

Responsive Management



FACTORS RELATED TO HUNTING PARTICIPATION IN PENNSYLVANIA

FINAL REPORT

Conducted for the Pennsylvania Game Commission

by Responsive Management

2004

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FACTORS RELATED TO HUNTING PARTICIPATION IN PENNSYLVANIA

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Introduction and Methodology

This study was conducted for the Pennsylvania Game Commission (the Commission) to determine licensed hunters' participation in hunting, their motivations for and satisfaction with hunting, and their knowledge of and ratings of Commission programs. The study entailed a telephone survey of hunters who obtained a 2000-2001 hunting license in Pennsylvania and two focus groups, one conducted with ex-hunters and one conducted with active hunters. This report represents the final report in the study, which summarizes the results of the telephone survey and focus group discussions and provides recommendations based on those results.

The telephone survey interviews were conducted Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday noon to 6:00 p.m., and Sunday from 3:00 p.m. to 7:00 p.m., all local time. The survey was conducted in May 2004. Responsive Management obtained a total of 913 completed interviews. The software used for data collection was Questionnaire Programming Language 4.1.

The analysis of survey data was performed using Statistical Package for the Social Sciences software, as well as proprietary software developed by Responsive Management. Throughout this report, findings of the telephone survey are reported at a 95% confidence interval. For the entire sample of licensed hunters, the sampling error is at most plus or minus 3.24 percentage points.

For the data analysis, the sample was broken down into active hunters, inactive hunters, and ex-hunters, defined as follows:

- Active hunters: Those who indicated that they plan to hunt in Pennsylvania in the future and who hunted in at least one of the two previous seasons (the 2002-2003 season or the 2003-2004 season).
- Inactive hunters: Those who indicated that they plan to hunt in Pennsylvania in the future but who did not hunt in either of the two previous seasons.
- Ex-hunters: Those who indicated that they do not plan to hunt in Pennsylvania in the future.

Two focus groups were also conducted for the Commission in July 2004 in follow-up to the telephone survey to obtain qualitative data about some issues discussed in the telephone survey.

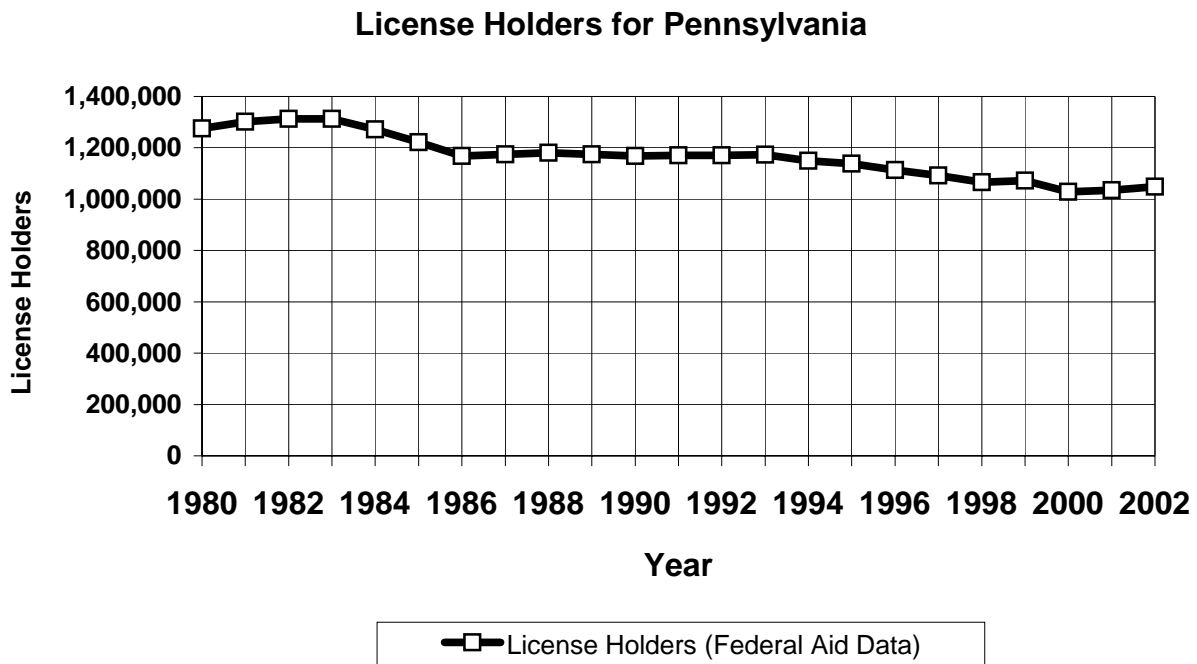
Specifically, the focus groups were conducted to identify sources of hunting satisfaction and dissatisfaction, as well as awareness of the Commission's hunting programs. A focus group discussion among active hunters was conducted June 30 in Harrisburg, Pennsylvania. A focus group discussion among ex-hunters was conducted July 22 via a recorded telephone conference. Focus group comments are included in italics in this report where appropriate.

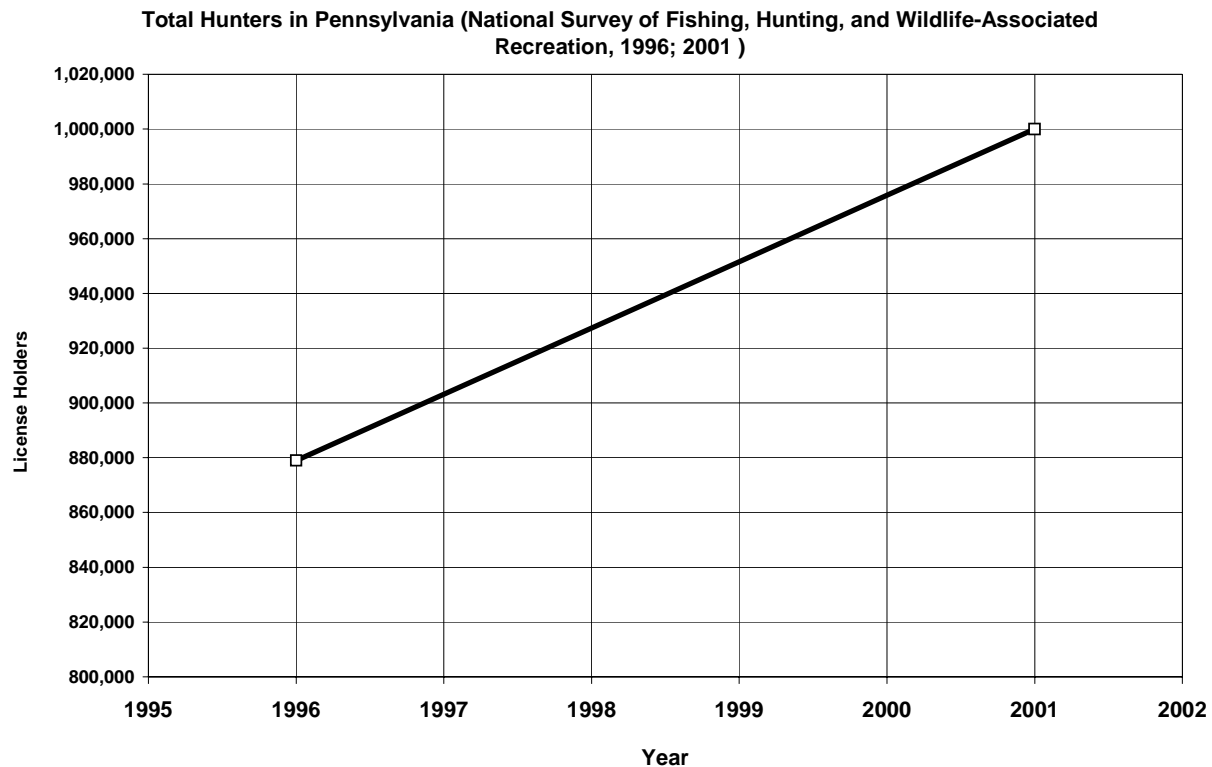
Major Findings

HUNTING PARTICIPATION

- **Hunting participation in Pennsylvania has remained relatively stable.**

The total number of license sales has declined slightly while the National Survey of Fishing, Hunting, and Wildlife-Associated Recreation reported an increase in the hunting population in Pennsylvania between 1996 and 2001. Pennsylvania hunting license sales data shows that hunting participation in Pennsylvania has remained relatively stable, but with a slight, overall decline, from 1980 to 2002. Please see the graphs below.





Over half (58%) of 2000-2001 hunting license holders in the current study for the Commission indicated that the amount of their hunting participation has remained about the same over the past 5 years. Seventeen percent of 2000-2001 license holders said their amount of hunting increased, resulting in 75% percent of license holders whose hunting participation has not decreased.

- **Pennsylvania has a high rate of hunter retention.**

In the survey, very few ex-hunters were identified (3%); 94% of respondents indicated that they plan to hunt in Pennsylvania in the future. It appears as though Pennsylvania has experienced little hunting desertion or “turnover” in hunting participation.

Please note, however, that not included in the completed interviews of 2000-2001 license holders are those who moved their residence, including those who moved out of state—they were categorized as “not eligible” or “disconnected” in the survey because either they were no longer

at the telephone number that was given (not eligible) or the telephone number provided was no longer working (disconnected).

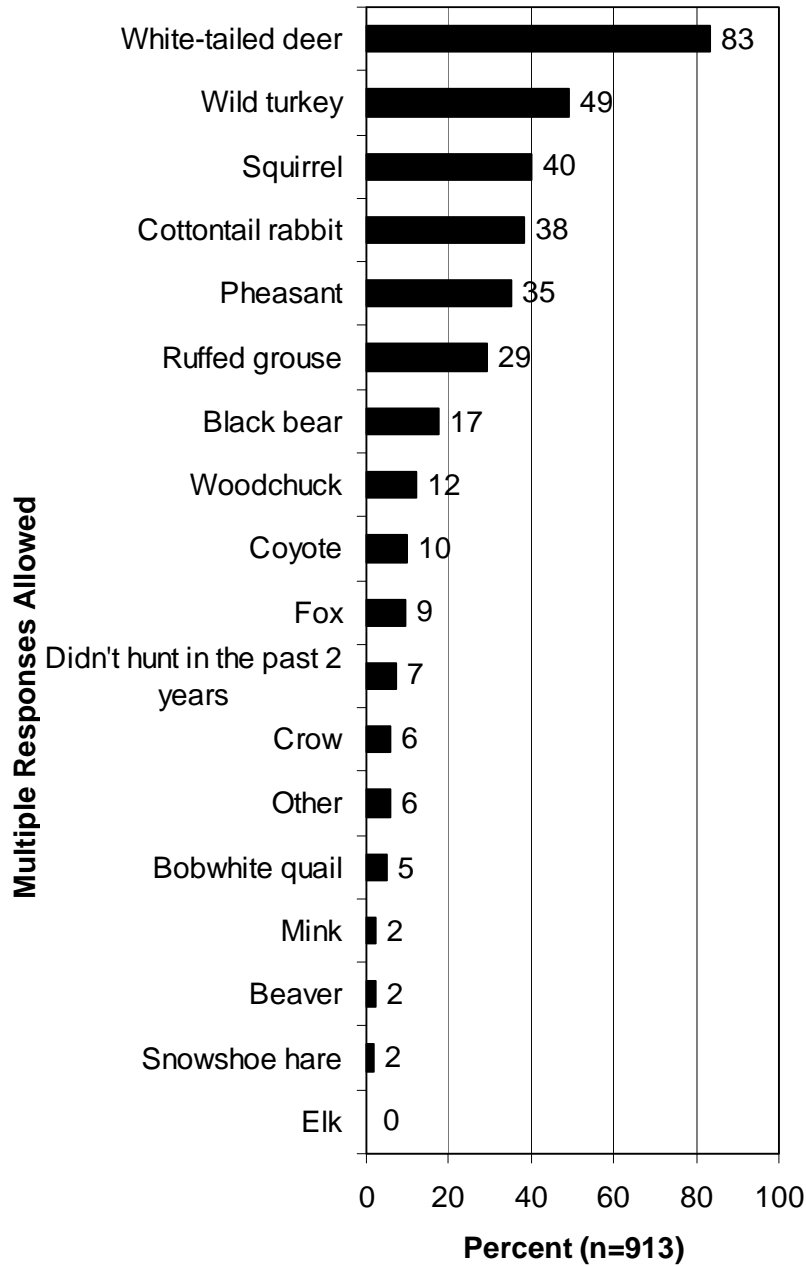
- **Hunters who purchased a Pennsylvania hunting license in the 2000-2001 season are quite avid.**

Hunters who purchased a Pennsylvania hunting license in the 2000-2001 season are quite avid: 87% hunted in the 2002-2003 season, and 85% hunted (or indicated plans to hunt) in the 2003-2004 season (please note, however, that this measure of avidity very likely overestimates actual avidity because, as noted above, not included in the completed interviews of 2000-2001 license holders are those who were “not eligible” or “disconnected”). An additional measure of avidity is that most respondents indicated plans to hunt in the future in Pennsylvania.

