A formal evaluation of Iowa Department of Natural Resource's Iowa Habitat and Access Program: an insight into hunter landowner relations in Iowa

James Michael Crain
Iowa State University

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A formal evaluation of the Iowa Department of Natural Resource’s Iowa Habitat and Access Program: An insight into hunter landowner relations in Iowa

by

James Michael Crain

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Program of Study Committee:
Rebecca Christoffel, Major Co-Professor
Robert Klaver, Major Co-Professor
Catherine Kling
Chris Jennelle

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CHAPTER 1. INTRODUCTION

Rationale

Available land for outdoor recreation has become increasingly scarce in Iowa, a landscape with a climate and soil fertility which is beneficial for row crop agriculture. Currently 88.7% (31.7 million acres) of Iowa’s land area is privately owned farmland, leaving only a small percentage of land available for other purposes such as residential development and recreational pursuits (Otto et al. 2007).

The decline of available land in Iowa in the past decade can be attributed to increases in demand for agriculture, which is largely linked to the rapid growth of the ethanol industry in Iowa and other Midwestern states (Gascoigne et al. 2013; Otto et al. 2007; Secchi et al. 2009). Agriculture in the United States supports billions of people and generates more than $13 billion in direct sales annually (Otto et al. 2007). Coinciding with demand for ethanol, corn prices have also increased (Secchi et al. 2009; Gascoigne et al. 2013). In turn, farmers have become more inclined to cultivate as much of their land as possible. This is true even when it means taking marginal lands and putting them into production, thus removing Conservation Reserve Program (CRP) acres and buffers designed to slow soil erosion and enhance water quality (Otto et al. 2007; Secchi et al. 2009). These issues present challenges to leaders concerned with what the consequences of continued growth in agriculture mean for maintaining natural landscapes for wildlife and outdoor recreationists (Gascoigne et al. 2013; Otto et al. 2007; Secchi et al. 2009).

Demands for recreational land use have also continued to increase in Iowa over the last twenty years (Otto et al. 2007). Since the 1960’s, Iowa’s human population has
become increasingly urban with more than 60% of Iowa’s population now living in urbanized areas (Otto et al. 2007). Urbanization decreases the amount of land available for hunting and access to available lands (Responsive Management and National Shooting Sports Foundation (NSSF) 2010). The impacts of urbanization are intensified when combined with population increases and rural land loss (Responsive Management and NSSF 2010). Residents move from rural farms into more urban areas, thus increasing demand for recreational activities and use of natural resources (Otto et al. 2007). Increases in demands for recreational opportunities create challenges for wildlife agencies because there is a finite supply of natural resources, particularly open land (Responsive Management and NSSF 2010). One such challenge in providing wildlife-related recreational sports, such as fishing and hunting, is a loss of wildlife habitat (Jensen and Guthrie 2006). In a state with expanding urban populations and where the majority of land use is row crop agriculture, providing such recreational opportunities appears to be a daunting task for Iowa leaders.

Outdoor recreational activity in Iowa is not only important for recreationists, but also local economies (Gascoigne et al. 2013; Otto et al. 2007). Businesses and government agencies depend on outdoor recreation spending from Iowans and non-resident visitors to generate funds that help support conservation programs. In January 2014, the Iowa Natural Resource Commission’s (NRC) annual report indicated that outdoor recreation in Iowa was a $1.61 billion business and generated greater than $700 million in local retail sales (Iowa Department of Natural Resources (IDNR) a. 2014). Revenue not only provides jobs but also helps obtain and properly manage public access lands used by recreationists. For example, Iowa has many state parks, rivers, lakes, and
trails for enthusiasts to enjoy, and research indicates that amenities and facilities have improved (Otto et al. 2007). In 2006, outdoor recreation in Iowa had greater than 1.3 million participants, which represents more than half of Iowa’s population (Otto et al. 2007). People who visit these recreational places typically fall into at least one of three groups: wildlife viewers, anglers, or hunters (Otto et al. 2007).

Specifically, we are interested in hunters. Across the nation, numbers of hunters have steadily declined for decades and wildlife agencies have been faced with multiple issues as a result (Enck et al. 2000; Larson et al. 2013; Peyton, 2000). These issues include reduced funds, a loss of management control over some game species, fear of loss of the North American Model of Conservation, and a growing concern that declines may lead to a loss of the societal conservation ethic (Larson et al. 2013). Hunting license sales and excise taxes from ammunition and sporting goods fund wildlife agencies and wildlife management efforts, and hunters also boost the economy with other purchases while in pursuit of recreational hunting opportunities (Responsive Management and NSSF 2010). Hunters spend billions of dollars each year (US Fish and Wildlife Service (USFWS) and US Census Bureau 2011) and contribute more money to conservation efforts per capita than non-hunters and the general population in the United States (Responsive Management and NSSF 2008). The single most important funding source for wildlife conservation efforts in the country is generated by hunters and has accounted for an extensive history of conservation successes (Responsive Management and NSSF 2010). In 2006, 50 wildlife agencies reported that they relied on hunting and fishing license sales as a primary source of revenue, a total of $10.6 billion annually (Blalock 2010). If
numbers of hunters continue to decline, how will agencies counteract loss of funds? Perhaps just as important a question to answer is “Why are hunter numbers declining?”

In response to declines, agencies have invested heavily in research about Hunter Recruitment and Retention (HRR) and developed studies to learn what social structures influence long-term hunter participation (Enck et al. 2000; Larson et al. 2013). Studies indicate that multiple factors can cause dissatisfaction with hunting and contribute to the sports decline (Responsive Management and Western Association of Fish and Wildlife Agencies (WAFWA) 1995; Responsive Management and NSSF 2008; Responsive Management and NSSF 2010). Hunters leave the sport due to age and health related issues, time constraints, lack of game, other hunter behavior, lack of access, lack of mentors, lack of interest, and even dissatisfaction with weather (NSSF 2006; Responsive Management and NSSF 2008; Responsive Management and NSSF 2010). Not all of these influences can be controlled by wildlife agencies, thus agencies have attempted to focus on factors that they can directly influence such as lack of access, game populations, and behavior of other hunters (Responsive Management and NSSF 2008).

Hunter recruitment and retention has been reduced in part by decreased hunting opportunities due to private land posting, segmentation of large tracts of land, and a decrease in proximity to available hunting land (Larson et al. 2013). Research conducted by Responsive Management (1998) in New Jersey revealed that 22% of ex-hunters reported that not having enough places to hunt influenced their decision whether or not to take up hunting again. Similar results were found in Pennsylvania where ex-hunters reported the leading cause for leaving the sport was lack of access (Responsive Management 2004). More recent work conducted by the Sporting Conservation Council
also found that limited access impeded hunter participation and other outdoor activities (Reece 2008).

A social framework identifies effects of these influences on HRR at the individual level, the “micro” level that includes family and mentors, and the “macro” level that includes society as a whole (Larson et al. 2013). Larson and others at Cornell University have also identified gaps in current knowledge and research needs from all levels of the HRR framework. Particularly, they state that a need exists to “connect hunters with both public and private lands” and this can be accomplished by “mechanisms to expand opportunities on both public and private land” and “encouraging relationship building with landowners to gain access to private land” (Larson et al. 2013). This study will investigate these two concepts by an assessment of Iowa’s walk-in hunting program and current hunter-landowner relations in Iowa.

Background information

As of 2011, Iowa had 253,000 hunters (USWFS 2011). With privately owned farmland making up 88.7% of Iowa’s land base (Otto et al. 2007), opportunities for hunting aren’t an issue if you are fortunate enough to be an owner, hold a lease, or have access to private land. Access to preferred private lands for hunting is becoming more of a challenge due to increases in land leasing, difficulty gaining permission, and difficulty in overcoming landowners’ perceptions of hunters after bad experiences (Blalock 2010). If hunters have limited or no access to private lands, then these ‘land poor’ individuals must rely on access to public lands for hunting. As of 2004, only 1.7% of Iowa’s land (600,000 acres) was available for public hunting access (Zohrer 2005).
Hunting access programs, or access programs, provide public hunting access on private or public lands, and have existed for decades (Hunting Heritage 2009). The United States had 43 states that participated in some type of hunter access program in 2009, with 37 states providing hunting access on private lands (Hunting Heritage 2009). State programs appear to be growing and many states have included hunting access programs in their strategic plans (Hunting Heritage 2009), but are challenged by funding, staffing needs, and the promotion of their hunter access programs.

An information brief prepared for the Minnesota legislature assessed hunting access programs in the United States (Minnesota House of Representatives Information Brief 2006). They found that hunting access programs exist on private lands in California, Colorado, Idaho, Illinois, Kansas, Montana, North Dakota, Oregon, South Dakota, Utah, and Wyoming, among others. Each state’s program has unique requirements for users and varies by the amount of land leased, funding opportunities, requirements for habitat management, and incentives to participating landowners. However, all of the programs contain similar goals of providing adequate habitat for wildlife and walk-in hunting access on private land.

In response to programs in neighboring states, IDNR began an exploratory analysis evaluating the needs and benefits of private land habitat and access programs as early as 1997. Todd Bogenschutz, IDNR up-land game biologist, recruited 6 additional panel members that possessed wildlife management and research backgrounds to assist in creating the program. Opinions from additional IDNR staff, multiple group panel discussions, and attendees at a Midwest Deer & Turkey Expo were also included.
Early in this process research was conducted on existing walk-in hunting programs in North Dakota, South Dakota, Nebraska, Kansas, Michigan, and Wisconsin. These programs all provide public hunting access on private land but vary by their name, governing entity, funding, size, type of land enrolled, whether habitat improvements and management are required, and hunter requirements. Most of these walk-in programs exist today and operate under the original guidelines under which they were established, but some programs have been altered. The following list of state-run (except for Illinois) walk-in access programs was examined during the Iowa Habitat and Access Program (IHAP) planning process and distributed to each member of the panel for comments and recommendations (T. Bogenschutz, personal communication).

- The North Dakota Private Lands Open to Sportsmen program (PLOTS) allows private landowner enrollment on all private lands. Private landowners receive priority for tracts greater than 80 acres with emphasis on quality habitat. Cost share is available from North Dakota Game and Fish Department depending on soil types and the conservation practices being performed. Conservation practices include food plots, shrub plantings, and establishing herbaceous cover. PLOTS contracts range from 1-6 years and are open to hunting only. As of 2014, the PLOTS program still exists and has operated for over a decade (North Dakota Game and Fish Department 2014).

- South Dakota’s Walk in Areas (WIA) Program began in 1987 and allows all available private lands to be enrolled in the program (leased by the state) with an 80-acre minimum. Landowner payments are based on the size and location of the property and whether they are open to all hunting. WIA does not require
habitat improvements but a cost share is available for landowners to improve the seeding on CRP-enrolled lands. As of 2014, WIA still exists in South Dakota and has greater than 1 million acres of private land enrolled. (South Dakota Game, Fish, and Parks 2014).

- In Nebraska, the CRP Management Access Program (CRP-MAP) is a walk-in hunting program available only on CRP lands and has contracts that range from 1-5 years. Landowner payments for CRP-MAP are based on the habitat management applied to CRP. As of 2014, this program exists but is currently being restructured and transitioned to the Open Fields and Waters Program (Nebraska Game and Parks 2014).

- The Kansas Walk in Hunting Areas (WIHA) program began in 1995 and is available for all private lands that meet the 80-acre minimum. Landowner payments are based on the size and location of the property (Kansas Department of Wildlife, Parks and Tourism 2014).

- Michigan’s Hunter Access Program (HAP) was created in 1977 and offers private land enrollment to all land types in designated counties. HAP provides payments of $10 per acre with a maximum of $5000 for each landowner. Land quality, amount, and location of the offered properties influence payment amounts and hunters are required to register with landowners before hunting HAP properties. HAP still exists today and is one of the nation’s oldest public access private lands programs (Michigan Department of Natural Resources 2014).

- The Access Illinois Outdoor program is a program managed by Two Rivers Resource, Conservation and Development Inc., a non-profit conservation
organization. The program is NOT run by a state agency and is primarily in west-central Illinois. This program requires that hunters pay an annual fee in exchange for landowner contacts for hunting. Landowners also charge hunters with access fees in addition to annual membership fees (Access Illinois Outdoors 2014).

Differences among bordering states’ access programs prompted concerns and discussions about what objectives Iowa’s access program should encompass (T. Bogenschutz, personal communication). Panel members were concerned with: 1) the purpose for establishing a program in Iowa, 2) determining the program emphasis as access- or habitat-based, 3) the need to identify IDNR’s role in providing hunting opportunities to the public, 4) how landowners would receive incentives for participation, 5) required manpower and funding resources to initiate the program, and 6) future support from hunters. These members also questioned if the proposed program adhered to the agency’s mission statement and objectives. In 2006, panel members also recognized a need to include more input from IDNR agency staff and constituents to identify hunter and landowner perceptions before making project recommendations (T. Bogenschutz, personal communication). Additionally, no source of funding was available to initiate a program.

In 2008, the Iowa legislature proposed HF 862, an Outdoor Access Tax Credit, that provided a state income tax credit for landowners who allowed public access to their lands. IDNR Wildlife Bureau conducted a survey of private landowners to elicit opinions about the creation of an access program. In 2009, four focus groups were used to elicit private landowner opinions about a hunter access program and the desired features of a proposed hunter walk-in program in Iowa. Results indicated that landowners showed
interest in a hypothetical access program in Iowa, but differences existed in hunters’ willingness to pay for the program. Information from both studies was given full consideration in the final planning of Iowa’s program. The Outdoor Access Tax Credit was never passed, but the information gathered from the survey and focus groups provided valuable information about landowner and hunter perceptions, and how the IDNR could mitigate concerns and establish an emphasis for an Iowa hunter access program.

New sources of funding became available in 2010 for the IDNR to initiate an access program. This included a dollar increase in the IDNR’s wildlife habitat stamp dedicated to access programs and a new program in the 2008 USDA Farm Bill called Voluntary Public Access-Habitat Improvement Program (VPA-HIP). States were required to submit proposals for VPA-HIP grant funding. IDNR chose to model their access proposal after the North Dakota PLOTS program with a purpose similar to the Pheasant and Quail Habitat Restoration Program authorized by Iowa legislature in 2001 (Bogenschutz 2001). The emphasis of the proposed pilot program was habitat-based and IDNR would pay to improve wildlife habitat on private lands by enhanced management of CRP and woodlands. This involved creating mid-contract management requirements for lands enrolled in the existing conservation programs that included, mowing, burning, establishing food plots, inter-seeding, and tree planting. These incentives would hopefully be recognizable to private landowners and entice them to enroll in the program. If the program was established and well-received by participating landowners over the course of several pilot years, IDNR would consider taking the program statewide (T. Bogenschutz, personal communication).
In August 2010, Iowa was one of 27 states vying for VPA-HIP funds, and was one of 17 states awarded such funds in September 2010 (IDNR b. 2014). Iowa received $1.5 million dollars to be paid over a three-year period to assist in funding initial habitat enrichment conservation practices, which began in Spring 2011 (IDNR b. 2014).

IDNR officially launched IHAP in September 2011 (Iowa DNR c. 2011). Today, the program is funded by a combination of USDA Farm Bill (76%) and IDNR Habitat Stamp funds (24%, K. Smith, personal communication) with an emphasis on providing private landowners with habitat management in exchange for public access at little to no cost to the landowner (IDNR b. 2014). Initially, 9-10 private properties were enrolled in IHAP, but the program has expanded to include 50 properties in 2014 that were open to the public, providing access to almost 8,000 acres for hunting across Iowa (IDNR d. 2014).

Strong relationships with willing landowners were critical to IHAP’s establishment. The program’s future may depend on continued good relations among hunters, landowners, and the IDNR. Private landowners who participate in IHAP work closely with IDNR representatives. Landowners express their needs and goals for their properties and the IDNR assists landowners in carrying out those activities and maintaining properties for the duration of existing contracts. Landowners and IDNR also work with many government and non-profit organizations to carry out management objectives. These organizations have included Natural Resource Conservation Service (NRCS), Farm Service Agency (FSA), Pheasants Forever (PF), local county conservation boards, and others. Currently, the budget for IHAP is greater than $2 million, average contract length is 7 years, and scheduled maintenance of each property must be
performed multiple times per year (K. Smith personal, communication). Scheduled maintenance depends on the property’s habitat type, age of the habitat, and the private landowners’ management objectives. Landowners have the option to perform all or part of their annual scheduled maintenance themselves or to hire private contractors, apart from the agency that oversees the project.

Current information about IHAP is available on the IDNR website (IDNR e. 2014). A synopsis of pertinent information provided for hunters and landowners on that site follows. IHAP properties are open to the public for hunting from September 1st until May 31st each year during hunting seasons and are closed to the public from June 1st to August 31st. IHAP properties are subject to all current IDNR hunting and trapping regulations and are visited regularly by local IDNR law enforcement officers. Properties are distributed across the state but are more closely clustered around the south central portion of the state. Properties are managed for all types of game and non-game species. Detailed maps of each IHAP property are available on the IDNR website (http://www.iowadnr.gov/Hunting/PlacestoHuntShoot/HabitatAccessProgram.aspx) for incoming hunters to identify property boundaries and designated parking areas. Each major parking area also has a clearly identified hunter “check-out” box with blank surveys for hunters to complete at the conclusion of their visit to that property.

Although IHAP is in its infancy, all partners have multiple reasons to join the program. Landowners receive professional land management and financial incentives for participating in IHAP and have the ability to dovetail IHAP with other conservation programs, such as the federal CRP and Wetland Reserve Program (WRP). The IDNR provides additional lands to the public for hunting and augments habitat for Iowa’s
diverse wildlife. Direct benefits of IHAP appear to be two-fold; however, research is needed to assess IHAP in terms of hunter and landowner satisfaction.

Thesis organization

Chapter 2

IHAP is dependent on participant landowners for the program to exist. Expansion of IHAP from 9-10 properties to 50 properties in just 3 years has prompted a need for an evaluation of the program. In 2011, IDNR conducted a landowner satisfaction survey. It was important to supplement that information with the experiences of landowners and help to alleviate any concerns that landowners may have had with the program and hunters. To obtain landowner opinions, I conducted in-person interviews with IHAP landowners and obtained information about their overall experience with the program using a questionnaire (Appendix A) to guide conversations. This information benefits the IDNR and the IHAP program as a whole by allowing landowners to express any concerns they may have, providing a projection for future landowner participation, and providing much needed feedback for program enhancement.

Chapter 2 objectives:

1. Identify the reason(s) for landowner participation in IHAP.
2. Identify landowner concerns prior to and after joining IHAP.
3. Identify landowners’ overall satisfaction with IHAP.
4. Identify landowners’ future plans for participation in IHAP.
5. Compare landowner hunter relations before and after joining IHAP.

6. Learn of landowners’ recommendations for IHAP.

Chapter 2 expected benefits:

1. Increase the IDNR’s effectiveness in managing the IHAP program by incorporating recommendations and beliefs of participating landowners.
2. Gain insights from landowners about how they perceive the IHAP program and learn of their future plans.
3. Assist the IDNR by performing an overall assessment of the IHAP program from a landowner’s perspective.

Chapter 3

The continued existence of IHAP is dependent on future funding of the program. Because federal funding for IHAP is finite, a need for alternative funding exists. It is likely that hunters will need to provide the funding needed to make IHAP a sustainable program in Iowa. One way to address this issue is to query hunters about their willingness to pay for the IHAP program (Appendix B). I acknowledge that surveying respondents on “willingness to pay” can be difficult because there is much debate about measures of validity and reliability and sampling methodology that may produce bias and erratic results (University of Minnesota School of Public Health 2001). To address some of these concerns, I paired willingness to pay responses from hunters who have hunted IHAP and those who have not. I am also aware that because hunters do not have to register to access IHAP properties, obtaining information from hunters who have visited IHAP properties was difficult. I conducted two surveys concurrently, using identical
questionnaires in an attempt to avoid a biased sample. These surveys provided feedback from hunters who have and have not visited IHAP properties, which allowed me to determine overall hunter support for the program and to calculate revenue projections in regards to hunters’ willingness to pay. This information is beneficial to the IDNR and all parties involved with IHAP. It will be used to determine whether the program should be continued, based on revenue and support projections.

Chapter 3 objectives:

1. Develop a projection of revenue for hunters willing to pay for IHAP.
2. Determine the level of support for IHAP from hunters.
3. Determine hunters’ level of awareness about the IHAP program.

Chapter 3 expected benefits:

1. Assist the IDNR by providing a detailed report on hunter support for the IHAP program and determine a projection of revenue for hunters willing to pay for IHAP.
2. Increase the IDNR’s effectiveness by providing information about the current marketing of the IHAP program and combining it with our information from the 2012 and 2013 IHAP use surveys.
3. Provide IDNR with information that will ultimately influence the future sustainability and existence of the IHAP program.

Chapter 4
IHAP’s continued existence depends upon the maintenance of good relations among landowners and IDNR staff, contractors, hunters, and other participating agencies, which in turn, contributes to landowners’ willingness to continue their IHAP participation. Although hunters that visit IHAP sites are not required to talk to IHAP landowners, interactions between hunters and landowners in IHAP have allowed us to gain insight into the importance of these relations while conducting landowner interviews in 2013. Landowners reported that they enjoyed meeting and talking with hunters that visited their properties and also reported improvements in relationship categories with hunters since IHAP has been implemented (Appendix B).

Across the nation, hunters have reported that access to private property is becoming increasingly difficult to obtain and hunters are having difficulty overcoming landowners’ negative perceptions of hunters due to previous bad experiences (Benson 1987; Blalock 2010). A need for relationship building between hunters and landowners exists and improvements in relations may also lead to improved HRR (Larson 2013). To further examine hunter-landowner relations, I thought it was most important first to assess the current state of these relations in Iowa. I included questions in the willingness to pay survey (Appendix B) that pertained to hunter perceptions of their current relations with private landowners on whose properties they hunt. These included queries to indicate how hunters believe landowners view them and how hunters perceive themselves. I asked hunters to indicate some of their common practices for obtaining access to private property, identify the level of difficulty in gaining access to private land, and identify why hunters may not be granted access to private property. My data allowed me to determine the current state of hunter-landowner relations in Iowa, determine if
improvements are necessary, and examine a potential need for a supplemental hunter education program.

Chapter 4 objectives:

1. Determine the current state of hunter-landowner relations in Iowa.
2. Determine overall hunter perceptions of private landowners in Iowa.
3. Determine if a need exists for a supplemental hunter education program.

Chapter 4 expected benefits:

1. Provide IDNR with a baseline projection of current hunter-landowner relations in Iowa.
2. Assist the IDNR by providing information that can be used to examine reasons behind the current state of hunter-landowner relations.
3. If necessary, develop a hunter education module or program to supplement hunter education programs.

Products of Research:

1. A thesis on integrating human dimension insights to assess sustainability, landowner satisfaction, and hunter satisfaction with IDNR’s IHAP and investigate hunter-landowner relations in Iowa.
2. Peer reviewed articles in wildlife management and research journals.
3. Two detailed formal reports presented to the Iowa Department of Natural Resources.
4. Presentations to national, regional, and state audiences at relevant meetings and conferences.

5. An education module developed to enhance overall hunter-landowner relations.
CHAPTER 2. IOWA’S WALK-IN HUNTING PROGRAM: A LANDOWNERS PERSPECTIVE

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JAMES M. CRAIN, 1,2 Wildlife Ecology Program, Department of Natural Resource Ecology and Management, Iowa State University, Ames, IA 50011, USA

REBECCA CHRISTOFFEL, Department of Natural Resource Ecology and Management, Iowa State University, Ames, IA 5011, USA

PETER A. FRITZELL JR., Iowa Department of Natural Resources, 1436 255th Street, Boone, IA 50036, USA

1 E-mail: jmcrain@iastate.edu

2 Present Address: 1436 255th Street, Boone, IA 50036, USA

ABSTRACT

In states with little public land such as Iowa, the majority of hunting takes place on private lands, of which landowners allow limited hunting access. In response to this shortage of accessible private land, the Iowa Department of Natural Resources (IDNR) initiated the Iowa Habitat and Access Program (IHAP), which opened up 50 privately owned properties (~8,000 acres) to public hunting. Strong relationships with willing landowners were critical to IHAP’s beginning and continued good relations among hunters, landowners, and IDNR are critical to IHAP’s future. During July and August of 2013, we conducted in-person interviews with participating landowners about their experiences with IHAP. We asked them to evaluate IHAP based on: (1) their overall satisfaction, (2) their interactions with IDNR personnel, (3) necessary program procedures, and (4) their perceptions of IHAP hunters. Overall, 100% (n = 29) of the landowners we interviewed were satisfied with IHAP. Landowners enjoyed IHAP because the program reduces their costs for property management, and improves habitat
for wildlife, which they can share with others. All interviewees expressed satisfaction with the behavior of hunters, and 96% \((n = 28)\) were satisfied with the service of IDNR staff.

Since IHAP was initiated, landowners indicated an increased number of hunters using their properties. Although hunters are not required to obtain permission or pay to hunt IHAP lands, many landowners indicated that they often interacted with visiting hunters. Such new interactions may be beneficial for improving hunter-landowner relations.

