t find the classes and dates.”

Similarly, several participants noted that distance was often an issue. Even when they know about LtH, unless the meeting is close, it's hard to find the motivation to make the trip.

### *Constraints*

Perhaps the strongest theme from the interviews was the desire to have mentors. They need someone “who has knowledge” to take them one-on-one, to show them the ropes, and “you need someone to pal around with.” Universally, participants explained that they could not do this alone if they were going to be successful. They need to find ways to network – and online can be helpful, but in person, hands on, one-on-one is the best-case scenario. “Once I’ve experienced it all, watched it all, then I can do it, be more confident in myself next time.”

## **DISCUSSION**

Decreased sales of hunting licenses suggest negative trends for future conservation programs and agency operations through declining revenues. Even though Americans show high overall support for hunting as a recreation and food harvesting activity, hunting license sales continue to decline across much of the country. With the average age of the active hunter continuing to rise, there has been a significant effort to recruit, retain, and reengage hunters. Because the sale of hunting licenses by hunters are the primary support of conservation efforts in North America, and because outdoor recreationists are strong advocates for conservation efforts, the decline in hunting poses problems for the protection, maintenance, and expansion of public and protected lands.

The Illinois Learn to Hunt program is recommending 10 strategies to bolster hunting participation in Illinois. This targeted approach should be applied by all Illinois R3 stakeholders although some strategies are specific to only a portion of stakeholders. As developing R3 strategies has many obstacles it will take a unified effort among NGO's, Illinois DNR, LtH, and more importantly, Illinois hunters to implement an objective strategy aimed at increasing hunting license sales.

### **Strategy 1:** Assess the impact of site-specific closures on small game hunting participation.

Illinois hunters start hunting small game at a younger age compared to big game and waterfowl hunting (Williams et al., 2018). 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), small game hunting is often cited by R3 practitioners as a critical tool for hunter R3 efforts. Small game hunting can be done frequently and easily and allows for a great entry point to hunting. As discussed previously, younger hunters were significantly more likely to be interested in squirrel hunting than both middle-aged hunters and older hunters. However, the lack of accessible public land for squirrel hunting is compounded by site-specific regulations that further restrict small game hunting opportunities. Many sites restrict small game hunting, particularly during deer archery season. It is critical to understand the impact site-specific regulations have towards small game hunting participation.

### **Strategy 2:** Increase hunting opportunity near populated urban centers, particularly small game opportunities.

One of the primary structural constraints (indirectly) responsible for the change in 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 have with

wildlife differ in nature from those experienced by their rural counter parts (Manfredo et al., 2009). Furthermore, as cities sprawl, previously accessible hunting land decreases as does demand for hunting opportunities. 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).

Illinois ranks 46<sup>th</sup> among U.S. States by percent public land with 4.1% of the state being publicly accessible lands (US Census, 1991). While much of Illinois hunters rely on public land solely for hunting (Williams et al., 2018), lack of accessible public land accessible is compounded by site-specific regulations that further restrict hunting opportunities. To assess hunting opportunity on Illinois public sites, the number of days available for hunting a particular species at individual Illinois DNR sites was tabulated. Percentages were obtained by comparing number of days in the state-wide season to days huntable at individual sites. Regional averages are represented in Table 35. Full tables can be found in Appendices I – M.

Table 35: Regional average of public land hunting opportunities at Illinois DNR managed sites.

Hunting Type	Region 1	Region 2	Region 3	Region 4	Region 5
<b>Deer Archery</b>	60%	90%	49%	91%	94%
<b>Duck</b>	41%	80%	18%	37%	40%
<b>Deer Firearm</b>	34%	77%	37%	59%	75%
<b>Fall Turkey</b>	36%	58%	36%	71%	62%
<b>Spring Turkey</b>	35%	100%	39%	68%	82%
<b>Rabbit</b>	29%	4%	34%	53%	51%
<b>Goose</b>	27%	77%	16%	34%	40%
<b>Squirrel</b>	25%	33%	39%	58%	71%
<b>Quail</b>	22%	54%	31%	49%	50%
<b>Deer Muzzleloader</b>	20%	30%	18%	59%	70%
<b>Pheasant</b>	20%	63%	35%	16%	15%
<b>Dove</b>	18%	83%	26%	57%	51%

While these percentages can provide a snapshot of regional hunting opportunities, further analysis is needed to total land available at a regional and county level.

As a portion of Illinois' small game hunters rely exclusively on public land for small game hunting it is imperative to create additional small game hunting opportunities across the state, particularly near urban-centers, to bolster R3 efforts (Schulz, Millspaugh, Zekor, & Washburn, 2003).

**Strategy 3:** Develop and refine communication techniques with the Illinois public with the goal to recruit new hunters.

It is known that outdoor enthusiasts derive satisfaction from overcoming the challenges presented to them by outdoor activities. 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* engaging in the activity. For several decades, scholars have recognized that hunters evaluate their experience based on multiple satisfactions, and that psychological benefits needed to be taken into consideration (Hammitt, McDonald, & Patterson, 1990).

While we know that outdoor enthusiasts appreciate the sense of community and accomplishment gained through outdoor recreation, hunters must be drawn in for other reasons. The outdoor activity itself needs to be equally as appealing as the benefits derived from the activity (Larson et al., 2014; Yuen, Pedlar, & Mannell, 2005), thus, hunting must be seen as a desirable activity *before* value can be derived from participation. In order for individuals to see hunting as a desirable activity, R3 practitioners must develop a communication strategy aimed at distinct market segments. We have identified 4 distinct market segments.

### Market Segments

#### *Nature lover*

The contributions by hunters to the conservation of natural resources are frequently used by state agencies, and other R3 practitioners as a communication tool for recruitment efforts. While this messaging is useful to maintain the relevancy of hunting, it is not a motivating factor for many new hunters. In a recent focus group, a past LtH participant spoke to this theme: "To me, I guess just to be frankly honest, it doesn't impact me at all. I don't ever think about it. If it were the opposite, and it was seriously detrimental to deer, and like a really bad thing. Then I'd feel bad and I'd rethink some things. I'm happy that it's a good thing, but I guess I don't – that doesn't factor into my decision to go hunting." While this conservation message may resonate with some nature lovers, particularly existing hunters, it should not be used as the definitive communication theme for R3 related efforts towards those who enjoy the natural world.

The desire to spend time in nature is the most common motivation for many new and existing hunters. 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). 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). As increased urbanization continues, interactions with nature will continue to decrease, and the interactions that urbanites do have with wildlife differ from those experienced by their rural counter parts. This ultimately leads to a desire to re-connect with nature for many individuals.

#### *Food motivated*

Over the last decade, the increase in consumer concerns regarding food production methods and food safety have changed the landscape of consumer food-related purchasing decisions. A recent trend in R3-related marketing has attempted to capitalize on the locavore movement. This movement encourages consumers to purchase from farmers’ markets or even produce their own food, using the argument that fresh, local products are more nutritious and taste better. While the locavore movement is an important market to reach, our data suggests there are many individuals motivated by food, not just locavores. Many are motivated by the desire to establish a connection with their food, lowering their carbon emissions, eating protein from a sustainable source, eating a healthier protein, and eating protein from an organic source.

Food motivated hunters are interested in taking control of their own food supply. They want to use hunting as a tool to supplement or even eliminate factory farmed meat from their diets. They feel a responsibility to provide ethical healthy food for themselves and their families. Hunting gives them a deeper connection and respect for their food compared to the traditional fast food or prepackaged options commonly offered in society.

#### *Skill-oriented*

In today’s modern world, it is relatively easy to go through the day without having the chance to test yourself mentally or physically. With a growing feeling of stagnation, many people are recognizing that hunting provides them an opportunity to learn new skills, overcome challenges, and become self-reliant. While some train to go hunting as if they were professional athletes, others use it as an excuse to get out for a nice hike. Learning about the ecology and seasonal behavior of game species gives them a deeper understanding of the food they eat. Practicing target shooting becomes a discipline for them to master. Executing a successful hunt gives them a sense of fulfillment and pride that they struggle to find elsewhere.

#### *Social Enthusiast*

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. Hunters appreciate the sense of community and accomplishment.

**Strategy 4:** Increase communication efforts for lapsed and intermittent hunters.

Our results indicated, intermittent license purchasers are less-motivated, on average, than individuals who purchase a license every-year. While we know that outdoor enthusiasts appreciate the accomplishment gained through outdoor recreation, hunters must be motivated for other reasons. It has been shown that 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). However, much of the traditional communication efforts by the hunting community and industry skews towards the harvest of wildlife, rather than the hunting process. Instead, R3 practitioners and state agencies should focus on communication themes and imagery that appeal to the motivations and constraints of intermittent or lapsed hunters.

Lapsed and intermittent hunters encounter many of the same constraints that every-year and new hunters also face in Illinois; land access and time. However, as previously discussed, intermittent license purchasers indicated that a lack motivation and other recreational activities taking up their free time was more of a constraint than every-year license purchasers. To address the lack of motivation for intermittent license purchasers, R3 practitioners must first understand what motivates intermittent license purchasers.

Intermittent hunters, while less-motivated than every-year hunters, are motivated by spending time outdoors, sharing time with friends and family, experiencing challenge, and developing their skillsets. Communication efforts that focus on these themes are critical to developing an objective strategy for the retention and reengagement of Illinois hunters.

