



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
DNR211011

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
FRANK WHITTAKER
304-558-2316

VENDOR

*818132926 540-432-1888
RESPONSIVE MANAGEMENT
130 FRANKLIN STREET

HARRISONBURG VA 22801

SHIP TO

DIVISION OF NATURAL RESOURCES
WILDLIFE RESOURCES SECTION
324 4TH AVENUE

SOUTH CHARLESTON, WV
25303 304-558-3397

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
08/12/2010				

BID OPENING DATE: ~~09/15/2010~~ **09/15/2010** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		961-60	124,488	124,488
<p>PUBLIC OPINION SURVEY SERVICES</p> <p>THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DIVISION OF NATURAL RESOURCES, IS SOLICITING BIDS FROM RESPONSIBLE VENDORS TO DESIGN, CONDUCT, ANALYZE AND REPORT THE RESULTS OF A MAJOR TELEPHONE SURVEY OF WEST VIRGINIA RESIDENTS RELATING T HUNTER EFFORT AND SUCCESS IN WEST VIRGINIA PER THE ATTACHED SPECIFICATIONS.</p> <p>ALL TECHNICAL QUESTIONS MUST BE SUBMITTED IN WRITING TO FRANK WHITTAKER IN THE WV PURCHASING DIVISION VIA EMAIL AT FRANK.M.WHITTAKER@WV.GOV OR VIA FAX AT 304-558-4115 DEADLINE FOR TECHNICAL QUESTIONS IS 8/30/10 AT 4:00 PM. ALL TECHNICAL QUESTIONS WILL BE ADDRESSED BY ADDENDUM AFTER THE DEADLINE.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;">DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p>						

RECEIVED
 2010 SEP 15 A 10:34
 PURCHASING DIVISION
 STATE OF WV

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE <i>Mark Davis Duda</i>	TELEPHONE 540.432.1888	DATE 9/14/2010	
TITLE Executive Director	FEIN 54.164.2830	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.
5. Payment may only be made after the delivery and acceptance of goods or services.
6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.htm and is hereby made part of the agreement. Provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
15. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.
16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).



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<p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: 44</p> <p>RFQ. NO.: DNR211011</p> <p>BID OPENING DATE: 09/15/2010</p> <p>BID OPENING TIME: 1:30 PM</p> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID: ----- 540.432.1892 -----</p> <p>CONTACT PERSON (PLEASE PRINT CLEARLY): ----- Mark Damian Puda -----</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Mark Damian Puda</i>	TELEPHONE 540.432.1888	DATE 9/14/2010
TITLE Executive Director	FEIN 54.164.2830	ADDRESS CHANGES TO BE NOTED ABOVE

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PRICING SHEET

Design, Conduct, Analyze and Report the Results of a Major Telephone Survey of West Virginia Residents on a Number of Issues Relating to Hunter Effort and Success in West Virginia.

ITEM No.	QUANTITY	ITEM DESCRIPTION	UNIT PRICE	AMOUNT
1.	1	Telephone Survey	124,488	124,488
TOTALS				124,488

State of West Virginia

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with West Virginia Code, §5A-3-37. (Does not apply to construction contracts). West Virginia Code, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the West Virginia Code. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1. Application is made for 2.5% resident vendor preference for the reason checked:
NA Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,

NA Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,

NA Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,

2. Application is made for 2.5% resident vendor preference for the reason checked:
NA Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,

3. Application is made for 2.5% resident vendor preference for the reason checked:
NA Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,

4. Application is made for 5% resident vendor preference for the reason checked:
NA Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,

5. Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:
NA Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,

6. Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:
NA Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Responsive Management Signed: Mark S. ...
Date: 9/14/2010 Title: Executive Director

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (*West Virginia Code §61-5-3*), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Responsive Management

Authorized Signature: Mark A. Duda Date: 9/14/2010

State of Virginia

County of Rockingham, to-wit:

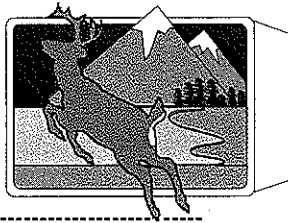
Taken, subscribed, and sworn to before me this 14 day of September, 2010.

My Commission expires November 30, 2013 Rockingham County, VA

AFFIX SEAL HERE

NOTARY PUBLIC Alison J. Lerner

Responsive Management



September 13, 2010

Mr. Frank Whittaker
West Virginia Department of Administration
Purchasing Division, Building 15
2019 Washington Street, East
Charleston, WV 23505-0130

Dear Mr. Whittaker:

This letter is in reference to Request for Quotation (RFQ) #DNR211011 issued by the West Virginia Division of Natural Resources (WVDNR) to design, administer, analyze, and report the results of a telephone survey to determine big and small game hunting participation, success, and pressure at the county level in West Virginia. Responsive Management would very much like an opportunity to conduct a telephone survey of West Virginia residents to determine the total number of hunters hunting various big and small game species; to estimate harvest success for white-tailed deer, wild turkey, and black bear; and to assess hunters' attitudes towards hunting seasons.

Responsive Management was established to help natural resource agencies and organizations better understand and work with their constituents. Specializing in research for fish and wildlife agencies and organizations, Responsive Management has been conducting survey research exclusively on public attitudes toward natural resource, fish and wildlife, and outdoor recreation issues for 20 years. It has conducted hunter harvest and hunter opinion surveys in many states in the U.S., including West Virginia, Arizona, Delaware, Georgia, Maryland, New Hampshire, New Jersey, Vermont, and Washington, to name only a few.

Additionally, Responsive Management has a longstanding relationship with the WVDNR and has completed more than eight major studies for or in the State of West Virginia. Projects include a study to determine West Virginia residents' opinions on black bear management and black bear hunting, a study to determine residents' attitudes toward wildlife and their participation in wildlife-related activities, a telephone survey of West Virginia hunters to assess their opinions on issues related to deer and the deer hunting season, and a telephone survey of West Virginia rural landowners to assess their opinions on issues related to hunter access to private lands, deer harvest on private lands, deer crop damage, problems with hunter behavior, and potential programs to increase deer harvest on private lands.

I believe Responsive Management's prior experience in the State of West Virginia, exceptional customer service, high level of credibility, and proven track record will prove a great asset for the successful completion of this project.

Experience

No other firm or individual in the country has as much experience and working knowledge of conducting survey research measuring hunting participation, success, and pressure and determining hunters' opinions on and attitudes toward wildlife management policies and regulations. In fact, Responsive Management conducted a similar study for the WVDNR in 2007 to determine deer hunting participation and deer harvest totals. This project included a telephone survey of West Virginia residents aged 15 years and over to determine residents' participation in deer hunting and their harvest of deer. For this study, Responsive Management interviewed 2,564 deer hunters in the state to determine the number of days hunters spent hunting deer. Additional analysis was conducted to examine hunter participation and harvest rates by type of license and purchase methods.

Additionally, Responsive Management has been conducting hunter participation and harvest surveys for the Georgia Department of Natural Resources (GDNR) since 2005. Through a term contract with the GDNR, Responsive Management conducts several annual surveys of Georgia resident licensed hunters to determine harvest numbers by species, type of hunting equipment, and by county. Other relevant studies include annual hunter participation and harvest surveys conducted for the South Carolina Department of Natural Resources, which involved telephone surveys of license holders to obtain information regarding number of hunters of each of several species, number of each species harvested, days afield for each species hunter, deer hunting weapons, and hunting locations.

As another example, last year, Responsive Management conducted a study for the Kentucky Department of Fish and Wildlife Resources (KDFWR) regarding hunting and wildlife management in Kentucky. This study entailed a telephone survey of resident hunting license holders from across the state. The survey was designed to measure hunting participation and harvest in Kentucky, including years hunted, hunting locations, and species hunted; satisfaction with hunting and wildlife management in the state; conflicts with other recreationists and participation in other activities; and opinions on allowable activities in WMAs and forest management for habitat improvement. As well, this study also assessed license holders' knowledge of and opinions on funding for the KDFWR as well as opinions on funding and management efforts for the recovery of various species. As a companion to this study, Responsive Management completed a separate study specifically regarding the Peabody WMA. This survey was conducted with Peabody WMA Permit holders to assess their knowledge of and values associated with the Peabody WMA; to explore their opinion on and attitudes toward wildlife management and regulation changes, particularly as it concerns bobwhite; and, ultimately, to determine their support for and/or opposition to proposed hunting season changes. Another study, conducted for the New Jersey Division of Fish and Wildlife, involved a telephone survey of licensed hunters to determine hunter participation and harvest and to assess hunters' opinion on and attitudes toward deer management issues, such as the size of the deer herd, hunting access and opportunities, and harvest size. The results of this research provided these agencies a foundation for future development of management strategies, collaborative efforts, and mechanisms for successful deer management programs and initiatives.

In the completion of all studies, Responsive Management provides thorough data analysis that will be displayed graphically in an easily understandable format. Responsive Management's experience conducting similar studies using scientifically sound research means that you can be assured that your study will be completed both accurately and promptly.

Customer Service

Responsive Management works exclusively with wildlife and natural resource agencies and organizations and has a 20-year track record of high customer satisfaction. The following are client comments regarding Responsive Management's work:

"His work demonstrates the highest standards of professionalism and the volume of work is truly prolific. 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."

—Bruce Lemmert, President, Virginia Wildlife Society

"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 have enclosed further comments and recommendations from numerous natural resource management professionals on the quality of Responsive Management's work.

Credibility

Responsive Management has been conducting textbook-quality research for natural resource and outdoor recreation organizations for 20 years. Many firms do not employ quality methodology and cut corners to increase profits; Responsive Management does not cut corners. When comparing firms, compare and contrast methodology, quality control, experience, and credibility. The more you examine its methods, the more you will see the methodologies Responsive Management uses are of the highest quality.

Responsive Management's research has been upheld in U.S. District Courts, used in peer-reviewed journals, and presented at major natural resource and outdoor recreation conferences across the world. Its research has been featured in many of the nation's top media, including *The Washington Times*, *The New York Times*, *The Wall Street Journal*, *CNN*, and on the front pages of *The Washington Post* and *USA Today*. Its research has also been highlighted in *Newsweek* magazine, and findings from Responsive Management's hunter opinion studies were recently featured in *Delta Waterfowl* and *Field and Stream*.