**KEYWORDS** habitat management, hunting, Iowa, landowners, private land, public access, walk-in

**INTRODUCTION**

Public land available for hunting in Iowa, as elsewhere in the Midwestern U.S., is becoming increasingly scarce. As of 2004, only 1.7% (600,000 acres) of Iowa’s land base was available for public hunting (Zohrer 2005). It has been estimated that 88.7% of Iowa is privately owned farmland (Otto et al. 2007). Iowa landscapes are dominated by agriculture because of their fertile soils and well-suited climate for row crops. Billions of dollars are generated annually from agriculture and Iowa is a national leader in corn, soybean, and ethanol production (Secchi et al. 2009). Landscape shifts from native grasslands to monoculture row crops have devastated many of Iowa’s wildlife populations over the past 50 years (Zohrer 2005). Although Iowa has diverse wildlife species, these landscape shifts have challenged wildlife professionals to promote and implement conservation programs to preserve and enhance wildlife populations while
attempting to maintain balance with agricultural needs. Technological improvements have allowed farmers to increase yields and meet rising agricultural demands, but the introduction of ethanol as a renewable energy source has led to a much greater demand for crop production (Otto et al. 2007). Incentives to increase production and inflated market prices have led some farmers to remove lands from conservation programs to farm additional acres (Secchi et al. 2009). These changes in farming practices not only modify Iowa’s landscape and natural resource qualities, but also reduce the amount of private land available for hunting.

Because nearly 90% of Iowa is privately owned farmland (Otto et al. 2007), most hunting opportunities only exist for those who own or lease private property; therefore, access to the land is vital to hunters (Benson a. 2001; Knoche and Lupi 2012; Larson et al. 2013; Miller and Vaske 2003). However, private landowners are reluctant to allow hunting access due to increasing concerns over liability, hunter crowding, and prior negative experiences with hunters (Blalock and Montgomery 2010; Tipton and Nickerson 2011; Wright et al. 1988). If much of the private property in Iowa is inaccessible to hunters, then ‘land poor’ hunters must rely on the state’s sparse public lands for hunting access. Hunters have indicated public lands are frequently congested, over-hunted, and lack sufficient game populations (Tipton and Nickerson 2011). In 2010, Iowa ranked 49th of 50 states for total acres of public hunting access (Iowa Department of Natural Resources (IDNR) c. 2015). There is very little public hunting access for Iowa’s 253,000 hunters, who spent over $400 million dollars on hunting related expenditures in 2011 (US Fish and Wildlife Service 2011).
In response to limited public hunting access, IDNR launched the Iowa Habitat and Access Program (IHAP) in 2011 (IDNR d 2014). The program provides habitat management assistance to private landowners in exchange for public access to hunting on their properties (IDNR d 2014). Coordination of IHAP is performed by IDNR, but also has many contributing agencies, such as: US Department of Agriculture (USDA), Farm Service Agency (FSA), and many local Iowa County Conservation Boards. Because of the collaboration among landowners, IDNR representatives, and hunters, the program’s success is dependent on good relations among landowners, hunters, and the IDNR. In just three years, IHAP has grown from fewer than a dozen to 50 properties, providing improved wildlife habitat and public hunting access to almost 8,000 acres of privately owned land (IDNR d 2014).

Across the country, many states have implemented hunter access programs to increase the amount of private land access to hunters in an attempt to decrease the number of hunters leaving the sport. A multi-state study about hunter access programs indicated that these programs have experienced growth over the last decade, but many are challenged with maintaining funding and sufficient staffing levels (Hunting Heritage 2009). As of 2009, 37 states indicated that hunter access programs have been implemented on private lands but many differences among programs exist from state to state (Hunting Heritage 2009). This includes: size of the program, governing agency, participant requirements, types of land enrolled, seasonal hunting restrictions, habitat requirements, hunter requirements, and incentives to participating landowners (Hunting Heritage 2009; Responsive Management and National Shooting Sports Foundation
Although differences exist among programs, they share a common goal of providing additional hunter access opportunities on private lands.

Evaluations of state hunter access programs have occurred in a variety of fashions. Many studies have been conducted on hunter access programs by mail, phone, and personal interviews (Responsive Management & NSSF 2007; Responsive Management 2004; Tipton and Nickerson 2011). These studies typically are very large-scale, encompassing many states, and generally focus on hunter and landowner opinions (Responsive Management & NSSF 2007; Responsive Management 2004). Hunting Heritage has also conducted hunter access program research by surveying state agencies about their hunter access programs (Hunting Heritage 2009). The difficulty in performing evaluations of hunter access programs across states is that diversity exists among programs, rendering meaningful comparisons among states impossible (Responsive Management and NSSF 2011). Therefore, one must rely on national information gained from baseline studies (Responsive Management and NSSF 2011) and individual state hunter access program evaluations.

Research indicates that hunter access programs in Kansas, Wyoming, and Nebraska have been successful in opening hundreds of thousands of acres of private land to public hunting (Miniter 2004). A study evaluating Utah’s fee-access program indicated that it was successful in improving hunter access, providing hunter satisfaction, and increasing wildlife habitat (Messmer et al. 1998). Data elicited from private landowners in Montana reveal that there is a need for hunters to be more respectful and responsible, key elements to developing and maintaining relationships between hunters and landowners (Tipton and Nickerson 2011). Findings from other states hunter access
programs are important inclusions for evaluating Iowa’s hunter access program although IHAP is much smaller in comparison. It’s evident that incorporating similar ideas from individual state evaluations and national baseline studies will provide useful information for evaluating IHAP, but to perform a complete evaluation, input from both hunters and private landowners is necessary.

While IHAP participation has grown, little is known about the opinions of participating landowners and their perceptions of IHAP. To fill this need, we aimed to collect and analyze information gleaned from landowners. Our objectives included: (1) to identify overall landowner satisfaction with IHAP, (2) to determine landowners’ willingness to continue future enrollment in the program, (3) to identify landowner satisfaction with established procedures for IHAP, (4) to determine landowner recommendations for IHAP, and (5) to catalog landowner opinions of IHAP hunter-landowner relations.

STUDY AREA

Our study was undertaken with landowners that own property in Iowa and were enrolled in IHAP. To enroll in IHAP, landowners were selected based on two factors; their willingness to participate and owning properties greater than 40 acres. In 2012, Iowa had approximately 40 IHAP sites (Figure 1). Currently, IHAP has 50 properties and about 8,000 acres of land enrolled in the program, with sites non-randomly distributed throughout Iowa (Figure 2) (IDNR f. 2014). Funding for IHAP is provided from the United States Department of Agriculture’s (USDA) Voluntary Public Access Hunter Incentive Program (VPA-HIP) and funds generated from habitat stamp ($1 per stamp)
sales. Participating landowners typically enroll properties into 10-year contracts with IDNR. Landowners receive financial incentives for participation in the program and open their land to hunters from September 1st through May 31st each year (IDNR d 2014). IDNR representatives collaborate with landowners to develop management objectives and coordinate habitat augmentation on all IHAP properties. Upon enrollment, landowners have the option to perform habitat maintenance themselves or contract maintenance with IDNR or other contractors. IDNR private lands biologists work with landowners to ensure management plan objectives are met and that mid-contract maintenance is performed, along with landowner submissions of maintenance receipts and checklists to participating agencies.

METHODS

We attempted to contact all landowners ($n = 37$) enrolled in the IHAP program in 2011. In cooperation with IDNR private lands biologists, we developed a semi-structured interview guide consisting of 52 items in two sections to address IHAP landowner satisfaction and hunter-landowner relations. The semi-structured interview guide contained 26 open-ended questions, allowing the respondent to speak freely, and 26 questions with response categories consisting of five-point Likert scales (Appendix 1).

We mailed IHAP landowners an introduction letter in June 2013, providing a brief overview of our study and indicating we would contact them within two weeks to set up interviews. We contacted landowners by phone to set up interviews, left messages for non-respondents, and followed up with non-respondents by phone within one week. If we were still unable to contact the landowner, we mailed a copy of the semi-structured
interview guide with a postage paid return envelope as a final attempt to include them in our study. We performed interviews in person during July and August 2013. Landowner proximity to IHAP sites varied and interviews were conducted at their residences or locations of their choice. Interviews were conducted by the lead author and typically lasted 45-75 minutes. When permission was granted, the interview was digitally recorded. Respondents were asked questions verbatim from the semi-structured interview guide while the interviewer marked responses and scribed additional notes. Items containing Likert-scale response categories were verbally presented to respondents for their selection.

The IHAP program was evaluated using landowner responses to questions about their overall satisfaction with IHAP, recommendations for additional rules, and future enrollment. IHAP landowners were asked questions about their satisfaction with IDNR representatives based on relations, communication, and the process of handling their concerns. Established procedures of IHAP were evaluated using landowner responses about habitat improvements, service and professionalism of contractors, and time required for mid-contract management repayment. Landowner perceptions of hunters were evaluated by asking about hunter-landowner relations before and after implementation of IHAP, neighbor complaints, and hunter behavior and respect for property.

To ensure respondent confidentiality, we assigned a unique number to each interview guide and audio file as interviews were completed. We filed hard copies of interview guides, consent forms, and interview notes in a locked file cabinet and stored digital data on a secure computer. The interviewer transcribed audio files and compared
information with written responses marked by the interviewer and additional interviewer notes. We coded all open-ended answers by themes and/or categories. Due to the small sample size, Likert-scale response categories were reduced from 5-point scales to 3-point scales for data analysis.

We used SAS v.9.3 for all statistical analysis (SAS Institute, 2014). All work was conducted in compliance with Iowa State University Internal Review Board approval #13-318.

RESULTS

We attempted to obtain data from all landowners in our population of interest, i.e. a census. Of the 37 IHAP participant landowners, we were able to reach and interview 29. Thus, we effectively sampled 78% of the population. The remaining landowners were not interviewed for a variety of reasons: the sale of the land prior to the study ($n = 1$), an inability to contact landowners by phone and a subsequent non-response to questionnaires mailed to them ($n = 3$), and an inability to make arrangements for interviews with landowners who were contacted ($n = 4$).

Landowners provided us with the reason or reasons that they chose to enroll in IHAP. The greatest percentage of landowners indicated that they wanted Conservation Reserve Program (CRP) assistance (76%, $n = 22$), followed by a desire to provide or improve wildlife habitat (65%, $n = 19$). About a third (34%, $n = 10$) of landowners enrolled in IHAP to provide hunting opportunities for others, while 28% ($n = 8$) of landowners enrolled to improve soil erosion and water quality. Interviewees provided the following comments:
I like the fact that the land is being managed according to CRP requirements. It’s beneficial to the land, with controlled hunting, and more relaxed management for me being located so far away.

It’s handy, no work, no fuss [IHAP]

IHAP opened lands for people to hunt and we have habitat at no cost

I enjoy the economic benefit of spending less time to manage CRP requirements, it saves time and money.

I enjoy the financial help to seed and mid-contract maintenance is taken care of.

Landowner comments indicated that developing and implementing a habitat management plan with IDNR staff was a facet of IHAP that was very valuable to them. Given that the average age of IHAP landowners we interviewed was 68, many were enthusiastic about having habitat augmentation and maintenance performed on their properties. Some landowners were unable to personally manage wildlife habitat on their land due to health, financial, or social constraints. Landowners reported the following comments:

I enjoy the ease of getting work done without fronting the money and it’s nice to have this program because it’s easier for me at my age.

I like creating better hunting for people, it’s a good program.

I wanted my property in CRP and I’m older, I do not need the extra cost or work.
I wanted my farm to be managed better than I could do so the property can obtain its’ full potential.

All interviewed landowners ($n = 29$) were satisfied with the IHAP program. When asked if additional rules should be implemented in IHAP, 86% ($n = 25$) of the landowners reported that no additional rules were necessary. Landowners that recommended additional rules ($n = 4$) provided the following comments:

I need more clarity for billing and payments, and how the costs break down with cost share. Who pays what, when?

Rules need to be established to differentiate between hunting and collecting.

Can we incorporate fishing and trapping? Fishing is needed for management of the ponds on my property.

I had an incident where a hunter parked in my field driveway when I had to mow. I would like to have signs to deter hunters from parking in my field driveway.

When asked about their continued participation in IHAP, 86% ($n = 25$) responded that they would re-enroll in the program, 52% ($n = 15$) would enroll additional acres, and 97% ($n = 28$) would recommend IHAP to a friend. Four respondents (14%, $n = 4$) indicated that they would not re-enroll in the program. One landowner (3%, $n = 1$) indicated that enrollment was unlikely but did not provide a reason, and the remaining landowners were (10%, $n = 3$) uncertain about their (or their family’s) future plans for land use beyond their current contracts. Since a portion of landowners indicated that re-enrollment was likely, opportunities for IHAP expansion may be available by enrolling
additional acres from existing participants after current contracts expire. Those that indicated that they would not enroll additional acres (n = 14) simply did not have additional acres to enroll. All but one landowner (97%) reported that they were satisfied with their IDNR representative and each landowner referred to their representative by name. Landowner comments included:

My IDNR representative and I have a great relationship, she’s very cordial and always finds the answers.

I have a good working relationship with the people and agencies involved.

We have a good plan for the farm with knowledgeable people to work with.

These same landowners also reported that they were satisfied with their communication with IDNR staff. Prior to joining the program, 55% (n = 16) of the landowners indicated they had concerns or fears about hunters visiting their properties or personal concerns with landowner liability protection. All but one landowner (97%, n = 28) reported that their concerns prior to, and during, their enrollment had been adequately addressed by their IDNR representative. The sole landowner who did not have his concerns adequately addressed felt that landowner liability protection was not adequately discussed between himself and his IDNR representative.

When asked about the value of habitat improvements on their property, 62% (n = 18) of landowners responded that the improvements were valuable, 7% (n = 2) responded that improvements were neither valuable nor non-valuable, and 31% (n = 9) of landowners were unsure. Landowners (n = 9) who were unsure of the habitat value
achieved by contractors had experienced stunted vegetative growth. Landowners provided additional comments about management on their IHAP property:

I like the idea of native grass restoration, erosion control, and people get to enjoy the land.

I am pleased with the management on my property and can see the potential for grasses, plots, and legumes.

It’s a first year stand, I need more time to see the maturation

I’m still waiting to see results

I enjoy seeing the wildflowers and wildlife

I anticipate seeing restored grassland and enhanced wildlife.

A great majority (86%, \( n = 25 \)) of landowners reported being satisfied with the service and professionalism of contractors performing habitat work. Eleven landowners also performed habitat work on their properties themselves and were reimbursed for their work. Of these 11 landowners, 81% \(( n = 9 \) were satisfied with the procedure for submitting paperwork for reimbursement; however, 7 landowners (64%) were not satisfied with the time it took to receive payment. Some landowners also indicated that the paperwork process was sometimes confusing. This was especially true when landowners had multiple conservation programs on their properties and mid-contract management dates were not the same for each of the programs. Landowners provided the following comments:
I have three agencies that are not all on board together with time frames and contract requirements.

I need clarity between bureaus about billing and who I need to see to take care of billing and payments.

It’s a hassle on who pays what bills

Bureaucracy and paperwork is a slow moving potato.

All but one landowner (97%, n = 28) indicated that they were satisfied with the behavior and respect shown for their properties by hunters. Before IHAP implementation, 35% (n = 10) of landowners reported that their neighbors were concerned about their enrollment. Initial neighbor concerns included: increased hunter trespassing, lack of respect for neighboring property, increased littering, a lack of caution around neighboring livestock, and damage to fences. After enrollment, only one landowner had a complaint about a cut section of fence along the shared property line of an IHAP site they believed was done by a hunter. One landowner knew of an issue that was handled by an IDNR conservation officer. This involved illegal use of an all-terrain vehicle on an IHAP property by the neighboring property owner’s son.

All landowners enrolled in IHAP who came into contact with hunters (n = 13) were satisfied with their overall relationship with such hunters. Interactions between hunters and landowners were not mandatory, but happened quite frequently and interviewee landowners allowed us to gain insight into how much they valued such interactions. Some landowners stated that friendships were developed with visiting hunters and that the same individuals would approach them often just to talk.
Correspondence between hunters and landowners was most prevalent on properties where the landowner lived on-site, which prompted some hunters to stop by each time they came to hunt, even if they were non-resident hunters. Landowners provided the following comments:

I’ve enjoyed the hunters that I’ve met.

I like to visit with the people and like the appreciation for allowing them to hunt.

IHAP has allowed people to hunt and is beneficial to everyone.

Landowners reported satisfaction in all categories of hunter relations before and after implementation of IHAP (Figure 3). The greatest change in landowner satisfaction regarding hunter relations before and after implementation of IHAP was “appreciation.” Landowner responses after IHAP implementation showed slight improvements in all relations except “trust” (Figure 3).

**DISCUSSION**

Private landowner participation plays a vital role in hunting because of declining hunter access, a situation especially true in states with very little public hunting land, like Iowa (Blalock et al. 2010). When IDNR introduced IHAP in 2011, it served as a pilot program to provide hunting access on private lands, while also augmenting habitat for wildlife (IDNR d. 2014). Although the program was new, IHAP more than tripled the number of enrolled properties in just three years and expanded to 8,000 acres (IDNR c. 2014). IHAP’s growth was similar to those reported in other states’ hunter access programs across the nation (Hunting Heritage 2009).
Although IHAP landowners reported being satisfied with the program thus far, the program could be improved based upon comments from IHAP landowners. IDNR should examine the possible benefits of incorporating fishing and trapping on select properties which may make the program more appealing to both landowners with permanent aquatic habitat on their properties and hunters interested in accessing areas for trapping and fishing. Paperwork and mid-contract maintenance varied among properties, along with the type of habitat management performed. Standardization of contract management dates among conservation programs may assist landowners in overcoming confusion about which governing agency holds priority. Enhanced communication from governing agencies and IDNR private lands biologists may assist landowners to better understand the process of re-payment for self-performed habitat maintenance. IDNR private lands biologists may need to continue to communicate with IHAP landowners to explain their landowner liability protection to the fullest extent and determine which properties may be in need of additional signage to deter or direct hunters to proper parking areas. Similar results were found in the evaluation of Pennsylvania’s hunter access program (Responsive Management and NSSF 2007). These suggestions from IHAP landowners will only improve what appears to be a successful program for IDNR and its constituents.

Landowners stated that they enjoyed providing hunter access opportunities while participating in IHAP. Landowner satisfaction with hunter relations was evident prior to, and post-IHAP implementation. However, one landowner reported that their satisfaction for “trust” decreased after IHAP was implemented, which may have resulted from the landowner not living on the property where the IHAP site was located and the inability to interact with hunters visiting the IHAP site. Similar findings were present in Montana’s
assessment on private lands where “the aspect of trust came up in nearly every interview” (Tipton and Nickerson 2011). Although interaction between hunters and landowners was not required, conversations with hunters may have eased initial landowner concerns about enrolling in IHAP, thus explaining why landowners indicated satisfaction and improved in almost all of the hunter relations categories after implementation. These interactions highlighted a major theme that became clear through this study - IHAP is dependent on good relations among stakeholders participating in the program.

Satisfaction for landowners not only stemmed from providing access to hunters, but also from the ability to have their lands professionally managed by the IDNR while providing habitat for wildlife. Frequent communication between IDNR and landowners was vital to obtaining habitat management objectives and building strong relationships among them. Landowners that indicated that they were unsure of the value of habitat improvements experienced stunted vegetative growth, which stemmed from drought conditions present in Iowa from 2012-2013 (National Oceanic and Atmospheric Administration Climatic Data Center 2014). Drought conditions delayed the seeding, spraying, and burning of some properties and initiated alterations to mid-contract management due dates. During the drought, relationships among IDNR, contractors, and landowners were tested but good relations prevailed. For assistance, landowners stated that they just called their IDNR representatives, who then followed up with contractors or other participating agencies to inform them of the weather difficulties. Landowners, IDNR, and contractors productively worked together to develop alternative strategies to complete the required habitat maintenance when feasible. While landowners understood the implications of weather constraints and were satisfied with the habitat work
performed, they were unable to provide a definitive answer about the perceived value of the habitat work that had been done because of its as yet, lack of vegetative growth.

Landowner satisfaction with IHAP, IDNR, and contractors relies on open and consistent communication among these stakeholders and close attention to preserving these relationships is imperative to IHAP’s future. Our findings are similar to those reported from the Pennsylvania Public Access Program, in which increased communication efforts between program coordinators and landowners was recommended as the “number one priority” to allow the program to run more efficiently and to inform wildlife managers of possible issues before major incidents occur (Responsive Management & NSSF 2007).

A majority of interviewee landowners reported their willingness to re-enroll in IHAP, but we don’t know the status of the eight landowners whom we were unable to interview. State agencies with walk-in access programs across the country indicate that competition from others attempting to lease access to properties enrolled in walk-in hunting programs is a barrier to improving hunter access on private lands (Hunting Heritage 2009). Although we were unable to contact eight landowners, re-enrollment in the program was likely from a majority of landowners we interviewed, and is yet another indication that IHAP landowners were satisfied with the program.

Although our sample of landowners were satisfied with IHAP, results of our study are conditional on private landowners already participating in IHAP and do not reflect the opinions of all landowners in Iowa. We expect that willing IHAP participants are likely to have generally positive beliefs regarding the questions we asked, otherwise they would not have enrolled in the program. Given this positive loading on the front end, a key element for effectively evaluating landowner perceptions about IHAP is to perform a pre-
program and post-program assessment. Our interviews were conducted after landowners had accrued experience with the IHAP program, and we cannot gauge the extent to which their actual experiences influenced answers regarding their perceptions prior to the start of the program. However, hunter access program evaluations have typically been conducted after program implementation (Hunting Heritage 2009; Responsive Management 2004; Tipton and Nickerson 2011). Regardless, IHAP’s future is not only dependent on landowner participation, but also hunter participation and sustainable funding within Iowa.

Programs, such as IHAP, allow managers to expand wildlife habitat and hunting opportunities on private lands that otherwise might have been used for row crops, which negatively impact wildlife populations (Clark et al. 2008; Secchi et al. 2009). Increased enrollment in IHAP will not only expand the natural resource base available for wildlife populations, but will result in increased hunting opportunities that may improve hunter recruitment and retention. In part, this manuscript serves as the first formal evaluation of Iowa’s hunter access program. Future research is necessary to indicate the level of hunter support, including their willingness to pay, for IHAP and to determine what alternative funding sources exist.

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and provide feedback. We also thank Iowa Department of Natural Resources staff for their comments to improve the semi-structured interview guide and assistance in contacting participating landowners.
Figure 1. Distribution of properties enrolled in the Iowa Habitat and Access Program (IHAP) as of October 2012.
Figure 2. Distribution of properties enrolled in the Iowa Habitat and Access Program (IHAP) as of August 2014.
Figure 3. Percentage of IHAP landowners who indicated satisfaction in aspects of hunter relations before (black) and after (grey) the implementation of IHAP. Data were collected in July-August 2013 during individual interviews with IHAP landowners ($n = 29$) in Iowa.
CHAPTER 3. EXPANDING HUNTER OPPORTUNITIES IN IOWA: A REVIEW OF HUNTER ACCESS OPTIONS

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**JAMES M. CRAIN,** 1,2 Wildlife Ecology Program, Department of Natural Resource Ecology and Management, Iowa State University, Ames, IA 50011, USA

**REBECCA CHRISTOFFEL,** Department of Natural Resource Ecology and Management, Iowa State University, Ames, IA 5011, USA

**CHRIS JENNELLE,** Iowa Department of Natural Resources, 1436 255th Street, Boone, IA 50036, USA

**PETER A. FRITZELL JR.,** Iowa Department of Natural Resources, 1436 255th Street, Boone, IA 50036, USA

1 E-mail: jmcrain@iastate.edu

2 Present Address: 1436 255th Street, Boone, IA 50036, USA

**ABSTRACT**

Reductions in hunter recruitment and retention have been recognized across the United States for nearly a decade. Wildlife agencies have invested heavily in research to determine the causes of declining numbers of hunters. Research indicates that hunter recruitment and retention is affected by a number of reasons and agencies have focused on factors that they can influence directly, specifically, hunter access. Private landowners have become more reluctant to allow access to their properties and one reason given for hunters leaving the sport was lack of hunting access. Many states have implemented walk-in hunting programs on private land to increase the amount of private land available to hunters. Iowa initiated its version of a walk-in program in 2011 called the Iowa Habitat and Access Program (IHAP). As of 2015, IHAP has grown from 9-10 properties in 2011 to 50 properties and has opened approximately 8,000 acres of private land to public
hunting. Although IHAP is in its infancy, a program evaluation is necessary to identify hunter opinions and gauge hunter willingness to pay once federal funding is no longer available. We conducted a mail survey to a random and non-random sample of Iowa hunters. Iowa hunters identified a need for IHAP and were supportive of the program. Individuals who had hunted IHAP rated the program as positive. In general, Iowa hunters did not support paying for IHAP, although most hunters who had previously hunted IHAP properties were willing to assist in funding the program.

