

Responsive Management Report



Winter/Spring 2001

"Excellent companies are better listeners" — Tom Peters

Wildlife, Fisheries, Parks and Forests for the 21st Century:

How Natural Resource Agencies and Organizations Are Embracing the New Millennium



A NEW YEAR provides an important symbolic milestone to evaluate the past, make resolutions, set goals and plan for the future. The new millennium marked an even more important milestone and served as a catalyst for many natural resource agencies and outdoor recreation organizations across the nation to assess their present capabilities and to plan for the future.

Different approaches, processes and methodologies were employed by various natural resource agencies

and organizations to assess their strengths, weaknesses and future goals. However, the commonality among all agencies and organizations was a commitment to assessments from both the "inside-out," as well as from the "outside-in."

Assessment from the "inside-out" means an organization takes a detailed look at where it wants to go as an organization, sets realistic goals and measurable objectives, evaluates its mission and undertakes the job of better understanding the organization's in-

ternal attitudes, values and vision for the future.

Many agencies and organizations conducted internal surveys and focus groups of their employees, commissions and boards of directors. Other agencies identified their goals and objectives in terms of what exactly they want to accomplish within the next 10, 20, and even 30 years, given the realities and challenges of limited financial and personnel resources and changing demographics.

Assessing the natural resource or outdoor recreation situation from the "outside-in" means gaining a better understanding of and working with various publics and constituents. Many natural resource

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agencies and organizations conducted assessments for the future from the “outside-in” by beginning to better understand their constituents’ and the general public’s opinions and attitudes toward natural resource and outdoor recreation issues. Resource inventories took the form of supply inventories, goals and needs analyses.

In preparing for the future, important questions need to be asked of an agency’s or organization’s constituents and the public at large. Where do wildlife, fisheries, forests or parks fall along the public priority spectrum when compared to other important state government programs, such as crime prevention, tourism or education? What values do the public hold when it comes to natural resources? What does the public think about the health of wildlife and fisheries populations, parks or forests? What are the public’s knowledge levels and awareness of the agency or organization? Does the agency or organization have credibility among the public? What are the public’s program priorities?



ILLUSTRATION COURTESY OF TODD TELANDER

What are the public’s attitudes toward program funding? Where does the public get its information about natural resources and outdoor recreation activities? What are the constraints to participation in outdoor recreation? What messages resonate with the public?

“Public opinion is everything. With public sentiment, nothing can fail. Without it nothing can succeed. Consequently he who molds public opinion goes deeper than he who enacts statutes or pronounces decisions.”

—Abraham Lincoln

Assessing from the “outside-in” also means reviewing which and how much of various natural, cultural or historical resources are protected, and what the future need will be to meet the demands of a growing and changing population. Which habitats are the most vulnerable to loss through development? Where should new wildlife management areas or parks be located? What are the outdoor recreational activities that will be most in demand in the year 2010? How will changing demographics impact recreational demand? Does the natural, cultural or outdoor recreation supply work as a whole? Where is the system inadequate? Where is it redundant?

The natural resource community’s efforts during the last century were successful. Is there more that needs to be done? Of course, that goes without saying. But the future is bright, and the dawn of a new century is upon us. Day to day, little seems to change in our struggle to preserve what is best about the natural world. But an evaluation of the last century should bring a major sense of accomplishment to each and every

natural resource professional in the nation. In a way, it is a lot like watching your children grow. On a daily basis, they do not seem to change, but one day you see an old photograph and you realize just how much they have grown.

The 20th century was a good one. It brought us Theodore Roosevelt, Aldo Leopold, and Rachel Carson. The 20th century saw the birth of most of the natural resource agencies and organizations we have today and saw millions of acres of land preserved as wildlife management areas, state and national parks and historic sites. The 20th century brought us the Federal Aid in Wildlife Restoration Programs, Everglades and Shenandoah National Park, Chincoteague National Wildlife Refuge and Little Wolf Creek Wildlife Management Area. Elk are more numerous today than at any other time since 1900 and occupy more suitable habitat than ever before. Effective education programs have decreased the number of lives lost each year to hunting and boating accidents. The public remains steadfastly concerned over natural resource issues.

Numerous resource challenges still exist before us. The best approach in preparing for the future is the combination of understanding gleaned from both an “inside-out” and from an “outside-in” analysis. A thorough understanding of an organization’s internal workings placed within the proper context of its external environment makes for the most informed approach to creating policies and strategies for the future. Natural resource challenges sometimes seem overwhelming and there is much to be done in this new century. Yet, as Louis Armstrong sang, “What a wonderful world,” and that world is worth our continued hard work and optimism. 🌲

How the Texas Parks and Wildlife Department is Preparing for the Future

AT THE TURN of the 20th Century, Texas was a rural, sparsely populated state of 3 million people with an average population density of 11 people per square mile. No more. At the turn of this Century, Texas' population had grown to 20 million people with an average population density of 74 people per square mile. Forecasts project that Texas' population will double to 40 million by the turn of the next century.

Texas' increasing population growth coupled with an historically small percentage of public land (4 percent) make comprehensive planning critical to protect the State's natural and cultural resources and to

maintain and enhance outdoor recreation opportunities.

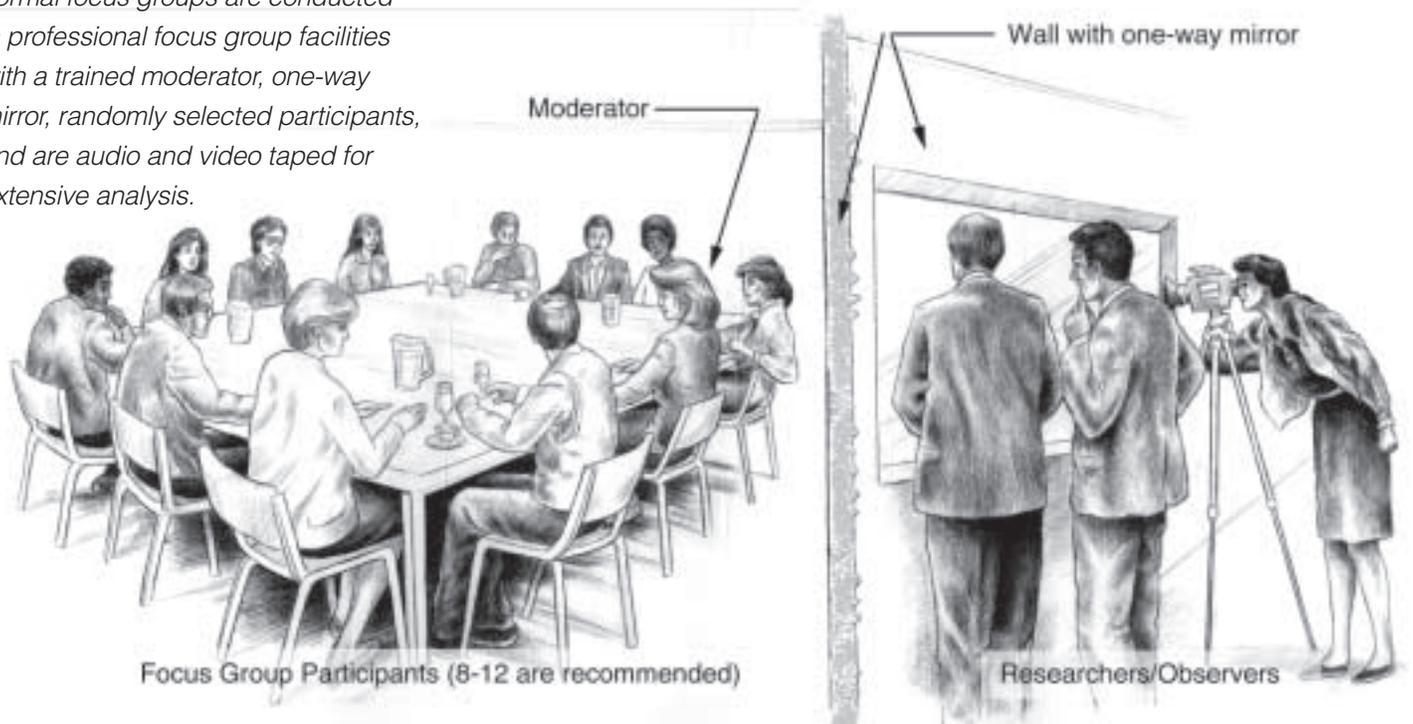
In 2000, the Texas Parks and Wildlife Department (TPW) initiated a major planning project with Texas Tech University, Responsive Management and Loomis Austin, Inc. The overall purpose of the project was to develop a plan to meet the natural and cultural resources and outdoor recreation needs in Texas through the year 2030.

Planning is being accomplished through an assessment of the State's natural, cultural and outdoor recreation needs as well as the needs of the Texas public and the Texas Parks and Wildlife Department's constituents and stakeholders.

Loomis Austin was contracted to conduct a statewide conservation needs assessment for natural and cultural resources and outdoor recreation and to determine the requirements to meet current and future needs. This has been accomplished through: 1) A supply inventory identified through contacts with state and federal agencies and non-profit organizations throughout Texas. 2) A goals analysis developed through an evaluation of programs in other states. 3) A needs analysis accomplished through an evaluation of 245 databases on wildlife, vegetation, population, agriculture and landsat and

See Texas Parks, page 4

Formal focus groups are conducted in professional focus group facilities with a trained moderator, one-way mirror, randomly selected participants, and are audio and video taped for extensive analysis.