Proven Track Record

Responsive Management has incorporated its research into numerous real-world communications, recommendations, and strategies to achieve the desired objectives of its clients. For example, Responsive Management has been conducting research for the past decade for the highly acclaimed and successful STEP OUTSIDE® Program, and in a study conducted last year, Responsive Management highlighted a series of recommendations to improve program awareness and help make STEP OUTSIDE® publicity more accessible to partner organizations. In Virginia, Responsive Management's research and communications strategies were utilized to win a statewide vote on a referendum for a constitutional amendment for the right to hunt, fish, and harvest game.

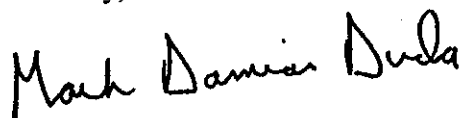
Responsive Management has also worked closely with many states to improve hunter recruitment and retention strategies, including the two top-ranked states for in-state hunter participation (Texas

and Pennsylvania) and four of the top five states with the highest participation rates: Montana, North Dakota, Arkansas, and Minnesota.¹

Most recently, Responsive Management completed a comprehensive assessment of hunter recruitment and retention efforts in North Dakota. For this project, Responsive Management conducted a telephone survey of strategic demographic groups to determine the status of long-term hunter recruitment and retention, to offer comparison with related surveys from other states that have implemented successful hunter recruitment and retention strategies, and to develop recommendations for best strategies to recruit and retain North Dakota hunters. The final report provided the framework for a comparison of trends in North Dakota against the backdrop of national hunting participation trends. Data sources included license data provided by the North Dakota Game and Fish Department, license data obtained through the U.S. Fish and Wildlife Service as part of the Wildlife and Sport Fish Restoration programs, and data from the *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*.

Through its dedication and commitment to excellence, Responsive Management can ensure the completion of a timely and quality hunting participation and public opinion survey for West Virginia. Thank you for considering Responsive Management. I look forward to an opportunity to work with you again.

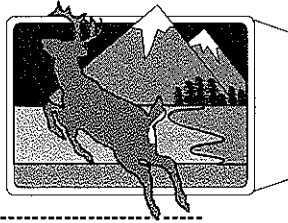
Sincerely,



Mark Damian Duda, Executive Director
Responsive Management
130 Franklin Street
Harrisonburg, VA 22801
540-432-1888
fax: 540-432-1892
www.responsivemanagement.com

¹ Based on information from U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*. Available at http://library.fws.gov/nat_survey2006_final.pdf.

Responsive Management



2010-2011 WEST VIRGINIA HUNTER SURVEY: HUNTING PARTICIPATION AND SUCCESS IN WEST VIRGINIA

**Proposal for Survey Research Services for the
West Virginia Division of Natural Resources**

Submitted by Responsive Management

September 2010

WHY RESPONSIVE MANAGEMENT?

- ✓ **Credibility.** Responsive Management is a leader in the survey research field and has conducted human dimensions research for almost every state natural resource and fish and wildlife agency and many of the nation's top universities, including Auburn University, Colorado State University, Duke University, George Mason University, Michigan State University, Mississippi State University, North Carolina State University, Oregon State University, Penn State University, Rutgers University, Texas Tech University, University of California-Davis, University of Florida, University of Montana, University of New Hampshire, University of Southern California, Virginia Tech, and West Virginia University.
- ✓ **Experience.** Responsive Management is an internationally recognized survey research specializing in public opinion on natural resource, fish and wildlife, and outdoor recreation issues. For 20 consecutive years, Responsive Management has been conducting survey research to assess hunting participation, hunting pressure, and hunter satisfaction in numerous states. In fact, Responsive Management has been awarded several contracts to conduct hunter harvest research in West Virginia, Georgia, South Carolina, and Ohio, to name only a few states.
- ✓ **Facility and Expert Personnel.** Responsive Management maintains its own in-house, full-service telephone survey research center, which is staffed with professional interviewers who are trained according to the standards established by the Council of American Survey Research Organizations, assuring rigorous oversight and strict quality control. Responsive Management consists of an Executive Director, Statisticians, Survey Center Managers, Qualitative Research Associates, Quantitative Research Associates, a Business Manager, and 50 professional interviewers.
- ✓ **Service.** Responsive Management will work directly with the WVDNR to ensure that survey design and methodology meet the exact specifications, goals, and objectives of the study. Responsive Management will assist the WVDNR in selecting the proper study design to maximize speed and accuracy and to conduct a thorough study while minimizing costs. The WVDNR will be directly involved throughout the entire study design process, and final approval of the methodology will be obtained prior to implementation.
- ✓ **Value.** Responsive Management offers the most cost-effective approach to study design without sacrificing the validity and reliability of study results. Responsive Management will work closely with WVDNR personnel to determine the best methodology to ensure that all study objectives are achieved, that statistically valid data are obtained, and that scientifically defensible results are produced at reasonable cost. Responsive Management is able to offer affordable survey design and completion because all work is completed in-house, eliminating the need for additional outsourcing, subcontracting expenses, or high university overhead charges.

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INTRODUCTION

PURPOSE AND SCOPE

This proposal outlines the specific services, methodology, costs, and a timeline in response to Request for Quotation (RFQ) #DNR211011 issued by the West Virginia Division of Natural Resources (WVDNR) to conduct a telephone survey to determine big and small game hunting participation, success, and pressure at the county level in West Virginia. Specifically, this study will be designed to achieve the following major objectives, as outlined in the RFQ:

- Estimate the number and success of white-tailed deer hunters by hunting season type and within all of West Virginia's 55 counties
- Estimate the number of spring wild turkey, fall wild turkey, and black bear hunters by county
- Assess hunter attitudes towards their preference for spring or fall wild turkey seasons
- Estimate the number of small game hunters by species in West Virginia's 6 ecological regions
- Estimate the number of trappers by species in West Virginia

The complexity and scope of this study requires that the sample size is large enough to provide representative results at the county level and based on ecological regions within the state, meaning that responses will be stratified to show similarities and differences at the local level. The results of this study will determine hunting participation, success, and pressure in the state and will prove integral in WVDNR planning and the development of hunting regulations.

SUMMARY OF METHODOLOGICAL APPROACH

To accomplish the objectives of this study, Responsive Management proposes the following approach, further detailed in the section of this proposal titled "Proposed Methodology and Overall Approach":

1. **Convene an Initial Planning Session.** This project will begin with an initial meeting between Responsive Management's project team, representatives from the WVDNR, and the WVDNR's survey liaison team.
2. **Develop Sampling Frame.** Responsive Management will develop a statistically representative sample of West Virginia residents to conduct a telephone survey to determine an accurate total number of and participation rates for big and small game hunters for each county and statewide. In order to meet these specifications, the sample population will be large enough to complete 4-5 initial survey questions with a representative sample of the general population on a per county basis and to ask additional questions *only* of West Virginia hunters. As per RFQ #DNR211011, the WVDNR requires that 5,500 telephone interviews are completed for *each* question asked (meaning 5,500 completed surveys with active hunters).

Because approximately 14% of West Virginia's population age 16 years old and older participate in hunting activities² and this survey will be administered to the general population, Responsive Management estimates that approximately one out of every

² 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. Retrieved on September 2, 2010 from <http://www.census.gov/prod/2008pubs/fhw06-nat.pdf>.

"I would just like to take this quick opportunity to thank you and your staff on the tremendous work you recently completed for the West Virginia Division of Natural Resources. All too often we lack important human dimensions work in wildlife management decisions and focus only on biological data. I believe wildlife management decisions should be based on solid biological data; however, I also believe that we must use essential human dimensions work and public opinion to come up with the best management strategy. The survey of West Virginia Residents' Opinions on Black Bears and Black Bear Hunting that Responsive Management conducted for the West Virginia DNR was just the kind of information that we were so desperately lacking.

The report that Responsive Management supplied us with was very comprehensive, and the cross-tabulations supplied additional insight that may have otherwise gone undetected. The additional analysis that you and your staff did . . . was above and beyond the call of duty and demonstrated the kind of expertise and caring attitude that your staff has about our natural resources. It also helped to demonstrate that while this survey was conducted on all residents of West Virginia, your staff was able to identify our target audience very effectively and supplied us with the best possible data to make management recommendations."

-Dr. Chris Ryan, Black Bear Project Leader, West Virginia Division of Natural Resources

seven residents contacted will have participated in hunting in West Virginia. Based on the assumption that only about half of the sample population will agree to complete the survey, Responsive Management estimates that a sample population of approximately 80,000-90,000 West Virginia residents will have to be contacted initially statewide in order to obtain 5,500 completed telephone interviews with hunters³, as well as to obtain a representative number of completed interviews with the general population. It is important to note that the size of the sample may vary (i.e., increase in most cases) in order to achieve representative results at the county level. Additionally, one alternative that may be considered to obtain representative harvest data, may be to augment the general population sample with a sample of licensed hunters in the State of West Virginia. Responsive Management will work closely with WVDNR personnel to determine the best approach to sample selection.

3. **Design and Pretest Survey.** Responsive Management will plan, design, and computer code a 4-5 question survey questionnaire (i.e., universal module) to determine overall hunting participation, specific dates and number of days spent hunting, species hunted, harvest rates, and opinions regarding deer populations. This initial survey will be asked of everyone within the general population. Additional survey modules will also be developed for implementation in the different counties of the state and to obtain information from specific subpopulations. Survey design will be based on collaboration with the WVDNR and Responsive Management's own extensive experience in natural resource, fish and wildlife, and outdoor recreation studies. Responsive Management will pretest the survey instrument and make any necessary revisions for logic, wording, and clarification.
4. **Administer Survey.** Responsive Management will conduct a random digit dial telephone survey of West Virginia residents to determine big and small game hunting participation and harvest at the county level. Responsive Management will complete telephone interviews with a representative sample of the general population to provide general population data on a per county basis. Responsive Management will also obtain 100 completed telephone interviews with West Virginia *hunters* in each county, resulting in a total of 5,500 completed interviews with hunters statewide. The sample will be stratified for representative results at the county level. In other words, the sample size for this survey must be large enough to provide the total number of hunters and hunting participation rates at the county level, based on survey interviews with the general population as well as a sample subpopulation of 5,500 hunters in the state.
5. **Analyze Data.** Responsive Management will fully analyze data and interpret findings. All data collected will be processed and analyzed using SPSS for Windows software and proprietary software developed by Responsive Management. Data processing and analysis will include coding, preparation of straight tabulations, computer processing with crosstabulations, and preparation of study printouts.
6. **Prepare Final Report.** Responsive Management will create graphs to correspond to each question for easy review and visual display of survey data and will prepare a final report on the results of the study.

