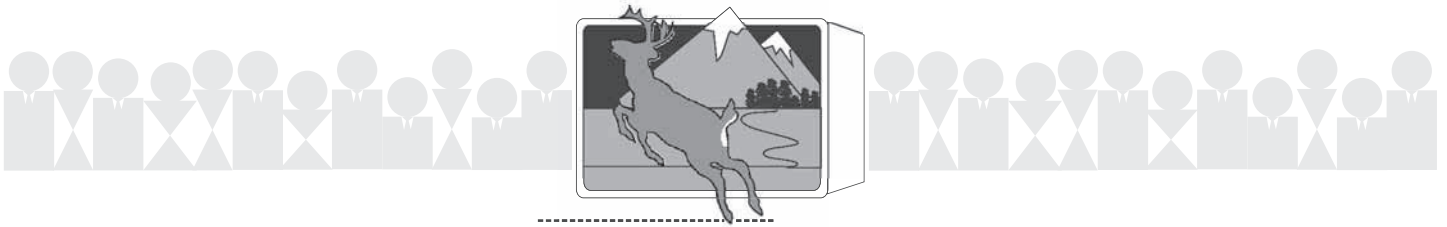


# Responsive Management Report



Spring 2005

*Specializing in opinion and attitude research on natural resource and outdoor recreation issues*

## Securing a Future for Fish, Wildlife, and Natural Resources in the 21st Century

*Understanding Public Opinion on Natural Resources and Participation in Hunting, Fishing, Boating, and Wildlife Viewing*



ILLUSTRATION BY TODD TELANDER

The theme for the 2004 International Association of Fish and Wildlife Agencies' Annual Conference was "Securing a Future for Fish and Wildlife in the 21st Century." At the opening session of the conference, Mark Damian Duda, Executive Director of Responsive Management, presented an overview of how public opinion on and attitudes toward fish, wildlife, and natural resource management and participation in hunting, fishing, boating, and wildlife viewing related to securing a future for the nation's natural resources.

Twenty-one observations on the

"people side" of natural resource management and outdoor recreation were presented. The observations were based on 15 years of continuous survey research with the public, including nationwide surveys of the general population, hunters, anglers, boaters, and wildlife viewers, as well as several hundred state-specific surveys. State-specific surveys spanned the nation, from Maine residents' attitudes toward the Maine Department of Inland Fisheries and Wildlife to Washington state residents' attitudes toward hunting, from Florida residents' attitudes on endangered species and water quality

to southern California residents' attitudes toward marine mammals, the latter survey conducted in five different languages.

The 21 broad-scale observations follow:

1. Despite war, terrorist attacks, and the economy, the environment is still on the radar screen. In a poll sponsored by the Yale School of Forestry and Environmental Studies in 2004, 13% of Americans said the environment was the most important issue while 60% said it was a very important issue.
2. The top issues that Americans feel are facing the nation's natural resources and the environment are water resources, habitat loss, law enforcement, endangered species, and conservation education. However, air quality has also been surfacing lately as a very important issue.
3. When asked to identify the most important issue facing fish and

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wildlife, Americans overwhelmingly respond with water quality and quantity.

4. Among Americans, ecological values are more important than recreational values. In general, the public is satisfied with agencies' work in fish and wildlife *recreation*, but they want agencies to do more in *resource-related* program areas.

5. Though ecological values are more important than recreational values, recreational values are still important. For the past decade, Responsive Management has conducted a biennial survey for the Arizona Game and Fish Department, which has continually shown that although only a small percentage of Arizona residents hunt, a majority of residents feel that it is very important that the Department provide hunting opportunities.

6. With few exceptions, the public feels the nation's wildlife resources are healthy. This is because they are seeing more and more deer, geese, and other wildlife populations in urban and suburban areas.

7. The public shows amazing levels of concern for the nation's wildlife. In a major Responsive Management study, 77% of Northeast residents *disagreed* that providing land for new homes should take precedence over preserving wildlife habitat.

8. Very low levels of knowledge about state fish and wildlife agencies exist. In a study of Northeast residents, only 16% could correctly identify their state agency responsible for managing the state's fish and wildlife resource.

9. While the public holds low levels of specific knowledge about fish and wildlife agencies, agencies do hold high levels of credibility.

10. The public holds little factual knowledge about fish and wildlife resources. In a study conducted by Responsive Management a few years ago in Florida, only 14% of the state's residents could name an endangered species other than the

Florida panther or manatee. In Responsive Management studies on awareness of the Federal Aid in Sport Fish and Wildlife Restoration Program, less than 5% of the public identifies "excise taxes on hunting and fishing equipment" as a source of funding for fish and wildlife.

11. While the public may hold little factual knowledge of wildlife, they know a lot about nuisance animals, deer, and car collisions. Responsive Management surveys show that every year more than a quarter of the public experience nuisance animal problems.

12. Much of the nation's youth have a high interest in wildlife. In a 2004 Responsive Management study, 41% of youth said they had a high interest in wildlife.



ILLUSTRATION BY PETER RING

13. Americans' participation in wildlife-related activities and their interaction with the natural world and wildlife occur in numerous ways: 49% are visiting state parks, 47% are taking trips to view wildlife, 46% are viewing wildlife around their home, 30% are fishing, 30% are boating, 20% are camping, and 6% are hunting.

14. While there are numerous issues confronting boating, boating safety is a primary concern.

15. An important trend in fishing shows a major shift in reasons for fishing. Responsive Management research shows that fishing for food, fishing to catch trophy fish, and fishing for the sport are all declining while fishing to be close to nature, for relaxation, and to be with friends and

family are all increasing.

16. The public continues to support hunting overall. Approximately 75% of the American public supports legal hunting.

17. Regarding hunter recruitment, it takes a hunter to make a hunter. Responsive Management research shows that hunters come from hunting families, and hunting families produce hunters. In the Responsive Management study on youth and wildlife, only 8% of all youth who go hunting come from non-hunting families. Ninety-two percent of youth who hunt come from hunting families.

Urbanization continues to be the most important factor contributing to hunting decline. Access remains hunters' highest priority besides firearm and hunters' rights issues.

18. Wildlife viewers remain an important but still largely untapped market, even though participation declined by 13% between 1991 and 2001. Research clearly shows that most wildlife viewers support hunting; they are not a threat to hunting and fishing programs.

19. While trapping remains a controversial wildlife management topic, it is clear that securing a place for trapping in the 21st century means that communication about trapping must portray it as being a scientific, sanctioned, wildlife management solution. People need to know that trapping is based on science and biology, that it is sanctioned by the state agency, and that it is a solution—a means to an end.

20. Agency communications should be carefully crafted and targeted. Responsive Management research clearly shows that different groups of people relate differently to natural resources and outdoor recreation, and agencies and organizations must therefore target their markets with appropriate messages. This targeting must be based on research, not

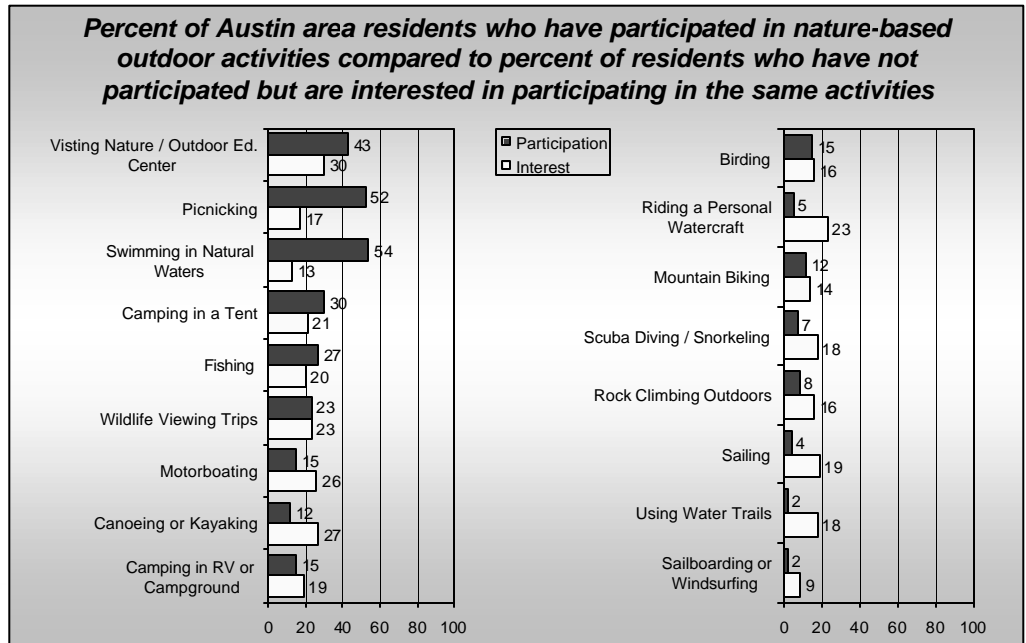
See **Future**, page 3

## Future *from page 2*

assumptions. Messages must also be carefully crafted. In one Responsive Management project, a message being used by the organization tested last out of 10 messages field-tested. 21. Securing a future for fish, wildlife, and the nation's natural resources comes down to one word: *relevant*. Agencies' and organizations' programs, products, and services must be relevant to the average citizen. Only by making agency programs, products, and services relevant to the average citizen through enhanced communications efforts; an understanding of the public's attitudes, opinions, and perceptions; an understanding of the issues facing hunters, anglers, boaters, and wildlife viewers; and targeted messages based on these understandings, will a future for fish, wildlife, and natural resources in the 21st century be secured.

# Research on Outdoor Recreation

During the past 20 years, participation in outdoor recreation within the state of Texas has changed significantly, particularly in relation to new activities such as urban and regional trail-based recreation. With the current population shifts occurring in Texas, outdoor recreational opportunities have increased in the total amount of lands accommodating recreation, diversity of providers both public and private, and the diversity of outdoor recreation activities. In spite of the increase in opportunities to recreate, the exploding populations and shifts of population from rural areas to urban areas and between states are stressing the existing supply of



recreational lands. Demand for new areas is perceived as being high, but in the past there was insufficient data to support this conclusion.

To better understand the recreation needs of Austin area residents, the U.S. Army Corps of Engineers (USACE) and its local partners, the Cities of Austin and Sunset Valley, Travis County, and the Lower Colorado River Authority, sponsored this study to identify residents' current participation in 89 activities, their future outdoor recreation needs as well as their willingness to pay for these activities.

