

# FACTORS RELATED TO HUNTING AND FISHING PARTICIPATION AMONG THE NATION'S YOUTH

PHASE V: FINAL REPORT



Peter Ring ©

CONDUCTED BY RESPONSIVE MANAGEMENT  
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Grant Agreement 91400-01-0010 (VA M-2-R FAIMS)

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The views contained in this report do not necessarily represent the views of the U.S. Fish and Wildlife Service.

Although numerous people assisted with this project, any errors, omissions, or typographical mistakes in the reports are the sole responsibility of Responsive Management.

# Table of Contents

Chapter 1. Introduction.....	1
Chapter 2. Major Findings.....	5
Major Demographic Trends in the U.S. Affecting Youth and Hunting and Fishing Participation.....	5
Stages of Childhood Development.....	8
Motivation for Participation in Outdoor Recreation Among U.S. Youth and Reasons for Desertion .....	13
Youth Participation in Sports and Other Outdoor Activities .....	14
Attitudes Toward Wildlife .....	18
Attitudes Toward Hunting.....	26
Attitudes Toward Fishing.....	35
Participation in Hunting .....	43
Participation in Fishing .....	53
Chapter 3. Implications and Recommendations.....	65
Major Demographic Trends in the U.S. Affecting Youth and Hunting and Fishing Participation.....	65
Stages of Childhood Development.....	68
Attitudes Toward Wildlife .....	70
Attitudes Toward Hunting.....	72
Attitudes Toward Fishing.....	77
Participation in Hunting .....	80
Hunting Initiation and Recruitment .....	80
Hunting Retention and Desertion.....	87
Participation in Fishing .....	88
Fishing Initiation and Recruitment .....	88
Fishing Retention and Desertion.....	93
Chapter 4. Methodologies.....	95
Literature Review .....	95
Focus Groups.....	95
Telephone Survey.....	97
Chapter 5. Literature Cited .....	101

# Chapter 1

## Introduction

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The future of hunting and fishing in the United States ultimately depends upon the commitment of future generations to these traditional fish and wildlife activities. The key to active participation in and commitment to hunting and fishing by future generations is fostering this commitment and participation among today's youth.

Research clearly indicates that active participation in hunting and fishing as an adult is directly related to active participation as a youth. Adult hunters and anglers typically started hunting and fishing before the age of 20, and their level of avidity as an adult is directly related to their avidity when young. Indeed, those who start hunting and fishing early in life and who hunt and fish frequently as a child are more likely to hunt and fish as adults. Conversely, those who start hunting and fishing later in life and who hunt and fish less often when young are more likely to cease hunting and fishing altogether as adults. Clearly, children's exposure to hunting and fishing is critical to their participation as adults. In addition, participation by adults is critical to participation by children—adults take children hunting and fishing—continuing the cycle of hunting and fishing recruitment and retention within the U.S. population.

This study was conducted to better understand the factors related to hunting and fishing initiation, participation, retention, and desertion among today's youth 8-18 years old. There were two major objectives of this study. The first objective was to identify the factors

involved in the recruitment and retention of the nation's youth in hunting and fishing. The second objective was to recommend to the fish and wildlife management community programs and strategies to increase participation in hunting and fishing among the nation's youth and improve the retention of these participants. Although there has been a proliferation of studies on hunting and fishing participation and retention, almost all of this work has focused on adults. This project focuses on where hunting and fishing recruitment and retention begin: with the nation's youth.

There were five phases to this project. Phase I consisted of a literature review of not only what is known about youth and hunting and fishing participation, but also what is known about youth participation in other activities, demographic trends affecting youth, and children's cognitive development and stages of learning. Phase II consisted of a series of focus groups of youth of various ages. Phase III consisted of a telephone survey of the nation's youth regarding their participation in and opinions on hunting and fishing and other outdoor activities as well as their attitudes toward wildlife. Phase IV of the project included extensive cross-tabulations of the telephone survey data. All of these reports can be accessed at the Responsive Management Website: [www.responsivemanagement.com](http://www.responsivemanagement.com).

Phase V of the project is this final report, which includes a synthesis of the findings from the literature review, focus groups, and telephone survey and analyses, as well as the implications of the findings. It also includes recommendations and strategies to increase participation in hunting and fishing among the nation's youth and improve the retention of these participants.

This report is based upon a solid foundation of both original data, obtained through the focus groups and telephone survey, and secondary data, obtained from studies that were examined during the literature review. The methodologies employed in all phases of this research project are fully discussed in "Chapter 4. Methodologies."

This project was funded under a grant from the U.S. Fish and Wildlife Service, Division of Federal Aid, Federal Aid in Sport Fish and Wildlife Restoration: Grant Agreement 91400-01-0010 (VA M-2-R FAIMS). Responsive Management would like to extend special

thanks to the many people who have assisted in this project, including the project managers Steve Farrell, Chris McKay, and Sylvia Cabrera of the U.S. Fish and Wildlife Service. Responsive Management would also like to thank all the youth who participated in the focus groups and telephone survey, as well as the parents and guardians who accompanied their children to the focus groups and allowed their children to participate in the telephone survey.

Although numerous people assisted with this project, any errors, omissions, or typographical mistakes in the reports are the sole responsibility of Responsive Management.



## Chapter 2

# Major Findings

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### **Major Demographic Trends in the U.S. Affecting Youth and Hunting and Fishing Participation**

- **The total number of youth in the U.S. has increased in recent years and will continue to increase; however, the percentage of the total population made up of youth is decreasing (the percentage of the nation's population that is comprised of the older age cohorts is increasing).**

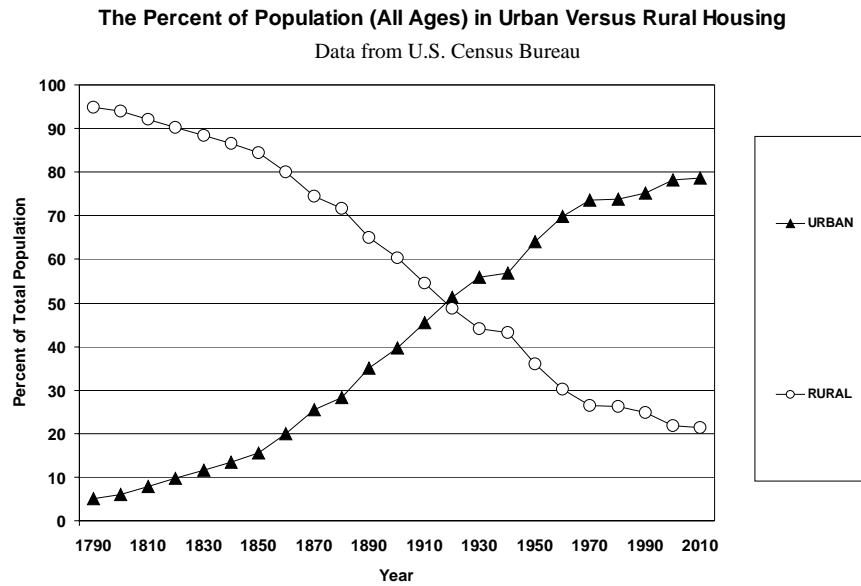
In 1980, there were 63,683,466 youth 17 years old and younger, while in 1990, there were 63,923,717 youth 17 years old and younger, and in 2000, there were 70,781,407 youth 17 years old and younger (Phase I).

In 1970, youth 17 years old and younger comprised 34% of the U.S. population, while in 2000, they comprised 26% of the U.S. population. This downward trend is expected to continue into the future (Phase I).

- **Most of the U.S. population now lives in non-rural housing, and the percentage of the U.S. population living in non-rural housing is expected to continue to increase (Figure 1).**

In 1950, 36% of the population lived in a rural area. This percentage decreased so that by 1960, 30% lived in a rural area, in 1970, 27% lived in a rural area, and in 1990, 25% lived in a rural area. The latest census in 2000 showed that 22% of the U.S. population lived in a rural area (Phase I).

**Figure 1.**



- **The percentage of the total population comprised of those of Hispanic ethnicity is increasing, including the percentage of youth. Additionally, the percentage of the total population comprised of white ethnicity is declining, including the percentage of youth. Nonetheless, the absolute numbers of both Hispanic and white youth are increasing.**

In 1995, 10.2% of the total population was of Hispanic ethnicity, while in 2000, 11.4% of the total population was of Hispanic ethnicity. In 2003, that percentage had risen to 12.1%. Among youth 17 years and younger, the percent comprised of those of Hispanic ethnicity was 14.0% in 1995, 15.6% in 2000, and 16.6% in 2003 (Phase I).

The percent of the total population comprised of those of white ethnicity has fallen, from 73.7% in 1995 to 70.6% in 2003. The percent of the population 17 years and younger comprised of those of white ethnicity has fallen from 66.5% in 1995 to 62.5% in 2003 (Phase I).

- **The percentage of families in which both parents/guardians work is increasing (Figure 2), and wage earners in families with children are working more hours per week.**

In 1987, the percentage of married couples with at least one child in which both parents/guardians worked was 62%. In 1990, this percentage increased to 64%, and then to 67% in 1995. By 2000, in 68% of married couples with at least one child, both parents worked (Figure 2) (Phase I).

In 1987, wage earners in families with one or more related children worked an average of 11.33 hours per day (this includes both spouses in a family), which increased to 11.50 hours per day by 1990, and 11.72 hours per day in 1995. By 2000, wage earners in families worked an average of 11.75 hours (Phase I).

**Figure 2.**



## Stages of Childhood Development

There are numerous theories regarding stages of childhood development and how children learn (Piaget, 1929; Kohlberg, 1963; Kohlberg and Gilligan, 1971; and Rejeski, 1982). Most agree on several salient points (Phase I).

- **A child's development is affected by a combination of "nature" (i.e., genetics and biology) and "nurture" (i.e., learned behaviors and learned norms of society).**
- **Children pass through various developmental stages that are marked by differences in methods of learning, behaviors, attitudes, and motivations for participating in activities. Each stage requires different approaches to teach these children and otherwise influence their behaviors and attitudes.**
- **Piaget's major stages of cognitive development include: sensorimotor (birth to 2 years), preoperational (2 to 8 years), concrete operational (8 to 11 years), and formal operational (early to mid-adolescence).**

The *sensorimotor* stage is marked by the infant's discovery of the relationship between their perceptions and their movements. They learn cause and effect—for instance, that certain movements produce interesting sounds (hitting a drum). They learn to use and manipulate objects. They also begin to understand relations based on time and space. This stage includes increasing awareness of the difference between the self and others, development of "object permanence" (the infant knows an object exists when the object is no longer in view), and the production of mental images that allow the contemplation of past, present, and future.

In the *preoperational* stage, the child engages in more imaginative play, and the child can use symbols to represent other objects in his/her environment. Verbal communication emerges during this stage. Children start to classify and conceptualize the phenomena they encounter. Children at this stage, however, tend to focus their attention on one aspect of an object and have trouble

considering several aspects (a classic example is the child, confronted with two glasses of equal volume, who thinks the tall, thin glass will hold more than the short, wide glass because the child has focused only on the *height* and cannot consider both the *height and width* simultaneously).

The *concrete operational* stage is marked by the child's ability to develop systematic mental rules that can be applied to other situations. They can also understand that some mental rules can be reversed—that one action can undo a previous action.

In the *formal operational* stage, adolescents become capable of solving abstract problems through logical operations.

- **Rejeski (1982) outlined three stages of cognitive development as they relate to obtaining environmental knowledge and understanding ecological concepts. The first stage is literalism, wherein the child has little ability to see himself or herself removed from his or her physical surroundings. The second stage is organization, wherein a child learns natural laws that allow him or her to classify things and to systematically reduce the complexity of the world by applying these laws. The third stage is moralism, wherein the child begins to understand ecosystem concepts (Phase I).**
- **One normal developmental behavior is the child's natural tendency to discontinue activities that do not meet the child's needs for self-fulfillment. This behavior is noted for its association with attrition in many activities as children choose to continue those activities that provide fulfillment and to discontinue those activities that do not provide fulfillment. The age at which this happens is dependent on both the child and the particular activity.**
- **As children mature, some theories suggest that they rely more on information from children their own age to determine their abilities and skills rather than on information from adults (Sapp and Haubenstricker, 1978; Nicholls, 1978; Nicholls and Miller, 1984).**

Other research relates childhood development to wildlife and outdoor recreation, as discussed below.

- **Youth appear to relate to the natural environment in different ways through predictable stages of cognitive development.**

Information on wildlife and the natural environment is not equally useful at all ages; what is salient or ignored, and how a child responds, varies with age and developmental abilities (Kahn and Kellert, 2002). Kellert and Westervelt (1980) suggest three major transitions occur in a child's development: in the period from 2<sup>nd</sup> to 5<sup>th</sup> grade, the child has an increase in emotional concern and affection for animals; from 5<sup>th</sup> to 8<sup>th</sup> grade, the child has an increase in cognitive understanding of animals; and in the 8<sup>th</sup> to 11<sup>th</sup> grades, the child has an increase in ethical and ecological concern for animals and the natural environment, as well as an increase in interest in wildlife and outdoor recreation.

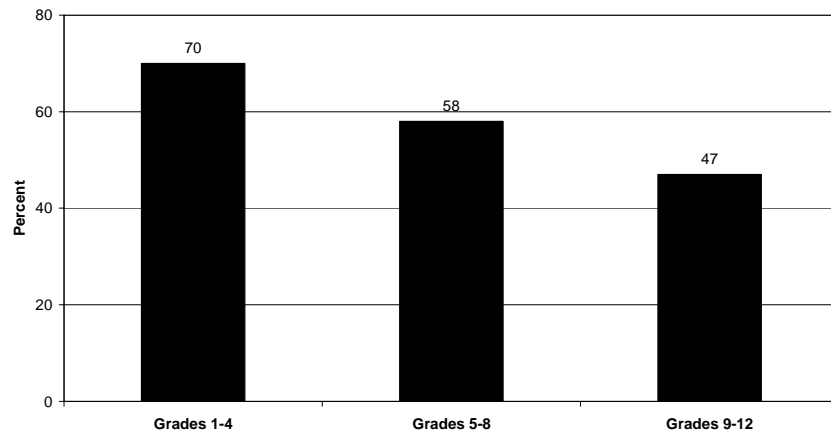
- **Youth's motivations for, satisfactions with, and reasons for hunting and fishing appear to change as they progress through these stages of development.**

Younger youth commonly say that they fish "to catch fish," but this reason appears to become less important among older youth, while fishing to be with friends and to relax becomes more important among older youth (Figures 3 and 4). For example, 70% of youth in grades 1-4 compared to 47% of youth in grades 9-12 said that keeping the fish they caught at a fishing event would have made the event better. Younger youth appear to enjoy fishing more when physical, concrete rewards are associated with the experience—such as being able to keep the fish they catch or catch large, trophy fish (Responsive Management, 2001).

In the Phase III survey, getting a trophy/big fish or a trophy animal was a more important reason for younger youth to fish or hunt, respectively, than it was for older youth to fish or hunt. Fishing to escape from stress or to relax was more important for older youth than for younger youth. Specifically, 43% of youth in

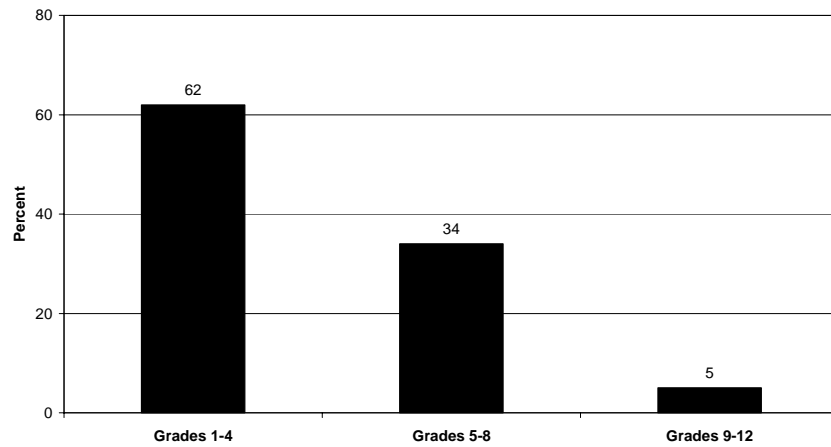
**Figure 3.**

**Keeping the fish they catch is more important to younger youth than older youth.**  
Percent of Georgia kids' fishing event participants by grade stating the event would have been better if they could have kept the fish they caught ( $r_s = -.109$ ,  $p < .01$ ).



**Figure 4.**

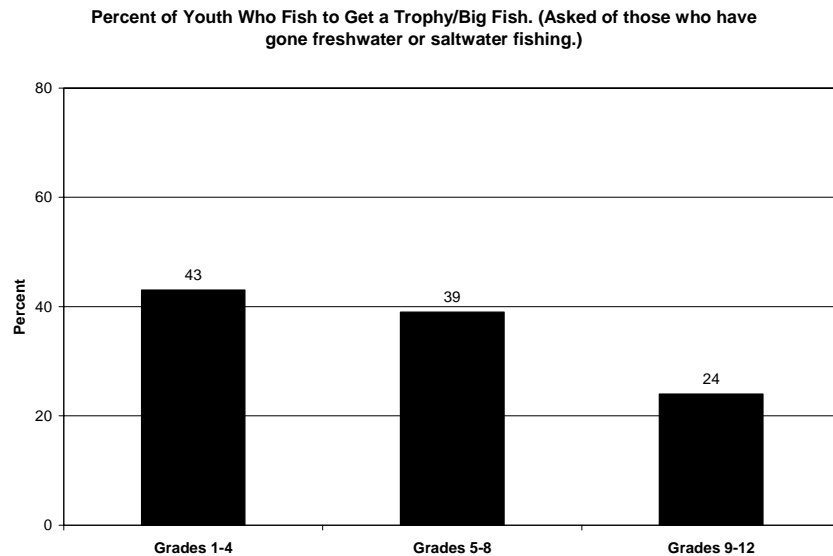
**Being with friends is a much more important reason for older youth to go fishing than younger youth.**  
Percent of Georgia kids' fishing event participants by grade stating that to be with friends is not a reason at all to go fishing ( $\chi^2(4) = 26.104$ ,  $p < .001$ )



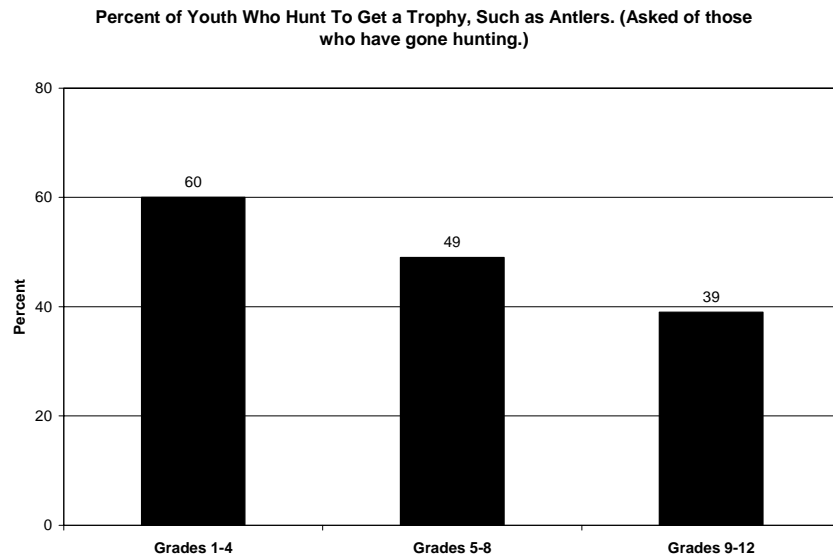
grades 1-4 said that to get a trophy/big fish was a reason that they went fishing, while only 24% of youth in grades 9-12 said it was a reason they go fishing (Figure 5). On the other hand, 42% of youth in grades 1-4 said they go fishing to escape from stress or relax, while 60% of youth in grades 9-12 said they go fishing to escape from stress or relax. And while 60% of youth in grades 1-4 who hunt stated that “to get a trophy” was a reason they hunt, only 39% of youth hunters in grades 9-12 said that this was a reason that they go hunting (Figure 6).

However, findings from the Phase III survey regarding the reasons that youth hunt and fish and how those reasons relate to stages of childhood development were not always clear. For example, despite the fact that more older youth fish to relax, younger youth anglers (grades 1-4) were more likely to state that they fish “for spiritual reasons” than were older youth anglers (Phase III).

**Figure 5.**



**Figure 6.**



## **Motivation for Participation in Outdoor Recreation Among U.S. Youth and Reasons for Desertion**

There are numerous theories regarding motivations for participating in and for discontinuing participation in sports and outdoor-related activities. Although theories differ on particulars, many have several elements in common.

- **Incentives for participation in sports and activities include the desire to have fun, to improve skills, to “do something I’m good at,” and to demonstrate competence at an activity, as well as the excitement of the activity (Phase I).**
- **Research about children’s reasons for desertion include the youth’s feeling that he or she is not as good at the activity as he or she wants to be or that the training is too difficult, the youth’s inability to learn new skills associated with the activity, and the youth’s perceived failure at the activity. An**

**obvious but often overlooked reason for desertion is that the child feels that the activity is no longer fun (Phase I).**

Other research discusses motivations for participation in and desertion from outdoor activities and sports.

- **Research suggests that children may reassess their abilities when they become old enough to differentiate effort and ability, and this reassessment may lead to attrition from a sport (Smith, 1986).**

Some amount of attrition in any activity is normal as children experiment with an activity. The literature suggests (but is not universal in this) that the peak attrition period in sports may occur around the age of 10-12 years old (Michigan, 1976a, 1976b, 1976c). Additionally, three issues appear to have the greatest importance in the decisions that youth make about remaining in a sport or dropping out, and efforts to improve retention must consider these issues:

- the difference between ability and effort (Sapp and Haubenstricker, 1978),
- the importance of children's peers as a point of reference to the children (Widmeyer et al., 1993), and
- the children's place in the culture of their family, their sport, and their peers (St. Claire, 1986).