³ Estimates based on 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation estimates for hunting participation (199,000 hunters in 2006) and U.S. Census information (1,493,949 residents age 15 and older). This estimate is only approximate and the sampling plan will be finalized, pending a contract with the WVDNR.

“His work demonstrates the highest standards of professionalism and the volume of work is truly prolific. 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 Mark Damian Duda has become a benchmark of comparison for others doing similar work in the field”

–Bruce Lemmert, President, Virginia Wildlife Society

VENDOR QUALIFICATIONS

Established in 1990 by Mark Damian Duda, Responsive Management has been conducting research for 20 years on public attitudes toward natural resource, fish and wildlife, and outdoor recreation issues. Its mission is to help natural resource agencies and organizations better understand and work with their constituents, customers, and the public. Utilizing its in-house, full-service telephone and mail survey center with 50 professional interviewers, Responsive Management's research associates have conducted more than 500 telephone surveys, mail surveys, focus groups, and personal interviews exclusively on public attitudes toward natural resources, fish and wildlife, and outdoor recreation issues. Responsive Management routinely provides trends analysis, regional data analysis, and extensive nonparametric analysis. The geographic scope of its studies range from a single telephone exchange or zip code to studies conducted nationally. For all studies, Responsive Management follows the highest standards in conducting telephone surveys, mail surveys, focus groups, and personal interviews to ensure accurate, unbiased results.

The following is just a sampling of Responsive Management's extensive experience, relevant to the survey research needs of the WVDNR. For additional information about Responsive Management's research, methodologies, and qualifications and to download reports, please visit www.responsivemanagement.com.

PROJECT SUMMARIES

Studies Conducted on Hunting Participation and Success

No other firm has as much experience and knowledge of conducting survey research to measure hunting participation and pressure, to assess hunter recruitment and retention efforts, or to determine hunters' opinions on and attitudes toward wildlife management policies and regulations. In fact, Responsive Management conducted a similar study for the WVDNR in 2007. This project included a telephone survey of West Virginia residents aged 15 years and older to determine participation rates in deer hunting and residents' harvest of deer. Responsive Management obtained a total of 2,564 completed interviews with deer hunters in the state to determine the number of days hunters spent hunting deer. Additional analysis was conducted to examine hunter participation and harvest rates by type of license and purchase methods. Because it conducted the 2007 hunter harvest survey for the Division, Responsive Management has immediate access to study design, methodology, and comparative results. This access, combined with our background of extensive research on wildlife management issues, will prove invaluable in developing a final report that will ensure the most comprehensive and accurate statistics and comparative analyses for the WVDNR.

Responsive Management has also been conducting hunter participation and harvest studies for the Georgia Department of Natural Resources (GDNR) since 2005. In fact, Responsive Management conducts several annual studies for the GDNR to determine harvest numbers by species, type of hunting equipment, and by county. This year, the term contract came up for bid and Responsive Management was again awarded a 5-year contract with the GDNR to continue conducting GDNR's wildlife harvest surveys, which includes two annual hunter surveys (Harvest of Wildlife Survey and Wild Turkey Hunter Survey) and three periodic hunter surveys (Small Game Hunter Survey, Non-resident/Honorary/Lifetime License Holders Survey, and a

“His firm is recognized as the leading social science research firm in the nation that works in the natural resources arena.”

–Dr. Steve L. McMullin, Associate Professor, Virginia Tech

Wildlife Management Area User Survey). Other relevant studies include annual hunter participation and harvest surveys conducted for the South Carolina Department of Natural Resources (SCDNR), which involved telephone surveys of license holders to obtain information regarding number of hunters of each of several species, number of each species harvested, days afield for each species hunter, deer hunting weapons, and hunting locations. Another study, conducted for the New Jersey Division of Fish and Wildlife, involved a telephone survey of licensed hunters to determine hunter participation and harvest and to assess hunters' opinion on and attitudes toward deer management issues, such as the size of the deer herd, hunting access and opportunities, and harvest size. The results of this research provided these agencies a foundation for future development of management strategies, collaborative efforts, and mechanisms for successful deer management programs and initiatives. To follow is a list of studies Responsive Management has completed to determine hunting participation rates and harvest success.

West Virginia Residents' Participation in Deer Hunting and Harvest of Deer. This study was conducted for the West Virginia Division of Natural Resources to determine residents' participation rates in deer hunting and their harvest of deer. The study entailed a telephone survey of West Virginia residents aged 15 years and over to determine overall hunting participation rates, frequency and duration of hunting, harvest rates, and types of equipment used.

Georgia Wildlife Harvest Survey 2004-2005. This study entailed a telephone survey of Georgia resident licensed hunters and was conducted for the Georgia Department of Natural Resources (WRD) to determine harvest numbers by species, type of hunting equipment, and by county.

Georgia Wildlife Harvest Survey 2005-2006. This study entailed a telephone survey of Georgia resident licensed hunters and was conducted for the Georgia Department of Natural Resources (WRD) to determine harvest numbers by species, type of hunting equipment, and by county.

Georgia Wildlife Harvest Survey 2006-2007. This study entailed a telephone survey of Georgia resident licensed hunters and was conducted for the Georgia Department of Natural Resources (WRD) to determine harvest numbers by species, type of hunting equipment, and by county.

Georgia Wildlife Harvest Survey 2007-2008. This study entailed a telephone survey of Georgia resident licensed hunters and was conducted for the Georgia Department of Natural Resources (WRD) to determine harvest numbers by species, type of hunting equipment, and by county.

Georgia Wildlife Harvest Survey 2008-2009. This study entailed a telephone survey of Georgia resident licensed hunters and was conducted for the Georgia Department of Natural Resources (WRD) to determine harvest numbers by species, type of hunting equipment, and by county.

Georgia Spring Turkey Harvest Survey 2004-2005. This study entailed a telephone survey of Georgia resident licensed hunters and was conducted for the Georgia Department of Natural Resources (WRD) to determine spring turkey harvest numbers by county.

“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

Georgia Spring Turkey Harvest Survey 2005-2006. This study entailed a telephone survey of Georgia resident licensed hunters and was conducted for the Georgia Department of Natural Resources (WRD) to determine spring turkey harvest numbers by county.

Georgia Spring Turkey Harvest Survey 2006-2007. This study entailed a telephone survey of Georgia resident licensed hunters and was conducted for the Georgia Department of Natural Resources (WRD) to determine spring turkey harvest numbers by county.

Harvest of Small Game in Georgia. This study entailed a telephone survey of Georgia licensed hunters and was conducted for the Georgia Department of Natural Resources (WRD) to determine small game harvest.

The South Carolina Department of Natural Resources Hunter Harvest Survey 1999-2000. For this study, Responsive Management completed a telephone survey of license holders to obtain information regarding hunter harvest for 1999-2000 season. Information included number of hunters of each of several species, number of each species harvested, days afield for each species hunter, deer hunting weapons, and hunting locations.

The South Carolina Department of Natural Resources Hunter Harvest Survey 2002-2003. A telephone survey of license holders was conducted to obtain information regarding hunter harvest for 2002-2003 season. Information included number of hunters of each of several species, number of each species harvested, days afield for each species hunter, deer hunting weapons, and hunting locations.

The South Carolina Department of Natural Resources Hunter Harvest Survey 2003-2004. Responsive Management completed a telephone survey of license holders to obtain information regarding hunter harvest for 2003-2004 season. Information included number of hunters of each of several species, number of each species harvested, days afield for each species hunter, deer hunting weapons, and hunting locations.

New Jersey Deer Hunter Satisfaction. This study, conducted for the New Jersey Division of Fish and Wildlife, involved a telephone survey of licensed hunters to determine hunter participation and harvest; to rate the performance of the Division; and to assess hunters' opinion on and attitudes toward deer management issues, such as the size of the deer herd, hunting access and opportunities, and harvest size.

Studies Conducted on Wildlife Management, Big Game Species, and Hunting-Related Issues

Responsive Management is highly committed to increasing hunter recruitment and retention efforts. For this reason, Responsive Management has more experience than any other firm or individual in the country conducting research designed to examine hunting participation rates, to assess hunters' opinions on and attitudes toward wildlife management and hunting-related issues, and to determine hunters' satisfaction with hunting opportunities and access. In fact, Responsive Management partnered with the National Shooting Sports Foundation (NSSF) to produce one of the largest and most comprehensive studies ever conducted on hunting and sport shooting participation: *The Future of Hunting and the Shooting Sports: Research-Based Recruitment and*

“Mark Damian Duda is one of the nation’s foremost researchers on public attitudes toward the environment.”

–Associated Press

Retention Strategies. Four primary components complete this large-scale research project focused on developing actionable, research-based hunter and sport shooter recruitment and retention strategies. For Phase I of the project, Responsive Management completed a comprehensive literature review of past research pertaining to hunting and the shooting sports. Phase II entailed a series of focus groups in diverse geographic areas of active hunters and shooters, lapsed hunters and shooters, non-hunters and non-shooters, and anti-hunters and anti-shooters. Two nationwide telephone surveys were conducted in Phase III of the project: the first with a sample of hunters and shooters, and the second with a sample of the general population (the latter sample containing non-hunters and non-shooters). During Phase IV, Responsive Management compiled and examined all the data obtained in the previous three phases of the project and produced a final report of the results. This report was the core of the 2008 Shooting Sports Summit and the impetus for NSSF's *Task Force 20/20*. This task force was created to implement the strategic recommendations outlined in the report and develop an action plan to increase hunting and target shooting participation.

Additionally, Responsive Management has completed extensive research to determine hunters' opinions on big game hunting opportunities and their attitudes towards hunting seasons and regulations. In fact, last year, Responsive Management conducted a study for the Kentucky Department of Fish and Wildlife Resources (KDFWR) regarding hunting and wildlife management in Kentucky. This study entailed a telephone survey of resident hunting license holders from across the state. The survey was designed to measure hunting participation and harvest in Kentucky, including years hunted, hunting locations, and species hunted; satisfaction with hunting and wildlife management in the state; conflicts with other recreationists and participation in other activities; and opinions on allowable activities in WMAs and forest management for habitat improvement. As well, this study also assessed license holders' knowledge of and opinions on funding for the KDFWR as well as opinions on funding and management efforts for the recovery of various species. As a companion to this study, Responsive Management completed a separate study specifically for the Peabody WMA. This survey was conducted with Peabody WMA User Permit holders to assess their knowledge of and values associated with the Peabody WMA; to explore their opinion on and attitudes toward wildlife management and regulation changes, particularly as it concerns bobwhite; and, ultimately, to determine their support for and/or opposition to proposed hunting season changes.