**KEYWORDS** habitat management, hunting, Iowa, landowners, private land, public access, walk-in

**INTRODUCTION**

Declining access to private land for hunting continues to challenge hunters and wildlife agencies alike. Lack of access to private lands is often cited as a reason for reductions in hunter recruitment and retention (Wright et al. 1988; Miller and Vaske 2003; Blalock and Montgomery 2010), and subsequent declines in available funds for wildlife agencies to perform important conservation practices (Responsive Management and National Shooting Sports Foundation 2010). Private landowner concerns stemming from liability, property damage, safety, and not knowing the hunters asking for permission have made landowners more reluctant to grant access (Wright et al. 1988; Changyou et al. 2007; Kilgore et al. 2008). Furthermore, competing land uses also contribute to lack of private hunting access (Responsive Management & National Shooting Sports Foundation (NSSF) 2010). Trends in Iowa reveal that a majority of rural families are moving to expanding urbanized areas and agricultural demands have steadily increased over the last decade (Otto et al. 2007). Inflated market prices for row crops
have forced some farmers to put more land into production and to pull set-aside lands, rich in hunting opportunities, out of conservation programs (Secchi et al. 2009). In a state that ranked 49th of 50 states for the amount of available public hunting access in 2010, Iowa hunters and IDNR rely even more on private access for hunting opportunities and wildlife management than do hunters in most states (IDNR c. 2015).

In response to declines in private land access, many states have implemented walk-in hunter programs on private properties that provide additional hunter opportunities and incentives to participating landowners. Current programs exist in Kansas, Michigan, North Dakota, South Dakota, and Washington, to name a few. Although walk-in hunting programs share a common trait of providing additional hunting opportunities to the public on private land, program variations exist among states (Hunting Heritage 2009). Many programs differ in the minimum amount of land needed for participation, habitat requirements, land types, landowner incentives, and user requirements. Walk-in hunting programs have been successful in expanding hunter opportunities for decades in some states and have prompted other state wildlife agencies to introduce similar versions (Hunting Heritage 2009).

Discussion of a potential walk-in hunting program in Iowa began as early as 1997. It took many years of planning and coordination to decide on the direction of the proposed program. Rather than directly leasing land from private landowners, panel members and IDNR staff set the floor against private land leasing and agreed that their version of a hunter access program should be habitat-based. Their vision of the proposed hunter access program was to provide additional wildlife habitat in Iowa, while decreasing opportunities for land leasing competition from hunters, and provide private
landowner liability protection under Iowa law (HS 649), which protects private landowners from liability while person(s) are utilizing private properties for recreational purposes without charge. They identified a need for habitat-based incentives for participant landowners and emphasized a need for additional research to gauge interest from hunters and landowners. IDNR issued state-wide scoping surveys to determine landowner interest (2008) and hunter support (2009) for a walk-in hunting program. Results indicated that landowners showed interest in such a program while differences existed in hunters’ willingness-to-pay to support a walk-in hunting program.

After their study revealed interest from landowners and hunters, IDNR applied for and was awarded a USDA-Farm Service Agency grant in 2010 to support program development and initiation. IDNR used this grant to launch the Iowa Habitat and Access Program (IHAP) in 2011 (IDNR c. 2014). IHAP funds were used to hire contractors to enhance wildlife habitat on private properties at little to no cost to landowners, in exchange for opening the same private properties for public hunting. Initially, IHAP opened 9-10 properties across Iowa in 2010-2011. As of 2014, IHAP has grown to 50 properties and offers about 8,000 acres of private land open to public hunting (IDNR d. 2014). Public hunting for all legally harvestable game is permitted on IHAP properties between September 1st and May 31st each year and hunters are not required to gain permission or “check in” with participating landowners (IDNR d. 2014). Hunters are asked to provide feedback from their experience at IHAP properties by filling out survey cards and placing them in drop boxes provided at each site.

Although IHAP is in its infancy, hunters and landowners have indicated that they are satisfied with the program. Drop box cards collected from 2012-2014 and IDNR
state-wide IHAP use surveys revealed that IHAP hunters are satisfied with the program. It’s estimated that greater than 17,000 hunters have visited IHAP sites accounting for more than 100,000 hunting days annually (P. Fritzell, personal communication). During landowner interviews conducted in 2013, participant landowners indicated satisfaction with IHAP, the necessary procedures for participating in IHAP, IDNR staff, and hunters visiting their properties (see Chapter 2). The IHAP program is a success in terms of hunter and landowner satisfaction. However, continued federal funding of Iowa’s walk-in hunting program is uncertain and a more reliable source of funding is needed to assure IHAP sustainability. To address this funding need, we initiated a study to solicit hunter opinions about IHAP. We aimed to determine hunter awareness of IHAP and willingness to pay for IHAP once federal funding subsides. We sought to develop a projection of revenue based on hunter willingness to pay for IHAP via three funding mechanisms, an annual-user fee, a daily-user fee, and an increase in price for the general hunting license.

METHODS

We developed a self-administered mail questionnaire (Appendix C) using Abbyy Flexicapture v8.0 (Abbyy 2015) consisting of 32 items to elicit hunter opinions and perceptions about their need, experiences, and support for IHAP. We also queried respondents about their hunting activities and types of land on which they hunt. Questionnaire items included open-ended questions that allowed respondents to provide narrative responses and close-ended questions with five and seven-point Likert scale response options.
We conducted cognitive interviews in June 2014 to identify potential measurement errors from the response process to our questionnaire. In doing so, we attempted to reduce problems with comprehension errors, adherence to question format, identification of the correct response category, and recall of requested information (Dillman 2007). We recruited 12 individuals who varied by age and sex. Participants were issued a copy of our questionnaire and asked to take it home for completion to simulate likely conditions for survey respondents. The following day we met with each participant and used retrospective probing and “think-alouds” to navigate thought processes for answering 4 pre-selected questions that represented key points from the questionnaire (Dillman 2007). After interviews were completed, we determined that no major revisions to the questionnaire were necessary.

We administered two identical surveys following a modified version of Dillman’s Tailored Design Method (2007) on two sample populations \((n = 5,327 \text{ hunters})\) from June – August 2014. The first population included a random sample of 5,031 Iowa hunters stratified by county and region (including non-resident hunters), and license type, i.e. whether one was a deer hunter or not. A variety of license types were included in the sample frame, and we did not sample these by the probability proportional to their relative abundance in the population, so some license types may be over or under represented in the sample. Hunter information was accessed from IDNR’s electronic licensing database (ELSI). In an attempt to obtain equal representation, we administered surveys to hunters in each county of Iowa’s 9 USDA service regions (Figure 1) with approximately one half being sent to hunters that purchased deer permits and the other half being sent to hunters that purchased a hunting license but not a deer permit.
However, equal representation was still subject to response rate differences. The random sample also included 500 non-resident hunters that purchased a hunting license during the 2013-2014 hunting season. The non-resident hunter sample was not stratified by type of hunting license purchased.

The second sample consisted of 296 IHAP hunters with confirmed names and addresses who had submitted check-out cards while visiting IHAP properties during the 2012-2014 hunting seasons. Previous research conducted by IDNR staff revealed that hunter awareness of IHAP was minimal during 2012-2014 hunting seasons for 3 reasons: 1) the inability of hunters to differentiate IHAP properties from state-owned public hunting properties, 2) proximity of IHAP sites to hunter residences, and 3) minimal marketing of IHAP by IDNR (P. Fritzell personal communication). Known IHAP hunters were included in the sample frame to assist in proportionate response distributions from both IHAP-aware and IHAP-unaware hunters.

We processed questionnaires that were received by August 15, 2014. We then conducted follow-up phone calls to randomly selected individuals who did not respond ($n = 78$) to the survey in an attempt to identify non-response bias (Vaske 2008).

Data were cleaned to remove duplicates and identify logical and non-logical missing values and were proportionally weighted by USDA region of residence (Vaske 2008). Open-ended questions were condensed and categorized. We developed projections of IHAP’s potential revenue based on hunter responses. Annual fee projections were calculated using estimates of the number of hunters utilizing IHAP and incremental annual fee amounts. Daily user fee projections were calculated using the estimate of
IHAP hunters and conservative estimates for numbers of days hunted annually. License fee projections were calculated using the known population of hunters in Iowa and incremental amounts based on survey results. Questionnaires were processed using Abbyy Flexicapture v8.0 (Abbyy 2015) scanning software and analysis was performed using SAS v9.4 (SAS Institute 2014). All work was conducted in compliance with Iowa State University Internal Review Board approval #13-318.

RESULTS

Of the 5,327 individuals selected to participate, 249 undeliverable surveys were removed from the original sample, providing an adjusted sample frame of 5,078. We effectively surveyed 1,833 hunters and obtained a 36% adjusted response rate. Data obtained from the random sample of Iowa hunters were used to create weighted projections of Iowa hunters. We obtained a 61% response rate from the non-random sample of known IHAP users. Data from known IHAP users \((n = 182)\) were not included in statewide projections and were analyzed separately. We found no bias due to non-response based on hunter awareness of IHAP, private land hunting participation, importance of hunting, and all 3 mechanisms for funding IHAP.

The majority of respondents had less than a 4-year college degree: 28.9% (95% CI=24.7-33.2%) hold a high school diploma/GED, 22.7% (95% CI=18.9-26.6%) have at least some college, and 17.7% (95% CI=14.5-20.9%) have a technical/vocational degree. A majority of respondents indicated that their annual household income was below $100,000: 20.6% (95% CI=16.8-24.5%) earn $25,000 to $49,999, 24.7% (95% CI=20.6-
28.7%) earn between $50,000 and $74,999 and 17.1% (95% CI=13.5-20.7%) earn between $75,000 and $99,999.

Less than a quarter of Iowa hunters were aware of IHAP (21.8%; 95% CI=18.6-25.1%). Our estimates indicate that there were 5,615 IHAP hunters (95% CI=3,321 – 8,165). The IDNR website is the primary source for information about IHAP. Greater than half (59.8%; 95% CI=55.4-64.2%) of respondents used the IDNR website to obtain information about hunting, but 40.2% (95% CI=35.8-44.6%) did not utilize the website at all. Few (2.5%; 95% CI=1.4-3.5%) hunted IHAP sites during 2012-2014. Similarly, a small portion (15.6%; 95% CI=12.6-18.6%) of respondents indicated that they had hunted walk-in hunting programs in other states.

A majority of Iowa hunters found it difficult to gain access to private lands for hunting and indicated that a hunter access program was needed (Table 1). Respondents indicated that they felt IHAP was beneficial, but were unsure about the potential effects of IHAP on private land leasing and hunter retention in Iowa (Table 2). Most respondents indicated that they support IHAP in Iowa (Figure 1). A majority of hunters who hunted an IHAP site from 2012-2014 reported having positive experiences while visiting IHAP sites (Figure 2). About half of the random sample of Iowa hunters indicated that they would hunt IHAP sites in upcoming seasons (Figure 3).

A series of questions investigated the likelihood of hunter financial support to continue IHAP if federal funding was no longer available. A majority of respondents indicated that they are unlikely to support an annual fee to access IHAP sites (Figure 4). Greater than half of respondents indicated they were unlikely to support a daily fee
Most respondents did not support a license fee increase to assist in funding IHAP (Figure 6). A sizeable portion (41.6%, 95% CI=37.1-46.1%) of Iowa hunters do not want to pay any additional amount, but some individuals are willing to add a few dollars to the hunting license fee (Figure 7). The most frequently selected reasons for choosing not to support any increase in hunting license fee included: 1) not receiving benefits from IHAP and, 2) “Other Reason” (Figure 8). The most commonly reported “Other Reason” 35%, (n = 63) was that the license fee was too expensive already. Additional “Other Reason” comments included: an alternative funding source is needed, IHAP should be an additional separate fee, IHAP is not needed, rising costs are scaring away hunters, some hunters have no access to the program, hunters need more information, and that there was some level of government distrust.

Most known IHAP user respondents (84.4%; 95% CI=78.9-89.9%) hunt both public and private land. Although unexpected, only 90.6% (95% CI=86.3-94.9%) of known IHAP users were aware of IHAP, 92.7% (95% CI=88.9-96.6%) indicated that they had hunted IHAP, and 92.3% (95% CI=88.3-96.2%) indicated that they use the IDNR website to obtain information about hunting. Similar to other respondents, greater than 80% of known IHAP users indicated that there was a need for a walk-in program in Iowa, that gaining access to private lands in Iowa has been difficult over the past 5 years, and that IHAP is beneficial to the state of Iowa. A majority (>60%) of known IHAP users indicated that they had visited walk-in programs in other states. Most known IHAP hunters indicated that they were supportive of the program (Figure 1) and a majority of these users had a positive experience while visiting IHAP sites (Figure 2). A majority of known IHAP user respondents indicated they were likely to support an annual fee to
access IHAP lands (Figure 4) and more than half were likely to support the daily fee (Figure 5). A majority of known IHAP users indicated that they were likely to support an increase in the fee for the general hunting license should federal funding no longer be available (Figure 6). Known IHAP hunters were twice as likely to pay to support IHAP, via each of the 3 payment methods, than our randomly selected population of hunters (Figures 4, 5, and 6). Finally, known IHAP hunters indicated that they were more likely to support an increase in the cost of a hunting license and willing to pay more than random sample participants (Figure 7). Hunters from the random sample who had hunted IHAP sites were as willing to pay as were known IHAP hunters.

A majority of non-resident hunters, included in the state-wide random sample, were willing to support an annual and daily user fee to access IHAP lands (Figures 4 and 5). However, these hunters did not support increasing the price of the general hunting license (Figure 6). Hunter willingness to pay to support IHAP did not vary by USDA region or hunting license type. Hunters who were not tenants or owners of agricultural land were slightly more supportive of paying for IHAP than owners or tenants of land, but collectively were not supportive of paying an annual, daily, or license fee increase to access IHAP.

Revenue projections based on implementation of a daily user fee of $5 to hunt IHAP properties for an average of 10 days a year / hunter could generate as much as $166,050 - $408,250 annually (Table 3). Revenue projections for implementing an annual user fee of $30 could generate as much as $99,630 - $244,950 annually with 3,321 – 8,165 hunters each year (Table 4). Finally, adding to the price of the general license fee would potentially generate the most, $578,652 annually, for IHAP if an additional $2.50
were added to the price of the general hunting license (Table 5). Revenue elasticity projections reveal that hunter contributions could earn as much as $349,250 - $439,750 for a proportion of Iowa hunters (69,850 – 87,950 hunters) that would pay a maximum increase of $5 to hunting license fees (Table 6).

**DISCUSSION**

Although hunters provided many indicators that a walk-in program was needed and a majority of hunters use IDNR’s website, only a small portion of respondents were aware that IHAP existed. This indicates that hunters may not be using IDNR’s website to its full potential and that alternative marketing strategies may be needed to advertise and raise awareness of IHAP. Low hunter awareness of access programs has also been documented in other states (Hunting Heritage 2009; Responsive Management 2004; Responsive Management and NSSF 2007). In addition, about 8% of known IHAP users indicated that they had not hunted IHAP sites and 10% indicated that they were unaware of the program, which contradicted the information that IDNR obtained from check-out cards that these hunters voluntarily submitted at IHAP sites. This suggests that a portion of Iowa hunters may not know where or what types of properties they are hunting and further emphasizes a need for additional marketing to raise awareness of IHAP and to develop additional signage that would likely aid in IHAP property recognition. Similarly, state-wide surveys conducted by IDNR from 2012-2014 revealed that hunters reported hunting IHAP sites in counties where IHAP properties do not exist (P. Fritzell, personal communication).

Hunter respondents indicated that IHAP was needed to improve hunter access to private lands in Iowa, but less than half of these hunters reported that IHAP was
personally beneficial. This suggests that most hunters support IHAP’s existence regardless of personal benefits obtained from the program. Similarly, all stakeholders in Pennsylvania perceived their hunter access program as valuable (Responsive Management & NSSF 2007). Our respondents indicated that IHAP creates new hunting opportunities on private land, a finding consistent with research conducted on Washington’s hunter access program (Responsive Management 2004). Because half of Iowa hunters were projected to hunt IHAP in the future, our survey instrument may have served to educate some hunters on IHAP and raise hunter awareness of the program. As expected, known users of IHAP reported much greater awareness than random sample respondents and were more enthusiastic about responding to the questionnaire. Their ratings of support for IHAP were also greater than state-wide projections. This indicates that those who use and are familiar with the program are more likely to support IHAP.

Our respondents’ lack of support for annual, daily, or license fee increase to support IHAP were consistent with IDNR’s previous study in 2009 to elicit hunter willingness to pay for a hypothetical hunter access program (P. Fritzell, personal communication). Research conducted on Washington’s hunter access program also revealed that hunters were unwilling to add to the cost of the hunting license fee to support such a program (Responsive Management 2004). It’s also likely that hunters’ lack of financial support for IHAP did not depend on post-recession financial decisions. In fact, research indicates that hunting license sales tend to increase during tough economic times (Freeman 2010; Responsive Management 2009). Non-resident hunters support for an annual and daily user fee but not a license fee increase indicate that these hunters are likely to receive a benefit from IHAP, but are unsupportive of increasing
hunting license fee costs. Increasing license fees for non-resident hunters have been identified nationally as the top factor for decreases in non-resident hunting participation (American Sportfishing Association 2013).

Although Iowa hunters indicated that they were unlikely to support implementing fees for IHAP, funding options do exist. If license fees are increased in Iowa, most hunters would pay a maximum of $1-$2, which could generate $462,000 from a license fee increase of $2. Revenue elasticity projections revealed that an increase to hunting license fees could generate funds as much as $349,000 - $439,000 from a portion of Iowa hunters who were willing to add at least $5 to license fee costs. Yet, hunters who have hunted IHAP sites and who are aware of the program are more willing to pay to support the program financially. It is likely that these individuals are more willing to pay because they are receiving personal benefits from the program, whereas a majority of random sample respondents were not. Regardless, IHAP hunters were willing to support a $5 daily use fee, a $30 annual fee, and an increase of an additional $5-$8 to license fee expenses, and some were willing to add as much as $100 to license costs.

Funding for IHAP will likely become an issue beyond the resources of the current grant. A majority of respondents indicated that they were unwilling to fund the program, yet those who used the program were willing to support it. Thus user fees may offer the best option for funding the program. If IHAP user fees are pursued as a funding option, there are many steps to implementation. Steps include: 1) obtaining legislation approval, 2) developing and implementing a method of tracking IHAP users, 3) reconfiguring IDNR’s electronic licensing database, 4) educating IDNR vendors, 5) educating IDNR’s law enforcement officers, 6) increasing law enforcement efforts, 7) increasing IDNR’s
administrative duties, 8) updating IDNR websites and policy manuals, and 9) increasing IHAP’s marketing. All of these are likely to affect IDNR’s decision making process and need to be weighed carefully.

A large majority of respondents indicated that hunting was either their most important or one of their most important recreational activities. Given our adjusted response rate of 36%, we assume that hunter avidness did not have an effect on willingness to pay for IHAP. We acknowledge that those who did respond may have been more predisposed for answering questions about hunting, while individuals that may have considered hunting less important could have been less inclined to respond to the questionnaire. Yet, our strong response rate of 61% from known IHAP hunters is likely an indicator of their enthusiasm for the program. Phone call follow-ups to identify non-response bias resulted in few contacts. Hunters in Iowa are not required to provide phone contact information at the time of license purchases which resulted in few phone numbers, a lack of current information, and the inability to contact a large portion of questionnaire non-respondents. Future research could also incorporate questions about hunter typologies (age group, number of years hunting, etc.) that may assist in determining their willingness to pay.

MANAGEMENT IMPLICATIONS

Iowa hunters want the benefits of the program, yet until they actually use the program or hunt IHAP properties, they are unwilling to pay for it. A new influx of funding received in 2015 presents an opportunity for IHAP to expand, but it’s likely that program funding will become an issue again in the future. The most frequently cited
potential barrier to the future of these programs across the nation is funding and an
associated lack of sufficient staff to maintain hunter access programs (Hunting Heritage
2009). Decisions regarding future expansion of IHAP not only depend on hunter
willingness to pay and private landowner demand for the program, but also IDNR’s
vision and expectations for IHAP, which would likely depend on the agency’s ability to
coordinate such efforts. These efforts would include: 1) identifying additional private
landowners to enroll in the program, 2) providing adequate staffing, 3) increasing
administrative duties, 4) management of additional acres, 5) coordination of sub-
contractors, 6) continued monitoring of the effectiveness and efficiency of the program,
and 7) sustainable funding. If IDNR’s expectations and vision for the program allow for
expansion, IHAP hunter participation would likely increase if properties were located
near metropolitan areas, where 60% of Iowa residents live (Otto et al 2007). At this time
IHAP properties are not concentrated near any of Iowa’s major cities (Figure 9).
Research has indicated that 65% of Iowa hunters travel less than 30 miles from their
residence to hunt (Responsive Management & NSSF 2010). Focusing new IHAP sites
near major Iowa metropolitan areas may enhance hunter participation and further
contribute to hunter willingness to pay once these hunters have hunted IHAP properties.

We recommend implementing a $30 annual user fee for hunters that are using the
program, which could generate as much as $100,000-$245,000 annually. Although
revenue from an annual user fee of $40 could generate as much as $132,840 - $326,600, a
user fee of $30 is recommended since our evidence of hunter willingness to pay is based
on this amount. This would likely be the least difficult method of payment to get
approved by legislature, and is supported by individuals who have hunted IHAP sites. In
addition, a daily fee for IHAP use was deemed infeasible because of the degree of difficulty for implementing, tracking, and enforcing the fee. Implementing an annual user fee could also be assessed by IDNR vendors at the time of license purchase with an IHAP option evident on the customer’s hunting license. This method of payment would provide IDNR with the ability to track IHAP users and increase their ability to draw inferences from this population of hunters. It also provides law-enforcement officers a simple option for checking hunters.

Combined with a very conservative estimate of $100,000 annually from habitat stamp sales, IHAP revenue could reach as high as $200,000 - $345,000 each year. Since IHAP habitat expenses are allocated upon enrollment and the average contract length is 7 years, an average cost of $37.72 per acre per year can provide hunting access and habitat maintenance for 7 years at a cost of $264.04 per acre (K. Smith, personal communication). In 2012, IHAP administrative fees totaled $57,000 (K. Smith, personal communication). If annual user fees are implemented, and administrative costs are covered by these fees, then IHAP could support an additional 541 – 1,090 acres each year, which sum to 3,787 – 7,635 acres over a 7-year period and almost double the size of the program. It is likely that these projections will be higher because Iowa was awarded a second USDA-VIP grant for $3 million in 2014. Given that IHAP habitat expenses are allocated upon enrollment, implementing IHAP user fees by fall of 2015 or 2016 could assist in building self-sustainable funding once federal funds are no longer available. If IHAP expansion is feasible and awareness of the program grows, we suspect that hunter willingness to pay will also increase as more hunters visit IHAP sites. Thus, re-visiting funding options in the future is recommended.
ACKNOWLEDGEMENTS

We would like to thank Iowa State University and Iowa Department of Natural Resources for funding this study and R. Klaver and C. Kling for their expertise and guidance. We would also like to thank all questionnaire respondents for taking the time to complete and return the survey instrument.
Figure 1. Known IHAP hunter and a projection of Iowa hunters’ (including 95% confidence intervals) holding various levels of support for IHAP. Data were collected from June-August 2014.
Figure 2. Projected percentages (including 95% confidence intervals) of Iowa hunters ranking and known IHAP hunter rankings of the quality of their experiences with IHAP. Data were collected from June-August 2014.
Figure 3. Projected percentages (including 95% confidence intervals) of Iowa hunters and known IHAP hunter likeliness of hunting IHAP properties in the future. Data were collected from June-August 2014.
Known IHAP Hunter and a Projection of Iowa Hunter and Non-Resident Hunter Likelihood of Paying an Annual Fee (~$30) to Hunt IHAP

Figure 4. Projected percentages (including 95% confidence intervals) of Iowa hunter responses regarding their willingness to pay an annual fee (~$30) to hunt IHAP properties. Data were collected from June-August 2014.
Figure 5. Projected percentages (including 95% confidence intervals) of Iowa hunter responses regarding their willingness to pay a daily user fee (~$5) to hunt IHAP properties. Data were collected from June-August 2014.
Known IHAP and a Projection of Iowa Hunter and Non-Resident Hunter Likelihood of Adding to Hunting License Costs to Fund IHAP

Figure 6. Projected percentages (including 95% confidence intervals) of Iowa hunter responses regarding their willingness to increase the price of the general hunting license to assist in funding IHAP. Data were collected from June-August 2014.
The Greatest Amount Iowa Hunters and Known IHAP Hunters Would Add to Hunting License Costs to Fund IHAP

![Bar chart showing the percentage of Iowa hunters and known IHAP hunters willing to add different amounts to the hunting license cost. The x-axis represents the amount added in dollars ($0, $2.5, $5, $8, $15), and the y-axis represents the percentage of hunters. The chart includes error bars indicating 95% confidence intervals.]