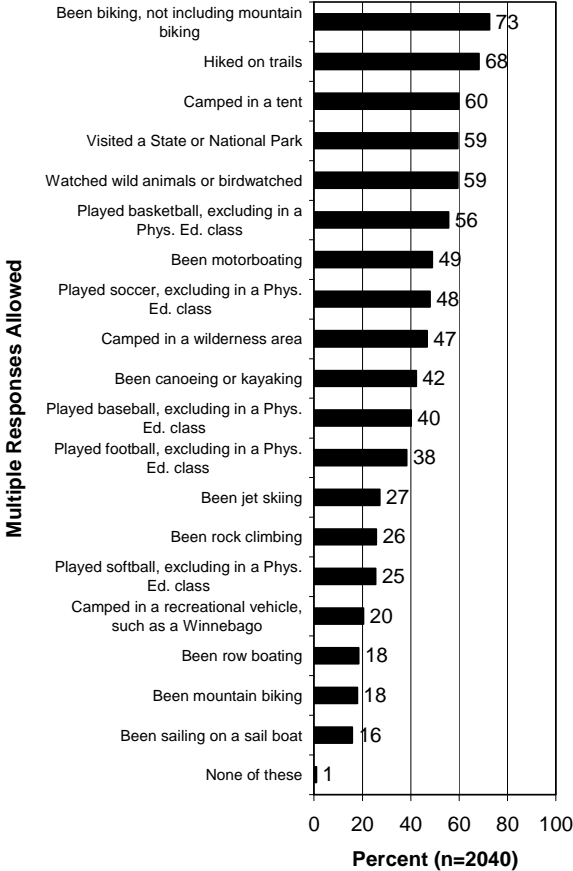
## **Youth Participation in Sports and Other Outdoor Activities**

- **The most popular outdoor activities among youth include biking, hiking, camping, visiting State or National Parks, and watching wild animals or birdwatching (Figure 7).**

In the Phase III survey, youth were asked about their participation in 19 outdoor recreational activities, not including hunting or fishing, within the previous year. The most popular activities among youth were biking, not including mountain biking (73% had participated), hiking on trails (68%), camping in a tent (60%), visiting a State or National Park (59%), and watching wild animals or birdwatching (59%) (Phase III).

Figure 7.

**Q7 & 8. Have you participated in any of the following outdoor activities in the past year?**



- **Slightly more than half of youth had shot a bow and arrow at some time in the past, and just under half of youth had shot a gun at some time in the past.**

A slight majority of youth (54%) had shot a bow and arrow at some time in the past, and 32% had shot a bow and arrow in the

previous year. Slightly less than half of youth (47%) had shot a gun at some time in the past, and 34% had shot a gun in the previous year (Phase III).

- **Numbers of participants in some outdoor recreation activities among youth are declining, and in other outdoor activities the numbers are either stable or increasing (Figures 8 and 9).**

According to the Sporting Goods Manufacturers Association (2001), participation in hunting and fishing declined among youth between 1990 and 2000 (Figure 8). However, the *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* (USFWS, 1991, 1996, and 2001) reported a smaller decline in youth fishing participation and a stabilization in youth hunting participation between 1990 and 2000 (Figure 9). According to the Sporting Goods Manufacturers Association, freshwater fishing declined by 8% between 1990 and 2000 among youth 12-17 years old who had fished at least once, and hunting declined by 26% between 1990 and 2000 among youth 12-17 years old who had hunted (Phase I). The *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* (USFWS, 1991, 1996, and 2001) reported a 5% decline between 1990 and 2000 in the number of youth 6-15 years old who went fishing and a stabilization among youth hunters 6-15 years old between 1990 and 2000.

Other outdoor recreational activities that experienced declines in youth participation between 1990 and 2000 reported by the Sporting Goods Manufacturers Association were softball, which declined by 41% among youth 12-17 years old; baseball, which declined by 41%; and soccer, which declined by 10%. Other outdoor recreational activities experienced increases in participation. Participation in ice skating among youth 12-17 years old increased by 407%, snowboarding increased by 156%, mountain biking increased by 88% and tent camping increased by 42% between 1990 and 2000 (Phase I).

Figure 8.

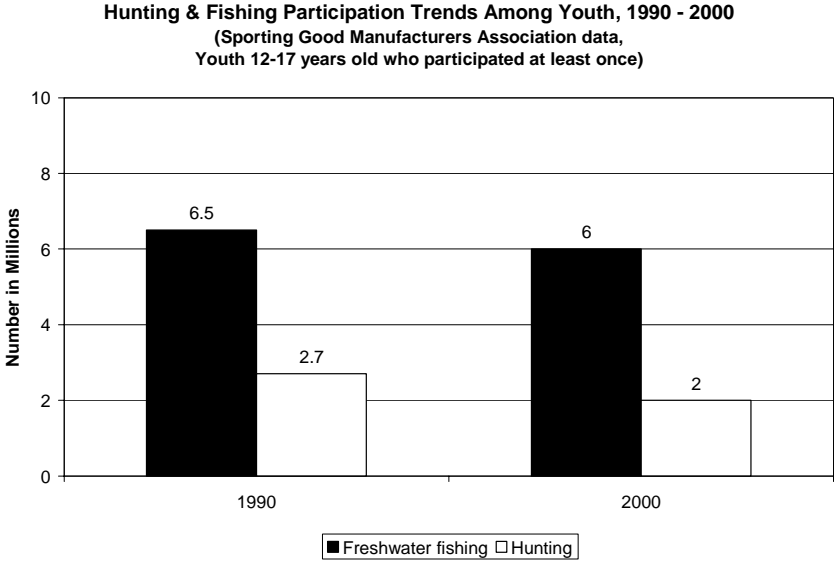
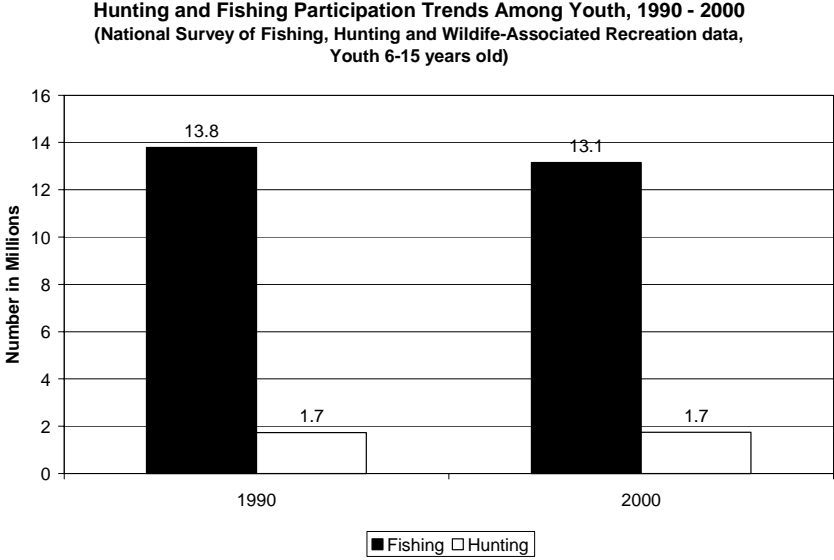


Figure 9.



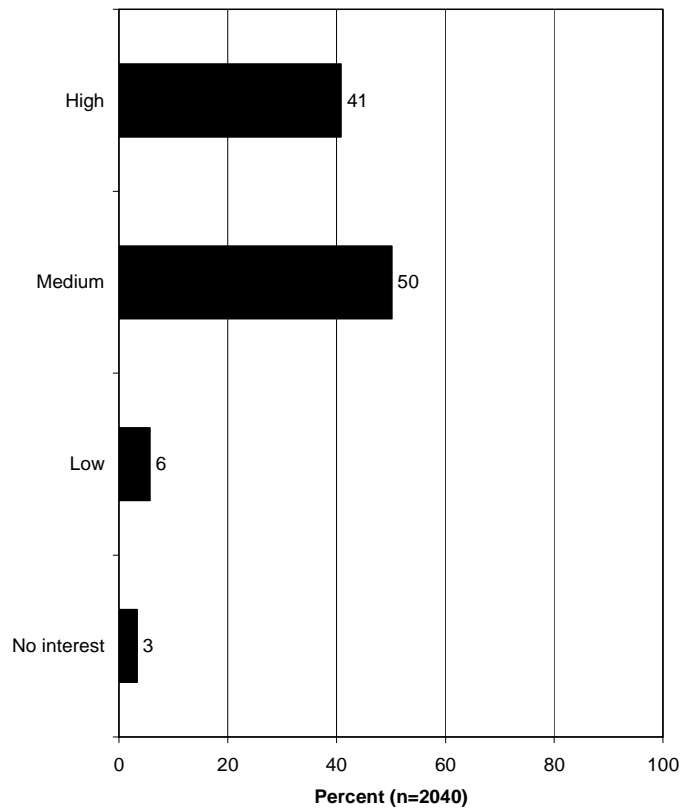
## Attitudes Toward Wildlife

- An overwhelming majority of youth have a high or medium interest in wildlife (Figure 10).

A substantial percentage (41%) of youth indicated a high interest in wildlife, and 50% of youth indicated a medium interest (Phase III).

Figure 10.

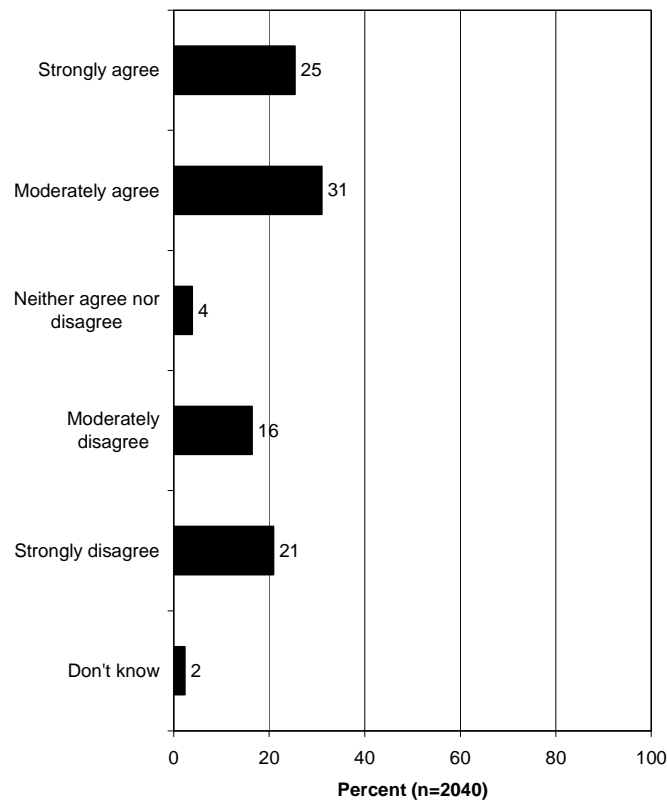
**Q14. How would you gauge your interest in wildlife? Would you say you have a high, medium, or low interest, or do you have no interest in wildlife?**



- A majority of youth (56%) agree that hunting wild animals for food is okay (Figure 11) (Phase III).

Figure 11.

Q21. Hunting wild animals for food is OK. Do you agree or disagree with this statement?



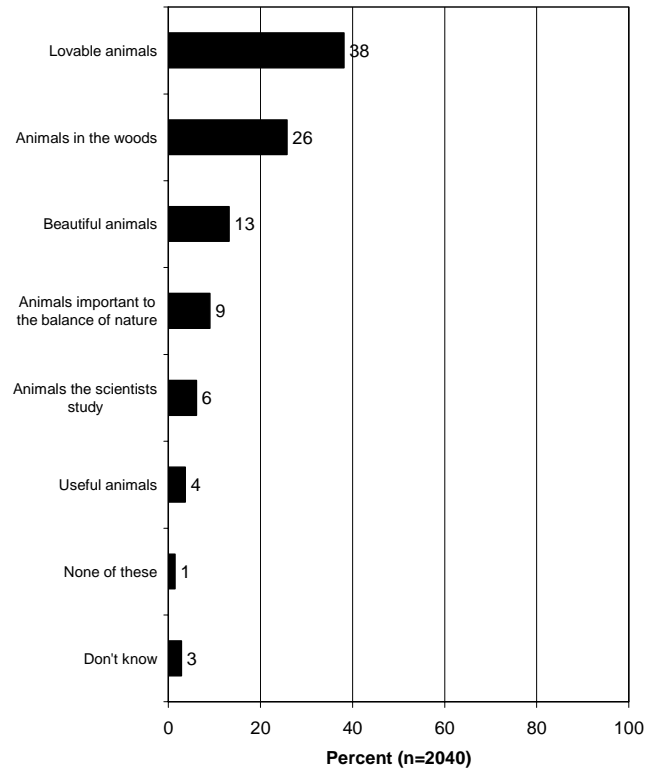
- Youth exhibit a range of attitudes toward wildlife, and Kellert and Westervelt (1980) developed a typology of attitudes to better explain how children relate to wildlife and the natural world, including how children relate to wildlife-associated recreation.

Kellert and Westervelt's (1980) attitude typology is not chronological (i.e., a child does not pass through various attitude typologies as he/she matures); however, evidence suggests that various attitudes emerge and become more or less dominant at various stages of childhood development. The emergence of one attitude does not mean the abandonment of other attitudes; rather, some amount of several attitudes can be present. The attitudes in the typology are:

- **Naturalistic:** Primary interest and affection for wildlife and the outdoors.
  - **Ecologicistic:** Primary concern for the environment as a system, for interrelationships among wildlife species and natural habitats.
  - **Humanistic:** Primary interest and strong affection for individual animals, principally pets. Regarding wildlife, focus on large attractive animals with strong anthropomorphic associations.
  - **Moralistic:** Primary concern for the right and wrong treatment of animals, with strong opposition to exploitation or cruelty toward animals.
  - **Scientistic:** Primary interest in the physical attributes and biological functioning of animals.
  - **Aesthetic:** Primary interest in the artistic and symbolic characteristics of animals.
  - **Utilitarian:** Primary concern for the practical and material value of animals and/or habitat.
  - **Dominionistic:** Primary interest in the mastery and control of animals, typically in sporting situations.
  - **Negativistic:** Primary orientation in active avoidance of animals due to dislike or fear.
- **Youth in 2003 showed tendencies toward humanistic, naturalistic, and aesthetic attitudes toward wildlife: they showed a preference for “lovable animals,” “animals in the woods,” and “beautiful animals.” Ecologicistic, scientistic, and utilitarian attitudes were less prevalent, as few children showed a preference for “animals important to the balance of nature,” “animals scientists study,” and “useful animals” (Figure 12).**

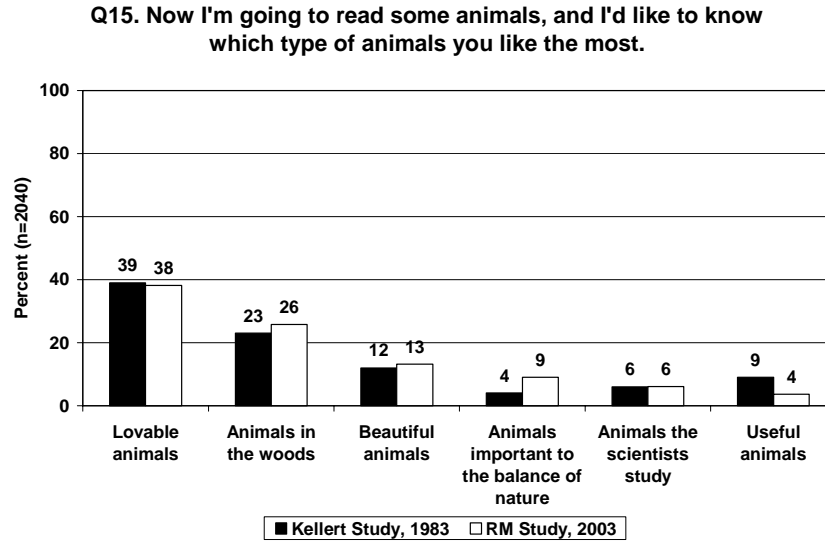
**Figure 12.**

**Q15. Now I'm going to read some animals, and I'd like to know which type of animals you like the most.**



In the Phase III survey, youth were asked to indicate which type of animals they liked the most, and the top answers related to humanistic, naturalistic, and aesthetic attitudes: lovable animals (38%), animals in the woods (26%), and beautiful animals (13%). Ecologistic, scientific, and utilitarian attitudes were lower down: animals important to the balance of nature (9%), animals the scientists study (6%), and useful animals (4%) (Phase III). The following graph shows how the Phase III survey data compare to previous research (Figure 13).

Figure 13.

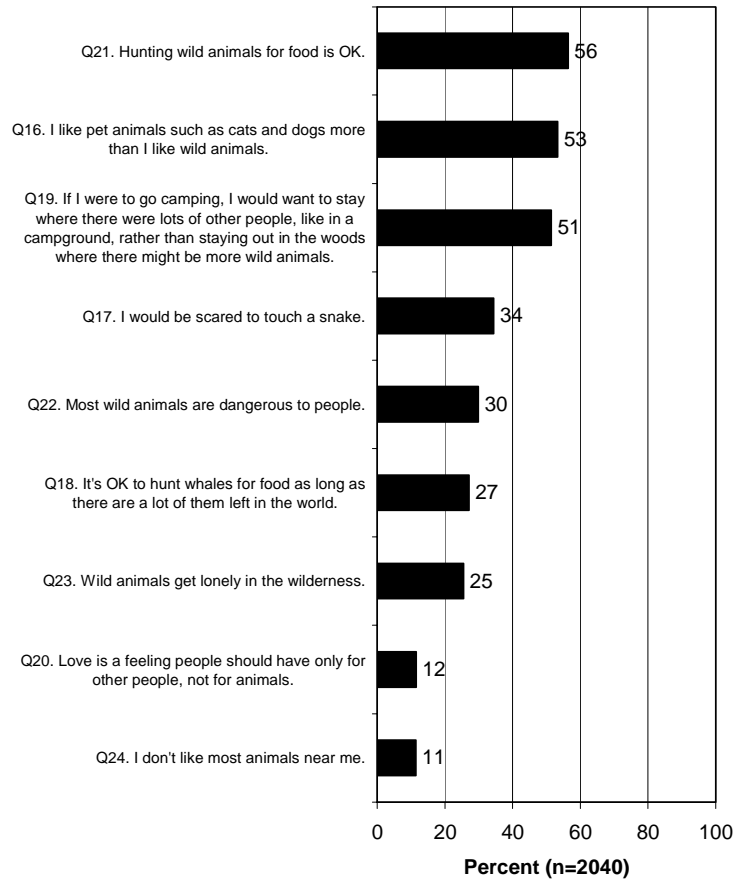


- **A majority of youth in 2003 were not completely comfortable with wild animals: a majority liked pet animals such as cats and dogs more than they liked wild animals, and a majority would want to camp where there were lots of other people, like in a campground, rather than camping out in the woods where there might be more wild animals (Figure 14).**

In the Phase III survey, youth were asked whether they agreed or disagreed with each of nine statements about wildlife. A majority strongly or moderately agreed with three of the nine statements: “Hunting wild animals for food is OK” (56% agreed), “I like pet animals such as cats and dogs more than I like wild animals” (53%), and “If I were to go camping, I would want to stay where there were lots of other people, like in a campground, rather than staying out in the woods where there might be more wild animals” (51%) (Phase III).

Figure 14.

**Q16-24. Percent who strongly or moderately agree with the following statements.**



- **Previous research has found that common attitudes toward wildlife among U.S. youth are the humanistic and naturalistic attitudes.**

Westervelt and Llewellyn (1985) found that the humanistic attitude was the most common attitude among 5<sup>th</sup> and 6<sup>th</sup> graders

nationwide. Kellert (1984) found a greater prevalence of naturalistic attitudes among children than among adults.

- **Previous research indicates that attitudes toward wildlife differ according to gender, age, place of residence and ethnicity.**

Kellert and Westervelt (1980) suggested that attitudes differed according to gender, as they found greater factual knowledge, awareness, and concern for wildlife among boys than among girls. Boys had lower negativistic and humanistic scores than did girls, and boys had higher ecologicistic and utilitarian scores. Westervelt and Llewellyn (1985) found that 5<sup>th</sup> and 6<sup>th</sup> grade girls nationwide had higher humanistic scores than did boys.

Kellert and Westervelt (1980) found that attitudes differed according to age, as they found that younger children had greater negativistic and utilitarian attitudes than did older children, and younger children held less ecologicistic and naturalistic attitudes.

Kellert and Westervelt (1980) found that attitudes differed according to place of residence: urban youth had greater negativistic attitudes toward wildlife than did rural children, and they had lower ecologicistic and naturalistic scores. Westervelt and Llewellyn (1985) found that urban 5<sup>th</sup> and 6<sup>th</sup> graders had higher humanistic scores. Kellert and Berry (1980) found that people raised in rural areas expressed stronger utilitarian sentiments towards animals than did those raised in more urban areas.

Kellert and Westervelt (1980) found that attitudes differed according to ethnicity, as they found that African-American children had strong humanistic, naturalistic, and negativistic attitudes. In general, non-whites had higher negativistic and utilitarian attitudes than did whites.

- **Research by Kellert and Westervelt (1980) supports the idea that there are varying stages of development of a child's perceptions of animals. Their research suggests that as the typical child matures, there is a major increase in the emotional concern and affection for animals, followed later by**

**an increase in the factual and cognitive understanding of animals, finally followed in late youth by a major expansion in ethical and ecological concern for and understanding of animals and the natural environment.**

Kellert (1984) suggested that these different periods of development in a child's perceptions of animals offers different opportunities to teach children about wildlife. Kellert suggested that wildlife educational efforts focus on concern for the environment and the natural world when targeting 2<sup>nd</sup> to 5<sup>th</sup> graders, factual understanding of animals in the 5<sup>th</sup> to 8<sup>th</sup> grade, and ethical concern for animals and an understanding of ecology in the 8<sup>th</sup> to 11<sup>th</sup> grades. The changes among children between 8<sup>th</sup> and 11<sup>th</sup> grades involve major increases in ethical concern for animals, a growing appreciation of wildlife, and an ability to understand and apply abstract concepts such as ecosystems and biological diversity (Kellert 1984).