- **Most (60%) 2000-2001 license holders rated their expertise as a hunter as advanced.**
- **The most popular species that had been hunted or trapped in Pennsylvania in the past 2 years were white-tailed deer and wild turkey.**

Please see the graph on the following page.

Q46. Which species have you hunted or trapped in Pennsylvania in the past 2 years?



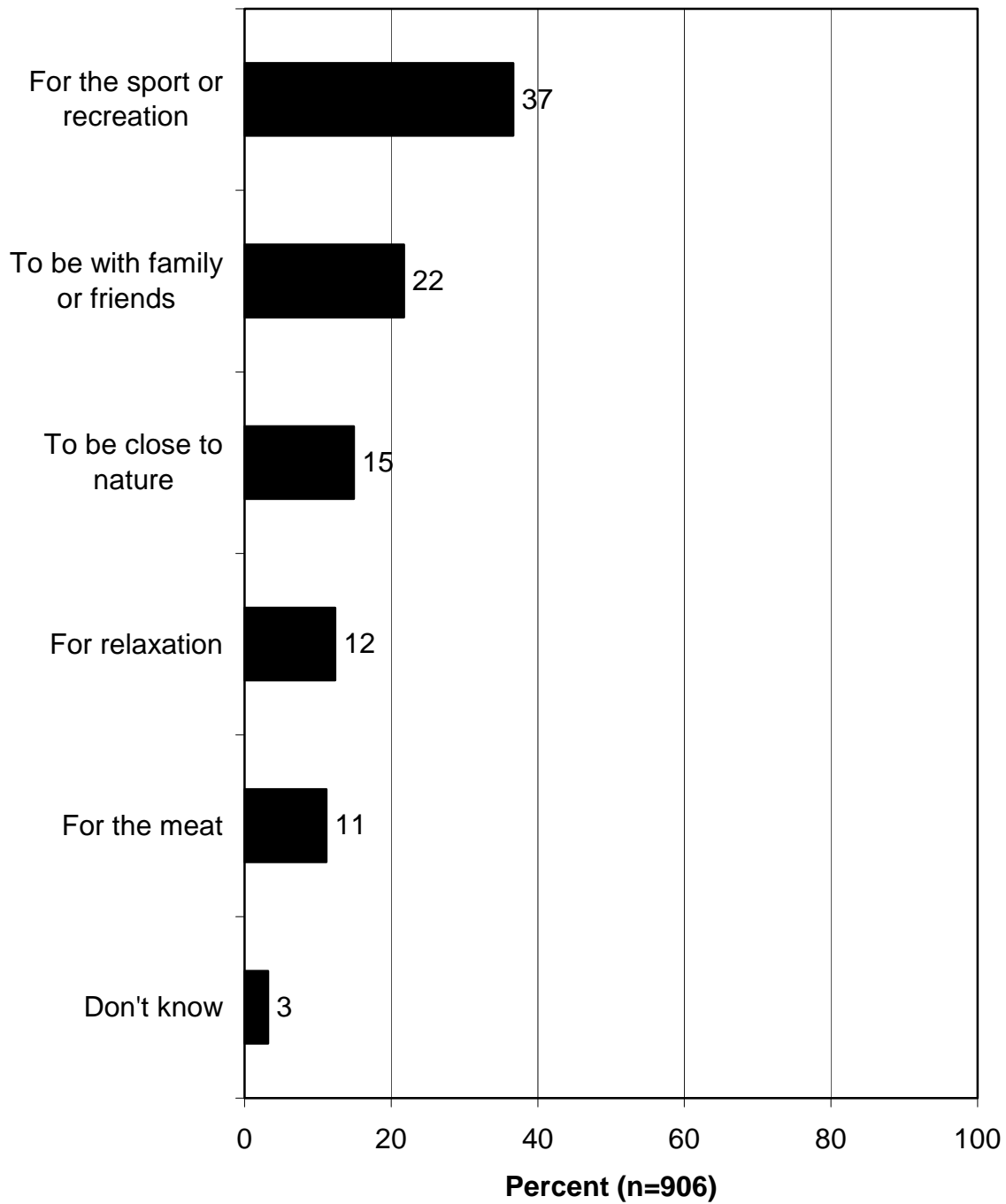
- **Although hunting small game is popular among hunters in Pennsylvania, small game hunting participation has decreased.**

The majority (88%) of 2000-2001 hunting license holders had hunted small game in Pennsylvania in the past. However, participation in small game hunting has decreased over the past 10 years for the majority (61%) of small game hunters, while hunting participation for these same hunters in general has remained the same or increased. It is important to note that 47% of those who have hunted small game in Pennsylvania said they have hunted small game for more than 25 years, although not necessarily in Pennsylvania. A strong association exists between being an ex-hunter or an inactive hunter and never having hunted small game in Pennsylvania.

- **The main reason those who went hunting in Pennsylvania in the past 5 years did so was for the sport or recreation.**

The most common reason given by respondents for hunting in Pennsylvania in the past 5 years was for the sport or recreation (37% gave this reason), followed by being with family and/or friends (22%) and being close to nature (15%). Please see the graph on the following page.

Q19. What would you say is the main reason you went hunting in Pennsylvania over the past 5 years? (Asked of those who went hunting in Pennsylvania at least 1 of the past 5 years.)



- **Most hunters hunt with a family member.**

Immediate family members are the most common hunting companions: 63% said they usually hunt with immediate family (and 21% said they usually hunt with extended family). Friends was the second highest answer: 36% said they usually hunt with friends. About a fifth (19%) said they usually hunt alone.

- **An invitation to go hunting is an important factor to encourage hunters to hunt more/hunt again.**

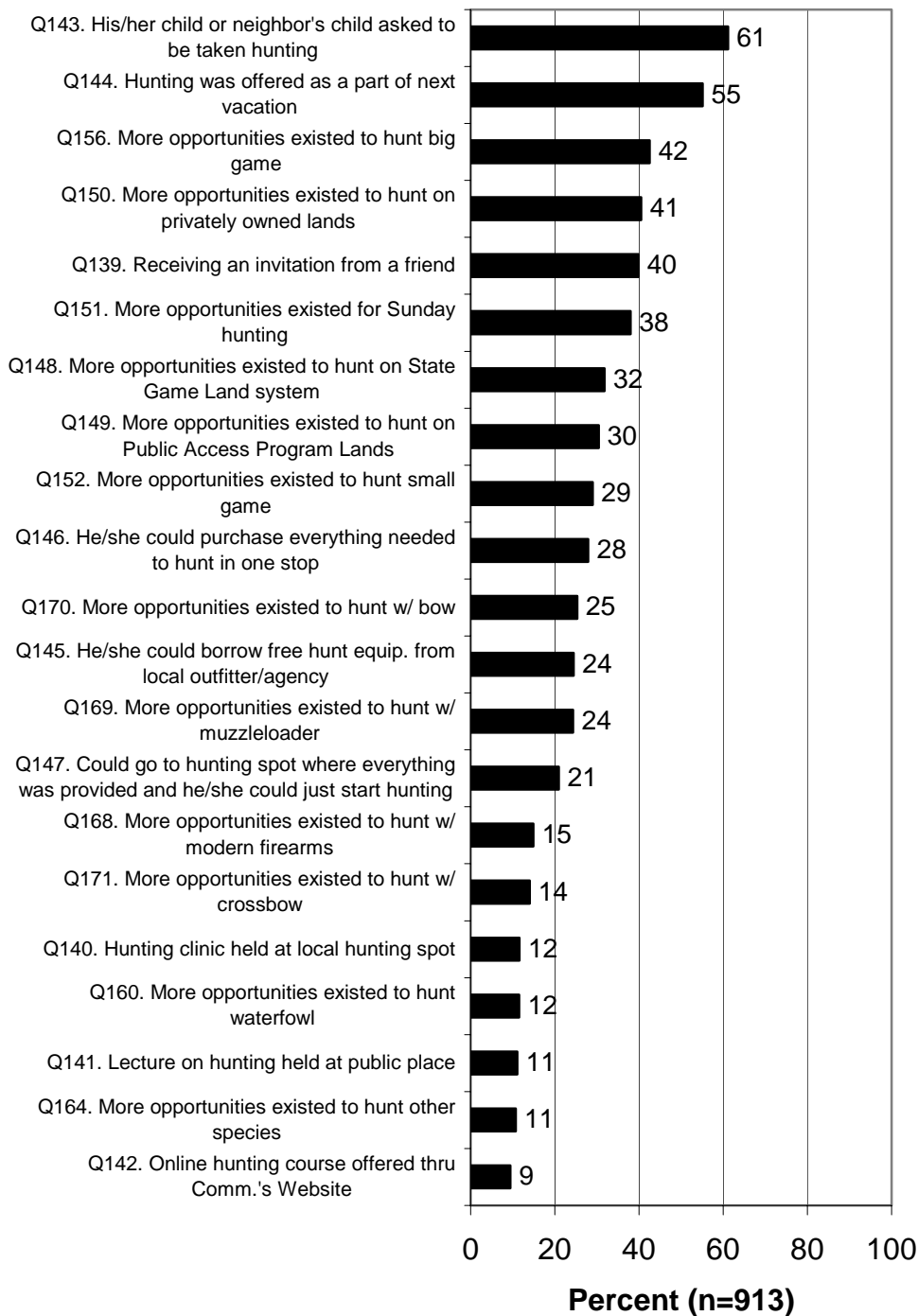
The top factor that would encourage hunters to hunt more/hunt again was having his or her child or a neighbor's child ask to go hunting: 61% of hunters overall (i.e., active and inactive hunters combined) said this reason would *strongly* encourage them to hunt more/hunt again, and 86% said this reason would *strongly or moderately* encourage them to hunt more/hunt again. The majority of inactive hunters (64%) and of active hunters (63%) said a child asking to go hunting would *strongly* encourage them to hunt more/hunt again. However, the majority of ex-hunters (52%) said this factor would not encourage them to hunt again.