Thirteen formal focus groups were conducted by Responsive Management for the Texas Parks and Wildlife Department to gain a better understanding of the Texas public. "Focus groups" used by Responsive Management is not a generic phrase for anything from public meetings to facilitated workshops, but rather professional focus groups using accepted research methodologies. Focus groups define the range of issues and increase the validity of survey instruments.

a correlation with the supply inventory information.

Responsive Management was contracted to conduct a major needs assessment of the Texas public. The objectives of the study were to better understand the attitudes of the Texas public, constituents and stakeholder groups toward 1) resource protection 2) state management of natural and cultural resources and outdoor recreation and 3) attitudes toward TPW programs. Responsive Management's study was also designed to better understand rates of outdoor recreation participation, identify unmet public wants and needs and establish benchmarks to allow the TPW to measure their progress in meeting public needs by comparing attitudes, participation rates and unmet wants and needs at periodic intervals in the future.

The public attitude phase was accomplished in three steps. Step 1 included a review of previous research and internal TPW documents. Step 2 included a series of thirteen formal focus groups with the public and various constituent groups, including, African Americans, hunters, anglers, boaters, urban residents, day park users, overnight park users, Hispanics, ranch owners, large landowners, suburban residents and wildlife viewers. Step 3 consisted of a series of seven telephone surveys of the general population as well as key constituent and stakeholder groups, including anglers (saltwater and freshwater), hunters, boaters, park users (day and overnight), outdoor recreation enthusiasts and landowners who own more than 640 acres.

The results of the focus groups and the quantified surveys clearly indicated that Texas' natural and cultural resources and outdoor recreation are important issues to most Texans. In the general population survey of Texans:

- Ninety-eight percent felt it was very important (72 percent) or somewhat important (26 percent) that people have opportunities to visit state parks.
- Ninety-seven percent stated it was very important (80 percent) or somewhat important (17 percent) to know that wildlife exists in Texas.

“The objectives of the study were to better understand the attitudes of the Texas public, constituents and stakeholder groups...”

- Ninety-seven percent stated it was very important (79 percent) or somewhat important (18 percent) that natural areas exist in Texas for enjoying and experiencing nature.
- Ninety-four percent felt it was very important (73 percent) or somewhat important (21 percent) that fish and wildlife populations be properly managed and conserved.

Overall, natural resource/ecological values were more important to Texans than recreational values, although it is important to note that both were shown to be important issues.

Water resources, including both water quantity and quality, were by

far the most important natural resource and environmental concerns of Texans. It was not only the most important “top-of-the-mind” issue but was also the most important issue in relation to other natural resource and environmental issues facing Texas.

The importance of 22 Texas Parks and Wildlife Department activities as perceived by constituents were measured. Of the 22 activities presented, 18 were rated very important by more than half of the respondents. Each program was rated as either very or somewhat important by more than half of all respondents. Not one of the activities presented was rated as unimportant by a majority of Texans.

The “upkeep and maintenance at state parks” was considered very important (84 percent) by more respondents than any other activity. Law enforcement programs, education programs, protecting threatened and endangered species and managing and preserving places to enjoy and experience nature were also considered very important by a strong majority of Texans.

Numerous other findings were reported, especially as they related to specific constituent and stakeholder groups. For each major group, specific findings on each group's attitudes toward their interests and activities were assessed. Interest in numerous outdoor recreational activities among the general population were identified to assist in projecting future outdoor recreation demands.

All in all, the Texas Parks and Wildlife Department is entering the 21st Century armed with detailed knowledge of both the needs of Texas' natural and cultural resources as well as the needs of the Texas public. 

Future Directions for the Virginia Department of Game and Inland Fisheries

THE VIRGINIA DEPARTMENT OF Game and Inland Fisheries begins 2001 with the addition of several million new dollars.

The additional funds will help keep the department solvent and for the first time infuse a major amount of new funding from non-traditional wildlife constituents.

The 1998 Virginia General Assembly unanimously approved House Bill 38, a measure that allocates up to \$13 million per year in existing sales tax collections to the Virginia Department of Game and Inland Fisheries. The actual amount of new funding the department will receive—estimated to be \$12.3 million in fiscal year 2001—is based on expenditures by anglers, hunters and wildlife watchers as determined by the United States Fish and Wildlife Service’s *National Survey of Fishing, Hunting and Wildlife-Associated Recreation*, conducted every 5 years.

The department’s leaders recognized that a comprehensive plan based upon the opinions of individuals within the agency, Virginians and specific department constituents was necessary to best allocate the new funds derived from House Bill 38.

The department contracted with Virginia Tech, Responsive Management and Dr. Brett Wright of George Mason University to conduct this major study.

The study was conducted in three phases. In the first phase, scoping meetings were conducted with department employees in every administrative region of the Commonwealth and at their

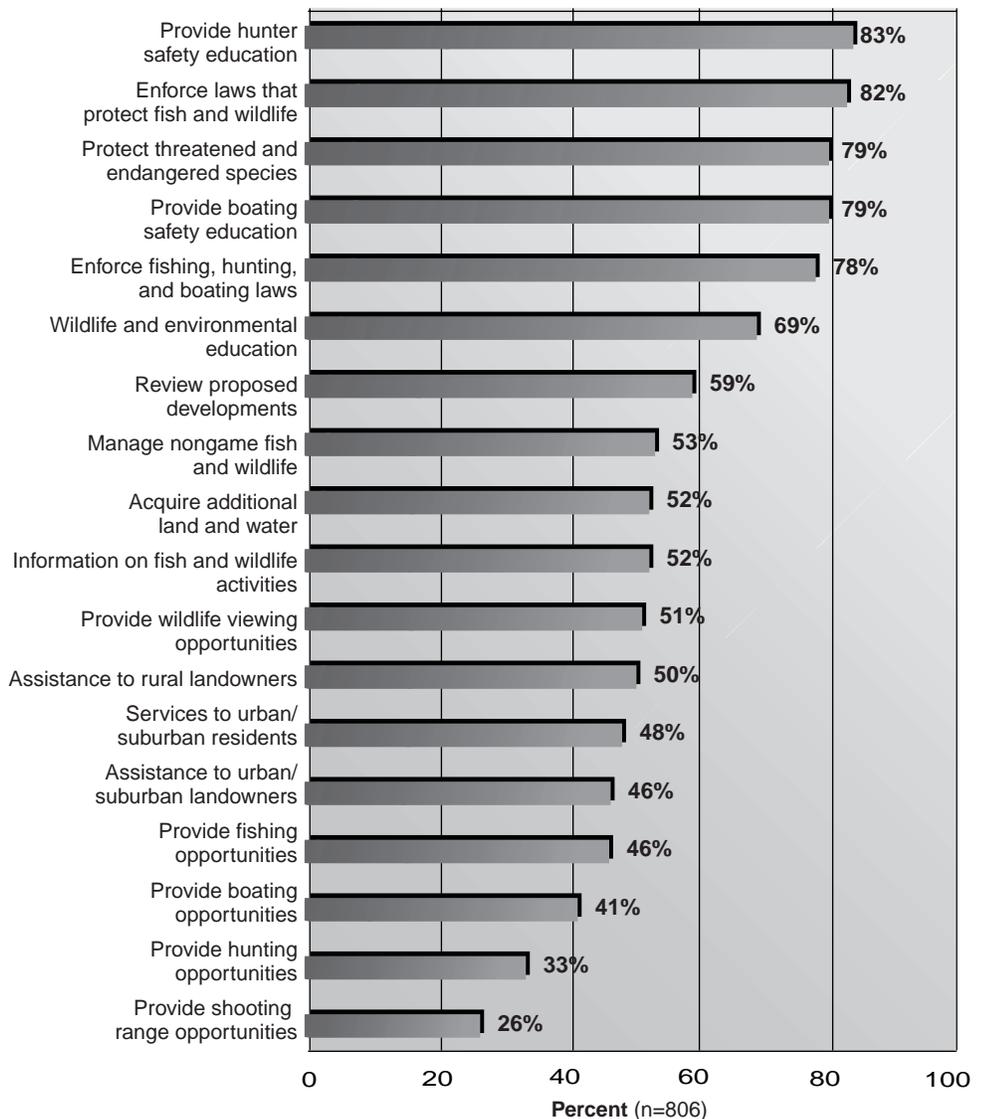
Richmond headquarters. Personal, face-to-face interviews were conducted with each member of the department’s board of directors.

In the second phase, a mail survey of department employees was conducted. The survey was used to identify employees’ opinions on the department’s fiscal allocations to different programs and on department performance in those programs. This survey was used as

a part of a masters thesis by Jim Watkins of Virginia Tech.

Responsive Management conducted telephone surveys with numerous external constituent groups, including the general population, anglers, non-consumptive wildlife enthusiasts, Virginia landowners, Virginia hunters and Virginia boaters. Samples were large enough for each group to assess regional differences. 🏠

Percent of Virginia residents that rated each activity as a “very important” activity for the Virginia Department of Game and Inland Fisheries



Factors Related to Boating Participation in the United States and the Boating Futures Forum

RESPONSIVE MANAGEMENT recently completed a major review and analysis of the most salient issues relating to recreational boating in the United States for the National Association of State Boating Law Administrators (NASBLA). This study was funded under a grant from the Aquatic Resources (Wallop-Breaux) Trust Fund administered by the U. S. Coast Guard.

In addition to this situation analysis from the “outside-in,” we are also conducting a needs analysis from the “inside-out.” The internal needs assessment is being conducted through a series of interviews with boating professionals throughout the U.S.

NASBLA’s intention is to utilize the information as part of a major conference on the future of boating that will be held in April 2001 in St. Petersburg, Florida. The study results will also be used to develop suggested recommendations toward future needs of boating in America.