- **Research suggests that there is a gradual progression of children's attitudes towards animals from an egocentric to an appreciative perspective.**

Pomerantz (1977, 1985, 1986) found evidence in support of various developmental and cognitive stages in children's perceptions of wildlife and the natural world, building on the work in development theory and education by Piaget (1929), moral development by Kohlberg (1963) and Kohlberg and Gilligan (1971), cognitive development by Rejeski (1982), and research on children's knowledge, attitudes, and behavior toward wildlife by Kellert and Westervelt (1980) and Westervelt and Llewellyn (1985). Pomerantz (1986) suggested that there is a gradual progression of children's attitudes towards animals from an egocentric to an appreciative perspective.

- **Research suggests that the strongest influence on children's knowledge of and attitudes toward wildlife is knowledge gained through direct contact with various animals, whereas indirect instruction (i.e., showing slides and photographs of animals rather than having the actual animal available) is not as effective.**

LaHart (1978), Baird and Tolman (1982), and Kress (1975) found that the strongest influence on children's knowledge of and attitudes toward wildlife was knowledge gained through direct contact with various animals, whereas indirect instruction was not as effective. LaHart (1978) found that participation in animal-related activities had the strongest association with knowledge levels in youth of any of the variables he had studied. A Responsive Management study (1999a) suggested that programs aimed at school children are more effective in imparting knowledge if the program includes "hands-on" activities.

One study suggested that a negative correlation between interest in wildlife and fear of animals shows the value of dispelling fears about wildlife before attempting to foster among children an interest in learning more about wildlife and wildlife-related activities (Westervelt and Llewellyn, 1985).

## Attitudes Toward Hunting

- **A majority of youth approve of legal hunting (Figures 15 and 16).**

A majority of youth (58%) approve of legal hunting, while 33% disapprove (Figure 14) (Phase III). Additionally, a majority of youth (58%) think that people who hunt respect living things (Figure 15) (Phase III).

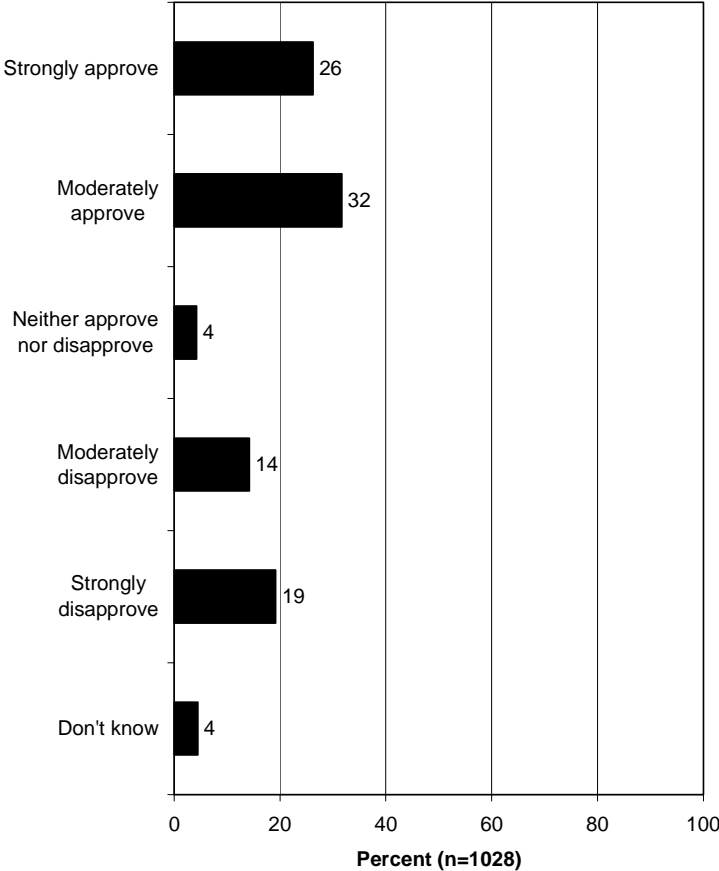
- **Slightly less than half of youth expressed some interest in going hunting, and one in five were very interested in going hunting (Figure 17).**

Forty-four percent of youth expressed some interest (19% very interested; 25% a little interested) in going hunting (Phase III). Youth who were very interested in going hunting were significantly more likely to have a family member who hunts ( $z = 5.87$ ) (Phase IV). Additionally, youth who were very interested in going hunting were significantly more likely to have been fishing in the previous year ( $z = 4.02$ ) (Phase IV). Those interested in going hunting were significantly more likely to live in a rural area ( $z = 2.65$  for rural areas, and  $z = 5.89$  for rural non-

farm) or to have grown up in a rural area ( $\bar{z} = 4.58$  for rural areas, and  $\bar{z} = 3.38$  for rural non-farm) (Phase IV). Finally, males were significantly more likely than were females to be very interested in going hunting ( $\bar{z} = 4.42$ ) (Phase IV).

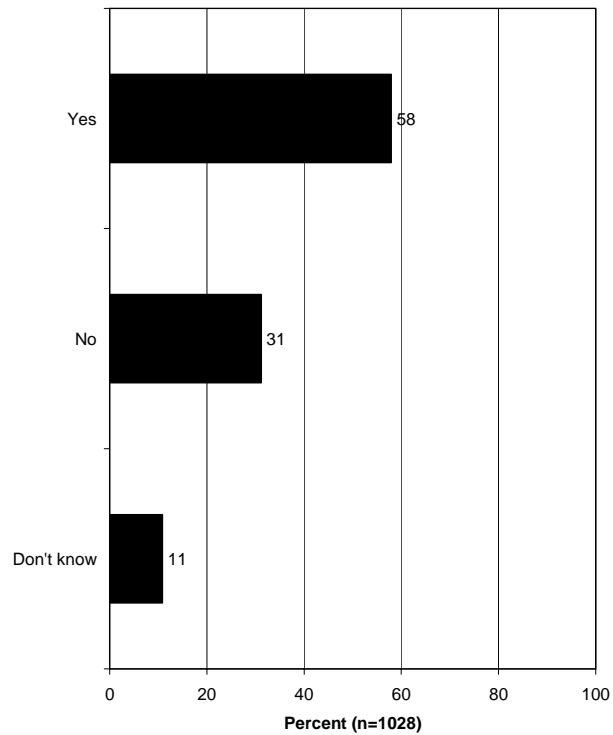
Figure 15.

**Q55. In general, do you approve or disapprove of hunting when it is legal to do so?**



**Figure 16.**

**Q59. In general, do you think that people who hunt respect living things?**

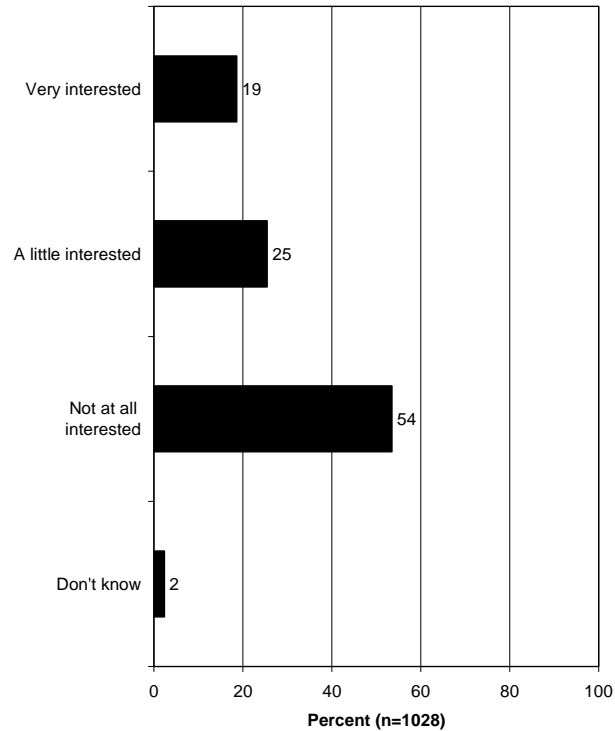


- **Most youth hunters would like to hunt more than they currently do.**

Among youth hunters (those who had hunted in the past year), a plurality (41%) said that they would like to hunt a lot more than they currently do. Twenty-eight percent of youth hunters said that they would like to hunt a little more than they currently do; 27% of youth hunters said they would like to hunt about the same amount. Only 4% of youth hunters said they would like to hunt less (Phase III).

**Figure 17.**

**Q26. How interested are you in going hunting?**

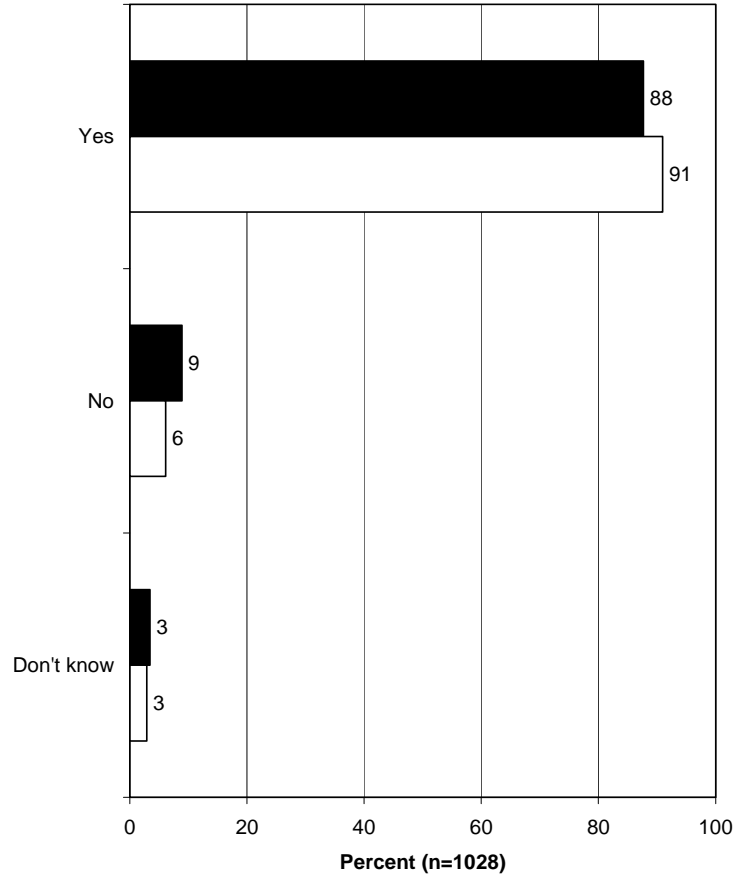


- **A majority of youth hunters like hunting “a lot.”**

Among those who had hunted, a majority (56%) like hunting “a lot,” and 39% like hunting “a little,” while 5% indicated that they do not like hunting at all (Phase III).

- **Overwhelming majorities of youth think it is okay for girls and boys to hunt (Figure 18).**

Overwhelming majorities of youth think it is okay for girls to hunt (88%) and for boys to hunt (91%) (Phase III).

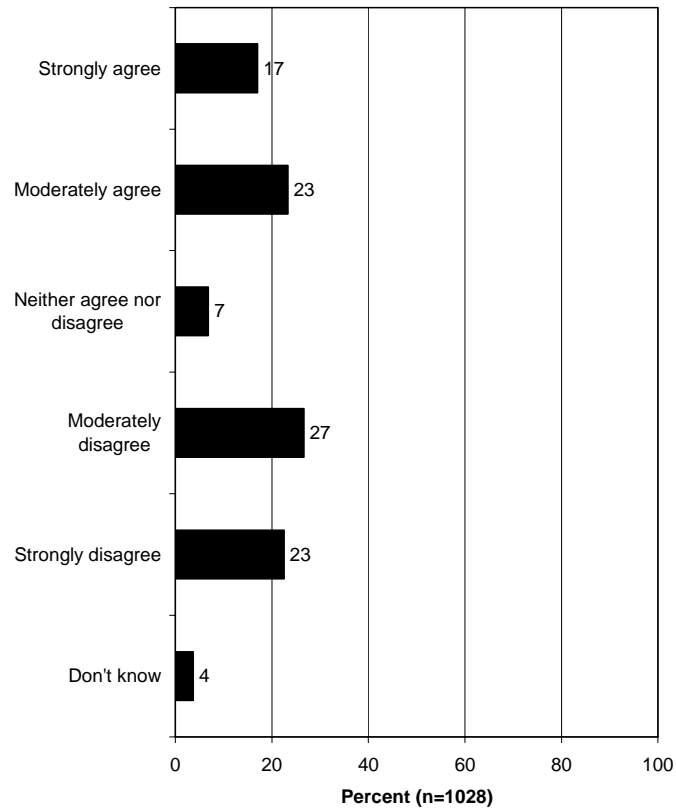
**Figure 18.****Q56-57. Do you think it is OK for girls/boys to hunt?**

- **Youth are split on their opinion on the safety of hunting, with slightly more who think it is unsafe than think it is safe (Figure 19).**

More youth disagree that hunting is a safe recreational activity than agree: 50% of youth disagree that hunting is a safe recreational activity, while 40% of youth agree (Phase III).

**Figure 19.**

**Q58. Do you agree or disagree that hunting is a safe recreational activity?**



- **A majority of youth think their peers think that hunting is a “little cool” or “very cool.”**

A majority of youth (55%) said that kids their age think hunting is a “little cool”; otherwise, nearly equal percentages said kids their age think hunting is “very cool” (16%) or “not cool at all” (18%) (Phase III).

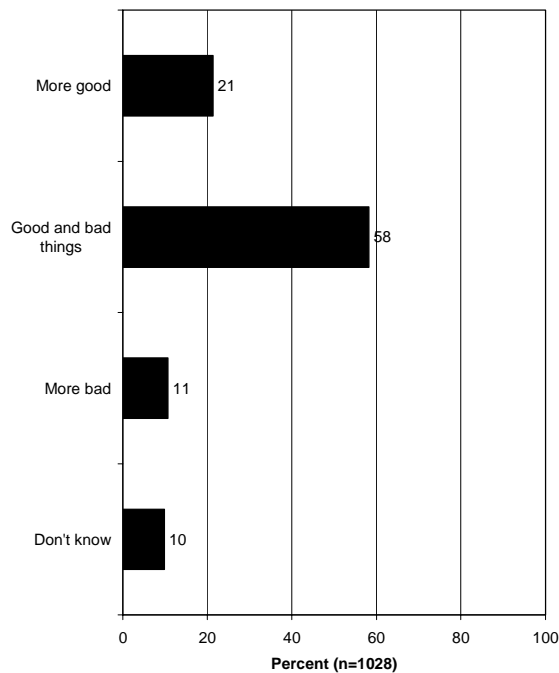
- **Youth hear more good things than bad things about hunting (Figure 20).**

The majority of youth (58%) said that they hear both good and bad things about hunting. Otherwise, roughly twice as many hear more good things (21%) than hear more bad things (11%) about hunting (Phase III).

- **Very few youth are seeing or hearing information at school that helps them learn more about hunting or that increases their interest in going hunting. Slightly more, but still not a majority, are seeing or hearing information outside of school that helps them learn more about hunting or that increases their interest in going hunting.**

**Figure 20.**

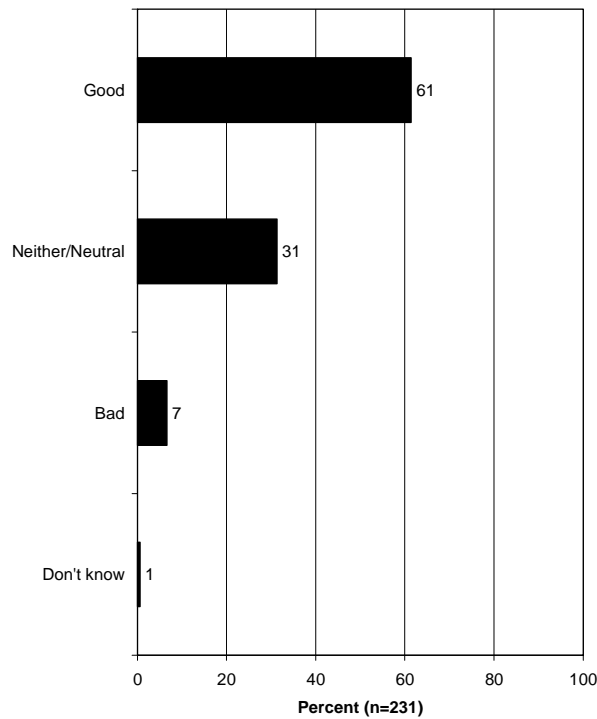
**Q65. In general, do you hear more good things or bad things about hunting, or do you hear both good and bad things about hunting?**



- A low percentage of youth (15%) had seen or heard information from teachers or adults at school that helped them learn more about hunting or that increased their interest in going hunting. A slightly higher percentage (34%) had seen or heard information outside of school that helped them learn more about hunting or that increased their interest in going hunting (Phase III).
- **When youth do hear things about hunting at school, they are hearing good things, and their perceptions are that their teachers support hunting (Figures 21 and 22).**

**Figure 21**

**Q63. Did they say good things or bad things about hunting? (Asked of those who have had a teacher or guest speaker talk about hunting at school.)**

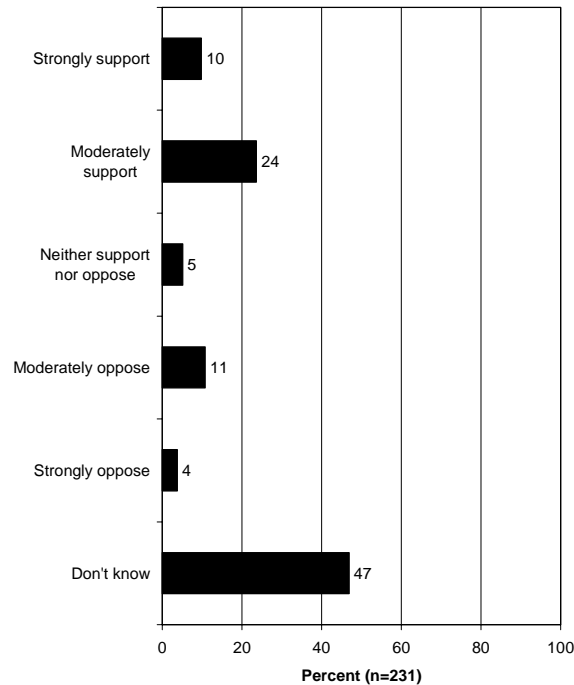


A little more than a fifth of youth (22%) had had a teacher or guest speaker talk about hunting at school. A majority (61%) of those who had had a teacher or guest speaker at school talk about hunting indicated that the teacher or guest speaker had said good things about hunting, while 7% indicated that the teacher or guest speaker had said bad things about hunting (Figure 21) (Phase III).

Slightly more than a third of youth who had a teacher or guest speaker talk about hunting at school (34%) said their teacher(s) supports hunting, while 15% said their teacher(s) opposes hunting. A plurality (47%) answered, "Don't know" (Figure 22) (Phase III).

**Figure 22.**

**Q64. Does your teacher, or do most of your teachers, support or oppose hunting? (Asked of those who have had a teacher or guest speaker talk about hunting at school.)**



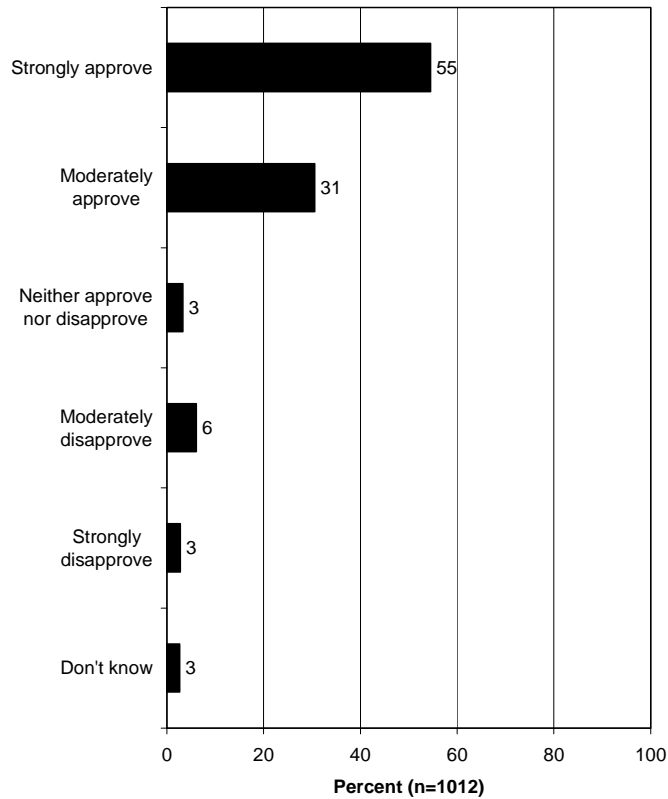
## Attitudes Toward Fishing

- A majority of youth approve of legal fishing (Figures 23 and 24).

A very large majority of youth (86%) approve of legal fishing, while 9% disapprove (Figure 23). A very large majority of youth (83%) also believe that people who fish respect living things (Figure 24) (Phase III).

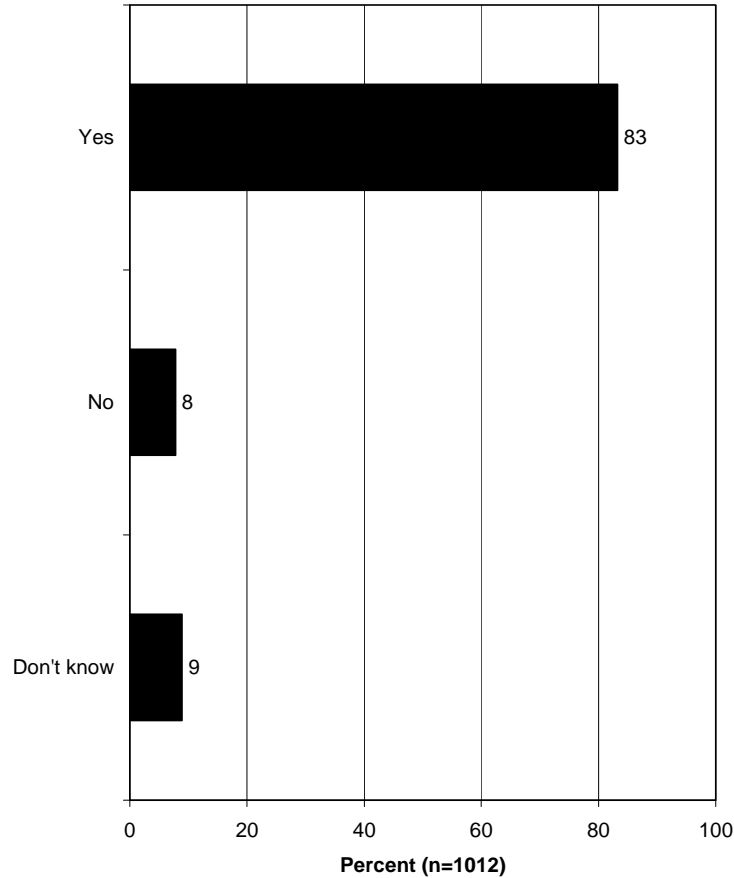
Figure 23.