When *strongly* encourage and *moderately* encourage responses were combined for each factor, the top two factors that would *strongly or moderately* encourage hunters to hunt more/hunt again involved an invitation to go hunting. The top two factors were having a child ask to be taken hunting (86%) and receiving an invitation from a friend to go hunting (75%). Please see the graphs on the following pages.

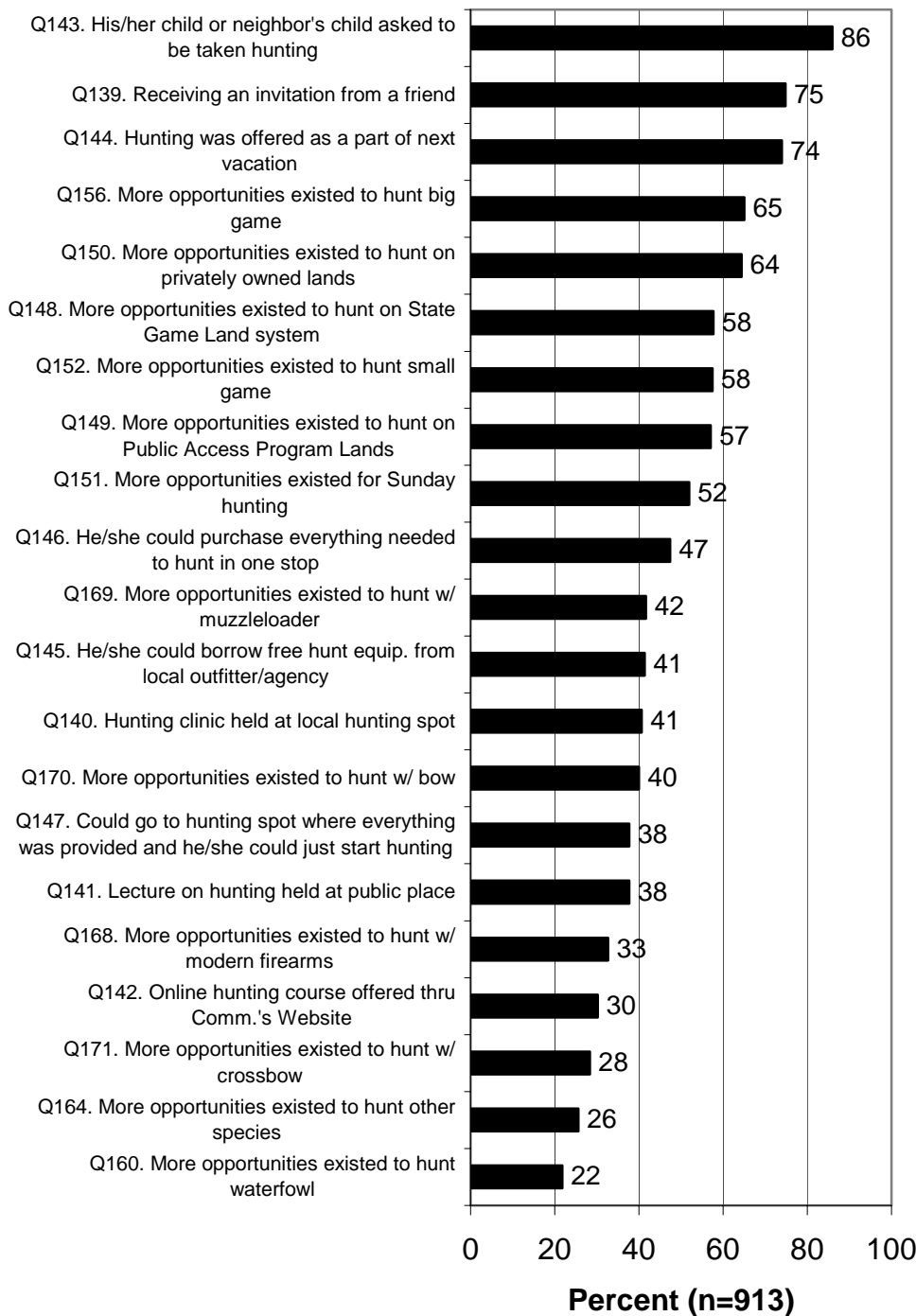
- **Vacations that offer hunting would encourage hunters to hunt more/hunt again.**

Having hunting offered as a part of a vacation would also *strongly or moderately* encourage 74% of hunters to hunt more/hunt again. Other important factors that would *strongly or moderately* encourage the majority of hunters to hunt more/hunt again were having more opportunities to hunt big game, more opportunities to hunt on private land, more opportunities to hunt on the State Game Land system, more opportunities to hunt small game, and more opportunities for Sunday hunting. Please see the graphs on the following pages.

Q139-Q152, Q156, Q160, Q164, Q168-171. Factors that would strongly encourage respondent to hunt more/hunt again.



Q139-Q152, Q156, Q160, Q164, Q168-171. Factors that would strongly or moderately encourage respondent to hunt more/hunt again.



- **Although satisfaction was high for hunting/trapping various species in Pennsylvania, a majority of respondents indicated that more opportunities for big game and small game hunting would strongly or moderately encourage them to hunt more/hunt again.**

Many hunters (65%) said more opportunities to hunt big game would *strongly or moderately* encourage them to hunt more/hunt again. Of 2000-2001 license holders who said more opportunities to hunt big game would encourage them to hunt more/hunt again, most (72%) would like to see more opportunities for white-tailed deer hunting.

A majority of hunters (58%) said that more opportunities to hunt small game in Pennsylvania would *strongly or moderately* encourage them to hunt more/hunt again, especially ring-necked pheasant.

Some focus group participants also indicated that an increase in small game populations would encourage them to hunt more/hunt again.

What would it take to increase the amount of days you go hunting? More game and more places to hunt. For the small game—just around this Harrisburg area—very little. You have to know some people that own farms if you want to hunt small game. That would make a difference. (Active Hunter)

What kinds of things would get you out hunting more times per year? Having time to do it. I mentioned earlier, I hunt a couple a days a year, a few days a year. I don't think I could really come up with much more time. It's just private commitments and family and things like that. Now if small game was better, I might try and get a couple more Saturdays in. (Active Hunters)

- **Provision of Sunday hunting opportunities is attractive to active hunters.**

Active hunters (41%) were more likely than were inactive hunters (22%) and ex-hunters (13%) to say that more Sunday hunting opportunities would strongly encourage them to hunt more. Furthermore, active hunter focus group participants indicated that they did not like Sunday hunting closures and that Sunday hunting opportunities would encourage them to hunt more.

One of the things that I think would improve hunting for people like myself, I hunt like 2 [or] 3 days, that's it, for deer, would be this Sunday hunting during the middle of deer season. That... one Sunday would make such a huge difference for hunters because of the responsibility for jobs. Most guys go out the first two days, then that little weekend gets broken up with Sunday. If that little weekend was there with Sunday hunting, there would be such a big push in that little weekend for hunters, I think. (Active Hunter)

What would it take to increase the amount of days you go hunting? That Sunday, because of job requirements, would make a difference for the deer hunting. (Active Hunter)

HUNTING SATISFACTION

- **In general, hunters are satisfied with hunting in Pennsylvania.**

Hunters' overall satisfaction with hunting in Pennsylvania is quite positive: 79% were very or somewhat satisfied with their hunting experiences in Pennsylvania over the past 2 years; only 10% were dissatisfied.

HUNTING DESERTION AND DISSATISFACTION

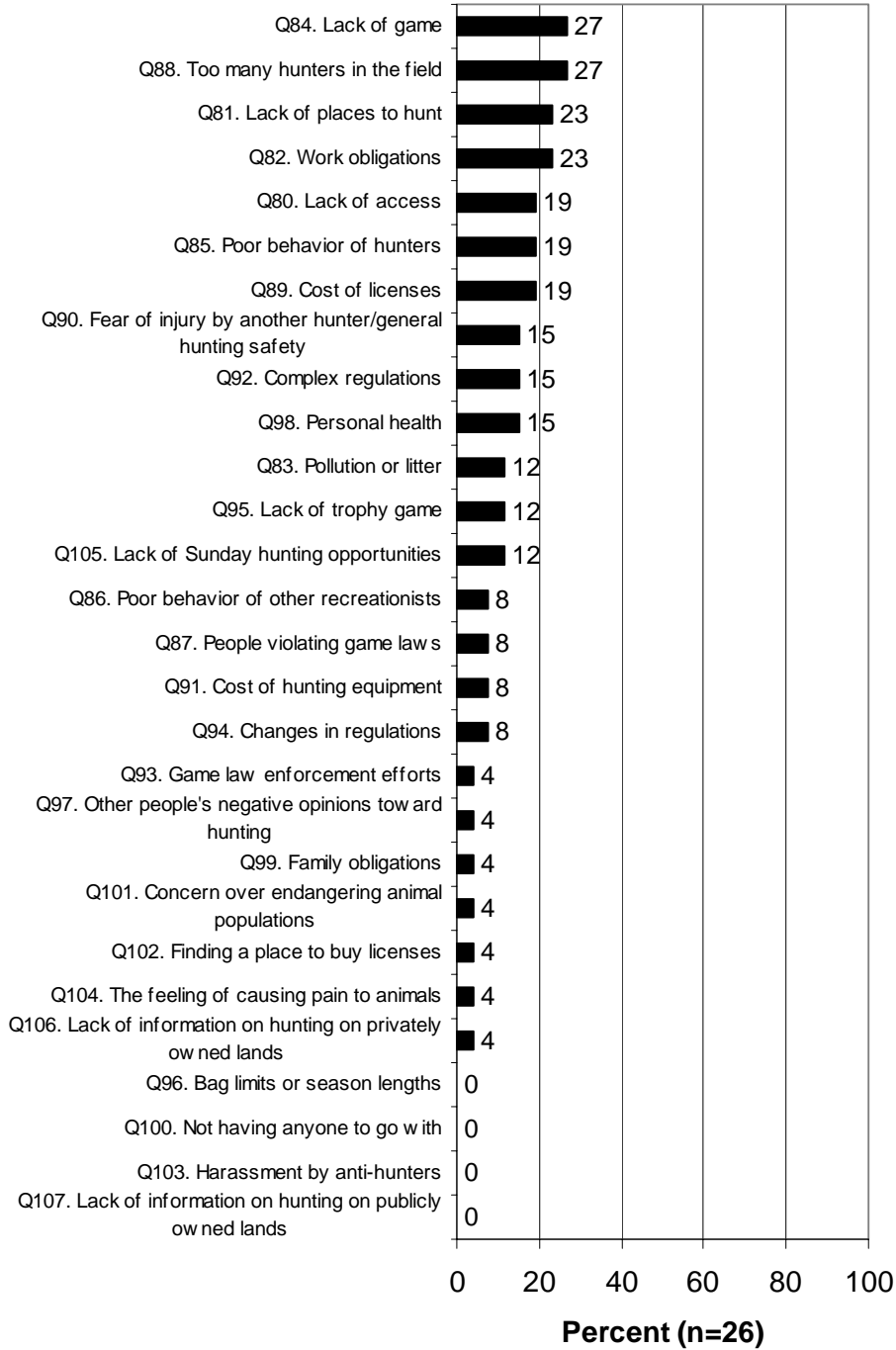
- **Hunting participation and satisfaction in Pennsylvania is affected by two very different issues: social-psychological issues and resource-related issues.**

A single cause of hunter dissatisfaction and desertion did not emerge; instead, there were several very different factors. In many hunting studies, factors with the most impact on hunting participation and satisfaction are social-psychological issues, many of which are beyond the control of state agencies, such as work and family obligations, personal health/age, or a lack of time. While typical social-psychological issues appeared in the data for hunting participation in Pennsylvania, resource-related issues emerged, as well. As mentioned above, personal health/age, a social-psychological issue, was the main reason respondents did not plan to hunt in Pennsylvania in the future; however, respondents indicated that a lack of game and a lack of access to land, both of which are resource-related issues, also influenced their decision not to hunt and their hunting satisfaction.