Although statisticians have devised several different techniques for measuring willingness to pay, for this analysis, willingness to pay was calculated following the guidelines in the USACE document titled, *ER 1105-2-100 Civil Works Planning Guidance*. Willingness to pay values were assigned to the anticipated use of existing facilities.

On average, each individual was willing to pay \$618 per year on recreation, and each household was willing to pay \$1,572 per year on recreation. Obviously, however, there were great variations among different activities. The activities for which people were willing to pay the most were cultural activities or arts outdoors, golf, water parks, cultural activities or arts indoors, SCUBA diving or snorkeling, and horseback riding at equestrian centers.

General fitness far exceeded any other activity in the total amount that all households were willing to pay per year at \$92 million. Two other activities had totals among all households of more than \$30 million: cultural activities or arts outdoors (households were willing to pay \$42 million per year) and swimming in outdoor pools (households were willing to pay \$31 million).

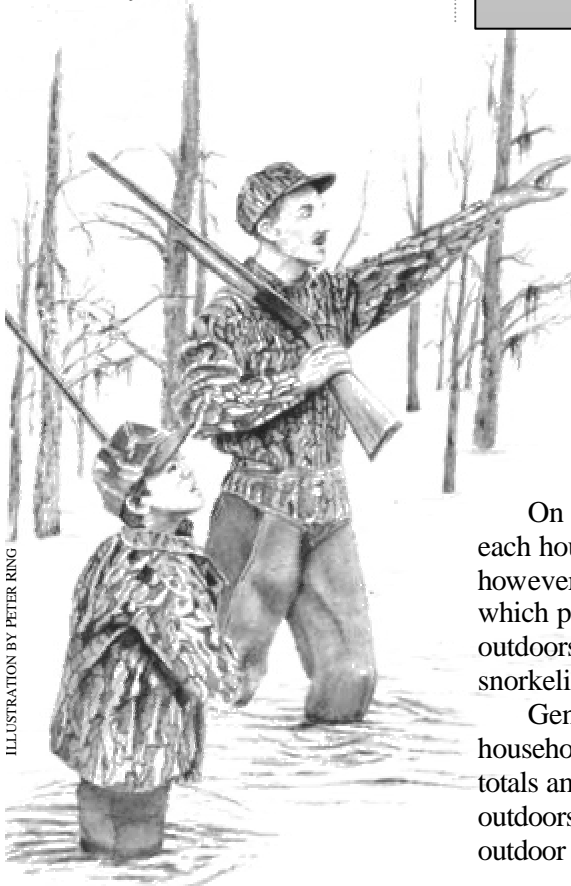


ILLUSTRATION BY PETER RING

# Public Opinion on Fish and Wildlife Agencies in the Northeast U.S.

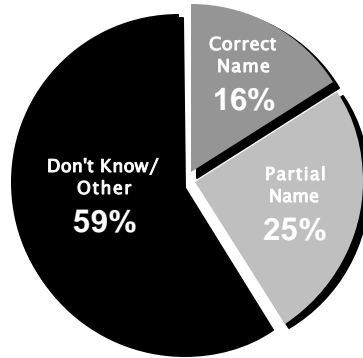
Today, it is of vital importance that natural resource and outdoor recreation organizations operate with a clear direction for the future and with a thorough understanding of the environment in which they are operating. In order to effectively manage natural resources and to meet the outdoor recreation needs of the public, natural resource organizations need to be armed with not only biological facts, but with knowledge of the program needs and priorities that exist among both employees as well as the public at large.

This study was conducted for the Northeast Conservation Information and Education Association (NCIEA) under a Federal Aid in Sport Fish and Wildlife Restoration Grant to assist in the development of effective communications programs and enhance credibility with the Northeast public. Separate studies were conducted in Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia. Individual state reports, as well as the regional report, are available at [www.responsivemanagement.com](http://www.responsivemanagement.com).

The study revealed that most people had positive perceptions of and were satisfied with their state's fish and wildlife agency. Nearly two-thirds (64%) of respondents agreed that the staff at

their state agency really cares about fish and wildlife, and a majority (52%) agreed that their state agency effectively balances the interests of anglers, hunters, conservation groups, and the general public.

**Most respondents could not correctly name the state agency responsible for fish and wildlife management in their state.**



Although credibility and satisfaction were high, specific knowledge about the fish and wildlife agencies was low. Most respondents did not know which government agency was most responsible for managing and protecting fish and wildlife in their state—only 16% named the correct state agency. Moreover, after being informed which agency is responsible, most respondents (78%) indicated that they knew little or nothing about that agency.

## Statistically Significant Characteristics Associated With Support for Hunting in Maine

Characteristic	Significance Levels
Approves of legal recreational fishing	***
Approves of regulated trapping	***
Agrees hunting/fishing are part of scientific management of healthy fish/wildlife populations	***
Male	***
Agrees that efforts to preserve wildlife habitat in Maine are adequate.	***
Participated in freshwater fishing in the past 12 months	***
Satisfied with the Maine Dept. of Inland Fisheries and Wildlife as a government agency	***
Participated in hunting in the past 12 months	**
Knew a great deal or moderate amount about the Maine Dept. of Inland Fisheries and Wildlife before the survey	**
Disagrees he/she can make a significant difference in protecting fish/wildlife habitat	*
Disagrees that costs for managing fish/wildlife should be paid solely with specific user fees (e.g., hunting/fishing licenses)	*
Has attended an educational program dealing with fish/wildlife (e.g., hunter safety class, lecture at state park, etc.)	*
Married	*
Has lived in Maine longer than the median number of years (33)	*
Named correct state agency that is most responsible for managing and protecting fish and wildlife in Maine	*

Stronger Relationships

\*\*\*p < 0.001    \*\*p < 0.01    \*p < 0.05

### The Power of "Z"

Responsive Management now has the ability to cross-tabulate all of the questions in a survey, no matter the size, by all of the other questions in a survey. Responsive Management's method joins the simplicity of easy-to-read, summarized results with the power of knowing that these results are the product of the exploration of every possible pair of variables in a study.

For instance, in the NCIEA study, over 1.1 million calculations were performed and summarized into tables that presented lists of only the significant, positive results ranked in the order of the strength of their relationships. Responsive Management's methods allowed all these analyses without losing valuable information. Please see the table to the right showing characteristics that are strongly associated with support for hunting among residents of Maine.

The "engine" that drives these analyses is the z-score. It is a simple, nonparametric statistical test that provides a reference number indicating how strongly two variables are related. Positive findings indicate that two variables increase or decrease together. Significant findings are ones that are strong enough to be unlikely to have happened by chance. In the table to the right, findings with three asterisks are findings that are so strong that they would happen by chance only 1 out of 1,000 times. Two asterisks denote findings that are so strong that they would happen by chance only 1 out of 100 times. A single asterisk indicates a finding that is so strong that it would happen by chance only 5 out of 100 times.

# Public Attitudes Toward and Behaviors That Affect **Water Quality**

For the past 15 years, Responsive Management research has shown that by far the most important natural resource issue for Americans is water resources. The implications for natural resource and outdoor recreation management are straightforward. Americans' health depends upon a clean water supply, as does the health of our natural resources and the quality of outdoor recreation experiences. Any resource management or outreach program that is linked directly to clean water will inevitably touch upon the most prominent natural resource concern within the hearts and minds of the American public.

Recent studies by Responsive Management conducted in Delaware and Georgia assessed residents' attitudes toward water quality and quantity issues.

Despite the fact that water quality and water resource protection are top-of-the-mind natural resource issues for most Americans, most do not recognize the link between their own personal habits and the resulting impact on water resources.

The lack of personal responsibility in relation to water

resources can be mitigated by increased education and outreach. For example, 90% of Delaware respondents said that they would be likely to change their behavior to help improve water quality if they knew that doing so would help protect future generations, and 79% said that they would be likely to change their behavior to help improve water quality if they knew that poor water quality led to unsafe drinking water.

Increasing education and outreach requires research on the best methods for communicating with the public. The most preferred method of receiving information about water quality for Delaware residents (68%) was a brochure mailed to their house.

The information gathered from the study on Delaware residents' attitudes toward water quality assisted the agency in planning and producing effective education and outreach campaigns to increase awareness of water quality issues and to produce change in the actions of Delaware residents toward water quality. The information gathered from the study on Georgia residents' attitudes toward water resource issues was incorporated with pre- and post-survey focus groups to test and refine message themes in a water conservation campaign.

## Missouri Residents' Opinions on Water Quality and Quantity Issues

In a study conducted by Responsive Management for SEAFWA (see page 7 for more information), a majority (58%) of Missouri residents indicated that they thought Missouri's waters were healthy. However, a substantial percentage (32%) felt Missouri's waters were unhealthy. Hunters and anglers were more likely to say that Missouri's waters were very healthy.

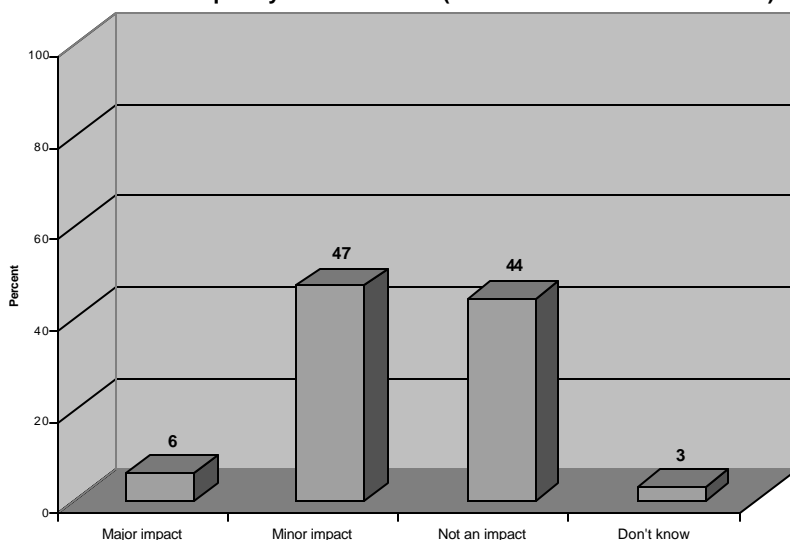
Concern over water quality was higher than concern for water quantity. Respondents were asked to rate their concerns for water quality and water quantity on a scale of 0 to 10, with 0 being "not at all concerned" and 10 being "extremely concerned." The mean of residents' answers regarding water quality was 7.4, and for water quantity the mean was 6.3.