Q95. In general, do you approve or disapprove of fishing when it is legal to do so?



**Figure 24.**

**Q99. Do you think that people who fish respect living things?**



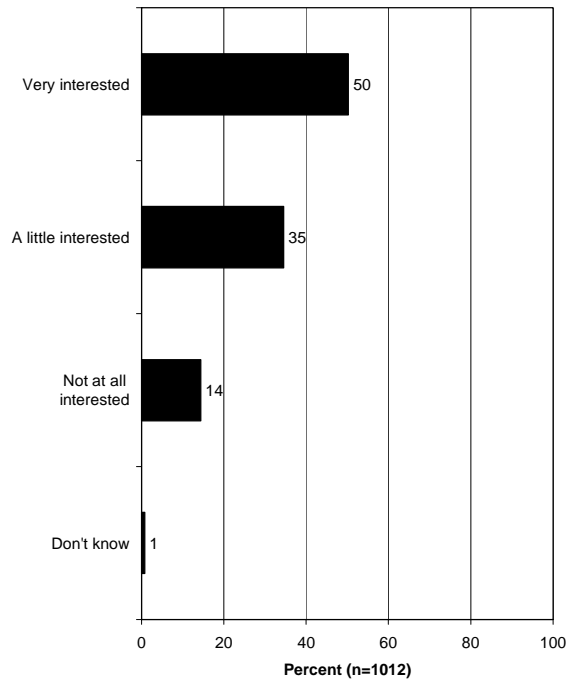
- **A majority of youth are interested in going fishing, with half of them being very interested (Figure 25).**

Half of youth (50%) were *very* interested in going fishing, and an additional 35% were a *little* interested, for a total of 85% of youth who expressed some interest in fishing (Phase III). Youth who were very interested in going fishing were significantly more likely to have a family member who fishes ( $z = 2.73$ ) and were

significantly more likely to have gone hunting in the previous year ( $\underline{z} = 3.31$ ) (Phase IV). Males were significantly more likely to be interested in going fishing than were females ( $\underline{z} = 5.49$ ) (Phase IV). There were no correlations to interest in fishing and residence in an urban or rural area (Phase IV).

**Figure 25.**

**Q69. How interested are you in going fishing?**



- **A large majority of youth anglers want to fish more than they currently do.**

Among youth who had fished in the previous year, a plurality (45%) said that they would like to fish a lot more than they currently do, and 30% said they would like to fish a little more than they currently do (Phase III).

- **A majority of youth anglers like fishing “a lot.”**

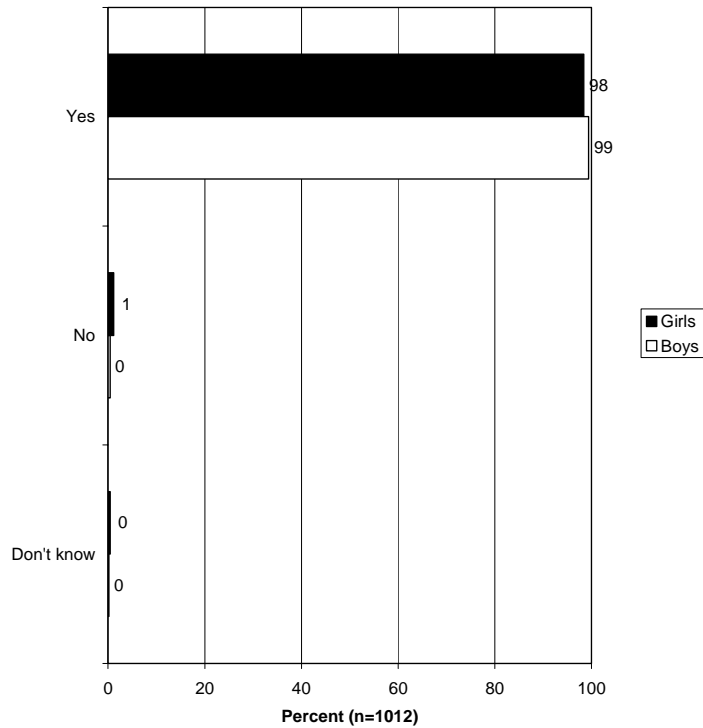
A slight majority (51%) of youth who had gone fishing said they like fishing “a lot,” and an additional 43% of youth who had gone fishing said they like fishing “a little.” Only 6% said they do not like fishing at all (Phase III).

- **Nearly all youth think it is okay for girls to fish and for boys to fish (Figure 26).**

Youth overwhelmingly thought it is okay for girls to fish (98%) and for boys to fish (99%) (Phase III).

**Figure 26.**

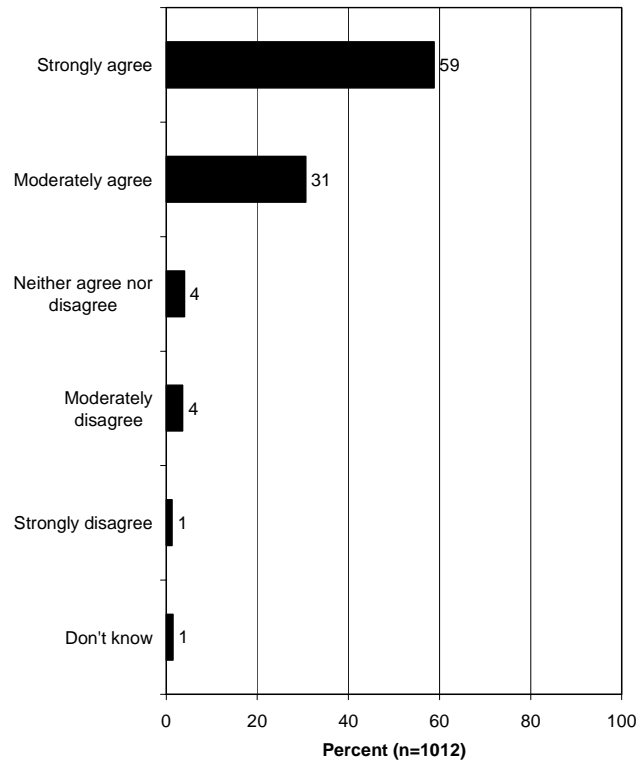
**Q96-97. Do you think it is OK for girls/boys to fish?**



- **Youth overwhelmingly agree (90%) that fishing is a safe recreational activity (Figure 27) (Phase III).**

**Figure 27.**

**Q98. Do you agree or disagree that fishing is a safe recreational activity?**

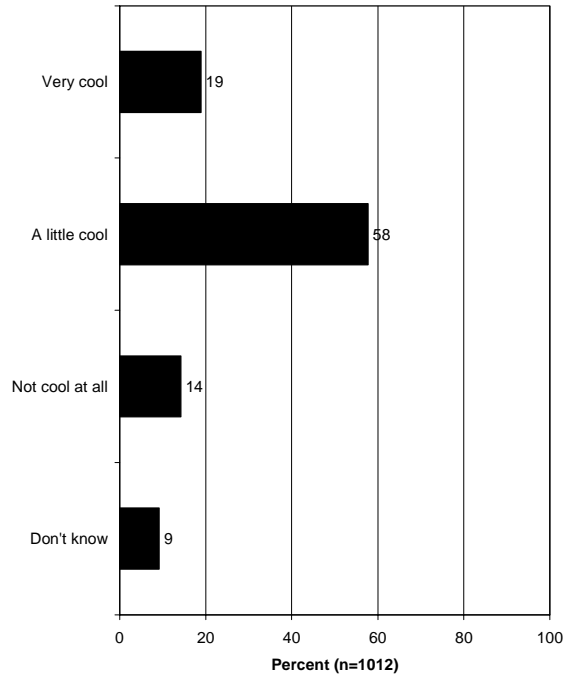


- **A majority of youth think their peers think that fishing is a “little cool” or “very cool” (Figure 28).**

A majority of youth (77%) said that kids their age think fishing is “a little cool” or “very cool,” while 14% said that kids their age think fishing is “not cool at all” (Phase III).

**Figure 28.**

**Q90. How cool do you think kids your age think fishing is?**



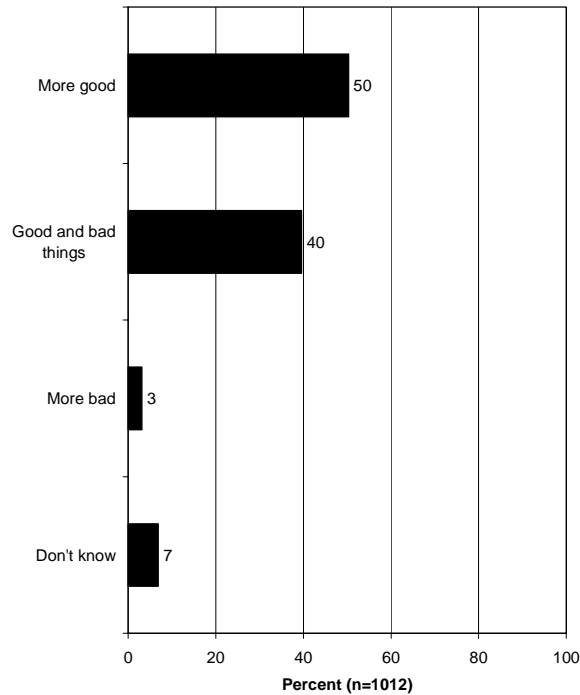
- **Youth hear more good things than bad things about fishing (Figure 29).**

Half of youth (50%) said that they hear more good than bad things about fishing; however, another 40% hear both good and bad things. Only 3% hear more bad things than good things about fishing (Phase III).

- **About a fifth of youth are hearing information at school that helps them learn more about fishing or that increases their interest in going fishing, and half are hearing information outside of school that helps them learn more about fishing or that increases their interest in going fishing.**

**Figure 29.**

**Q105. In general, do you hear more good things or bad things about fishing, or do you hear both good and bad things about fishing?**



About a fifth of youth (21%) had seen or heard information from teachers or adults *at school* that helped them learn more about fishing or that increased their interest in going fishing. A much higher percentage (49%) had seen or heard information *outside of school* that helped them learn more about fishing or that increased their interest in going fishing (Phase III).

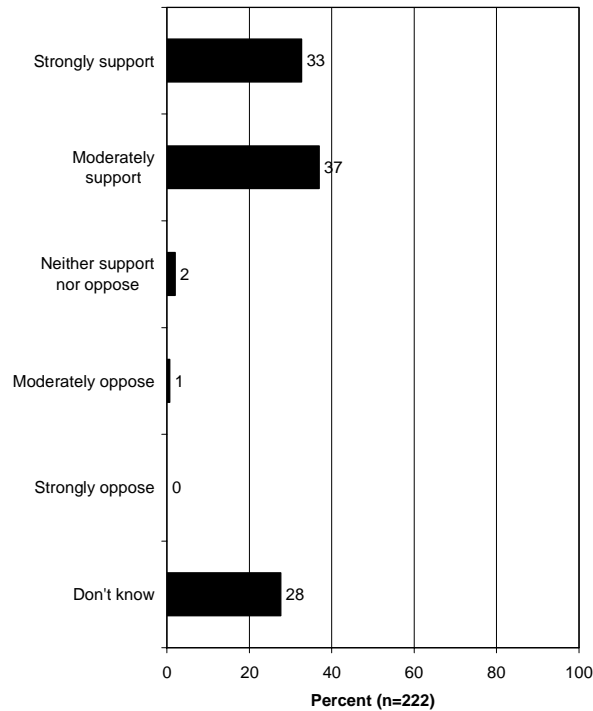
- **When youth do hear things about fishing at school, they are hearing good things, and they perceive that their teachers support fishing (Figure 30).**

- A little more than a fifth of youth (22%) had a teacher or guest speaker talk about fishing at school. An overwhelming majority of those who had had a teacher or guest speaker at school talk about fishing (80%) indicated that the teacher or guest speaker had said good things about fishing, while only 1% indicated that the teacher or guest speaker had said bad things about fishing (Phase III).

Those who had had a teacher or guest speaker talk about fishing at school overwhelmingly said that their teacher(s) supports fishing: 70% said their teacher(s) supports fishing, while only 1% said that their teacher(s) opposes fishing (Figure 30) (Phase III).

**Figure 30.**

**Q104. Does your teacher, or do most of your teachers, support or oppose fishing? (Asked of those who have had a teacher or guest speaker talk about fishing at school.)**



## Participation in Hunting

- **Just under a quarter of youth in 2003 had gone hunting at some time in the past, while 15% of American youth had hunted in the previous year. Youth participation in hunting is positively related to being male, to having a family member who hunts, to having also been fishing, and to living in a rural area or spending time in rural areas.**

Just under a quarter of youth (24%) had gone hunting at some time in the past, and 15% of youth had hunted in the previous year (Phase III).

Youth who had hunted *at some point in their life* were significantly more likely to have a family member who hunts ( $z = 8.42$ ) (Phase IV). Also, participation in hunting is related to participation in fishing: youth who had been hunting were significantly more likely than youth who had not been hunting to have gone freshwater fishing ( $z = 2.56$ ) or saltwater fishing ( $z = 5.46$ ) and were more likely to have been fishing in the previous year ( $z = 4.63$ ) (Phase IV). Youth who had been hunting at some time in their life were significantly more likely than were youth who had not been hunting to have lived on a farm ( $z = 6.31$ ), to have lived in a rural area but not on a farm ( $z = 3.98$ ), to have grown up on a farm ( $z = 6.97$ ), to have grown up in a rural area but not on a farm ( $z = 2.45$ ), and to have spent time away from the city ( $z = 2.52$ ) (Phase IV). Finally, youth who had hunted at some time were significantly less likely than were youth who have never hunted to be African-American ( $z = -2.32$ ) (Phase IV).

Youth who had gone hunting *in the previous year* were significantly more likely than were youth who had not hunted in the previous year to have gone freshwater fishing at some time in their life ( $z = 2.42$ ) or saltwater fishing at some time in their life ( $z = 3.92$ ) and were more likely to have fished in the previous year ( $z = 4.71$ ) (Phase IV). There is also a relationship between rural areas and hunting: youth who had hunted in the previous year were significantly more likely than were youth who had not hunted in the previous year to live on a farm ( $z = 4.57$ ), to have been raised on a farm ( $z = 4.03$ ), to live in a rural area but not on a

farm ( $\underline{z} = 2.96$ ), to have been raised in a rural area but not on a farm ( $\underline{z} = 2.85$ ), and to indicate that they spend time away from the city ( $\underline{z} = 2.36$ ) (Phase IV). Youth who had hunted in the previous year were more likely than were youth who had not hunted in the previous year to be male ( $\underline{z} = 4.65$ ) (Phase IV). Also, youth who had hunted in the previous year were positively correlated with youth who said that their family was “very close” ( $\underline{z} = 2.15$ ) (Phase IV).

Another correlation was found between participation in hunting and reasons for *fishing*: youth who had hunted at some time in the past were more likely to say they *fish* to eat fish ( $\underline{z} = 3.05$ ) or they *fish* for the challenge ( $\underline{z} = 4.94$ ) (Phase IV).

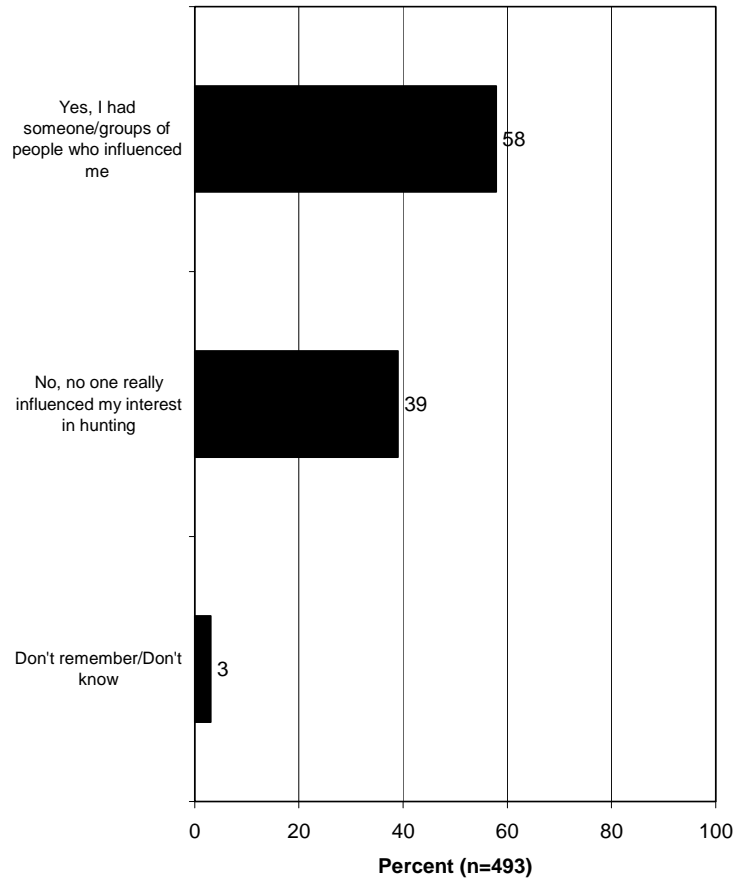
- **The mean number of times that youth hunters went hunting in the past year was 8.8 times (Phase III).**
- **The mean age at which youth hunters had started hunting was 10 years (Phase III).**
- **Youth hunters typically had a mentor who had a positive influence on their interest and/or participation in hunting, and most often that mentor was their father or, to a lesser extent, another male family member (Figures 31, 32, and 33).**

Of those who had gone hunting at some time in the past, a majority (58%) indicated that a person or a group of people had had a positive influence on their interest or participation in hunting (Figure 31) (Phase III). Additionally, youth who had hunted in the previous year were positively correlated with youth who indicated that someone or some group had influenced them in their interest and participation in hunting ( $\underline{z} = 2.29$ ) (Phase IV).

A little more than half of youth (52%) had a family member who hunts, typically a male—a father, uncle, or grandfather. These three family members also are the most likely to have taught a youth to hunt: 72% of youth who had been hunting said their

**Figure 31.**

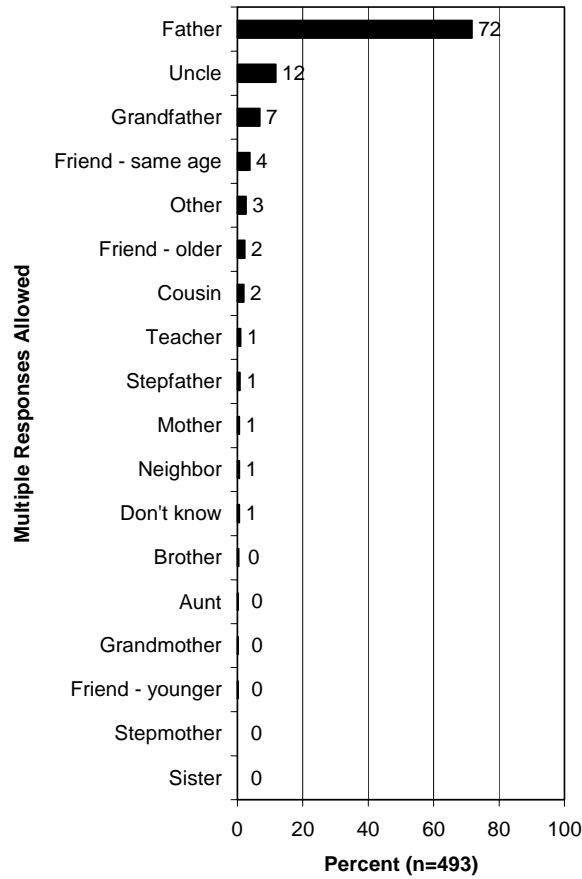
**Q122. Did anybody or any groups of people have a positive influence on your interest or participation level in hunting today? (Asked of those who have gone hunting.)**



father taught them, 12% said an uncle, and 7% said a grandfather (Figure 32). Youth who had been hunting most commonly hunt with their father (65%), uncle (12%), or friend of the same age (9%) (Figure 33) (Phase III).

**Figure 32.**

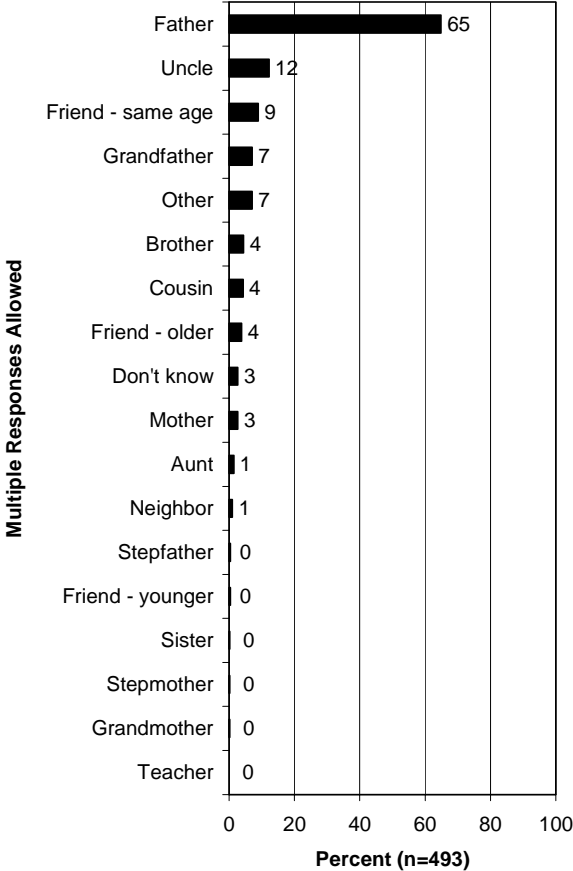
**Q115. Who first taught you how to hunt? (Asked of those who have gone hunting.)**



Youth who were very interested in going hunting were significantly more likely to have a family member who hunts ( $z = 5.87$ ) (Phase IV). Put another way, hunters come from hunting families.