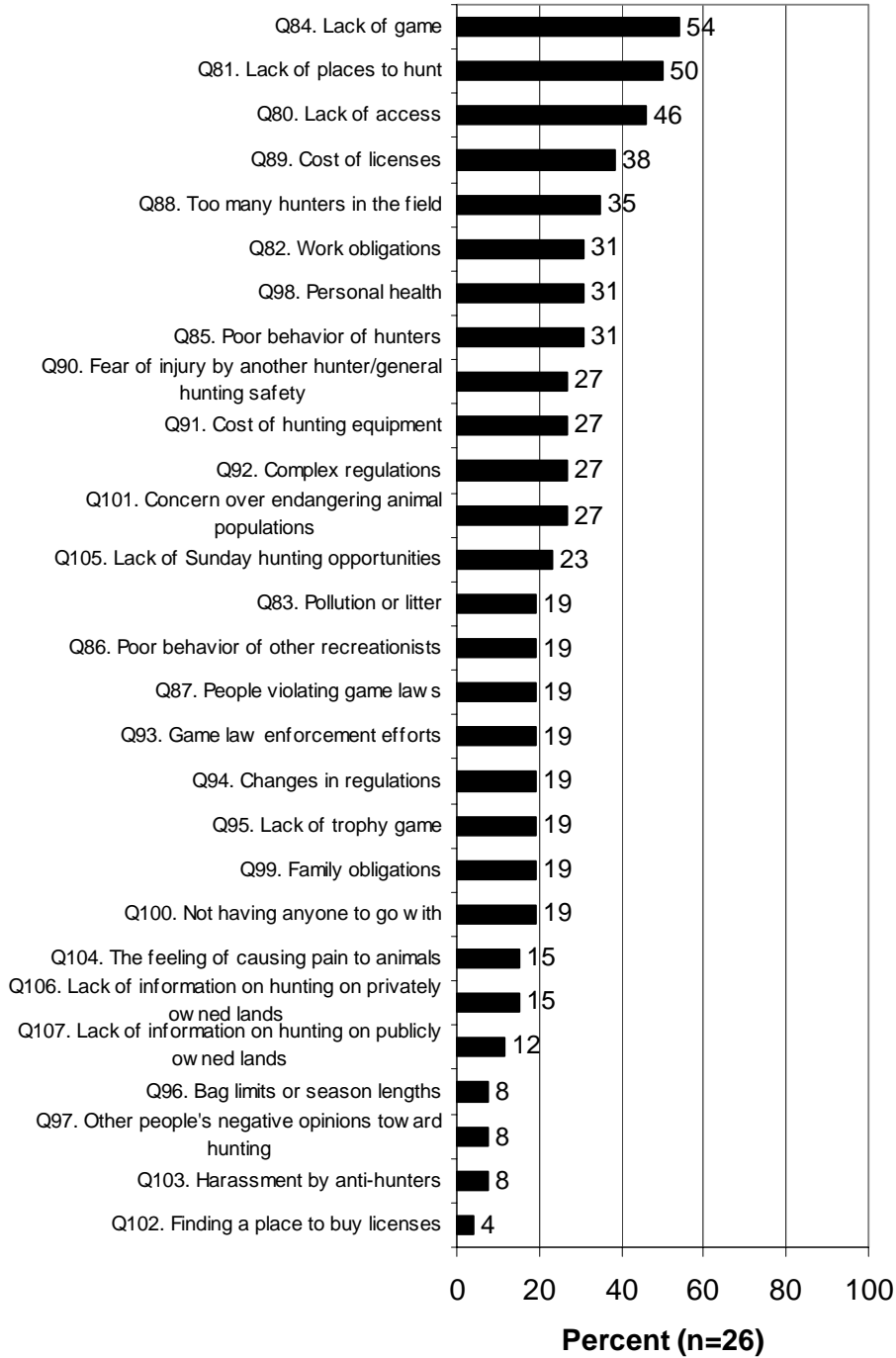
- **Major factors contributing to hunting desertion in Pennsylvania include an aging population, a perceived lack of game, a perceived lack of places to hunt, a perceived lack of access, too many hunters in the field, and work obligations.**

Please see the graphs on the following pages.

Q80-Q107. Factors that strongly influenced ex-hunters' decision to stop hunting in Pennsylvania.



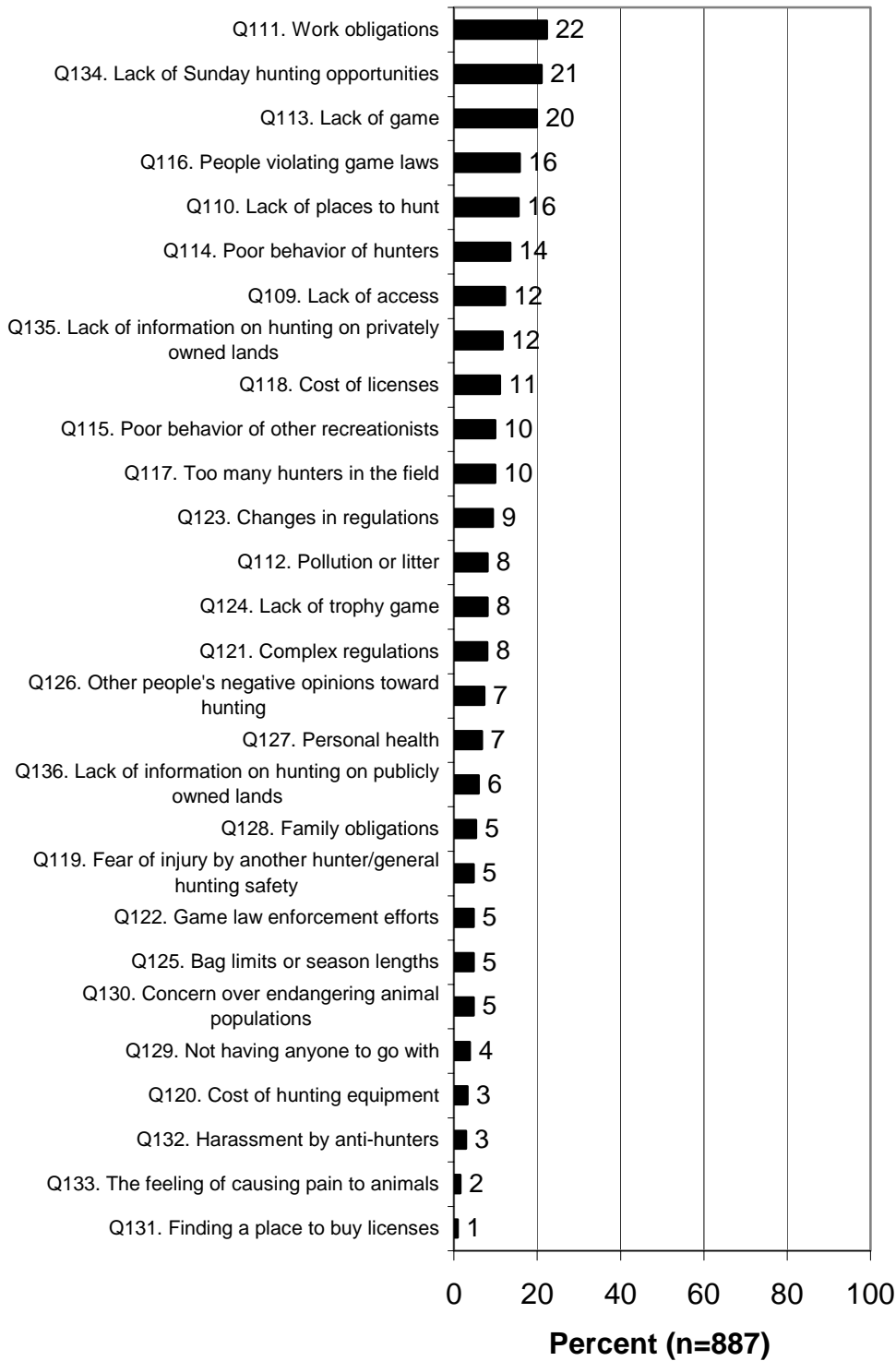
Q80-Q107. Factors that strongly or moderately influenced ex-hunters' decision to stop hunting in Pennsylvania.



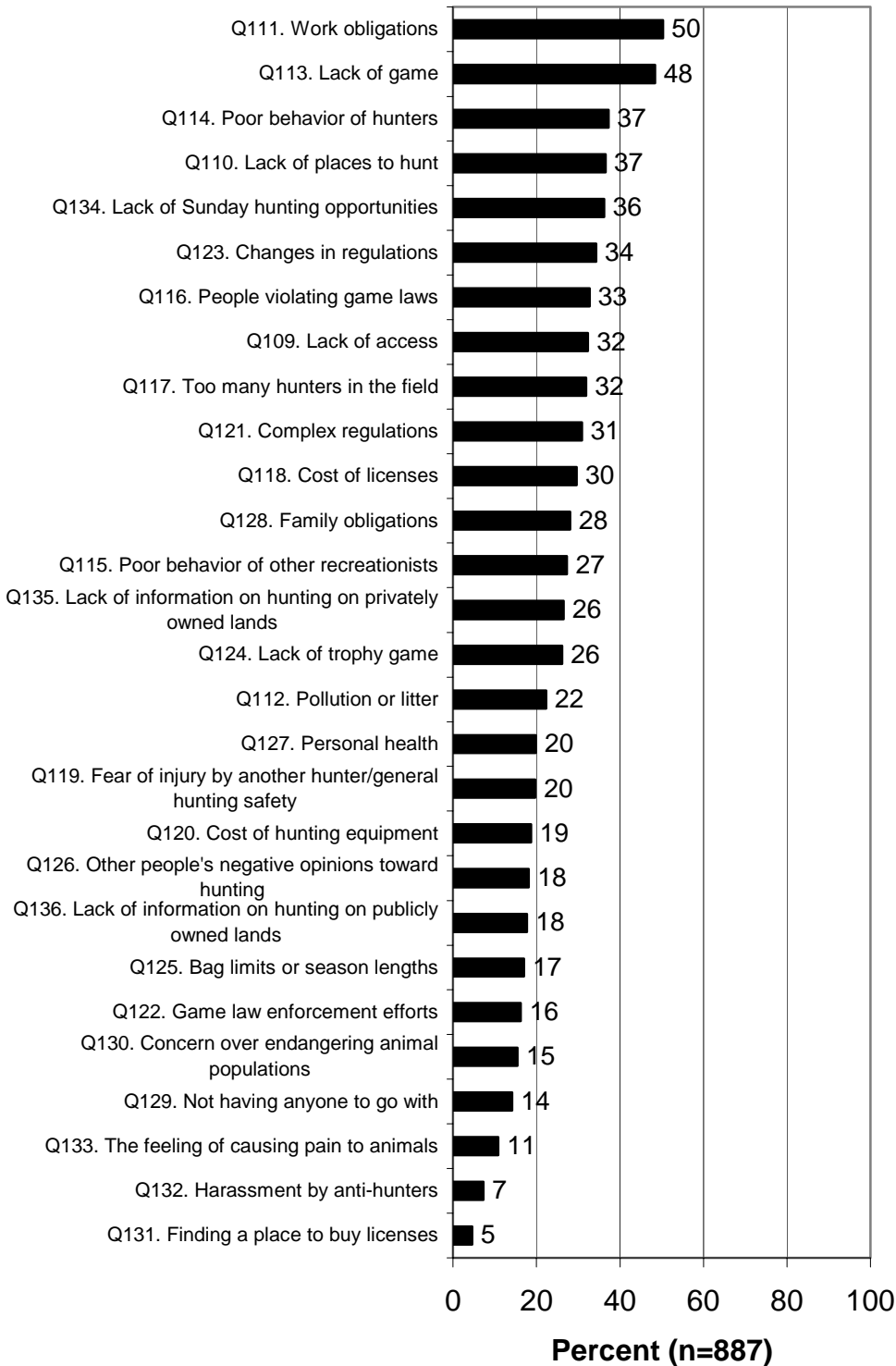
- **Major factors contributing to hunting dissatisfaction in Pennsylvania are work obligations, a lack of Sunday hunting opportunities, a perceived lack of game, a perceived lack of places to hunt, a perceived lack of access, and poor behavior of other hunters.**

Please see the graphs on the following pages.