The majority (75%) of residents and the majority of hunters (76%) and anglers (75%) were concerned about water resources for people *and* fish and wildlife about equally; otherwise, concern about water for people was higher than for fish and wildlife among the general population, while concern for fish and wildlife was higher among hunters and anglers than for people regarding water resources.

The major factors that Missouri respondents considered to be contributing to water *quality* issues included industrial waste (the top answer at 44%), wastewater treatment plants/sewage (25%), litter and trash (25%), and agricultural runoff (18%).

The major factors that Missouri respondents considered to be contributing to water *quantity* issues included drought (19%), industrial and commercial use (12%), water diversions (9%), and residential use including lawn watering (8%).

**How much of a negative impact do you feel your own daily activities have on water quality in Delaware? (asked of Delaware residents)**



## Results of the 2004 Arizona Trends Study

- The most popular wildlife-related activity, and the only activity in which a majority participated (55% in the past 12 months and 61% in the past 3 years, excluding “don’t know” responses), was taking a special interest in wildlife at home by closely observing or trying to identify types of wildlife.
- Consumptive wildlife-related activities had the least participation: 17% of residents had been fishing in the past 12 months, and 9% of residents had been hunting in the past 12 months.
- Nearly a quarter of residents had boated in the past 12 months.
- A sizable percentage of residents had fished in the past 12 months, but nearly double that had fished sometime in the past 3 years. Most residents who had gone fishing in the past 12 months were satisfied with their fishing experience.
- Hunting was the least popular wildlife-related activity in Arizona of the six activities discussed in the survey. A majority of residents who had hunted in the past 12 months were satisfied with their hunting experiences.
- Most contacts with Department law enforcement officers occurred while residents were hunting, followed closely by fishing. Fewer contacts occurred while residents were boating, off-highway driving, or wildlife viewing.
- Less than a majority of residents (42%) could correctly name the Arizona Game and Fish Department as the government agency primarily responsible for managing Arizona’s wildlife resources.
- A majority of residents rated the overall performance of the Department as excellent or good. Few residents rated the Department’s overall performance as poor or very poor.
- Majorities of residents felt the Department should place more emphasis on providing environmental education programs, watercraft safety, and providing public information on Arizona wildlife.
- Half of residents (66% when “don’t know” responses are excluded) felt more emphasis should be placed on off-highway driving management, specifically on habitat protection and rider safety.
- A substantial percentage of residents (38%) were interested in taking a 1-day weekend course on wildlife-watching skills, with 13% of residents very interested.
- In the past 12 months, very few residents had observed a wildlife violation. Violations that were observed most commonly related to hunter behavior. Although a sizable majority did not report the violation, over a quarter did.
- Department-related sources were the only sources about Arizona wildlife identified as being very credible by a majority of residents.

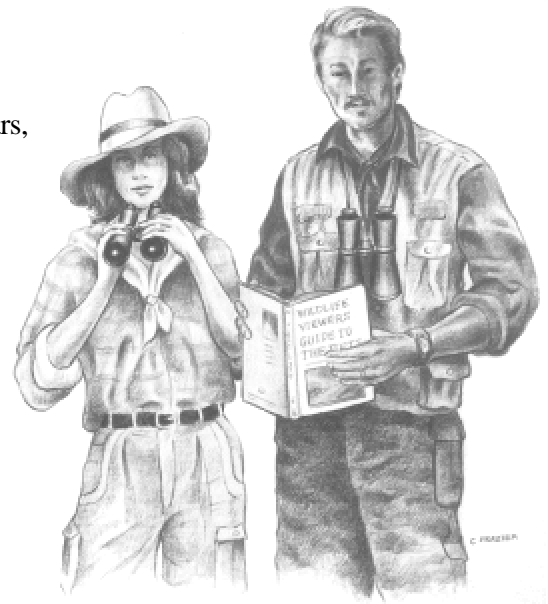
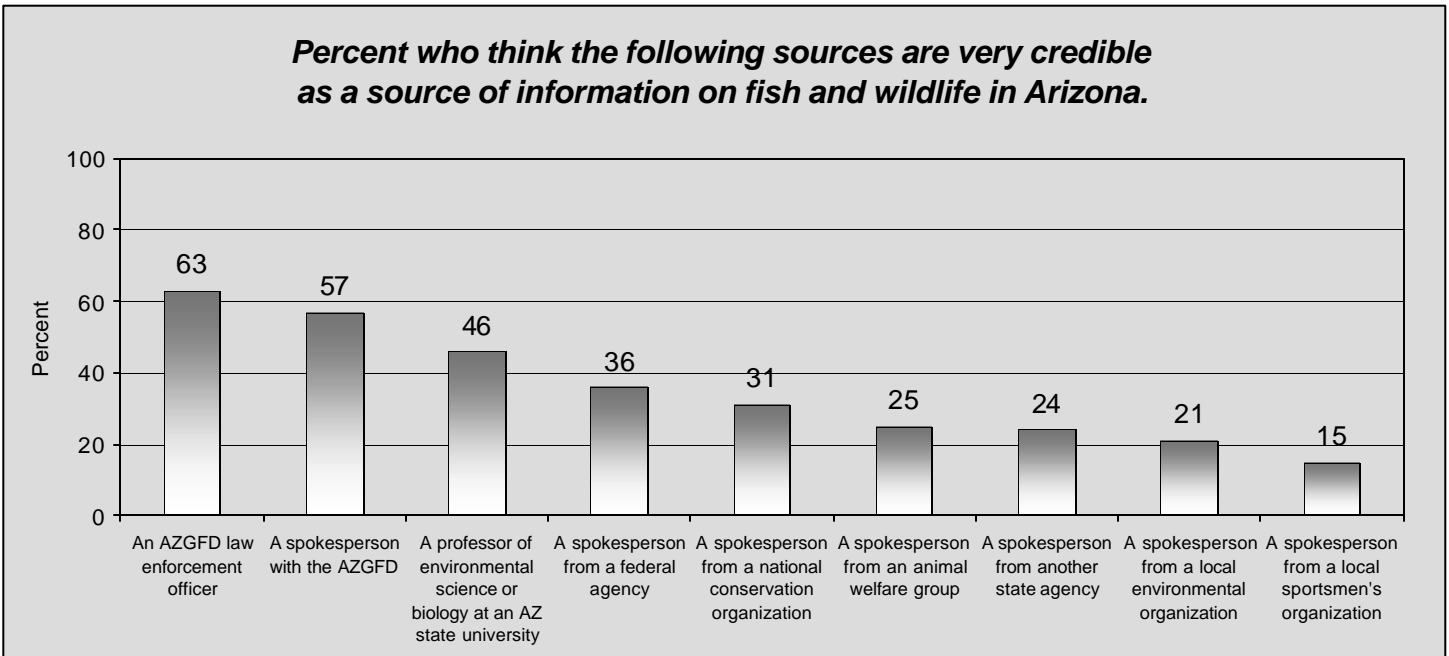


ILLUSTRATION BY CLARK FRAZIER



# Measuring Public Opinion on Natural Resources and Outdoor Recreation in the Southeast U.S.

In cooperation with the Southeastern Association of Fish and Wildlife Agencies (SEAFWA), Responsive Management is conducting a study to determine public opinion on fish and wildlife management issues and agency reputation and credibility in the member states: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. Funding was provided under a Federal Aid in Sport Fish and Wildlife Restoration Grant. Below are some of the highlights of the survey in North Carolina. Full reports are available on Responsive Management's Web site.

Overall, North Carolina residents were satisfied with the North Carolina Wildlife Resources Commission (the Commission). A majority (51%) of residents said that they were very or somewhat satisfied with the Commission, and only 10% expressed dissatisfaction. Of those who had contacted the Commission, an overwhelming majority (84%) were very or somewhat satisfied with the contact. Furthermore, agreement (58%) was about six times greater than disagreement (9%) that the Commission effectively balances the interests of anglers, hunters, conservation groups, and the general public.

North Carolina residents were polled about 14 Commission program areas and efforts. The top three program areas/efforts in importance were conserving fish and wildlife habitat, providing opportunities for boating safety education, and providing educational programs on the state's fish and wildlife. The top three areas/efforts in performance were providing opportunities for recreational fishing, protecting residents against diseases from wild animals, and protecting residents from harm from wildlife.

Although all programs were rated fairly high in importance and performance, conserving fish and wildlife habitat, providing educational programs on the state's fish and wildlife, providing opportunities for boating safety education, providing opportunities for hunting safety education, protecting threatened and endangered species, restoring native fish and wildlife to the state, and enforcing fish and game laws each had much higher importance ratings than performance ratings. Conversely, providing opportunities for recreational fishing was rated the highest in performance, but was rated lower in importance, relative to the other areas/efforts.

Regarding fish and wildlife issues facing North Carolina, polluted water or water quality was the top-named



ILLUSTRATED BY PETER RING

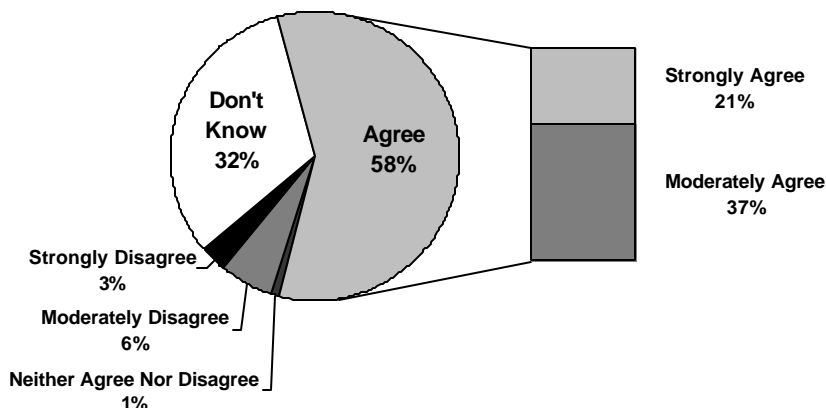
issue (29%), followed by habitat loss (18%). Ten percent named air pollution or air quality.