Figure 33.

**Q118. Whom do you usually hunt with now? (Asked of those who have gone hunting.)**

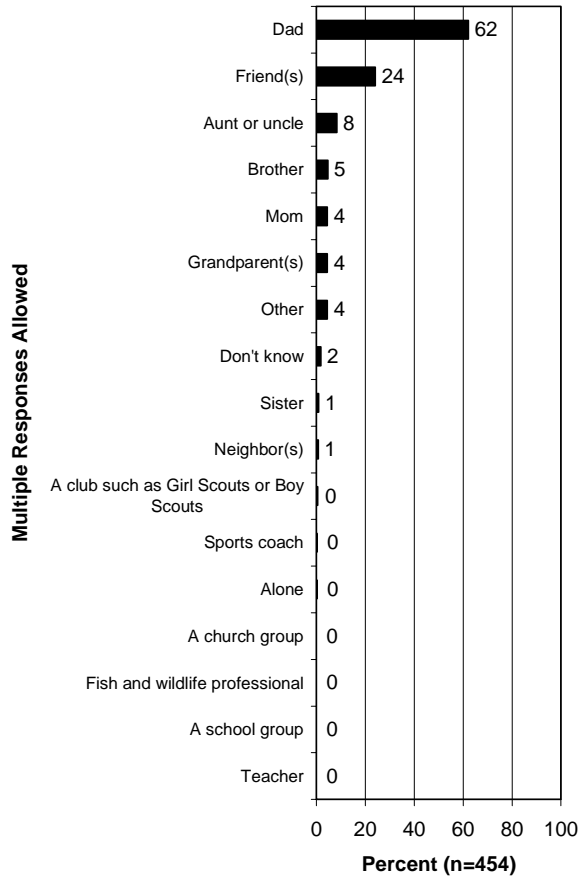


- **A majority of youth who expressed an interest in hunting want to hunt with their father (Figure 34).**

Youth who expressed interest in hunting most commonly wanted to hunt with their father (62%), distantly followed by a friend (24%) (Phase III).

**Figure 34.**

**Q28. Of all the people you could hunt with, whom would you most like to go hunting with? (Asked of those who were interested in going hunting.)**



- **The top reasons that would encourage youth to go hunting or to hunt more were being asked by another person, such as his/her father, another family member, or a friend (Figure 35).**

The top three reasons that would encourage youth to go hunting or to hunt more pertained to being asked by somebody else: a father (56%), another family member (50%), or a friend (49%). The next items pertained to having knowledge or skills: youth would want to hunt more if they could learn more at a hunter education class (42%) and if they had better hunting/shooting skills (38%) (Phase III).

Figure 35.

**Q67 & 68. I'm going to read a list of things that might make you want to go hunting or hunt more. Would it make you want to go hunting or hunt more if...?**



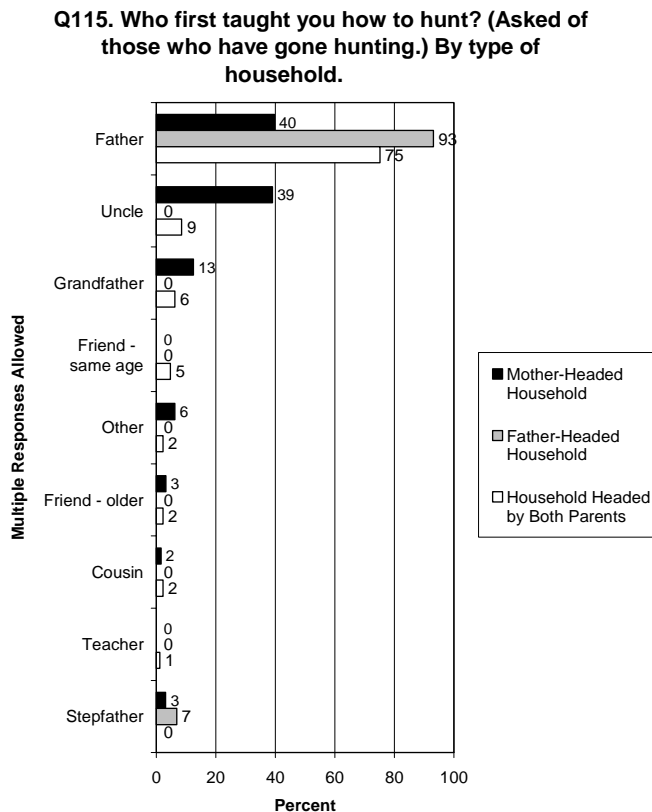
- **Single-parent households, including female-headed households, are not negatively affecting hunting participation. In fact, the Phase IV analysis of the telephone survey data indicated that a youth who was raised in a single-parent household had a greater likelihood to have hunted at some time in his or her life and to have gone hunting in the previous year than did youth raised in a dual-parent household. In mother-headed households, fathers still play an active role in encouraging children to hunt, but when the father does not do so, other male family members, particularly uncles and grandfathers, step in to fill that role (Figure 36).**

Statistical analysis indicated a significantly greater chance ( $z = 3.62$ ) that a child in a single-parent household had hunted at some time in his or her life and a significantly greater chance ( $z = 2.21$ ) that a child from a single-parent household had gone hunting in the previous year than did a child raised in a dual-parent household. Children who lived primarily with their father ( $z = 3.74$ ) and children who lived primarily with their mother ( $z = 2.16$ ) were more likely to have gone hunting sometime in their life than children from dual-parent households ( $z = -1.42$ ) (Phase IV).

Further analysis indicated that there was also a significant difference between children who lived primarily with their mother and the likelihood that they had hunted in the previous year. Children who lived primarily with their mother were more ( $z = 2.16$ ) likely to have hunted in the previous year than were children who lived primarily with their father ( $z = 0.65$ ) and children who lived in dual-parent households ( $z = -0.85$ ) (Phase IV).

Finally, an analysis of who teaches children to hunt, broken down by the type of household (mother-headed, father-headed, or dual-parent households), found that 40% of children from mother-headed households are taught to hunt by their father, 39% are taught by their uncle, and 13% are taught by their grandfather (Figure 36) (Phase IV).

Figure 36.

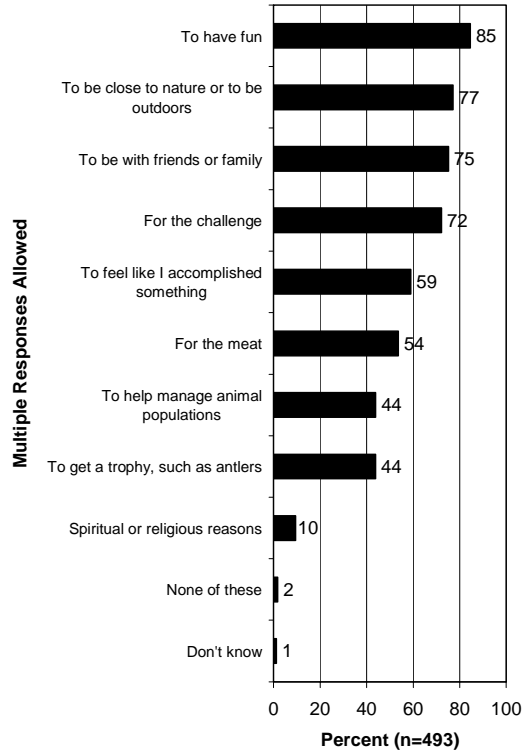


- Youth hunt most commonly to have fun, to be close to nature/outdoors, to be with friends or family, and for the challenge (Figure 37).

The top reasons that youth (those who had gone hunting sometime in the past) gave for hunting were to have fun (85%), to be close to nature/outdoors (77%), to be with friends or family (75%), and for the challenge (72%) (Phase III). When asked about the single most important reason why they go hunting (asked of youth who had hunted), youth most commonly said to have fun (34%) and to be with friends or family (30%) (Phase III).

**Figure 37.**

**Q127. Thinking about the reasons that you go hunting, please tell me if each of the following reasons is a reason that you, personally, go hunting. (Asked of those who have gone hunting.)**



- **Slightly more than half of youth had a friend who hunts, and having a friend who hunts appears to increase the likelihood that the youth will want to hunt.**

Slightly more than half of youth (56%) had a friend who hunts (Phase III). Having a friend who hunts appears to increase the likelihood that the youth will show interest in hunting: 42% of youth said that they would be more likely to go hunting if a friend hunted too (Phase III).

- **Youth who don't hunt most commonly said that they don't do so because they don't want to kill animals or because they are simply not interested in hunting.**

Most commonly, youth overall and youth who had not gone hunting in the past year said that they don't hunt or that they don't hunt more often because they don't want to kill animals (51%) or that they aren't interested in hunting (46%). Another important reason was time constraints (34%)—most commonly school or other sports/hobbies were reasons why they did not hunt or did not hunt more often (Phase III).

- **Many parents are reluctant to allow their children to hunt out of safety concerns.**

Those youth who said their parent(s) would not let them go hunting most commonly said that one of the reasons for this was that hunting was not safe (42%) (Phase III).

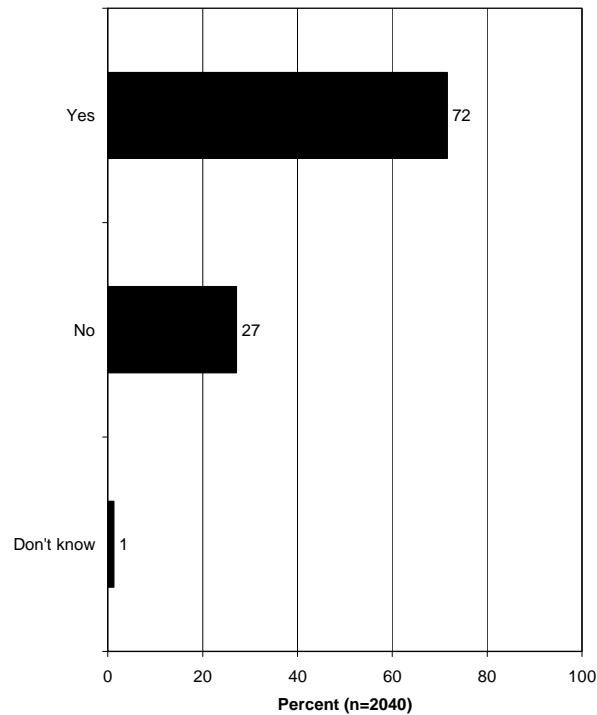
- **That the parents think hunting is wrong is not a common reason children are not allowed to hunt.**

Only 12% of those youth who said their parent(s) would not let them go hunting said that one of the reasons for this was that their parent(s) think hunting is wrong.

## **Participation in Fishing**

- **A majority of youth have gone freshwater fishing at some time in the past, and just over a third have gone saltwater fishing at some time in the past (Figures 38, 39, and 40).**

A strong majority of youth (72%) had gone freshwater fishing at some time in the past (Figure 38). Just over a third of youth (36%) had gone saltwater fishing at some time in the past (Figure 39). Overall, a majority of American youth (58%) had fished, either in freshwater or saltwater, in the previous year (Figure 40) (Phase III).

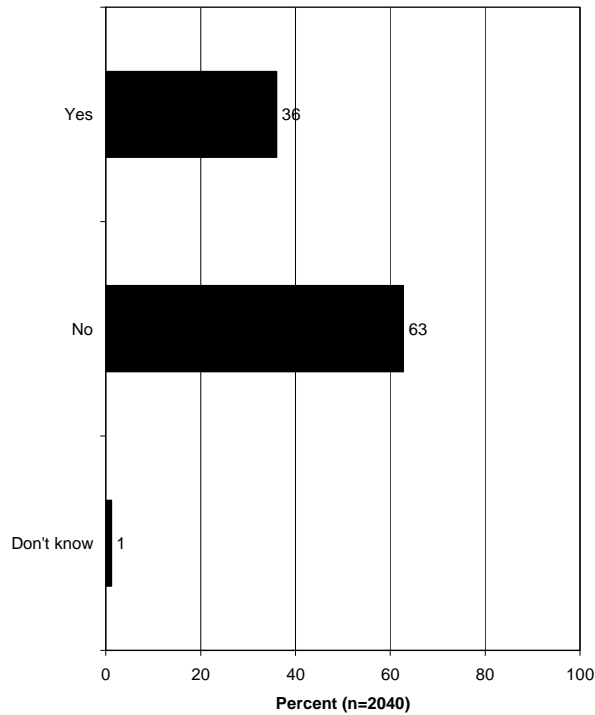
**Figure 38.****Q129. Have you ever gone freshwater fishing?**

Youth who had been freshwater fishing at some time were more likely than were youth who had not been freshwater fishing to be male ( $\underline{z} = 3.81$ ) (Phase IV). Additionally, youth who had been freshwater fishing at some time in their life were *less* likely than were youth who had not been freshwater fishing to be African-American ( $\underline{z} = -2.46$ ) (Phase IV).

Youth who had been saltwater fishing at some time were more likely than were youth who had never been saltwater fishing to be male ( $\underline{z} = 4.03$ ), and they were less likely to be African-American ( $\underline{z} = -2.61$ ) (Phase IV). *Urban* areas were positively correlated to participation in saltwater fishing: youth who had been saltwater

Figure 39.

Q130. Have you ever gone saltwater fishing?

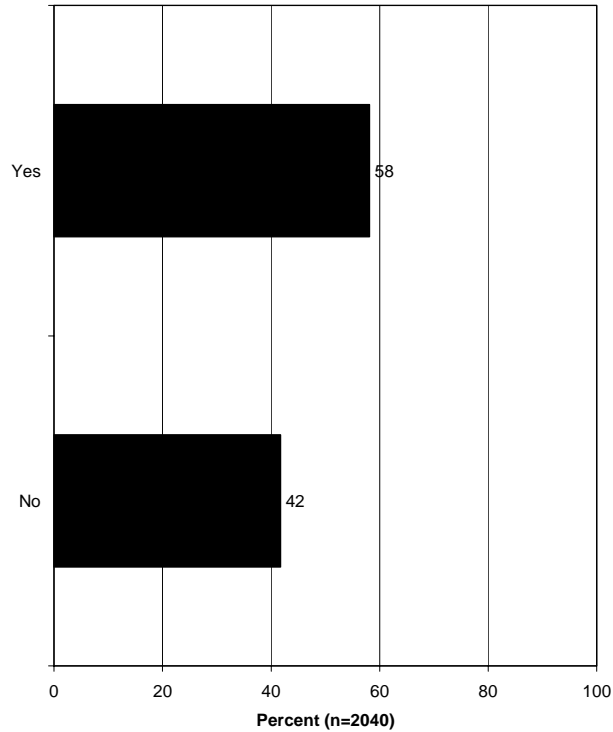


fishing at some time were more likely than were youth who had never been saltwater fishing to live in an urban area ( $\underline{z} = 3.21$ ) or to have grown up in an urban area ( $\underline{z} = 3.26$ ) (Phase IV). Also, those youth who had been saltwater fishing were more likely than were youth who had not been saltwater fishing to indicate that they fish to compete in a fishing tournament ( $\underline{z} = 2.05$ ) or that they fish for the challenge ( $\underline{z} = 2.05$ ) (Phase IV).

Finally, youth who had been fishing in the previous year were more likely than were youth who had not been fishing in the previous year to be white ( $\underline{z} = 1.97$ ), and they were less likely to

**Figure 40.**

**Q131. Have you gone fishing in the past year?  
(Percentage shown out of all respondents.)**



be African-American ( $z = -2.84$ ) (Phase IV). Youth who had been fishing in the previous year were positively correlated to youth who indicated that someone or some group had had a positive influence on their fishing interest and/or participation ( $z = 2.19$ ) (Phase IV).

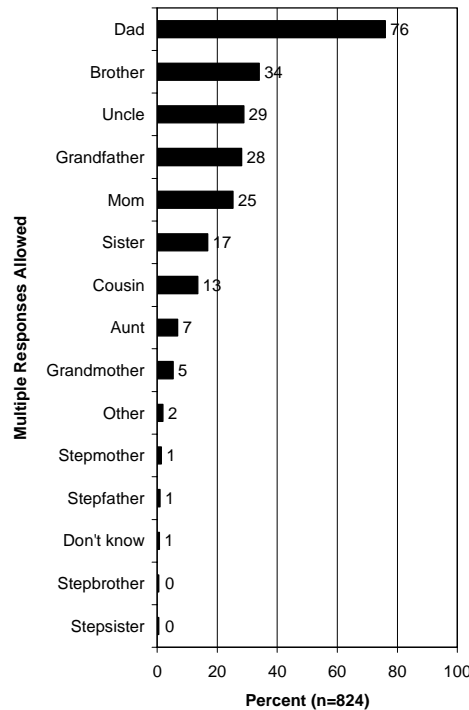
- **The mean number of times that youth anglers went fishing in the past year was 12.9 times (Phase III).**
- **The mean age at which youth anglers had started fishing was 6.5 years (Phase III).**

- **Youth anglers typically had a mentor who had a positive influence on their interest and/or participation in fishing, and the mentor was most commonly their father or, to a lesser extent, another male family member (Figures 41, 42, and 43).**

Of those youth who had gone fishing at some time in the past, a majority (57%) indicated that a person or a group of people had had a positive influence on their interest or participation in fishing. Also, more than half of youth (55%) said that they had accompanied another person fishing while not actually fishing themselves. Most often, they accompanied a family member fishing (Phase III).

**Figure 41.**

**Q79. Which members of your family fish? (Asked of those who have a family member who fishes.)**



A large majority of youth (81%) had a family member who fishes, typically a male—a father, brother, uncle, or grandfather (Figure 41). These family members also are the most likely to have taught the youth to fish: 65% said their father taught them, 15% said a grandfather taught them, and 9% said an uncle taught them (Figure 42). Regarding whom they currently fish with, youth who had fished most commonly said they fish with their father (59%) or a friend of the same age (14%) (Figure 43) (Phase III).

**Figure 42.**

**Q140. Who first taught you how to fish? (Asked of those who have gone freshwater or saltwater fishing.)**

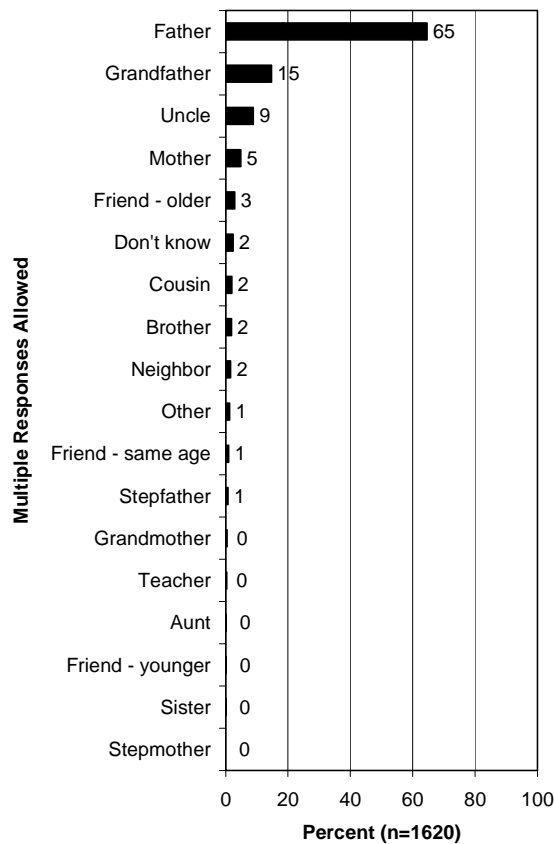
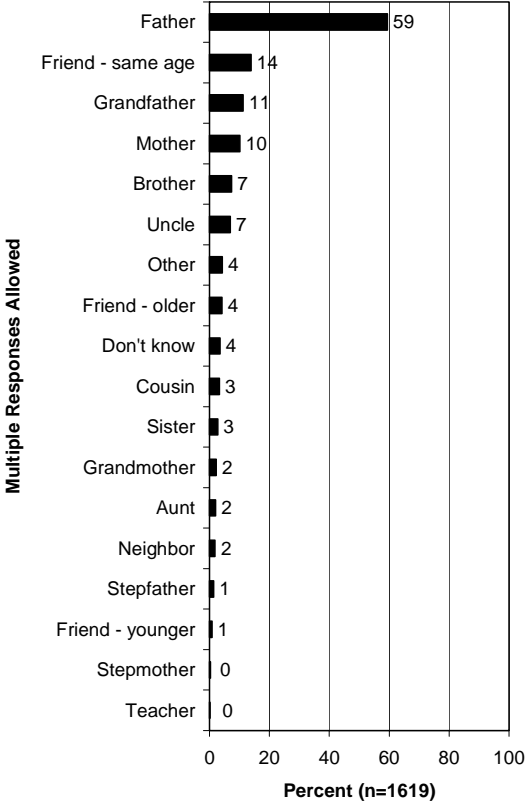


Figure 43.

Q143. Whom do you usually fish with now? (Asked of those who have gone freshwater or saltwater fishing.)