More recently, Responsive Management was awarded a sole-source contract with the Vermont Fish and Wildlife Department (VFWD) to conduct a telephone survey of Vermont hunters regarding proposed changes to deer and moose hunting seasons. Specifically, this study will be designed to assess hunters' opinions on a split muzzleloader season for antlerless deer as well as a limited archery-only moose hunting season. The results of this study will help inform the Department's hunting regulations and season limits. As another example, Responsive Management is currently working with the Virginia Department of Game and Inland Fisheries to update the state's bear management plan based on the most current black bear ecology and management statistics, as well as a comprehensive assessment of public opinion on bear and bear management issues. This plan will be developed to address the increasingly complex challenges and issues surrounding bear management efforts, including bear hunting, human-bear conflicts, and bear habitat conservation, among other concerns. The development of the *2011-2020 Bear Management Plan* involves an interactive, multi-phased approach to plan development that

“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 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

simultaneously addresses public issues and concerns while also maintaining stable wildlife populations and preserving habitat. The first phase of this project involved comprehensive public opinion and biological research: Responsive Management and the VDGIF partnered to conduct a telephone survey of Virginia residents and to collect biological data regarding bear ecology and habitat. Responsive Management is currently working on the second phase of the study, which involves a series of meetings with Stakeholder Advisory Committees throughout the state to assist in the development of a comprehensive bear management plan.

Other relevant projects include *The Opinions of Residents, Hunters, and Landowners on Deer Management in Maryland*, which was a study conducted for the Maryland Department of Natural Resources to determine the opinions of residents, active deer hunters (they had hunted deer within the previous 2 years), and landowners (who own at least 20 acres and who grow commercial agriculture crops) on the deer population, deer hunting, and deer management in Maryland. A similar study was conducted for the Wyoming Game and Fish Department. For this study, Responsive Management conducted a telephone survey of both licensed resident and non-resident Wyoming hunters to assess hunters' opinions on and attitudes toward deer management in Wyoming, including their opinions on general deer management practices, deer hunting regulations, and controlling deer populations in urban areas; to identify areas hunted, types of land hunted, and the motivations for these preferences; and to determine Wyoming hunters' satisfaction with the Department's deer management strategies. To follow are numerous examples of Responsive Management's survey research work regarding hunting and big-game management issues.

Regarding Hunting-Related Issues and Big Game, in General

The Future of Hunting and the Shooting Sports: Research-Based Recruitment and Retention Strategies. This report involved a large-scale, three-year study of hunting and shooting sports. The purpose of this project was to better understand the factors related to hunting and sport shooting participation, identify strategies to better meet the needs of current and potential participants, and more effectively communicate to the public about these activities. Four primary components made up this study. Phase I entailed a literature review of past research pertaining to hunting and the shooting sports. Phase II entailed a series of focus groups in diverse geographic areas of active hunters and shooters, lapsed hunters and shooters, non-hunters and non-shooters, and anti-hunters and anti-shooters. Phase III entailed two nationwide telephone surveys: the first on a sample of hunters and shooters, and the second on a sample of the general population (the latter sample containing non-hunters and non-shooters). Phase IV of this study entailed a compilation and examination of all the data obtained in the previous three phases of the project, as well as the production of the final report.

Survey Regarding Hunting and Wildlife Management in Kentucky. This study was conducted for the Kentucky Department of Fish and Wildlife Resources (KDFWR) regarding hunting and wildlife management in Kentucky. The study entailed a telephone survey of resident hunting license holders from across the state. The survey was designed to measure hunting participation and harvest in Kentucky, including years hunted, hunting locations, and species hunted; satisfaction with hunting and wildlife management in the state; conflicts with other recreationists and participation in other activities; and opinions on allowable activities in WMAs and forest

"I want to take this opportunity to express my thanks for your outstanding work . . . This is a very fine report that has already proven 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 Regan, (Former) Commissioner, Vermont Department of Fish and Wildlife (currently Executive Director for the Association of Fish and Wildlife Agencies)

management for habitat improvement. As well, this study also assessed license holdres' knowledge of an opinions on funding for the KDFWR as well as opinions on funding and management efforts for the recovery of various species.

Survey Regarding Recreation in the Peabody Wildlife Management Area in Kentucky. This study was conducted for the Kentucky Department of Fish and Wildlife Resources (KDFWR) regarding recreation in the Peabody Wildlife Management Area (WMA). For this project, Responsive Management conducted a telephone with Peabody WMA User Permit holders to assess their opinions on and attitudes toward wildlife management and hunting regulations. Specifically, this survey was conducted to assess their knowledge of and values associated with the Peabody WMA; explore their opinion on and attitudes toward wildlife management and regulation changes, particularly as it concerns bobwhite; and, ultimately, determine their support for and/or opposition to proposed hunting season changes.

Hunters' Opinions on Wildlife Management and Other Hunting Issues in Washington. Responsive Management conducted this study for the Washington Department of Fish and Wildlife. The purpose of this study was to obtain hunters' opinions on wildlife management in the State, explore hunters' attitudes toward funding for hunting and wildlife management, determine hunters' opinions on hunting seasons and regulations, and assess hunters' satisfaction and/or dissatisfaction with hunting in Washington.

Factors Related to Hunting Participation in Pennsylvania. Telephone survey of Pennsylvania licensed hunters was conducted for the Pennsylvania Game Commission to determine hunters' participation in and motivations for hunting, their satisfaction with hunting, and their knowledge and ratings of Pennsylvania Game Commission programs.

North Dakota Hunting Survey. For this project, Responsive Management conducted a telephone survey of strategic demographic groups to determine the status of long-term hunter recruitment and retention; to offer comparison with related surveys from other states that have implemented successful hunter recruitment and retention strategies; and to develop recommendations for best strategies to recruit and retain North Dakota hunters. The final report provided the framework for a comparison of trends in North Dakota against the backdrop of national hunting participation trends. Data sources included license data provided by the North Dakota Game and Fish Department; license data obtained through the U.S. Fish and Wildlife Service as part of the Wildlife and Sport Fish Restoration programs; and data from the National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

Findings from this study were the driving force in recent legislative and policy changes in the state. According to an article featured in The Dickinson Press , North Dakota passed legislation (Senate Bill 2165) affording 12- and 13-year-olds the opportunity to deer hunt with their parents as a direct result of this important research conducted by Responsive Management. In addition to showing that exposure to hunting at a younger age is crucial to hunter retention, the study "also found, to the surprise of many, the majority of North Dakotan's first hunting experience was with deer." These results prompted legislative action that increased hunting opportunities for youth; prior to this legislation, youth were only able to hunt upland game bird or waterfowl. As a result of the findings from this study, North Dakota also added an apprentice hunting

"Thanks again for all of your work on the statewide litter attitudes survey for Georgia and for participating in the Governor's Land Summit The campaign created exactly the buzz that we were after! . . . Your research certainly paved the way for us to launch the new "Litter. It Costs You" campaign. I have given several presentations on the development of the campaign in recent weeks that highlights decisions that were made to select the logo and tag line based on both the telephone survey and focus groups. Time and again, I have had people praise our thorough process and science-based decision-making In short, we're off to a great start, thanks to the foundation that you helped us set. I appreciate your guidance and input on this project from the outset and look forward to measuring our progress 12 to 18 months from now The work that Responsive Management has done for Georgia is extremely valuable and has staying power. In recent weeks, I've paged through not only the litter attitudes survey, but also the DNR strategic planning survey and the water messaging survey as well. They are amazing resources for us to have at our fingertips, and I don't know how any agency can make natural resources decisions without having a solid understanding of the human factor Please pass along our appreciation to Alison, Steve, Peter and the rest of the Responsive Management team."

-Beth Brown, Special Assistant to the Commissioner, Georgia Department of Natural Resources

license, allowing someone to hunt with a mentor for a year without taking a hunter education course.

New Hampshire Residents' and Hunters' Opinions on the Status and Management of Big Game Populations. This study was conducted for the New Hampshire Fish and Game Department (the Department) to determine public opinions on and attitudes toward populations and management of the following big game species: white-tailed deer, black bear, moose, and wild turkey.

New Mexico Big Game Hunter Survey. Responsive Management conducted a telephone survey of New Mexico licensed deer, elk, oryx, and turkey hunters to assess their opinions on and attitudes toward big game hunting and regulations in New Mexico.

New Hampshire Residents' Opinions and Attitudes Toward Deer, Moose and Bear in New Hampshire. Responsive Management conducted this telephone survey of New Hampshire residents for the New Hampshire Fish and Game Department to assess residents' opinions on and attitudes toward big game management and related issues, including cultural carrying capacity regarding moose, bear, and deer.

Specifically Regarding Deer and Other Ungulates

Survey of Landowners of Large Tracts Concerning Deer Management and Hunting in North Carolina. Responsive Management contracted with the Commission to provide data collection research services for a public opinion survey conducted with North Carolina landowners to identify property and demographic characteristics of landowners in the state; explore their perceptions of the costs and/or benefits associated with deer and the deer population; determine their opinions on and attitudes toward deer management strategies and hunting on property; and assess their tolerance of deer/people interactions.

Resident Hunters' Opinions on Potential Changes to the Deer and Moose Hunting Seasons in Vermont. This study was conducted for the Vermont Fish and Wildlife Department to determine hunters' opinions on potential changes to the deer and moose hunting seasons in Vermont. The study entailed a telephone survey of Vermont resident licensed hunters (Resident Combination and Resident Hunting license holders).

The Opinions of Residents, Hunters, and Landowners on Deer Management in Maryland. This study was conducted for the Maryland Department of Natural Resources (MDNR) to determine the opinions of residents, active deer hunters (they had hunted deer within the previous 2 years), and landowners (who own at least 20 acres and who grow commercial agricultural crops) on the deer population in Maryland, deer hunting, and deer management.