One-fifth (20%) of North Carolina residents have experienced problems with wild animals, including birds, in the past 2 years. Most commonly, deer, raccoons, opossums, squirrels or birds were the cause of the problem. Problems often involved gardens, yards, pets, or garbage, although substantial percentages of those who experienced problems had structural damage to their home.

A large majority of all respondents agreed (83%, with 47% strongly agreeing) that hunting and fishing are part of scientific management of fish and wildlife populations. Additionally, North Carolina residents showed deference for fish and wildlife habitat over human use of land: more respondents thought that the use and development of land should be restricted to protect fish and wildlife (44% strongly agreed and 38% moderately agreed) than thought either that landowners should be allowed to develop their land regardless of its impact on wildlife (10% strongly agreed and 16% moderately agreed) or that development for new home sites should take precedence over preserving wildlife habitat (7% strongly agreed and 19% moderately agreed).

## The North Carolina Wildlife Resources Commission effectively balances the interests of anglers, hunters, conservation groups, and the general public.

Do you agree or disagree with this statement?



# Attitudes Toward Wildlife

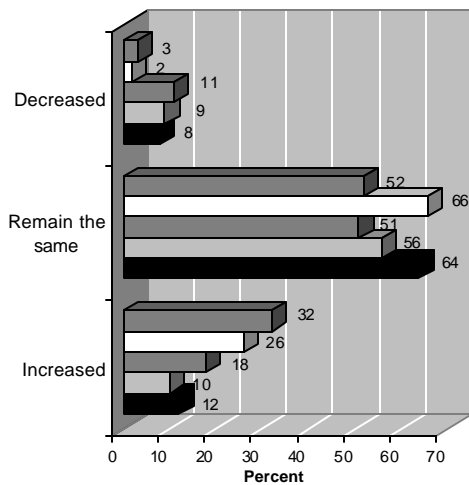
## New Hampshire Residents and Big Game Management

As the guardian of the state's fish, wildlife, and marine resources, the New Hampshire Fish and Game Department works in partnership with the public to conserve, manage and protect these resources and their habitats; inform and educate the public about these resources; and provide the public with opportunities to use and appreciate these resources. Responsive Management recently conducted a study to assist the Department with its current development of a 10-year big game management plan. Responsive Management conducted a similar study to assist in the previous 10-year big game management plan implemented in 1996.

The study determined public opinion on and attitudes toward populations and management of big game species, including white-tailed deer, black bear, moose, and wild turkey. The results include trend data among the public and hunters, as well as extensive regional analyses.

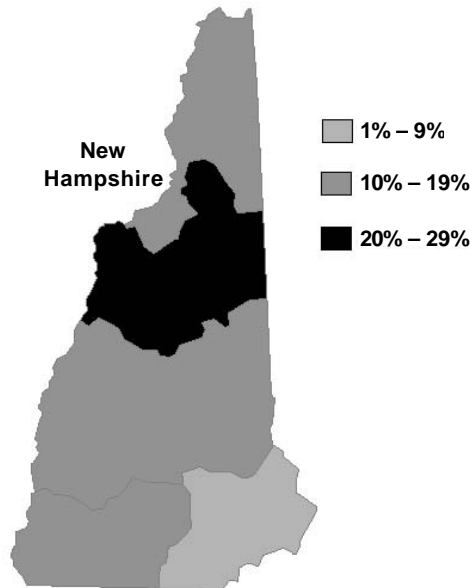
For each species (white-tailed deer, black bear, moose, and wild turkey), a majority of New Hampshire residents thought the population in their county should remain the same.

**New Hampshire Residents' Opinions on the Size of the Deer Population in Their County ("Don't Know" Responses Excluded)**



Legend: North (lightest gray), White Mountains (medium-light gray), Central (medium gray), South-East (medium-dark gray), South-West (darkest gray)

**Percent of Residents Who Want a Decrease in the Black Bear Population**



Among those who wanted to see an increase in deer populations, a clear pattern emerged regarding the potential consequences of increased populations. Those who wanted deer populations increased were still willing to tolerate increased populations even if it means damage to human property. However, these people were not willing to increase populations if it means harm to wildlife populations or habitat.

Results were also analyzed regionally. Residents in the North region of New Hampshire were more likely than residents in any other region to have hunted in the past 5 years. North region residents were also more likely than residents in any other region to want an increase in the deer and wild turkey populations. Regional results indicated that the black bear population is an important issue for residents living in the White Mountains region of New Hampshire. White Mountains residents were the most likely (23%) to support a decrease in the black bear population, and the most common reasons were to reduce bear-human conflicts.

## Grizzly Bears and Washington Residents

A survey of residents from Skagit and Whatcom Counties of Washington state revealed widespread support for grizzly bear recovery in the North Cascades. A majority of respondents (52%) reported strong support for recovery and 24% reported moderate support for recovery. Support for grizzly bear recovery was about the same in each county.

Wildlife agencies are determining if grizzly bears will need to be relocated to the North Cascades to recover the population. Relocating bears can be controversial. However, 33% of the respondents in the survey reported that they would be more supportive of grizzly bear recovery in the North Cascades if 5-10 bears had to be added, while only 15% said they would be less supportive.

Very few realize that full recovery of the grizzly bear population in the North Cascades will take around 100 years. Nearly everyone knew that it is legal to kill a grizzly bear in self-defense or defense of other people. However, almost a third did not know that it is illegal to kill a grizzly bear if it were to attack livestock.

Almost everyone (91%) agreed that residents and visitors to the North Cascades could prevent most problems with grizzly bears by taking a few simple precautions and avoiding areas where grizzly bears are known to be present.

The results of the study are being used to assist the Grizzly Bear Outreach Project in determining if and how grizzly bears should be reintroduced into Washington state. The study measured residents' attitudes and opinions prior to the project, and another survey will be conducted by Responsive Management this spring to determine progress.



# The Public and Deer Management in Georgia



ILLUSTRATION BY TODD TELANDER

A study to determine the opinions and attitudes of the general population, hunters, and large landowners regarding deer management in Georgia was conducted by Responsive Management for the Georgia Department of Natural Resources. The study entailed a telephone survey of Georgia residents, licensed hunters, and landowners who own at least 100 acres.

Most commonly, Georgia residents described their feelings about deer positively, saying that they enjoy seeing and having deer around. Substantial percentages, however, said they enjoy seeing deer but worry about the problems they cause. Finally, small percentages regard deer as a nuisance, with landowners being much more likely to regard deer as a nuisance.

Georgia residents also had positive opinions of the current deer population. While respondents, in general, thought the deer population in their county had grown over the past 5 years, a majority of respondents thought the deer herd in Georgia was very or somewhat healthy (74% of the general population, 85% of hunters, and 79% of landowners), and majorities of the general population (51%) and hunters (59%) thought the deer population in their county was about the right size.

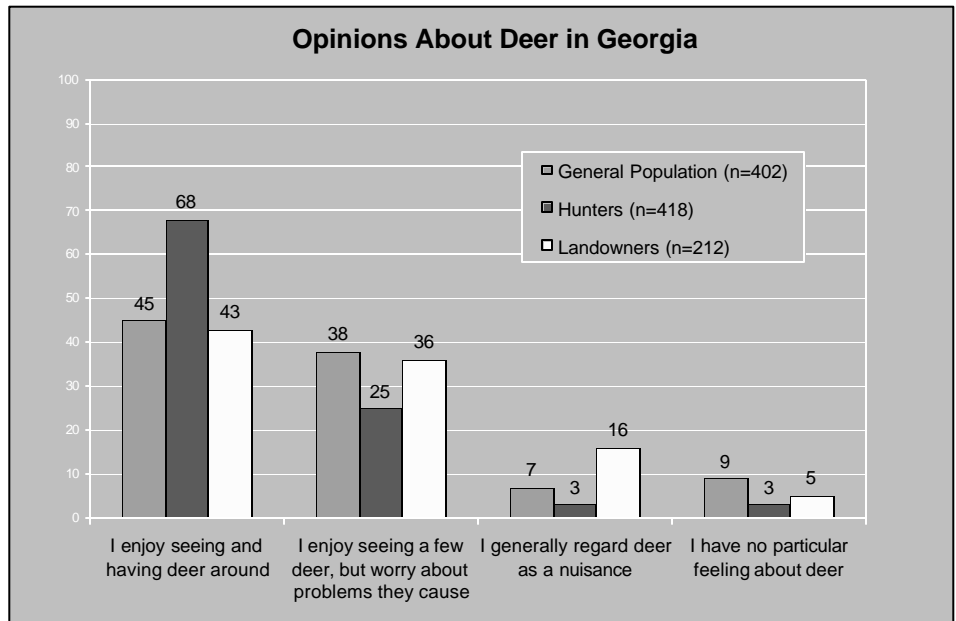
In addition to their positive feelings toward deer, respondents in

Georgia placed a high value on deer management: overwhelming majorities of the general population (89%), hunters (96%), and landowners (88%) said knowing that deer populations are being properly managed in Georgia was very or somewhat important to them. All three groups of respondents overwhelmingly supported deer hunting as a way to manage deer populations and supported controlling deer in urban and suburban areas.

While there was no wide agreement on the method for controlling deer in urban and suburban areas, most respondents did, however, think scientific information and the professional judgment of DNR biologists should be important

factors in making decisions about deer management.

Although small percentages of Georgia residents regard deer as a nuisance, substantial percentages reported that they or someone from their household had a collision with a deer in the past 2 years. Furthermore, those respondents who said that they thought the deer population in their county should be decreased most commonly cited automobile collisions with deer as a reason. Among landowners, a large percentage cited damage to crops as a reason.



## The Human Dimensions of Black Bears in Maryland

A primary objective of the 10-year Maryland black bear management plan is to maintain Maryland's black bear population at a level compatible with land use goals and acceptable social limits. Toward this objective, the Maryland Department of Natural Resources (MDNR) contracted Responsive Management to conduct a study to determine residents' opinions

on black bear management in Maryland, including a regional analysis.

For the study, survey respondents were asked questions about their contacts and experiences with black bears, attitudes toward black bears, strategies to avoid black bear nuisance behavior, and their opinions on various management tools.

In general, Maryland residents reported knowing very little about

black bears in Maryland.