With modern society becoming increasingly busier, it's imperative to motivate hunters *prior* to hunting season. Much of the current communications efforts from the hunting community, state wildlife agencies, and other organizations to recruit or retain hunters focus on hunting as the seasons approach. However, as we know, people are busy and need planning time to accommodate their busy schedules. Additionally, as Illinois requires a lottery application for many public and private hunting opportunities, it is imperative to motivate hunters through communication efforts prior to these deadlines. Timely communication with messaging consistent with spending time outdoors, developing skillsets, and spending time with friends and family should be used to reach intermittent and lapsed hunters.

## **Strategy 5:** Develop hunt-planning tools and resources.

Modern life has forced individuals to spare less time on themselves and their interests. As mentioned, hunters of all ages, genders, and experience level indicate time as a constraint to hunting. In a recent survey of Illinois hunters, respondents were asked to indicate actions that they take to help them get out hunting as often as they would like (Walberg & Miller, 2019). This survey showed that the most common actions taken were setting aside time for hunting, planning ahead so they have time to hunt, and fitting in hunting around their other commitments. Through hunt-planning hunters are able to mitigate some personal time constraints.

However, simply communicating the hunt-planning process is likely to be ineffective as structural constraints still need to be addressed (e.g., land access, hunting opportunity). Creating or promoting hunt-planning resources and tools that help hunters address these constraints is critical. While developing hunt-planning tools and resources does not increase land access for hunters, it will inform hunters of existing hunting opportunities they might have been unaware existed. Additionally, hunt-planning tools will allow hunters to make more informed decisions during lottery applications and other hunt-planning processes maximizing their time afield. We recommend several hunt-planning tools and resources be developed and maintained:

1. Searchable database of public hunting harvest and effort data by species at public Illinois DNR sites.
2. Searchable database of total lottery applications, number drawn, and percent drawn at public Illinois DNR sites by application periods.
3. ArcGIS web map that allows users to visualize area boundaries, access points, topographic features, and other points of interest of public Illinois DNR sites (e.g., blind locations, check-in locations).
4. Learning opportunities and other educational content covering remote scouting, map interpretation, and other hunt-planning processes to aid the public in site selection.
5. Consistent informational references of IDNR site-specific rules with uniformity in the language and organization used.
6. Searchable database of Illinois specific research findings on game species ecology.
7. Opt-in reminder system for application deadlines.

## **Strategy 6:** Develop a framework for events/opportunities aimed at increasing social support among new hunters.

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 important 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).

As evidenced through focus groups, new hunters need someone “who has knowledge” to take them one-on-one, to show them the ropes, and “you need someone to pal around with”. Universally, participants explained that they could not do this alone if they were going to be successful. Participants need to find ways to network – and online can be helpful, but in person, hands on, one-on-one is the best-case scenario. As one participant mentioned: “once I’ve experienced it all, watched it all, then I can do it, be more confident in myself next time”.

Developing events and other learning opportunities that help hunters transition through this phase is an important step in the recruitment process. These individuals have learned the basics of game species ecology, regulations, equipment, firearm/archery safety, hunting techniques and are now ready to take the next step. As developing a mentorship framework has many obstacles (e.g., liability, incentives, access) it will take a unified effort among NGO’s, Illinois DNR, LtH, and more importantly, Illinois hunters. Although, mentorship related communication efforts to hunters has been a constant for much of the hunting community in recent years, without a mentorship plan or framework in place communication efforts related to mentorship are likely to have minimal impact.

#### **Strategy 7:** Increase the number of accessible public shooting ranges for Illinois hunters.

The hunting community often discusses the importance of target practice as the responsibility of any ethical hunter to increase shooting competence. However, the lack of accessible public ranges in Illinois makes this difficult and is an additional constraint to hunters. In a 2001 study of Illinois hunters, researchers found that 68% of hunters felt a need for more public shooting ranges close to where they live (Miller, 2003).

Our results indicated that hunters are motivated by a wide range of different factors. One central motivation, particularly for existing hunters, is the concept of skill development and the ability to test one’s abilities. Providing additional opportunities to foster skill development not only increases shooting competency, but it also acts as a way to keep hunters engaged and active in the off seasons. Additionally, if shooting ranges were more accessible, participation in shooting sports would increase (Miller, 2003) likely contributing to more Pittman-Robertson contributions.

Utilize these ranges to communicate the personal, social, biological, and financial benefits of hunting and R3 related offerings, using signage and other printed materials. While not every target-shooter will be receptive to R3 offerings, many new hunters' transition from a target shooting background.

**Strategy 8:** Develop R3 focused events aimed at young families.

While the social aspect of hunting is not the primary motivator for many new hunters it is influential among new and existing hunters. As evidenced through focus groups and program surveys, many new hunters cite that not having anybody to hunt with is a major constraint. Many of these same hunters indicated that they have friends or family that hunt, however, for whatever reason these individuals are not accessible hunting partners. Universally, participants explained that they could not do this alone if they were going to be successful. Additionally, many new hunters are at the life-stage where they are beginning to start a family or have already done so. Providing R3-related events that foster an already established network of social support, the family, is necessary.

**Strategy 9:** Increase education and outreach through contemporary media platforms (e.g., podcasting).

Illinois Learn to Hunt program is growing its online media presence through prominent social networks. Posting educational content, event dates, and seasonal reminders to Instagram and Facebook. We also are growing our YouTube page with question and answer sessions with IDNR staff. With the lack of in person workshops, we are holding live webinars via Zoom as the main way to inform our participants about the different aspects of hunting. Moving forward, we must continue to bolster these platforms while finding new ways to make engaging content.

A new media avenue for R3 practitioners to pursue is the emerging medium of podcasting. Podcasting has become one of the most influential media platforms available. As of 2019, 70% of Americans were familiar with the term podcast, 51% had listened to a podcast, 32% are monthly listeners, and 22% are weekly listeners (Whitner 2020). Weekly listeners listen to seven podcasts a week. Podcast audiences skew younger as audience members ages 18 to 44 make up 67% of the listeners (Whitner 2020).

The emergence of podcasting has been credited to several factors. Most podcasts are free, affordable to produce, and listening to an audio recording does not require your full attention. This allows listeners to multitask while listening to the podcast. Additionally, podcasts can be downloaded and listened to at the user's convenience.

R3 centric podcasts would provide engagement with the Illinois public that has not been achieved through other social media outlets. Having on demand recordings creates an outreach opportunity for new participants to discover the program.

**Strategy 10:** Utilize waterfowl hunting as a strategic retention and reengagement tool.

As our results have indicated, there are significant differences between a hunters age and what species they are interested in hunting. Older hunters are more interested in hunting waterfowl than younger hunters. Since, older hunters are typically more experienced and waterfowl hunting is often described as an advanced hunting style, it makes sense that younger hunters are not as interested in waterfowl. Though hunter recruitment of younger new hunters through waterfowl hunting may not appear effective, waterfowl hunting may prove a suitable strategy for retaining and reengaging older hunters.

Understanding hunter motivations will allow for further understanding of why older hunters may be more interested in waterfowl hunting. As indicated by our results, older hunters are primarily motivated by spending times with friends and/or family and experiencing challenge. Waterfowl hunting is both social and challenging. Strategically, the learn to hunt program will refine communication strategies and event curricula of waterfowl related efforts aimed at older experienced hunters.

## **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 reengagement (R3) of lapsed hunters. While web-based learning opportunities have proven to be desirable by the Illinois hunting community, web-based opportunities will never replace hands-on learning opportunities. However, the LtH program plans on utilizing web-based learning opportunities to supplement field-based learning opportunities. Moving forward, field events (deer hunting 101, turkey hunting 101, waterfowl hunting 101, and small game hunting 101) will be scheduled alongside webinars. These webinars will allow the program to detail the importance of hunting as a management tool, rules and regulations, game species ecology and other topics that can effectively be covered virtually. Covering these topics virtually, allows for more time at field-events to focus on hands-on activities. The program will urge all participants to attend the webinar. For individuals unable to attend the live webinar, a recording will be distributed.

Our results indicated that web-based learning opportunities are desirable by new and existing hunters. The program envisions partnering with Illinois DNR to develop hunter-related educational content. Example

content includes: question and answer session with DNR Wildlife Division staff, how-to videos on navigating regulations, equipment overview, hunting technique demonstrations and wild game cooking videos. This content will be aimed at educating new hunters on hunting specifics and keep current hunters engaged and motivated. Additionally, the program had several collaborative efforts with partnering organizations that were postponed due to the Coronavirus pandemic. The major efforts included: family outdoor days, aimed at recruiting young families, R3 related video content. These efforts will continue to progress, pending social distancing guidelines.