**Figure 7.** Projected percentages (including 95% confidence intervals) of the greatest amount ($) Iowa hunters would be willing to add to the cost of the general hunting license fee. Categories for those willing to pay greater than $0 were condensed for ease of viewing. Data were collected from June-August 2014.
**Projection of Iowa Hunters' Reasons For Not Supporting A License Fee Increase To Fund IHAP**

![Bar chart](image)

**Figure 8.** Projected percentages (including 95% confidence intervals) of Iowa hunter responses regarding their reasons for not supporting a license fee increase to fund IHAP. Data were collected from June-August 2014.
Figure 9. Distribution of properties enrolled in the Iowa Habitat and Access Program (IHAP) as of August 2014.
Table 1. A projection of hunter perceptions pertaining to questions about the perceived need for a hunter access program in Iowa. Projections were calculated with 95% confidence. Data were collected from June-July 2014.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Somewhat Agree</th>
<th>Neither Agree Nor Disagree</th>
<th>Somewhat Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is difficult to find places to hunt in Iowa.</td>
<td>21.1%</td>
<td>46.0%</td>
<td>14.1%</td>
<td>11.2%</td>
<td>7.6%</td>
</tr>
<tr>
<td>It is difficult to gain access to private properties for hunting in Iowa.</td>
<td>29.0%</td>
<td>44.9%</td>
<td>13.1%</td>
<td>9.5%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Over the past 5 years, landowners have become less willing to grant permission to hunt on private land in Iowa.</td>
<td>40.8%</td>
<td>32.8%</td>
<td>18.3%</td>
<td>6.3%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Over the past 5 years, it has become more difficult to establish and maintain landowner contacts.</td>
<td>21.9%</td>
<td>35.7%</td>
<td>33.1%</td>
<td>7.6%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Some type of walk-in program is needed to improve hunter access to private lands in Iowa.</td>
<td>31.1%</td>
<td>25.2%</td>
<td>28.2%</td>
<td>8.8%</td>
<td>6.7%</td>
</tr>
</tbody>
</table>
**Table 2.** A projection of hunter perceptions pertaining to questions about perceived benefits and effect of IHAP in Iowa. Projections were calculated with 95% confidence. Data were collected from June-July 2014.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Somewhat Agree</th>
<th>Neither Agree Nor Disagree</th>
<th>Somewhat Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHAP is needed to improve hunter access to private lands in Iowa.</td>
<td>28.0%</td>
<td>36.1%</td>
<td>24.8%</td>
<td>6.3%</td>
<td>4.8%</td>
</tr>
<tr>
<td>IHAP is beneficial for Iowa.</td>
<td>31.3%</td>
<td>37.7%</td>
<td>24.6%</td>
<td>3.5%</td>
<td>2.9%</td>
</tr>
<tr>
<td>IHAP is beneficial for me personally.</td>
<td>13.8%</td>
<td>20.0%</td>
<td>51.2%</td>
<td>6.4%</td>
<td>8.6%</td>
</tr>
<tr>
<td>IHAP causes more hunters to lease places to hunt for themselves.</td>
<td>6.2%</td>
<td>19.3%</td>
<td>58.7%</td>
<td>11.8%</td>
<td>4.0%</td>
</tr>
<tr>
<td>IHAP decreases the number of hunters that are leaving the sport.</td>
<td>6.0%</td>
<td>22.5%</td>
<td>56.5%</td>
<td>10.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>IHAP creates new opportunities to hunt private lands in Iowa.</td>
<td>25.4%</td>
<td>39.6%</td>
<td>29.6%</td>
<td>3.1%</td>
<td>2.3%</td>
</tr>
</tbody>
</table>
Table 3. Projected revenue for IHAP based on a $4, $5, and $6 daily user fee, number of days hunted annually, an estimated 5,615 IHAP hunters, and 95% confidence intervals for the number of IHAP hunters. Revenue projections were calculated by multiplying the number of hunters by the daily user fee amount and the number of days hunted annually for point estimates and 95% confidence intervals. Data were collected from June – August 2014.

<table>
<thead>
<tr>
<th>Daily User Fee Amount</th>
<th>Number of days hunted</th>
<th>Point Estimate of IHAP Hunters</th>
<th>95% CI Number of IHAP Hunters</th>
<th>Point Estimate of Projected Revenue</th>
<th>95% CI of Projected Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4</td>
<td>1</td>
<td>5,615</td>
<td>3,321 – 8,165</td>
<td>$22,460.00</td>
<td>$13,284.00 - $32,660.00</td>
</tr>
<tr>
<td>$4</td>
<td>5</td>
<td>5,615</td>
<td>3,321 – 8,165</td>
<td>$112,300.00</td>
<td>$66,420.00 - $163,300.00</td>
</tr>
<tr>
<td>$4</td>
<td>10</td>
<td>5,615</td>
<td>3,321 – 8,165</td>
<td>$224,600.00</td>
<td>$132,840.00 - $326,600.00</td>
</tr>
<tr>
<td>$5</td>
<td>1</td>
<td>5,615</td>
<td>3,321 – 8,165</td>
<td>$28,075.00</td>
<td>$16,605.00 - $40,825.00</td>
</tr>
<tr>
<td>$5</td>
<td>5</td>
<td>5,615</td>
<td>3,321 – 8,165</td>
<td>$140,375.00</td>
<td>$83,025.00 – $204,125.00</td>
</tr>
<tr>
<td>$5</td>
<td>10</td>
<td>5,615</td>
<td>3,321 – 8,165</td>
<td>$280,750.00</td>
<td>$166,050.00 - $408,250.00</td>
</tr>
<tr>
<td>$6</td>
<td>1</td>
<td>5,615</td>
<td>3,321 – 8,165</td>
<td>$33,690.00</td>
<td>$19,926.00 - $48,990.00</td>
</tr>
<tr>
<td>$6</td>
<td>5</td>
<td>5,615</td>
<td>3,321 – 8,165</td>
<td>$168,450.00</td>
<td>$99,630.00 - $244,950.00</td>
</tr>
<tr>
<td>$6</td>
<td>10</td>
<td>5,615</td>
<td>3,321 – 8,165</td>
<td>$336,900.00</td>
<td>$199,260.00 - $489,900.00</td>
</tr>
</tbody>
</table>
Table 4. Projected revenue for IHAP based on multiple annual user amounts, an estimated 5,615 IHAP hunters, and 95% confidence intervals for the number of IHAP hunters. Revenue projections were calculated by multiplying the number of hunters by the annual fee amount for point estimates and confidence intervals. Data were collected from June – August 2014.

<table>
<thead>
<tr>
<th>Annual Fee Amount</th>
<th>Point Estimate of Number of IHAP Hunters</th>
<th>95% CI of Estimate of IHAP Hunters</th>
<th>Point Estimate of Projected Revenue</th>
<th>95% CI of Projected Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>$25</td>
<td>5,615</td>
<td>3,321 – 8,165</td>
<td>$140,375.00</td>
<td>$83,025.00 - $204,125.00</td>
</tr>
<tr>
<td>$30</td>
<td>5,615</td>
<td>3,321 – 8,165</td>
<td>$168,450.00</td>
<td>$99,630.00 - $244,950.00</td>
</tr>
<tr>
<td>$35</td>
<td>5,615</td>
<td>3,321 – 8,165</td>
<td>$196,525.00</td>
<td>$116,235.00 - $285,775.00</td>
</tr>
<tr>
<td>$40</td>
<td>5,615</td>
<td>3,321 – 8,165</td>
<td>$224,600.00</td>
<td>$132,840.00 - $326,600.00</td>
</tr>
</tbody>
</table>
Table 5. Projected revenue for IHAP based on incremental amounts added to the cost of Iowa’s general hunting license and an estimated 231,461 Iowa hunters. Revenue projections were calculated by multiplying the amount added to the hunting license fee by the number of Iowa hunters. Data were collected from June – August 2014.

<table>
<thead>
<tr>
<th>Amount Added to Hunting License Fee</th>
<th>Number of Iowa Hunters</th>
<th>Projected Revenue for IHAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1.00</td>
<td>231,461</td>
<td>$231,461.00</td>
</tr>
<tr>
<td>$1.50</td>
<td>231,461</td>
<td>$347,191.50</td>
</tr>
<tr>
<td>$2.00</td>
<td>231,461</td>
<td>$462,922.00</td>
</tr>
<tr>
<td>$2.50</td>
<td>231,461</td>
<td>$578,652.50</td>
</tr>
</tbody>
</table>
Table 6. Projection of revenue for IHAP based on hunter responses to the maximum amount they would add to the cost of the general hunting license. Projections of revenue include respondents who were willing to pay $2.5 and those who would pay more were included in estimates of lower dollar amounts. Projections were based on an estimate of 231,461 Iowa hunters. Revenue was calculated using estimates calculated with 95% confidence and multiplied by the amount hunters were willing to pay. Data were collected from June – August 2014. Note: Many hunters indicated that they were unwilling to have any license fee increase.

<table>
<thead>
<tr>
<th>Amount</th>
<th>Point Estimate of Number of Hunters</th>
<th>95% CI Number of Hunters</th>
<th>Point Estimate of Revenue</th>
<th>95% CI of Projected Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2.5 or greater</td>
<td>135,169</td>
<td>124,843 – 145,494</td>
<td>$337,922.50</td>
<td>$312,107.50 - $363,735.00</td>
</tr>
<tr>
<td>$5 or greater</td>
<td>78,819</td>
<td>69,850 – 87,950</td>
<td>$394,095.00</td>
<td>$349,250.00 - $439,750.00</td>
</tr>
<tr>
<td>$8 or greater</td>
<td>32,302</td>
<td>25,637 – 38,968</td>
<td>$258,416.00</td>
<td>$205,096.00 - $311,744.00</td>
</tr>
<tr>
<td>$15 or greater</td>
<td>3186</td>
<td>839 – 5,534</td>
<td>$47,790.00</td>
<td>$12,585.00 - $83,010.00</td>
</tr>
</tbody>
</table>
CHAPTER 4. EVALUATING HUNTER LANDOWNER RELATIONS IN IOWA

To be submitted to *Human Dimensions of Wildlife*. Co-authors contributed in study design, preparation, analysis, and editing, this document was prepared by the major author.

JAMES M. CRAIN, ¹² *Wildlife Ecology Program, Department of Natural Resource Ecology and Management, Iowa State University, Ames, IA 50011, USA*

REBECCA CHRISTOFFEL, *Department of Natural Resource Ecology and Management, Iowa State University, Ames, IA 5011, USA*

CHRIS JENNELLE, *Iowa Department of Natural Resources, 1436 255th Street, Boone, IA 50036, USA*

PETER A. FRITZELL JR., *Iowa Department of Natural Resources, 1436 255th Street, Boone, IA 50036, USA*

¹ E-mail: jmcrain@iastate.edu

² Present Address: 1436 255th Street, Boone, IA 50036, USA

ABSTRACT

Declines in hunter recruitment and retention have been occurring across the United States for decades and many agencies have invested heavily on hunter recruitment and retention research. Decreasing numbers of hunters have raised concerns about future funding for wildlife agencies because hunters generate revenue that wildlife agencies depend on to fund management practices. In Iowa, private landowners have become reluctant to allow hunters onto their properties for many reasons. Landowner decisions are based on experiences and encounters with individuals and a need for relationship building between hunters and private landowners exists. During June-August 2014, we mailed questionnaires to a random sample of Iowa hunters to: (1) determine the status of hunter-landowner relations in Iowa; (2) identify hunters’ opinions of themselves, other hunters, and private landowners, and (3) determine if supplemental education is needed to enhance relationship building between hunters and landowners. We found that hunter-
landowner relations in Iowa are generally good and hunters have positive opinions of private landowners, themselves, and other hunters. However, hunter-landowner relations have room for improvement that could benefit from supplemental hunter education focused on hunter-landowner relations.

**KEY WORDS** hunting, Iowa, landowners, private land, relations, hunter recruitment and retention

**INTRODUCTION**

Declines in hunter recruitment and retention (HRR) have been recognized by wildlife agencies across the United States for decades (Larson et al. 2013; Responsive Management and NSSF 2011). Lack of participation from hunters has associated reductions in available funds for wildlife agencies, which is a cause for concern because hunters contribute more to wildlife conservation per capita in the United States than non-hunters and the general population (Responsive Management 2010). License sales and excise taxes are extremely important to fish and wildlife agencies because they rely on these monies as a funding source to operate and manage wildlife habitat and wildlife populations. Reductions of these funds have forced some agencies to operate on reduced budgets and have ultimately lessened their abilities to effectively manage wildlife populations that are dependent on recreational hunting as a source of population management (Backman & Wright, 1993; Responsive Management and NSSF 2010). Some reasons for declining hunter participation cannot be influenced by wildlife agency intervention such as not having enough time, too many family responsibilities, and work (Responsive Management and NSSF 2011). Agencies have attempted to focus
on factors that they can influence, such as lack of accessible hunting lands. Lack of hunting access has been identified recently as the most important factor to the decline of HRR that is not related to demographics or time-related issues (Responsive Management and NSSF 2008). In response, many states have increased public land acres and implemented private lands walk-in hunting programs to increase opportunities for hunting (Responsive Management and NSSF 2010). These hunter opportunities are especially important for states that have a majority of land in private ownership, such as Iowa, where 88.7% of the land is privately owned agricultural land (Otto et al. 2007).

Accessibility to private lands is crucial to HRR and managing wildlife populations because hunters prefer and use private land more than public lands. More than twice as many hunters have hunted on private land at one time or another than hunters solely using public land (82% vs. 39%, respectively) (US Fish and Wildlife Service (USFWS) 2007). Access to private land may impact agencies’ effectiveness in managing deer populations because private land hunters are more likely to harvest game, spend more time hunting, be more committed to hunting, be more likely to harvest antlerless deer, and continue hunting longer than public land hunters (Steadman et al. 2008).

Although more hunters hunt and prefer private land, gaining access to these private lands remains an issue. Private landowners are more concerned with hunting on their property than any other recreational activity (Responsive Management 2004). Increasing numbers of private landowners are reluctant to allow hunters onto their properties for a variety of reasons, including liability concerns, property damage, safety, and simply not knowing the individual(s) attempting to gain access. Reasons for
landowners denying access to private land can be very diverse. Wright et al. (1988) identified 5 factors that influence landowners’ decisions about hunter access: 1) landowner opinions about land users, 2) user intentions for land use, 3) financial incentives, 4) landowner attitudes about activities performed, and 5) liability concerns. Private landowners have the right to dictate who may or may not hunt on their properties and landowners typically allow access to individuals they know best—friends and family (Teasley et al. 1999). A need for relationship building between hunters and landowners exists and improvements in these relations may also lead to improved hunter recruitment and retention (Larson 2013).

In Iowa, the need for private land access is vital to effective wildlife management and hunter recruitment and retention. Iowa trends in hunter recruitment and retention too have declined and are likely a result of the aforementioned issues. License sales have shown a steady decrease over the past decade (P. Fritzell personal communication). Previous research indicates that an Iowa hunter’s average tenure on properties for deer hunting was 11.96 years, 37% of respondents indicated that they lost access to properties over the previous 5 years that they had hunted, and 37% of these displaced hunters had lost hunting days as a result (P. Fritzell, personal communication). Since private landowners’ decisions about hunting access are based on experiences and encounters with users (Responsive Management 2010), the future of private land hunting in Iowa is reliant on access to private land and good relations between hunters and private landowners. In this study, we aim to identify the current state of hunter-landowner relations in Iowa, identify hunter opinions of landowners, themselves, and other hunters, and determine if a need exists for a supplemental educational program to enhance
relationship building and assist in mitigating potential conflict between private landowners and hunters.

**METHODS**

We developed a self-administered mail questionnaire using Abby Flexicapture v8.0 (Abbyy 2015) consisting of 32 items (Appendix C). We queried hunters about their experiences when interacting with private landowners in Iowa and identified respondents’ tendencies and perceptions of themselves as hunters, perceptions of other hunters, and perceptions of Iowa private landowners. We used open-ended questions and a series of items that used 5-point and 7-point Likert scales throughout the survey. We also developed two multiple-item indices, which included 6 items we considered as indicators of healthy relationships between hunters and private landowners. Our indicators included: listening, positive attitude, forthcoming with expectations, compromise, appreciation, and a method of exchange for hunting access. Hunters were first asked 6 index questions about their perceptions of private landowners while attempting to obtain hunting access and were later asked 6 similar questions about their own behaviors while interacting with private landowners.

We conducted cognitive interviews in June 2014 to identify potential measurement errors from the response process to our questionnaire. In doing so, we attempted to reduce problems with comprehension errors, adherence to the question format, identification of the correct response category, and recall of requested information (Dillman 2007). We recruited 12 individuals that varied by age and sex. We issued a copy of our questionnaire to participants and asked them to take it home for completion to simulate likely conditions for survey respondents. The following day we
met with each participant and used retrospective probing and “think-alouds” to navigate thought processes for answering 4 pre-selected questions that represented key points from the questionnaire (Dillman 2007). After interviews were completed, we determined that no major revisions to the questionnaire were necessary.

We administered two identical surveys following a modified version of Dillman’s Tailored Design Method (2007) on two sample populations (a total of 5,327 hunters) from June – August 2014. The first population included a random sample of 5,031 Iowa hunters. Our sampling was stratified by county and region (including non-resident hunters), and by license type, i.e. whether one was a deer hunter or not. Many different types of licenses were included in the sample frame, and we did not sample these by the probability proportional to their relative abundance in the population, thus some license types may be over or under represented in the sample. Hunter information was accessed from IDNR’s electronic licensing database (ELSI). In an attempt to obtain equal representation, we administered surveys to hunters in each county of Iowa’s 9 United States Department of Agriculture (USDA) service regions (Figure 1.) with approximately one half being sent to hunters that purchased deer permits and the other half being sent to hunters that purchased a hunting license but not a deer permit. However, equal representation was still subject to response rate differences. The random sample also included 500 non-resident hunters that purchased a hunting license during the 2013-2014 hunting season, which were not stratified by type of hunting license purchased.

Our second sample population consisted of 296 IHAP hunters with confirmed names and addresses who had submitted check-out cards while visiting IHAP properties during the 2012-2014 hunting seasons. Previous research conducted by IDNR staff
revealed that hunter awareness of the IHAP program was minimal during 2012-2014 hunting seasons for 3 reasons: 1) the inability of hunters to differentiate IHAP properties from state-owned public hunting properties, 2) proximity of IHAP sites to hunter residences, and 3) minimal marketing of IHAP by IDNR (P. Fritzell, personal communication). Known IHAP hunters were included in the sample frame to assist in proportionate response distributions from both IHAP-aware and IHAP-unaware hunters.

After all questionnaires were received and processed, we conducted non-response follow-up phone calls to 78 individuals who did not respond to the survey in an attempt to identify non-response bias (Vaske 2008).

Data were cleaned to remove duplicates and to identify logical and non-logical missing values and were proportionally weighted by USDA region of residence (Vaske 2008). Open-ended questions were condensed and categorized. If questionnaire items that required three responses were exceeded, data were cleaned by randomly assigning three of the respondent’s selected categories. Likert response categories for both healthy relationship indices were numerically coded from 1 to 7, each respondent’s indices containing 6 items were summed to provide a total score, and each index was divided by the total possible score (42). Respondents who did not provide answers to all indexed questions had their scores summed and divided by the total possible score based on the number of questions they answered (Vaske 2008). As a whole, indices of hunter perceptions of private landowners and hunters’ behaviors were tested for reliability and then compared. Questionnaires were processed using Abbyy Flexicapture v8.0 (Abbyy 2015) scanning software and analysis was performed using SAS v9.4 (SAS Institute
2015). All work was conducted in compliance with Iowa State University Internal
Review Board approval #13-318.

RESULTS

Of the 5,327 individuals selected to participate, 249 undeliverable surveys were
removed from the original sample, thus providing an adjusted sample frame of 5,078. We
effectively surveyed 1,833 hunters and obtained a 36% adjusted response rate. Answers
from individuals who did not complete our questionnaire but answered follow-up phone
calls revealed that questions regarding general relations in Iowa and a special DNR
hunter education program were biased positively. We chose not to re-calculate weights
for these items due to our small sample of follow-up respondents and accept that our
projections of these two items may underrepresent positive results. Additional items
examined from non-respondent phone call follow-ups revealed no presence of non-
response bias for hunter participation during the 2014 hunting season, experience hunting
on private land in Iowa, and hunter personal relationships with private landowners.

Demographic questions revealed that the majority of Iowa hunters had less than a
4 year degree: 28.9% (95% CI=24.7-33.2%) hold a high school diploma/GED, 22.7%
(95% CI=18.9-26.6%) have had some college, and 17.7% (95% CI=14.5-20.9%) have a
technical/vocational degree. A majority of respondents indicated that their annual
household income was below $100,000: 20.6% (95% CI=16.8-24.5%) earn $25,000 to
$49,999, 24.7% (95% CI=20.6-28.7%) earn between $50,000 and $74,999, and 17.1%
(95% CI=13.5-20.7%) earn between $75,000 and $99,999.
A majority of respondents indicated that general hunter-landowner relations across Iowa were positive (Figure 1). A large portion (89.6%; 95% CI=86.9-92.4%) of hunters have had experience hunting private land in Iowa, and a majority of these hunters rated the quality of communication between hunters and private landowners as favorable (Figure 2). Greater than half (72.1%; 95% CI 67.7-76.4%) of respondents indicated that they have hunted the same private properties for 5 or more years and another 15.9% (CI 12.3-19.4%) of respondents have had access to the same properties for 3 to 4 years. A large portion of respondents indicated that their personal relationships with private landowners were positive (Figure 3).

Greater than 60% of Iowa hunters are likely to seek permission to hunt private property in the future (Figure 4). Private landowners received a majority of positive remarks in all categories in which hunters were asked to indicate their level of agreement or disagreement to a set of statements about private landowner perceptions (Table 1). Hunters identified their top three explanations for why landowners do not allow hunting on their properties. A majority (68.1%; 95% CI=63.7-72.5%) of hunters indicated “previous bad experiences with hunters” was the primary reason, followed by 57.7% (95% CI=53.2-62.3%) who indicated “landowners hunt the property themselves”, and 39.5% (95% CI=34.7-44.3%) who indicated “liability concerns”. Hunters also indicated their opinions about the top 3 behaviors that Iowa landowners want to see from hunters. Almost 90% (87.7%; 95% CI=84.8-90.7%) of hunters believed that “respect for private property” was the most important, followed by 60.2% (95% CI=55.5-64.9%) of hunters that indicated “always asking permission”, and 35.9% (95% CI=31.4-40.3%) who indicated “showing appreciation” to private landowners.
Reliability analyses of healthy relationship indices indicate that both indices (i.e. 
hunter assessments of landowner behaviors and hunters’ self-reported behaviors) 
obtained acceptable internal consistency measures (Cronbach’s alpha .73 and .80, 
respectively). Each index contained 1 item which could have been removed to improve 
reliability measures, the act of performing chores in exchange for hunting access, yet we 
chose to keep this item as a metric of hunter effort (Tables 2 and 3). Hunter ratings of 
Iowa private landowners resulted in an average score of 67% for components of a healthy 
relationship while Iowa hunters obtained an average score of 86%. A comparison of 
healthy relationship scores revealed that a potential difference exists between hunter 
ratings of themselves and hunter ratings of private landowners.

Less than half (42.8%; 95% CI=38.1-47.5%) of Iowa hunters have lost access to 
private property that was previously hunted. Hunter comments indicate that 44% (n = 
329) of respondents lost access due to the sale of private land while another 20% (n = 
150) lost access due to hunting rights being leased. A majority (59.0%; 95% CI=54.4-
63.5%) of Iowa hunters visit with 1-3 landowners annually to obtain or confirm hunting 
access, followed by another 20.1% (95% CI=16.3-23.9%) that meet with 4-6 landowners 
each year. A small portion (8.7%; 95% CI=6.1-11.3%) of Iowa hunters do not meet with 
landowners annually. Greater than 60% of Iowa hunters indicated that they approach 
private landowners either weeks or months before hunting season begins to obtain or 
confirm hunting access (Figure 5). About half of respondents indicated that they take the 
lead role in obtaining permission for hunting on private land (Figure 6). After obtaining 
access, 43.3% (95% CI=38.5-48.1%) of Iowa hunters check-in with landowners once or 
twice a year, while another 6.3% (95% CI=4.2-8.5%) never contact the landowner again
Respondents indicated that it was important to them for IDNR to provide special education to improve their skills at approaching landowners and asking permission to hunt private land in Iowa (Figure 8).

DISCUSSION

We found that hunters and landowners have positive personal relationships. Our results from hunter respondents indicated that their personal relationships are positive, with favorable communication, and a majority of hunters have been hunting private properties for multiple years.

Although many hunters have positive relationships with private landowners in Iowa, there is always room for improvement. For example, a majority of hunters ranked general hunter-landowner relations across the state from “fair” to “good”, with very few indicating that relations were in excellent standing. This finding suggests that hunters were able to speak positively about their own relationships but not relations across Iowa. Hunter and private landowner healthy relationship indices revealed a possible difference between hunter and landowner relationship scores. A closer examination revealed inconsistencies between hunter and landowner relationship index components of compromise and performing chores as method of exchange for hunting access. Hunters believed that landowners were unwilling to grant hunting access if they offered to do chores and also believed that landowners were unwilling to compromise with hunters. We acknowledge that both indices were answered by hunters and we lack input from private landowners. Future quantitative research is needed to elicit opinions from private landowners about hunters in Iowa. We also acknowledge that personal opinions of one’s self tend to typically rank higher than opinions of others, which may explain a portion of
the difference (Brown 1986). Because a large portion of hunters reported losing access to private lands in the past, private landowners have become more reluctant to grant access, and healthy relationship scores reveal a possible difference, thus evident room for improvement exists in developing healthier relationships between hunters and private landowners.