Opinions and Attitudes of Georgia Residents, Hunters, and Landowners Toward Deer Management in Georgia. This study involved a telephone survey of three sample populations, which included hunters, landowners, and Georgia residents. Conducted for the Georgia Department of Natural Resources, the purpose of this study was to explore public opinions on and values associated with deer; to assess public opinions on deer management strategies, deer population, and deer-human conflicts; and to determine public opinion on deer hunting in

“Responsive Management is one of the most respected research firms in our industry.”

—Gary Bogner, President, Safari Club International

Georgia, including season structures, license fees and use of revenues, hunting regulations, and land access and conflicts.

Opinions of the General Population, Hunters, and Farmers Regarding Deer Management in Delaware. This study was conducted for the Delaware Department of Natural Resources and Environmental Control, Division of Fish and Wildlife to determine the opinions of the general population, hunters, and farmers regarding deer management in Delaware. The final report explores public opinions on and attitudes toward the Division's efforts to control the deer population, mitigate deer-human conflicts, reduce damage caused by wildlife, and minimize hunter and landowner/ farmer problems and/or conflicts.

Arkansas Residents' and Hunters' Opinions and Attitudes Toward Deer Management. This study, conducted for the Arkansas Game and Fish Commission, involved a telephone survey of Arkansas resident hunters to assess their opinions on and attitudes toward issues related to deer management, including deer populations, buck harvest, doe harvest, and season length.

Minnesota Deer Hunters' Opinions and Attitudes Toward Deer Management. This study was conducted for the Minnesota Department of Natural Resources to assess the opinions and attitudes of resident hunting license holders toward issues pertaining to deer management in Minnesota.

Licensed Deer Hunters' Opinions on and Attitudes Toward Deer Management in Wyoming. This study was conducted for the Wyoming Game and Fish Department (WGFD) to determine licensed Wyoming hunters' opinions on areas and types of land hunted, the WGFD's management of deer, hunting regulations, and other hunting-related issues.

Wyoming Resident and Nonresident Deer, Elk, and Antelope Hunter Expenditure Survey. This study was conducted for the Wyoming Game and Fish Department (WGFD) to determine hunters' expenditures and the impact that hunting has on the Wyoming economy. It is the latest survey in a series of hunter expenditure studies conducted for the WGFD. The study also obtained information about the hunters' trips, as well as their opinions on several game management issues. The study entailed a telephone survey of 2,446 individuals who held one of the following types of 2003 Wyoming hunting licenses: resident or nonresident antelope, deer, or elk license.

Hunters' Opinions on and Attitudes Toward Elk Management Strategies in Wyoming. This telephone survey of Wyoming elk hunters was conducted to assess their opinions on and attitudes toward elk management strategies in Wyoming.

Oregon Department of Fish and Wildlife Survey of Western Oregon Elk Hunting License Holders. This telephone survey of Oregon licensed elk hunters was conducted for the Oregon Department of Fish and Wildlife to assess opinions on and attitudes toward elk hunting and elk management options.

"I'd like to say a few things about our survey contractor, Responsive Management of Harrisonburg, Virginia.

Responsive Management has grown to be the nation's premier survey research firm on fish, wildlife and natural resource issues.

When we began to look for a survey contractor for the wolf survey, we knew we needed good information, and we needed it fast. We contacted the University of [name withheld]. They couldn't meet our timeline. We contacted other potential contractors. They either couldn't do it the way we wanted, or couldn't meet our timeline. Responsive Management could. In fact, they have consistently been ahead of the timeline we were told was 'simply unrealistic' by other survey researchers.

Their timeliness and efficiency is only one thing we've been impressed with. They have been very cooperative, taking great pains to address the concerns of the Commission and staff in developing a set of survey questions from our objectives, then repeatedly refining those questions to reflect our comments. Their cooperation has been outstanding.

From a technical standpoint, Responsive Management is simply the best. They have the best computer-assisted telephone interviewing system. Their interviewers are the most thoroughly trained, according to industry standards. They only conduct surveys on wildlife and natural resource issues. They always pre-test their surveys, something no other survey contractor has ever done for us. Their sampling is the most painstaking. They produce reports from the perspective of an unbiased third party, with full statistical analysis.

We're very happy with the work Responsive Management has done for us, and we're not alone. It was a pleasure to work with them on this survey."

—Walt Gasson, Wyoming Game and Fish Department

Washington Department of Fish and Wildlife Hunter Opinion Survey: Elk and Deer Hunting License Holders. This telephone survey of Washington licensed elk and deer hunters was conducted to assess their opinions on hunting regulations.

Colorado Hunters' Attitudes Toward Elk Hunting Alternatives. This telephone survey of Colorado elk hunters was conducted to assess their preference for elk and other hunting opportunities in Colorado.

Specifically Regarding Black Bears

West Virginia Residents' Opinions on Black Bears and Black Bear Hunting. This study was conducted for the West Virginia Division of Natural Resources (WVDNR) to determine West Virginia residents' opinions on black bears, black bear management, and black bear hunting.

Virginia Residents' Opinions on Black Bears and Black Bear Management. This study was conducted for the Virginia Department of Game and Inland Fisheries (VDGIF) to determine Virginia residents' knowledge levels regarding black bears and their opinions on and attitudes toward black bears and black bear management. The study was designed to explore public acceptance of or intolerance for bear, determine the frequency of encounters and conflicts with bear and how these encounters affect residents' behaviors and patterns, assess public awareness of and attitudes toward various bear management options, and examine results based on geographic and demographic factors. The results of this study were used to update the Virginia Bear Management Plan.

Virginia Bear Management Plan 2011-2020. Successful wildlife management strategies are developed not only through biological research to optimize wildlife populations and habitat but also through human dimensions research. In March 2002, the VDGIF completed a comprehensive bear management plan for 2001-2010. The plan was developed to address the increasingly complex challenges and issues surrounding bear management issues, including bear hunting, human-bear conflicts, and bear habitat conservation, among other concerns. When the VDGIF sought to update its bear management plan with the most current black bear ecology and management statistics, as well as a comprehensive assessment of public opinion on bear and bear management issues, it contracted with Responsive Management to finalize a revised *2011-2020 Bear Management Plan*. Responsive Management is currently working with the VDGIF and Stakeholder Advisories Committees in three regions to develop the most informed bear management strategies and recommendations.

Anchorage Residents' Opinions on Bear and Moose Population Levels and Management Strategies. This study was conducted for the Alaska Department of Fish and Game (ADFG) to determine Anchorage residents' opinions on bear and moose populations, problems caused by bear and moose, and the management of these populations in the Anchorage area. The study entailed focus groups of Anchorage residents and trail users and a telephone survey of Anchorage residents (at least 18 years old).

Pennsylvania Residents' Opinions on and Attitudes Toward Black Bears. This study was conducted for the Pennsylvania Game Commission to determine Pennsylvanians' opinions on black bears in general, black bear management, and the hunting of black bears. The study sought

“Mark Duda, Executive Director of RM, has worked with the Florida Wildlife Federation on a number of projects and was our Conservation Educator of the Year for his work in applying an understanding of people to wildlife issues. I highly recommend his and Responsive Management’s abilities for work you have involving your constituency and wildlife issues, training workshops for your employees, or public opinion/attitude surveys.”

–Manley K. Fuller III, President, Florida Wildlife Federation

to obtain data for individual Wildlife Management Units (WMUs) within Pennsylvania, as well as regional data, with each region consisting of several WMUs.

Public Attitudes Toward Black Bear Management in Maryland. Responsive Management conducted a telephone survey of Maryland residents to determine their attitudes toward and opinions on black bear management in Maryland. Specifically, this study was designed to assess public knowledge and awareness of black bears in Maryland, contact and encounters with the species, attitudes toward black bears and nuisance behaviors, and opinions on management and regulation options.

Michigan Black Bear Survey. Responsive Management completed this survey to assess Michigan residents' opinions on, attitudes toward, and awareness of black bears.

Floridians' Opinions on Black Bear Hunting in Florida: Select Frequency Tables and Select Crosstabulations. For this project, Responsive Management conducted a telephone survey of Florida residents to assess public awareness of black bears in Florida, to measure residents' support for or opposition to black bear hunting in Florida, and to explore public support for or opposition to various black bear hunting alternatives.

Specifically Regarding Wild Turkey

Georgia Spring Turkey Harvest Survey. Responsive Management has been conducting this survey for the Georgia Department of Natural Resources on an annual basis since 2005.

Behavioral, Attitudinal, and Demographic Characteristics of Spring Turkey Hunters in the United States. This study was conducted for the National Wild Turkey Federation (NWTF) and the fish and wildlife agencies in nine states (California, Georgia, Idaho, Kansas, Mississippi, New York, Ohio, Texas, and Washington) to determine the behavioral, attitudinal, and demographic characteristics of spring turkey hunters, as well as to assess the impacts of spring turkey hunting on the U.S. economy and each state's economy. The study entailed a telephone survey of licensed hunters in the aforementioned states who had hunted spring turkey in the previous year.

Public Attitudes Toward Wild Turkeys in Alabama and Pennsylvania. This telephone survey of Pennsylvania and Alabama residents was conducted to assess their attitudes toward wild turkey management.

Studies Conducted for or in the State of West Virginia

Responsive Management also has a longstanding relationship with the WVDNR, and in addition to the aforementioned hunting participation and harvest study, Responsive Management has contracted with the state to conduct several natural resource, fish and wildlife, and outdoor recreation studies. Projects include a study to determine West Virginia residents' opinions on black bears, black bear management, and black bear hunting; a study to determine residents' attitudes toward wildlife, their participation in wildlife-related activities, their consumption of fish caught in West Virginia, and their attitudes toward fish consumption advisories; a telephone survey of West Virginia hunters was conducted to assess their opinions on issues related to deer, the deer hunting season, and hunter access to private lands; and a telephone survey of West

“Mark Damian Duda is one of the nation’s most respected researchers on natural resource issues.”

–Steve Pennaz, Executive Director, North American Fisherman, North American Outdoor Group, Inc.

Virginia rural landowners to assess their opinions on issues related to hunter access to private lands, deer harvest on private lands, deer crop damage, problems with hunter behavior, and potential programs to increase deer harvest on private lands. To follow is a list of the 8 major studies specifically conducted for or in the State of West Virginia.

West Virginia Residents' Participation in Deer Hunting and Harvest of Deer. The project description is included above.

West Virginia Residents' Opinions on Black Bears and Black Bear Hunting. The project description is included above.