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## **APPENDICES**

## **Appendix A: Webinar Course Curricula**

### **Deer Hunting 101**

- Hunters are conservationist
  - Hunters sustain wildlife conservation through the Pittman-Roberson Act
  - Hunting numbers are declining
  - Hunting is a tool in managing wildlife populations
  - Play a role in natural resource conservation
- Hunting regulations
  - Hunting seasons
  - Bag and possession limits
  - Licenses and permits
  - Equipment
  - Clothing
  - Post-harvest procedures
  - Public vs. Private land access
- Deer ecology
  - Optimal habitat
  - Seasonal deer behavior
- Hunting and scouting tactics
  - Seasonal hunting tactics that complement deer behavior
  - Examples of deer sign
  - Understanding deer movement through the landscape
  - Utilizing wind direction
  - Scouting tools
  - Scouting from a broad to fine scale
  - Reading maps and selecting a hunting location

### **Deer Hunting 102**

- Deer ecology and hunting strategies
  - Optimal habitat
  - Seasonal deer behavior
  - Seasonal hunting tactics that complement deer behavior
- Deer vocalizations and calling strategies
  - When to use calls
  - Overview of vocalizations, calls, and rattling
- Controlling your scent
  - Understanding wind direction
  - Equipment storage
  - Cover scents
  - Scent elimination products
- Utilizing lures and attractants
  - When and where to use scent lures
  - Types of scent lures
- Tree stands

- Types of tree stands (Pros and Cons)
  - Tree stand safety
  - Using blinds and ground hunting
- After taking a shot and tracking deer
  - What to do after taking a shot
  - Reading a deer's body language
  - Reading blood sign
  - Strategies for following a blood trail
  - How to contact a dog tracker and the dog tracking process
- Field dressing
  - Step by step guide to field dressing a deer
  - Getting a deer out of the woods
- Chronic Wasting Disease (check-in and testing procedures)
  - CWD overview
  - CWD regulations
  - Check stations

## **Deer Hunting Strategies and Stand Placement**

- Deer ecology and hunting strategies
  - Optimal habitat
  - Doe vs Buck bedding areas
  - Feeding habits
  - Food resources
  - Seasonal deer behavior
  - Seasonal hunting tactics that complement deer behavior
  - Understanding how deer move across the landscape
  - Scouting for deer sign
  - How to hunt the rut
- Finding public land sites
  - Engineered pursuit website
  - IDNR resources (Hunting Harvest Report and Hunter Fact Sheets)
- Scenario using the tools covered in the presentation
- Interactive quiz

## **Remote Scouting for Deer**

- Site selection
  - Questions to ask yourself before scouting
  - Broad to fine scale scouting
  - Engineered pursuit website
  - IDNR resources (Hunting Harvest Report and Hunter Fact Sheets)
  - Identifying potential habitat
  - How to use satellite imagery to find resources
- Reading a topographic map
  - Contour Lines
  - Index Lines
  - Map Features

- Color key
- Identifying areas to scout
  - Using skills to find deer habitat and resources at a public land site
- Boots on the ground techniques
  - Tools to help you organize scouting info (apps and mapping tools)
  - Identifying food resources
  - Finding deer sign
- Trail cameras
  - Types of trail cameras
  - Common settings use
  - Camera accessories
  - Camera placement
- Seasonal scouting techniques
  - Overview of how to scout year round
- Interactive quiz

## **Rabbit, Squirrel, and Dove Hunting**

- Hunters are conservationist
  - Hunters sustain wildlife conservation through the Pittman-Roberson Act
  - Hunting numbers are declining
  - Hunting is a tool in managing wildlife populations
  - Play a role in natural resource conservation
- Hunting regulations
  - Hunting seasons
  - Bag and possession limits
  - Licenses and permits
  - Equipment
  - Clothing
  - Post-harvest procedures
  - Public vs. Private land access
- Ecology and hunting strategies for each species
  - Basic ecology and hunting strategies by species
    - Mating behavior
    - Food resources
    - Daily movement patterns
    - How to hunt solo, in a group, and with dogs

## **Upland Hunting 101**

- Hunters are conservationist
  - Hunters sustain wildlife conservation through the Pittman-Roberson Act
  - Hunting numbers are declining
  - Hunting is a tool in managing wildlife populations
  - Play a role in natural resource conservation
- Upland game ecology
  - History of Ring-necked Pheasants in America
  - Pheasant habitat needs

- Pheasant feeding behavior
  - Pheasant Hen vs Rooster
  - History of Northern Bobwhite Quail
  - Quail habitat needs
  - Quail female vs male
  - Quail Covey behavior
  - Importance of Native Warm Season Grasses (NWSG)
- Hunting regulations
  - Hunting seasons
  - Bag and possession limits
  - Licenses and permits
  - Equipment
  - Clothing
  - Post-harvest procedures
  - Public vs. Private land access
- Hunter equipment
  - List of common equipment used by upland hunters
- Upland hunter safety
  - Upland safety tips when hunting solo, in a group, and with a dog
- Hunting dogs
  - Hunting strategies when using a pointer
  - Hunting strategies when using a flusher
- Hunting strategies
  - Cover a step by step day of upland hunting on a public land site
- Controlled pheasant hunting program
  - Cover a step by step day of a controlled pheasant hunt

## **Turkey Hunting 101**

- Hunters are conservationist
  - Hunters sustain wildlife conservation through the Pittman-Roberson Act
  - Hunting numbers are declining
  - Hunting is a tool in managing wildlife populations
  - Play a role in natural resource conservation
- Hunting regulations
  - Hunting seasons
  - Bag and possession limits
  - Legal game
  - Licenses and permits
  - Equipment
  - Clothing
  - Post-harvest procedures
  - Public vs. Private land access
- Turkey ecology
  - Turkey species ranges in North America
  - Seasonal behavior

- Scouting techniques
  - Optimal turkey habitat
  - Turkey sign
  - Using satellite data to find suitable habitat
- Hunting tactics and setups
  - Decoy placement
- Turkey vocalizations and calling
  - Overview of turkey vocalizations and their meanings
  - Common turkey calls and how to use them

## **Turkey Hunting 102**

- Wild turkey ecology
  - Turkey species ranges in North America
  - History of wild turkey in Illinois
  - Turkey seasonal behavior
- Turkey Vocalizations
  - Overview of turkey vocalizations and their meanings
- Turkey calling
  - Review of turkey calls with live video demonstration
- Locating roosts
  - Roosting habitat features
  - Using satellite mapping to find habitat
  - Using locator calls
- Roost hunting strategies
  - Learn how to properly hunt a roost location
- Decoy placement and hunting strategies
  - Review decoy placement techniques
- Turkey hunting scenarios
  - A step by step run through of turkey hunting season starting at day 1, day 2, and onward

## **Waterfowl Hunting 101**

- Hunters are conservationist
  - Hunters sustain wildlife conservation through the Pittman-Roberson Act and Federal Duck Stamp
  - Hunting is a tool in managing wildlife populations
  - Play a role in natural resource conservation
- Waterfowl ecology
  - What birds are considered waterfowl
  - Migration flyways
  - Waterfowl banding program
  - Waterfowl habitat
  - Dabbling vs Diving ducks
  - Resident Canada geese vs migratory Canada geese
  - Snow geese
- Hunting regulations

- Hunting seasons
  - Bag and possession limits
  - Legal game
  - Licenses and permits
  - Equipment
  - Clothing
  - Post-harvest procedures
  - Public vs. Private land access
- Hunting strategies
  - Decoys
  - Calls and calling
  - Blinds
- Decoy strategies
  - Elements that dictate decoy placement
  - Types of decoy spreads

## **Waterfowl Identification 101**

- Hunters are conservationist
  - Hunters sustain wildlife conservation through the Federal Duck Stamp
- Why waterfowl identification is important for hunters
- Dabbling vs Diving ducks
- Waterfowl anatomy
- Common Illinois Duck species overview
  - Identification characteristics
  - Common behavior
- Common Illinois Goose species overview
  - Identification characteristics
  - Common behavior
- Interactive quiz

## **Plant ID (Woody plants)**

- Identification techniques
  - Leaf type
  - Leaf arrangement
  - Leaf margin
- Nut-bearing species overview
  - Identification characteristics
  - Why it is useful to game species
- Fruit-bearing species overview
  - Identification characteristics
  - Why it is useful to game species
- Shrubs and woody vines species overview
  - Identification characteristics
  - Why it is useful to game species

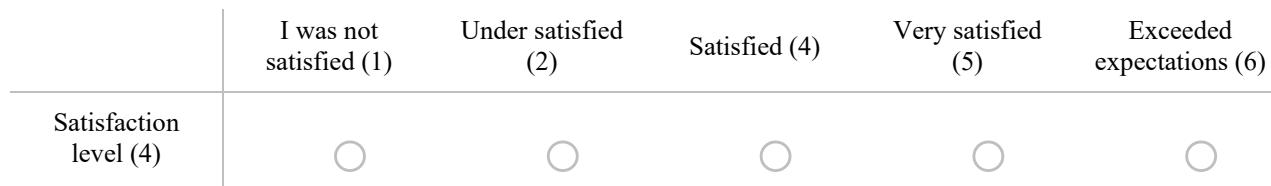
## Appendix B: Webinar Post-Workshop Survey

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What webinar did you attend?

- Turkey 102 (1)
  - Deer Hunting 101 (2)
  - Waterfowl ID (3)
  - Squirrel, Rabbit, and Dove Hunting 101 (4)
  - Waterfowl Hunting 101 (5)
  - Upland Hunting 101 (6)
  - Deer Hunting 102 (7)
  - Deer Scouting Techniques (8)
  - I registered but did not attend (9)
- 

How satisfied were you with the webinar you attended?



1. Have you ever accompanied someone hunting, but not hunted yourself?

- Yes (1)
- No (2)

---

2. Have you ever eaten wild game meat?

- Yes (1)
  - No (2)
  - I don't know (3)
- 

3. Do you have friends or family that hunt?

- Yes (1)
  - No (2)
  - I don't know (3)
-

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

Deer (1)

Turkey (2)

Pheasant (3)

Dove (4)

Quail (5)

Squirrel (6)

Rabbit (7)

Duck (8)

Goose (9)

Other: (10) \_\_\_\_\_

5. Why do you want to hunt?

Enter response below: (1) \_\_\_\_\_

6. How long have you been interested in hunting?

less than a year (1)

1 year (2)

2 years (3)

3 years (4)

4 years (5)

5 years+ (6)

---

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

Enter response below: (1) \_\_\_\_\_

---

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

less than a year (1)

1 year (2)

2 years (3)

3 years (4)

4 years (5)

5 years+ (6)

---

9. Have you ever shot a firearm?

Yes (1)

No (2)

---

10. Have you ever shot a compound bow?

Yes (1)

No (2)

---

11. Have you ever shot a cross bow?

Yes (1)

No (2)

---

12a. How often do you use public land?