Fifteen major issues and implications were identified from the external analysis:

1. Recreational boating in the United States is increasing along several distinct lines. While the number of boats as a percentage of the population seemingly is not increasing, the number of boats per boating household is increasing. In addition, the amount of time spent by recreational boaters is increasing, and the demand for additional time for boating is increasing.

All of these factors lead to increased demands for and usage of public and private boating access, boating facilities and boating supplies.

2. Boat ownership is increasing in certain areas. The number of boat ownerships by households that already own one boat has increased. This may be due to the increase in personal watercraft ownership, but the overall trend shows boat owners are increasingly owning more than one boat.



3. The majority of recreational boating in the United States is done in open motorboats under 26 feet in length. Boats under 16 feet long are the most commonly used craft in recreational boating. Jet ski and other personal watercraft ownership has increased remarkably, but still represent a minority of recreational boating. Most recreational boating takes place on freshwater lakes or impoundments. The average number of boating days is

17, and the average number of hours per day spent boating is five.

4. Inconsistent registration requirements confound the accurate description of boating statistics.

Standard codified boating registration and accident reportage would increase the accuracy of analysis of boating participation and accident rates.

5. Income is correlated to boating recreation and boat ownership in the middle to upper income levels. There is a correlation between education and participation in recreational boating. Those with graduate or professional degrees and college graduates are slightly more likely to participate in recreational boating. Ethnic minorities are under-represented in boating and boat ownership.

6. Recreational boating is closely tied to fishing. Over 80 percent of recreational boaters also fish. This connection is found throughout the various issues of satisfaction, ownership, accidents and education. An interesting aspect is that fishing rates nationally are stable to declining, but boating is increasing. It remains to be seen whether or not the fishing segment of boaters is increasing.

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Factors, from page 6

7. Although the issue of access has been raised as a negative in recreational boating, little evidence suggests that a lack of access is anything other than a local issue. The research does not suggest that issues regarding access or boating facilities from a national perspective are displacing recreational boaters.

8. Recreational boating satisfaction does not come from the physical characteristics of boats or boating. Rather, satisfaction from recreational boating, as in other types of outdoor recreation, tends to be about naturalistic experiences, rest and relaxation, and social issues around friends and family. The implications of these observations about satisfaction, motivations and benefits of recreational boating are profound. The fact that naturalistic experiences, being with friends and family, relaxation, and other less tangible reasons are of primary importance, and proximal factors such as costs, challenge, physical characteristics of boats, boat performance, and others are of less importance needs to be carefully considered in the development of management and marketing plans.

9. Attitudes and opinions toward recreational boating by agency personnel are largely unknown. There is some evidence that fish and wildlife agency personnel do not place as much importance on boating recreation enhancement, or boating enforcement, compared to other issues such as game and fish. However, these attitudes need to be assessed in a comprehensive study.

10. The issue of a theoretical carrying capacity for recreational boaters centers on the concepts of physical and social carrying capacities. Another issue is the biological or environmental carrying capacity of a body of water for recreational boating. These issues are highly complex and appear to be a function of local conditions and cultural characteristics of boaters using the area.

11. If recreational boating fatalities, accidents and injuries are taken as a per-

centage of numbered boats, then their number has remained stable since 1994. As far as transportation safety is concerned, recreational boating fatalities and accidents remains second only to traffic accidents.

12. Recreational boating fatalities occur primarily in boats under 26 feet long. Capsizing, swamping or flooding of the boat are also factors. Alcohol is found in a fair number of accidents. The use of personal floatation devices and mandatory boater education appear to be potential factors in reducing fatalities.

13. Among boating fatalities involving hunters and anglers, over 80 percent are from drowning. A high percentage involves capsizing, swamping, and/or flooding of the boat. Most accidents are with open motorboats less than 16 feet in length. Anglers and hunters age 30-50 years old are at highest risk. The use of alcohol and failure to use a PFD are increasing correlations to fatalities.

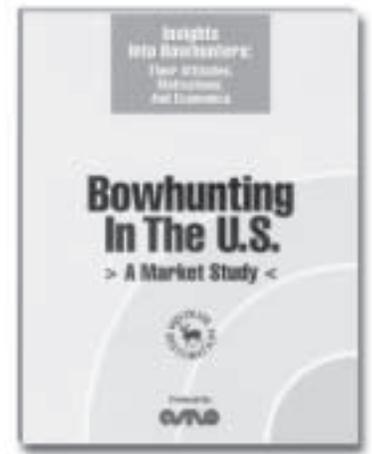
14. The actual use of PFDs in any given group and for all recreational boaters needs to be studied empirically. There is a need for a national survey of PFD use based on actual observation and count, not reportage by boaters.

15. Over 80 percent of boat operators have not taken a boating safety course. While most boaters do not participate in boating safety courses, they do participate in basic first aid, water safety or rescue courses at a higher rate than that of the general population. Recreational boaters favor mandatory boating safety, but few feel they personally need it. Recreational boaters are more likely to favor mandatory requirements for new boat operators, especially personal watercraft operators.

For more information on the "Futures Forum," contact NASBLA at 859-225-9487. The forum will be held April 1-3, 2001 at the Hilton Hotel in St. Petersburg, Florida. 🏠

Insights Into Bowhunters

Their Attitudes, Motivations & Economics



WHILE OVERALL HUNTING participation in the United States is stagnant to declining, bowhunting has enjoyed a significant increase in popularity. This affords industry, wildlife agencies, and organizations involved with bowhunting a unique opportunity. Social and demographic analysis of bowhunting can facilitate focused marketing plans and specific marketing strategies toward reaching this growing niche.

This project was a collaborative effort between Responsive Management, Southwick Associates and the Archery Manufacturers Organization. The final report focuses on selected issues in order to facilitate better understanding of social, cultural and demographic factors impacting bowhunting for industries, agencies and organizations involved with the sport. This report provides a picture of the American bowhunter that will enable agencies and organizations to tailor their programs to best meet the needs of the bowhunting public, improve satisfaction levels and help foster additional participation in the sport. 🏠

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 and the public.

Utilizing our in-house, full-service, computer-assisted telephone and mail survey center with 40 professional interviewers, we have conducted more than 500 telephone surveys, mail surveys and focus groups, as well as numerous marketing and communication plans and needs assessments.

Clients include most of the federal natural resource and state fish and wildlife agencies, many state departments of natural resources, environmental protection agencies, state park, tourism and conservation departments and most of the major conservation and sportsmen's organizations.

Responsive Management also collects attitude and opinion data through telephone and mail surveys, as well as personal interviews for many of the nation's top universities, including the University of Southern California, Virginia Tech, Colorado State University, Auburn University, Texas Tech University, Michigan State University, the University of Florida, West Virginia University, and others.

Among the wide-range of projects we have completed during the past 10 years are studies on how the general population values natural resource and outdoor recreation,

and their opinions on and attitudes toward an array of natural resource-related issues. We have conducted dozens of studies of hunters, anglers, wildlife viewers, boaters, landowners, park visitors, historic site visitors, hikers, birdwatchers, campers and rock climbers.

We have conducted studies on animal rights and animal welfare, endangered species, waterfowl and wetlands and the reintroduction of large predators such as wolves, grizzly bears and the Florida panther.

We have assisted in numerous natural resource ballot initiatives and referenda, and helped agencies and organizations find alternative funding and increase their memberships and donations. We have conducted major agency and programmatic needs assessments and helped natural resource agencies and organizations develop more effective programs based upon a solid foundation of fact.

We have developed Web sites for natural resource organizations. We conduct training workshops on the human dimension of natural resources, and we present numerous studies each year 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. We routinely conduct surveys in Spanish and have also conducted surveys and focus groups in Chinese, Korean, Japa-

nese and Vietnamese. We have also conducted numerous natural resource and outdoor recreation studies with 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, Crossfire, the Washington Post, Washington Times, New York Times, Newsweek, Wall Street Journal, and on the front page of the USA Today. 

RM conducts:

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

RM develops:

- Marketing plans
- Communications plans
- Outreach plans
- Business plans
- Program evaluation
- Policy analysis
- Public relations plans

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www.responsivemanagement.com

Why Responsive Management?

"I want to take this opportunity to express my thanks for your outstanding work, resulting in the report "Vermont Residents' Attitudes Toward Program Priorities and Alternative Funding Mechanisms for the Vermont Fish and Wildlife Department." This is a very fine report that has already proved helpful in discussions about funding and marketing issues with my staff and the administration. I know that it will prove to be of similar value in upcoming discussions with external constituents and legislators.

"This is the third time that my department has contracted for your services, and I am pleased to have been personally involved in each survey. I continue to be impressed by your candid and thoughtful input, personalized approach to customer needs, and professional approach to survey design, implementation, and reporting. In sum, you do great work that results in a product with high outreach and advocacy value."

RONALD J. REGAN

*Commissioner,
Vermont Department of Fish and Wildlife*

"Responsive Management provided extraordinary services to my research project, which involved a large-scale telephone survey about cultural diversity and attitudes toward marine animals in Los Angeles. This was a challenging project, involving a lengthy survey that needed to be translated into several languages and required a complex sampling strategy. Mark provided invaluable guidance in refining my survey instrument, structuring the sampling design and working out the survey's logistics. And his friendly, knowledgeable, professional staff worked closely with me before, during and after the survey was completed. I would recommend Responsive Management to anyone planning a survey or focus group about wildlife and wildlife management."

DR. JENNIFER WOLCH

*Professor,
University of Southern California*

"...In addition to an impeccable research record with numerous wildlife management agencies, including our own, Responsive Management has a history of thorough data collection and analysis, the ability to maintain a research schedule and budget, as well as the ability to consistently produce legally and statistically defensible research documents..."