This study also allowed us to identify hunter opinions of private landowners in Iowa, which is extremely important because a majority of hunters reported that they will seek permission to hunt private properties in the future. Although only a portion of Iowa hunters take a leadership role in obtaining access, their opinions suggest that landowners believe hunters are safe, ethical, responsible, appreciative, and trustworthy. Hunters were also aware of possible landowner concerns for not allowing access to private properties, of which liability concerns and previous bad experiences with hunters were consistent with landowner concerns from previous research (Responsive Management and NSSF 2007; Responsive Management and NSSF 2011; Tipton and Nickerson 2011). In addition, hunter responses reveal that acknowledgement of these top three landowner concerns were consistent with IDNR hunter education training (Iowa Hunter’s Education Course 2015). Iowa hunters also identified the top 3 characteristics that they believe landowners would like to see from hunters: 1) respect for private property, 2) always asking permission, and 3) showing appreciation. Again, these hunter responses appear to be a direct product of IDNR hunter education (Iowa Hunter’s Education Course 2015). Overall, Iowa hunters have positive opinions of private landowners in Iowa.

Although many Iowa hunters have positive relationships with private landowners and have experienced the ability to hunt the same private properties for a number of
years, it’s unavoidable that situations will arise where private landowners must sell their properties or choose to alter previous agreements with hunters or tenants. This was evident in our study as we projected that almost half of Iowa hunters have lost access to property that was previously hunted. In most cases, hunters indicated that they lost access due to the sale of the property, which may have resulted from financial distress, a loss of a family member, or a medical condition experienced by the private landowner. These situations typically are not controllable by the landowner or hunter. Hunting access may also be lost due to a decision by the landowner to lease hunting rights or to deny hunting on their property altogether. Regardless of how or why, it’s important for Iowa hunters to understand that the right for landowners to make decisions about how their properties are utilized still exists and that private landowners are not required to grant permission for hunting access. However, establishing well-developed relationships with landowner(s) may ease potential disagreements and provide involved parties with more information and a better understanding of situations at hand. This would allow hunters and landowners to learn more about each other and focus on factors that are controllable, i.e. their own actions.

Our results indicate that hunters in Iowa are making an effort to be sure to ask permission and secure access to private properties prior to the start of hunting seasons. Otherwise, hunters may not have reported having such positive personal relationships with landowners. These relationships are important because about half of Iowa hunters indicated that they are not the leader when asking landowners for hunting access. Those individuals may be inexperienced hunters and have parents, group members, or spouses that are obtaining permission for them, and their observations of interactions between
group leaders and landowners may be instrumental in setting positive examples for future relationships.

Although Iowa hunters are putting forth effort and contacting multiple landowners each year, it appears that private landowners are still reluctant to grant hunting access on private properties. Otherwise hunters would not have reported difficulty in finding places to hunt in Iowa and that landowners have become less willing to grant private land access over the past 5 years. Reasons for landowner indifference may stem from previous experiences of poor hunter behavior or landowners not knowing the individual(s) asking for permission. Landowner interviews conducted by Tipton and Nickerson (2011) in Montana revealed that poor hunter behavior was an emerging theme throughout their study and identified that “hunters need to be more responsible and respectful”, and work on “establishing a relationship with the landowner”. If hunters are not fortunate to own land or have family that owns land, developing a relationship and getting to know landowners may be the best method of securing private land hunting access. However, obtaining access should not be the primary goal. Our study revealed that after obtaining hunting access, most Iowa hunters contact private landowners once or twice a year and some never contact the landowner again. This provides yet another opportunity for private landowner and hunter relations to improve. More frequent contact with private landowners may allow hunters to be informed of landowner concerns, identify potential situations that may affect future decisions about the property, and assist in mitigating any issues that may have come about. Overall, more frequent contact allows hunters and landowners to have more face time and get to know one another on a personal level.
A large majority of respondents indicated that hunting was either their most important or one of their most important recreational activities. Given our adjusted response rate of 36%, we assume that hunter avidness did not have an effect on hunter-landowner relations in Iowa. We acknowledge that those who did respond may have been more predisposed for answering questions about hunting, while individuals that may have considered hunting less important could have been less inclined to respond to the questionnaire. Phone call follow-ups to identify non-response bias resulted in few contacts. Hunters in Iowa are not required to provide phone contact information at the time of license purchases which resulted in few phone numbers, a lack of current information, and the inability to contact a large portion of questionnaire non-respondents. Future research could also incorporate questions about hunter typologies (age group, number of years hunting, etc.) that may assist in determining the status of hunter-landowner relationships.

MANAGEMENT IMPLICATIONS

Our study revealed that improvement in hunter-landowner relations is necessary because hunters indicated that private landowners have become less willing to grant hunting access and it has become difficult to establish landowner contacts and find places to hunt. Because a majority of hunters reported that their perceptions of hunter-landowner relations across the state were ranked from “fair” to “good”, room for improvement exists. Iowa hunters considered it important for the IDNR to offer a special program aimed to improve hunter skills for approaching and asking permission to hunt private lands. At this time IDNR does not have such a program but a portion of their required hunter education course is dedicated to ethical hunting and dealing with private
landowners (Iowa Hunter’s Education Course 2015). This course is available online or as a field day, but the information about ethical hunter and private landowners is covered in only three pages (Iowa Hunter’s Education Course 2015). The information portrayed does provide hunters with a useful set of guidelines for interacting with private landowners and while hunting on private properties. Results from our study reveal that the ethical hunter and landowner information provided in the IDNR hunter education program appear to be effective tools, otherwise hunters may not have ranked their personal relationships with private landowners as high. However, it is possible that a portion of Iowa hunters have not taken Iowa Hunter Education course due to their age, or their hunter education may have been obtained in another state. Regardless, it is apparent that Iowa hunters and private landowner relationships could improve and this program may be the link by offering more in-depth information about how to approach landowners, ask permission to access their land, provide a stronger list of best management practices with reasoning, and develop healthy relationships with landowners.

IDNR could also adopt a program similar to Montana’s Hunter-Landowner Stewardship online training course that specializes in hunter-landowner relations and responsible hunter education (Montana Fish, Wildlife & Parks 2015). This course is completely voluntary and provides hunters with realistic topics and scenarios to educate individuals about the diverse situations that could arise when dealing with landowners (Montana Fish, Wildlife & Parks 2015). Once users complete the course, a certificate is issued which can then be presented to landowners while attempting to gain hunting access (Montana Fish, Wildlife & Parks 2015). Because Iowa hunters indicated that
gaining access to private land in Iowa is difficult and that landowners have become less willing to allow hunting access over the past 5 years, this certification may be a useful tool and could help mitigate hunter concerns with difficulty in gaining access to private land.

Given that a large majority of Iowa is privately owned farmland, continued access to highly coveted private land for hunting will continue to be vital to individuals that desire to hunt in Iowa. Less than 2% of Iowa’s land area is available for public hunting (Zohrer 2005), thus opportunities are limited if hunting access is not granted on private lands in Iowa. State agencies are reliant on hunters and landowners to bridge the gap and establish and maintain relationships to allow hunting to persist. Hunting in Iowa aids in effective game management and generates sufficient funding for IDNR to manage wildlife, but is dependent on continued participation of hunters. State agencies across the nation have invested heavily on HRR and efforts are needed now more than ever to implement new programs and to continue to improve systems that are currently in place.

CONCLUSIONS

To our knowledge, this is the first attempt to gain an understanding of the conditions of hunter and landowner relations in Iowa. Previous studies have identified a need to examine hunter – landowner relationships across the nation, yet little information was available for comparison. This research will serve as a baseline for hunter recruitment and retention in Iowa and to assist similar states that have little public hunting land and considerable competing land use pressures. Our research will also
contribute to current literature about HRR issues across the United States and will be useful to individuals, organizations, and government agencies.

ACKNOWLEDGEMENTS

We would like to thank Iowa State University and Iowa Department of Natural Resources for funding this study and R. Klaver and C. Kling for their expertise and guidance. We would also like to thank all questionnaire respondents for taking the time to complete and return the survey instrument.
Figure 1. A map of the distribution of the 9 USDA crop reporting regions in Iowa. Image was provided by Iowa State University Iowa Community Indicators Program and accessed on March 4, 2015. http://www.icip.iastate.edu/maps/refmaps/crop-districts.
Figure 1. Projected percentages (including 95% confidence intervals) of Iowa hunters ranking the quality of hunter-landowner relations in Iowa. Data were collected from June-August 2014.
Figure 2. Projected percentages (including 95% confidence intervals) of Iowa hunters ranking the quality of communication between hunters and private landowners from Poor to Excellent. Data were collected from June-August 2014.
Figure 3. Projected percentages (including 95% confidence intervals) of Iowa hunters ranking their personal relationships (from Poor to Excellent) with private landowners in Iowa. Data were collected from June-August 2014.
Figure 4. Projected percentages (including 95% confidence intervals) of Iowa hunter likeliness for seeking permission to hunt private land in the future. Data were collected from June-August 2014.
Figure 5. Projected percentages (including 95% confidence intervals) of the amount of time prior to hunting season that Iowa hunters contact landowners to gain or confirm access to private property for hunting. Data were collected from June-August 2014.
Figure 6. Projected percentages (including 95% confidence intervals) of Iowa hunter responses regarding how often they were the leader in asking permission to hunt private property. Data were collected from June-August 2014.
Figure 7. Projected percentages (including 95% confidence intervals) of Iowa hunter responses regarding how frequently they check-in with private landowners in Iowa. Data were collected from June-August 2014.
Projection of Iowa Hunter Importance Rankings For IDNR to Offer Special Education

Figure 8. Projected percentages (including 95% confidence intervals) of Iowa hunters indicating their perceived importance for IDNR to provide special education for approaching private landowners and asking permission to hunt private land in Iowa. Data were collected from June-August 2014.
Table 1. A projection of Iowa hunter opinions about private landowners in Iowa. Projections were calculated with 95% confidence. Data were collected from June-August 2014.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Somewhat Agree</th>
<th>Neither Agree Nor Disagree</th>
<th>Somewhat Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landowners believe hunters are safe.</td>
<td>21.2%</td>
<td>53.7%</td>
<td>14.5%</td>
<td>8.9%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Landowners believe hunters are ethical.</td>
<td>19.9%</td>
<td>52.8%</td>
<td>15.9%</td>
<td>8.9%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Landowners believe hunters are responsible.</td>
<td>19.5%</td>
<td>53.3%</td>
<td>13.8%</td>
<td>11.1%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Landowners trust hunters who hunt their property.</td>
<td>28.3%</td>
<td>48.1%</td>
<td>11.2%</td>
<td>9.9%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Landowners believe hunters are appreciative</td>
<td>44.1%</td>
<td>44.6%</td>
<td>6.0%</td>
<td>3.9%</td>
<td>1.4%</td>
</tr>
</tbody>
</table>
Table 2. Reliability analysis results for Iowa private landowner healthy relationship index.

<table>
<thead>
<tr>
<th>Private Landowner Healthy Relationship</th>
<th>Cronbach’s alpha if deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private landowners carefully listen to me.</td>
<td>0.64</td>
</tr>
<tr>
<td>Private landowners address me in a positive manner.</td>
<td>0.63</td>
</tr>
<tr>
<td>Private landowners are forthcoming with expectations / rules for hunting their property</td>
<td>0.69</td>
</tr>
<tr>
<td>Private landowners are willing to make compromises.</td>
<td>0.70</td>
</tr>
<tr>
<td>Private landowners appreciate my asking permission before hunting</td>
<td>0.71</td>
</tr>
<tr>
<td>Private landowners will allow me to hunt if I offer to do chores.</td>
<td>0.79</td>
</tr>
</tbody>
</table>
Table 3. Reliability analysis for Iowa hunter healthy relationship index.

<table>
<thead>
<tr>
<th>Hunters’ Healthy Relationship</th>
<th>Cronbach’s alpha if deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>I carefully listen to private landowners’ directions and concerns.</td>
<td>0.73</td>
</tr>
<tr>
<td>I approach private landowners in a positive manner.</td>
<td>0.73</td>
</tr>
<tr>
<td>I follow the rules / expectations established by private landowners.</td>
<td>0.72</td>
</tr>
<tr>
<td>I am willing to compromise with private landowners in order to obtain hunting access.</td>
<td>0.79</td>
</tr>
<tr>
<td>I show my appreciation to private landowners that allow me to hunt.</td>
<td>0.75</td>
</tr>
<tr>
<td>I offer to do chores in exchange for hunting access.</td>
<td>0.86</td>
</tr>
</tbody>
</table>
CHAPTER 5. GENERAL CONCLUSIONS

Iowa Habitat and Access Program

To provide a comprehensive evaluation of the Iowa Habitat and Access Program (IHAP), it was necessary to receive input from hunters and participating landowners. Participating landowners are especially important because they are a vital component to the existence of IHAP. Our study revealed that all of the IHAP participant landowners we interviewed were satisfied with the program. As an added benefit, our evaluation unveiled the importance of relations between landowner participants and IDNR staff. Landowner satisfaction with their communication and relationships with IDNR representatives, whom they all knew by name, reinforces the idea that these private landowners are supportive of IHAP and enjoy the relationships that they have developed with agency affiliates. Landowners and IDNR staff were able to work together to mitigate contract maintenance issues during times of drought, another indication that relationships among stakeholders has been and will continue to be key to IHAP’s success.

Participating landowners were satisfied with hunters that were visiting IHAP sites. Thus hunter behavior on IHAP sites has not been an issue for landowners. Some landowners also reported that they had the opportunity to meet and talk to the hunters utilizing their properties, although such interactions are not required of the program. Many hunters and landowners interacted regularly, emphasizing the value and importance of these relationships to the program’s success. Landowners reported that they thought hunters were appreciative of their ability to hunt IHAP. Support from
landowners and relationships among stakeholders have allowed IHAP to grow and continue to receive positive feedback.

Hunters provided a second component to the assessment of IHAP. Feedback was solicited from hunters about IHAP and about their perceived need for the program. Most Iowa hunters use private land for hunting. Iowa hunters reported that gaining access to private land in Iowa is difficult and that landowners have become less willing to grant hunting access to their properties over the past 5 years. They also indicated that a walk-in hunting program was needed, that IHAP was beneficial, and that IHAP presents hunters with new opportunities to hunt private land. However, less than half of Iowa hunters indicated that IHAP was personally beneficial. Although hunters identified a need for a walk-in program, it was surprising to learn that less than a quarter of them were aware of IHAP.

Another aspect of assessment was to determine hunter support for IHAP, despite the large percentage of hunters who were unaware of the program. A majority of respondents were supportive of IHAP and those who were aware of and hunted IHAP indicated that their experiences were positive. The fact that hunters reported being supportive of IHAP, although most of them were unaware of its existence prior to filling out the questionnaire, may indicate that Iowa hunters have positive opinions of IHAP and can relate to the potential benefits of the program regardless of their awareness. Less optimistically, respondents may have indicated support for the program because they felt that this is what the research team was seeking. Almost all of the known IHAP users we queried were aware of the program. They reported positive IHAP experiences and even higher marks for their support of IHAP than the statewide hunter sample. Thus,
individuals who were aware of IHAP and took advantage of IHAP’s hunting opportunities were likely to have higher opinions about the program. Overall, Iowa hunters were supportive of IHAP, and their expressed support for the program’s existence was not dependent on their awareness or their personal need of the program.

Although Iowa hunters indicated a need for IHAP and showed support for IHAP, the future of the program is dependent on continued funding. Hunters were asked their level of support for 3 funding mechanisms to fund IHAP, an annual fee, a daily fee, and/or an increase to the general license fee. We determined that a majority of hunters did not support funding the program. However, hunters indicated that if they had to pay, the most they would add to the license fee was from $1-$2. Known IHAP users indicated that they would be willing to pay to fund IHAP, regardless of the three funding scenarios. They would be willing to add more than twice as much to the license fee than Iowa hunters from the random sample. Hunters who have hunted IHAP sites and who are aware of the program are more likely to pay to support the program financially. Thus, options exist to provide future funding for the program.

The Iowa Habitat and Access Program began as a pilot program with an emphasis on improving the quality of wildlife habitat on private lands in Iowa. Participant landowners have opened their land to public hunting in exchange for receiving the benefit of professional habitat management on their properties. Based on our results, IHAP hunters and landowners were satisfied with the program and continued efforts to improve IHAP and the good relations among stakeholders are vital to future success of the program. Study results indicated that IDNR staff are doing a great job of balancing program responsibilities, providing expanded services to their customers, and relating
well with private landowners enrolled in the program. IDNR has implemented a successful walk-in hunting program while also providing improved habitat for wildlife in a state with many competing land use pressures. IDNR’s vision of IHAP has proven to be a quality program that has obtained many positive marks from participating landowners and hunters.

Recommendations for IHAP

During the initial stages of IHAP’s evaluation, the program was operating with funds from the 2010 USDA VPA-HIP grant. We determined hunter willingness to pay for IHAP once federal funding was set to expire in 2014. However, in September 2014, Iowa was awarded another USDA VPA-HIP grant providing an additional $3 million and negating any immediate funding need from hunters. However, given that both hunters and landowners are supportive of the program and have indicated satisfaction with IHAP, it appears that they would likely support expanding the program. If expansion is likely, we recommend examining the possibility of opening IHAP properties near major metropolitan areas in Iowa to improve hunter participation, which also may improve hunter awareness and hunter willingness to pay for the program. Such expansion would rely on IDNR to decide IHAP’s future and to determine their ability to coordinate such efforts, which include: 1) identifying additional private landowners to enroll in the program, 2) providing adequate staffing, 3) increasing administrative duties, 4) managing additional acres, 5) coordinating sub-contractors, and 6) continued monitoring of the effectiveness and efficiency of the program. It is also likely that funding will again become an issue, when the current round of federal funding expires. Future assessments of the program are likely needed if expansion does occur, which would not only benefit
from hunter and landowner opinions about IHAP, but also an assessment of the program from IDNR wildlife, fisheries, and law enforcement staff.

Because the general population of Iowa hunters was unwilling to pay for IHAP and individuals who had used IHAP properties were willing to pay for it, our best recommendation would be to implement fees for hunters that are utilizing the program. This would likely be the least difficult method of payment to get legislature approval and least likely to receive negative feedback from the bulk of Iowa’s hunters who do not use IHAP sites. We suspect that an IHAP user fee would be more likely to be approved by Iowa legislature than increasing the price of the general license fee, but increasing the license fee would be easier for IDNR to implement. If IHAP expansion is feasible and awareness of the program grows, we feel that hunter willingness to pay will also increase, but re-visiting funding options in the future may be necessary. If IHAP user fees are implemented, there are many considerations that IDNR would have to take into account, some of which are applicable for all funding mechanisms we examined. These include: 1) obtaining legislative approval, 2) developing and implementing a method of tracking IHAP users, 3) reconfiguring IDNR’s electronic licensing database, 4) educating IDNR vendors, 5) educating IDNR’s law enforcement officers, 6) increasing law enforcement efforts, 7) increasing IDNR’s administrative duties, 8) updating IDNR websites and policy manuals, and 9) increasing IHAP’s marketing. We are quite sure that all of these considerations would be examined by IDNR and each would weigh into their decision-making process.

Finally, we believe an examination of IHAP marketing strategies is necessary. Hunter responses indicated that a majority of Iowa hunters were unaware of IHAP and
few hunters reported hunting IHAP sites. Yet, a majority of hunters indicated that they use IDNR’s website to acquire information about hunting, which is where IHAP is advertised. To provide hunters with more information about IHAP, marketing techniques could be utilized to assist in branding this program such as: strategic placement of IHAP sites near larger population centers, determining ways to make the program more visible, enrolling properties near wildlife travel areas (e.g. waterfowl flyways), incorporating additional recreational activities into the program, and advertising the additional environmental benefits of the program (i.e. soil and water quality). These marketing techniques could also impact funding opportunities in the future because our results revealed that individuals who hunted IHAP sites were more willing to pay for the program. If the program does expand and IHAP fees are applied to hunters, increased marketing will only aid in generating funds for the program.

Hunter-landowner relations in Iowa

This study provided insights about the status of hunter-landowner relations in Iowa. In general, Iowa hunters’ personal relationships with private landowners were positive and their responses indicated that they put effort into obtaining private land hunting access. A majority of hunters also indicated that their perceptions of private landowners in Iowa were positive. A large portion of Iowa hunters had experience hunting private land and hunters indicated that they were visiting with multiple landowners each year to obtain access. These hunters were approaching landowners from weeks to months before the start of hunting season and most hunters have hunted the same properties for a number of years.
Although hunters reported that hunter-landowner personal relationships were positive in Iowa, a closer examination reveals that relations could be improved. About half of Iowa hunters indicated that general relations between hunters and landowners across the state ranked from fair to good, which implies that they could definitely be better. Hunters also indicated that obtaining access to private land in Iowa was difficult and that landowners have become less willing to grant hunting access to their properties over the past 5 years. These hunters also reported that greater than 40% of hunters have lost access to private properties they hunted in the past and greater than 40% of hunters check-in with private landowners only once or twice a year. Hunters are definitely putting effort into gaining access to hunt private property but likely are not taking adequate time to interact with landowners after access is obtained. If hunters are willing to put time into developing relationships with private landowners, we suspect that the number of hunters that lose access to private properties may decrease, resulting in fewer hunters indicating that securing access to private land is difficult.

Overall scores for hunters and landowner healthy relationship indices revealed a potential difference between how hunters perceive themselves and how hunters believe landowners view them. When examining the components for each index, it was apparent that Iowa hunters had very positive opinions about themselves and had less positive remarks about private landowner perceptions. Hunter responses to indices revealed that landowners were unwilling to compromise with hunters and were unwilling to grant hunting access if hunters offered to do chores. Likewise, most hunters indicated that they do not offer to do chores for landowners in exchange for hunting access. To gain a complete understanding of hunter-landowner relationships, future research is needed to
elicit opinions from a larger sample of private landowners in Iowa. Finally, a majority of hunter respondents indicated that it was important for IDNR to offer special education to assist hunters with approaching landowners and obtaining permission to hunt on private land. At this time no such course is offered by IDNR, but augmenting the current hunter education program to fill this need may be used to further educate those who typically are not leaders when obtaining hunting access. Overall, our results indicated that hunter-landowner relations in Iowa are generally positive but could be improved.

Recommendations for hunter-landowner relations in Iowa

Although hunter-landowner relations in Iowa appear to be generally positive, we identified opportunity for improvement. Iowa hunters and IDNR would benefit from augmenting the current hunter education program to include more in-depth information about suggested and discouraged practices. Current hunter education does provide hunters with what we feel is a good foundation of hunter behaviors, yet this course devotes only three pages of the manual to hunter-landowner relations. The course could be improved by adding information to assist new hunters in building relationships with private landowners by addressing each of our indicators of a healthy relationship. Respondents felt that it is important for IDNR to be offering education to enhance their skills for interacting with private landowners in Iowa. Implementing changes to current hunter education could improve and build on what appear to be generally positive relations. These changes may also contribute to HRR efforts by providing hunters with training to reduce hunter-landowner conflict. Better-informed hunters may be more
successful at obtaining private hunting access, which could then lead to improved hunter retention.

As an alternative, IDNR could adopt a special education program similar to Montana’s Hunter-Landowner Stewardship online training course, which specializes in hunter-landowner relations. This course is completely voluntary and provides hunters with realistic topics and scenarios to educate individuals about the diverse situations that could arise when dealing with landowners (Montana Fish, Wildlife & Parks 2015). Once users complete the course, a certificate is issued which can then be presented to landowners when attempting to gain hunting access (Montana Fish, Wildlife & Parks 2015). Because Iowa hunters indicated that gaining access to private land in Iowa is difficult and that landowners have become less willing to allow hunting access over the past 5 years, this certification may be a useful tool and could also help mitigate hunter concerns with difficulty in gaining access to private land. Ideas from this program would likely benefit Iowa hunters, private landowners, and IDNR, and should be included in future research to elicit private landowner opinions.
APPENDIX A. LANDOWNER SURVEY INSTRUMENT

Iowa Habitat and Access Program (IHAP)

Landowner Interview

1. Are you the lead decision-maker for how the IHAP property is managed?
   [ ] Yes    [ ] No

NOTE: Distance Residence to site ______

2. Why did you (or members of your trust) choose to enroll these acres in IHAP?
   (Check all that apply)
   [ ] To provide or improve habitat for wildlife in general
   [ ] To provide or improve habitat for a particular wildlife species
       Which Species? ________________________________
   [ ] To be in CRP with minimal coordination or effort on my part
   [ ] Financial incentive for offsetting CRP establishment costs
   [ ] To improve odds of re-enrolling CRP by upgrading cover
   [ ] Interest in having mid-contract CRP chores taken care of for me
   [ ] To improve my land without manipulating the habitat myself
   [ ] To improve my land without paying anything out of pocket
   [ ] To improve soil erosion and water quality
   [ ] To provide hunting opportunities for others

3. Did you have concerns or fears prior to joining IHAP?    [ ] Yes    [ ] No

________________________________________________________________________
________________________________________________________________________
4. I have listed a few concerns that I thought that you might have had prior to being part of IHAP, please check the ones that apply to you.