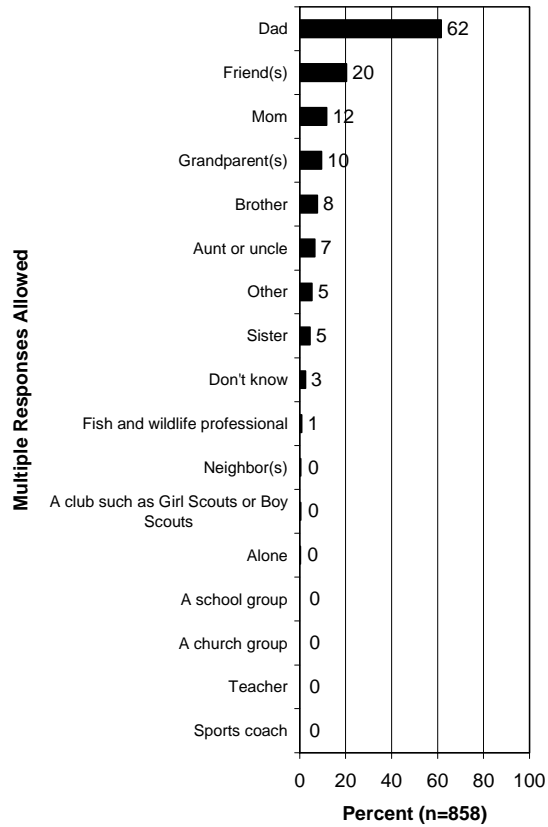


- A majority of youth who have expressed an interest in fishing want to fish with their father (Figure 44).

Youth who were interested in fishing said they want to fish most with their father (62%), distantly followed by a friend (20%).

**Figure 44.**

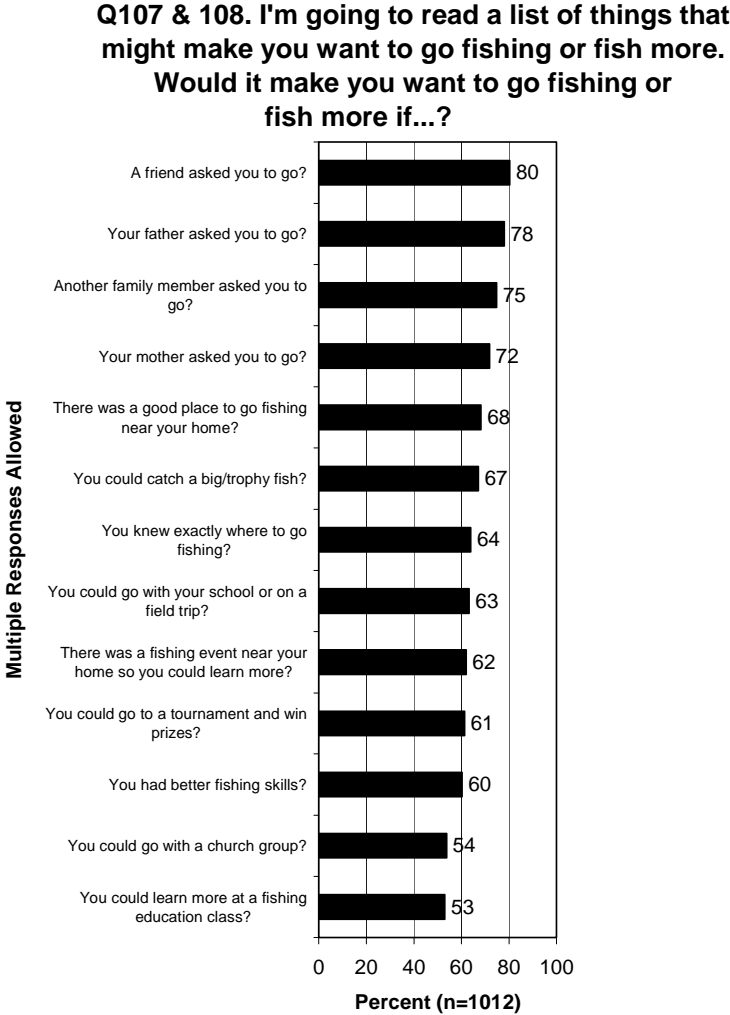
**Q71. Of all the people you could fish with, whom would you most like to go fishing with? (Asked of those who were interested in going fishing.)**



- **A large majority of youth said being asked to fish by their father or their mother would encourage them to go fishing (Figure 45).**

The top four things that would encourage youth to go fishing more pertained to being asked by somebody else: a friend (80%), a father (78%), another family member (75%), or a mother (72%) (Phase III).

Figure 45.



- **The type of family where a youth is raised (single-parent versus dual-parent household) does not negatively affect the likelihood that a youth will go fishing.**

Analysis indicated that there is no statistical relationship between children who live in single-parent households (versus dual-parent

households) and the likelihood that children have gone fishing at some time in their life (single-parent household  $\underline{z} = 0.15$ ; dual-parent household  $\underline{z} = -0.38$ ) or the likelihood that they have gone fishing in the previous year (single-parent household  $\underline{z} = -1.0$ ; dual-parent household  $\underline{z} = 0.39$ ) (Phase IV).

Further analysis indicated that not only is there no statistical correlation between single-parent households and fishing participation, but there is no statistical correlation between children who live primarily with their father ( $\underline{z} = 0.77$ ) or children who live primarily with their mother ( $\underline{z} = -0.79$ ) [compared to dual-parent households ( $\underline{z} = 0.13$ )] and their likelihood to have participated in fishing during their lifetime (Phase IV). Nor is there a correlation between children who live primarily with their father ( $\underline{z} = 1.33$ ) or children who live primarily with their mother ( $\underline{z} = -1.86$ ) [compared to dual-parent households ( $\underline{z} = 0.39$ )] and their likelihood to have participated in fishing in the past year (Phase IV).

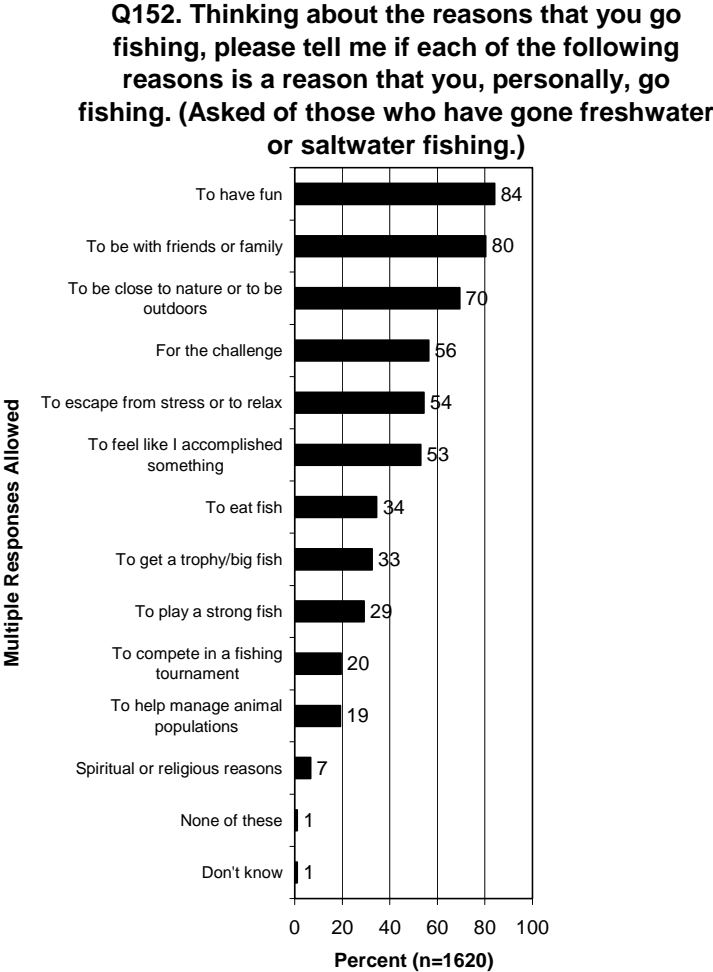
- **Youth fish most commonly to have fun, to be with friends or family, to be close to nature/outdoors, and for the challenge (Figure 46).**

The top reasons why youth (those who had gone fishing) said they go fishing were to have fun (84%), to be with friends or family (80%), to be close to nature/outdoors (70%), and for the challenge (56%). When asked about the single most important reason why they go fishing (asked of youth who had fished), to have fun (42%) and to be with friends or family (35%) were the top answers (Phase III).

- **A majority of youth have a friend who fishes, and having a friend who fishes appears to increase the likelihood that the youth will want to fish.**

Two thirds of youth (67%) reported having a friend who fishes (Phase III). Having a friend who fishes appears to increase the likelihood that a youth will show interest in fishing: 67% of youth said that they would be more likely to go fishing if a friend fished too (Phase III).

Figure 46.



- **Time is the primary constraint to fishing participation. Other constraints of less importance are that the youth feels fishing is boring or that the youth does not want to kill fish.**

Most commonly, youth overall said that they don't fish or that they don't fish more often because of time constraints (57%), followed by that they think fishing is boring (22%), that they

don't want to kill fish (21%), and they are not interested in fishing (21%). Of those who said lack of time, school was the most common reason for the lack of time, followed by other sports/hobbies (Phase III).

- **Parents' primary constraint to allowing their child to fish appears to be the time involved with fishing and/or the time and effort in getting to a place to fish.**

Those youth who said their parent(s) would not let them go fishing most commonly said that the reasons for this were that there was no place nearby/too much travel time (32%) or their parent(s) had no time because of work (24%). Only 7% said it was because their parent(s) think fishing is wrong.



# Chapter 3

## Implications and Recommendations

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### Major Demographic Trends in the U.S. Affecting Youth and Hunting and Fishing Participation

- **Demographic trends indicate that the percentage of youth in relation to the total population is decreasing and will continue to do so in the future. This demographic shift may affect the recruitment and retention of youth hunters and anglers in that there may be a greater societal emphasis toward cultural and recreational activities oriented toward an aging population.**

Research has shown that hunting and fishing participation rates decrease as age increases. According to the *2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*, participation rates in fishing steadily declined with age: 17% of 16- and 17-year-olds fished, compared to only 8% of persons 65 years old or older. The same pattern is true for hunting: as age increased, participation rates in hunting decreased. The *National Survey* found that 8% of 16- and 17-year-olds hunt, compared to only 3% of persons 65 years old or older (Phase I). As the percentage of the nation's population that is comprised of older persons increases, society will likely place more emphasis on



those cultural and recreational activities oriented toward an aging population, and there is the possibility that society, because hunting and fishing are recreational activities predominantly (but not exclusively) of younger individuals, will place less emphasis on hunting and fishing in the future.

Also, because nearly all youth are initiated into hunting and fishing by an adult, the implications of an aging population present additional challenges to those attempting to increase youth recruitment and retention in hunting and fishing. As the U.S. population ages and participation rates in hunting and fishing decrease, there may be a smaller proportion of the population to initiate younger individuals into hunting and fishing.

- **One of the more pronounced demographic shifts in the U. S. is the increase in the percentage of households that are urban and the decrease in the percentage of households that are rural. The percentage of the population living in rural housing is declining in favor of urban/suburban housing. Previous research indicates that participation in hunting among adults is lowest among urban/suburban residents.**

One of the more important variables related to hunting participation is growing up in a rural environment. In a comprehensive regression analyses conducted by Responsive Management (2002a) on hunting participation on a state-by-state basis, of approximately 400 variables that might relate to hunting participation (the variables examined were obtained from the U.S. Fish and Wildlife Service, the U.S. Census Bureau, the *National Surveys*, and directly from the states through surveys conducted by Responsive Management on hunting lands access and availability), only 3 variables were found to correlate with increased hunting participation on a state-by-state basis. One of these variables was low housing density (i.e., more rural). States that had low housing density were more likely to have experienced an increase in the number of hunters between 1991 and 2001. This finding supports Applegate (1984), who found that the most important factor in hunting desertion was the percentage of the state population living in a Standard Metropolitan Statistical Area. Applegate found that a rural

environment was much more conducive to the maintenance and transmission of hunting than was an urban environment (1984). (The other two variables that Responsive Management found that positively correlated with hunting participation on a state-by-state basis were well-distributed federal lands and having a high percentage of leased hunting lands.)

Given the important relationship between rural areas and hunting participation, demographic trends toward increased urbanization present an additional challenge to the recruitment and retention of hunters. As a smaller proportion of youth grow up in rural areas, in which participation in hunting is a more typical occurrence, efforts to maintain the participation rate will become more difficult.

- **The proportion of two-parent families in the U.S. in which both parents work has increased; the number of hours that wage earners in families with one or more related children are working per week also has increased. These trends have implications for available time to go hunting or fishing, as research has shown that lack of time is one of the most important constraints to hunting and fishing participation.**

When asked why they did not hunt more often, 50% of youth who had hunted in the previous year said “not enough time” (Phase III). Additionally, when youth who had hunted in the previous year were asked about what took away from their hunting satisfaction, they commonly said “not enough time” (27%) (Phase III). Similarly, when asked why they did not fish more often, 66% of youth who had fished in the previous year said “not enough time” (Phase III).

Efforts to promote hunting and fishing among the nation's youth will not be able to change the amount of time that families and youth have available; however, programs that provide parent-youth hunting and fishing opportunities must take into account the reality of time constraints that families and youth face.

- **There are two significant demographic trends regarding ethnicity that may affect hunting and fishing participation: a**

**greater proportion of the population will be comprised of those of Hispanic ethnicity, and a smaller proportion of the population will be comprised of those of white ethnicity. (These two groups are not mutually exclusive, as defined by the U.S. Census Bureau.) This may affect future hunting and fishing participation rates because Hispanics have lower participation rates in hunting and fishing than do non-Hispanics (USFWS, 2001). Also, whites have higher participation rates in hunting and fishing than do non-whites (USFWS, 2001).**

- **Overall, several major demographic trends are working against hunting and to some extent fishing participation, including trends toward an overall older population, trends toward a smaller percentage of the population comprised of whites, a more urban population, an increase in the number of hours worked by parents, and an increase in dual-parent/guardian wage earners in families with children.**

The implication of these demographic trends is that programs designed to promote hunting and fishing participation must recognize these broad demographic changes and address these demographic pressures, where possible. Overall, however, the most important demographic trend, which sometimes gets obscured by discussions of ethnic, housing, and labor trends, is that the absolute number of youth is increasing, which means that the overall potential pool of hunters and anglers is increasing.

Regardless of demographic trends, the most successful efforts to recruit youth into hunting and fishing will remain focused on those populations traditionally involved in hunting and fishing: males who have established family traditions with hunting and fishing and who are surrounded by a hunting and fishing “culture.”

## **Stages of Childhood Development**

- **Children go through stages in their ability to learn and in their perception of the world around them. Research on children’s cognitive abilities and stages of learning indicates**

**that certain types of programs are most effective if designed with specific age groups in mind.**

Children's cognitive development and stages of learning can and should be applied to angler and hunter recruitment and retention programs. The incorporation of knowledge of childhood development into the design of natural resource educational strategies and programs greatly improves program effectiveness. For example, when information on childhood learning is applied to hunting and fishing recruitment and retention programs, slight design changes can result in more effective programs. Research shows that young elementary school children are very egocentric in their perception of the outdoors. They relate to the world in very concrete ways. This may translate into allowing elementary children to keep the fish they catch or providing them with fishing equipment, such as lures or bobbers, as ways to increase the enjoyment of their early fishing experiences. Similarly, allowing youth to eat the meat from a successful hunt will be very important for younger hunters and for fostering interest in hunting among younger youth.

Slightly older children, from 5<sup>th</sup> to 8<sup>th</sup> grade, are more receptive to learning facts about the natural world. Education programs targeting children in the 5<sup>th</sup> to 8<sup>th</sup> grades should include scientific facts, statistics, and the identification of fish and wildlife species. Developing hunting/shooting and fishing skills also becomes more important to children at this age. Courses on hunting and fishing skills is also important to hunting and fishing retention efforts. Research shows that an important reason youth desert activities at this age is because they feel that they have a lack of skill (Phase I).

The main thrust of fishing and hunting promotion programs at the high school level must be to entice participants to stay active in angling and hunting. Many teens report becoming busy with activities that compete with fishing and hunting for their time. Teens enjoy the social aspects of activities more at this time, and so as a way to bring teenagers together within the sport of fishing and hunting, more social events might be planned. Additionally, promoting fishing and hunting activities through existing social

structures like school, church clubs, or other groups could be an effective way of keeping teens interested in fishing and hunting. This is vital because fishing and hunting involvement during the teen years is one of the strongest predictors of long-term fishing and hunting involvement (Phase I).

## Attitudes Toward Wildlife

- **A majority of youth have a high or medium interest in wildlife, and very few youth report having no interest in wildlife. In terms of fostering interest among youth in wildlife-associated activities, including hunting and fishing, recruitment and retention strategies can and should tap into this existing interest in wildlife. However, hunting and fishing communications and recruitment programs must recognize the diversity of attitudes toward wildlife that exist among today's youth.**

Naturalistic and humanistic attitudes are highly prevalent in youth (Phase I), which have direct implications for hunting and fishing recruitment and retention programs. The humanistic attitude (besides the moralistic attitude) is the most problematic, particularly in hunting, and particularly the hunting of big game, because large, furry animals have greater anthropomorphic associations. While hunting and fishing programs should not gloss over or ignore the fact that these recreational activities do involve killing an animal, strategies that address the prevalence of the humanistic attitude while emphasizing the positive aspects of hunting and fishing need to be considered. Strategies to counter the humanistic attitude emphasize hunting and fishing as a way of being close to nature, being with friends and family, the challenge of the activity, the importance of these activities in wildlife management, and the difference between the health of individual animals and the health of fish and wildlife populations as a whole. Programs and strategies that allow youth to observe hunting without having the youth actually kill an animal, such as when a youth accompanies an adult while hunting, can be an important introduction to hunting and a way to overcome highly humanistic attitudes.

Research suggests that boys have a lower prevalence of negativistic and humanistic attitudes than do girls, so programs aimed at boys will enjoy less attitudinal constraints than programs aimed at girls. In general, boys have a greater propensity to hunt and fish than do girls: boys are more interested than are girls in going hunting (57% of boys versus 30% of girls) and in going fishing (90% of boys versus 79% of girls), and more boys (33%) than girls (15%) have gone hunting at some point in their life, and more boys than girls have gone fishing at some point in their life (82% of boys have gone freshwater fishing, compared to 61% of girls; 44% of boys have gone saltwater fishing, compared to 28% of girls) (Phase IV). These facts reinforce the idea that males will continue to be an important target market for hunting and fishing recruitment/retention efforts.

Among younger youth, higher negativistic attitudes are present relative to older youth (Kellert and Westervelt, 1980). Any wildlife-associated recreation program must dispel fears about wildlife before attempting to interest younger youth in wildlife-associated recreation (Westervelt and Llewellyn, 1985). A much larger percentage of younger youth in grades 1-4 (69%) than youth in grades 9-12 (44%) agreed that if they went camping, they would want to stay where there were lots of people, like in a campground, rather than staying out in the woods where there might be more wild animals. Younger youth in grades 1-4 were also more likely (41%) than older youth in grades 9-12 (29%) to say that they would be more likely to go fishing or fish more often if they didn't have to touch the fish they caught (Phase III).

There has been much discussion about how to tailor wildlife-associated recreational programs to varying age groups. Kellert and Westervelt (1980) suggested that educational efforts should focus on concern for the environment and the natural world when targeting 2nd to 5th graders, focus on factual understanding of animals in the 5th to 8th grades, and focus on ethical concern for animals and an understanding of ecology in the 8th to 11th grades. Programs that tie hunting and fishing to environmental protection should be important to youth at all ages, albeit the messages need to be tailored to the youth's stage of development.

Urban youth often have greater negativistic attitudes than do rural youth (Kellert and Westervelt, 1980). Therefore, recruitment strategies in urban settings first need to address and dispel negativistic attitudes about wildlife before participation can be increased.

Different ethnic groups hold different attitudes toward wildlife, and these differences appear to be based on ethnic and cultural experiences rather than genetics. Strategies targeting specific geographic areas should consider the ethnic composition of the particular geographic area and should be sensitive to the traditionally held wildlife attitudes and opinions of the predominant group and other important ethnic groups in that area. For example, studies have indicated that African-American children have greater negativistic attitudes than do white children (Kellert and Westervelt, 1980). Therefore, programs designed to increase hunting and fishing participation in a geographic area with many African-Americans first need to address and dispel negativistic attitudes about wildlife among that group.

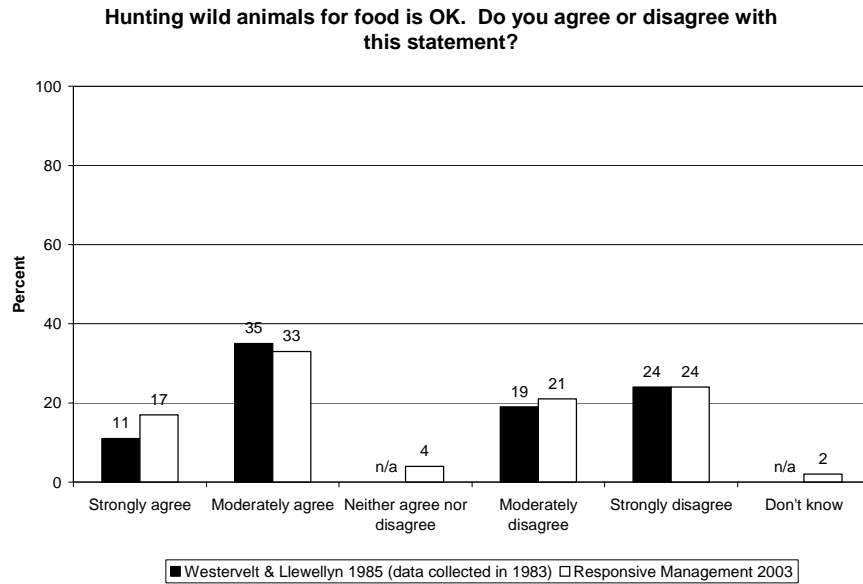
- **Hunting and fishing recruitment and retention programs should not be built exclusively around existing agency paradigms. Most agency personnel are highly oriented toward scientific and ecologic approaches to education and hunting and fishing promotion. Research, however, shows that naturalistic, humanistic, and possibly even moralistic approaches, which may be denigrated by agency personnel, may be more appropriate for youth.**

## **Attitudes Toward Hunting**

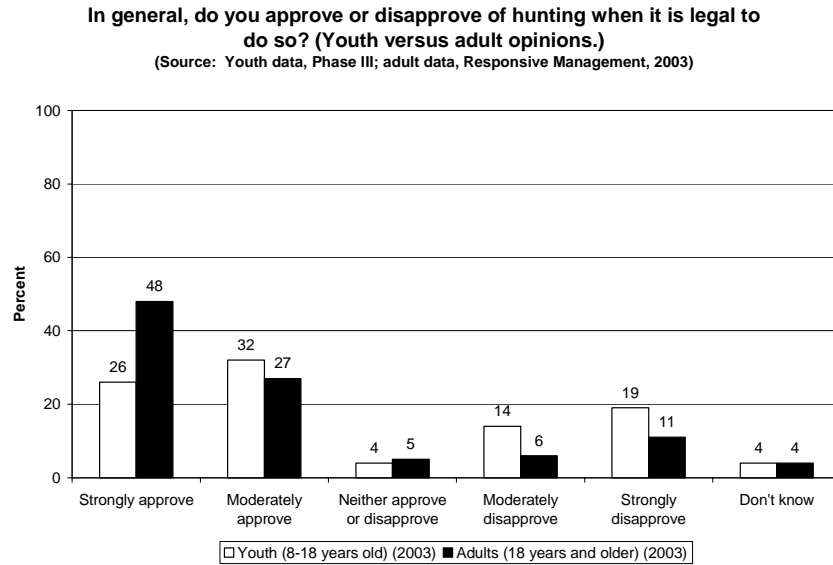
- **Data indicate that a slight majority of today's youth support hunting. Where data are comparable, there appears to be little change in support for or opposition to hunting among youth in the past 20 years. Overall, youth are less supportive of hunting than adults; however, this appears to be more of a function of age-related development as opposed to broad societal trends in attitudes toward hunting.**

Youth in 2003 supported and opposed hunting at about the same rates that youth supported and opposed hunting in 1983. Westervelt and Llewellyn (1985) found that 46% of 5<sup>th</sup> and 6<sup>th</sup> graders agreed with the statement, "Hunting wild animals for food is ok." In 2003, 50% of 5<sup>th</sup> and 6<sup>th</sup> graders agreed with this statement. In 1983, 43% of 5<sup>th</sup> and 6<sup>th</sup> graders nationwide disagreed with this statement while in 2003, 45% of 5<sup>th</sup> and 6<sup>th</sup> graders disagreed with this statement (Figure 47).