Never (1)

Rarely (2)

Sometimes (3)

Often (4)

---

12b. What do you use public land for?

- Running (1)
  - Cycling (2)
  - Hiking (3)
  - Camping (4)
  - Boating (5)
  - Fishing (6)
  - Other: (7) \_\_\_\_\_
- 

13. In what other outdoor activities do you participate?

- Running (1)
  - Cycling (2)
  - Hiking (3)
  - Camping (4)
  - Boating (5)
  - Fishing (6)
  - Other: (7) \_\_\_\_\_
-

14. What is your age?

In years: (1) \_\_\_\_\_

---

15. What is your gender?

Male (1)

Female (2)

---

16a. Are you an Illinois resident?

Yes (1)

No (2)

---

*Display This Question:*

*If 16a. Are you an Illinois resident? = Yes*

16b. How long have you lived in Illinois?

in years: (1) \_\_\_\_\_

---

*Display This Question:*

*If 16a. Are you an Illinois resident? = No*

16d. In what state are you a resident?

State abbreviation: (1) \_\_\_\_\_

---

*Display This Question:*

*If 16a. Are you an Illinois resident? = Yes*

16c. Do you intend to live in Illinois for at least the next 5 years?

- Yes (1)
  - No (2)
  - I don't know (3)
- 

17. How many children do you have?

- 0 (1)
  - 1 (2)
  - 2 (3)
  - 3 (4)
  - 4+ (5)
- 

18. In what range is the combined gross income of your household?

- (1)
  - \$41 - \$60K (2)
  - \$61 - \$80K (3)
  - \$81 - \$100K (4)
  - \$101K+ (5)
-

Please provide us with any suggestions that would improve the webinar content or webinar experience for the future.

Please answer below: (5) \_\_\_\_\_

---

## **Appendix C: Cover Letter for Qualtrics survey**

Dear (First Name) (Last Name),

The Illinois Learn to Hunt program would like to extend a sincere thank you for attending a past Learn to Hunt event. We are asking you to provide information about your activities during the 2019-2020 hunting seasons in Illinois. **Even if you did not hunt in Illinois during the 2019-2020 seasons, we ask that you please take a few minutes to complete the portions of the questionnaire that pertain to you.**

This study, jointly conducted by the Illinois Department of Natural Resources and the Illinois Natural History Survey, is an effort to learn about hunting activities in Illinois. Results of this study will help wildlife managers make decisions to improve hunting opportunities. **Your responses are voluntary and completely confidential.** By responding you will help us more effectively manage wildlife and hunting in Illinois.

Questionnaire link: (Unique Survey Link)

If you have any questions regarding this study, please respond to this email or call us at (217) 300-0875.

Thank you for your valuable feedback.

Illinois Learn to Hunt

[www.learntohuntill.com](http://www.learntohuntill.com)

## **Appendix D: Follow-up Qualtrics Survey**

The Illinois Learn to Hunt program would like to extend a sincere thank you for attending a past event. We realize that you are extremely busy, but we hope that you will participate in this brief survey because of the important input you can bring. In order to better serve you and future hunters, we have designed this survey as a follow-up to help us further refine the program by increasing the scope and reach of program events. Thank you for your feedback. If you have any questions about this survey, please contact Dan Stephens at [danieljs@illinois.edu](mailto:danieljs@illinois.edu).



What is your home zip code?

---

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

Learn to Hunt Workshop

Learn to Hunt Seminar

Learn to Hunt Mentored Hunt

---

How many Illinois Learn to Hunt program events have you attended?

1

2

3

4+

Did you register for an event, but were not able to attend?

- Yes
- No

Which of the following best describes why you were unable to attend the event? (Please choose all that apply)

- Bad weather
- Event was canceled
- Forgot about the event
- Scheduling conflict
- Didn't think the event would be helpful
- Other
- N/A

---

Did you purchase a hunting license for the 2019-2020 hunting season?

- Yes
- No

Did you purchase a Federal Migratory Duck Stamp for the 2019-2020 hunting season?

- Yes
- No

Did you purchase a state waterfowl hunting permit?

- Yes
- No

Did you apply for a permit (for example, for a duck blind, firearm deer permit on public land, free upland pheasant hunt, etc.) through the Illinois DNR's lottery application system for the 2019-2020 hunting season?

- Yes
- No

Were you successful in drawing a permit?

- Yes
- No

---

Have you sought out a mentor to help you learn to hunt?

- Yes
  - No
-

Did you go hunting with this mentor?

Yes

No

---

What characteristics would you look for in a mentor?

---

Did you hunt during the 2019-2020 hunting season?

Yes

No

What species did you hunt for during the 2019-2020 season?

- Deer
  - Turkey
  - Pheasant
  - Duck
  - Goose
  - Dove
  - Quail
  - Rabbit
  - Squirrel
- 

Which of the following did you use to hunt deer last year?

- Shotgun
  - Muzzleloader
  - Compound bow
  - Traditional bow e.g. longbow, recurve bow
  - Crossbow
-

Did you share your harvest with any non-hunting friends?

Yes

No

---

Did you hunt public or private land during the 2019-2020 hunting season?

Public land

Private land

Both

---

Which of the following did you hunt most often during the 2019-2020 hunting season?

Public land

Private land

About how many hours did you spend hunting & scouting during the 2019-2020 hunting season?

Less than 10 hours

10 - 20 hours

20 - 30 hours

30 - 40 hours

More than 40 hours

---

What prevented you from hunting more often during the 2019-2020 hunting season? (Choose all that apply)

	Not at All	A Little	A Moderate Amount	A Lot	A Great Deal
Costs of Licenses/permits	<input type="radio"/>				
Costs of hunting equipment	<input type="radio"/>				
Access to public hunting land close to home	<input type="radio"/>				
Access to hunting opportunities close to home	<input type="radio"/>				
Crowding at public sites	<input type="radio"/>				
Work/family commitments	<input type="radio"/>				
Safety concerns	<input type="radio"/>				
Hunting skills/knowledge	<input type="radio"/>				
Lack of people to hunt with	<input type="radio"/>				
Childcare obligations	<input type="radio"/>				
Other recreational activities take up my free time	<input type="radio"/>				
My friends/family don't approve of me hunting	<input type="radio"/>				
Health problems	<input type="radio"/>				
Hunting regulations are too confusing	<input type="radio"/>				
Lack of transportation to get to hunting sites	<input type="radio"/>				
Lack of motivation	<input type="radio"/>				

What motivated you to go hunting during the 2019-2020 hunting season? (Choose all that apply)

	Not at All	A Little	A Moderate Amount	A Lot	A Great Deal
I hunt to be away from the everyday routine of home	<input type="radio"/>				
Get away from crowded areas	<input type="radio"/>				
Enjoy nature	<input type="radio"/>				
Test my abilities	<input type="radio"/>				
Develop my skills	<input type="radio"/>				
Experience challenge	<input type="radio"/>				
Share quality time with friends and family	<input type="radio"/>				
Provide wild game for family	<input type="radio"/>				
Provide meat from a sustainable source	<input type="radio"/>				
Provide wild game for friends	<input type="radio"/>				
Other:	<input type="radio"/>				

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

Yes

No

How much did you spend on hunting equipment since attending a Learn to Hunt event?

- Less than \$100
  - Between \$100 & \$250
  - Between \$250 & \$500
  - Between \$500 & \$1000
  - Over \$1000
- 

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

- Yes
  - No
- 

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

- Yes
  - No
- 

Did you prepare any meals using wild game you harvested?

- Yes
  - No
- 

What has been the most confusing Illinois hunting regulation you have come across?

---

How much knowledge do you have of chronic wasting disease (CWD)?

	None	Very Little	Some	Moderate	Extensive
CWD Knowledge	<input type="radio"/>				

---

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

- Yes
  - No
- 

Did you join a conservation or hunting organization this past year? (e.g. NWTF, Pheasants Forever, Ducks Unlimited)

- Yes
  - No
- 

Which organization did you become a member of?

---

---

Have you considered joining a conservation or hunting organization?

- Yes
  - No
-

If you had to pick one type of shooting range to be developed in your area, what type would it be?

- Archery
  - Shotgun/Muzzleloader
  - Handgun
- 

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 use this program?

- Yes
  - Maybe
  - No
- 

Since attending a Learn to Hunt event, have you discussed hunting with non-hunting friends, family, or acquaintances?

- Yes
  - No
- 

Have you convinced any of your friends or family to learn to hunt?

- Yes
  - No
-

How likely are you to discuss the following with friends, family, or acquaintances?

	Not at All	A Little	A Moderate Amount	A Lot	A Great Deal
Hunters make important financial contributions to wildlife conservation.	<input type="radio"/>				
Recruiting the next generation of hunters is important for the future of hunting.	<input type="radio"/>				
Hunting is a critical tool to manage wildlife populations.	<input type="radio"/>				
Hunting provides a sustainable source of food.	<input type="radio"/>				
Hunters play an important role as advocates for wild things and wild spaces.	<input type="radio"/>				

Have you utilized the Illinois Learn to Hunt eLearning modules found at [www.learntohuntill.com](http://www.learntohuntill.com)?

Yes

No

Do you find social media ads influence your purchases or participation in hunting-related activities?