Wyoming Game and Fish Department

"I would recommend Mark Duda to anyone wishing to assess public views. His style was interactive in the development of the instrument, as well as during the assessment of the results. His knowledge and experience nationwide was tremendously helpful in framing the questions on the survey and provided a basis to further understand not only what our citizens thought about our performance and what our priorities would be, but how it compared on a national level. Mark provided a professional presentation to our Wildlife Commission, and answered their queries from a technical expertise concerning the survey and what it meant, which would have been difficult to manage on our own. I have utilized his graphs which he provided in Microsoft PowerPoint to develop programs for training of employees and presentation to public groups. In the final analysis of his services, I would say that when it becomes time to do another assessment, Mark will be the first one contacted to see if he can do the work. I'd hire him again."

JOHN BREDEHOFT

*Chief, Law Enforcement,
Colorado Division of Wildlife*

"Many thanks go to Mark Damian Duda, Steven J. Bissell and the staff of Responsive Management. Their dedication, creativity and hard work were unfailing throughout the entire research process."

PAUL W. HANSEN

*Executive Director,
Izaak Walton League of America*

JOSHUA WINCHELL

*Outdoor Ethics Program Director,
Izaak Walton League of America*

"If there is anyone who can predict the future of our industry, he's it."

Florida Outdoor Writers Association

"I regard Mark Damian Duda as an exceptional blend of intelligence, resourcefulness and professional competence. His leadership of the Responsive Management program has been distinguished and innovative. He has clearly made this a model program for the wildlife management field. Under his guidance, Responsive Management has been an outstanding source of information, ideas and techniques helping to foster important and needed change."

DR. STEVE KELLERT

Professor, Yale University

"Mark Damian Duda is one of the nation's foremost researchers on public attitudes toward the environment."

Associated Press

"I personally sincerely appreciated working with you and your very professional and talented staff. I thought it was going to be difficult managing a project that was half done, but your assistance and guidance helped me catch up right away. Thank you again for a sensational job. Please relay my personal best to everyone at Responsive Management."

HARDY PEARCE

*Biological Resource Division,
Department of the Interior*

"The admonition to "Know Thyself" was never more true than when it is applied to business. And helping us define our bowhunting market and who we are has recently been masterfully done for us by Mark Damian Duda and the folks at Responsive Management. In my 34 years in the archery industry, I have never seen such a complete and understandable marketing research exercise than what they have just completed for us. Mark has long been recognized as the leader in definitive research when it comes to our outdoor field and he is a joy to work with, as is his entire staff. We can recommend Responsive Management in the highest possible terms."

DICK LATTIMER

*President/CEO, The Archery Manufacturers
& Merchants Organization*

"Aloha! Thank you very much for all the great work you did on the freshwater fishing marketing study. We never imagined that the results would be that positive. Your expertise in asking the focus group questions and writing the telephone surveys has given us a wealth of information. The opportunities provided for both the supporters of freshwater fishing and the environmentalists to work together are wonderful. Thank you also for coming to Hawaii to make the presentation to our group. We all agreed that this greatly assisted in our understanding of the document."

LYNN P. MCCRORY

*President,
Kauai Economic Development Board*

"Thank you for your capable and professional work in completing the recent survey of Pennsylvania anglers and boaters. There is no doubt that the commission received the best and most cost-effective survey product available. You and your staff did an outstanding job preparing and conducting the survey and presenting the results... In spite of the frequent request for modifications during the survey development process, you were still able to complete the survey instrument, compile customer opinion and present results at the July commission meeting. We are extremely impressed with Responsive Management's capacity to meet tight deadlines!"

PETER A. COLANGELO

*Executive Director,
Pennsylvania Fish & Boat Commission*

RECENT RESPONSIVE MANAGEMENT PROJECTS & SURVEYS

Agency and Organization

Constituent Studies and Surveys

- ✓ Arizona Residents' Uses of the State's Wildlife Resources and Their Knowledge of and Attitudes Toward the Arizona Game and Fish Department Trends Survey 2000
- ✓ Arkansas Residents' Awareness of and Attitudes Toward Aquatic Activities and Resource Management
- ✓ Arkansas Residents' Attitudes Toward the Arkansas Game and Fish Commission and Program Priorities
- ✓ House Bill 38 and Future Directions for the Virginia Department of Game and Inland Fisheries, in cooperation with Virginia Tech and George Mason University
- ✓ Texas Parks and Wildlife for the 21st Century: Public Attitudes Toward Natural and Cultural Resources and Outdoor Recreation, in cooperation with Texas Tech University
- ✓ Virginia Residents' Attitudes Toward Fish and Wildlife Management in Virginia
- ✓ Constituent Attitudes Toward Fish and Wildlife Agencies in the Northeast United States
- ✓ An Evaluation of the Public Television Show, "Georgia Outdoors"

Wildlife and Natural Resources

- ✓ Southern California Residents' Attitudes Toward Marine Resources, in cooperation with the University of Southern California
- ✓ Arizona Residents' Attitudes Toward Off-Highway Vehicle Use in Arizona
- ✓ The Aroostook Band of Micmac and the Houlton Band of Maliseets and Attitudes Toward Natural Resource Management
- ✓ Attitudes Toward and Awareness of Trapping Issues in the United States
- ✓ Public Attitudes Toward Trapping in Connecticut, Wisconsin and Indiana
- ✓ Wildlife Professionals' Attitudes Toward Trapping

Hunting

- ✓ National Shooting Sports Foundation Hunting Participation and Attitudes Trends Survey 2000
- ✓ Bowhunting in the United States: A Market Study and Insights Into Attitudes, Motivations and Economics, in cooperation with Southwick Associates
- ✓ Arkansas Residents' and Hunters' Opinions and Attitudes Toward Deer Management
- ✓ Message Testing and Evaluation of the "Step Outside" Program
- ✓ Hunting as a Choice: A World Wide Web Site for Youth on Wildlife Management and Hunting
- ✓ Licensed Antelope Hunters' Opinions on and Attitudes Toward Antelope Hunting and Management in Wyoming
- ✓ New Mexico Big Game Hunters' Attitudes Toward Wildlife Management in New Mexico
- ✓ South Carolina Hunter Harvest Survey
- ✓ Hunters' and Anglers' Attitudes Toward Roads in the National Forests
- ✓ Virginia Resident Hunters' Attitudes Toward Hunting in Virginia
- ✓ Texas Hunters' Attitudes Toward Hunting in Texas
- ✓ Virginia Residents' Attitudes Toward a Proposed Constitutional Amendment on the Right to Hunt, Fish and Harvest Game
- ✓ The Impact of Hunter Education on Hunter Behavior in Colorado
- ✓ Ohio Mourning Dove and Ruffed Grouse Harvest Survey
- ✓ Wyoming Hunting Expenditures

Funding

- ✓ Vermont Residents' Attitudes Toward Program Priorities and Alternative Funding Mechanisms for the Vermont Fish and Wildlife Department
- ✓ Preferences of Wyoming Residents' Toward Alternative Funding Mecha-

nisms for the Wyoming Game and Fish Department

- ✓ Preferences of Wyoming Hunters' and Anglers' Toward Alternative Funding Mechanisms for the Wyoming Game and Fish Department
- ✓ Hunters', Anglers' and Boaters' Awareness of and Attitudes Toward the Federal Aid in Sport Fish and Wildlife Restoration Programs

Fishing

- ✓ The Future of Fishing in the United States: Assessment of Needs to Increase Sport Fishing Participation
- ✓ Arkansas Resident Anglers' and Non-Resident Anglers' Awareness of and Attitudes Toward Fishing in Arkansas
- ✓ An Evaluation of the Georgia Wildlife Division's Kids' Fishing Events
- ✓ Hawaii Residents', Tourists' and Mainland Anglers' Attitudes Toward Freshwater Fishing
- ✓ Participation and Catch Rates of Washington State Sport Anglers
- ✓ An Evaluation of the Florida Outdoor Times Freshwater Fishing Publication
- ✓ Pennsylvania Trout Anglers' Consumption of Stocked Trout and Their Awareness of and Attitudes Toward Consumption Advisories
- ✓ Participation in and Attitudes Toward Fishing and Aquatic Resources Among South Carolina Youth
- ✓ Striped Bass Anglers' Attitudes Toward Fisheries Management on Lake Murray, South Carolina
- ✓ Wyoming Resident and Non-Resident Anglers' Fishing Trip Expenditures
- ✓ Virginia Anglers' Attitudes Toward Fishing in Virginia
- ✓ Texas Freshwater and Saltwater Anglers' Attitudes Toward Fishing in Texas

See **Recent Projects**, page 11

Recent Projects, from page 10

Wildlife Viewing

- ✓ Virginia Residents' Participation in and Attitudes Toward Wildlife Viewing in Virginia

Boating

- ✓ Factors Related to Recreational Boating Participation in the United States: A Review of the Literature
- ✓ Boating Professionals' Priorities and Boating Needs
- ✓ Licensed Motorboat Operators' and Registered Personal Watercraft Users' Opinions and Attitudes Toward Motorized Boating in Wyoming
- ✓ Virginia Boaters' Attitudes Toward Boating in Virginia

- ✓ Texas Licensed Boaters' Attitudes Toward Boating in Texas
- ✓ Boating Accidents and Sportsmen: Sportsmen's Forum

Landowners

- ✓ Virginia Landowners' Attitudes Toward Fish and Wildlife Management in Virginia
- ✓ Texas Landowners' Attitudes Toward Natural and Cultural Resources and Outdoor Recreation in Texas

Outdoor Recreation

- ✓ Texans' Participation and Interest in Outdoor Recreation in Texas

Outreach and Communications

- ✓ New Hampshire Aquatic Resources Education Center and Program Analysis
- ✓ Message Testing for the Recreational Boating and Fishing Foundation

Law Enforcement

- ✓ Colorado Residents', Hunters' and Anglers' Attitudes Toward Fish and Wildlife Law Enforcement in Colorado
- ✓ Wyoming Residents' Attitudes Toward Wyoming Game and Fish Department Law Enforcement Priorities

Park Users

- ✓ Texas State Park Users' Attitudes Toward State Park Management in Texas 🏡

Mark Celebrates 10 Years as Executive Director *Wins Awards from the Virginia Wildlife Society and Ducks Unlimited*

The new millennium started off on a positive note for Responsive Management Executive Director Mark Damian Duda. He celebrated his 10th year anniversary as executive director of Responsive Management, the Virginia Wildlife Society presented him the Henry S. Mosby Award for the Wildlife Professional of the Year for 2000, and the Potomac Valley Chapter of Ducks Unlimited honored him with their Conservation Award for 2000.