West Virginia Residents' Attitudes Toward Wildlife, Their Participation in Wildlife-Related Recreation, and Their Consumption of Fish Caught in West Virginia. This study was conducted for the West Virginia Division of Natural Resources (WVDNR) to determine residents' attitudes toward wildlife, their participation in wildlife-related activities, their consumption of fish caught in West Virginia, and their attitudes toward fish consumption advisories.

West Virginia 1998 Landowner Survey. For this project, Responsive Management conducted a telephone survey of West Virginia rural landowners to assess their opinions on issues related to hunter access to private lands, deer harvest on private lands, deer crop damage, problems with hunter behavior, and potential programs to increase deer harvest on private lands.

West Virginia 1998 Hunter Survey. This telephone survey of West Virginia hunters was conducted to assess their opinions on issues related to deer, the deer hunting season, and hunter access to private lands.

West Virginia Wildlife Viewing Guide. This is a book about the best locations for viewing wildlife within West Virginia, including directions to each site. The book also includes information about how best to watch wildlife and the ethics of wildlife viewing.

West Virginia Residents' Attitudes Toward the Land Acquisition Program and Fish and Wildlife Management. This study involved a telephone survey of West Virginia residents to assess their attitudes toward fish and wildlife management, including funding issues and land acquisition.

Public Use of Wildlife Resources in West Virginia. Responsive Management conducted a telephone survey of Randolph County, West Virginia, residents to assess their use of wildlife and forest products for West Virginia University.

“Responsive Management is one of the nation’s most respected research firms in the area of public opinion about wildlife.”

–Laury Parramore, U.S. Fish and Wildlife Service

CLIENT REFERENCES

Wildlife Issues

As per the instructions in RFQ #DNR211011 issued by the West Virginia Division of Natural Resources, Responsive Management provides “references from at least **five** prior survey on personal attitudes toward wildlife issues, at least three of which must have been directed towards residents in an oak-hickory broad leaved ecosystem.”

Chris Ryan, Bear Biologist/Leader

West Virginia Division of Natural Resources
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Charleston, WV 25305
(304) 558-2771

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Summary of Work: *West Virginia Residents' Opinions on Black Bears and Black Bear Hunting* was a survey of West Virginia residents to determine their opinions on black bears, black bear management, and black bear hunting. For this survey, Responsive Management obtained a total of 1,206 completed interviews of West Virginia residents 18 years old and older. The analysis included a crosstabulation by region and by hunter/non-hunter. The results were weighted so that the proportions of the sample among the counties matched the distribution of the population statewide.

Brian Clark, Assistant Director of Public Affairs

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Summary of Work: In 2009, Responsive Management worked with the Kentucky Department of Fish and Wildlife Resources on two surveys to measure hunting participation and harvest in Kentucky, including years hunted, hunting locations, and species hunted; satisfaction with hunting and wildlife management in the state; conflicts with other recreationists and participation in other activities; and opinions on allowable activities in WMAs and forest management for habitat improvement. The first survey, *Survey Regarding Hunting and Wildlife Management in Kentucky*, was conducted on a statewide basis. The second survey, *Survey Regarding Recreation in the Peabody Wildlife Management Area in Kentucky*, was conducted specifically with Peabody WMA User Permit holders to assess their opinions on and attitudes toward wildlife management and hunting regulations.

Dave Steffen, Forest Wildlife Program Manager

Virginia Department of Game and Inland Fisheries
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“We would like to express our gratitude, on behalf of the Colorado Division of Wildlife, for your excellent efforts in collecting the data for our human dimensions study. . . . Your expertise contributed to a thorough and credible study. The results have been very useful and have reinforced our agency’s broad-based funding approach to wildlife management.”

–Colorado Division of Wildlife

Summary of Work: Responsive Management is currently working with the Virginia Department of Game and Inland Fisheries to update Virginia's bear management plan based on the most current black bear ecology and management statistics, as well as a comprehensive assessment of public opinion on bear and bear management issues. The first phase of this project involved comprehensive public opinion and biological research: Responsive Management and the VDGIF partnered to conduct a telephone survey of Virginia residents and to collect biological data regarding bear ecology and habitat. For Phase I, Responsive Management conducted a telephone survey to determine Virginia residents' knowledge levels regarding black bears and their opinions on and attitudes toward black bears and black bear management. Responsive Management is currently working on the second phase of the study, which involves a series of meetings with Stakeholder Advisory Committees throughout the state to assist in the development of the *2011-2020 Bear Management Plan*.

Mark Burch, Alaska Department of Fish & Game

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Summary of Work: For *Anchorage, Alaska Residents' Attitudes Toward Bears and Bear Management Issues*, Responsive Management was commissioned by the Alaska Department of Fish and Game (ADF&G) to conduct focus groups, design and administer a public opinion survey, and develop a final report of a study designed to assess Anchorage, Alaska residents' attitudes toward bears, their prey (moose and salmon), their habitat, and various bear management options. Specifically, the purpose of this study was to determine Anchorage residents' acceptance of or intolerance for bears and moose in urban areas and salmon in area streams; to quantify changes in trail use and participation in outdoor recreation activities resulting from concern for or fear of wildlife encounters; to determine residents' acceptance of and attitudes toward various wildlife management options related to bear, moose, and salmon; to assess residents' knowledge and awareness of how to avoid and properly deal with bear encounters; to determine how past experiences with bears affects public attitudes toward risks; and to examine the findings based on regional and demographic characteristics.

Frank Briganti, Manager of Industry Research and Analysis

National Shooting Sports Foundation
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Newtown, CT 06470
(203) 426-1320

Summary of Work: *The Future of Hunting and the Shooting Sports: Research-Based Recruitment and Retention Strategies* was funded under a Multistate Conservation Grant, awarded to the National Shooting Sports Foundation by the U.S. Fish and Wildlife Service. Four primary components made up this study. Phase I entailed a literature review of past research pertaining to hunting and the shooting sports. Phase II entailed a series of focus groups in diverse geographic areas of active hunters and shooters, lapsed hunters and shooters, non-hunters and non-shooters, and anti-hunters and anti-shooters. Phase III entailed two nationwide telephone surveys: the first on a sample of hunters and shooters, and the second on a sample of the general population (the latter sample containing non-hunters and non-shooters). Phase IV of

"If there is anyone who can predict the future of our industry, he's it."
—Florida Outdoor Writers Association

this study entailed a compilation and examination of all the data obtained in the previous three phases of the project, as well as the production of the final report.

Big-Game and Hunting-Related Studies

As per the instructions in RFQ #DNR211011 issued by the West Virginia Division of Natural Resources, Responsive Management provides “references from at least **three** prior studies on white-tailed deer management, big game hunter effort, or personal attitudes toward hunting seasons.”

Mark Scott, Director

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Summary of Work: Most recently, Responsive Management conducted a survey for the Vermont Fish and Wildlife Department to determine hunters’ opinions on potential changes to the deer and moose hunting seasons in Vermont: *Resident Hunters’ Opinions on Potential Changes to the Deer and Moose Hunting Seasons in Vermont*. The study entailed a telephone survey of Vermont resident licensed hunters (Resident Combination and Resident Hunting license holders). For a study completed for the Department in 2007, *Public Opinion on Wildlife Species Management in Vermont*, Responsive Management worked with Mark Scott to conduct a telephone survey of Vermont residents to determine public opinion on wildlife species management, on funding for the Department, and on hunting regulations. Specifically, this study explored residents’ opinion on and attitudes toward Division funding resources, habitat management efforts, human-wildlife conflict resolution, and Chronic Wasting Disease, among other topics.

Brian Eyler, Deer Biologist and Statistician

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Indian Springs WMA,
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Summary of Work: *The Opinions of Residents, Hunters, and Landowners on Deer Management in Maryland* was conducted for the Maryland Department of Natural Resources (MDNR) in 2007. The purpose of this study was to determine the opinions of residents, active deer hunters (they had hunted deer within the previous 2 years), and landowners (who own at least 20 acres and who grow commercial agricultural crops) on the deer population in Maryland, deer hunting, and deer management. The study entailed three telephone surveys of the three aforementioned groups and assisted the MDNR in better understanding public awareness of, opinions on, and attitudes toward the state’s deer population, deer hunting, and deer management decisions. Responsive Management is not currently providing services to the MDNR because this project has been completed.

"I want to take this opportunity to thank you for your outstanding work on behalf of the Wildlife Division of the Vermont Fish and Wildlife Department. I greatly appreciated your candid counsel in the design of the survey and the enthusiasm you brought to the project. Your final report was very well done, and the extra effort you made to present the findings to myself and other Department staff was very valuable. Vermont Residents' Opinions and Attitudes Toward Species Management will prove to be a good first step for some of the planning that awaits us in the coming months."

—Ronald Regan, (Former) Commissioner, Vermont Department of Fish and Wildlife (currently Resource Director for the Association of Fish and Wildlife Agencies)

Susan Stewart, Human Dimensions/ Strategic Planning Coordinator

Wyoming Game and Fish Department

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Summary of Work: Responsive Management completed *Wyoming Range Hunters' Attitudes Toward Mule Deer Management in the Wyoming Range* to determine mule deer hunters' opinions on management issues pertaining to the Wyoming Range.

Wildlife Species Harvest Surveys

As per the instructions in RFQ #DNR211011 issued by the West Virginia Division of Natural Resources, Responsive Management provides "references from a minimum of **three** wildlife species harvest surveys."

Chris Ryan, Bear Biologist/Leader

West Virginia Division of Natural Resources

Capitol Complex, Bldg 3, Room 825

Charleston, WV 25305

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Summary of Work: *West Virginia Residents' Participation in Deer Hunting and Harvest of Deer* was conducted to determine residents' participation rates in deer hunting and their harvest of deer. This study entailed a telephone survey of West Virginia residents aged 15 years and over. For the survey and the subsequent analysis, West Virginia was divided into 24 regions. To ensure that there would be enough respondents in each region for accurate analyses, Responsive Management obtained at least 100 completed interviews with deer hunters in each region. For statewide analyses, the data were weighted so that the proportions of the sample among the regions matched the distribution of the population statewide.

Don McGowan, Senior Wildlife Biologist

Georgia Department of Natural Resources

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Summary of Work: Responsive Management has an ongoing, 5-year contract with the Georgia Department of Natural Resources to conduct annual hunter harvest studies. These studies are conducted to determine participation in hunting and harvest of selected big game species and entail a telephone survey of Georgia resident licensed hunters from among the following license types: Resident Combination Hunting and Fishing licenses, Resident Hunting licenses, Resident Primitive Weapon licenses, and Resident Sportsman. These studies assist the Georgia Department of Natural Resources in determining their overall hunter harvest each year.