Q109-Q136. Factors that strongly took away from respondent's enjoyment of hunting in Pennsylvania.



Q109-Q136. Factors that strongly or moderately took away from respondent's enjoyment of hunting in Pennsylvania.



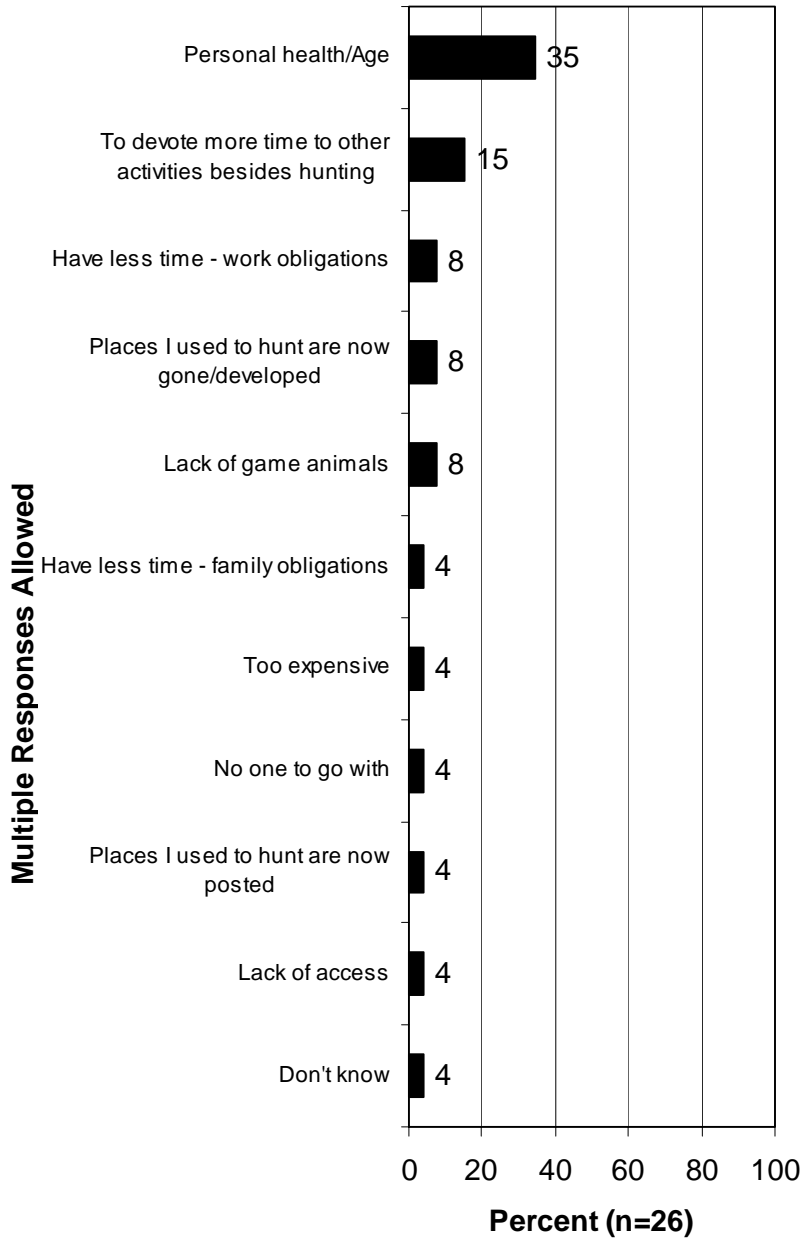
- **The Pennsylvania hunter population appears to be older and aging.**

The mean age of all 2000-2001 license holders was 47 years, and the hunting population is skewed toward older males. Additionally, personal health/age was the most common reason given by ex-hunters (35% when asked in an open-ended question) for not planning to hunt in Pennsylvania in the future. Although the sample for this study is based on Pennsylvania hunting license data from 2000 and cannot account for the ages of hunters who have entered the sport in Pennsylvania since 2000, it appears that the Pennsylvania hunter population is older and may be aging. Please see the graph on the following page.

One focus group participant expressed the desire but not the ability to hunt.

I have to quit. I hate to quit, but I'm 67. I have a bad lung. I worked the rock drills on Route 80 and 81 back in the '60s and they didn't make you wear masks. So, that caught up with me. I have a tough time, especially if it's warm and humid, but I hate to quit. I would never quit otherwise. (Ex-hunter).

**Q77. What are the main reasons you have chosen to stop hunting in Pennsylvania? (Open-ended)
(Asked of those who said that they do not plan to hunt in Pennsylvania in the future.)**



- **The top factor that contributes to hunting dissatisfaction in Pennsylvania is somewhat beyond the control of the Pennsylvania Game Commission: work obligations.**

Half (50%) of 2000-2001 license holders said work obligations *strongly or moderately* took away from hunting enjoyment, and 22% said it *strongly* took away from hunting enjoyment. Work obligations also influenced ex-hunters' decision not to hunt: 31% of ex-hunters indicated that work obligations influenced their decision.

- **A perceived lack of game to hunt impacts hunting satisfaction and participation in Pennsylvania.**

A perceived lack of game, a resource-related issue, was the second most common cause of dissatisfaction among Pennsylvania hunters. Nearly half (48%) of 2000-2001 license holders said that a lack of game *strongly or moderately* took away from their hunting enjoyment.

Although only 8% of ex-hunters indicated in an open-ended question that a lack of game was a main reason for their decision to stop hunting, the majority of ex-hunters (54%) said that a lack of game *strongly or moderately* influenced their decision not to hunt when asked individual questions regarding 28 factors that could have influenced their decision to stop hunting in Pennsylvania; 27% said a lack of game *strongly* influenced their decision. Please see the graphs on pages 14 and 15.

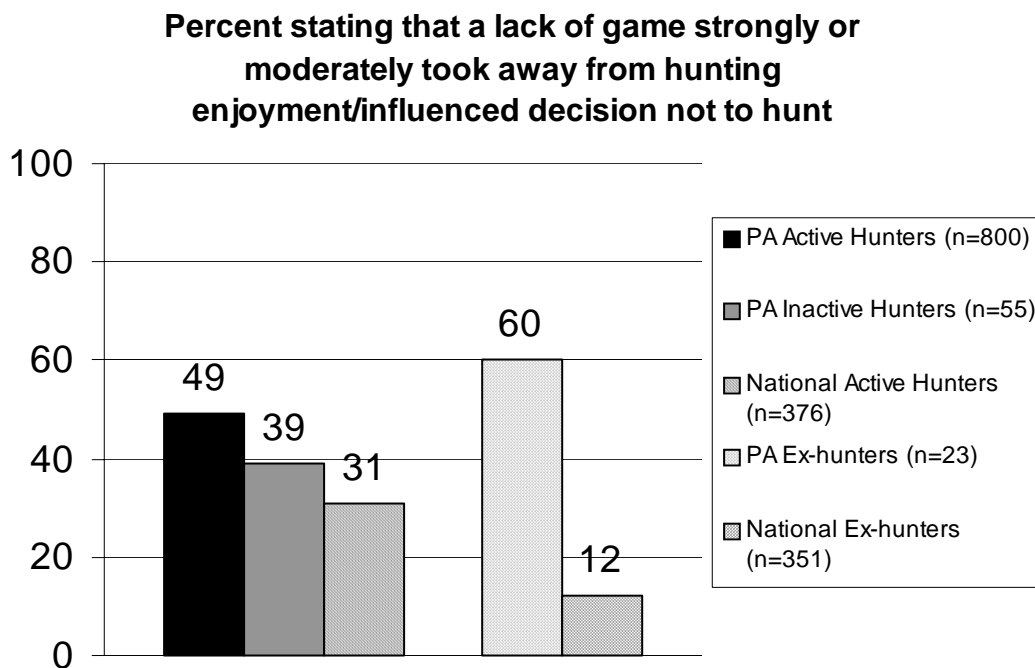
- **Pennsylvania ex-hunters' frustration with a lack of game is high.**

The percentage of Pennsylvania ex-hunters frustrated with a lack of game is high when compared to national data. In a national study on factors related to hunting participation completed by Responsive Management in 1995, 12% of respondents who had stopped hunting indicated that not enough game to hunt *strongly or moderately* influenced their decision not to hunt compared to 60% of ex-hunters in Pennsylvania. A lack of game to hunt also had less impact on New Jersey ex-hunters in a study conducted by Responsive Management in 1998: only 22% indicated that a lack of game influenced their decision not to hunt/hunt less.

It is interesting to note that while Pennsylvania ex-hunters were more likely than were Pennsylvania inactive and active hunters to cite a lack of game as a factor for

dissatisfaction/desertion, the 1995 national study by Responsive Management found the reverse to be true: active hunters were much more likely to cite lack of game as a factor for dissatisfaction/desertion than were ex-hunters.

In Responsive Management's national study, 31% of active hunters and 12% of ex-hunters cited not enough game as a factor of dissatisfaction/desertion compared to 29% of inactive hunters, 32% of active hunters, and 46% of ex-hunters in Pennsylvania. Please see the graph below.



Although several active hunters who participated in the focus group felt that wild turkey and white-tailed deer populations are satisfactory, ex-hunters expressed concern regarding the lack of game to hunt when hunting in Pennsylvania.