Bruce Lemmert, president of the Virginia Wildlife Society, nominated Mark, writing:

"Responsive Management has become one of the foremost and highly respected survey and research companies in the

United States with respect to fisheries, wildlife, natural resources and outdoor recreation. The quality of work directed by Duda has become a benchmark of comparison for others doing similar work in the field of wildlife management. His work demonstrates the highest standards of professionalism and the volume of his work is truly prolific... The depth, quality and volume of work that Mark Damian Duda has done for the profession of wildlife management truly qualifies him to be a recipient of the Virginia Wildlife Society's highest award, the Dr. Henry S. Mosby Award."



The Potomac Valley Chapter of Ducks Unlimited honored Mark at their 18th Annual Dinner and Reception on Oct. 24, noting,

"Over the past years, the Potomac Valley Chapter of Ducks Unlimited has honored certain outdoor writers for their contribution to the understanding and appreciation of the sustainable use of renewable resources. The chapter has made this award only three times in the past... The chapter has voted to have you receive this recognition..."

In past years, Mark has been named Conservation Educator of the Year by the Florida Wildlife Federation and the National Wildlife Federation and was the recipient of the Conservation Achievement Award from the Western Association of Fish and Wildlife Agencies. He is the author of three wildlife books and two monthly outdoor columns that reach about eight million Americans. Mark holds a masters degree in Natural Resource Policy and Planning from Yale University. 🏡

Alternative Funding Studies

Vermont Residents' Attitudes Toward Program Priorities and Alternative Funding Mechanisms for the Vermont Department of Fish and Wildlife

This study was conducted for the Vermont Department of Fish and Wildlife to ascertain Vermont residents' attitudes toward alternative funding mechanisms and program priorities. In addition, residents' values regarding Vermont fish and wildlife resources and lands were assessed. The survey was administered by telephone to randomly selected adult Vermont residents.

Values Associated with Vermont's Fish and Wildlife Resources

The protection of fish and wildlife resources, habitats and lands, as well as the opportunity to participate in wildlife-related recreation was important to nearly all (97 percent) surveyed Vermont residents. The vast majority (between 77 percent and 80 percent) judged these resources and activities to be "very important" to them.

The top reasons why increasing funding to manage and conserve fish and wildlife in Vermont was important included the importance of managing and conserving fish and wildlife for future generations, the importance of a clean environment to Vermont residents' health, the importance of enjoying fish and wildlife to a healthier and happier life in general, perceived personal responsibility to protect natural resources, and the importance of recreation and fish and wildlife to

promoting healthier lifestyles in youth and children.

Attitudes Toward Fish and Wildlife Department Program Priorities

Vermont residents were generally supportive of maintaining or increasing the time and money spent on all eight priorities presented, and there was an increase (in some cases a large increase) in support for each of the priorities since the same questions were asked in a previous Responsive Management survey in 1995.

Support for Alternative Funding Mechanisms

Support for twelve alternative funding mechanisms was assessed. The following were supported by a large majority of residents:

- Continuing to receive a fixed dollar amount of the Rooms and Meals Tax (90 percent supported)
- Receiving general fund dollars for programs and activities in which the Department participates but does not receive funding (87 percent),
- Redistributing a portion of the current state sales tax so that the Department would receive $\frac{1}{8}$ of 1 percent of the existing sales tax (81 percent),
- Receiving a small percentage of the current sales tax on certain outdoor items (73 percent),
- Charging developers a fee for habitat evaluations (73 percent),
- Increasing the state general sales tax or raising hunting license fees was opposed by the largest percentage of residents; however, each was still *supported* by a majority.
- A majority of respondents (84 percent) indicated that they

would be somewhat or more likely to support increased funding if they knew that every new dollar brought into the department was matched with three dollars of federal money.

Preferences of Wyoming Residents Toward Alternative Funding Mechanisms for the Wyoming Game and Fish Department

This study was conducted for the Wyoming Game and Fish Department to better understand Wyoming residents' attitudes toward alternative funding mechanisms for the Department. The survey was administered by telephone to randomly selected adult Wyoming residents.

The majority of residents supported two alternative funding options, the establishment of a trust fund using money from extractive industries (62 percent of respondents supported) and a $\frac{1}{8}$ of 1 percent increase in the State General Sales Tax (53 percent supported). An increase in the state's gasoline tax was opposed by 76 percent of respondents, with 60 percent registering *strong opposition* to this option. Respondents were more or less evenly split between support and opposition for the remaining two alternatives, the reallocation of a portion of the state's gasoline tax and the establishment of a special sales tax on outdoor equipment. 

Colorado Residents', Hunters' & Anglers' Attitudes Toward Wildlife Law Enforcement

COLORADO RESIDENTS, hunters and anglers gave the Colorado Division of Wildlife high grades for its overall law enforcement efforts, according to results of a Responsive Management Survey conducted in 2000.

The survey, which is the first one conducted by the division specifically about wildlife law enforcement efforts, interviewed more than 800 Colorado residents, licensed hunters and anglers to discover their opinions, attitudes and awareness of wildlife law enforcement in Colorado.

The survey found that the more familiar people were with the division's law enforcement efforts, the higher they ranked those efforts. A majority also strongly agreed that law enforcement officers performed their duties in a professional manner.

"Being a wildlife law enforcement officer is not an easy job," said Division Chief of Law Enforcement John Bredehoft. "It is really refreshing to get this kind of recognition, and the officers really appreciate the citizens', hunters' and anglers' support. However, although we appreciate the high marks, we also recognize that we need to maintain that public trust and confidence by always trying to improve."

The survey found that there is a common perception among Colorado residents, anglers, and hunters that many people are consciously violating hunting and fishing laws and are seldom caught.

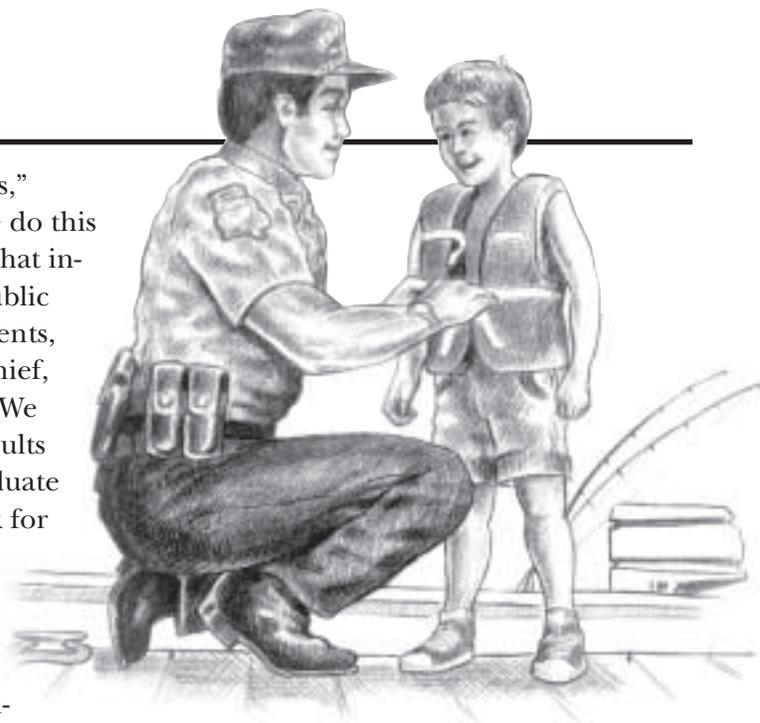
"There is both a perceived and real violation rate that we con-

stantly try to address," Bredehoft said. "We do this through programs that include education, public service announcements, Operation Game Thief, patrol and contact. We will be using the results of this survey to evaluate our efforts and look for ways to improve and better serve the public and wildlife resources."

Changes could include public education about hunting and fishing laws, how to report violations and an evaluation of officers' work loads to see how more time can be devoted to law enforcement.

The survey's specific findings include:

- Hunters and anglers gave higher ratings to the division's overall law enforcement efforts than did the general public. Overall, the more familiar someone was with the division's wildlife law enforcement efforts, the higher they ranked those efforts.
- Wildlife officers were given high ratings by individuals who have had contact with them.
- A majority of Colorado hunters, anglers and residents rated the division's overall enforcement efforts as good to excellent. "Poor" ratings were virtually nonexistent.
- A majority of Colorado hunters, anglers and residents felt that penalties for violating hunting, fishing and threatened or endangered species laws were "appropriate" to "too low." Overall, more people felt that penalties for vio-



lating laws that protect threatened or endangered wildlife were "too low" as compared to penalties for violating hunting and fishing laws.