Yes

No

Do you have suggestions for digital resources (e.g. videos, webinars, eLearning modules) the Learn to Hunt program could provide that could help you become a better hunter?

---

Do you have suggestions for Learn to Hunt events (e.g. game calling clinics, advanced hunting tactics) that could help you become a better hunter?

---

Rank from 1 (most) to 7 (least) the resources you have used to learn Illinois hunting regulations.

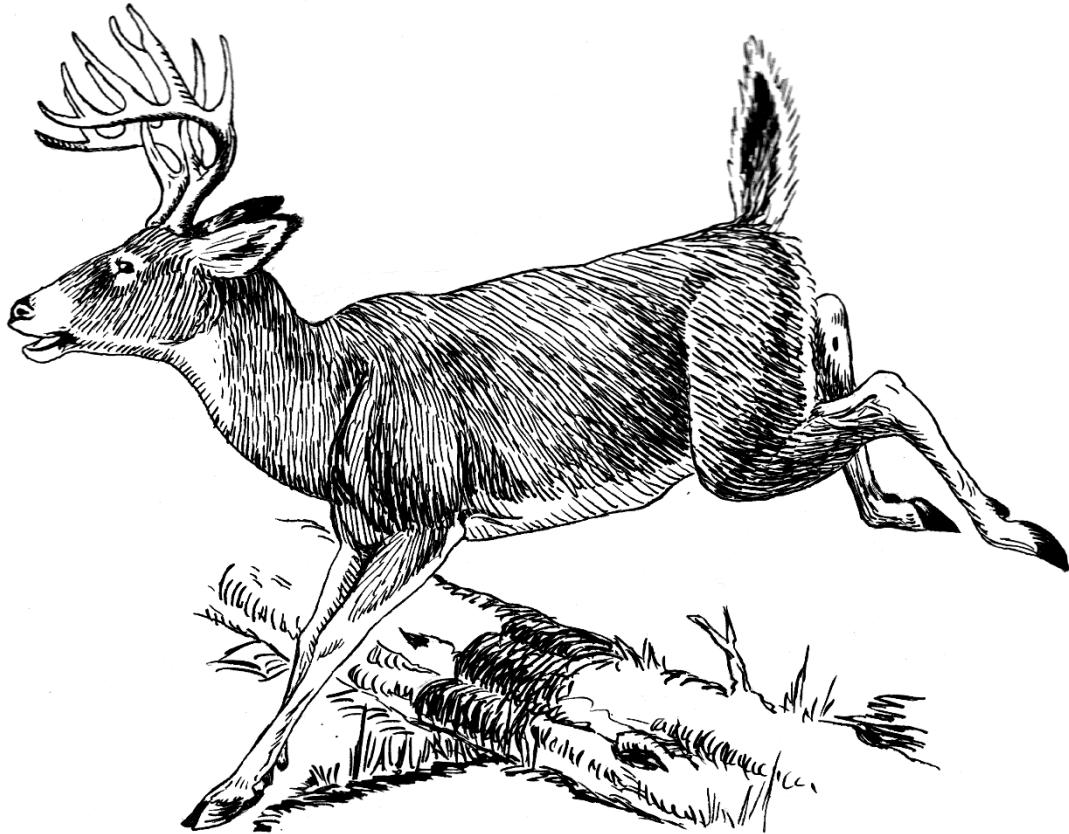
- \_\_\_\_\_ Annual Illinois Digest of Hunting and Trapping Regulations (paper version)
  - \_\_\_\_\_ Annual Illinois Digest of Hunting and Trapping Regulations (online version)
  - \_\_\_\_\_ Formal Instruction (e.g., Learn to Hunt workshop)
  - \_\_\_\_\_ Informal Instruction (e.g., hunting mentor)
  - \_\_\_\_\_ Word-of-mouth
  - \_\_\_\_\_ General Web Search
  - \_\_\_\_\_ Other
- 

If the Illinois DNR developed a new online tool to help improve your hunting preparation, what would be most useful?

- Table to query odds of drawing a site-specific or county permit for a given species
  - Table to query harvest statistics of species by site and county
  - Application and drawing results for daily hunting spots, such as blinds, conducted digitally before the day of the hunt
-

**Appendix E: Illinois Hunter R3 Mail Survey – 4 Page Questionnaire**

**Illinois Hunter Survey  
2019-20 Season**



**Illinois Department of Natural Resources  
Division of Wildlife Resources**

**&**

**The Illinois Natural History Survey**

**ILLINOIS**  
Illinois Natural History Survey  
PRAIRIE RESEARCH INSTITUTE

The Department of Natural Resources is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under the Illinois Compiled Statutes, The Wildlife Code, Chapter 520. Disclosure of information is voluntary. This study is funded by the federal Wildlife Restoration Fund through your purchase of sporting arms and ammunition.

**THANK YOU FOR YOUR COOPERATION!**

All of your responses will be kept confidential.

Please return this survey in the postage-paid return envelope provided.

1. Did you purchase a hunting license for the 2019-2020 hunting season?  Yes  No

2. Which of the following best describes how often you purchase an Illinois hunting license?

Every year  Most years  Occasional years  Rarely  Never

3. Did you purchase a Federal Migratory Duck Stamp for the 2019-2020 hunting season?

Yes  No

4. Did you purchase a state waterfowl stamp for the 2019-2020 hunting season?  Yes  No

5. Did you apply for a permit (for example, a duck blind, firearm deer permit on public land, free upland pheasant hunt, etc.) through the Illinois DNR's lottery application system for the 2019-2020 hunting season?

Yes  No

5a. Were you successful in drawing a permit?  Yes  No

6. Did you hunt during the 2019-2020 season?  Yes  No

6a. What species did you hunt for during the 2019-2020 season?

Deer  Pheasant  Duck  Quail  Rabbit  
 Turkey  Goose  Dove  Squirrel

6b. If you hunted deer during the 2019-2020 hunting season, which of the following methods of take did you use?

Shotgun  Muzzleloader  Compound Bow  Traditional Bow  Crossbow

7. Did you hunt public or private land during the 2019-2020 hunting season?

Public land  Private land  Both

7a. If Both, which of the following did you hunt most often during the 2019-2020 hunting season?

Public land  Private land

8. This past year, did you search for any wild game recipes?  Yes  No

9. Did you prepare any meals using wild game you harvested?  Yes  No

10. Did you share your harvest with any non-hunting friends?  Yes  No

11. What prevented you from hunting more often during the 2019-2020 hunting season?

	Not at all	A little	A moderate amount	A lot	A great deal
Costs of license/permits	1	2	3	4	5
Costs of hunting equipment	1	2	3	4	5
Access to public hunting land close to home	1	2	3	4	5
Access to hunting opportunities close to home	1	2	3	4	5
Crowding at public sites	1	2	3	4	5
Work/family commitments	1	2	3	4	5
Safety concerns	1	2	3	4	5
Hunting skills/knowledge	1	2	3	4	5
Lack of people to hunt with	1	2	3	4	5
Childcare obligations	1	2	3	4	5
Other recreational activities take up my free time	1	2	3	4	5
My friends/family don't approve of me hunting	1	2	3	4	5
Health problems	1	2	3	4	5
Hunting regulations are too confusing	1	2	3	4	5
Lack of motivation	1	2	3	4	5

12. How likely are you to discuss the following with friends, family, or acquaintances?

	Not at all	A little	A moderate amount	A lot	A great deal
Hunters make important financial contributions to wildlife conservation	1	2	3	4	5
Recruiting the next generation of hunters is important for the future of hunting	1	2	3	4	5
Hunting is a critical tool to manage wildlife populations	1	2	3	4	5

Hunting provides a sustainable source of food	1	2	3	4	5
Hunters play an important role as advocates for wild things and wild spaces	1	2	3	4	5

13. What motivates you to go hunting?

	Not at all	A little	A moderate amount	A lot	A great deal
I hunt to be away from the everyday routine of home	1	2	3	4	5
Get away from crowded areas	1	2	3	4	5
Test my abilities	1	2	3	4	5
Develop my skills	1	2	3	4	5
Experience challenge	1	2	3	4	5
Share quality time with friends and family	1	2	3	4	5
Provide wild game for my family	1	2	3	4	5
Provide meat from a sustainable source	1	2	3	4	5
Provide wild game for friends	1	2	3	4	5

### Background Information

1. How many years have you hunted in Illinois? \_\_\_\_\_ Years
2. At what age did you first hunt? \_\_\_\_\_ Years-old
3. Please give your age. \_\_\_\_\_ Years-old
4. What is your gender? \_\_\_\_\_ Male      \_\_\_\_\_ Female

### Comments



**THANK YOU FOR YOUR TIME AND ASSISTANCE!**

**Please return this survey in the postage-paid envelope provided.**

The Illinois Department of Natural Resources receives federal assistance and therefore must comply with federal anti-discrimination laws. In compliance with the Illinois Human Rights Act, the Illinois Constitution, Title VI of the 1964 Civil Rights Act, Section 504 of the Rehabilitation Act as amended, and the U.S. Constitution, the Illinois Department of Natural Resources does not discriminate on the basis of race, color, sex, national origin, age, or disability. If you believe you have been discriminated against in any program, activity, or facility, please contact the Equal Employment Opportunity Officer, Department of Natural Resources, One Natural Resources Way, Springfield, IL 62701-1787, (217) 782-7616 or the Officer of Human Resources, U.S. Fish and Wildlife Service, Washington, D.C. 20240.