*For the last 5, 6 years, I did hunt in Pennsylvania. The deer are getting tougher to find. **Really? You think you're seeing less deer in Pennsylvania?** Oh, definitely.... But you can't tell the Game Commission that. **What do you mean?** Oh, they think they're more plentiful than ever, but if they are, they're all on posted ground. (Ex-hunter)*

What kind of information could a hunter get from the Game Commission if you were to call up and ask for some information, what would you get from them? About whitetail hunting, it'd

be propaganda probably.... Yeah, they're [the Commission] not going to tell you the truth. (Ex-hunter)

They'll [the Commission] tell you there's plenty of deer and then everyone's complaining there isn't any. Who's right? (Ex-hunter)

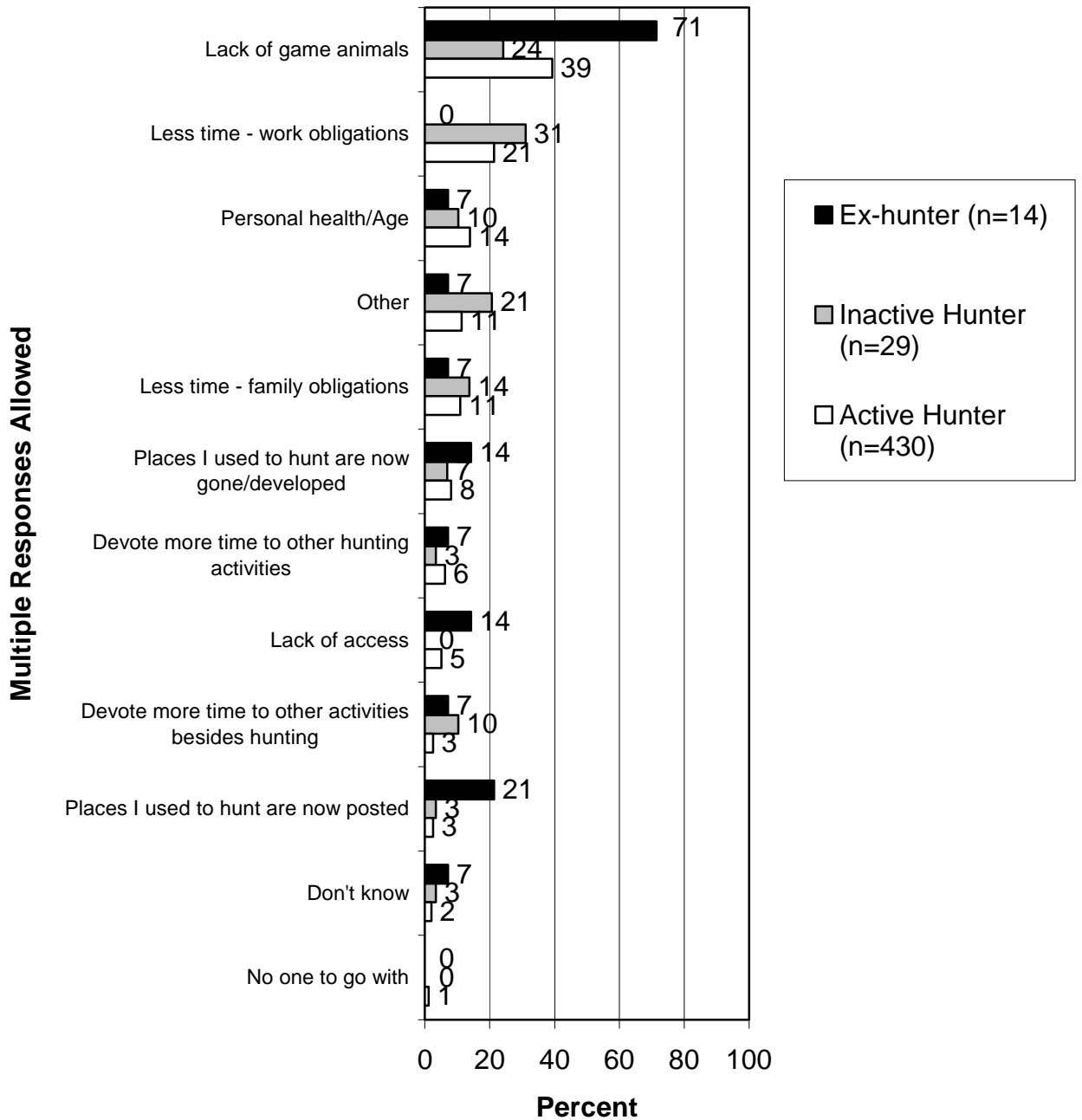
Yeah, who do you believe, the hunters or the Game Commission? (Ex-hunter)

***Who do you believe?** The hunters are the ones out in the field. (Ex-hunter)*

- **Hunters are particularly influenced by a lack of small game to hunt.**

When asked for the main reasons their level of small game hunting has decreased, an overwhelming majority of ex-hunters (71%) said a lack of game animals contributed to their dissatisfaction with small game hunting. A lack of game was also the top reason small game hunting has decreased for active hunters (39% gave this reason) and inactive hunters (24%). A lack of game was the top reason and far more common than personal health/age (the top factor contributing to decision not to hunt in general) or work obligations (the top factor that took away from respondents' enjoyment of hunting in general) for the decrease in small game hunting among all three groups of hunters. Please see the graph on the following page.

Q67. What are the main reasons the level of your small game hunting has decreased? (Asked of those who have hunted small game in Pennsylvania and who said the level of their small game hunting has decreased.)



Several focus group participants said their small game hunting has decreased due to the lack of game, but their hunting participation remains the same because they hunt other game. However, focus group participants were frustrated by the lack of small game to hunt and some hunt less overall as a result:

Small game hunting is decreasing. *That's true, but it's not a matter of choice.... There's nothing else to hunt but deer. (Ex-hunter)*

The [small] game isn't there. (Ex-hunter)

I only hunt 2 to 4 days a year now. But it is less [than it used to be]. It's down since I don't hunt small game. (Active Hunter)

Why are you hunting less? *Well, mainly just because of small game. I only ever committed a few days a year to deer hunting. It's like everybody's saying, job obligations.... I took those (small game hunting) days basically out of my calendar. (Active Hunter)*

- **Dissatisfaction among white-tailed deer hunters is high.**

Nearly a quarter (24%) of white-tailed deer hunters were dissatisfied with white-tailed deer hunting. Ex-hunters were the most likely (30%) to be *very or somewhat* dissatisfied with white-tailed deer hunting in Pennsylvania. However, a noteworthy percentage of inactive and active hunters were dissatisfied with white-tailed deer hunting in Pennsylvania: 19% of inactive hunters and 24% of active hunters were *very or somewhat* dissatisfied with white-tailed deer hunting.

- **A perceived lack of access to land on which to hunt impacts hunting satisfaction and participation in Pennsylvania.**

Perceived lack of access to land was among the top three factors that *strongly or moderately* influenced ex-hunters' decision to stop hunting: 46% of ex-hunters said a lack of access influenced their decision to stop hunting. Twenty-nine percent of inactive hunters and 32% of active hunters said a lack of access to land *strongly or moderately* took away from their hunting satisfaction.

The lack of access issue often has two dimensions: real access issues and perceived access issues. Sometimes hunters perceive a lack of access to land because access is not adequately promoted. Perceived lack of access may be an issue for Pennsylvania given the amount of and access to land in the state. A national study conducted by Responsive Management for The

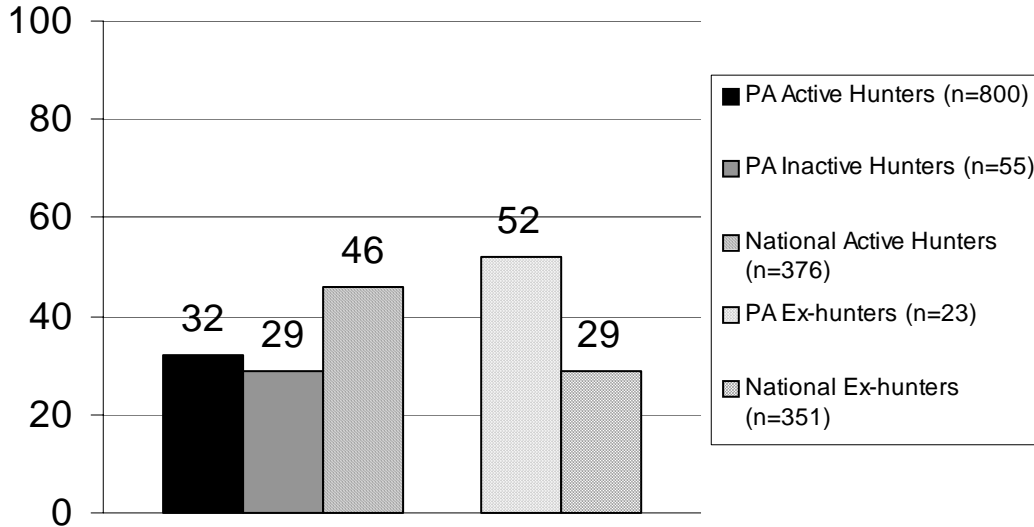
Conservation Fund in 2003 indicated that Pennsylvania ranks among the top 5 states in the U.S. for the amount of state-controlled hunting land (over 8 million acres), that the Pennsylvania ratio of acres per hunter in 2001 was 8.33 (ranking among the top 21 states nationally and among the top five on the East Coast), and that Pennsylvania's state-controlled hunting land was rated fairly high for accessibility [7.11 on a scale of 1(poor)-10(excellent)]. Nonetheless, determining the amount of actual access is beyond the scope of this study.

- **Pennsylvania hunters' and ex-hunters' frustration with access to land is high in Pennsylvania.**

Despite the relatively high availability of hunting land in Pennsylvania, the percentage of Pennsylvania hunters reporting lack of access as a factor of dissatisfaction or desertion is high when compared to other states. A study conducted by Responsive Management in 2000 shows that only 16% of Virginia hunters said access to public hunting lands is poor, and 35% of Virginia hunters said access to private hunting lands is poor.

The percentage of ex-hunters in Pennsylvania (52%) who cited a lack of access as a reason they decided to stop hunting was notably higher than the percentage of inactive (29%) or active (32%) hunters who cited lack of access as a factor in hunting dissatisfaction and a lessening of hunting participation. National data indicated the reverse: active hunters were much more likely to cite a lack of access than were ex-hunters (46% of national active hunters compared to 29% of national ex-hunters). Pennsylvania's high rate of ex-hunters being influenced by a lack of access may be associated with the state's older hunting population; the definition of a lack of access may be different for an ex-hunter than for an active hunter. A lack of access for ex-hunters may indicate a lack of access accommodating physical needs of those who are aging, such as recreational vehicle access to hunting lands for those who cannot walk without assistance. Please see the graph on the following page.

Percent stating that a lack of access strongly or moderately took away from hunting enjoyment/influenced decision not to hunt



- **A perceived lack of places to hunt impacts hunting participation and satisfaction in Pennsylvania.**

Half (50%) of ex-hunters indicated that a lack of places to hunt *strongly or moderately* influenced their decision to stop hunting in Pennsylvania compared to 31% of inactive hunters and 37% of active hunters who indicated that a lack of places to hunt *strongly or moderately* took away from their hunting satisfaction.

- **Despite the low rates of hunters having witnessed game law violations, the violations and other poor behavior of hunters still affect hunter satisfaction.**

Although an overwhelming majority (84%) of 2000-2001 license holders had not witnessed any game law violations within the past 2 years, poor behavior of other hunters and people violating game laws were still top factors of hunting dissatisfaction. Thirty-seven percent of hunters said poor behavior of other hunters *strongly or moderately* took away from hunting enjoyment and was the third most common answer. Thirty-three percent said people violating game laws *strongly or moderately* took away from hunting enjoyment.

- **A lack of Sunday hunting opportunities impacts hunting participation and satisfaction in Pennsylvania.**

A lack of Sunday hunting opportunities has an important impact on the hunting satisfaction of active hunters. Thirty-seven percent of active hunters indicated that a lack of Sunday hunting opportunities *strongly or moderately* took away from their hunting enjoyment; 22% said a lack of Sunday hunting opportunities *strongly* took away from their hunting enjoyment.

Twenty-four percent of inactive hunters and 22% of ex-hunters said a lack of Sunday hunting opportunities *strongly or moderately* took away from hunting enjoyment or influenced their decision to stop hunting. Also, as discussed in the previous sub-section “Hunting Participation,” focus group participants, especially active hunters, said Sunday hunting opportunities would be likely to encourage them to hunt more.