Charles Ruth, Deer and Wild Turkey Project Supervisor

South Carolina Department of Natural Resources

“Job well done. The past 6-month effort has done much to begin the resolution of the deer hunting controversy here in Maryland

I appreciate your timeliness and professionalism in carrying out this job. Your presentation certainly helped us put our best foot forward.”

–Josh Sandt, Director, Maryland Department of Natural Resources, Wildlife Division

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Summary of Work: Responsive Management currently has a 5-year term contract with the South Carolina Department of Natural Resources (SCDNR). Specific research through this contract may include, but is not limited to, studies to determine harvest, participation efforts, and other statistics associated with wildlife, fisheries, and marine services; to measure public opinions on and attitudes toward natural resource issues and improve public involvement and constituency building; to assist in the development of plans, programs, products, and services; and to evaluate public sentiment about issues of interest to SCDNR and fish, wildlife, and marine resources management. Most recently, Responsive Management worked with Charles Ruth on a public opinion survey of South Carolina hunters: *South Carolina Deer Hunters' Attitudes Regarding Harvest Limits and Tagging of Deer*. This study was conducted for the SCDNR to determine deer hunters' opinions on harvest limits and regulations regarding tagging harvested wildlife. To determine deer hunter's opinions on harvest limits and tagging regulations, the SCDNR contracted the firm of Responsive Management to conduct a telephone survey of randomly selected resident licensees who indicated that they had hunted deer during the 2009 season.

SCIENTIFIC PUBLICATIONS

Ryan, C.W., Edwards, J.W., and Duda, M.D. (2009). "West Virginia Residents Attitudes and Opinions Toward American Black Bear Hunting." *Ursus*, 20(2). 131-142.

This peer-reviewed journal article highlights the major findings of a 2006 study Responsive Management conducted in partnership with the West Virginia Division of Natural Resources. A total of 1,206 West Virginia residents 18 years old and older were surveyed for this study to determine their opinions on black bears, black bear management, and black bear hunting. The analysis included a crosstabulation by region and by hunter/non-hunter. The results were weighted so that the proportions of the sample among the counties matched the distribution of the population statewide and demonstrate the importance of considering regional and sociodemographic differences in public opinion when making bear management decisions and determining wildlife population objectives.

Duda, M. D., Jones, M. F., & Criscione, A. E. (in press). *The Sportsman's Voice: Hunting and Fishing in America*. State College, PA: Venture Publishing.

The Sportsman's Voice is an outgrowth of a three-year study that the Congressional Sportsmen's Foundation (CSF) commissioned Responsive Management to conduct in 2006 and is designed to assist the development of policy and legislation focused on increasing hunting and fishing opportunities in the U.S. Although the publication began with a nationwide survey to assess public opinion on and attitudes hunting and fishing, the project quickly evolved into a comprehensive publication packed with up-to-date information on issues related to hunting and fishing—participation numbers and trends, how the American public feels about hunting and fishing, what they know and think about current conservation issues, how they feel about conservation versus access and recreation, and more. For the final publication, Responsive

“On behalf of the West Virginia Division of Natural Resources, I want to commend you for your authorship of the excellent West Virginia Viewing Guide. Your professionalism and knowledge of wildlife and West Virginia served to make this a publication that we are not only proud of, but will enhance the image of our state. Because of your commitment to seeing that only the best would be acceptable for our state’s guide, we have a publication that I believe to be the best in the series.

We are all appreciative of your efforts in producing the West Virginia Viewing Guide. You can count on our enthusiastic support for all of your future endeavors.”

–Bernard F. Dowler, Chief of Wildlife Resources Section, West Virginia Division of Natural Resources

Management worked with more than 20 fish and wildlife agency professionals and not-for-profit groups who reviewed the preliminary draft of the book and offered their comments and feedback. Their suggestions were incorporated into the final draft of the book. This publication is currently in press, with a planned release date of Fall 2010.

Duda, M. D., & Nobile, J. L. (2010). "The Fallacy of Online Surveys: No Data Are Better Than Bad Data." *Human Dimensions of Wildlife*, 15(1), 55-64.

Internet or online surveys have become attractive to fish and wildlife agencies as an economical way to measure constituents' opinions and attitudes on a variety of issues. Online surveys, however, can have several drawbacks that affect the scientific validity of the data. In this article, Responsive Management describes four basic problems that online surveys currently present to researchers and then discusses three research projects conducted in collaboration with state fish and wildlife agencies that illustrate these drawbacks. Each research project involved an online survey and/or a corresponding random telephone survey or non-response bias analysis. Systematic elimination of portions of the sample population in the online survey is demonstrated in each research project (i.e., the definition of bias). One research project involved a closed population, which enabled a direct comparison of telephone and online results with the total population.

Duda, M. D., Jones, M. F., & Criscione, A. (2009). "Public Awareness and Credibility of Fish and Wildlife Agencies in the Northeastern United States." *Human Dimensions of Wildlife* 14(2), 142-44.

This findings abstract presents the results of a study commissioned Northeast Conservation Information and Education Association (NCIEA) to measure and examine public awareness and knowledge of fish and wildlife agencies and the public's attitudes toward the credibility of fish and wildlife agencies in the northeastern United States. The study entailed a telephone survey of residents' attitudes toward and opinions on fish and wildlife management issues and the state's fish and wildlife agency in all 13 member states of the NCIEA: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia. The study consists of 13 separate state reports and a regional report of the cumulative results.

Inkley, D. B., Staudt, A. C., and Duda, M. D. (2009). "Imagining the Future: Humans, Wildlife, and Global Climate Change." In *Wildlife and Society: The Science of Human Dimension*, edited by Manfredo, M. J., Vaske, J. J., Brown, P. J., Decker, D. J., and E. A. Duke, 57-72. Washington: Island Press.

This book chapter discusses the impact of climate change on humans and wildlife. It begins with a discussion of climate change, its effects, and future implications for wildlife. The chapter also explores human attitudes on climate change and trends in public perceptions and views on global warming. It outlines several conservation actions and recommendations to help mitigate the effects of climate change on wildlife. Finally, this chapter stresses the value of human dimensions research in achieving these goals: human dimension researchers are challenged to identify what makes climate change a real concern for people and how to encourage people to take actions and change behaviors to reduce pollution to help minimize rapid climate change.

“Thank you for meeting with my staff and me and reviewing the results of Georgia’s first Responsive Management survey I especially appreciate the outstanding report and newsletter that you prepared and provided to us.”

–David Waller, (Retired) Director, Georgia Department of Natural Resources,
Wildlife Resources Division

Duda, M. D., and Jones, M. F. (2008). "Public Opinion on and Attitudes Toward Hunting." Paper presented at the 73rd North American Wildlife and Natural Resources Conference, Phoenix, AZ, March 25-29, 2008. *Transactions of the 73rd North American Wildlife and Natural Resources Conference*. Washington: Wildlife Management Institute.

As debate over hunting in the United States continues, an objective analysis of public attitudes toward and opinions on legal hunting provides a fundamental context for any discourse on the controversy. Research indicates that most Americans support hunting in general; however, support for and opposition to hunting can vary dramatically based on numerous factors, including personal values and characteristics, attitudes toward hunters, attitudes toward animal welfare, the motivation for participating, and the species involved, to name a few. This paper discusses public opinion on and attitudes toward hunting and explores the characteristics that influence public opinion on hunting and hunting-related issues.

Responsive Management/NSSF. (2008). *The Future of Hunting and the Shooting Sports: Research-Based Recruitment and Retention Strategies*. Produced for the U.S. Fish and Wildlife Service under Grant Agreement CT-M-6-0. Harrisonburg, VA.

Responsive Management recently completed one of the largest studies on hunter recruitment and retention ever conducted. The study included a comprehensive literature review of past research; focus groups in diverse geographic areas of active hunters and shooters, lapsed hunters and shooters, non-hunters and non-shooters, and anti-hunters and anti-shooters; two nationwide telephone surveys with hunters and shooters and the general population; and final report, including actionable recommendation strategies. Currently, Responsive Management is working with the National Shooting Sports Foundation (NSSF), numerous state fish and wildlife agencies, conservation organizations, and industry on implementing the recommendations in this report. This report was the core of the 2008 Shooting Sports Summit and the impetus for NSSF's *Task Force 20/20*. This task force was created to implement the strategic recommendations outlined in the report and develop an action plan to increase hunting and target shooting participation. Their goal is to increase both hunting and target shooting participation during the next five years. Based on recommendations in *The Future* report, *Task Force 20/20* has chosen several targeted areas of focus to increase hunter participation, recruitment, and retention: advancing youth shooting programs, tailoring products and services, addressing aging demographics, improving physical access and availability, and coordinating industry efforts.

Responsive Management. (2003). *Factors Related to Hunting and Fishing Participation Among the Nation's Youth*. Produced under Federal Aid in Sport Fish and Wildlife Restoration Grant Agreement 91400-01-0010. Harrisonburg, VA.

The future of hunting and fishing in the United States ultimately depends upon the commitment of future generations to these traditional fish and wildlife activities. The key to active participation in and commitment to hunting and fishing of future generations is fostering this commitment and participation among today's youth. The purpose of this study is to better understand the factors related to hunting and fishing initiation, participation, retention, and desertion among U.S. youth 8-18 years old. There are two major objectives of this study. The first objective is to identify the factors involved in the recruitment and retention of the nation's youth to hunting and fishing through primary and secondary research. The second objective is to recommend to the fish and wildlife management community programs and strategies that have

“I just wanted to get back to you to say thank you for the outstanding job you did on the recent opinion survey on deer, moose and bear management in New Hampshire. You did an outstanding job at preparing and conducting the survey, as well as presenting the results at our May Commission meeting. As you heard from members of the Commission and audience, interest in the survey results is high, and [the results] will be an important piece of the puzzle when developing our new 5-10 year management plans for these species. Our next challenge will be to integrate this information into a proactive strategy for big game populations in New Hampshire.

Thanks again for the highly professional job.”

–James J. DiStefano, (Former) Executive Director, New Hampshire Fish and Game Department

the best chance of success in the recruitment and retention of the nation's youth in hunting and fishing participation based on the research findings.