(Check all that apply)

[ ] Habitat Concerns [ ] Hunter Concerns [ ] Personal Concerns
[ ] Contractor Concerns [ ] Other concerns or fears not listed

________________________________________________________________________

________________________________________________________________________

What is or was causing this fear?

________________________________________________________________________

________________________________________________________________________

5. In general, have your concerns or fears been adequately addressed by the DNR representative with whom you enrolled in IHAP?

[ ] Yes [ ] No (if Yes, skip to question 6)

Which concerns were NOT addressed?

________________________________________________________________________

________________________________________________________________________

6. How satisfied have you been with the service you have received from your DNR representative administering this program?

[ ] Extremely satisfied [ ] Somewhat satisfied [ ] Neither
[ ] Somewhat dissatisfied [ ] Extremely dissatisfied

NOTE: Representative Name __________________________

7. How satisfied have you been with the communication between yourself and DNR representatives for IHAP?

[ ] Extremely satisfied [ ] Somewhat satisfied [ ] Neither
[ ] Somewhat dissatisfied [ ] Extremely dissatisfied

8. How would you rate the value of habitat improvements made on your property while enrolled in IHAP?

[ ] Extremely valuable [ ] Somewhat valuable [ ] Neither
[ ] Somewhat un-valuable [ ] Extremely un-valuable [ ] I don’t know
9. Did you perform habitat work **YOURSELF** and turn in an invoice to the DNR?  
   [ ] Yes  [ ] No  *(if No, skip to question 10)*

A. How satisfied were you with the **time** it took to receive your payment?  
   [ ] Extremely satisfied  [ ] Somewhat satisfied  [ ] Neither  
   [ ] Somewhat dissatisfied  [ ] Extremely dissatisfied

B. How satisfied were you with the necessary **procedures** for receiving your payment?  
   [ ] Extremely satisfied  [ ] Somewhat satisfied  [ ] Neither  
   [ ] Somewhat dissatisfied  [ ] Extremely dissatisfied

10. How satisfied have you been with the **service** (promptness, efficiency, care, quality) and **professionalism** (kindness, organization, planning, communication) of the contractor that performed work on your IHAP property?  
   [ ] Extremely satisfied  [ ] Somewhat satisfied  [ ] Neither  
   [ ] Somewhat dissatisfied  [ ] Extremely dissatisfied

11. Did your neighbors have concerns about you enrolling the land into IHAP?  
   [ ] Yes  [ ] No

12. Did your neighbors approve of your entering the property into IHAP?  
   [ ] Yes  [ ] No  [ ] I don’t know

A. Were you concerned with their approval?  
   [ ] Yes  [ ] No
13. Did your neighbors complain to you about **HUNTER BEHAVIOR** on the enrolled property during or after the hunting seasons?
   
   [ ] Yes  [ ] No

A. Do you feel that additional rules should be considered for IHAP?
   
   [ ] Yes  [ ] No

B. What are your suggestions?
   
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

14. Do you know how to contact an officer or DNR employee if needed?
   
   [ ] Yes  [ ] No

15. Were you contacted this year by a DNR representative to “check in” on how you thought things were going?
   
   [ ] Yes  [ ] No

16. How important would a regular “check in” by a DNR representative be to you?
   
   [ ] Extremely important  [ ] Somewhat important
   [ ] Neither  [ ] Somewhat unimportant
   [ ] Extremely unimportant

17. Did you witness or know of unauthorized vehicle use on the IHAP property?
   
   [ ] Yes  [ ] No

18. Did you know of any issues that were handled by a DNR Conservation Officer regarding your IHAP property?
   
   [ ] Yes  [ ] No

19. Prior to enrolling in IHAP, how often did you feel you needed to contact a DNR Conservation Officer or other law enforcement to address problems with hunters using the property?
   
   [ ] Frequently  [ ] Infrequently  [ ] Never  [ ] I don’t know
20. After this property was enrolled in IHAP, how often did you feel you needed to contact a DNR Conservation Officer or other law enforcement to address problems with hunters using the property?
   
   [ ] Frequently  [ ] Infrequently  [ ] Never  [ ] I don’t know

21. What have you liked most about IHAP so far?

________________________________________________________________________
________________________________________________________________________

22. What have you liked least about IHAP so far?

________________________________________________________________________
________________________________________________________________________

23. What are your suggestions (if any) for IHAP?

________________________________________________________________________
________________________________________________________________________

24. Considering your **overall experience** with IHAP, how would you rate your satisfaction with IHAP?

   [ ] Extremely satisfied  [ ] Somewhat satisfied  [ ] Neither
   [ ] Somewhat dissatisfied  [ ] Extremely dissatisfied

25. How likely is it that you would recommend to a friend that they consider enrolling a property in IHAP?

   [ ] Extremely likely  [ ] Somewhat likely  [ ] Neither
   [ ] Somewhat unlikely  [ ] Extremely unlikely
26. When your current contract expires, how likely is it that you would re-enroll in IHAP?
   [ ] Extremely likely  [ ] Somewhat likely  [ ] Neither
   [ ] Somewhat unlikely [ ] Extremely unlikely

27. When your current contract expires, how likely is it that you would enroll additional acres?
   [ ] Extremely likely  [ ] Somewhat likely  [ ] Neither
   [ ] Somewhat unlikely [ ] Extremely unlikely

28. Would you consider allowing the DNR to host a field day on your farm to show other landowners the habitat management that was completed on your farm?
   [ ] Yes  [ ] No

A. Are any of the following months completely “off the table” for hosting a field day?
   [ ] June  [ ] July  [ ] August  [ ] September

**Hunter-Landowner Relations**

1. Do you consider yourself a hunter?
   [ ] Yes  [ ] No

2. Prior to your enrollment in IHAP, about how many persons per year were hunting the property you placed in IHAP?
   [ ] 1-5  [ ] 6-10  [ ] 11-15  [ ] >15  [ ] I don’t know

3. After the property was enrolled in IHAP, how many people hunted on the property?
   [ ] More people  [ ] Less people  [ ] About the same number
   [ ] I don’t know
4. Prior to your enrollment in IHAP, who was allowed to hunt the property that you placed in IHAP?

(Check all that apply)

[ ] No one was allowed to hunt the property  [ ] Me and/or immediate family
[ ] Friends and neighbors  [ ] Hunters who requested permission
[ ] The property was open to anyone who wanted to hunt, they did NOT have to ask for permission
[ ] Hunting club members and/or people who leased hunting rights to the property

5. Since IHAP, who has hunted the property?

(Check all that apply)

[ ] Family, friends, and neighbors  [ ] Iowa resident hunters
[ ] Non-resident hunters  [ ] I don’t know

6. Prior to your enrollment in IHAP, what game did persons hunt on the property?

(Check all that apply)

[ ] Dove  [ ] Waterfowl (ducks and geese)
[ ] Small game (rabbit, squirrel)  [ ] Upland birds (pheasant, quail, grouse, crow)
[ ] Predators (coyote, fox, raccoon)  [ ] Deer
[ ] Turkey  [ ] I don’t know

7. Since IHAP, for which type of game, did persons hunt on the property?

(Check all that apply)

[ ] Dove  [ ] Waterfowl (ducks and geese)
[ ] Small game (rabbit, squirrel)  [ ] Upland birds (pheasant, quail, grouse, crow)
[ ] Predators (coyote, fox, raccoon)  [ ] Deer
8. Prior to IHAP, what was your overall rating of your relationship with the hunters who hunted your property?

[ ] Extremely satisfactory  [ ] Somewhat satisfactory  [ ] Neutral
[ ] Somewhat unsatisfactory  [ ] Extremely unsatisfactory

9. Prior to IHAP, how would you rate the hunters’ appreciation for hunting your property?

[ ] Extremely appreciative  [ ] Somewhat appreciative  [ ] Neutral
[ ] Somewhat non-appreciative  [ ] Extremely non-appreciative

10. Prior to IHAP, do you believe you could trust the hunters that hunted your property?

[ ] Strongly Agree  [ ] Somewhat Agree  [ ] Neutral
[ ] Somewhat Disagree  [ ] Strongly Disagree

11. Prior to IHAP, do you believe that the hunters who hunted your property were responsible hunters?

[ ] Strongly Agree  [ ] Somewhat Agree  [ ] Neutral
[ ] Somewhat Disagree  [ ] Strongly Disagree

12. Prior to IHAP, do you believe that the hunters who hunted your property were ethical hunters?

[ ] Strongly Agree  [ ] Somewhat Agree  [ ] Neutral
[ ] Somewhat Disagree  [ ] Strongly Disagree

13. Prior to IHAP, do you believe that the hunters who hunted your property were safe hunters?

[ ] Strongly Agree  [ ] Somewhat Agree  [ ] Neutral
14. Has the prescribed habitat work been completed on your property?
   [ ] Yes  [ ] No  (if No, skip to question 16)

15. Have you visited the property enrolled in IHAP after the habitat work was completed?
   [ ] Yes  [ ] No

16. Did you **hunt** the property enrolled in IHAP during the hunting season?
   [ ] Yes  [ ] No

17. Have you met or spoken with hunters visiting your IHAP property?
   [ ] Yes  [ ] No  (if No, skip to question 19)

18. Overall, what is your rating of the overall relationship with the hunters you came into contact with?
   [ ] Extremely satisfied  [ ] Somewhat satisfied  [ ] Neutral
   [ ] Somewhat dissatisfied  [ ] Extremely dissatisfied

19. Since IHAP, I believe that the hunters **appreciate** the opportunity of visiting the IHAP property.
   [ ] Strongly Agree  [ ] Somewhat Agree  [ ] Neutral
   [ ] Somewhat Disagree  [ ] Strongly Disagree

20. Since IHAP, I believe I can **trust** the hunters that hunt your property.
   [ ] Strongly Agree  [ ] Somewhat Agree  [ ] Neutral
   [ ] Somewhat Disagree  [ ] Strongly Disagree
21. Since IHAP, I believe that the hunters who hunt the IHAP property are **responsible** hunters.

   [ ] Strongly Agree  [ ] Somewhat Agree  [ ] Neutral
   [ ] Somewhat Disagree  [ ] Strongly Disagree

22. Since IHAP, I believe that the hunters who hunt the IHAP property are **ethical** hunters.

   [ ] Strongly Agree  [ ] Somewhat Agree  [ ] Neutral
   [ ] Somewhat Disagree  [ ] Strongly Disagree

23. Since IHAP, I believe that the hunters who visited the IHAP property are **safe** hunters.

   [ ] Strongly Agree  [ ] Somewhat Agree  [ ] Neutral
   [ ] Somewhat Disagree  [ ] Strongly Disagree

24. How satisfied have you been with the overall **behavior** and **respect** for your property shown by hunters who used the property you enrolled in IHAP?

   [ ] Extremely satisfied  [ ] Somewhat satisfied  [ ] Neutral
   [ ] Somewhat dissatisfied  [ ] Extremely dissatisfied  [ ] I Don’t Know

25. Other Comments

   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

26. What are your thoughts about the Conservation Reserve Program?

   Benefits

   __________________________________________________________________________
   __________________________________________________________________________
Concerns
APPENDIX B. LANDOWNER INTERVIEW RESULTS

**Iowa Habitat and Access Program (IHAP)**

**Landowner Interview**

29. Are you the lead decision-maker for how the IHAP property is managed?
   [ ] Yes \( (n = 29) \) 100% [ ] No \( (n = 0) \) 0%

30. Why did you (or members of your trust) choose to enroll these acres in IHAP?
   *(Check all that apply)*
   [ ] To provide or improve habitat for wildlife in general \( (n = 19) \) 65.5%
   [ ] To provide or improve habitat for a particular wildlife species \( (n = 6) \) 20.7%
   [ ] To be in CRP with minimal coordination or effort on my part \( (n = 12) \) 41.4%
   [ ] Financial incentive for offsetting CRP establishment costs \( (n = 22) \) 75.9%
   [ ] To improve odds of re-enrolling CRP by upgrading cover \( (n = 15) \) 51.7%
   [ ] Interest in having mid-contract CRP chores taken care of for me \( (n = 12) \) 41.4%
   [ ] To improve my land without manipulating the habitat myself \( (n = 6) \) 20.7%
   [ ] To improve my land without paying anything out of pocket \( (n = 10) \) 34.5%
   [ ] To improve soil erosion and water quality \( (n = 8) \) 27.6%
   [ ] To provide hunting opportunities for others \( (n = 10) \) 34.5%

31. Did you have concerns or fears prior to joining IHAP?
   [ ] Yes \( (n = 16) \) 55.2% [ ] No \( (n = 13) \) 44.8%

32. I have listed a few concerns that I thought that you might have had prior to being part of IHAP, please check the ones that apply to you.
   *(Check all that apply)*
   [ ] Habitat Concerns \( (n = 0) \) 0%
[ ] Hunter Concerns \( (n = 13) \) 44.8%
[ ] Personal Concerns \( (n = 14) \) 48.3%
[ ] Contractor Concerns \( (n = 1) \) 3.5%
[ ] Other concerns or fears not listed \( (n = 5) \) 17.2%

What is or was causing this fear?

33. In general, have your concerns or fears been adequately addressed by the DNR representative with whom you enrolled in IHAP?

[ ] Yes \( (n = 28) \) 96.6%  [ ] No \( (n = 1) \) 3.5%

*(if Yes, skip to question 6)*

Which concerns were NOT addressed?

34. How satisfied have you been with the service you have received from your DNR representative administering this program?

[ ] Extremely satisfied \( (n = 25) \) 86.2%
[ ] Somewhat satisfied \( (n = 3) \) 10.3%
[ ] Neither \( (n = 0) \) 0%
[ ] Somewhat dissatisfied \( (n = 1) \) 3.5%
[ ] Extremely dissatisfied \( (n = 0) \) 0%

ALL LANDOWNERS KNEW IDNR REPRESENTATIVES BY NAME

35. How satisfied have you been with the communication between yourself and DNR representatives for IHAP?

[ ] Extremely satisfied \( (n = 25) \) 86.2%
[ ] Somewhat satisfied \( (n = 3) \) 10.3%
36. How would you rate the value of habitat improvements made on your property while enrolled in IHAP?

- Extremely valuable \((n = 13)\) \(44.8\%\)
- Somewhat valuable \((n = 5)\) \(17.2\%\)
- Neither \((n = 2)\) \(6.9\%\)
- Somewhat un-valuable \((n = 0)\) \(0\%\)
- Extremely un-valuable \((n = 0)\) \(0\%\)
- I don’t know \((n = 9)\) \(31.0\%\)

37. Did you perform habitat work **YOURSELF** and turn in an invoice to the DNR?

- Yes \((n = 11)\) \(37.9\%\)
- No \((n = 18)\) \(62.1\%\)

*(if No, skip to question 10)*

C. How satisfied were you with the time it took to receive your payment?

- Extremely satisfied \((n = 2)\) \(18.2\%\)
- Somewhat satisfied \((n = 2)\) \(18.2\%\)
- Neither \((n = 3)\) \(27.3\%\)
- Somewhat dissatisfied \((n = 2)\) \(18.2\%\)
- Extremely dissatisfied \((n = 2)\) \(18.2\%\)

D. How satisfied were you with the necessary **procedures** for receiving your payment?

- Extremely satisfied \((n = 6)\) \(54.6\%\)
- Somewhat satisfied \((n = 3)\) \(27.3\%\)
38. How satisfied have you been with the service (promptness, efficiency, care, quality) and professionalism (kindness, organization, planning, communication) of the contractor that performed work on your IHAP property?

- [ ] Extremely satisfied \( (n = 19) \) 65.5%
- [ ] Somewhat satisfied \( (n = 6) \) 20.7%
- [ ] Neither \( (n = 1) \) 3.5%
- [ ] Somewhat dissatisfied \( (n = 0) \) 0%
- [ ] Extremely dissatisfied \( (n = 0) \) 0%
- [ ] I don’t know \( (n = 3) \) 10.3%

39. Did your neighbors have concerns about you enrolling the land into IHAP?

- [ ] Yes \( (n = 10) \) 34.5%
- [ ] No \( (n = 19) \) 65.5%

40. Did your neighbors approve of your entering the property into IHAP?

- [ ] Yes \( (n = 23) \) 79.3%
- [ ] No \( (n = 5) \) 17.2%
- [ ] I don’t know \( (n = 1) \) 3.5%

B. Were you concerned with their approval?

- [ ] Yes \( (n = 7) \) 24.1%
- [ ] No \( (n = 22) \) 75.9%

41. Did your neighbors complain to you about HUNTER BEHAVIOR on the enrolled property during or after the hunting seasons?

- [ ] Yes \( (n = 1) \) 3.5%
- [ ] No \( (n = 28) \) 96.6%
C. Do you feel that additional rules should be considered for IHAP?
   [ ] Yes \((n = 4)\) 13.8%    [ ] No \((n = 25)\) 86.2%

D. What are your suggestions?

VARIOUS SUGGESTIONS

42. Do you know how to contact an officer or DNR employee if needed?
   [ ] Yes \((n = 26)\) 89.7%    [ ] No \((n = 3)\) 10.3%

43. Were you contacted this year by a DNR representative to “check in” on how you thought things were going?
   [ ] Yes \((n = 19)\) 65.5%    [ ] No \((n = 10)\) 34.5%

44. How important would a regular “check in” by a DNR representative be to you?
   [ ] Extremely important \((n = 12)\) 41.4%
   [ ] Somewhat important \((n = 10)\) 17.2%
   [ ] Neither \((n = 5)\) 17.2%
   [ ] Somewhat unimportant \((n = 2)\) 6.9%
   [ ] Extremely unimportant \((n = 0)\) 0%

45. Did you witness or know of unauthorized vehicle use on the IHAP property?
   [ ] Yes \((n = 5)\) 17.2%    [ ] No \((n = 24)\) 82.8%

46. Did you know of any issues that were handled by a DNR Conservation Officer regarding your IHAP property?
   [ ] Yes \((n = 1)\) 3.5%    [ ] No \((n = 28)\) 96.6%

47. Prior to enrolling in IHAP, how often did you feel you needed to contact a DNR Conservation Officer or other law enforcement to address problems with hunters using the property?
   [ ] Frequently \((n = 0)\) 0%
   [ ] Infrequently \((n = 1)\) 3.5%
   [ ] Never \((n = 28)\) 96.6%
   [ ] I don’t know \((n = 0)\) 0%
48. After this property was enrolled in IHAP, how often did you feel you needed to contact a DNR Conservation Officer or other law enforcement to address problems with hunters using the property?

- Frequently $(n = 0)$ 0%
- Infrequently $(n = 2)$ 6.9%
- Never $(n = 26)$ 89.7%
- I don’t know $(n = 1)$ 3.5%

49. What have you liked most about IHAP so far?

________________________________________________________________________
________________________________________________________________________

50. What have you liked least about IHAP so far?

________________________________________________________________________
________________________________________________________________________

51. What are your suggestions (if any) for IHAP?

________________________________________________________________________
________________________________________________________________________

52. Considering your overall experience with IHAP, how would you rate your satisfaction with IHAP?

- Extremely satisfied $(n = 23)$ 79.3%
- Somewhat satisfied $(n = 6)$ 20.7%
- Neither $(n = 0)$ 0%
- Somewhat dissatisfied $(n = 0)$ 0%
- Extremely dissatisfied $(n = 0)$ 0%

53. How likely is it that you would recommend to a friend that they consider enrolling a property in IHAP?

- Extremely likely $(n = 25)$ 86.2%
- Somewhat likely $(n = 3)$ 10.3%
- Neither $(n = 1)$ 3.5%
54. When your current contract expires, how likely is it that you would re-enroll in IHAP?

- Extremely likely \( (n = 20) \) 68.9%
- Somewhat likely \( (n = 5) \) 17.2%
- Neither \( (n = 3) \) 10.3%
- Somewhat unlikely \( (n = 0) \) 0%
- Extremely unlikely \( (n = 1) \) 3.5%

55. When your current contract expires, how likely is it that you would enroll additional acres?

- Extremely likely \( (n = 13) \) 44.8%
- Somewhat likely \( (n = 2) \) 6.9%
- Neither \( (n = 3) \) 10.3%
- Somewhat unlikely \( (n = 1) \) 3.5%
- Extremely unlikely \( (n = 10) \) 34.5%

56. Would you consider allowing the DNR to host a field day on your farm to show other landowners the habitat management that was completed on your farm?

- Yes \( (n = 27) \) 93.1%
- No \( (n = 2) \) 6.9%

B. Are any of the following months completely “off the table” for hosting a field day?

- June \( (n = 4) \) 13.8%
- July \( (n = 3) \) 10.3%
- August \( (n = 4) \) 13.8%
- September \( (n = 7) \) 24.1%
Hunter-Landowner Relations

27. Do you consider yourself a hunter?
   [ ] Yes (n = 10) 34.5%  [ ] No (n = 19) 65.5%

28. Prior to your enrollment in IHAP, about how many persons per year were hunting the property you placed in IHAP?
   [ ] 1-5 (n = 8) 27.6%
   [ ] 6-10 (n = 6) 20.7%
   [ ] 11-15 (n = 6) 20.7%
   [ ] >15 (n = 6) 20.7%
   [ ] I don’t know (n = 3) 10.3%

29. After the property was enrolled in IHAP, how many people hunted on the property?
   [ ] More people (n = 7) 24.1%
   [ ] Less people (n = 1) 3.5%
   [ ] About the same number (n = 7) 24.1%
   [ ] I don’t know (n = 14) 48.3%

30. Prior to your enrollment in IHAP, who was allowed to hunt the property that you placed in IHAP?
   (Check all that apply)
   [ ] No one was allowed to hunt the property (n = 2) 6.9%
   [ ] Friends and neighbors (n = 21) 72.4%
   [ ] The property was open to anyone who wanted to hunt, they did NOT have to ask for permission (n = 4) 13.8%
   [ ] Hunting club members and/or people who leased hunting rights to the property (n = 0) 0%
   [ ] Me and/or immediate family (n = 13) 44.8%
31. Since IHAP, who has hunted the property?

(Check all that apply)
- [ ] Family, friends, and neighbors \( (n = 15) \) 51.7%
- [ ] Non-resident hunters \( (n = 4) \) 13.8%
- [ ] Iowa resident hunters \( (n = 19) \) 65.5%
- [ ] I don’t know \( (n = 12) \) 41.4%

32. Prior to your enrollment in IHAP, what game did persons hunt on the property?

(Check all that apply)
- [ ] Dove \( (n = 0) \) 0%
- [ ] Small game (rabbit, squirrel) \( (n = 2) \) 6.9%
- [ ] Predators (coyote, fox, raccoon) \( (n = 6) \) 20.7%
- [ ] Turkey \( (n = 12) \) 41.4%
- [ ] Waterfowl (ducks and geese) \( (n = 2) \) 6.9%
- [ ] Upland birds (pheasant, quail, grouse, crow) \( (n = 22) \) 75.9%
- [ ] Deer \( (n = 24) \) 82.8%
- [ ] I don’t know \( (n = 1) \) 3.5%

33. Since IHAP, for which type of game, did persons hunt on the property?

(Check all that apply)
- [ ] Dove \( (n = 2) \) 6.9%
- [ ] Small game (rabbit, squirrel) \( (n = 2) \) 6.9%
- [ ] Predators (coyote, fox, raccoon) \( (n = 6) \) 20.7%
- [ ] Turkey \( (n = 11) \) 37.9%
- [ ] Waterfowl (ducks and geese) \( (n = 3) \) 10.3%
- [ ] Upland birds (pheasant, quail, grouse, crow) \( (n = 20) \) 68.9%
[ ] Deer  
(n = 20)  68.9%  
[ ] I don’t know  
(n = 4)  13.8%

34. Prior to IHAP, what was your overall rating of your relationship with the hunters who hunted your property?

[ ] Extremely satisfactory  
(n = 15)  51.7%  
[ ] Somewhat satisfactory  
(n = 9)  31.0%  
[ ] Neutral  
(n = 1)  3.5%  
[ ] Somewhat unsatisfactory  
(n = 0)  0%  
[ ] Extremely unsatisfactory  
(n = 0)  0%  
[ ] I don’t know  
(n = 4)  13.8%

35. Prior to IHAP, how would you rate the hunters’ appreciation for hunting your property?

[ ] Extremely appreciative  
(n = 15)  51.7%  
[ ] Somewhat appreciative  
(n = 8)  27.6%  
[ ] Neutral  
(n = 0)  0%  
[ ] Somewhat non-appreciative  
(n = 1)  3.5%  
[ ] Extremely non-appreciative  
(n = 0)  0%  
[ ] I don’t know  
(n = 5)  17.2%

36. Prior to IHAP, do you believe you could trust the hunters that hunted your property?

[ ] Strongly Agree  
(n = 16)  55.2%  
[ ] Somewhat Agree  
(n = 10)  34.5%  
[ ] Neutral  
(n = 0)  0%  
[ ] Somewhat Disagree  
(n = 0)  0%  
[ ] Strongly Disagree  
(n = 0)  0%  
[ ] I don’t know  
(n = 3)  10.3%
37. Prior to IHAP, do you believe that the hunters who hunted your property were **responsible** hunters?