- **Ex-hunters in Pennsylvania are more likely to be female.**

Although sample sizes were small, ex-hunters were four times more likely than were active hunters to be female: 17% percent of ex-hunters were female compared to 4% of active hunters who were female. Additionally, more inactive (13%) than active hunters (4%) were female. Gender appears to be an important factor in hunting desertion in Pennsylvania.

- **Factors that are not great detractors from enjoyment include finding a place to purchase licenses, harassment by anti-hunters, the feeling of causing pain to animals, and not having anyone to go with.**

An overwhelming majority of 2000-2001 license holders said that the following factors did not take away from their hunting enjoyment: finding a place to purchase licenses (95% said this did not take away from their enjoyment), harassment by anti-hunters (92%), the feeling of causing pain to animals (89%), and not having anyone to go with (86%).

HUNTING PREFERENCES

- **Rifle and shotgun are the most popular sporting devices used by hunters in Pennsylvania.**

The majority of hunters in Pennsylvania use a rifle (92%) or shotgun (55%); 35% use a bow and arrow, and 16% use a muzzleloader.

- **Hunters most commonly hunt on private land.**

Most commonly, 2000-2001 hunting license holders said they hunted primarily on private land (45%) in the past 5 years in Pennsylvania, followed by those saying they hunted on both private and public land about equally (30%); just less than a quarter hunted primarily on public land (24%) in the past 5 years in Pennsylvania.

- **State Game Lands are the most popular public and/or cooperative lands on which to hunt.**

Of the seven types of public and cooperative lands about which the survey asked, State Game Lands were the most popular: 61% of 2000-2001 hunting license holders had hunted on them. State Forests (35%) and Farm Game Cooperative Lands (17%) were also fairly popular. The least popular of the seven types of land were the Safety Zone Cooperative Lands (6%). More than a quarter (26%) had not hunted on any of the seven types of land.

- **A small percentage of 2000-2001 license holders (11%) had hunted on land that was enrolled in Pennsylvania Game Commission Public Access Program lands.**

HUNTER KNOWLEDGE AND OPINION OF THE PENNSYLVANIA GAME COMMISSION AND ITS ACTIVITIES

- **Overall, opinions of the Pennsylvania Game Commission are positive.**

Most hunters gave the Commission positive ratings for its efforts at managing wildlife and hunting in Pennsylvania, and of the few who had hunted on Public Access Program lands, many rated the experience positively. The majority of hunters also indicated that law enforcement officers were doing a good or excellent job. Most hunters also rated the Commission's law enforcement officers' efforts in protecting wildlife in Pennsylvania as excellent or good.

- **In general, there is a lack of awareness among hunters of the Pennsylvania Game Commission's Public Access Program and other programs among hunters.**

The majority of 2000-2001 license holders (74%) knew a little or nothing about the Pennsylvania Game Commission's Public Access Program. A quarter (25%) knew a great deal or moderate amount about the program. As indicated above, only 11% had actually hunted on land enrolled

in the program in the past 5 years. In general, focus group participants were not familiar with any of the Commission's programs.

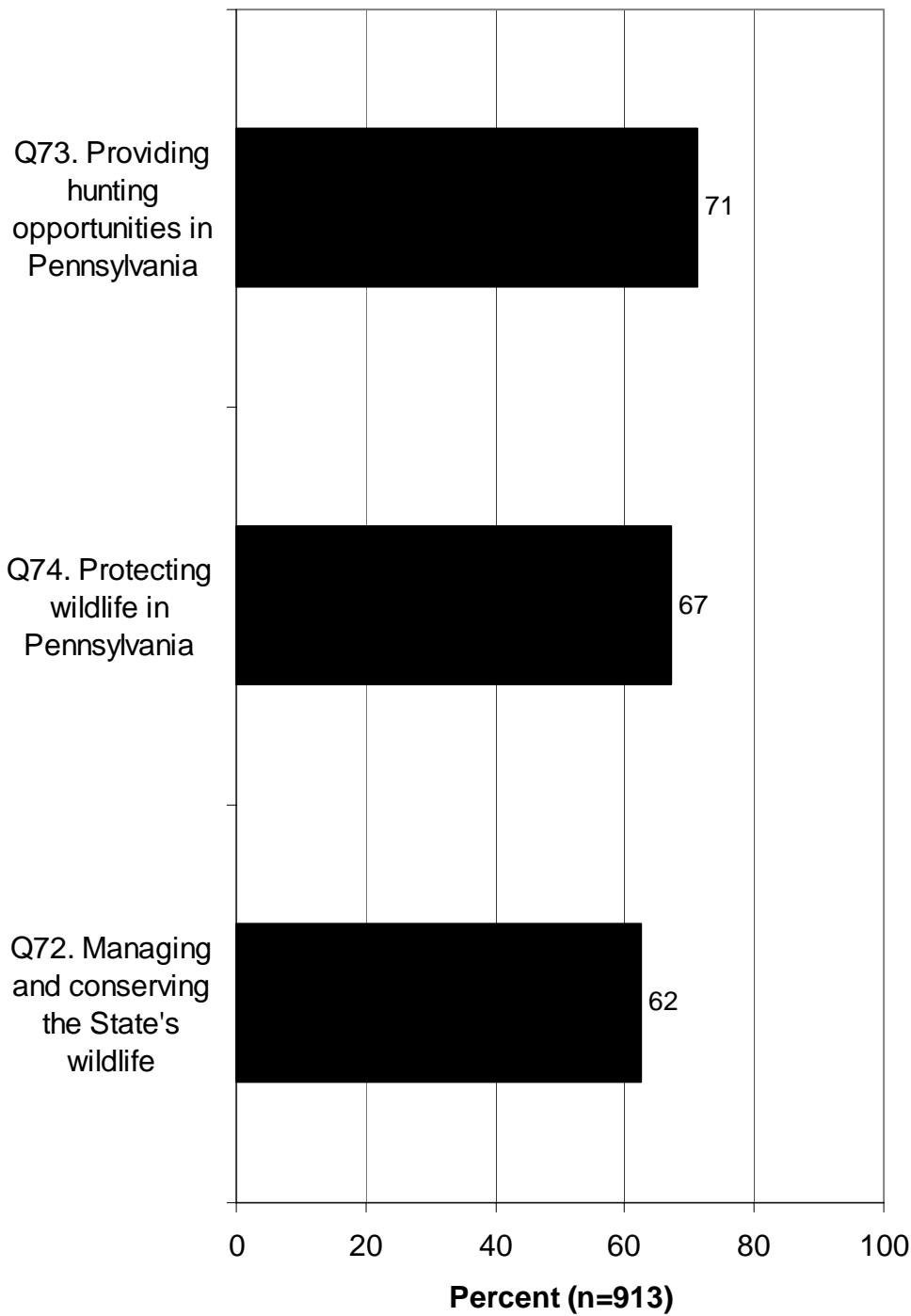
- **Experience with the Pennsylvania Game Commission's Public Access Program lands has been positive.**

Of the 11% who have hunted on Public Access Program lands, the majority have positive ratings of their experience hunting on those lands: 69% rated their experience excellent or good; only 8% rated it poor. They also had positive ratings of the quality of habitat on those lands: 69% rated the quality excellent or good; only 8% rated the quality of habitat poor. Ratings of the number of game are not quite as positive: 49% rated the number of game excellent or good, but 20% rated it poor. Despite the lower ratings of *number* of game, the ratings of *quality* of game are positive: 67% rated the quality of game excellent or good; only 8% rated the quality of game poor.

- **The Pennsylvania Game Commission receives higher ratings for providing hunting opportunities than it does for managing and conserving Pennsylvania's wildlife. Nonetheless, both efforts have positive ratings.**

Seventy-one percent of respondents rated the Commission as excellent or good at providing hunting opportunities in Pennsylvania, and 63% rated the Pennsylvania Game Commission as excellent or good at managing and conserving Pennsylvania's wildlife. Please see the graph on the following page.

Q72-Q74. Percent rating the Pennsylvania Game Commission's job at the following as excellent or good.



PROVISION OF INFORMATION ON HUNTING

- **The overwhelming majority of 2000-2001 hunting license holders agree that Pennsylvania's Digest of Hunting and Trapping Regulations is clear and easy to understand; 13% disagree.**
- **Direct mail is the best way to provide information on hunting to license holders.**

When 2000-2001 license holders were asked about the best way to provide them with information on hunting, the top answers were direct mail (26%), the Pennsylvania Digest of Hunting and Trapping Regulations (21%), magazines (19%), newspapers (18%), and the Internet (17%).

- **Two-thirds of hunters have Internet access in their homes.**

Two-thirds (67%) of 2000-2001 license holders have Internet access in their homes, and 40% of 2000-2001 license holders have visited the Pennsylvania Game Commission's Website. Of those who have Internet access in their homes, 54% have visited the Commission's Website.

Implications and Recommendations

While there are numerous important and salient points in this final report of factors related to hunting participation and satisfaction in Pennsylvania, two factors are most evident: an aging hunting population and the need for more communication. The future of hunting participation in Pennsylvania must be protected through increased recruitment of younger hunters and effective communications.

- **The older population of Pennsylvania hunters needs to be studied in-depth.**

Although most hunters who received a 2000-2001 Pennsylvania hunting license were active hunters and the rates of hunting inactivity and desertion were low, the Pennsylvania hunter population appears to be aging. Recall that the mean age of Pennsylvania hunters is 47 years and that the top factor given by ex-hunters for hunting desertion was personal health/age. While Responsive Management does not have the trend data to show that the Pennsylvania hunter population is aging, an older population could indicate an aging population if younger hunters are not joining the population consistently. This is an extremely important implication for the future of hunting participation in Pennsylvania. Pennsylvania could be vulnerable to a dramatic decline in hunting participation when this cohort of aging hunters stops hunting due to age or illness within the next 10 to 20 years. Responsive Management recommends that the Commission consider conducting an in-depth study of the demographics of Pennsylvania hunters to learn more about the trends associated with this older population and to predict at what age and year most hunters are likely to stop hunting.

- **Efforts to maintain hunting participation among Pennsylvania hunters should focus on hunter recruitment, not hunter retention.**

In many Responsive Management hunting studies, retention of current hunters is an issue. For Pennsylvania, however, retention does not appear to be as important as recruitment. Personal health/age is the most common cause of hunter desertion in Pennsylvania. As mentioned previously, the current hunting population in Pennsylvania is older and, if the population is a cohort of aging hunters as suspected, could lead to a dramatic decline in hunting participation in the future. The Pennsylvania Game Commission should consider actively recruiting younger hunters to maintain high hunting participation in Pennsylvania in the future. Promotional

campaigns to recruit and encourage younger hunters need to be designed and implemented to address this issue.

- **Communication is essential to successfully address other major factors affecting hunting participation and satisfaction.**

Although the different issues affecting hunting participation and satisfaction in Pennsylvania will require different solutions, effective and increased communications efforts will be required to address the issues successfully. Both social-psychological issues and resource-related issues require strategic communications. For example, work obligations, a social-psychological issue somewhat beyond the control of the Commission, may be successfully addressed with advertising messages and image campaigns targeting those who feel overworked. Resource-related issues, such as a lack of access to hunting land, may be reality or the perception of hunters, but a communications campaign is necessary to inform hunters where land access exists or where it has been made available.

As communications efforts are undertaken to recruit new hunters and to address the issues confronting hunting participation and satisfaction in Pennsylvania, the Commission should consider increasing the budget of communications programs.