**Appendix F: Illinois Hunter R3 Mail Survey – Cover Letter**

Dear Illinois Hunter,

Your name was randomly selected from the list of 2019 Illinois hunting license purchasers. We are asking you to provide information about your activities during the 2019-2020 hunting seasons in Illinois. **Even if you did not hunt in Illinois during the 2019-2020 seasons, we ask that you please take a few minutes to complete the portions of the questionnaire that pertain to you.** A postage paid envelope is providing for returning the questionnaire to us.

This study, jointly conducted by the Illinois Department of Natural Resources and the Illinois Natural History Survey, is an effort to learn about hunting activities in Illinois. Results of this study will help wildlife managers make decisions to improve hunting opportunities. **Your responses are voluntary and completely confidential.** By responding you will help us more effectively manage wildlife and hunting in Illinois.

If you do not wish to participate, please return the blank questionnaire so we can remove your name from our mailing list.

If you have any questions regarding this study, please call us at (217) 300-0875.

Sincerely,



Craig A. Miller

Human Dimensions Research Program

## **Appendix G: 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 to 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?
  - a. Follow-up: What, if any, steps have you taken to address [X constraint]?
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 H: Focus Group Consent Form**

You are being asked to participate in a voluntary research study. The purpose of this study is to better understand the challenges you face as a new hunter. Participating in this study will involve participating in a focus group and your participation will last approximately 60 minutes. 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 consent form, you can always contact a study team member, or you can call the Learn to Hunt program leader whose name and phone number is on this form.

**Principal Investigator Name and Title:** Craig Miller, Leader Human Dimensions Program

**Department and Institution:** Illinois Natural History Survey

**Contact Information:** craigm@illinois.edu

### **Why am I being asked?**

You are being asked to be a participant in a research study about Illinois hunting. The purpose of this research is to better understand your perceptions and attitudes towards Illinois hunting. You have been asked to participate in this research because you have previously registered for an Illinois Learn to Hunt workshop. Approximately 12 participants will be involved in this research at the University of Illinois at Urbana-Champaign.

Your participation in this research is voluntary. Your decision whether or not to participate will not affect your current or future dealings with the University of Illinois at Urbana-Champaign. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

### **What procedures are involved?**

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.

This research will be performed in Chicago, IL. You will need to come to the study site 1 time. This visit will last approximately 60 minutes.

### **What are the potential risks and discomforts?**

N/A

**Are there benefits to participating in the research?**

Study participants will be compensated with a \$50 Bass Pro Shops gift card.

**What other options are there?**

You have the option to not participate in this study.

**Will my study-related information be kept confidential?**

We will use all reasonable efforts to keep your personal information confidential, but we cannot guarantee absolute confidentiality. When this research is discussed or published, no one will know that you were in the study. But, when required by law or university policy, identifying information (including your signed consent form) may be seen or copied by: a) The Institutional Review Board that approves research studies; b) The Office for Protection of Research Subjects and other university departments that oversee human subjects research; c) University and state auditors responsible for oversight of research; d) Federal regulatory agencies such as the Office of Human Research Protections in the Department of Health and Human Services; or e) the Illinois Department of Natural Resources the funder of this research.

**Will I be reimbursed for any expenses or paid for my participation in this research?**

You will be offered compensation for being in this study in the form of a \$50 Bass Pro gift card

**Can I withdraw or be removed from the study?**

If you decide to participate, you are free to withdraw your consent and discontinue participation at any time. The researchers also have the right to stop your participation in this study without your consent if they believe it is in your best interests, you were to object to any future changes that may be made in the study plan.

**Will data collected from me be used for any other research?**

Your de-identified information could be used for future research without additional informed consent.

**Who should I contact if I have questions?**

Contact the researchers Dan Stephens, Asst. Scientist at 217-300-0875 or [danieljs@illinois.edu](mailto:danieljs@illinois.edu) if you have any questions about this study or your part in it, or if you have concerns or complaints about the research.

**What are my rights as a research subject?**

If you have any questions about your rights as a participant in this study, please contact the University of Illinois at Urbana-Champaign Office for the Protection of Research Subjects at 217-333-2670 or [irb@illinois.edu](mailto:irb@illinois.edu).

I have read the above information. I have been given an opportunity to ask questions and my questions have been answered to my satisfaction. I agree to participate in this research. I will be given a copy of this signed and dated form.

---

Signature

---

Date

---

Printed Name

---

Signature of Person Obtaining Consent

---

Date (must be same as subject's)

---

Printed Name of Person Obtaining Consent

## Appendix I: Hunting Opportunity at Illinois DNR Sites – Region 1

Site Name	Dove	Quail	Pheasant	Deer Firearm	Deer Archery	Deer Muzzlelo- ader	Rabbit	Squirrel	Spring Turkey	Fall Turkey	Duck	Goose
<b>Anderson Lake</b>	100%	100%		100%		100%	100%	100%	100%	100%	100%	57%
<b>Apple River Canyon - Salem &amp; Thompson Units</b>				100%	100%	43%	100%	100%	100%	100%		
<b>Argyle Lake</b>	92%	100%		100%	100%	100%	100%	100%	100%	100%		
<b>Banner Marsh</b>	34%	21%	21%		100%		50%				100%	100%
<b>Big Bend</b>	100%	100%	100%		100%		100%	100%	100%	100%		
<b>Big River</b>	100%	90%	90%	100%	100%		93%	100%	100%	100%		
<b>Bradford Habitat Area</b>		25%	25%		31%							
<b>Buffalo Prairie Pheasant Habitat Area</b>		100%	100%			100%						
<b>Buffalo Rock State Park/Effigy Tumuli/ Pecumsagan Creek (Black Ball Mine) Nature Preserve</b>					100%							
<b>Castle Rock</b>				100%	100%	43%	0%	31%	100%	100%		
<b>Donnelley State Fish &amp; Wildlife Area</b>											71%	57%
<b>Double T State Fish and Wildlife Area</b>	34%										100%	91%
<b>Doublin Highlands Pheasant Habitat Area</b>		100%	100%		57%		100%					
<b>Franklin Creek State Natural Area</b>				100%	88%					94%		
<b>Franklin Creek - Nachusa Prairie SNA</b>			24%									
<b>French Bluff Natural Area</b>				100%	95%	43%		100%	100%	100%		
<b>George S. Park State Natural Area</b>				100%	100%	100%						
<b>Green River - Deer and Fall Turkey, Spring Turkey, Upland Game, and Dove and Squirrel</b>	34%	31%	31%	100%	100%	100%	20%	48%	100%			
<b>Hanover Bluff State Natural Area</b>				100%	100%	100%	81%	93%	100%	100%		
<b>Henderson Creek SFWA</b>											100%	100%
<b>Hennepin Canal State Trail</b>	34%				100%					100%		

## Appendix I Continued: Hunting Opportunity at Illinois DNR Sites – Region 1

Site Name	Dove	Quail	Pheasant	Deer Firearm	Deer Archery	Deer Muzzlelo- ader	Rabbit	Squirrel	Spring Turkey	Fall Turkey	Duck	Goose
<b>Ilo Dillin State Habitat Area</b>		100%	100%		31%		100%					
<b>Johnson Sauk Trail State Recreation Area (Archery Deer, Dove, Spring Turkey, Upland)</b>	34%	33%	33%		100%		21%	28%	100%			
<b>Jubilee College State Park</b>	34%	39%	39%	100%	100%	43%	100%	100%	100%	100%		
<b>Kishwaukee River - Spring Turkey and Fish &amp; Wildlife Area</b>				100%	100%				100%	100%		
<b>Lake DePue State Fish &amp; Wildlife Area</b>											100%	29%
<b>Lake DePue Three I Unit</b>											100%	29%
<b>Lake Le-Aqua-Na</b>	34%	0%	0%	79%								
<b>Little Rock Creek State Habitat Area</b>		25%	25%		49%		16%					
<b>Lowden Memorial State Park</b>					86%							
<b>Lowden-Miller</b>				100%	100%			15%	100%	100%		
<b>Mackinaw River State Fish &amp; Wildlife Area</b>	34%	100%	100%	100%	100%		100%	29%	100%	100%		
<b>Manito Pheasant Habitat Area</b>		100%	100%				100%					
<b>Marseilles State Fish &amp; Wildlife Area (Upland Game/Furbearer), (Deer/Archery Turkey), (Spring Turkey)</b>	100%	90%	90%	100%	81%	100%	93%	68%	58%	74%		
<b>Marseilles State Fish &amp; Wildlife Area (Duck Ranch)</b>					36%				33%	100%	100%	
<b>Marseilles State Fish &amp; Wildlife Area (Marshall Unit Waterfowl)</b>										100%	100%	
<b>Marseilles State Fish &amp; Wildlife Area (Sparland Unit - Waterfowl)</b>										100%	100%	