- There is a common perception among residents, anglers and hunters that a lot of people violate hunting and fishing laws consciously and are seldom caught, and that the laws broken were mostly harvest-related.
- Forty-two percent of hunters reported they had personally seen a violation of a hunting law or regulation in the past two years, while 27 percent of anglers reported that they had personally seen a fishing violation in the past two years.
- In general, Colorado hunters, anglers and residents felt that all of the duties of the division's wildlife officers were important. The activities considered most important include requiring people to have licenses while hunting and fishing; protecting threatened and endangered wildlife; prohibiting illegal sales of wildlife or wildlife parts; and protecting wildlife from being killed illegally. 🐾

Virginians Approve a Constitutional Amendment for The Right to Hunt, Fish and Trap

ON NOVEMBER 7, 2000, Virginians deemed that hunting, fishing and harvesting game should be considered a right in Virginia, and that right should be added to the state's Constitution. In a presidential election that will long be remembered as the closest in our

nation's history, the Virginia constitutional amendment on the right to hunt, fish and harvest game was approved by a significant margin.

By a 60 percent (yes) to 40 percent (no) margin, Virginians voted to approve the following question that appeared on the ballot:

“Shall the Constitution of Virginia be amended by adding a provision concerning the right of the people to hunt, fish, and harvest game?”

Because space is limited on ballots, only the above text appeared. The full text of the proposed constitutional amendment, “Right to Hunt, Fish, and Harvest Game Article XI, Conservation, New Section” reads:

“Amend the Constitution of Virginia by adding in Article XI a section numbered 4 as follows: ‘Section 4. Right of the people to hunt, fish and harvest game. The people

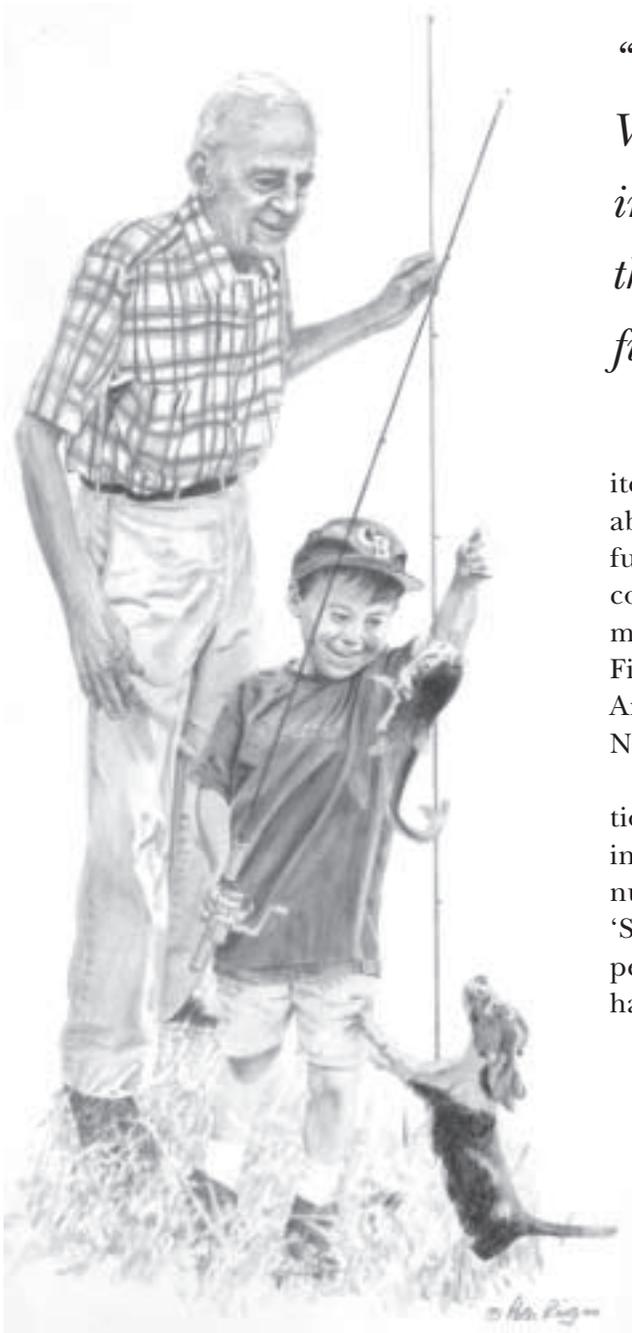
have a right to hunt, fish and harvest game, subject to such regulations and restrictions as the General Assembly may prescribe by general law.’ ”

The victory did not happen by accident. It was the result of a well-coordinated and thought out campaign run by a group of dedicated citizens. The campaign used scientific surveys based on a solid foundation of public attitude research to better understand the attitudes of

Virginians with the goal of creating a carefully crafted communication strategy.

Several weeks before the election, Responsive Management assisted in strategy efforts by conducting a statewide survey (with regional breakdowns) to better understand Virginian's attitudes toward this ballot initiative.

Responsive Management also provided communication and campaign strategies based on the results of the survey, including who was likely and unlikely to vote for the initiative. 🏠



This drawing was used in the campaign to portray the familial value of fishing and is the courtesy of Peter Ring and the Virginia Heritage Foundation.

National Shooting Sports Foundation Hunting and Shooting Participation and Attitudes Trends Survey 2000

Responsive Management Survey Hints at a Possible Resurgence in Small Game Hunting

THE LATEST HUNTING and shooting participation and attitude trends survey conducted by Responsive Management for the National Shooting Sports Foundation showed hunters are hunting more days with a shoulder arm than in previous years. An increasing percentage of hunters are also shooting more in an individual outing than in previous years.

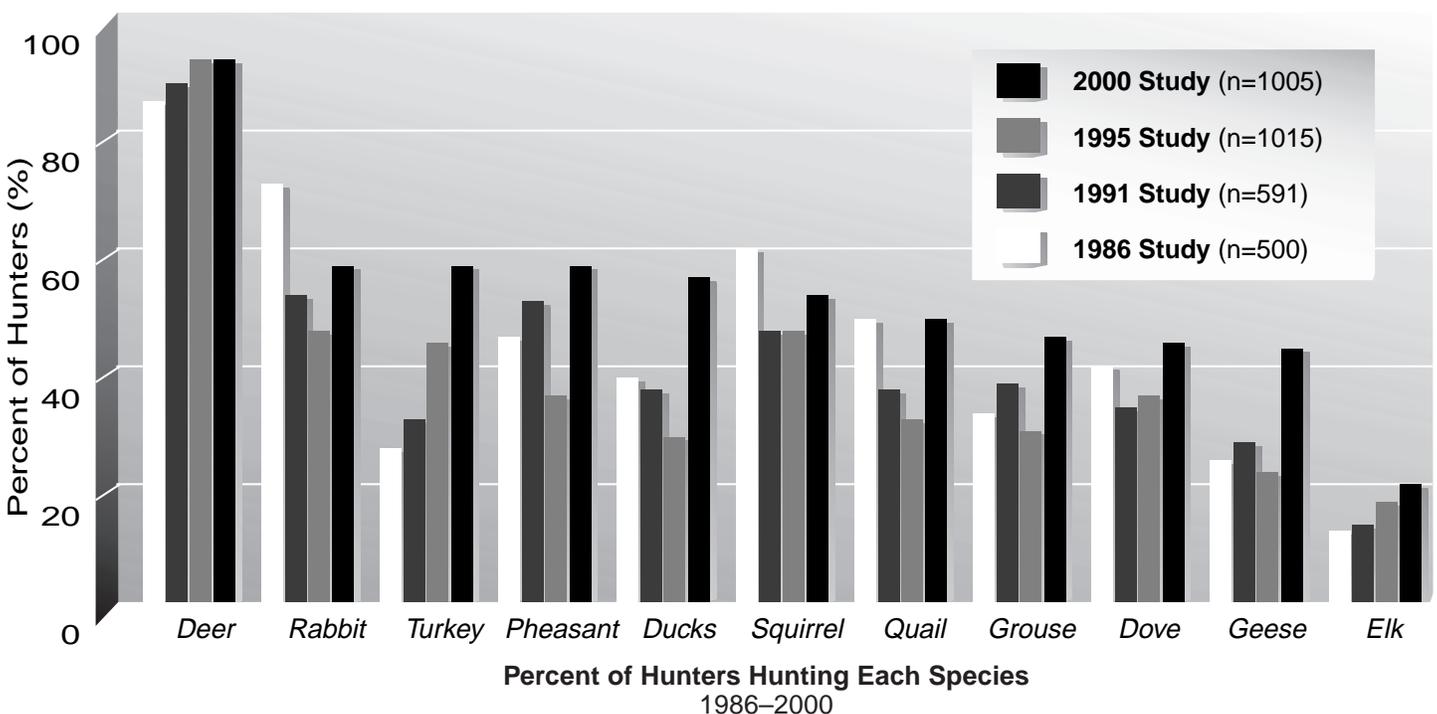
From a varied list of potential hunting difficulties, hunters felt the following had become *much* greater problems over the past five years: access (33 percent); concern over anti-hunting activities (23 percent); the anti-hunting attitude of the public (20 percent); crowded hunting areas (20 percent); less

landowner cooperation (20 percent); access to private hunting lands (19 percent); cost of firearms (12 percent); less game (11 percent); and distance needed to travel (10 percent).

Deer remains the species of choice to hunt—92 percent of all hunters said they hunted deer—and there has been an ever increasing trend in the percentage of hunters who hunt wild turkey. In the 1986 study, 26 percent of hunters hunted wild turkey while in the 2000 study, 57 percent of hunters hunted turkey. The 2000 study also hinted at an increase in the percentage of hunters hunting for rabbit, pheasant, ducks, quail and grouse, which all had previously seen a decline in hunting popularity. The popularity

of goose hunting has almost doubled since the 1986 study.