**Figure 47.**



Most youth in 2003 (58%) supported hunting (Phase III). However youth opposed hunting at a higher rate than did adults. In 2003, 33% of youth disapproved of legal hunting (Phase III) compared to 17% of adults who disapproved of legal hunting (Figure 48) (Responsive Management, 2003).

**Figure 48.**

Earlier studies in the 1980s (Phase I) hypothesized that the higher opposition to hunting among youth relative to adults was due to broad demographic changes and that opposition to hunting among adults would increase in the future as youth who opposed hunting became older. This hypothesis does not appear to be correct. The differences appear to be age-related and not due to broad societal changes in attitudes. Support for hunting increases as age increases, and a strong majority of adults continue to support hunting.

- **Positive attitudes toward hunting increase as youth become older. Wildlife professionals and the hunting community should work with this age-related development and not be overly concerned with higher levels of opposition to hunting among younger children.**

Support for hunting increases as youth get older. In the Phase III survey, youth were asked, “In general, do you approve or disapprove of hunting when it is legal to do so?” While 40% of the youth in grades 1-4 supported hunting, 64% of high school students (grades 9-12) supported hunting (Phase IV). These findings correspond to what is known about adult attitudes toward

hunting. Overall, 75% of the nation's adults support hunting (Responsive Management, 2003).

- **Males support hunting at a higher rate than females, and this gender difference is present at a young age.**

While studies of adults have long showed that men are more supportive of hunting than are women (Duda et al., 1998), this study shows the difference between male and female attitudes toward hunting are present at a young age: 67% of male youth compared to 48% of female youth strongly or moderately supported hunting (Phases III and IV).

- **While more youth supported than opposed hunting, the overall impression from the research was that hunting is not a “top-of-mind” issue for most of the nation's youth. The wildlife management and hunting community must increase communications efforts toward youth on hunting to raise awareness levels and foster positive attitudes toward hunting.**

Most youth are not being exposed to information about hunting that increases their interest in hunting or makes them want to hunt more (Phase III). Only 15% of youth reported that they had seen or heard any information from teachers or other adults *in* their school that helped them learn more about hunting or that increased their interest in going hunting. Slightly more youth (34%) had seen or heard information *outside* of school that helped them learn more about hunting or that increased their interest in going hunting. Roughly two-thirds (65%) of youth are not seeing or hearing any information outside of school that helps them learn more about hunting or increases their interest in going hunting (Phase III). The lack of information youth receive about hunting may contribute to hunting not being a “top-of-mind” issue for most youth.

- **Despite the fact that few youth had seen or heard any information about hunting in schools, youth who reported hearing information about hunting at school generally said the information they heard was positive.**

Only 22% of youth said that at some point in their life they had heard a teacher or a guest speaker talk about hunting at school. When these youth were asked if the information they had heard about hunting from the teacher or guest speaker was positive or negative, most youth reported that the teacher or guest speaker had said good things about hunting, and more said that their teacher(s) supports hunting than said their teacher(s) opposes hunting. Indeed, 61% of youth said the teacher or guest speaker who spoke about hunting said good things about hunting, and an additional 31% of youth reported that the teacher or guest speaker was neutral. Only 7% of youth said that the teacher or guest speaker said bad things about hunting (Phase III).

While almost half (47%) of youth who had had a teacher or guest speaker talk about hunting at school did not know if their teacher(s) supported or opposed hunting, just over a third of youth (34%) said that they thought their teacher(s) supports hunting. Only 15% said that they thought their teacher(s) opposes hunting. The assumption that youth are hearing mostly bad things about hunting in school or that most teachers are opposed to hunting is not true.

- **One of the primary concerns youth and parents had regarding hunting was safety. More youth disagreed than agreed that hunting is a safe recreational activity, and of youth who said their parents would not let them go hunting, the number one reason their parents would not let them go hunting was that the parents did not consider hunting to be safe. Furthermore, younger youth expressed more interest in taking hunter education than did older youth (Phase IV), which suggests that early hunter education opportunities may be effective in fostering interest in hunting.**

Half of youth (50%) disagreed that hunting is a safe recreational activity, while 40% of youth agreed it is a safe recreational activity (Phase III). Of those youth who reported that their parents would not let them go hunting, a plurality (42%) said their parents would not let them go hunting because their parents do not think hunting is safe (Phase III). Regarding hunter safety, youths' and parents' concerns about hunting should not be

ignored. Ignorance about hunter safety measures and the relative safety of hunting in comparison to other recreational activities appears to be a roadblock to support for and participation in hunting among some youth and their parents. Communications strategies directed toward youth and parents should inform youth and parents that hunting is and can be a safe recreational activity as long as safety recommendations are followed. Rather than de-emphasizing in communications strategies the need for safety when hunting, as some have suggested in an effort to not unduly alarm potential hunters, effective communications strategies should include the message that hunting is and can be a safe recreational activity because of hunter safety classes and the emphasis on safety.

Additionally, research shows that younger youth are more interested in taking hunter education courses than are older youth: in grades 1-4, 40% of youth were interested in taking a hunter education course; in grades 5-8, 35% of youth were interested in taking a hunter education course; and in grades 9-12, 25% were interested in taking a hunter education course (Phase IV). This provides a possible avenue for fostering interest in hunting that should not be ignored.

## **Attitudes Toward Fishing**

- **Today's youth overwhelmingly support fishing and feel that anglers respect living things. Negative attitudes toward fishing are not as prevalent as negative attitudes toward hunting and, therefore, do not present as great a constraint to fishing participation as negative attitudes present to hunting participation.**

In 2003, 86% of youth strongly or moderately approved of fishing (Phase III). As children grow older, support for fishing increases. While 47% of youth in grades 1-4 *strongly* approved of fishing, 60% of youth in grades 9-12 *strongly* approved of fishing (Phase III). Overall, 72% of youth in grades 1-4 approved of fishing while 92% of youth in grades 9-12 approved of fishing (Phase IV).

In 2003, 83% of youth agreed that people who fish respect living things (Phase III). As age increased, youth's agreement that anglers respect living things also increased: while 73% of youth in grades 1-4 felt that people who fish respect living things, 88% of youth in grades 9-12 felt that people who fish respect living things (Phase IV).

- **Males support fishing at a higher rate than females, and this gender difference is present at a young age.**

While studies of adults have long showed that men are more supportive of fishing than women (Duda et al. 1998), this project shows the difference between male and female attitudes toward fishing are present at a young age: 66% of boys compared to 44% of girls *strongly* approved of fishing (Phase III). Overall, 90% of boys approved of fishing while 81% of girls approved of fishing (Phase III). In contrast, girls were almost three times as likely to disapprove of fishing than were boys (5% of boys and 14% of girls disapproved of fishing) (Phase III).

- **While today's youth overwhelmingly support fishing, fishing is not a "top-of-mind" issue for most of the nation's youth. The fisheries management community must increase communications efforts toward youth on fishing to raise awareness levels and foster increased participation in fishing.**

Most youth are not being exposed to information about fishing that increases their interest in fishing or makes them want to fish more. Only 21% of youth reported that they had seen or heard any information from teachers or other adults *in* their school that helped them learn more about fishing or that increased their interest in going fishing (Phase III). Slightly more youth (49%) had seen or heard information *outside* of school that helped them learn more about fishing or that increased their interest in going fishing (Phase III).

The lack of information youth receive about fishing, particularly at school, may contribute to fishing not being a "top-of-mind" issue for most youth. Furthermore, research shows that teaching youth about fishing or providing opportunities to go fishing is one

of the best ways to introduce youth to the outdoors and to teach youth about the environment (Phase I). Participation in fishing leads to higher overall environmental knowledge as well as positive attitudes toward the outdoors. Because research clearly indicates that fishing is one of the best environmental education strategies available, fishing should be incorporated into school curriculums as a mechanism to teaching environmental education.

- **Despite the fact that few youth had seen or heard any information at school about fishing, youth who reported hearing information about fishing at school said the information they heard was positive.**

Only 22% of youth said that at some point they had heard a teacher or a guest speaker talk about fishing at school. When these youth were asked if the information that they had heard about fishing from their teacher or guest speaker was positive or negative, most youth reported that the teacher or guest speaker supported fishing and said good things about fishing. Eighty percent of youth said the teacher or guest speaker who spoke about fishing said good things about fishing and an additional 18% of youth reported the teacher or guest speaker was neutral. Only 1% of youth said the teacher or guest speaker said bad things about fishing (2% said they didn't know) (Phase III). Also, a sizable majority of youth (70%) said they thought their teacher(s) supports fishing, while only 1% said they thought their teacher(s) opposes fishing (the rest did not know or perceived their teacher(s) as being neutral) (Phase III). Today's teachers and schools should be commended for their continued support for fishing.

- **Fishing is perceived by parents and youth alike as being a safe recreational activity.**

Unlike in hunting, safety is not a major constraint to fishing participation, although, ironically, fishing has the potential to be dangerous if standard, simple safety advice is not followed (most particularly as this applies to use of a personal flotation device when fishing from a boat, even on a boat at anchor or when water and weather conditions are good). Ninety percent of youth agreed

that fishing is a safe recreational activity (Phase III). Safety concerns were not raised by youth as a reason they do not go fishing or do not fish more (Phase III). Of those youth who reported that their parents would not let them go fishing, only 7% reported that their parents would not let them go fishing because fishing was not safe (Phase III).

- **The “Awareness-to-Action” model of Henderson (1984) can be somewhat reversed in fishing promotion. For efforts to increase fishing participation among youth, it appears to be best to involve youth in ‘action’ early on before introducing education programs on fisheries habitat and fisheries management issues.**

As quoted in *In Search of Excellence* (Peters and Waterman, 1982): “There are two schools of thought. One says that attitudes (beliefs, policies, proclamations) precede actions—the “tell, then do” model. The other, clearly more dominant, reverses the logic. The Harvard psychologist Jerome Bruner captures the spirit when he says, ‘You are more likely to act yourself into feeling than feel yourself into action.’ The implications of this line of reasoning are clear: only if you get people *acting*, even in small ways, the way you want them to, will they come to believe in what they’re doing.”

## **Participation in Hunting**

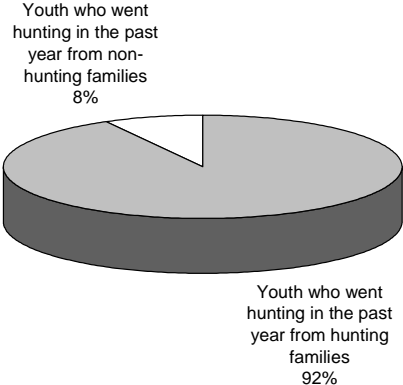
### **Hunting Initiation and Recruitment**

- **The most important tenet of hunting recruitment is that hunting initiation takes place within the context of the family: hunting families produce hunters, and most hunters are initiated into hunting when they are children, typically by their father, uncle, or grandfather. Indeed, 92% of all youth who had hunted in the previous year came from a hunting family (Figure 49), and only 2% of youth from non-hunting families go hunting (Figure 50). Successful hunting initiation programs will build on this fact. Programs that foster hunting initiation within the context of the family will be the most successful. Programs that go beyond fostering hunting**

**initiation and participation within the context of the family should strive to replicate the variables conducive to hunting: a close bond with a male relative, having the child accompany**

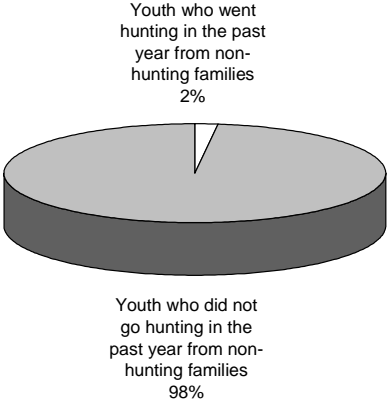
**Figure 49.**

**Youth Who Hunted in the Past Year by Hunting/Non-Hunting Family (Pie Represents All Youth Who Hunted in Previous Year).**



**Figure 50.**

**Youth from Non-Hunting Families and Their Participation in Hunting (Pie Represents All Youth from Non-Hunting Families).**



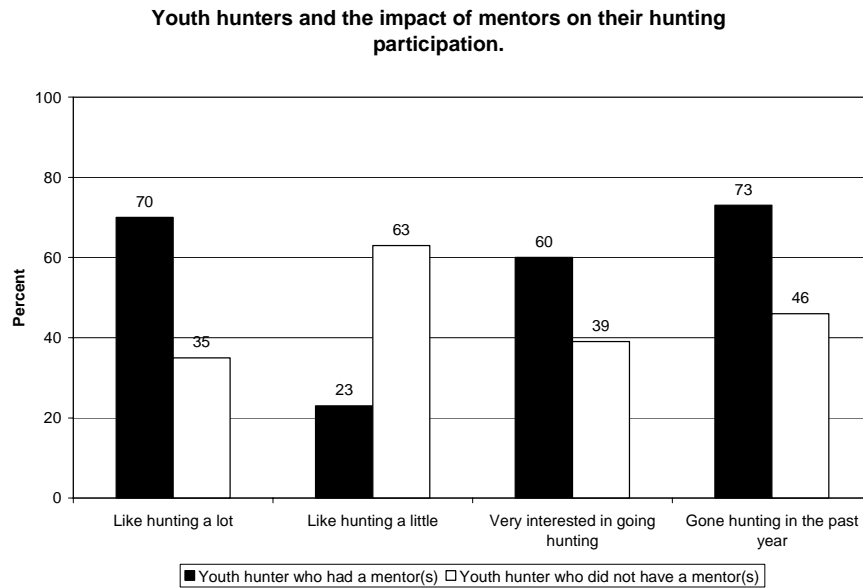
**an experienced hunter without having to kill an animal themselves, having initiation occur during childhood over an extended period of time, and providing repeated exposure to hunting and the culture of hunting.**

Hunting is a family-oriented activity for many reasons, including cultural, social, and safety reasons. All aspects of hunting—recruitment, participation, satisfaction, and retention—need to incorporate the fact that hunting should be considered within the context of familial relationships. Hunting recruitment programs that emphasize getting children involved in hunting through their parents or parental surrogates, particularly their father or a close male relative, will have success. Recruitment programs that do not include a male family member (father, grandfather, uncle, or cousin) will not be as effective as programs that attempt to incorporate male family mentors into the hunting recruitment, initiation, and retention process.

- **Mentoring is very important in hunting participation programs. Those who had been positively influenced by somebody to participate in hunting had higher measures of hunting avidity and satisfaction relative to those who had not been exposed to such an influence (Figure 51).**

Four measures of hunting avidity—frequency of participation, levels of interest in participation, measures of liking the sport, and current participation (i.e., how long ago they went hunting)—were all statistically significantly related to having been positively influenced by somebody. Those who had been positively influenced by somebody were significantly more likely to hunt more often, have a greater liking for hunting, have more interest in hunting, and to have participated in hunting more recently relative to those who had not been exposed to such an influence (Figure 51). This means that social support is vital to the health of hunting among the nations' youth. The influence of others has an important relationship to both behaviors and attitudes/interests in hunting. Hunting requires social support or mentoring to “take root.”

**Figure 51.**



Mentoring is a challenging task. It requires a knowledgeable mentor who is willing to take a great deal of time, commitment, and personal sacrifice to bring/accompany a youth in the sport. It would appear that there are many youth who are interested in hunting who do not participate. Some of those youth come from families that have members who participate in hunting.

Research conducted by Responsive Management has indicated that sportsmen/sportswomen think that bringing new participants into their sport is important, but that the process takes away from their own enjoyment. Supervising a new participant often means less personal time to participate and relax. This same research seems to indicate that the personal cost of introducing a new person to the sport is reasonably high, but, despite that, most sportsmen/sportswomen are willing to entertain the idea of mentoring a new participant (Responsive Management, 2002b).

Somehow those potential mentors need to be reached and encouraged to bring along children from immediate and/or extended families to teach them and encourage them in the sport.

Social support is vital. It makes a large, significant difference in many measures of participation, satisfaction, and avidity.

- **An important program to encourage hunting participation that builds on the idea of a mentor is the Step Outside Program, which also takes advantage of the fact that youth commonly say being asked by someone else would encourage them to go hunting (Phase III).**

The Step Outside program is a good program to increase hunting participation. The Step Outside program encourages active outdoor enthusiasts to ask their family, friends, neighbors, or co-workers to go hunting, fishing, or shooting with them. Those attempting to increase hunting participation should take full advantage of the Step Outside Program.

- **Hunting participation is predominantly an activity of white, rural males, particularly those from hunting households. Strategies to increase hunting participation need to consider and, where practical, continue to target this demographic group.**

Hunting initiation strategies aimed at increasing participation among non-traditional participants will be difficult. White, rural, males are the most amenable demographic group to hunting. Programs targeted at demographic groups other than white males hold importance for many reasons, but strategies to increase the absolute number of hunters will be most effective if they target this demographic group first before attempting to increase participation among other groups. Also, currently only 25% of youth from hunting households actively participate in hunting. This leaves a large untapped pool within this important target market for recruitment efforts. This reinforces the idea that efforts should first be made to fully penetrate this target market before attempting to increase market breadth by targeting other groups.

- **Although data indicate that hunters are more likely to also be anglers than are anglers to also be hunters, there is a positive**

**correlation between participation in fishing and participation in hunting.**

One target market among youth that is amendable to hunting is comprised of youth anglers who do not currently hunt.

- **Currently, there is not high interest in hunting among those youth who have never hunted.**

There is not as large a potential pool of youth who are predisposed to have an interest in hunting than is the case for fishing: 44% of youth said that they were interested in going hunting (19% very interested, 25% a little interested) compared to 85% of youth who were interested in going fishing (50% very interested, 35% a little interested) (Phase III). One possible explanation for youths' low interest in hunting is that hunting is not a top-of-mind activity among today's youth. Strategies to increase hunting initiation and recruitment must first put hunting into the minds of today's youth and position hunting as a fun, family- and friend-oriented, naturalistic activity. For hunting, it appears that efforts need to be made to first increase initial awareness and interest in hunting, then efforts can be made to move youth from interest to participation (this is different than fishing initiation). Fostering awareness and acceptance and then participation replicates the way hunting initiation typically occurs.

- **Contrary to popular belief that says that children raised in dual-parent households are more likely to hunt and fish, children raised in a single-parent household actually had a greater propensity compared to their dual-parent counterparts to have hunted in the past year as well as to have hunted at some time in their life. (For fishing, there was no correlation between participation and the family type in which the youth grew up: youth from single-parent households were as likely as were youth from dual-parent households to have gone fishing in the previous year.) A potential explanation of the increased likelihood of children in single-parent households to participate in hunting is that children in single-parent households may be exposed to more opportunities to participate in a wider variety of activities**

**than children in dual-parent households due to the overlap of two parents in separate situations providing recreational opportunities to their child(ren).**

The idea of “opportunities of overlap” refers to the scenario in which multiple recreational outings (i.e., such as going hunting) occur when each parent, individually, chooses to take his or her child hunting rather than coordinating one outing with both parents. In single-parent households, each parent might put forth effort, individually, to go hunting with his or her child or arrange for them to do so with relatives or friends. Due to the fact that each parent, individually, is taking his or her child hunting or arranging for him or her to do so, the child enjoys more opportunities to participate in the activity than children who are raised in dual-parent households where opportunities to hunt would be coordinated with both parents.

Another potential explanation of the increased likelihood of children in single-parent households to participate in hunting is that single parents may make a greater commitment and exert more effort to facilitate their child’s participation in outdoor activities, and, thus, more importance is placed on outdoor recreation participation. The enhanced effort to offer opportunities for their children to participate in this activity may in turn bolster the rate of participation.

Another possible explanation of the prevalence of children from single-parent households participating in hunting may be a result of the many state fish and wildlife agency programs that have sought to foster increased hunting participation among single-parent households over the years.

Although the reasons underlying the differential rates of participation in hunting among single- and dual-parent households are not clear, the statistical analysis indicates that single-parent households are, at least, not disadvantaged (fishing), and in some cases advantaged (hunting) in participation. Potential explanations for this finding deserve substantially more time and study in uncovering the factors affecting hunting and fishing participation and single-parent households.