- **Major factors affecting hunting participation in Pennsylvania are an aging population (discussed above), work obligations, a perceived lack of game, a perceived lack of access, a perceived lack of places to hunt, a lack of Sunday hunting opportunities, and poor behavior of other hunters.**

- **Address work obligations in recruitment and promotional campaigns.**

Work obligations were the top factor that took away from hunting satisfaction. The Commission should consider acknowledging and addressing this source of dissatisfaction in promotional hunting campaigns in Pennsylvania. The Commission may want to design promotional messages encouraging hunters and potential hunters to “take a break” from work and go hunting with information on the benefits of hunting, especially the camaraderie with family and friends since most hunters hunt with a family member and an invitation to hunt was the top factor that would encourage hunters to hunt more/hunt again.

- **Promote the location of plentiful game populations, especially small game populations.**

A perceived lack of game to hunt was clearly an issue for hunters and ex-hunters, particularly the lack of small game. Information needs to be communicated to hunters about where game and small game populations are plentiful for hunting. If efforts to increase game populations are undertaken and those efforts involve changes in hunting regulations, the changes, as well as the reason for the changes, should be communicated clearly to hunters.

- **Develop more small game hunting opportunities.**

Past research has shown that many hunters begin with small game hunting and progress to big game hunting. Progression from small to big game hunting is more likely to lead to long-term participation. Also note that in this study ex-hunters and inactive hunters were more likely than active hunters to have never hunted small game. Additionally, having hunted ring-necked pheasant, an upland game bird, the species for which a majority of hunters most wanted more hunting opportunities, was positively associated with an increase in hunting participation in the past 5 years. Increasing small game hunting opportunities (as well as upland game bird species like ring-necked pheasants) in Pennsylvania may be an important strategy for increasing hunting participation and recruiting new hunters.

- **Promote availability of hunting land, particularly the Public Access Program lands.**

A perceived lack of access to land to hunt on was a factor contributing to hunting desertion in Pennsylvania. The Pennsylvania Game Commission should consider increasing access to hunting land and promote the increase in access, as well as promote the high number of accessible acreage and any access that accommodates physical challenges.

Promoting the availability of hunting land will address the perceived lack of access. The Commission should also heavily promote the Public Access Program. While very few 2000-2001 license holders knew much about the Public Access Program and only 11% had hunted on the program lands, the majority of those who had hunted on program lands gave positive ratings of their experience. Heavily promoting the Public Access Program will increase satisfaction

with access to hunting land and may, as a result of positive experiences on the land, increase hunting satisfaction overall.

- **Encourage hunters who hunt on Public Access Program lands to thank landowners.**

Although an overwhelming majority of those who had hunted on the Commission's Public Access Program lands contacted the landowner after their hunting, only about half did so to thank the landowner. Encouraging hunters to express appreciation to landowners will contribute to a positive relationship between both parties (hunters and landowners) to maintain high satisfaction and continuation among those participating in the Public Access Program.

- **The Pennsylvania Game Commission should consider opening Sundays for hunting.**

A lack of Sunday hunting opportunities was the second highest factor that *strongly* took away from hunters' enjoyment, and active hunters were the most likely to say a lack of hunting opportunities took away from their hunting enjoyment. The Pennsylvania Game Commission should consider Sunday hunting opportunities. An increase in Sunday hunting opportunities may increase satisfaction and encourage more hunting participation among active hunters. However, because Sunday hunting is traditionally a divisive issue among hunters, landowners, and the general population, initial research would be beneficial. For example, 45% of Virginia hunters *strongly* opposed Sunday hunting in Virginia and 34% *strongly* supported Sunday hunting in Virginia in a study conducted by Responsive Management in 2000. Among Virginia landowners, 67% *strongly* opposed Sunday hunting and only 13% *strongly* favored it. Among the general population of Virginia, 44% of Virginia residents *strongly* opposed Sunday hunting and only 16% *strongly* supported it. Although Pennsylvania active hunters expressed a desire for Sunday hunting opportunities, opposition may emerge if it is initiated. Other states that have recently initiated Sunday hunting, such as Maryland, could be examined for potential benefits and consequences. The Commission should also consider performing a cost-benefit analysis before implementing Sunday hunting for all geographic regions and all species.

- **Promote deer hunting in Pennsylvania.**

Because white-tailed deer is the most common species hunted in Pennsylvania, and many who would like more big game hunting opportunities desired more opportunities to hunt deer, the

market for white-tailed deer hunting should not be considered fully penetrated. Hunters can be encouraged to hunt more, and new hunters can likely be recruited, if opportunities to hunt deer are increased. The Commission should consider marketing deer hunting opportunities in recruitment programs and in direct communication with current hunters.

- **Examine the specific dissatisfaction parameters of deer hunting.**

Although deer hunting in Pennsylvania could be a source of increased hunter participation, the Commission should consider conducting a study to examine the cause of dissatisfaction among white-tailed deer hunters. Nearly a quarter of those who hunted deer in Pennsylvania were dissatisfied with their deer hunting experiences in the past 2 years. Recall that the majority of 2000-2001 license holders who said more opportunities to hunt big game would *strongly or moderately* encourage them to hunt more/hunt again would like to see more white-tailed deer hunting. A lack of opportunities to hunt white-tailed deer may be a contributing factor to dissatisfaction with deer hunting, but a more in-depth study should be considered so that the Commission may address the specific source(s) of dissatisfaction and increase satisfaction among active hunters.

- **Increase communications to promote ethical hunting behavior.**

A majority of 2000-2001 license holders had not witnessed any game law violations within the past 2 years, yet poor behavior of other hunters and people violating game laws were still among the top factors of hunting dissatisfaction. When compared to the high percentage of hunters who had not witnessed a game law violation, the high level of dissatisfaction with behavior and law violations of other hunters indicate that Pennsylvania hunters may have a low tolerance for poor behavior of other hunters. The Commission should consider increasing communications to promote ethical hunting behavior in outreach campaigns. Increased communications to inform hunters how to report game law violations and unethical hunting behavior should be considered, as well.

- **Examine hunters' knowledge of and satisfaction with the Pennsylvania Game Commission.**

Recall that the Commission received higher ratings for providing hunting opportunities than it did for managing and conserving Pennsylvania's wildlife. The Commission should consider conducting a study to discover if the lower ratings of its management and conservation of wildlife is the result of hunters not knowing about the Commission's wildlife conservation efforts or if hunters know about the efforts and are still dissatisfied. If hunters are uninformed, increasing communication about management and conservation efforts will aid in alleviating dissatisfaction. If hunters are informed, the Commission will need to know why they are dissatisfied so that steps can be taken to improve efforts.

- **Awareness of the Pennsylvania Game Commission's programs needs to be increased.**

Although the Commission offers many excellent programs, the majority of hunters are unaware of the programs. The majority of respondents knew little to nothing about the Public Access Program; however, the program received positive ratings among those who had hunted on the program's lands. Focus group participants (ex-hunters and active hunters) were generally unaware of the Pennsylvania Game Commission's programs, as well. The Commission should consider increasing awareness and encouraging participation in its various programs.

- **Incorporate the Step Outside[®] Program into the Commission's activities.**

An invitation to go hunting is an important factor for encouraging hunters to hunt more/hunt again. A request from a child to take him or her hunting and an invitation from a friend to go hunting were the top two factors that respondents said would *strongly or moderately* encourage them to hunt more/hunt again. The Commission should consider implementing the National Shooting Sports Foundation's (NSSF) Step Outside[®] program in Pennsylvania. The Step Outside[®] program is an established program that encourages hunters and sportsmen to invite a friend or family member to try a traditional shooting sport. The Step Outside[®] program may successfully encourage active and inactive hunters to hunt more/hunt again in Pennsylvania.

- **Target youth with recruitment campaigns.**

The Step Outside[®] program can assist with recruitment of younger hunters. Promotion for the Step Outside[®] program, as well as any promotion designed for recruitment, should target youth.

The need to recruit younger hunters is important to protect the future of hunting participation in Pennsylvania as the many current active hunters age. The Step Outside[®] campaign can encourage active hunters to invite a child hunting, and other recruitment campaigns can utilize advertisements and slogans encouraging children to ask an adult to take him or her hunting.

- **Target females with recruitment campaigns.**

Females had a higher hunting dropout rate than did males; ex-hunters were four times more likely to be female. In addition to youth, The Pennsylvania Game Commission should consider targeting females with recruitment messages and programs. Given the necessity for recruitment of younger hunters and the possibility for an increased female hunting population, the Commission may consider creating a youth recruitment program that clearly targets both girls and boys.

- **Recruitment programs need to recreate what happens naturally.**

Previous research shows that hunters who are initiated to hunting by a friend or mentor, who are surrounded by family members and friends who hunt, and who progress slowly from small game to big game are more likely to become long-term, active hunters. Any program designed for hunter recruitment should also attempt to recreate these conditions for the individuals being recruited, especially youth. Therefore, mentors will be extremely important in providing a trusted hunting companion and introducing the individual to the hunting culture if he or she is a member of a family that does not hunt. The Pennsylvania Game Commission should consider utilizing the NSSF's Step Outside[®] program as a mentor program or designing its own mentor program. However, mentor programs should be considered carefully in light of child safety and comfort. For youth, mentors need to be someone known and trusted by parents. Mentor programs for children that consist of strangers will not succeed.

- **The Pennsylvania Game Commission should work with state tourism organizations and private business owners to offer hunting packages.**

Hunting offered as part of a vacation was the second top factor that respondents indicated would *strongly* encourage them to hunt more/hunt again. The Commission should consider coordinating vacation packages through the state tourism organizations, as well as with private

lodges and bed and breakfasts. Working cooperatively to provide hunting opportunities with vacation packages would also provide more hunting opportunities on private land, another factor that a majority of respondents indicated would *strongly or moderately* encourage them to hunt more/hunt again. The advantage private landowners and business owners have when offering a vacation package is that wildlife recreation programs can be modified or customized to suit individual needs of the owners and the hunter. For example, landowners can offer bed and breakfast accommodations and access to nearby land for pheasant hunters. A hunting package offered by private landowners and business owners would not require any management from the Commission, but the Commission would benefit (through increased license sales and increase hunting participation) from promoting the packages.

- **E-mail and the Pennsylvania Game Commission's Web site may be effective methods to communicate desired information to hunters in Pennsylvania.**

Although respondents indicated that the best ways to provide them with information is direct mail and the Pennsylvania Digest of Hunting and Trapping Regulations, direct mail is expensive. Fortunately, the majority of Pennsylvania hunters have Internet access, and an extraordinary number (40%) have already accessed the Pennsylvania Game Commission's Web site. The Commission should consider implementing e-mailings and e-mail alerts. E-mail is also effective for personalizing messages for hunters; the Commission could target e-mail messages with hunting information for different geographic regions in Pennsylvania, as well as by species hunted. E-mail messages can be targeted for hunters' specific interests, such as hunting specific species, hunting on private land, or a hunting vacation package.

An easy way to coordinate e-mail communication is to ask hunters for an e-mail address and to indicate specific interests from a pre-determined list of interests when they apply for a Pennsylvania hunting license. However, the request for an e-mail address and for receiving e-mail alerts should be optional; some hunters may prefer not to be contacted by e-mail or may not have e-mail access.

The high percentage of hunters accessing the Commission's Web site also indicates that the site is a good way to provide information to hunters. The Web site should be incorporated into the

communications efforts to increase awareness and knowledge among hunters. The Commission should also consider directing target audiences to the Web site in all communications efforts, especially by advertising the Web site in the Pennsylvania Digest of Hunting and Trapping Regulations, displaying it more prominently on hunting licenses, and including it in e-mails and direct mailings.