This trends survey was the fourth in a series of hunting and shooting trends surveys sponsored by the NSSF. Previous studies were conducted in 1986, 1991 and 1995. The 2000 survey was conducted using a database of known hunters compiled from warranty card information sharing program between NSSF and its member manufacturers. In 1996, hunting licenses were used as the sample for the survey. However, all states are not legally allowed to make hunting license information available, so in the 2000 study we returned to the previous sampling methodology of warranty cards from hunters available in all 50 states (also used in 1991 and 1985). 🏹



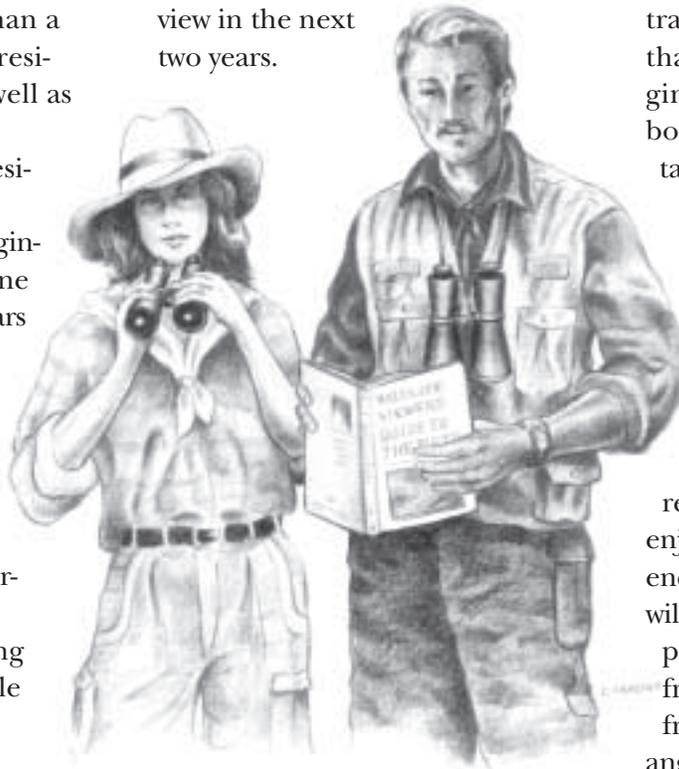
Virginia Wildlife Viewers' Attitudes Toward Wildlife Viewing in Virginia

A TELEPHONE SURVEY OF 800 Virginians was conducted to gauge participation and interest in wildlife viewing in Virginia as part of the House Bill 38 study. The study was conducted to allow for regional comparisons toward wildlife viewing participation and attitudes toward both taking trips to view wildlife more than a mile from one's home (nonresidential wildlife viewing) as well as wildlife viewing and feeding wildlifearound the home (residential wildlife viewing).

- Thirty-three percent of Virginians took a trip of at least one mile during the last two years to observe, photograph or feed wildlife. Of those who did not take a trip, 66 percent said they would consider doing so.
- Eighty-five percent of Virginians took a special interest in wildlife (closely observing, feeding or trying to identify) within one mile of their homes during the past two years.
- Seventy-one percent of nonresidential wildlife viewers made trips to federal lands to view wildlife, 55 percent to other state-owned lands, 50 percent to private lands, 47 percent to locally-owned public areas, and 33 percent to state wildlife management areas.
- Ninety-eight percent of nonresidential wildlife viewers were very satisfied or somewhat satisfied with their viewing trips over the past two years.
- White-tailed deer (69 percent), ducks and geese (74 percent)

and hawks, owls or eagles (60 percent) topped the list of animals that people made trips to view in the past two years.

- Hawks, owls or eagles (81 percent) and black bears (74 percent) topped the list of animals Virginians would be interested in taking a trip to view in the next two years.



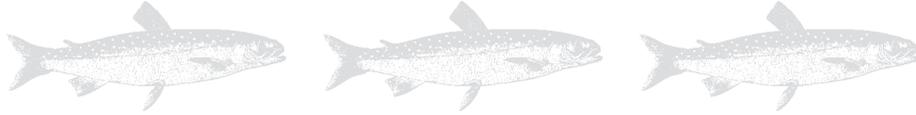
- Thirty-two percent of nonresidential wildlife viewers said the number of trips or level of their wildlife viewing increased in the last two years.
- Nature trails (63 percent) and printed materials (62 percent) topped the list of items that would significantly add to the enjoyment of users of wildlife viewing areas, followed by outdoor educational displays (52 percent), restrooms (41 percent) and viewing blinds and observation towers (41 percent).
- Items that would strongly add to

the enjoyment of viewing areas for Virginians interested in taking future trips included nature trails (69 percent), restrooms (60 percent), printed materials (59 percent) and other educational displays (55 percent).

- Nonresidential wildlife viewers tended to travel farther and travel overnight more often than other recreationists in Virginia (hunters, anglers, and boaters): 67 percent said they take overnight trips to view wildlife, 44 percent said they travel more than two hours for day trips to view wildlife.
- Eighty percent of nonresidential wildlife viewers said they did not experience any interference from other recreationists that reduced their enjoyment: 3 percent experienced interference from other wildlife viewers, 3 percent from people four-wheeling, 3 percent from hikers, and 1 percent each from boaters, jet skiers, hunters, anglers, mountain bikers, campers and swimmers.
- Where to view wildlife (85 percent) and how to identify wildlife (79 percent) topped the list of topics nonresidential wildlife viewers would be most interested in receiving information about. Other topics of broad interest included how to help injured wildlife (73 percent), information on specific species (71 percent), ethical conduct in the outdoors for wildlife viewers (71 percent), how to get involved in wildlife conservation efforts (68 percent) and how to view wildlife (67 percent). 🏠

The Future of Fishing

The Importance of Target Marketing



RECENTLY, FISHERIES managers have been increasingly interested in gaining a better understanding of fishing participation among anglers, as well as in interest among non-anglers. Based on a nationwide survey conducted by Responsive Management, it was clear that programs to promote fishing to the “general public” just will not work. The results clearly established that different groups of Americans have widely varying rates of interest in going fishing. Additionally, interest in freshwater and saltwater fishing varied dramatically by constituent groups. Various target markets expressed varying rates of interest in different types of fishing experiences (see table). Marketing, program design and communication efforts that utilize the information of these different market groups will be more successful. The final report also lists specific strategies for targeting audiences including the base angler, outdoor activity groups, men, women, African Americans, Hispanics, teens and their parents.

There has also been more interest in developing marketing strategies and the effectiveness of programs to maintain and increase American’s participation in recreational fishing. There is good reason for this: after a decade of substantial growth in the total number of anglers, fishing in the United States during the 1980s leveled off nationwide and decreased substantially in many states during the 1990s. Interesting to note, while fishing license sales have remained flat, days afield among anglers has increased dramatically.

Funding for The Future of Fishing study was provided through a Federal Aid in Sport Fish Restoration grant. The purpose of the project was to provide information and strategies to state fish and wildlife agencies, industry, nongovernment organizations and federal agencies to assist in efforts to keep current anglers fishing and to encourage others to start fishing.

There were five phases to this project: 1) a compilation of existing literature and a detailed secondary analysis of Responsive Management databases; 2) a series of six nationwide focus groups with anglers and nonanglers to identify initial strategies, programs and messages to increase fishing participation among various target markets; 3) a nationwide telephone survey administered to United States residents 12-years-old and older; 4) a second series of focus groups to assess the viability of promotional efforts encouraging people to go fishing; 5) a final report summarizing the results and implications of this study with an emphasis on target markets and strategies to increase participation in recreational fishing.

The keys to marketing and developing effective outreach strategies are first to understand the needs of various markets and second, to target those markets with appropriate programs, messages and communication strategies. The Future of Fishing study identified both target markets and specific programs and messages appropriate to reach those target markets. 🎣

Nonanglers: Interest in Going Freshwater Fishing

| Group | Z value |
|-----------------------------------|---------|
| Hunters | 6.44* |
| Wildlife/Bird Watchers | 4.40* |
| Campers | 4.21* |
| Target Shooters | 3.65* |
| No High School Diploma | 3.32* |
| Rural | 3.06* |
| Age: 12 to 15 | 2.99* |
| Native Hawaiian or Pacific Island | 2.93* |
| Male | 2.64* |
| Hispanic/Latino Ethnicity | 2.60* |
| Mountain Bikers | 2.54* |
| Jet Skiers | 2.33* |
| Income: 20,000 to 39,999 | 2.10* |
| African American | 2.05* |
| Rockclimbers | 1.68 |
| Boaters | 1.68 |
| Region 2 | 1.30 |
| Age: 25 to 34 | 1.26 |
| Region 1 | 1.20 |
| Motorboaters | 1.03 |
| Canoe/Kayakers | 1.02 |
| Large City/Urban | 1.00 |
| Age: 18 to 24 | 0.99 |
| Some College or Trade School | 0.96 |
| Campground Campers | 0.78 |
| Wilderness Campers | 0.72 |
| Region 4 | 0.70 |
| Income: 40,000 to 59,999 | 0.63 |
| High School Graduate | 0.62 |
| Swimmers | 0.43 |
| Age: 35 to 44 | 0.38 |
| Region 6 | 0.34 |
| RV Campers | 0.33 |
| Waterfowl Hunters | 0.27 |
| Region 3 | 0.26 |
| Age: 45 to 54 | 0.21 |
| Big Game Hunters | 0.03 |
| Water Skiers | -0.12 |
| Income: < 19,999 | -0.15 |
| Hikers | -0.19 |
| Small City/Town | -0.21 |
| Age: 16 to 17 | -0.33 |
| Snow Sport Participants | -0.66 |
| Sailboaters | -0.69 |
| College Graduate | -0.94 |
| Golfers | -0.99 |
| National/State Park Visitors | -1.16 |
| American Indian/Alaska Native | -1.50 |
| Small Game Hunters | -1.55 |
| Income: 60,000 to 99,999 | -1.56 |
| Age: 65 or Older | -1.94 |
| Income: > 100,000 | -1.95 |
| Age: 55 to 64 | -2.00* |
| White | -2.63* |
| Female | -2.64* |
| Region 5 | -2.81* |
| Suburban | -3.91* |
| Graduate or Professional Degree | -4.63* |



*Z values with positive or negative values of 1.96 or greater are statistically significant at the 0.05 level. Positive Z values indicate high interest. Negative Z values indicate low interest.