A majority of Maryland residents supported the DNR's use of repellents in various situations. Using repellents for black bears that threaten human safety in Maryland held the most support (93%). Residents showed a fair amount of support for depredation permits for black bears that cause damage to livestock or pets (57%) and to personal property or crops (44%).

# Recent Projects by Responsive Management

## Agency / Organization Constituent Studies and Surveys

- ✓ Arizona Residents' Opinions on the Arizona Game and Fish Department and Its Activities
- ✓ Public Opinion on and Attitudes Toward Fish and Wildlife Management in the 16 Southeastern Association of Fish and Wildlife Agencies (SEAFWA) States
- ✓ Public Opinion on Fish and Wildlife Management Issues and the Reputation and Credibility of Fish and Wildlife Agencies in the Northeast United States
- ✓ Fish and Wildlife Professionals' Opinions on the SEAFWA Annual Conference
- ✓ The Attitudes of Agency Staff, Stakeholders, and the General Public Regarding the Strategic Direction of the Georgia Department of Natural Resources
- ✓ Aroostook Band of Micmacs and Houlton Band of Maliseets Integrated Resources Management Plan Survey

## Coastal Resources

- ✓ National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center Triennial Customer Survey
- ✓ Coastal Community Professionals' Requirements for In-Situ Chlorophyll Fluorometers
- ✓ An Evaluation of the NOAA Coastal Services Center Coastal Resource Management Surveys
- ✓ Delaware National Estuarine Research Reserve Market Inventory and Needs Assessment
- ✓ Assessment and Market Inventory for the Jacques Cousteau National Estuarine Research Reserve
- ✓ Constituent Awareness of the Atlantic Coastal Cooperative Statistics Program
- ✓ Maryland Residents' Knowledge of and Attitudes Toward the Chesapeake Bay

## Funding / Economics

- ✓ Kansas Residents' Opinions and Attitudes Toward Alternative Funding

- ✓ Washington Dedicated Funds Survey
- ✓ Attitudes Toward Alternative Fish and Wildlife Funding in Wyoming
- ✓ Spring Turkey Hunting and Economics in the U. S.
- ✓ Wyoming Deer, Elk, and Antelope Expenditure Study
- ✓ Economic Impact Analysis of Nonconsumptive Wildlife-Related Recreation in Arizona

## Employee Surveys

- ✓ Maine Department of Inland Fisheries and Wildlife Employees' Survey
- ✓ Employee Attitudes Toward the Arizona Game and Fish Department Annual Employee Survey

## Wildlife and Natural Resources

- ✓ San Diego County Residents' Attitudes Toward Mountain Lions
- ✓ Wyoming Residents' Attitudes Toward Wolves and Wolf Management
- ✓ Attitudes Toward Manatees
- ✓ Public Attitudes Toward Black Bear Management in Maryland
- ✓ Skagit and Whatcom County, Washington, Residents' Attitudes Toward Grizzly Bears
- ✓ New Hampshire Residents' and Hunters' Opinions on the Status and Management of Big Game Populations
- ✓ Attitudes Toward Threats to California Condors
- ✓ Delaware Farmers', Hunters', and Residents' Attitudes Toward Deer Management Issues in Delaware
- ✓ Arizona Residents' Attitudes Toward Nongame Wildlife
- ✓ Arizona and New Mexico Residents' Attitudes Toward the Mexican Wolf
- ✓ Urban Wildlife and Arizonians

## Trapping

- ✓ Attitudes Toward Best Management Practices
- ✓ Ownership and Use of Traps by Trappers in the United States in 2004

## Hunting and Fishing

- ✓ Factors Related to Hunting and Fishing Participation Among the Nation's Youth
- ✓ Issues Related to Hunting and Fishing Access in the United States
- ✓ Indiana Hunting and Fishing License Duplication Study
- ✓ Hunting and Fishing in Wilderness Areas in Idaho

## Hunting

- ✓ Factors Related to Hunting Participation in Pennsylvania
- ✓ South Carolina Hunter Harvest Survey
- ✓ New Hampshire Lapsed Hunter Survey
- ✓ Behavioral, Attitudinal, and Demographic Characteristics of Spring Turkey Hunters
- ✓ The Future of Hunting and the Shooting Sports: Research Strategies to Increase Participation and Retention
- ✓ The Impacts of Crossbow Hunting on Hunter Recruitment
- ✓ Five-Year Hunting Participation and Shooting Trends Study (2000 – 2004)
- ✓ An Inventory and Assessment of State and Public Hunting Land Needs
- ✓ Western Washington Pheasant Hunters' Opinions on Proposed License Changes
- ✓ Access to Federal Hunting Lands in Colorado

## Shooting and Archery

- ✓ Expenditures of Participants in the Shooting Sports
- ✓ Firearm-Related Accidents in the United States: Trends Analysis
- ✓ Profile of the Shooting Sports
- ✓ Women's Participation in the Shooting Sports
- ✓ A Study of the Receptivity of the Creation of a New Shooting Range

## Fishing

- ✓ Colorado Lapsed and Returning Anglers' Attitudes Toward Fishing
- ✓ Anglers Attitudes Toward Fisheries Management in Lake Russell

# Recent Projects by Responsive Management

- ✓ Washington State Anglers' Attitudes Toward Fisheries Management
- ✓ New Jersey Anglers' Participation in Fishing, Harvest Success, and Opinions on Fishing Regulations
- ✓ South Carolina Fishing License Holders' Opinions on and Attitudes Toward Freshwater Fisheries Management
- ✓ New Hampshire Angler Survey: Resident Anglers' Participation in and Satisfaction with Fishing and Their Opinions on Fishing Issues
- ✓ Resident Participation in Freshwater and Saltwater Sport Fishing in Georgia
- ✓ Characteristics, Behaviors, and Attitudes of South Carolina Marine Anglers
- ✓ South Carolina License Duplication Study
- ✓ Washington State Sturgeon Anglers' Opinions on Potentially Lowering the Sturgeon Limit
- ✓ Public Opinion on Management Options for Recreational Fishing of Early Run King Salmon on the Kenai and Kasilof Rivers, Alaska

## Boating

- ✓ Indiana Residents' and Boaters' Attitudes Toward Boating in Indiana
- ✓ Georgia Boaters' Attitudes and Opinions Regarding Boating in Georgia
- ✓ Kansas Residents' Participation in, Opinions on, and Attitudes Toward Boating in Kansas
- ✓ An Assessment of State Recreational Boating Safety Program Needs
- ✓ Attitudes Toward Boating Safety, the Use of Personal Flotation Devices (PFDs), and Various Messages that Communicate the Benefits of Wearing PFDs

## Land Management

- ✓ Private Landowners' and Hunters' Opinions on the Private Lands Wildlife Management Area Program
- ✓ North Dakota Residents' Attitudes Toward Property Rights

- ✓ Washington State Hunters' and Landowners' Opinions on the Private Lands Wildlife Management Area Program (Follow-up)

## Park Users

- ✓ The Attitudes of Washington State Residents Regarding Alternative Funding for the State Parks System
- ✓ Regional Residents' Opinions on Management Issues at Point Reyes National Seashore
- ✓ Kansas Residents' Opinions on and Attitudes Toward the Programs and Activities of the Department of Wildlife and Parks

## Outreach / Education / Communications / Marketing

- ✓ Inventory of and Needs Assessment for Biodiversity Education Programs in Delaware
- ✓ National Archery in the Schools Program (NASP) Evaluation and Survey
- ✓ Marketing and Communication Strategies for the U.S. Fish and Wildlife Service Chesapeake Bay Field Office
- ✓ An Evaluation of Possible Support for the Conservation Communication Team of the International Association of Fish and Wildlife Agencies
- ✓ A Review of the Alliance for Coastal Technologies' Website
- ✓ Attitudes Toward and Awareness of the Arizona Game and Fish Department's Outreach Programs
- ✓ A Marketing Plan for the Freshwater Fisheries Section of the South Carolina Department of Natural Resources
- ✓ An Analysis of the Georgia Department of Natural Resources' Outreach Efforts to Increase Fishing License Sales Using the *Water Works Wonders* Campaign Materials

## Law Enforcement

- ✓ Attitudes Toward Conservation Law Enforcement in Georgia

## Water Resources

- ✓ Delaware Residents' Attitudes Toward and Behaviors that Affect Water Quality
- ✓ Understanding the Georgia Public's Perception of Water Issues and the Motivational Messages to Which They Will Respond
- ✓ Survey of Residents of the Pike Creek Watershed Regarding Attitudes Toward and Behavior Affecting Water Quality
- ✓ Residents' Attitudes Toward the Appoquinimink Watershed

## Outdoor Recreation

- ✓ A Recreation Study for the City of Austin and Travis County, Texas
- ✓ Delaware Residents' Outdoor Recreation Use Patterns and Needs: SCORP Survey and Report
- ✓ Recruitment and Retention Strategies for Women Involved in Outdoor Recreation



ILLUSTRATION BY PETER RING

## Research for Non-Governmental Organizations and Private Businesses

Recently, Responsive Management has also conducted numerous private marketing and communications research for many of the nation's top conservation and sportsmen's organizations and agencies, including Ducks Unlimited, The Rocky Mountain Elk Foundation, Safari Club International, The National Shooting Sports Foundation, and the Izaak Walton League of America. Responsive Management has also conducted market research and developed communications for numerous private natural resource and outdoor recreation businesses, both retail and manufacturers.

# Anglers and Fishing Participation

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Over the past year, Responsive Management has conducted several studies measuring participation in fishing and anglers' attitudes toward and opinions on a variety of fishing issues. Most of these studies are available for download in pdf format at [www.responsivemanagement.com](http://www.responsivemanagement.com).