[ ] Strongly Agree  \( (n = 20) \)  68.9%
[ ] Somewhat Agree  \( (n = 5) \)  17.2%
[ ] Neutral  \( (n = 1) \)  3.5%
[ ] Somewhat Disagree  \( (n = 0) \)  0%
[ ] Strongly Disagree  \( (n = 0) \)  0%
[ ] I don’t know  \( (n = 3) \)  10.3%

38. Prior to IHAP, do you believe that the hunters who hunted your property were **ethical** hunters?

[ ] Strongly Agree  \( (n = 17) \)  58.6%
[ ] Somewhat Agree  \( (n = 7) \)  24.1%
[ ] Neutral  \( (n = 0) \)  0%
[ ] Somewhat Disagree  \( (n = 0) \)  0%
[ ] Strongly Disagree  \( (n = 0) \)  0%
[ ] I don’t know  \( (n = 5) \)  17.2%

39. Prior to IHAP, do you believe that the hunters who hunted your property were **safe** hunters?

[ ] Strongly Agree  \( (n = 21) \)  72.4%
[ ] Somewhat Agree  \( (n = 4) \)  13.8%
[ ] Neutral  \( (n = 0) \)  0%
[ ] Somewhat Disagree  \( (n = 0) \)  0%
[ ] Strongly Disagree  \( (n = 0) \)  0%
[ ] I don’t know  \( (n = 4) \)  13.8%

40. Has the prescribed habitat work been completed on your property?
[ ] Yes (n = 27)  93.1%  [ ] No (n = 2)  6.9%

(if No, skip to question 16)

41. Have you visited the property enrolled in IHAP after the habitat work was completed?

[ ] Yes (n = 26)  96.3%  [ ] No (n = 1)  3.7%

42. Did you hunt the property enrolled in IHAP during the hunting season?

[ ] Yes (n = 3)  10.3%  [ ] No (n = 26)  89.7%

43. Have you met or spoken with hunters visiting your IHAP property?

[ ] Yes (n = 13)  44.8%  [ ] No (n = 16)  55.2%

(if No, skip to question 19)

44. Overall, what is your rating of the overall relationship with the hunters you came into contact with?

[ ] Extremely satisfied (n = 13)  100.0%
[ ] Somewhat satisfied (n = 0)  0%
[ ] Neutral (n = 0)  0%
[ ] Somewhat dissatisfied (n = 0)  0%
[ ] Extremely dissatisfied (n = 0)  0%

45. Since IHAP, I believe that the hunters appreciate the opportunity of visiting the IHAP property.

[ ] Strongly Agree (n = 24)  82.8%
[ ] Somewhat Agree (n = 3)  10.3%
[ ] Neutral (n = 1)  3.5%
[ ] Somewhat Disagree (n = 0)  0%
46. Since IHAP, I believe I can **trust** the hunters that hunt your property.

- **Strongly Agree** (n = 20) 69.0%
- **Somewhat Agree** (n = 5) 17.2%
- **Neutral** (n = 4) 13.8%
- **Somewhat Disagree** (n = 0) 0%
- **Strongly Disagree** (n = 0) 0%
- **I don’t know** (n = 0) 0%

47. Since IHAP, I believe that the hunters who hunt the IHAP property are **responsible** hunters.

- **Strongly Agree** (n = 21) 72.4%
- **Somewhat Agree** (n = 5) 17.2%
- **Neutral** (n = 3) 10.3%
- **Somewhat Disagree** (n = 0) 0%
- **Strongly Disagree** (n = 0) 0%
- **I don’t know** (n = 0) 0%

48. Since IHAP, I believe that the hunters who the IHAP property are **ethical** hunters.

- **Strongly Agree** (n = 19) 65.5%
- **Somewhat Agree** (n = 6) 20.7%
- **Neutral** (n = 2) 6.9%
- **Somewhat Disagree** (n = 0) 0%
- **Strongly Disagree** (n = 0) 0%
- **I don’t know** (n = 2) 6.9%
49. Since IHAP, I believe that the hunters who visited the IHAP property are **safe** hunters.

- [ ] Strongly Agree \( (n = 22) \) 75.9%
- [ ] Somewhat Agree \( (n = 4) \) 13.8%
- [ ] Neutral \( (n = 2) \) 6.9%
- [ ] Somewhat Disagree \( (n = 0) \) 0%
- [ ] Strongly Disagree \( (n = 0) \) 0%
- [ ] I don’t know \( (n = 1) \) 3.5%

50. How satisfied have you been with the overall **behavior** and **respect** for your property shown by hunters who used the property you enrolled in IHAP?

- [ ] Extremely satisfied \( (n = 22) \) 75.9%
- [ ] Somewhat satisfied \( (n = 5) \) 17.2%
- [ ] Neutral \( (n = 0) \) 0%
- [ ] Somewhat dissatisfied \( (n = 0) \) 0%
- [ ] Extremely dissatisfied \( (n = 0) \) 0%
- [ ] I Don’t Know \( (n = 2) \) 6.9%

51. Other Comments

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

52. What are your thoughts about the Conservation Reserve Program?

**Benefits**

________________________________________________________________________
________________________________________________________________________

**Concerns**
APPENDIX C. HUNTER SURVEY INSTRUMENT

Expanding Hunter Opportunities in Iowa:
A Review of Hunter Access Options

About You

First we’d like to learn a little about you and the type of hunting you do.

1. Please indicate how important hunting is to you.
   [ ] My most important recreational activity
   [ ] One of my most important recreational activities
   [ ] No more important than my other recreational activities
   [ ] One of my least important recreational activities
   [ ] My least important recreational activity

2. What type(s) of hunting did you do in Iowa during the 2013-2014 season? (check all that apply)
   [ ] I did not hunt (if you did not hunt, skip to question 4)
   [ ] Upland game (Rabbit, Squirrel)         [ ] Deer (Archery)
   [ ] Upland birds (Pheasant, Quail, Dove, etc.) [ ] Deer (Firearm)
   [ ] Turkey                             [ ] Deer (Muzzleloader)
   [ ] Waterfowl (Ducks, Geese)           [ ] Furbearers (Coyote, Fox, etc.)

3. On what type of land did you hunt during the 2013-2014 hunting season? (select only one)
   [ ] Private ONLY                           [ ] Both Public and Private
   [ ] Public ONLY  (If Public only, skip to question 4)

   A. On which type of private land did you hunt in 2013-2014? (check all that apply)
      [ ] Private land you personally own
[ ] Private land owned by family or friends
[ ] Private land that you leased or paid a fee to hunt
[ ] Private land NOT owned by family or friends where you asked permission to hunt
[ ] I rent private land for farming purposes, but also have permission to hunt the same land

4. Did you own or were you a tenant of agricultural land or wildlife habitat in 2013?
   [ ] Yes   [ ] No

**WALK-IN HUNTING AREAS** are tracts of private land that landowners have entered into agreements with wildlife agencies to open for public hunting. Several private land walk-in programs exist throughout the United States.

5. Have you personally hunted Walk-in Areas, Block Management Areas, or other PRIVATE LANDS ACCESS programs in other states?
   [ ] Yes   [ ] No

6. Please indicate your level of agreement or disagreement with each of the following statements:
   *(Select only one for each statement)*

   **SA = Strongly Agree, A = Agree, N = Neither Agree or Disagree, D = Disagree, SD = Strongly Disagree**

   - It is difficult to find places to hunt in Iowa. ___
   - It is difficult to gain access to private properties in Iowa ___
   - Over the past 5 years, landowners have become less willing to grant permission to hunt on private land in Iowa ___
   - Over the past 5 years, it has become more difficult to establish and maintain landowner contacts ___
   - Some type of walk-in program is needed to improve hunter access to private lands in Iowa ___
7. On a scale of (1-7), what is your general perception of the status of hunter / landowner relations in Iowa? (select only one)

1___ 2___ 3___ 4___ 5___ 6___ 7___
Poor    Fair    Good    Excellent

8. Have you used the Iowa Department of Natural Resources (IDNR) website to acquire hunting information (e.g. season dates, license information, hunting opportunities)?

[ ] Yes   [ ] No

**Iowa Habitat and Access Program (IHAP)**

The Iowa Habitat and Access Program (IHAP) is a federally funded pilot project that began in 2011 and has opened about 7500 acres of private land to the public for hunting in Iowa. The program’s emphasis is improving the amount and quality of wildlife habitat on private lands at no cost to landowners. However, to receive this assistance making habitat improvements on their land, landowners must allow walk-in hunting access to the public for 3 or more years. For more information please visit www.iowadnr.gov/Hunting/PlacestoHuntShoot/.

9. Prior to this survey did you know of the Iowa Habitat and Access Program (IHAP)?

[ ] Yes   [ ] No

10. Did you hunt any IHAP sites during the 2012-2013 or 2013-14 hunting seasons?

[ ] Yes   [ ] No  (if NO, skip to question 12)

11. On a scale of 1 to 7, how would you rate your overall IHAP experience? (select only one)

1___ 2___ 3___ 4___ 5___ 6___ 7___
Poor    Fair    Good    Excellent
12. Please indicate your level of agreement or disagreement with the following statements about IHAP:

*Select only one for each statement*

SA = Strongly Agree, A = Agree, N = Neither Agree or Disagree, D = Disagree, SD = Strongly Disagree

- IHAP is needed to improve hunter access to private lands in Iowa
- IHAP is beneficial for Iowa
- IHAP is beneficial to me personally
- IHAP causes more hunters to lease places to hunt for themselves
- IHAP decreases the number of hunters that are leaving the sport
- IHAP creates NEW opportunities to hunt private lands in Iowa

13. On a scale of 1-7, please rate your level of support for the Iowa Habitat and Access Program IHAP.

*Select only one*

1= Not at all Supportive  3= Slightly Supportive  5=Moderately Supportive  7= Extremely Supportive

1____ 2____ 3____ 4____ 5____ 6____ 7____

14. Please indicate how likely or unlikely it is that you will take the following actions in the future...

*Select only one for each question*

EL = Extremely Likely, SL = Somewhat Likely, N = Neither likely nor unlikely, SU = Somewhat Unlikely, EU = Extremely Unlikely

- ...to seek permission to hunt private property from non-IHAP landowners
- ...to hunt IHAP sites in the future

15. To this point, IHAP has been funded by a federal grant. In the absence of federal funding, how likely are you to...

*Select only one for each question*
EL = Extremely Likely, SL = Somewhat Likely, N = Neither likely nor unlikely, SU = Somewhat Unlikely, EU = Extremely Unlikely

- be willing to pay an ANNUAL user fee (e.g. about $30) that would allow you to hunt any day on private lands enrolled in IHAP
- be willing to pay a DAILY user fee (e.g. about $5) for each day that you hunt private lands enrolled in IHAP
- support increasing the price of the general hunting license to help fund IHAP

16. What is the MOST you would be willing to add to cost of the General Hunting License to help support IHAP? (Nearly all hunters are required to purchase this license to hunt.)

(select only one) $0 $1 $2 $3 $4 $5 $6 $7 $8 $9 $10 Other

A. If you answered zero above, please indicate the main reason for answering zero
(select only one)

[ ] You do not receive any benefits from IHAP and therefore see no reason to pay.

[ ] Your cost of living is already too high or you cannot afford to pay any more for the hunting license.

[ ] You believe the method of payment (i.e. the general hunting license) is not fair or equitable.

[ ] You have a right to recreational opportunities on IHAP properties, and it is unfair to expect you as a hunting license holder to pay for the privilege of hunting IHAP properties.

[ ] You do not think IHAP works as described.

[ ] Other

Iowa Hunter-Landowner Relations

The following questions are designed to assess the condition of hunters’ relations with private land owners in Iowa, and hunters’ ability to gain access to private property for hunting.

If you have hunted private property in Iowa, please continue to question 17.

[ ] Check here if you have NEVER hunted or attempted to hunt private property in Iowa and skip to question #30. Thank you!

17. Please indicate your level of agreement or disagreement with the following statements about IOWA private landowners: (Select only one for each statement)
SA = Strongly Agree, A = Agree, N = Neither Agree nor Disagree, D = Disagree, SD = Strongly Disagree

- Landowners believe hunters appreciate being able to hunt private property___
- Landowners trust hunters who hunt their property___
- Landowners believe hunters are responsible___
- Landowners believe hunters are ethical___
- Landowners believe hunters are safe___

18. On a scale from (1-7), please indicate what your experience with private landowners has been in Iowa when you have asked for permission to hunt. (Select only one for each statement)

1= Never 3= Infrequently 5= Frequently 7= Always

- Private landowners carefully listen to me___
- Private landowners address me in a positive manner___
- Private landowners are forthcoming with expectations / rules for hunting their property___
- Private landowners are willing to make compromises___
- Private landowners appreciate my asking permission before hunting___
- Private landowners will allow me to hunt if I offer to do chores___

19. How do you rate the quality of communication between hunters and private landowners in IOWA? (Select only one)

1___ 2___ 3___ 4___ 5___ 6___ 7___
Poor    Fair    Good    Excellent

20. In your experience, what are the top 3 reasons why some private landowners in IOWA DO NOT allow hunters to hunt their properties? (Please select ONLY your top 3 choices)

[ ] Previous bad experience with hunters [ ] Hunting interferes with farming practices
[ ] Hunters don’t respect private property [ ] Landowners don’t like hunting
[ ] Landowners hunt the property themselves [ ] Liability concerns
[ ] Landowners don’t know the hunters [ ] Hunters trespass on their land frequently
[ ] Hunters do not hunt legally [ ] Too many hunters are asking to hunt
[ ] Landowner has safety concerns  [ ] Other ______________________

21. What are the top 3 behaviors that IOWA landowners want to see from hunters they allow on their property?  

(Please select ONLY your top 3 choices)

[ ] Respect for private property  [ ] Respect for farming practices  
[ ] Respect for habitat and wildlife  [ ] Safety  
[ ] Parking in designated areas  [ ] Regular communication  
[ ] Showing appreciation (e.g. gift, card)  [ ] Always asking permission  
[ ] Following laws and regulations  [ ] Asking what rules are to be followed  
[ ] Offering to work or assist landowner  [ ] Other__________________________  
[ ] Not bringing other hunters onto the property without asking

22. Have you ever lost access to private property in Iowa that you hunted in the past?

[ ] Yes  [ ] No  (If No, skip to question 23)

A. Why do you believe you lost access?
___________________________________________________________________________

23. About how many landowners do you visit each year to obtain or confirm access to private property for hunting in IOWA?  (Select only one)

[ ] 0  [ ] 1-3  [ ] 4-6  [ ] 7-9  [ ] 10 +

24. How often are you the leader in obtaining permission to hunt for yourself and others with whom you hunt?  

(Select only one)

1= Never  3= Infrequently  5= Frequently  7=Always

1___ 2___ 3___ 4___ 5___ 6___ 7___

25. On average, how long before you intend to hunt do you approach private landowners in Iowa to gain access or confirm permission to their properties?  

(Select only one)
26. On average, after obtaining access to hunt, how often do you “check in” with the landowner(s) (either by phone, email, or in person)?
   [ ] Daily  [ ] Weekly  [ ] Monthly  [ ] Once or Twice a year  [ ] Never

27. On average, how many years have you been hunting the same private properties? (Select only one)
   [ ] < 1 yr  [ ] 1-2 years  [ ] 3-4 years  [ ] 5+ years

28. Please rate your answer to the following statements about your interactions with private landowners in Iowa on a scale from (1-7): (Select only one for each statement)
   1= Never  3= Infrequently  5= Frequently  7= Always
   - I carefully listen to private landowners’ directions and concerns___
   - I approach private landowners in a positive manner___
   - I follow the rules / expectations established by private landowners___
   - I am willing to compromise with private landowners in order to obtain hunting access___
   - I show my appreciation to private landowners that allow me to hunt___
   - I offer to do chores in exchange for hunting access___

29. The overall relationship between you and the private landowners whose properties you hunt in Iowa is… (select only one)
   1___ 2___ 3___ 4___ 5___ 6___ 7___
   Poor    Fair    Good    Excellent

30. On the following scale, please indicate how important you feel it is for the IDNR to provide a special educational program to help hunters improve their skills at approaching landowners and asking permission to hunt private land in IOWA? (Select only one)
   1= Not at all important  3= Slightly important  5= Somewhat Important 7= Extremely Important
   1___ 2___ 3___ 4___ 5___ 6___ 7___

31. What is the highest level of education that you have achieved? (select only one)
[ ] Less than high school diploma       [ ] Technical/vocational degree beyond high school

[ ] High school diploma or GED          [ ] 4-year college degree

[ ] Some college                        [ ] Advanced degree

32. What is your approximate annual household income before taxes? (select only one)

[ ] less than $10,000                   [ ] $75,000-$99,999

[ ] $10,000-$24,999                     [ ] $100,000-$124,999

[ ] $25,000-$49,999                     [ ] $125,000-$149,999

[ ] $50,000-$74,999                     [ ] > $150,000

Thank you for completing this survey, please use the enclosed postage paid envelope to return your survey. If you would like to share other thoughts about the condition of hunter-landowner relations in Iowa, or the Iowa Habitat and Access Program, feel free to add them in the space below.

James Crain
Graduate Student
Iowa State University
Department of Natural Resource Ecology and Management
339 Science II
Ames IA, 50011-3221
APPENDIX D. HUNTER SURVEY RESULTS

Expanding Hunter Opportunities in Iowa:
A Review of Hunter Access Options

About You

First we’d like to learn a little about you and the type of hunting you do.

1. Please indicate how important hunting is to you.

   [ ] My most important recreational activity \( (n = 398) \) 21.89%
   [ ] One of my most important recreational activities \( (n = 975) \) 53.63%
   [ ] No more important than my other recreational activities \( (n = 353) \) 19.41%
   [ ] One of my least important recreational activities \( (n = 57) \) 0.41%
   [ ] My least important recreational activity \( (n = 35) \) 0.32%

2. What type(s) of hunting did you do in Iowa during the 2013-2014 season? \( \textit{check all that apply} \)

   [ ] I did not hunt \( \text{(if you did not hunt, skip to question 4)} \)
   Selected \( (n = 180) \) 9.91% Not Selected \( (n = 1636) \) 90.10%

   [ ] Upland game (Rabbit, Squirrel)
   Selected \( (n = 553) \) 30.45% Not Selected \( (n = 1263) \) 69.55%

   [ ] Upland birds (Pheasant, Quail, Dove, etc.)
   Selected \( (n = 836) \) 46.04% Not Selected \( (n = 980) \) 53.96%

   [ ] Turkey
   Selected \( (n = 498) \) 27.42% Not Selected \( (n = 1318) \) 72.58%

   [ ] Waterfowl (Ducks, Geese)
   Selected \( (n = 273) \) 15.03% Not Selected \( (n = 1543) \) 84.97%

   [ ] Deer (Archery)
   Selected \( (n = 455) \) 25.06% Not Selected \( (n = 1361) \) 74.94%
[ ] Deer (Firearm)

Selected ($n = 851$)  46.86%  Not Selected ($n = 965$)  53.14%

[ ] Deer (Muzzleloader)

Selected ($n = 363$)  19.99%  Not Selected ($n = 1453$)  80.01%

[ ] Furbearers (Coyote, Fox, etc.)

Selected ($n=361$)  19.88%  Not Selected ($n = 1455$)  80.12%

3. On what type of land did you hunt during the 2013-2014 hunting season? (select only one)

[ ] Private ONLY  ($n = 707$)  43.62%

[ ] Both Public and Private  ($n = 795$)  49.04%

[ ] Public ONLY  ($n = 119$)  7.34%

(If Public only, skip to question 4)

A. On which type of private land did you hunt in 2013-2014? (check all that apply)

[ ] Private land you personally own

Selected ($n = 381$)  23.81%  Not Selected ($n = 1219$)  76.19%

[ ] Private land owned by family or friends

Selected ($n = 1085$)  67.81%  Not Selected ($n = 515$)  32.19%

[ ] Private land NOT owned by family or friends where you asked permission to hunt

Selected ($n = 561$)  35.06%  Not Selected ($n = 1039$)  64.94%

[ ] Private land that you leased or paid a fee to hunt

Selected ($n = 73$)  4.56%  Not Selected ($n = 1527$)  95.44%

[ ] I rent private land for farming purposes, but also have permission to hunt the same land

Selected ($n = 49$)  3.06%  Not Selected ($n = 1551$)  96.94%

4. Did you own or were you a tenant of agricultural land or wildlife habitat in 2013? 

[ ] Yes ($n = 472$)  26.11%  [ ] No ($n = 1336$)  73.89%
WALK-IN HUNTING AREAS are tracts of private land that landowners have entered into agreements with wildlife agencies to open for public hunting. Several private land walk-in programs exist throughout the United States.

5. Have you personally hunted Walk-in Areas, Block Management Areas, or other PRIVATE LANDS ACCESS programs in other states?

[ ] Yes \( (n = 432)  \)  23.79%  \[ ] No \( (n = 1384)  \)  76.21%

6. Please indicate your level of agreement or disagreement with each of the following statements:

\textit{(Select only one for each statement)}

SA = Strongly Agree, A = Agree, N = Neither Agree or Disagree,  \ D = Disagree, SD = Strongly Disagree

- It is difficult to find places to hunt in Iowa. 
  \begin{itemize}
  \item SA \( (n = 409)  \)  22.58%
  \item A \( (n = 784)  \)  43.29%
  \item N \( (n = 233)  \)  12.87%
  \item D \( (n = 250)  \)  13.80%
  \item SD \( (n = 135)  \)  7.45%
  \end{itemize}

- It is difficult to gain access to private properties in Iowa
  \begin{itemize}
  \item SA \( (n = 567)  \)  31.38%
  \item A \( (n = 767)  \)  42.44%
  \item N \( (n = 221)  \)  12.23%
  \item D \( (n = 180)  \)  9.96%
  \item SD \( (n = 72)  \)  3.98%
  \end{itemize}

- Over the past 5 years, landowners have become less willing to grant permission to hunt on private land in Iowa
  \begin{itemize}
  \item SA \( (n = 719)  \)  39.88%
  \item A \( (n = 601)  \)  33.33%
  \item N \( (n = 336)  \)  18.64%
  \item D \( (n = 112)  \)  6.21%
  \item SD \( (n = 35)  \)  1.94%
  \end{itemize}

- Over the past 5 years, it has become more difficult to establish and maintain landowner contacts
  \begin{itemize}
  \end{itemize}
Some type of walk-in program is needed to improve hunter access to private lands in Iowa.

7. On a scale of (1-7), what is your general perception of the status of hunter / landowner relations in Iowa? *(select only one)*

8. Have you used the Iowa Department of Natural Resources (IDNR) website to acquire hunting information (e.g. season dates, license information, hunting opportunities)?

The Iowa Habitat and Access Program (IHAP) is a federally funded pilot project that began in 2011 and has opened about 7500 acres of private land to the public for hunting in Iowa.

The program’s emphasis is improving the amount and quality of wildlife habitat on private
lands at no cost to landowners. However, to receive this assistance making habitat improvements on their land, landowners must allow walk-in hunting access to the public for 3 or more years. For more information please visit www.iowadnr.gov/Hunting/PlacestoHuntShoot/.