## Appendix I: Hunting Opportunity at Illinois DNR Sites – Region 1

Site Name	Dove	Quail	Pheasant	Deer Firearm	Deer Archery	Deer Muzzlelo- ader	Rabbit	Squirrel	Spring Turkey	Fall Turkey	Duck	Goose
<b>Marseilles State Fish &amp; Wildlife Area (Upland and Forest Game)</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
<b>Matthiessen Dove</b>	34%								70%	100%		
<b>Matthiessen State Park/Vermillion River Day Use Area (Squirrel, Coyote, &amp; Spring Turkey)</b>												
<b>Mautino State Fish &amp; Wildlife Area</b>	34%	25%	25%		100%				100%	92%		
<b>Maytown Pheasant Habitat Area</b>		24%	24%		31%		15%					
<b>Miller-Anderson Woods State Natural Area</b>				100%	100%	100%						
<b>Mississippi Pallisades</b>				100%	100%				74%	100%		
<b>Mississippi River Pool 16</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Mississippi River Pool 17 &amp; 18</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	1000%	100%
<b>Mitchell's Grove Nature Preserve</b>				100%	100%	100%						
<b>Morrison Rockwood</b>	34%			43%	59%			11%	74%			
<b>Pekin Lake State Fish &amp; Wildlife Area</b>					100%						100%	100%
<b>Powerton Lake State Fish &amp; Wildlife Area</b>											100%	100%
<b>Rall Woods</b>				100%	100%	43%	100%	100%		100%		
<b>Rice Lake</b>				0%	74%						100%	100%
<b>Rice Lake / Big Lake - Walk In</b>											100%	100%
<b>Rice Lake / Copperas Creek Rock Cut State Park (Disabled Hunt)</b>											100%	100%
<b>Rockton Bog State Natural Area</b>					100%							
<b>Sand Prairie</b>	34%	24%	24%				15%					
<b>Sandy Ford Land and Water Reserve</b>				100%	100%	100%		70%	100%	100%		

## Appendix I: Hunting Opportunity at Illinois DNR Sites – Region 1

Site Name	Dove	Quail	Pheasant	Deer Firearm	Deer Archery	Deer Muzzlelo- ader	Rabbit	Squirrel	Spring Turkey	Fall Turkey	Duck	Goose
<b>Shabbona Lake - Dove and Deer, Waterfowl</b>	34%				100%						78%	78%
<b>Sinnissippi Lake State Fish and Wildlife Area</b>										100%	86%	
<b>Snakeden Hallow</b>	34%				100%		23%					65%
<b>Spoon River State Forest</b>	100%	100%	100%	100%	100%		100%	100%	100%	100%		
<b>Spring Lake - Bottoms Unit (Waterfowl)</b>											46%	28%
<b>Spring Lake - Waterfowl and Wildlife Area</b>					100%			22%		100%	100%	100%
<b>Starved Rock / Matthiessen DOO Shotgun Deer</b>				100%								
<b>Starved Rock / Matthiessen State Park (Deer/Turkey)</b>				100%	100%	100%				100%		
<b>Starved Rock Land Waterfowl</b>											100%	100%
<b>Starved Rock Pool</b>											100%	100%
<b>Starved Rock Spring Turkey</b>								100%				
<b>Steward Pheasant Habitat Area</b>	0%	24%	24%				15%					
<b>Tapley Woods</b>				100%	100%	43%	100%	100%	100%	100%		
<b>Victoria Pheasant Habitat Area</b>	34%	25%	25%				16%					
<b>Ward's Grove Nature Preserve</b>				100%	100%	43%						
<b>White Pines State Park</b>				86%	86%							
<b>Whitefield Pheasant Habitat Area</b>	25%	25%	0%	31%			16%					
<b>Winston Tunnel State Natural Area</b>				100%	100%	43%	100%	100%	100%	100%		
<b>Witkowsky State Fish Wildlife Area</b>				100%	85%	43%	58%	31%	100%	100%		
<b>Woodford State Fish &amp; Wildlife Area (Upland) and (Waterfowl)</b>					25%			30%			100%	100%

## Appendix J: Hunting Opportunity at Illinois DNR Sites – Region 2

Site Name	Dove	Quail	Pheasant	Deer Firearm	Deer Archery	Deer Muzzleloader	Rabbit	Squirrel	Spring Turkey	Fall Turkey	Duck	Goose
<b>Adeline Jay Geo-Karis Illinois Beach State Park Archery Deer</b>					100%							
<b>Black Crown Marsh Waterfowl</b>										57%	58%	
<b>Braidwood State Fish and Wildlife Area (Waterfowl)</b>									70%	67%		
<b>Chain O' Lakes State Park</b>	100%		32%	30%	15%		2%	1%		15%		
<b>Chain O' Lakes State Park (Waterfowl)</b>										100%	100%	
<b>Des Plaines Game Propagation Center</b>					89%							
<b>Des Plaines State Fish and Wildlife Area</b>	100%	7%	82%	30%	100%		7%					
<b>Des Plaines State Fish and Wildlife Area - Waterfowl</b>									100%	100%		
<b>Fox River - Kendall County (Waterfowl)</b>									100%	100%		
<b>Goose Lake Prairie / Heidecke Lake Deer &amp; Squirrel</b>				100%	98%	30%		38%				
<b>Heidecke Lake - Waterfowl</b>									70%	67%		
<b>I&amp;M Canal Trapping</b>												
<b>James Pate Philip State Park and Heron Woods State Habitat Area</b>				100%								
<b>Kankakee River State Park</b>	100%		100%		100%			55%	100%	100%		
<b>Kankakee River State Park - Waterfowl</b>										100%	100%	
<b>Kankakee River State Park Furbearer</b>												

## Appendix J Continued: Hunting Opportunity at Illinois DNR Sites – Region 2

Site Name	Dove	Quail	Pheasant	Deer Firearm	Deer Archery	Deer Muzzleloader	Rabbit	Squirrel	Spring Turkey	Fall Turkey	Duck	Goose
<b>Mazonia (Waterfowl)</b>											70%	67%
<b>Mazonia-Braidwood</b>			15%		100%							
<b>Momence Wetland Land &amp; Water Reserve - Waterfowl</b>											88%	92%
<b>Momence Wetlands Land &amp; Water Reserve</b>				100%	100%				55%	100%		
<b>Moraine Hills State Park Firearm Deer</b>				100%								
<b>Redwing Slough / Deer Lake Waterfowl</b>											43%	29%
<b>Silver Springs</b>	33%	100%	88%		100%			4%	16%			
<b>Vesely Prairie LWR - Wilmington Shrub Prairie</b>				100%	100%				100%			
<b>Volo Bog / Moraine Hills (Archery Deer)</b>					75%							
<b>William Powers Waterfowl</b>											82%	71%

## Appendix K: Hunting Opportunity at Illinois DNR Sites – Region 3

Site Name	Dove	Quail	Pheasant	Deer Firearm	Deer Archery	Deer Muzzlelo- ader	Rabbit	Squirrel	Spring Turkey	Fall Turkey	Duck	Goose
Birkbeck Habitat Area	100%	100%	100%	100%	100%	60%	100%	100%	100%	100%	100%	100%
Butterfield Trail State Recreation Area				100%	100%	60%		100%	100%	100%		
Chatsworth State Habitat Area	100%	100%				100%						
Clifton Pheasant Habitat Area	13%	13%				13%						
Clinton Lake Handicapped Waterfowl											43%	29%
Clinton Lake SRA (Handicapped - Deer)				60%								
Clinton Lake State Recreation Area				100%	100%	100%			100%	100%		
Eagle Creek State Park	100%	100%		100%		100%	100%	49%	34%			
Finfrock	13%	13%		30%		13%						
Fox Ridge	100%	100%	100%	100%	100%		100%	100%	100%	100%	100%	100%
Gifford Pheasant Habitat Area	13%	13%				13%						
Hallsville	13%	13%		30%		13%						
Harry "Babe" Woodyard	100%	13%	13%	100%	100%	60%	13%	100%	100%	100%		
Herschel Workman	13%	13%				13%						
Hidden Springs	100%	100%	100%	100%	100%	60%	100%	100%	100%	100%	77%	
Hindsboro	13%	13%		30%		13%	13%					
Iroquois County State Wildlife Area	100%	100%	100%	100%	100%		100%	100%	100%	100%		
Kickapoo	100%	100%	100%	100%	100%	60%	100%	100%	100%	100%		
Kickapoo Waterfowl											100%	100%
Larry D. Closson Habitat Area	13%	13%		30%		13%	13%	32%			13%	13%
Lincoln Trail State Park				72%				31%		56%		
Loda Pheasant Habitat Area	13%	13%				13%						
Middle Fork	100%	100%	100%	100%	100%	60%	100%	100%	100%	100%		

## Appendix K Continued: Hunting Opportunity at Illinois DNR Sites – Region 3

Site Name	Dove	Quail	Pheasant	Deer Firearm	Deer Archery	Deer Muzzlelo- ader	Rabbit	Squirrel	Spring Turkey	Fall Turkey	Duck	Goose
<b>Milks Grove Pheasant Habitat Area</b>	13%	13%				13%						
<b>Moraine View Deer and Turkey</b>				61%					88%	61%		
<b>Moraine View Upland Game</b>	49%		71%				100%	100%				
<b>Paul C. Burrus</b>	13%	13%		30%			13%	32%	100%			
<b>Perdueville Habitat Area</b>	13%	13%				13%						
<b>Salt Creek Waterfowl Management Area</b>										43%	44%	
<b>Saybrook Habitat Area</b>	13%	13%				13%						
<b>Shelbyville Kaskaskia Unit</b>	100%	13%	13%	100%	100%	60%	13%	100%	100%	100%	100%	
<b>Shelbyville Okaw Unit</b>	100%	13%	13%	100%	100%	60%	13%	100%	100%	100%	100%	
<b>Sibley Habitat Area</b>	13%	13%				13%						
<b>Walnut Point</b>				100%				100%		100%		
<b>Weldon Springs - Piatt County Unit</b>	100%	100%	100%	100%	100%	100%	31%	100%				
<b>Willow Creek</b>	13%	13%		30%			13%	32%				
<b>Wolf Creek State Park</b>	100%	100%	100%	100%			100%		34%			