## **New Hampshire Angler Survey: Resident Anglers' Participation in and Satisfaction with Fishing and Their Opinions on Fishing Issues**

A telephone survey was conducted to assess New Hampshire resident anglers' participation in and satisfaction with fishing, their license purchasing behaviors, their typical fishing behaviors, and their likelihood to purchase various types of fishing licenses at various costs. Results of the study included:

- New Hampshire anglers, both active and lapsed, are also likely to participate in camping, motor-boating, target/sport shooting, and hunting.
- Majorities of active anglers generally travel less than 30 miles one-way to freshwater fish in New Hampshire.
- The freshwater species for which anglers most commonly fished were trout, bass, and, to a lesser extent, landlocked salmon, and these are the freshwater species for which anglers most *prefer* to fish.
- In comparison to the results of a similar study conducted by Responsive Management in New Hampshire in 1996, brook and rainbow trout have become less popular, while both types of bass have become more popular.
- In both surveys, the top six species for which anglers fished are the four types of trout and two types of bass.
- Although the percentages of anglers who *prefer* to fish for bass are roughly the same for the 1996 and 2004 studies, fishing for bass increased between the 1995 and 2003 seasons.

## **Colorado Lapsed and Returning Anglers' Attitudes Toward Fishing\***

This study was conducted for the Colorado Division of Wildlife (DOW) to determine the habits of Colorado anglers, particularly their motivations for purchasing a Colorado fishing license or the disincentives that contributed to their decisions to not purchase a Colorado fishing license in any particular year. The study entailed a telephone survey of individuals who were identified as ex-anglers or returning anglers.

\*Please note: This report has not yet been released.

## **South Carolina Fishing License Holders' Opinions on and Attitudes Toward Freshwater Fisheries Management and the South Carolina Department of Natural Resources**

This telephone survey of South Carolina licensed anglers was conducted to determine participation in various types of fishing, fishing habits, and attitudes toward and opinions on fisheries management and the South Carolina Department of Natural Resources (SCDNR). The report also presented trend data from previous Responsive Management surveys conducted for the SCDNR. Results of the study included:

- A majority of active anglers practice catch-and-release: 53% mostly release the fish they catch, 29% mostly keep the fish they catch, and 18% keep or release about equally.
- 11% of active anglers had participated in a freshwater fishing tournament in the past 12 months.
- Active anglers travel a variety of distances to fish in South Carolina and can be roughly divided into quarters: 23% of anglers travel

fewer than 10 miles to fish, 24% travel from 10 – 25 miles, 23% travel from 25 – 50 miles, and 28% travel more than 50 miles to fish.

- Active South Carolina anglers most typically spent from \$16 to \$30 on an average fishing trip in South Carolina (30% spent this amount). However, substantial percentages spent from \$31 to \$99 (24%) or \$100 or more (22%).

## **Resident Participation in Freshwater and Saltwater Fishing in Georgia**

This study was conducted for the Georgia Department of Natural Resources (GDNR) to determine the number of residents who participated in freshwater and saltwater sport fishing in Georgia within the previous 12 months, thereby allowing an equitable allocation of funding for freshwater and saltwater fisheries programs. This study builds on similar studies conducted in Georgia in 1994 and 1999. Results were calculated using two methodologies, one using households as the unit of analysis and the other using people as the unit of the analysis. Both methods of calculation demonstrated considerably more participation in freshwater fishing than in saltwater fishing in Georgia.

Results using households as the unit of analysis included:

- 19% of households in Georgia include at least 1 person who freshwater fished, 6% of households include at least 1 person who saltwater fished, and 5% of households include at least 1 person who both freshwater and saltwater fished within the previous year.
- Single-count and double-count methods were used to more

accurately account for anglers who both freshwater and saltwater fished. In the “single-count” method, 84% of anglers freshwater fished and 16% saltwater fished. In the “double-count” method, 79% of anglers freshwater fished and 21% saltwater fished.

Results using people as the unit of analysis included:

- 20% of Georgia residents freshwater fished in Georgia in the previous year, 6% of Georgia residents saltwater fished in Georgia in the previous year, and 5% of Georgia residents both freshwater and saltwater fished in Georgia in the previous year.
- In the “single-count” method, 84% of anglers freshwater fished and 16% saltwater fished. In the

“double-count” method, 77% of anglers freshwater fished and 23% saltwater fished.

### Factors Related to Hunting and Fishing Participation Among the Nation's Youth

This study was the first national study on youth attitudes toward wildlife and hunting and fishing to be conducted in almost 20 years. The project consisted of a literature review on demographic trends and participation in outdoor activities, as well as an analysis of the stages of cognitive development in youth. The study also entailed a series of nationwide focus groups and a nationwide telephone survey of youth ages 8-18. The results of this study related to fishing included:

- Numbers of participants in some outdoor recreation activities among youth are declining, including freshwater fishing and hunting.
- A large majority (86%) of youth approve of legal fishing.
- A large majority (85%) of youth are interested in going fishing, with half (50%) of all youth being very interested.
- A majority (75%) of youth anglers want to fish more than they currently do.
- Youth overwhelmingly agree (90%) that fishing is a safe recreational activity.
- A majority (77%) of youth think their peers think that fishing is a “little cool” or “very cool.”
- Youth hear more good things than bad things about fishing.

## Fishing and Children

According to results from Responsive Management’s recent study on public opinion on fish and wildlife management issues for the NCIEA (please see page 4 for more information), households that have children are more likely to have a member go fishing than households without children.

Within the past 5 years, have you or someone in your household gone fishing?  
 (“Don’t know” responses excluded.)

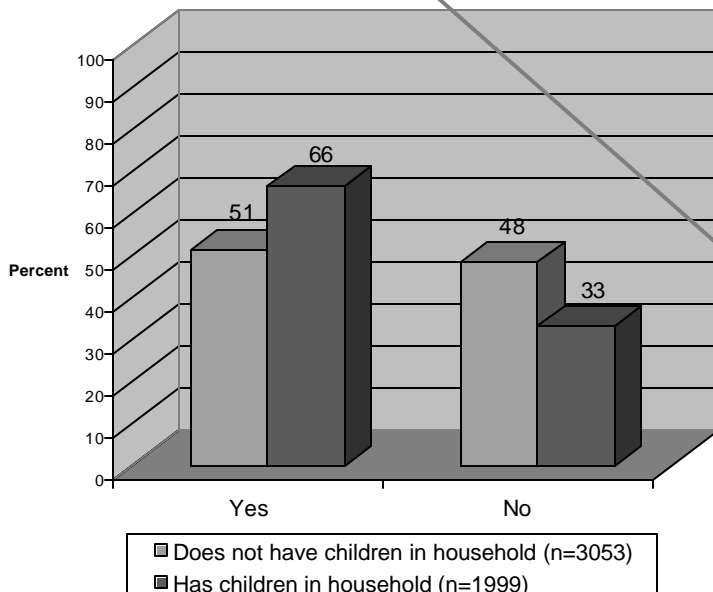


ILLUSTRATION BY PETER RING

# Hunting, Hunters, and Shooters

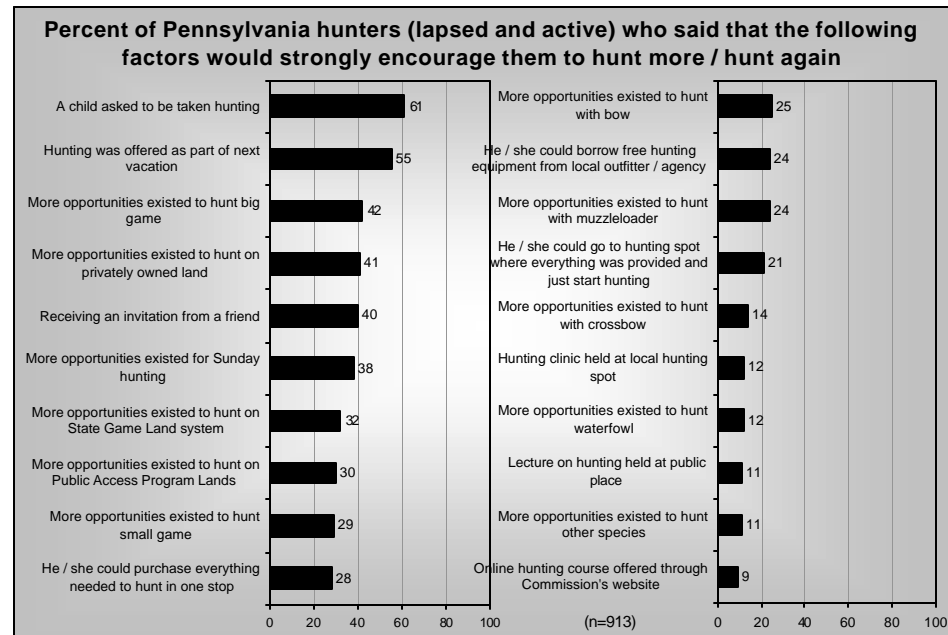
## Factors Related to Hunting Participation in Pennsylvania

Pennsylvania, like many states in the U.S., has experienced a decrease in hunting participation over the past two decades. Federal Aid data show that the number of hunting licenses purchased in Pennsylvania has decreased from 1,274,763 in 1980 to 1,017,802 in 2003.

Responsive Management recently conducted a study for the Pennsylvania Game Commission to determine hunters' level of participation in hunting, their motivations for and satisfaction with hunting, reasons for hunting desertion, and their knowledge of and ratings of Commission programs. The study included a series of focus groups and a telephone survey of hunters and ex-hunters.

While numerous important and salient findings emerged, two factors were most evident: an aging hunting population and the need for enhanced communications.

While numerous recommendations were made to the Pennsylvania Game Commission, the following were considered the most pressing:



- The age structure of Pennsylvania hunters needs to be studied in-depth. This study revealed an aging hunting population in Pennsylvania. This aging hunting population could be vulnerable to a dramatic decline in hunting participation when this cohort stops hunting due to age or illness within the next 10 to 20 years. In fact, personal health/age was the top reason survey respondents said they did not plan to hunt in the future.

- Efforts to maintain hunting participation among Pennsylvania hunters should focus on hunter recruitment, not hunter retention. In many Responsive Management state hunting studies, retention of current hunters emerges as a more important issue than hunter recruitment. For Pennsylvania, however, retention does not appear to be as important as recruitment.
- Communication is essential to successfully address other major factors affecting hunting participation and satisfaction. Other factors affecting hunting participation and satisfaction in Pennsylvania included work obligations, a perceived lack of game, a perceived lack of access to hunting land, and a lack of Sunday

hunting opportunities. While there were both social-psychological (perceptual) and resource-related (actual resource limitations) affecting hunting participation in Pennsylvania, both types of factors can be successfully addressed with targeted messages and campaigns.