9. Prior to this survey did you know of the Iowa Habitat and Access Program (IHAP)?

[ ] Yes \( (n = 611) \) 33.48%  [ ] No \( (n = 1214) \) 66.52%

10. Did you hunt any IHAP sites during the 2012-2013 or 2013-14 hunting seasons?

[ ] Yes \( (n = 235) \) 13.16%  [ ] No \( (n = 1551) \) 86.84%

(if NO, skip to question 12)

11. On a scale of 1 to 7, how would you rate your overall IHAP experience? (select only one)

<table>
<thead>
<tr>
<th></th>
<th>1___</th>
<th>2___</th>
<th>3___</th>
<th>4___</th>
<th>5___</th>
<th>6___</th>
<th>7___</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>( (n = 6) )</td>
<td>2.50%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair</td>
<td>( (n = 8) )</td>
<td>3.33%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>( (n = 26) )</td>
<td>10.83%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>( (n = 12) )</td>
<td>5.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>( (n = 90) )</td>
<td>37.50%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>( (n = 51) )</td>
<td>21.25%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>( (n = 47) )</td>
<td>19.58%</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. Please indicate your level of agreement or disagreement with the following statements about IHAP:

(Select only one for each statement)

SA = Strongly Agree, A = Agree, N = Neither Agree or Disagree,  D = Disagree, SD = Strongly Disagree

- IHAP is needed to improve hunter access to private lands in Iowa

SA \( (n = 608) \) 34.78%
A \( (n = 612) \) 35.01%
<table>
<thead>
<tr>
<th>Region</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>(n = 371)</td>
<td>21.22%</td>
</tr>
<tr>
<td>D</td>
<td>(n = 94)</td>
<td>5.38%</td>
</tr>
<tr>
<td>SD</td>
<td>(n = 63)</td>
<td>3.60%</td>
</tr>
</tbody>
</table>

- **IHAP is beneficial for Iowa**

<table>
<thead>
<tr>
<th>Region</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>(n = 679)</td>
<td>38.87%</td>
</tr>
<tr>
<td>A</td>
<td>(n = 627)</td>
<td>35.89%</td>
</tr>
<tr>
<td>N</td>
<td>(n = 345)</td>
<td>19.75%</td>
</tr>
<tr>
<td>D</td>
<td>(n = 48)</td>
<td>2.75%</td>
</tr>
<tr>
<td>SD</td>
<td>(n = 48)</td>
<td>2.75%</td>
</tr>
</tbody>
</table>

- **IHAP is beneficial to me personally**

<table>
<thead>
<tr>
<th>Region</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>(n = 390)</td>
<td>22.54%</td>
</tr>
<tr>
<td>A</td>
<td>(n = 395)</td>
<td>22.83%</td>
</tr>
<tr>
<td>N</td>
<td>(n = 701)</td>
<td>40.52%</td>
</tr>
<tr>
<td>D</td>
<td>(n = 120)</td>
<td>6.94%</td>
</tr>
<tr>
<td>SD</td>
<td>(n = 124)</td>
<td>7.17%</td>
</tr>
</tbody>
</table>

- **IHAP causes more hunters to lease places to hunt for themselves**

<table>
<thead>
<tr>
<th>Region</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>(n = 94)</td>
<td>5.44%</td>
</tr>
<tr>
<td>A</td>
<td>(n = 289)</td>
<td>16.73%</td>
</tr>
<tr>
<td>N</td>
<td>(n = 972)</td>
<td>56.28%</td>
</tr>
<tr>
<td>D</td>
<td>(n = 249)</td>
<td>14.42%</td>
</tr>
<tr>
<td>SD</td>
<td>(n = 123)</td>
<td>7.12%</td>
</tr>
</tbody>
</table>

- **IHAP decreases the number of hunters that are leaving the sport**

<table>
<thead>
<tr>
<th>Region</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>(n = 108)</td>
<td>6.26%</td>
</tr>
<tr>
<td>A</td>
<td>(n = 450)</td>
<td>26.09%</td>
</tr>
<tr>
<td>N</td>
<td>(n = 904)</td>
<td>52.41%</td>
</tr>
<tr>
<td>D</td>
<td>(n = 162)</td>
<td>9.39%</td>
</tr>
<tr>
<td>SD</td>
<td>(n = 101)</td>
<td>5.86%</td>
</tr>
</tbody>
</table>

- **IHAP creates NEW opportunities to hunt private lands in Iowa**

<table>
<thead>
<tr>
<th>Region</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>(n = 564)</td>
<td>32.53%</td>
</tr>
<tr>
<td>A</td>
<td>(n = 702)</td>
<td>40.48%</td>
</tr>
<tr>
<td>N</td>
<td>(n = 382)</td>
<td>22.03%</td>
</tr>
<tr>
<td>D</td>
<td>(n = 49)</td>
<td>2.83%</td>
</tr>
<tr>
<td>SD</td>
<td>(n = 37)</td>
<td>2.13%</td>
</tr>
</tbody>
</table>
13. On a scale of 1-7, please rate your level of support for the Iowa Habitat and Access Program IHAP. (Select only one)

1= Not at all Supportive  3= Slightly Supportive  5= Moderately Supportive
7= Extremely Supportive

<table>
<thead>
<tr>
<th>Level</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(n = 110)</td>
<td>6.15%</td>
</tr>
<tr>
<td>2</td>
<td>(n = 90)</td>
<td>5.03%</td>
</tr>
<tr>
<td>3</td>
<td>(n = 209)</td>
<td>11.68%</td>
</tr>
<tr>
<td>4</td>
<td>(n = 301)</td>
<td>16.82%</td>
</tr>
<tr>
<td>5</td>
<td>(n = 412)</td>
<td>23.02%</td>
</tr>
<tr>
<td>6</td>
<td>(n = 294)</td>
<td>16.42%</td>
</tr>
<tr>
<td>7</td>
<td>(n = 374)</td>
<td>20.89%</td>
</tr>
</tbody>
</table>

14. Please indicate how likely or unlikely it is that you will take the following actions in the future...
(Select only one for each question)

EL = Extremely Likely, SL = Somewhat Likely, N = Neither likely nor unlikely, SU = Somewhat Unlikely, EU = Extremely Unlikely

- …to seek permission to hunt private property from non-IHAP landowners____

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL</td>
<td>(n = 589)</td>
<td>32.58%</td>
</tr>
<tr>
<td>SL</td>
<td>(n = 647)</td>
<td>35.79%</td>
</tr>
<tr>
<td>N</td>
<td>(n = 297)</td>
<td>16.43%</td>
</tr>
<tr>
<td>SU</td>
<td>(n = 156)</td>
<td>8.63%</td>
</tr>
<tr>
<td>EU</td>
<td>(n = 119)</td>
<td>6.58%</td>
</tr>
</tbody>
</table>

- …to hunt IHAP sites in the future____

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL</td>
<td>(n = 425)</td>
<td>23.58%</td>
</tr>
<tr>
<td>SL</td>
<td>(n = 682)</td>
<td>37.85%</td>
</tr>
<tr>
<td>N</td>
<td>(n = 355)</td>
<td>19.70%</td>
</tr>
<tr>
<td>SU</td>
<td>(n = 189)</td>
<td>10.49%</td>
</tr>
<tr>
<td>EU</td>
<td>(n = 151)</td>
<td>8.38%</td>
</tr>
</tbody>
</table>
15. To this point, IHAP has been funded by a federal grant. In the absence of federal funding, how likely are you to… (Select only one for each question)

EL = Extremely Likely, SL = Somewhat Likely, N = Neither likely nor unlikely, SU = Somewhat Unlikely, EU = Extremely Unlikely

- …be willing to pay an ANNUAL user fee (e.g. about $30) that would allow you to hunt any day on private lands enrolled in IHAP____

<table>
<thead>
<tr>
<th></th>
<th>EL</th>
<th>SL</th>
<th>N</th>
<th>SU</th>
<th>EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n)</td>
<td>(235)</td>
<td>(477)</td>
<td>(298)</td>
<td>(323)</td>
<td>(474)</td>
</tr>
<tr>
<td>%</td>
<td>13.01%</td>
<td>26.40%</td>
<td>16.49%</td>
<td>17.87%</td>
<td>26.23%</td>
</tr>
</tbody>
</table>

- …be willing to pay a DAILY user fee (e.g. about $5) for each day that you hunt private lands enrolled in IHAP____

<table>
<thead>
<tr>
<th></th>
<th>EL</th>
<th>SL</th>
<th>N</th>
<th>SU</th>
<th>EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n)</td>
<td>(217)</td>
<td>(455)</td>
<td>(299)</td>
<td>(351)</td>
<td>(487)</td>
</tr>
<tr>
<td>%</td>
<td>12.00%</td>
<td>25.15%</td>
<td>16.53%</td>
<td>19.40%</td>
<td>26.92%</td>
</tr>
</tbody>
</table>

- …support increasing the price of the general hunting license to help fund IHAP____

<table>
<thead>
<tr>
<th></th>
<th>EL</th>
<th>SL</th>
<th>N</th>
<th>SU</th>
<th>EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n)</td>
<td>(176)</td>
<td>(356)</td>
<td>(329)</td>
<td>(307)</td>
<td>(646)</td>
</tr>
<tr>
<td>%</td>
<td>9.70%</td>
<td>19.63%</td>
<td>18.14%</td>
<td>16.92%</td>
<td>35.61%</td>
</tr>
</tbody>
</table>

16. What is the MOST you would be willing to add to cost of the General Hunting License to help support IHAP? (Nearly all hunters are required to purchase this license to hunt.)

(select only one) $0  $1  $2  $3  $4  $5  $6  $7  $8  $9  $10 Other____

<table>
<thead>
<tr>
<th></th>
<th>$0</th>
<th>$1</th>
<th>$2</th>
<th>$3</th>
<th>$4</th>
<th>$5</th>
<th>$6</th>
<th>$7</th>
<th>$8</th>
<th>$9</th>
<th>$10</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n)</td>
<td>(610)</td>
<td>(140)</td>
<td>(143)</td>
<td>(78)</td>
<td>(24)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>33.95%</td>
<td>7.79%</td>
<td>7.96%</td>
<td>4.34%</td>
<td>1.34%</td>
<td></td>
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</tr>
</tbody>
</table>
A. If you answered zero above, please indicate the main reason for answering zero
(select only one)

[ ] You do not receive any benefits from IHAP and therefore see no reason to pay.

(n = 198) 33.06%

[ ] Your cost of living is already too high or you cannot afford to pay any more for the hunting license.

(n = 111) 18.53%

[ ] You believe the method of payment (i.e. the general hunting license) is not fair or equitable.

(n = 50) 8.35%

[ ] You have a right to recreational opportunities on IHAP properties, and it is unfair to expect you as a hunting license holder to pay for the privilege of hunting IHAP properties.

(n = 58) 9.68%

[ ] You do not think IHAP works as described.

(n = 28) 4.67%

[ ] Other

(n = 154) 25.71%

Iowa Hunter-Landowner Relations

The following questions are designed to assess the condition of hunters’ relations with private land owners in Iowa, and hunters’ ability to gain access to private property for hunting.

If you have hunted private property in Iowa, please continue to question 17.

[ ] Check here if you have NEVER hunted or attempted to hunt private property in Iowa and skip to question #30. Thank you!
Selected ($n = 147$) 8.02%  Not Selected ($n = 1686$) 91.98%

17. Please indicate your level of agreement or disagreement with the following statements about IOWA private landowners:  
(Select only one for each statement)

SA = Strongly Agree, A = Agree, N = Neither Agree nor Disagree, D = Disagree, SD = Strongly Disagree

- Landowners believe hunters appreciate being able to hunt private property____
  
  SA ($n = 657$) 40.16%  
  A ($n = 757$) 46.27%  
  N ($n = 114$) 6.97%  
  D ($n = 84$) 5.13%  
  SD ($n = 24$) 1.47%

- Landowners trust hunters who hunt their property____
  
  SA ($n = 396$) 24.18%  
  A ($n = 806$) 49.21%  
  N ($n = 195$) 11.90%  
  D ($n = 198$) 12.09%  
  SD ($n = 43$) 2.63%

- Landowners believe hunters are responsible____
  
  SA ($n = 287$) 17.51%  
  A ($n = 858$) 52.35%  
  N ($n = 247$) 15.07%  
  D ($n = 211$) 12.87%  
  SD ($n = 36$) 2.20%

- Landowners believe hunters are ethical____
  
  SA ($n = 277$) 16.91%  
  A ($n = 855$) 52.20%  
  N ($n = 282$) 17.22%  
  D ($n = 188$) 11.48%  
  SD ($n = 36$) 2.20%

- Landowners believe hunters are safe____
  
  SA ($n = 301$) 18.38%  
  A ($n = 865$) 52.81%  
  N ($n = 265$) 16.18%  
  D ($n = 177$) 10.81%  
  SD ($n = 30$) 1.83%
18. On a scale from (1-7), please indicate what your experience with private landowners has been in Iowa when you have asked for permission to hunt. 

(Select only one for each statement)

1= Never   3= Infrequently   5= Frequently   7= Always

- Private landowners carefully listen to me___

1  \((n = 19)\)    1.18% 
2  \((n = 35)\)    2.18% 
3  \((n = 163)\)  10.13% 
4  \((n = 390)\)  24.34% 
5  \((n = 583)\)  36.23% 
6  \((n = 241)\)  14.98% 
7  \((n = 178)\)  11.06% 

- Private landowners address me in a positive manner___

1  \((n = 21)\)    1.30% 
2  \((n = 28)\)    1.73% 
3  \((n = 142)\)   8.80% 
4  \((n = 374)\)   23.17% 
5  \((n = 570)\)   35.32% 
6  \((n = 259)\)   16.05% 
7  \((n = 220)\)   13.63% 

- Private landowners are forthcoming with expectations / rules for hunting their property___

1  \((n = 26)\)    1.61% 
2  \((n = 20)\)    1.24% 
3  \((n = 116)\)   7.19%
4  \( n = 264 \)  16.37%
5  \( n = 524 \)  32.49%
6  \( n = 320 \)  19.84%
7  \( n = 343 \)  21.26%

- Private landowners are willing to make compromises___

1  \( n = 123 \)  7.68%
2  \( n = 147 \)  9.18%
3  \( n = 439 \)  27.42%
4  \( n = 444 \)  27.73%
5  \( n = 261 \)  16.30%
6  \( n = 108 \)  6.75%
7  \( n = 79 \)  4.93%

- Private landowners appreciate my asking permission before hunting___

1  \( n = 14 \)  0.86%
2  \( n = 11 \)  0.68%
3  \( n = 19 \)  1.17%
4  \( n = 60 \)  3.71%
5  \( n = 204 \)  12.60%
6  \( n = 190 \)  11.74%
7  \( n = 1121 \)  69.24%

- Private landowners will allow me to hunt if I offer to do chores___

1  \( n = 612 \)  39.87%
2  \( n = 113 \)  7.36%
3  \( n = 196 \)  12.77%
19. How do you rate the quality of communication between hunters and private landowners in IOWA?  
(Select only one) 

<p>| | | | | | | |</p>
<table>
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<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Poor</td>
<td>Fair</td>
<td>Good</td>
<td>Excellent</td>
<td></td>
<td></td>
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<tr>
<td>1 (n = 68)</td>
<td>2 (n = 91)</td>
<td>3 (n = 311)</td>
<td>4 (n = 292)</td>
<td>5 (n = 617)</td>
<td>6 (n = 177)</td>
<td>7 (n = 83)</td>
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<tr>
<td>4.15%</td>
<td>5.55%</td>
<td>18.98%</td>
<td>17.82%</td>
<td>37.64%</td>
<td>10.80%</td>
<td>5.06%</td>
</tr>
</tbody>
</table>

20. In your experience, what are the top 3 reasons why some private landowners in IOWA DO NOT allow hunters to hunt their properties?  (Please select ONLY your top 3 choices) 

[ ] Previous bad experience with hunters  
**Selected (n = 1175) 71.43% Not Selected (n = 470) 28.57%**

[ ] Hunters don’t respect private property  
**Selected (n = 397) 24.13% Not Selected (n = 1248) 75.87%**

[ ] Landowners hunt the property themselves  
**Selected (n = 971) 59.03% Not Selected (n = 674) 40.97%**

[ ] Landowners don’t know the hunters  
**Selected (n = 305) 18.54% Not Selected (n = 1340) 81.46%**

[ ] Hunters do not hunt legally
Selected \( (n = 41) \) 2.49% Not Selected \( (n = 1604) \) 97.51%
[ ] Landowner has safety concerns

Selected \( (n = 273) \) 16.60% Not Selected \( (n = 1372) \) 83.40%
[ ] Hunting interferes with farming practices

Selected \( (n = 97) \) 5.90% Not Selected \( (n = 1548) \) 94.10%
[ ] Landowners don’t like hunting

Selected \( (n = 203) \) 12.34% Not Selected \( (n = 1442) \) 87.66%
[ ] Liability concerns

Selected \( (n = 659) \) 40.06% Not Selected \( (n = 986) \) 59.94%
[ ] Hunters trespass on their land frequently

Selected \( (n = 466) \) 28.33% Not Selected \( (n = 1179) \) 71.67%
[ ] Too many hunters are asking to hunt

[ ] Other

Selected \( (n = 117) \) 7.11% Not Selected \( (n = 1528) \) 92.89%

21. What are the top 3 behaviors that IOWA landowners want to see from hunters they allow on their property?  

(Please select ONLY your top 3 choices)

[ ] Respect for private property
Selected \( (n = 1397) \) 84.98% Not Selected \( (n = 247) \) 15.02%

[ ] Respect for habitat and wildlife
Selected \( (n = 223) \) 13.56% Not Selected \( (n = 1421) \) 86.44%

[ ] Parking in designated areas
Selected \( (n = 80) \) 4.87% Not Selected \( (n = 1564) \) 95.13%

[ ] Showing appreciation (e.g. gift, card)
Selected \( (n = 656) \) 39.90% Not Selected \( (n = 988) \) 60.10%

[ ] Offering to work or assist landowner
<table>
<thead>
<tr>
<th>Selected ($n = 30$)</th>
<th>1.82%</th>
<th>Not Selected ($n = 1614$)</th>
<th>98.18%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not bringing other hunters onto the property without asking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected ($n = 508$)</td>
<td>30.90%</td>
<td>Not Selected ($n = 1136$)</td>
<td>69.10%</td>
</tr>
<tr>
<td>Respect for farming practices</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected ($n = 235$)</td>
<td>14.29%</td>
<td>Not Selected ($n = 1409$)</td>
<td>85.71%</td>
</tr>
<tr>
<td>Safety</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected ($n = 403$)</td>
<td>24.51%</td>
<td>Not Selected ($n = 1241$)</td>
<td>75.49%</td>
</tr>
<tr>
<td>Regular communication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected ($n = 129$)</td>
<td>7.85%</td>
<td>Not Selected ($n = 1515$)</td>
<td>92.15%</td>
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<tr>
<td>Always asking permission</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Selected ($n = 1036$)</td>
<td>63.02%</td>
<td>Not Selected ($n = 608$)</td>
<td>36.98%</td>
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<tr>
<td>Following laws and regulations</td>
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<td></td>
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<tr>
<td>Selected ($n = 174$)</td>
<td>10.58%</td>
<td>Not Selected ($n = 1470$)</td>
<td>89.42%</td>
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<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Selected ($n = 25$)</td>
<td>1.52%</td>
<td>Not Selected ($n = 1619$)</td>
<td>98.48%</td>
</tr>
</tbody>
</table>

22. Have you ever lost access to private property in Iowa that you hunted in the past?

| Yes ($n = 774$) | 47.57% | No ($n = 853$) | 52.43% |

(If No, skip to question 23)

A. Why do you believe you lost access?

**MANY VARIOUS REASONS**

23. About how many landowners do you visit each year to obtain or confirm access to private property for hunting in IOWA? *(Select only one)*

| 0 ($n = 147$) | 9.07% | 1-3 ($n = 872$) | 53.83% |
| 4-6 ($n = 386$) | 23.83% | 7-9 ($n = 99$) | 6.11% |
| 10+ ($n = 116$) | 7.16% |
24. How often are you the leader in obtaining permission to hunt for yourself and others with whom you hunt? (Select only one)

1= Never 3= Infrequently 5= Frequently 7= Always

1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___

1  (n = 190)  11.56%
2  (n = 116)  7.07%
3  (n = 184)  11.22%
4  (n = 242)  14.76%
5  (n = 422)  25.73%
6  (n = 212)  12.93%
7  (n = 274)  16.71%

25. On average, how long before you intend to hunt do you approach private landowners in Iowa to gain access or confirm permission to their properties? (Select only one)

[] The day of (n = 159) 9.87%  [] Days before (n = 411) 25.51%

[] Weeks before (n = 626) 38.86%  [] Months before (n = 415) 25.76%

26. On average, after obtaining access to hunt, how often do you “check in” with the landowner(s) (either by phone, email, or in person)?

[] Daily (n = 151) 9.39%  [] Weekly (n = 313) 19.47%

[] Monthly (n = 284) 17.66%  [] Once or Twice a year (n = 742) 46.14%

[] Never (n = 118) 7.34%

27. On average, how many years have you been hunting the same private properties? (Select only one)

[] < 1 yr (n = 79) 4.88%  [] 1-2 years (n =109) 6.74%

[] 3-4 years (n = 238) 14.71%  [] 5+ years (n = 1192) 73.67%

28. Please rate your answer to the following statements about your interactions with private landowners in Iowa on a scale from (1-7): (Select only one for each statement)
<table>
<thead>
<tr>
<th>1= Never</th>
<th>2= Infrequently</th>
<th>3= Frequently</th>
<th>4= Very Frequent</th>
<th>5= Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I carefully listen to private landowners’ directions and concerns</td>
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<tr>
<td>1</td>
<td>(n = 2)</td>
<td>0.12%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(n = 2)</td>
<td>0.12%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>(n = 1)</td>
<td>0.06%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>(n = 20)</td>
<td>1.23%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>(n = 130)</td>
<td>8.02%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>(n = 154)</td>
<td>9.51%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>(n = 1311)</td>
<td>80.93%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| I approach private landowners in a positive manner |
|---|---|---|---|---|
| 1 | (n = 2) | 0.12% |
| 2 | (n = 0) | 0.00% |
| 3 | (n = 3) | 0.18% |
| 4 | (n = 17) | 1.05% |
| 5 | (n = 100) | 6.17% |
| 6 | (n = 177) | 10.91% |
| 7 | (n = 1323) | 81.57% |

| I follow the rules / expectations established by private landowners |
|---|---|---|---|---|
| 1 | (n = 2) | 0.12% |
| 2 | (n = 0) | 0.00% |
| 3 | (n = 1) | 0.06% |
| 4 | (n = 12) | 0.74% |
| 5 | (n = 58) | 3.58% |
| 6 | (n = 149) | 9.19% |
| 7 | (n = 1400) | 86.31% |
• I am willing to compromise with private landowners in order to obtain hunting access:
  1. (n = 14) 0.87%
  2. (n = 3) 0.19%
  3. (n = 17) 1.05%
  4. (n = 46) 2.85%
  5. (n = 151) 9.37%
  6. (n = 220) 13.65%
  7. (n = 1161) 72.02%

• I show my appreciation to private landowners that allow me to hunt:
  1. (n = 1) 0.06%
  2. (n = 0) 0.00%
  3. (n = 8) 0.49%
  4. (n = 17) 1.05%
  5. (n = 94) 5.81%
  6. (n = 168) 10.38%
  7. (n = 1331) 82.21%

• I offer to do chores in exchange for hunting access:
  1. (n = 749) 46.72%
  2. (n = 96) 5.99%
  3. (n = 213) 13.29%
  4. (n = 194) 12.10%
  5. (n = 162) 10.11%
  6. (n = 54) 3.37%
  7. (n = 135) 8.42%
29. The overall relationship between you and the private landowners whose properties you hunt in Iowa is… **(select only one)**

<p>| | | | | | | |</p>
<table>
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<tr>
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<td>3</td>
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<tr>
<td>Poor</td>
<td>Fair</td>
<td>Good</td>
<td>Excellent</td>
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<tr>
<td>1 (n = 4)</td>
<td>0.25%</td>
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<tr>
<td>2 (n = 0)</td>
<td>0.00%</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>3 (n = 22)</td>
<td>1.35%</td>
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<tr>
<td>4 (n = 42)</td>
<td>2.58%</td>
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<tr>
<td>5 (n = 366)</td>
<td>22.52%</td>
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<tr>
<td>6 (n = 509)</td>
<td>31.32%</td>
<td></td>
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</tr>
<tr>
<td>7 (n = 682)</td>
<td>41.97%</td>
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</tbody>
</table>

30. On the following scale, please indicate how important you feel it is for the IDNR to provide a special educational program to help hunters improve their skills at approaching landowners and asking permission to hunt private land in IOWA? **(Select only one)**

1= Not at all important 3= Slightly important 5= Somewhat Important 7= Extremely Important

<p>| | | | | | | |</p>
<table>
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<td>3</td>
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<td>7</td>
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<tr>
<td>1 (n = 221)</td>
<td>12.35%</td>
<td></td>
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<tr>
<td>2 (n = 136)</td>
<td>7.60%</td>
<td></td>
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<tr>
<td>3 (n = 227)</td>
<td>12.69%</td>
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<tr>
<td>4 (n = 217)</td>
<td>12.13%</td>
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<tr>
<td>5 (n = 470)</td>
<td>26.27%</td>
<td></td>
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<tr>
<td>6 (n = 222)</td>
<td>12.41%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7 (n = 296)</td>
<td>16.55%</td>
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</tbody>
</table>
31. What is the highest level of education that you have achieved? (select only one)

[ ] Less than high school diploma  
   \( n = 96 \)  
   5.33%

[ ] High school diploma or GED  
   \( n = 438 \)  
   24.31%

[ ] Some college  
   \( n = 379 \)  
   21.03%

[ ] Technical/vocational degree beyond high school  
   \( n = 367 \)  
   20.37%

[ ] 4-year college degree  
   \( n = 344 \)  
   19.09%

[ ] Advanced degree  
   \( n = 178 \)  
   9.88%

32. What is your approximate annual household income before taxes? (select only one)

[ ] less than $10,000  
   \( n = 55 \)  
   3.32%

[ ] $10,000-$24,999  
   \( n = 96 \)  
   5.80%

[ ] $25,000-$49,999  
   \( n = 340 \)  
   20.53%

[ ] $50,000-$74,999  
   \( n = 422 \)  
   25.48%

[ ] $75,000-$99,999  
   \( n = 280 \)  
   16.91%

[ ] $100,000-$124,999  
   \( n = 202 \)  
   12.20%

[ ] $125,000-$149,999  
   \( n = 104 \)  
   6.28%

[ ] > $150,000  
   \( n = 157 \)  
   9.48%

Thank you for completing this survey, please use the enclosed postage paid envelope to return your survey. If you would like to share other thoughts about the condition of hunter-landowner relations in Iowa, or the Iowa Habitat and Access Program, feel free to add them in the space below.

James Crain  
Graduate Student  
Iowa State University  
Department of Natural Resource Ecology and Management  
339 Science II  
Ames IA, 50011-3221
**Survey Weights**

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REFERENCES


Larson, Lincoln R; Decker, Daniel J; Stedman, Richard C; Siemer, William F; Baumer, Meghan S; Enck, Jody W. 2013. Hunter recruitment and retention: a framework for research and action. Human Dimensions Research Unit, Department of Natural Resources, Cornell University. April 2013.


http://www.responsivemanagement.com/download/RM_ENews/Participation_Economy.pdf