## Appendix L: Hunting Opportunity at Illinois DNR Sites – Region 4

Site Name	Dove	Quail	Pheasant	Deer Firearm	Deer Archery	Deer Muzzlelo- ader	Rabbit	Squirrel	Spring Turkey	Fall Turkey	Duck	Goose
<b>Beaver Dam</b>				87%				31%	100%	88%		
<b>Bohm Woods Nature Preserve</b>				99%								
<b>Carlyle Lake</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Cedar Glen State Natural Area</b>				100%	68%	100%						
<b>Coffeen Lake State Fish and Wildlife Area</b>	33%	16%	16%	100%	100%	0%	10%	31%	100%	100%	88%	88%
<b>Copperhead Hollow State Fish &amp; Wildlife Area</b>	100%			100%	100%	100%	70%	100%	100%	100%		
<b>Edward R. Madigan State Fish and Wildlife Area</b>	100%											
<b>Eldon Hazlet</b>	49%	100%	100%		100%	0%	100%	100%	100%	100%	100%	100%
<b>Fort de Chartres</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Fort Kaskaskia Historic Site</b>					72%				72%			
<b>Frank Holten</b>					72%				72%			
<b>Freeman Mine</b>	16%	22%	22%				14%					100%
<b>Goode's Woods Nature Preserve</b>					99%							
<b>Henry Allen Gleason Nature Preserve</b>				100%	100%							
<b>Horseshoe Lake-Gabaret, Mosenthein, &amp; Chouteau Island</b>	100%	100%	100%		100%		100%	100%	100%	100%	100%	100%
<b>Horseshoe Lake-Madison</b>	33%				97%	100%			100%		100%	100%
<b>Jim Edgar Panther Creek</b>	68%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
<b>Kaskaskia River</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Kidd Lake State Natural Area</b>					100%						43%	43%
<b>Meredosia Lake</b>											100%	100%
<b>Mississippi River Pools 21, 22 &amp; 24</b>	100%			100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Mississippi River State Fish &amp; Wildlife Area</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Oakford State Conservation Area</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		

## Appendix L Continued: Hunting Opportunity at Illinois DNR Sites – Region 4

Site Name	Dove	Quail	Pheasant	Deer Firearm	Deer Archery	Deer Muzzlelo- ader	Rabbit	Squirrel	Spring Turkey	Fall Turkey	Duck	Goose
<b>Peabody River King</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%		
<b>Pere Marquette State Park</b>	100%			100%	100%	100%		81%	100%	100%		
<b>Randolph County State Recreation Area</b>	100%	100%			100%		100%	100%	100%	100%		
<b>Ray Norbut</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Ray Norbut - Dutch Creek Unit</b>		76%		100%	100%	100%	85%	100%	100%	100%		
<b>Ray Norbut - East Hannibal Unit</b>					100%							
<b>Revis Hill Prairie Nature Preserve</b>				100%	100%	100%						
<b>Sand Ridge State Forest</b>	68%			100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Sangamon County State Conservation Area</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%		
<b>Sanganois State Fish &amp; Wildlife Area</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	46%
<b>Sangchris Lake</b>	22%	20%	20%		100%	100%	14%	12%	100%	100%	100%	100%
<b>Siloam Springs</b>	100%			100%	100%	100%		100%	100%	100%		
<b>Siloam Springs - Buckhorn Unit</b>	100%	57%		100%	100%	100%	64%	100%	100%	100%		
<b>Siloam Springs - Fall Creek</b>					100%							
<b>Sparks Pond Land and Water Reserve</b>					100%							
<b>Turkey Bluffs</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Washington County</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%		
<b>Weinberg-King State Park</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%		
<b>Weinberg-King State Park - Scripps Unit</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%		
<b>Weinberg-King State Park - Spunkey Bottoms Unit</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%		
<b>Zoeller State Natural Area</b>					100%			100%	100%	100%		

## Appendix M: Hunting Opportunity at Illinois DNR Sites – Region 5

Site Name	Dove	Quail	Pheasant	Deer Firearm	Deer Archery	Deer Muzzlelo- ader	Rabbit	Squirrel	Spring Turkey	Fall Turkey	Duck	Goose
<b>Alvah Borah State Habitat Area</b>	100%			100%	100%	100%	100%	100%	100%	100%		
<b>Beall Woods State Park</b>					100%							
<b>Burning Star</b>	100%			100%	100%	100%	100%	100%	100%	17%		
<b>Cache River</b>	100%			100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Campbell Pond</b>	100%			100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Cape Bend State Fish and Wildlife Area</b>				100%	100%	100%		100%	100%	100%	100%	100%
<b>Cedar/Draper Bluff</b>				100%	100%	100%		100%	100%			
<b>Chauncey Marsh</b>	100%	100%		100%	100%		100%	100%	100%	100%	100%	100%
<b>City of Carbondale - Cedar Lake</b>					100%							
<b>Crawford County</b>	100%	100%		100%	100%	100%				100%		
<b>Cretaceous Hills State Natural Area</b>		100%		100%	100%	100%	100%	100%	100%			
<b>Cypress Pond</b>				100%	100%	100%		100%	100%	100%		
<b>Deer Pond</b>				100%	100%	100%		100%	100%	100%		
<b>Devils Island Wildlife Management Area</b>				100%	100%	100%		100%	100%	100%	100%	100%
<b>Dixon Springs</b>	100%			100%	100%	100%			100%	100%		
<b>Dog Island Wildlife Management Area</b>		100%		100%	100%	100%	100%	100%			100%	100%
<b>Embarras River Bottoms State Habitat Area</b>	100%			100%	100%	100%	100%	100%	100%	100%		
<b>Embarras River Waterfowl</b>											65%	65%
<b>Ferne Clyffe</b>		100%		100%	100%	100%	100%	100%	100%	100%		
<b>Flag Pond State Natural Area</b>				100%	100%	100%		100%	100%	100%		
<b>Fort Massac</b>	100%			100%	100%	100%	100%	100%	100%	100%		
<b>Giant City State Park</b>	100%			100%	100%	100%	100%	100%	100%	100%		
<b>Hamilton County</b>		100%		100%	100%	100%	100%	100%	100%	100%		
<b>Horseshoe Lake - Alexander County</b>	30%				50%			32%			73%	72%
<b>Kinkaid Lake</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%	100%	100%

## Appendix M Continued: Hunting Opportunity at Illinois DNR Sites – Region 5

Site Name	Dove	Quail	Pheasant	Deer Firearm	Deer Archery	Deer Muzzlelo- ader	Rabbit	Squirrel	Spring Turkey	Fall Turkey	Duck	Goose
<b>Maxine Loy Land and Water Reserve</b>		15%			100%			14%				
<b>Meeker State Habitat Area</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Mermet Lake State Fish &amp; Wildlife Area</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Mt. Vernon Game Propagation Center</b>	33%	100%		100%	100%	100%	43%	46%	100%	100%		
<b>Newton Lake State Fish &amp; Wildlife Area</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Prairie Ridge SNA Firearm &amp; Muzzleloader Deer</b>				100%		60%						
<b>Prairie Ridge State Natural Area</b>					100%							
<b>Pyramid State Park</b>	100%	100%		100%	100%	100%	100%	84%	100%	100%		
<b>Pyramid State Park - Captain Unit</b>	100%	13%		100%	100%	100%	13%		100%		100%	100%
<b>Pyramid State Park - Denmark Unit</b>	100%	13%		100%	100%	100%	13%		100%		100%	100%
<b>Pyramid State Park - East Conant Unit</b>	100%	13%		100%	100%	100%	13%	100%	100%		100%	100%
<b>Pyramid State Park - Galum Unit</b>	100%	100%		100%	100%	100%	100%	100%	100%			
<b>Ramsey Lake State Park</b>	100%	15%			100%		14%	16%	100%	100%		
<b>Rauchfuss Hill</b>					100%				100%	100%		
<b>Red Hills</b>	100%	100%			100%		100%	100%	100%	100%		
<b>Rend Lake Project Lands and Waters</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Rend Lake State Fish and Wildlife Area</b>		100%		100%	100%		100%	100%	100%	100%	100%	100%
<b>Sahara Woods State Recreation Area</b>	100%	100%	100%		100%		100%	100%	100%	100%		
<b>Saline County</b>	31%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Sam Dale Lake</b>		100%	100%		100%			100%	100%	100%	100%	100%
<b>Sam Parr State Fish and Wildlife Area</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%		
<b>Sielbeck Forest State Natural Area</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%	100%	100%

## Appendix M Continued: Hunting Opportunity at Illinois DNR Sites – Region 5

Site Name	Dove	Quail	Pheasant	Deer Firearm	Deer Archery	Deer Muzzlelo- ader	Rabbit	Squirrel	Spring Turkey	Fall Turkey	Duck	Goose
<b>Skinner Farm State Habitat Area (I-24)</b>	100%	100%	100%	100%	100%	100%	100%					
<b>Stephen A. Forbes</b>	31%	100%	100%		100%			100%	100%	100%	100%	100%
<b>Ten Mile Creek State Fish &amp; Wildlife Area</b>	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%	100%
<b>Trail of Tears State Forest</b>				100%	100%	100%		100%	100%	100%		
<b>Union County State Fish and Wildlife Area</b>	64%							100%			35%	49%
<b>Wayne Fitzgerrell State Recreation Area</b>					100%				100%	100%		
<b>Wildcat Hollow State Habitat Area</b>	100%	100%		100%	100%	100%	100%	100%	100%	100%		
<b>Wise Ridge State Natural Area</b>				100%	100%	100%			100%	100%		