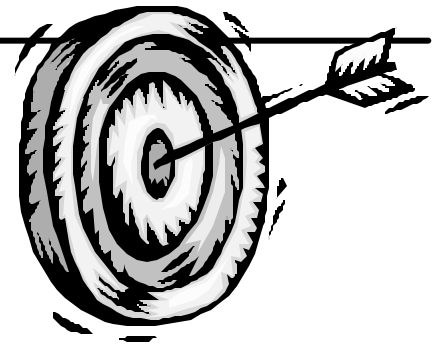
The following additional recommendations were also made:

- Acknowledge and address work obligations, which was the top factor that took away from hunting satisfaction, in recruitment and promotional campaigns.
- Increase communications to promote ethical hunting behavior. Poor hunter behavior was a major dissatisfaction with many Pennsylvania hunters.
- Increase awareness of the Pennsylvania Game Commission's programs. Low levels of knowledge of the Commission's programs for hunters emerged.
- Re-create what happens naturally in family settings with recruitment programs.
- Work with state tourism organizations and private business owners to offer hunting packages.
- Enhance e-mail and Web site efforts.



ILLUSTRATION BY PETER RING

# National Archery in the Schools Program Assessment



The National Archery in the Schools Program is a 2-week course designed to teach Olympic-style target archery in grades 6 – 8. Course content covers archery history, safety, technique, equipment, mental concentration, and self-improvement. Although the archery program has been added to the physical education curriculums in several states, this pilot was conducted in Kentucky where the program was initiated and where many schools have incorporated the 2-week course into their physical education classes in the past 1 to 3 years.

Responsive Management conducted this study for the Archery Trade Association (ATA) to help assess the National Archery in the Schools Program and provide information to make it even more effective. The study measured the effect the program has on students' attitudes toward archery, the constraints to archery participation before and after the course, as well as active student participation in archery before and after the program.

Printed questionnaires were mailed to physical education teachers certified to teach the archery program in Kentucky schools. The teachers distributed the questionnaires to students and returned completed questionnaires to Responsive Management.

Overall, results show that the archery course has been successful in Kentucky. Students not only liked the course, but were encouraged to continue participating in archery, as well as bowhunting, after the 2-week course ended.

Many students reported a positive effect on their self-esteem: a majority said that they felt very good about themselves while taking the course, and a majority said that they felt better about themselves upon finishing the course.

Subsequent to taking the course, students were more likely to show interest in and participate in archery and bowhunting. Comparisons of rates of participation and interest prior to and after taking the archery course show gains for archery and bowhunting.

In addition to increasing actual participation in archery and bowhunting, the course appears to mitigate some of the perceived constraints to archery and bowhunting participation. After the course, lower percentages of students said they did not have time to participate, they did not have someone to go with, they did not have enough information, they did not know where to go, they thought it was too dangerous, and their parents' wouldn't let them go.

An important constraint to participation is the lack of afterschool archery clubs or teams. Forty-eight percent of students indicated that their school does not have an archery club or team, and about half of those students expressed interest in joining a club or team.

Responsive Management is conducting another study for the ATA this year to determine participation in and behaviors related to crossbow hunting.

## Additional Responsive Management Research Focused on Hunting



ILLUSTRATION BY PETER RING

### Focus on the Woman: Recruitment and Retention Strategies and Tactics for Women Involved in Outdoor Recreation

This project identifies perceived and actual barriers experienced by women, and potential incentives that may be used to recruit and retain their involvement in outdoor recreation with the goal of increasing license revenues and sportsmen's numbers. An analysis of primary and secondary market research data, focus groups and a telephone survey are being completed. This study is being conducted in cooperation with the National Wild Turkey Federation.

### New Hampshire Lapsed Hunter Survey

This study was conducted to determine the attitudes and motivations of lapsed hunters, including their satisfactions and dissatisfactions with hunting, their constraints and barriers to continued and increased hunting participation, and message themes and programs that will move lapsed hunters to resume hunting in New Hampshire.

### Factors Related to Hunting and Fishing Participation Among the Nation's Youth

This study consisted of a literature review on demographic trends and participation in outdoor activities, as well as an analysis of the stages of cognitive development in youth. The study also entailed a series of nationwide focus groups and a nationwide telephone survey of youth ages 8-18. This was the first national study on youth attitudes toward wildlife and hunting and fishing to be conducted in almost 20 years.

# Boating

## Examining the Attitudes of Motorboat Operators and Personal Watercraft Users in Indiana

In 2004, there were 213,305 registered boaters in Indiana. Responsive Management recently conducted a study for the Indiana Department of Natural Resources (IDNR) to determine the participation patterns, behaviors, opinions, and attitudes of the general public and registered boaters in Indiana regarding boating locations, regulations, types of boats used and owned, satisfaction with boating, motivations for boating and barriers to boating participation, boating access, boating safety, boating expenditures, and the IDNR's boating programs and activities. The study entailed two telephone surveys. One telephone survey was of the general population, and the second survey was of registered boaters in Indiana.

The survey indicated that 38% of the Indiana general population has participated in boating or a boating-related activity in the previous 12 months. However, registered boaters were more likely than general population boaters (which includes boaters who have not personally registered a boat) to say they boat to fish, while the latter were more likely to say they boat for relaxation.

Majorities of both the general population (86%) and registered boaters (78%) perceived that boating on Indiana's waters is safe. However, registered boaters were somewhat more likely to think Indiana's waters are unsafe and to observe unsafe operation by other boaters,

especially unsafe operation of personal watercraft.

Alcohol is perceived to be the main reason that people have boating accidents, as is reckless or careless operation of watercraft. Boaters most commonly said that the IDNR could make waters safer by maintaining a more visible presence on Indiana's waterways. Furthermore, support was overwhelming for a change in legislation that would require boat occupants aged 12 and younger to use a personal flotation device (PFD) at all times: 83% of boaters and 91% of non-boaters supported the requirement.

Although support for PFD use among children 12 years old and younger was high, current PFD use among boaters of all ages was not as impressive: 38% of boaters said that they and their passengers usually use a PFD at all times, but 62% use a PFD only under certain conditions, if at all. Finally, 11% said they and their passengers never use a PFD.

A majority of boaters observed IDNR's law enforcement / conservation officers while boating: 58% said they see them very often or somewhat often. On the other hand, 40% said they see IDNR officers rarely or never. Roughly a quarter of boaters (26%) have

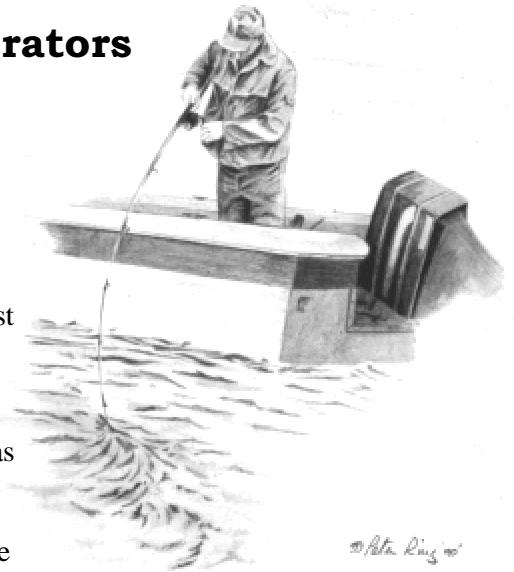
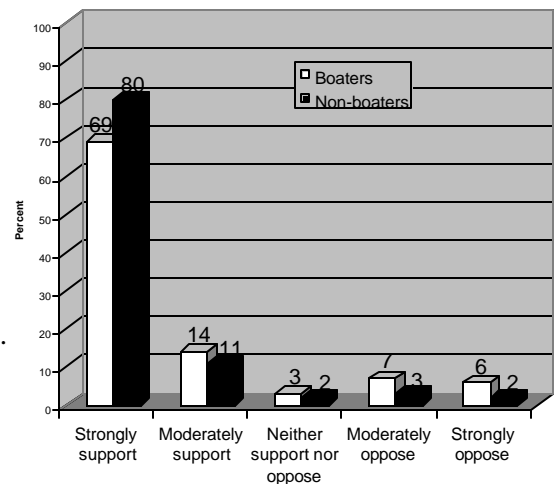


ILLUSTRATION BY PETER RING

Percent who support or oppose a change in legislation that would require boat occupants aged 12 and younger to use a PFD at all times.



had personal contact with an IDNR officer while on the water in the past 12 months. Most commonly, that contact was for a fishing license check (37%) or a boating equipment check (20%).

Finally, boaters were asked six questions regarding whether the IDNR should expend more or less effort on certain activities. Majorities said the IDNR should expend *much* more effort on controlling boaters under the influence of alcohol or drugs (57%) and controlling reckless operation (55%). A third (33%) said *much* more effort should be made enforcing personal watercraft laws and regulations.

ILLUSTRATION BY PETER RING

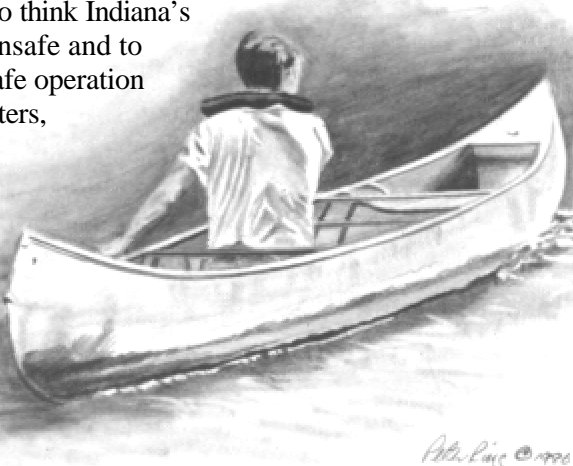


Illustration by Peter Ring © 2004



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## PFD Use Among Boaters and Media Effectiveness Encouraging PFD Use

Each year more than 62 million Americans take to the nation's waterways to participate in recreational boating. From canoes and kayaks to rowboats, personal watercraft, speedboats, and luxury boats, Americans spend more than 500 million days boating on the Nation's waters each year. And while boating has always been a popular activity, recreational boating participation in the United States has increased dramatically during the past decade and is expected to continue to increase.