### **Hunting Retention and Desertion**

- **Because it is easier to foster hunting participation among those who have been exposed to a hunting culture and have already had some experience with hunting, successful retention programs may have a more substantial positive effect on the absolute numbers of hunters than recruitment programs.**
- **Traditional management programs, such as “harvest,” “wildlife management,” and “trophy hunting,” are not as important to youths’ satisfaction with hunting as are social and other factors, such as being with friends and family or having fun. Therefore, it would appear that youth hunting programs that focus on these more traditional management objectives exclusively will not be as successful as programs that emphasize fun and family aspects first and more traditional management goals as ancillary objectives.**

Hunting retention is positively correlated with hunting satisfaction, and satisfaction with hunting among youth is not primarily addressed by traditional management programs, such as “harvest,” “wildlife management,” and “trophy hunting.” These traditional management programs are not highly integral to youths’ interest in hunting and, more importantly, are not primarily responsible for youths’ hunting satisfaction. Instead, the social aspects of hunting—being with friends and family and having fun—are more important to youth. It would appear that youth hunting programs that focus on these more traditional management objectives *exclusively* will not be as successful as programs that emphasize social aspects of hunting. It is important that efforts to make hunting fun should not be lost among other strategies to increase hunting participation.

- **Overall, youth hunting will remain preponderantly an activity of youth with their adult male family members. Youth hunting initiation and retention programs must recognize and incorporate this fact into their program design if they are to achieve significant long-term sustainable retention goals.**

- **One element of retaining youth hunters is for them to learn skills, as many youth indicated that their lack of skill was a detraction from their hunting satisfaction.**

## Participation in Fishing

### Fishing Initiation and Recruitment

- **Fishing recruitment programs will work, if designed properly, because there is demand: youth are interested in fishing.**

As discussed previously, half of youth (50%) were *very* interested in going fishing, and an additional 35% were a *little* interested, for a total of 85% of youth who expressed some interest in fishing (Phase III).

- **As with hunting participation programs, mentoring is very important in fishing participation programs. Youth who had been positively influenced by somebody to participate or participate more often in the sport had higher measures of avidity and satisfaction relative to those who had not been exposed to such an influence (Figure 52).**

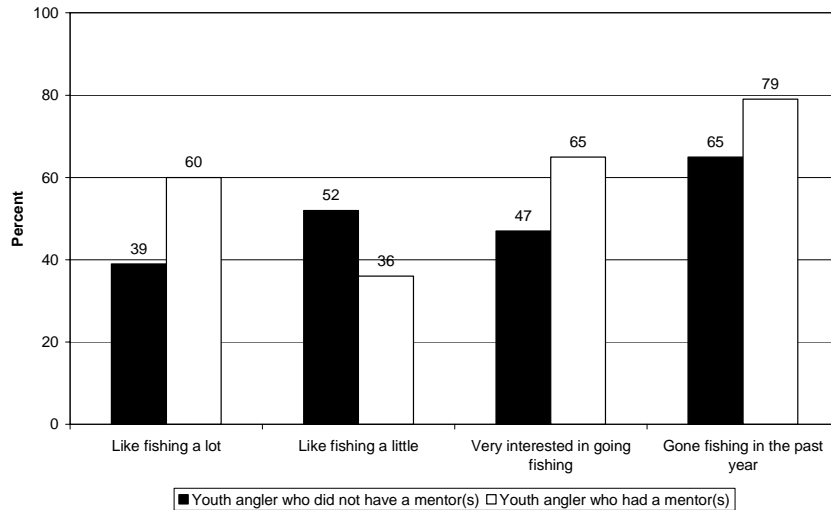
Four measures of fishing avidity—frequency of participation, levels of interest in participation, measures of liking the sport, and current participation (i.e., how long ago since they last fished)—were all significantly related to having been positively influenced by somebody. Those who had been positively influenced by somebody or some group were significantly more likely to fish more often, have a greater liking for fishing, have more interest in fishing, and to have participated in fishing more recently relative to those who had not been exposed to such an influence (Figure 52). The implication is that social support is vital to the health of fishing among the nation's youth. The influence of others has an important relationship to both behaviors and attitudes/interests in fishing. Fishing requires social support or mentoring to “take root.”

Mentoring is a challenging task. It requires a knowledgeable mentor who is willing to take a great deal of time, commitment, and personal sacrifice to bring/accompany a youth in the sport.

There are many youth who are interested in fishing who do not participate. Some of those youth come from families that have members who participate in fishing.

**Figure 52.**

**Youth anglers and the impact of mentors on their fishing participation.**



Research conducted by Responsive Management has indicated that sportsmen think that bringing new participants into their sport is important, but that the process takes away from their own enjoyment (2002b). Supervising a new participant often means less personal time to participate and relax. This same research seems to indicate that the personal cost of introducing a new person to the sport is reasonably high, but, despite that, most are willing to entertain the idea of mentoring a new participant.

Somehow those potential mentors need to be reached and encouraged to bring along children from immediate and/or extended families to teach them and encourage them in the sport. Social support is vital. It makes a large, significant difference in many measures of participation and avidity.

- **The role in fishing initiation played by the family is important, and fishing initiation in the context of family**

**should be the primary recruitment avenue. Successful fishing initiation programs will build on this fact—programs that foster fishing initiation within the context of the family will be the most successful. Programs that go beyond fostering fishing initiation and participation within the context of the family should strive to replicate the familial elements conducive to fishing.**

Optimal design of angling programs would focus on families with small children and families in which one or both parents are avid anglers. This would produce, in the long-term, the greatest return and most positive results.

- **Youth most commonly indicate that they would most like to fish with their father, were typically taught to fish by their father, and most often go fishing with their father. Recruitment and retention programs that seek to combine the role of fathers and their children in fishing should have a high likelihood of success.**

In the Phase III survey, 62% of youth who were interested in going fishing said they would most like to go fishing with their father, and 12% of youth said they would most like to go fishing with their mother. In addition, of those youth who do fish, 65% were first taught how to fish by their father followed by their grandfather (15%) or uncle (9%), and 59% of youth who fish usually fish with their father (Phase III). Fishing recruitment programs that emphasize getting children involved in fishing through their parents, particularly their father, or other male family members will have success.

- **An important program to encourage fishing participation that builds on the idea of a mentor is the Step Outside Program, which also takes advantage of the fact that youth commonly say being asked by someone else would encourage them to go fishing.**

As was discussed with hunting, the Step Outside program is an important program to increase fishing participation. The Step Outside program encourages active outdoor enthusiasts to ask

their family, friends, neighbors, or co-workers to go hunting, fishing, or shooting with them, and the effectiveness of a personal invitation to participate in fishing is supported by research (Responsive Management, 1999b, 2000, 2002b). Efforts to increase fishing participation should take full advantage of the Step Outside Program.

- **While the family is the most common route of initiation into fishing, it is not the only route. There is a component of the youth angling population that was initiated by somebody other than an immediate family member. The importance of friends who fish provides an additional avenue for fishing recruitment. Additionally, children benefit by seeing other children as role models because seeing children as role models facilitates learning and acceptance (Bandura, 1986).**

Friends play an important role in fishing for youth: 20% of youth reported that they would most like to fish with their friends, 14% of youth usually fish with a friend their same age, and a majority (67%) of youth said they would be more likely to go fishing if their friends did too (Phase III). This provides an opportunity to increase fishing initiation through schools or clubs, where youth can fish with friends.

- **To increase participation in fishing, fishing needs to be presented as a fun recreational activity, as well as a social activity.**

The most common reasons youth fish are to have fun (84%), to be with friends and family (80%), and to be close to nature/outdoors (70%). When youth were asked to name a single reason that they fish, the most important reason was to have fun (42%) and to be with friends and family (35%) (Phase III).

- **Because of the correlation between interest in fishing and participation in hunting among youth, those youth hunters who do not currently fish are an important target market for fishing recruitment and retention.**

Youth hunters who did not currently fish showed a high interest in fishing. Effort should be made to reach these youth with messages aimed at increasing fishing participation. Interestingly, youth hunters who were interested in fishing were interested in the utilitarian values of fishing and had very “hunting-like” motivations for fishing, such as wanting to eat the fish they catch and enjoying the challenge of fishing.

- **Youth who camp and those who participate in other outdoor activities are important target markets for fishing recruitment and retention.**

While the Sporting Goods Manufacturers Association indicated that freshwater fishing participation among the nation’s youth decreased by 8% between 1990 and 2000, the same study showed that participation in camping among youth increased by 42% (Phase I). Camping and fishing can be seen as recreational activities that can be combined where both activities benefit from the promotion of the other. In fact, the Phase IV data analysis found positive correlations between fishing in the previous year and camping in a tent ( $\underline{z} = 3.19$ ), camping in an RV ( $\underline{z} = 4.12$ ), and camping in a wilderness area ( $\underline{z} = 4.02$ ). Families that camp can easily become families that also fish. Fishing should be promoted as a potential activity that families can participate in while camping and exploring the outdoors. Fishing recruitment and retention programs that develop ties within the camping community will foster a symbiotic relationship that will provide a receptive market for increasing fishing participation.

Fishing recruitment and retention programs should target other outdoor recreation groups, as well. Positive correlations in the data were found between fishing in the previous year and visiting a State or National Park ( $\underline{z} = 2.80$ ), mountain biking ( $\underline{z} = 3.39$ ), rock climbing ( $\underline{z} = 2.59$ ), and all types of boating except sailboating (motorboating,  $\underline{z} = 6.06$ ; row boating,  $\underline{z} = 4.56$ ; canoeing/ kayaking,  $\underline{z} = 4.53$ ; and jet skiing,  $\underline{z} = 3.92$ ) (Phase IV).

- **Unlike hunting, fishing can be marketed in an urban setting. As is not the case with hunting, there are locations to fish in many urban areas. However, if efforts at fostering fishing**

**participation among urban residents are to be effective, there have to be locations to fish within the urban area or that are easily accessible to urban residents.**

In the Phase III telephone survey, youth from urban areas were as likely as youth from rural areas to go fishing. In other research, Responsive Management found that 74% of anglers 12 years old and older and 39% of non-anglers said that they would be encouraged to fish more or go fishing at a place in their neighborhood designed and managed specifically for fishing (1999b). African-Americans, Hispanics, and 12- to 15-year-olds were especially attracted to the concept of localized fishing spots. For example, 83% of African-American anglers, 53% of African-American non-anglers, 82% of 12- to 15-year-old anglers, and 57% of 12- to 15-year-old non-anglers stated that they would be encouraged to fish more or go fishing at a place in their neighborhood designed and managed specifically for fishing (Responsive Management, 1999b).

- **A single approach to angler recruitment may be attractive to fisheries managers because of the ease of administering a single approach, but it is unlikely to have as much success as a strategy that uses multiple approaches.**

The Phase II and Phase III research showed that young anglers have a wide spectrum of satisfactions, motivations, values, and socio-cultural needs. Fishing programs need to reflect this wide array of needs and serve these multiple needs.

### **Fishing Retention and Desertion**

- **Because it is easier to foster fishing participation among those who have already had some experience with fishing, successful retention programs may have a more substantial positive effect on the absolute numbers of anglers than recruitment programs. Indeed, because a majority of youth have fished at some time in their lives, fishing participation programs are, for the most part, attempting to retain these anglers rather than initiate youth into fishing for the first time.**

- **Fishing retention among youth is correlated with satisfaction with the activity. However, fishing satisfaction does not come primarily from things that traditional fisheries management program goals attempt to address: youth are not fully satisfied with only catching fish or catching trophy/big fish. Rather, having fun and being with family and friends are also very important factors in fishing satisfaction.**



# Chapter 4

## Methodologies

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### Literature Review

The literature review examined U.S. Census data and Bureau of Labor and Statistics data regarding age, place of residence, gender, ethnicity, family size, employment, and income. The review also examined data obtained from the Sporting Goods Manufacturers Association and the National Sporting Goods Association regarding participation in outdoor recreation, including hunting and fishing. An additional aspect of the literature review included new analyses of these secondary data. Several other reports were examined specifically pertaining to outdoor recreation, hunting, and fishing, as was literature on theories of childhood development. Finally, the review examined previous reports produced in-house by Responsive Management pertaining to participation in hunting, fishing, and other outdoor activities, as well as attitudes toward wildlife. Phase I of this project exclusively discusses the literature review.

### Focus Groups

The focus groups for this study were group-depth interviews in which a small group (8 to 12) of youth were interviewed at length about their attitudes toward and participation in outdoor recreation, including hunting and fishing. In these groups, parents or guardians were allowed to accompany the youth if they so desired. The use of focus groups is an accepted research technique for qualitative explorations of attitudes, opinions, perceptions, motivations,



constraints, participation, and behaviors. The use of focus groups provided Responsive Management, through the process of interaction, with insights, new hypotheses, and understanding of youth attitudes toward and participation in outdoor recreation, hunting, and fishing.

The focus groups were led, as unobtrusively as possible, through a discussion outline by an experienced, trained moderator who looked for new insights into why individuals felt the way they did about outdoor recreation, hunting, and fishing. The moderator kept the discussion within design parameters without exerting a strong influence on the discussion content. In this sense, the focus groups were non-directive group discussions and exposed spontaneous attitudes of the youth.

The focus groups were conducted using a discussion guide designed to encourage the youth participants to provide their opinions on and attitudes towards factors that have influenced their interest in and participation levels in hunting or fishing. Although the discussions varied somewhat among different focus groups (due to more sophisticated conversations with the higher grades), the topics of discussion focused on elements of actual participation, motivations and constraints to participation, as well as possible methods to increase youth recruitment into these activities in the future.

Focus group participants were recruited to represent several school grades, ranging from 2<sup>nd</sup> to 12<sup>th</sup> grade. For each grade level, separate focus groups were conducted for hunting and fishing. The groups were conducted at the following times and locations:

- Second grade (Hunting): Eufaula, Alabama, May 2, 2001.
- Second grade (Fishing): Eufaula, Alabama, May 2, 2001.
- Fifth grade (Hunting): Seattle, Washington, July 30, 2001.
- Fifth grade (Fishing): Seattle, Washington, July 30, 2001.
- Eighth grade (Hunting): York, Pennsylvania, March 6, 2002.
- Eighth grade (Fishing): York, Pennsylvania, March 6, 2002.
- Tenth grade (Hunting): St. Louis, Missouri, April 23, 2001.
- Tenth grade (Fishing): St. Louis, Missouri, April 23, 2001.
- Twelfth grade (Hunting): Phoenix, Arizona, November 26, 2001.
- Twelfth grade (Fishing): Phoenix, Arizona, November 26, 2001.

The focus groups were an important way to begin this study because they allowed for extensive open-ended responses to questions; probing, follow-up questions; group discussion; and observation of emotional reactions to hunting and fishing issues—aspects that could not have been measured in a traditional telephone survey. Focus group research is considered “qualitative research.” Qualitative research sacrifices reliability for increased validity. This means that although the focus group findings cannot be replicated statistically as a sample survey could have been (high reliability), they provided Responsive Management with a more valid understanding of the issues at the heart of the study (high validity).

All of the focus groups were audiotaped, and the Phoenix focus groups were videotaped as well. The analysis of these focus groups was an iterative process. The moderator took notes and observations at the time of the focus group. The audiotapes and videotapes were then reviewed and transcribed. After all of the audiotapes and videotapes were reviewed and transcribed, they were analyzed for content, and the focus group report was written. The focus groups associated with this project were invaluable in developing the telephone survey instrument. Phase II of this project exclusively discusses the focus groups.

## **Telephone Survey**

### **Telephone Interviewing Procedures and Facilities**

High-quality data collection is critical to survey research. Responsive Management maintains its own centrally located, in-house telephone interviewing facilities. These facilities are staffed by professional interviewers with extensive experience conducting computer-assisted telephone interviews on the subject of hunting, fishing, outdoor recreation, and attitudes toward wildlife, working under the close supervision of the Responsive Management professional staff.

To ensure that the data collected were of the highest quality, the interviewers were trained through lectures, role playing, and video training, according to the standards established by the Council of American Survey Research Organizations. The Survey Center Managers and the Executive Director of Responsive Management

conducted in-depth project briefings with the interviewing staff prior to their working on this project. Interviewers were instructed on survey goals and objectives, type of study, handling of survey questions, interview length, termination points and qualifiers for participation, reading of interviewer instructions, reading of survey, reviewing of skip patterns, and probing and clarifying techniques necessary for specific questions on the survey instrument, as well as issues specific to interviewing children.

The Survey Center Managers and statisticians edited each completed survey to check for clarity, understanding, completeness, and format. The Survey Center Managers monitored the telephone workstations without the interviewers' knowledge of which interviews were monitored. This allowed the Survey Center Managers to maintain strict quality control over the data collection process.

### **Questionnaire Design and Pretesting**

Responsive Management designed the survey instrument, although some questions were used that were developed by Kellert and Westervelt (1980). Responsive Management pretested the survey instrument and made any necessary revisions for logic, wording, and clarification.

### **Questionnaire Programming Language 4.1**

Responsive Management conducted the telephone interviews using Questionnaire Programming Language 4.1 (QPL), which is a comprehensive system for computer-assisted telephone interviewing that provides complete capabilities for designing, administering, and managing telephone-based research operations. The survey data were entered into the computer as the interview was being conducted, thereby eliminating any potential subsequent data-entry errors that could have otherwise occurred. The survey instrument was programmed so that QPL automatically skipped, coded, substituted phrases in the survey based upon previous responses, and edited data upon entry to ensure the integrity and consistency of data collection. Some respondent-specific data provided to Responsive Management was programmed to appear to the interviewer as part of the text of a subsequent question or as a branching control or skip pattern. This feature enhanced the flow of the interview and enabled the

interviewer to either validate/update sample information, or eliminated the need to ask some questions.

### **Contact Procedures**

Prior to the telephone interviews, letters with the U.S. Fish and Wildlife Service logo were sent to each household in the sample informing them that a follow-up telephone call might be made and requesting the participation of any youth in the household. Parents were encouraged to listen in on the interview, and many parents assisted the youth in answering questions, as appropriate.

The survey was conducted from August to October, 2003. Interviews were conducted Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday from noon to 6:00 p.m., and Sunday 5:00 p.m. to 9:00 p.m., local time. A five-callback design was used to maintain the representativeness of the sample, avoid bias toward people easy-to-reach by telephone, and provide an equal opportunity for all to participate. The five-callback system used a total of at least four subsequent calls, often as many as eight, to each not-answered number selected in the sample. Subsequent calls were placed at different times of the day and different days of the week. In addition, respondents who declined to participate because of inconvenience were called again to encourage their participation or to set an appointment for their participation.

### **Analysis**

All telephone survey data were processed and analyzed using SPSS/11.5 for Windows software. Data processing and analysis included coding, cleaning of data, preparation of straight tabulations, computer processing with cross tabulations, and preparation of study printouts.

Z-scores as reported in this document are post-hoc tests that examine the specific elements of a chi-square that contribute most to the relationships between the two variables. A chi-square analysis can be considered an omnibus test to determine the presence of a relationship between two variables, and the z-score, performed in the manner described by Sheskin (2000) called Analysis of Residuals, is used to determine which elements of the variable relationships are significant.

As with other z-score analyses, a finding at or above the absolute values of 1.96, 2.58, and 3.30 are significant (respectively) at the levels of 0.05, 0.01, and 0.001. These notations indicate the likelihood that a relationship like the one being examined would be found by chance. They rate the chances of an errant finding at (respectively) 5 chances out of 100, 1 chance out of 100, and 1 chance out of 1000.

The telephone survey results are exclusively discussed in Phases III and IV of this project.



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# About Responsive Management

RESPONSIVE MANAGEMENT is a nationally recognized public opinion and attitude survey research firm specializing in natural resource and outdoor recreation issues. Our mission is to help natural resource and outdoor recreation agencies and organizations better understand and work with their constituents, customers, and the public.

Utilizing our in-house, full-service, computer-assisted telephone and mail survey center with 65 professional interviewers, we have conducted more than 1,000 telephone surveys, mail surveys, personal interviews, and focus groups, as well as numerous marketing and communication plans, needs assessments, and program evaluations.

Clients include the federal natural resource and land management agencies, most state fish and wildlife agencies, state departments of natural resources, environmental protection agencies, state park agencies, tourism boards, most of the major conservation and sportsmen's organizations, and numerous private businesses. Responsive Management also collects attitude and opinion data for many of the nation's top universities.

Among the wide range of projects we have completed during the past 15 years are studies on how the general population values natural resources and outdoor recreation and their opinions on and attitudes toward an array of natural resource-related issues. Responsive Management has conducted dozens of studies of hunters, anglers, wildlife viewers, boaters, landowners, park visitors, historic site visitors, hikers, birdwatchers, campers, and rock climbers. Responsive Management has conducted studies on endangered species, waterfowl and wetlands, and the reintroduction of large predators such as wolves, grizzly bears, and the Florida panther.

Responsive Management has conducted research on numerous natural resource ballot initiatives and referenda and helped agencies and organizations find alternative funding and increase their membership and donations. Responsive Management has conducted major organizational and programmatic needs assessments and helped natural resource agencies and organizations develop more effective programs based upon a solid foundation of fact.

Responsive Management conducts training workshops on the human dimensions of natural resources and presents numerous studies in presentations, workshops, and as keynote speakers at major natural resource and outdoor recreation conferences and meetings.

Responsive Management has conducted research on public attitudes toward natural resources and outdoor recreation in almost every state in the United States, as well as in Canada, Australia, the United Kingdom, France, Germany, and Japan. Responsive Management routinely conducts surveys in Spanish and has conducted surveys and focus groups in Chinese, Korean, Japanese, and Vietnamese.

Responsive Management has also conducted numerous natural resource and outdoor recreation studies that pertain to specific target audiences, including Hispanics, African-Americans, Asians, women, children, senior citizens, urban, suburban residents, rural residents, large landowners, and farmers.

Responsive Management's research has been featured in most of the nation's major media, including CNN, *Crossfire*, *The Washington Post*, *The Washington Times*, *The New York Times*, *Newsweek*, *The Wall Street Journal*, and on the front page of *USA Today*.

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