This is what the Home Page of “THE WILDLIFE” looks like. Visit the site at www.thewildlife.net. It is also available in Spanish.

the eagle causes the player to lose the game. The simulation takes the player through a series of scenes and decision points that stress ethical and responsible hunting, giving even a non-hunter a sense of what hunting is all about. It is also a lot of fun! Clicking on the sign on the homepage that says “Wildlife Adventure” accesses this activity.

Module 1: “Why Hunt? Letters from Kids Who Hunt”

Here non-hunters can interact with children who hunt within the demographic parameters they select. Users can find testimonials describing what other children like about hunting, why they hunt, experiences they have had while hunting and why non-hunting children should consider taking a hunter education class and try hunting. The philosophy is that children are more likely to be influenced by other children rather than adults.

Module 2: “Point-Counterpoint: Should People Hunt?”

This interactive activity presents the commonly heard arguments against hunting and then counters those points in an interactive format.

Module 3: “Who Hunts?”

A Gallery of Hunters

In this module, a series of photographs of famous people are shown and the player guesses whether the person is a hunter or not.

Module 4: “What is it?”

Wildlife Identification

This interactive module shows several different wildlife species and the Web site visitor must identify them. There are three levels of difficulty in this activity.

Module 5: Hunter Education—How to Get Started

This portion of the Web site lists the steps needed to start a youth thinking about hunter education. The site has links to all 50 state fish and wildlife agencies’ hunter education sites.

Module 6: “Got an Attitude?”

This interactive activity leads the Web site visitor through a series of survey questions that allows them to look, in-depth, at their attitudes toward wildlife. This activity uses Dr. Steve Kellert’s attitude typology in a computer-based testing situation.

Module 7: “The Hunting Mind—A Memory Game”

This activity is a variation of the game “Memory.” Here, Web site visitors match several different pairs of theme-related cards.

Module 8: “All About Hunting”

The purpose of this module is to present facts to young people about hunting in the United States, such as how many people hunt, why people hunt, etc.

Module 9: “Homework Helpers”

This module provides information on wildlife management topics and features pictures of more than one hundred game and non-game wildlife species, including video footage.

Module 10: “Careers in Wildlife”

This section allows users to select real letters written by fish and wildlife professionals throughout the United States, which provide real-world descriptions of the fish and wildlife professionals’ positions, duties and insights into a career in conservation.

Module 11: Knowledge Module

In this question and answer activity, users choose the correct response to questions on wildlife and hunting to accumulate points. 🏠

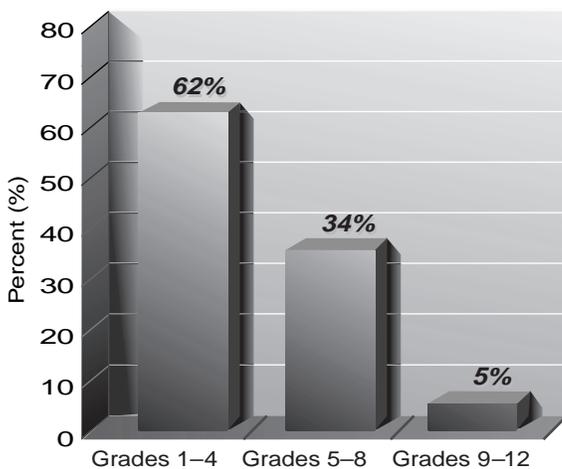
Our Children Are the Future of Wildlife

Utilizing Stages of Learning and Cognitive Development to Enhance Fishing and Hunting Recruitment and Retention Efforts, and Education Programs

CHILDREN GO THROUGH STAGES in their ability to learn and in their perception of the world around them. Research in 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, hunter and wildlife viewer recruitment and retention efforts. The incorporation 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 angling 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 elemen-

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 level stating that to be with friends is not a reason for all to go fishing ($\chi^2(4) = 26.104, p < .001$).

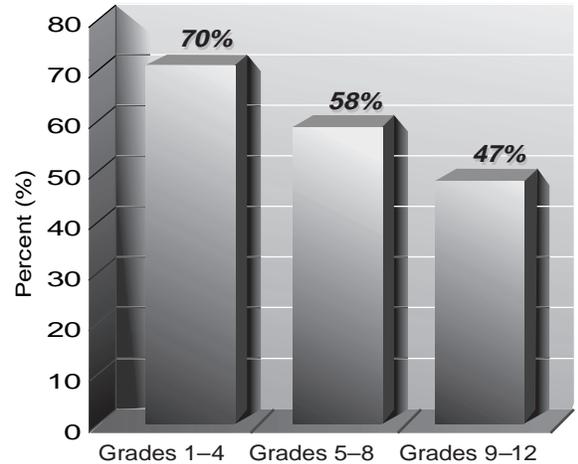
tary children to keep the fish they catch or providing them with fishing equipment, such as lures or bobbers, as ways to increase the enjoyment of their early fishing experiences.

Slightly older children, from fifth to eighth grade, are more receptive to learning facts about the natural world. Education programs targeting fifth to eighth-graders should include scientific facts, statistics and the identification of fish. Developing fishing skills, not just catching fish, also becomes more important.

The main thrust of fishing promotion programs at the high school level must be to entice participants to stay active in angling. The teenage years are a major period of desertion from recreational fishing. Many teens report becoming too busy with competing activities to continue fishing. Teens enjoy social activities more at this

time, and so as a way to bring teenagers together within the sport of fishing, more competitive events might be planned. Additionally, promoting fishing activities through existing social structures like school, church clubs or other groups should be an effective way of keeping teens interested in fishing. This is vital because fishing involvement during the teen years is one of the strongest predictors of long-term fishing involvement. The

Keeping the fish they catch is more important to younger youth than older youth.



Percent of Georgia kids' fishing event participants by grade level stating the event would have been better if they could have kept more of the fish they caught ($t_s = -.109, p < .01$).

Source: Responsive Management 2001 and the Georgia Wildlife Resources Division.

high school years also show youth have developed an increased sense of ethics and therefore may be more receptive to learning about catch and release programs.

During the past few years, Responsive Management has been assisting numerous agencies and organizations in applying research on childhood cognitive stages to natural resource and outdoor recreation programs. We are currently conducting a major survey for the South Carolina Department of Natural Resources of the state's youths' attitudes toward fish and aquatic resources. The survey of youth attitudes will assist in program development for the South Carolina Department of Natural Resources. We are also assisting the Georgia Department of Natural Resources in evaluating their children's fishing events, using the philosophy that what works for younger children probably will not work for older children. 🌲

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THE WILDLIFE

www.thewildlife.net

A New Interactive Web Site for Children on Wildlife, Wildlife Management & Hunting

TO MANY URBAN and suburban youth, “wildlife” refers to their Saturday night escapades or nightly rendezvous at the local mall. Their only exposure to wild animals or wildlife management is from the various media that influence their young lives. Educators and parents compete with MTV, video games and the World Wide Web in an information-saturated environment to reach and influence young Americans. So how do we reach today’s youth to promote wildlife management and hunting and show their role in managing wildlife species?

“The Wild Life” is a new Web site developed by Responsive Management, the International Association of Fish and Wildlife Agencies and Mouse-Up Media under a Federal Aid in Wildlife Restoration grant. The purpose of “The Wild Life” is to educate suburban and urban youth about wildlife, resource management and hunting. This educational

project will reach children where many of them spend a great deal of their time—on the Internet.

Specifically, the purpose of the “Hunting as a Choice” and “The Wild Life” project was to construct a Web site and educational interactive computer programs to inform and educate the nation’s youth to help them better understand:

- 1) Wildlife management
- 2) Wildlife and animals
- 3) Hunting as a wildlife management tool
- 4) Hunting as a legitimate recreational choice
- 5) Hunter education in their state
- 6) Hunting safety

Research has shown that children begin forming their opinions about hunting between the ages of 10 and 12. Traditionally those years represent the time when children, mostly in rural environments, are introduced to the hunting tradition by a family

member, most likely the father. However with the shift in population from a largely rural population at the turn of the last century to a largely urban population at the turn of this century, children are becoming detached from traditional wildlife use. A majority of youth today do not participate in hunting and even more likely, do not understand the role of hunting as it relates to wildlife management. Additionally, in today’s society, the hunting tradition must compete with numerous other activities just as enjoyable to children and even more convenient. All of these factors combined have greatly reduced the public’s, especially youths’, understanding of professional wildlife management and the role of hunting.

Featured on this Web site are an interactive hunting activity and eleven interactive modules.

Interactive Hunting Activity

This goal and ethics-oriented activity leads youth through a typical hunt. For example, a scene shows a bald eagle sitting in a tree. Shooting