With the passage of the Federal Boating Safety Act of 1971 and the creation of the Aquatic Resources (Wallop-Breaux) Trust Fund in 1984, the federal-state partnership is estimated to have saved more than 29,000 lives. Recreational boating safety programs are having a positive effect. For example, in 1973, boating-related fatalities peaked at 1,750, while in 2003, there were only 703 boating-related fatalities, even though the number of boats and boaters has increased substantially since 1973.

Unfortunately, far too many recreational boating trips still end in tragedy. Each year, there are still hundreds of boating-related fatalities on the Nation's waterways, and each year a discouragingly large number of those fatalities are preventable.

Responsive Management recently conducted a telephone survey and focus groups to determine the effectiveness of various media and messages encouraging the use of personal flotation devices (PFDs). The study was conducted for BoatUS.

The survey sample was chosen to be representative of boating participants, including anglers, boat owners, and participants who did not own a boat. Four states were strategically chosen to ensure that a

good cross section of the nation would be included: Washington, Georgia, New Jersey, and Indiana.

Regarding knowledge of boating safety and use of PFDs, most boaters said they know a great deal or a moderate amount about how to boat safely (94%) and when a PFD should be worn (95%). However, more than a fourth of boaters (26%) said they rarely or never wear a PFD while boating. Half of boaters wear a PFD only sometimes. The most common reason for never or rarely wearing a PFD was that they were uncomfortable or restrict movement.

Although most boaters (96%) agreed that children should be required to wear a PFD, support for requirements for adults to wear a PFD were conditional. While an overwhelming majority (95%) agreed that PFDs should be worn while boating in bad weather conditions, only 55% agreed that it should be required while boating in good weather conditions.

Measuring the effects of media encouragement to use PFDs revealed a majority of boaters (65%) had not seen any information or advertisements regarding the use of PFDs. Of those who had seen information or advertisements, only 14% said the information influenced them to start wearing a PFD.

Television was the top medium for encouraging both boating in general and PFD use. Of those who had seen information or advertisements encouraging boating and PFD use, they most commonly cited television as the source. Television was also the medium that boaters said would be most effective in encouraging boating, and it was among the top two types of media that boaters said would be most effective in encouraging PFD use (boating manuals was the other).

## Georgia Boaters' Attitudes and Opinions

This study was conducted for the Georgia Wildlife Resources Division to determine Georgia registered boaters' attitudes and opinions on a variety of boating and law enforcement issues.

Satisfaction with boating in Georgia in the past 2 years was quite high: 94% of respondents were satisfied with their boating experiences.

A large majority of boaters (82%) think boating on Georgia's waters is safe; 10% think it is dangerous. Issues of concern among boaters in Georgia are similar to issues of concern among boaters in Indiana (see "Examining the Attitudes of Motorboat Operators" on opposite page). The greatest issues of concern for Georgia boaters were reckless operation of personal watercraft, intoxicated boaters, speeding boaters, and reckless operation of boats other than personal watercraft.

Georgia boaters were satisfied with Conservation Rangers and their efforts. A strong majority of boaters (61%) said that Conservation Rangers have had a positive impact on their boating experiences in Georgia over the past 2 years; only 5% said that Conservation Rangers have had a negative impact. Georgia boaters were also satisfied (85%) with Conservation Rangers' efforts on the water over the past 2 years.

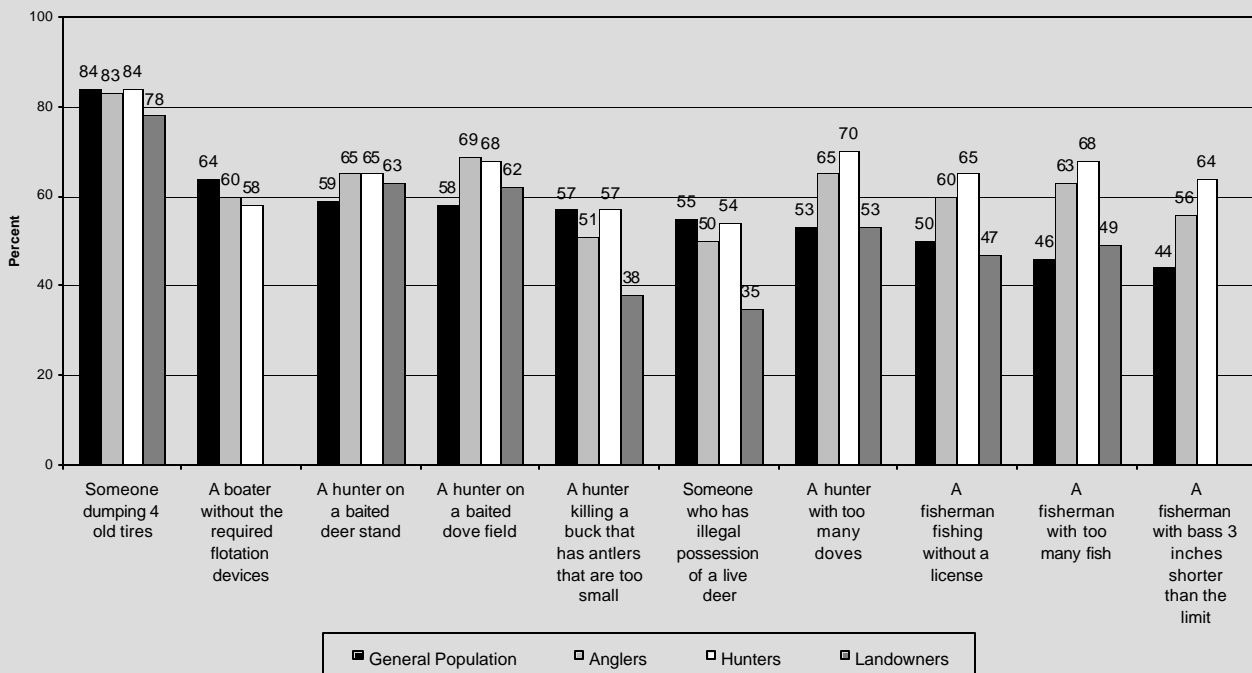
The majority (79%) of Georgia boaters who have had contact with a Conservation Ranger in Georgia in the past 2 years said their most recent contact was a positive experience, and only 5% said it was a negative experience. Also, an overwhelming majority (96%) of those who had contact with a Conservation Ranger agreed that they had been treated fairly by the ranger, with 85% strongly agreeing.

# Opinions on Law Enforcement Activities in Georgia

Responsive Management recently conducted a study for the Georgia Department of Natural Resources, Wildlife Resources Division, to assess the opinions and attitudes of Georgia residents, anglers, hunters, and landowners toward law enforcement activities of the Division, including opinions on enforcement priorities and strategies, as well as attitudes toward enforcement actions for violations. Significant results from the study are listed below.

- The most common perceptions of the duties of Conservation Rangers include general law enforcement and public safety, protecting wildlife and the environment, and enforcing hunting, fishing, and boating laws.
- Majorities of anglers, hunters, landowners, and the general population perceive the Conservation Ranger’s job as dangerous.
- Ratings of Conservation Rangers’ overall law enforcement efforts were positive, with a majority of anglers, hunters, landowners, and the general population rating the efforts as excellent or good.
- A majority of each group of respondents agreed that Georgia has maintained a sufficient Conservation Ranger presence over the past 2 years. However, the general consensus is that Georgia should increase its Conservation Ranger presence.
- The common perception is that a lot of people knowingly violate hunting, fishing, and boating laws and that violators are rarely or only sometimes caught. The laws most commonly thought of as being violated include hunting out of season; exceeding bag or creel limits; hunting or fishing without a license or required stamps; spotlighting; taking fish that are too small; boating under the influence; reckless operation of boats, including speeding; and not having enough personal flotation devices or not having them accessible.
- When asked to rate the importance of various law enforcement strategies, respondents gave the highest ratings of importance for high-visibility patrols.
- Most commonly, respondents indicated that Conservation Rangers should have the same authority on private lands as they do on public lands in the enforcement of hunting, fishing, and boating laws, although substantial percentages of residents, anglers, and hunters said that Conservation Rangers should have less authority on private lands.
- Substantial percentages (ranging from 22% to 44%) of residents, anglers, hunters, and landowners had witnessed what they thought were violations of a hunting, fishing, boating, or wildlife law. However, most of those who witnessed a possible violation did *not* report it.
- Opinions on Conservation Rangers’ conduct is positive: overwhelmingly, those who had contact said the most recent contact was positive, that they had been treated fairly, and that Conservation Rangers are professional, courteous, and knowledgeable. They also indicated that the Conservation Rangers’ uniform is appropriate and not intimidating.

The general population, anglers, hunters, and landowners in Georgia were asked what they thought was an appropriate enforcement action for each of the violations below. The percentages represent those who responded with “arrest” combined with those who responded with “citation.”



# RESPONSIVE MANAGEMENT

**R**ESPONSIVE 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, including Auburn University, Colorado State University, Duke University, George Mason University, Penn State University, Michigan State University, North Carolina State University, Rutgers University, the University of California-Davis, the University of Florida, the University of Montana, the University of New Hampshire, the University of Southern California, Texas Tech University, Virginia Tech, West Virginia University, and others.

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 on specific target audiences, including Hispanics, African-Americans, Asians, women, children, senior citizens, urban, suburban and rural residents, large landowners, and farmers.

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

## **RM conducts:**

- Telephone surveys
- Mail surveys
- Personal interviews
- Park/Outdoor recreation intercepts
- Web-based surveys
- Focus groups
- Needs assessments
- Literature reviews
- Data collection for researchers and universities

## **RM develops:**

- Marketing plans
- Communication plans
- Outreach plans
- Business plans
- Program evaluations
- Policy analyses
- Public relations plans

## **Responsive Management**

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## Trends in Arizona Residents' Opinions on and Attitudes Toward the Arizona Game and Fish Department

This study was conducted on behalf of the Arizona Game and Fish Department (the Department) to assess residents' opinions on and attitudes toward the Department and its activities. The study also included trends analysis for selected questions, based on biennial surveys conducted for the Department in 1992, 1994, 1996, 1998, 2000, and 2002.

The survey quantified residents':

- participation in six outdoor recreation activities,
- awareness of the Department,
- ratings of and needed emphasis on various program areas of the Department,
- observation and reporting of wildlife violations, and
- opinions of credible sources of information on wildlife in Arizona. *See Trends, page 6*

### Overall Wildlife Participation