Duda, M. D., Bissell, S. J., & Young, K. C. (1998). *Wildlife and the American Mind: Public Opinion on and Attitudes Toward Fish and Wildlife Management*. Produced under Federal Aid in Sport Fish and Wildlife Restoration Grant Agreement 14-48-0009-96-1230. Harrisonburg, VA: Responsive Management.

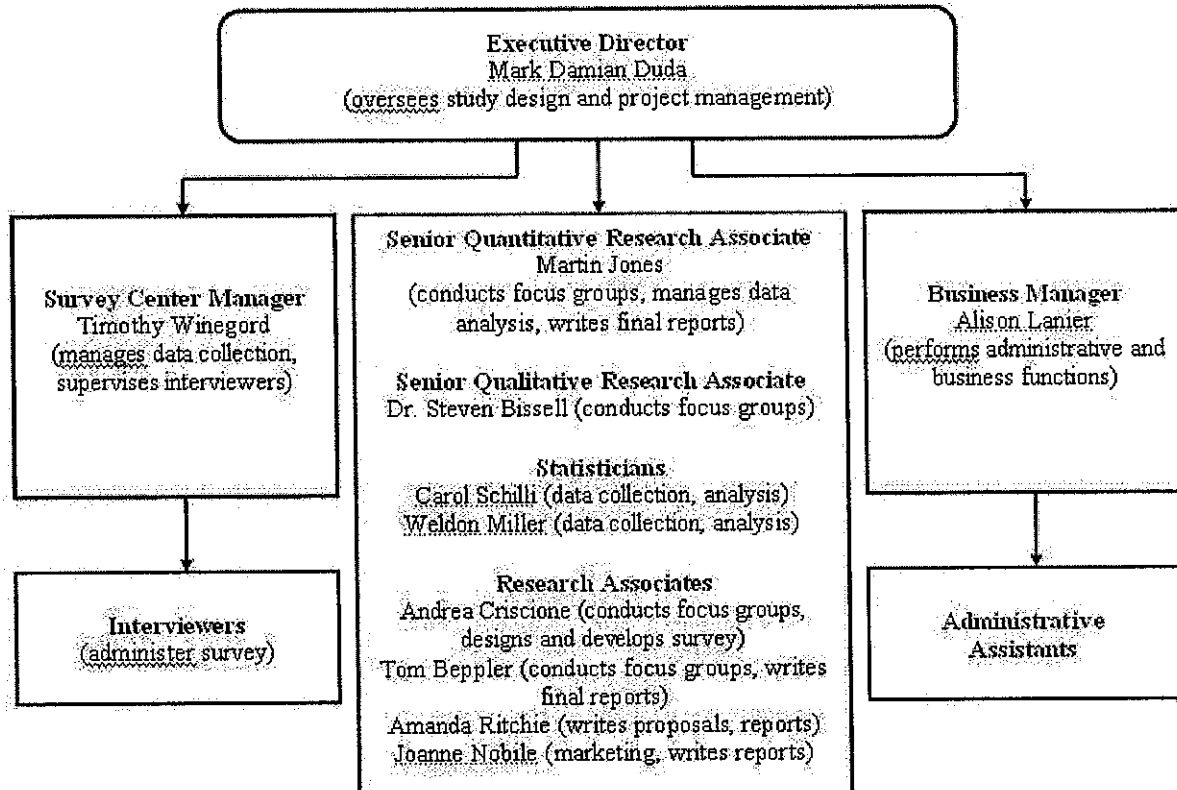
The success of the agency conservation efforts depends on striking a balance between its natural resources and its people. Not only is it important to manage the biological and ecological components of fish and wildlife and their habitat, but it is also crucial to understand the human dimension of those resources. Through the use of a variety of social science research methods, fish and wildlife agencies can monitor public opinion to measure agency efforts from the perspective of its constituents and to adjust planning and programs in response to these attitudes. This book was developed to address the human element of fish and wildlife management and its importance for successful fish and wildlife programs. It highlights the importance of utilizing human dimensions research and techniques to better understand and work with the public and agency constituents when making fish and wildlife management decisions. The use of human dimensions research to better understand the public served will, ultimately, enhance the management of agency resources and increase public support.

"The Washington Department of Fish and Wildlife (WDFW) would like to thank you [Mark Duda], Kira, and the rest of your staff for the revised Survey of Eastern Washington Upland Bird Hunters. The revised report was excellent and will help WDFW manage upland birds based on good science. We appreciate your taking all of our comments on the draft report into consideration. Comparing results based on place of residence will be very useful to WDFW. The revised figures were clear and distinct We look forward to working with you again. Again, thank you for a detailed, final report."

-Tom McCall, Planning Biologist, Washington Department of Fish and Wildlife

ORGANIZATIONAL CHART AND CONTACTS

Responsive Management consists of an Executive Director, Statisticians, Survey Center Managers, Qualitative Research Associates, Quantitative Research Associates, a Business Manager, and 50 professional interviewers who conduct surveys and research *only* on public opinion on and attitudes toward natural resource, fish and wildlife, and outdoor recreation issues. Please visit our website at www.responsivemanagement.com for additional information or to view our research studies. The following organizational chart illustrates the lines of authority for Responsive Management; all work on this project will be completed in-house by Responsive Management's qualified Research Associates and professional interviewers.



For further information about Responsive Management or to discuss available services, please contact:

Mark Damian Duda, Executive Director
mark@responsivemanagment.com

or Alison Lanier, Business Manager
alison@responsivemanagement.com

Responsive Management
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"Shazam! You did it again! The survey report you generated for the Commission's Task Force on Outdoor Kansas is excellent. Even more impressive is the fact that you beat, by two days, the unreasonable deadline we gave you

I was not at all surprised that you delivered the survey and report services as agreed (that is the type of work you're known for), but I was impressed that the Responsive Management crew was able to get it done so quickly."

—Rob Manes, (Former) Assistant Secretary, Kansas Department of Wildlife & Parks (currently with The Nature Conservancy)

STAFF RESUMES

Responsive Management consists of an Executive Director, Statisticians, Survey Center Managers, Qualitative Research Associates, Quantitative Research Associates, and 50 professional interviewers who conduct surveys and research only on public opinion on and attitudes toward natural resource, fish and wildlife, and outdoor recreation issues.

Mark Damian Duda

Mark Damian Duda is Executive Director of Responsive Management, a public opinion and attitude survey research firm specializing in natural resource and outdoor recreation issues. Mark has directed more than 500 quantitative surveys and hundreds of focus groups on hunting and sport shooting participation, recruitment, and retention. Most recently, Responsive Management partnered with the National Shooting Sports Foundation (NSSF) to produce one of the largest and most comprehensive studies ever conducted on hunting and sport shooting participation in the U.S.: *The Future of Hunting and the Shooting Sports: Research-Based Recruitment and Retention Strategies*. This large-scale project focuses on developing actionable, research-based hunter and sport shooter recruitment and retention strategies and became the impetus for *Task Force 20/20*, currently the largest recruitment and retention effort underway in the U.S., consisting of dozens of agencies and organizations. For 7 years, Mark also served as a columnist for *North American Hunter* magazine. In his column, "The Hunting Mind," Mark explored numerous hunting-related human dimensions topics and reported on the results of Responsive Management's surveys of hunters.

Mark founded Responsive Management in 1990 and has been conducting textbook-quality research for natural resource organizations for over 20 years. His research has been upheld in U.S. District Courts; used in peer-reviewed journals; and presented at major natural resource, fish and wildlife, and outdoor recreation conferences across the world. His work has also been featured in many of the nation's top media, including *Newsweek*, *The Washington Times*, *The Wall Street Journal*, *The New York Times*, CNN, and on the front pages of *The Washington Post* and *USA Today*. Recently, his research was highlighted in an article in *Delta Waterfowl* examining the decline in hunting license sales and exploring reasons for this decline.

Mark has been named Conservation Educator of the Year by both the Florida Wildlife Federation and National Wildlife Federation, was a recipient of the Conservation Achievement Award from the Western Association of Fish and Wildlife Agencies, and was named the Wildlife Professional of the Year by the Virginia Wildlife Society. He also received the Conservation Achievement Award in Communications from Ducks Unlimited, as well as an award from the Potomac Ducks Unlimited Chapter for his contributions as a researcher and writer. Mark holds a Master's degree from Yale University in natural resource policy and planning.

Steven J. Bissell, Ph.D.

Dr. Steven Bissell is Senior Qualitative Research Analyst for Responsive Management. He has worked for more than 25 years as a human dimensions in natural resource researcher, Wildlife Conservation Officer, nongame and endangered species biologist, and land-use planner. His work experience includes direct work in outreach and communications as the Head of Environmental Education for the Colorado Division of Wildlife. Steve received his Ph.D. from the University of Colorado, with a specialization in qualitative research methods.

“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

It is my pleasure to inform you the Chapter has voted to have you receive this recognition at our 18th Annual Dinner & Reception.”

–Stephen S. Boynton, The Potomac Valley Chapter of Ducks Unlimited Inc.

During his tenure with Responsive Management, Steve has performed data analysis and reported the findings on more than 100 studies involving public attitudes toward natural resources, hunting and fishing, and outdoor recreation. Steve is a pioneer in utilizing focus groups concerning natural resource and outdoor recreation issues and has conducted hundreds of focus groups about conservation and outdoor recreation values. He offers expertise in social science research combined with a strong background in the technical aspects of natural resource management, especially wildlife ecology and conservation biology.

Martin Jones

Marty Jones is Senior Quantitative Research Associate with Responsive Management and has researched and written exclusively about natural resources and outdoor recreation issues for the past 12 years. Marty serves as the lead technical report writer and is credited with writing and developing more than 200 surveys and reports focused on public attitudes toward natural resource and outdoor recreation issues. As lead technical report writer, Marty will assist in survey design and development and prepare the final report for submission to the WVDNR. Marty holds a Master's degree in geography from the University of Vermont and a Bachelor's degree as a double major in English and geography from James Madison University. Prior to joining Responsive Management, Marty headed the technical writing department for a major engineering firm in Northern Virginia that did extensive wetlands and land-use research.

Among other reports, Marty authored *West Virginia Residents' Participation in Deer Hunting and Harvest of Deer*, *West Virginia Residents' Opinions on Black Bears and Black Bear Hunting*, and *West Virginia Residents' Attitudes Toward Wildlife, Their Participation in Wildlife-Related Recreation, and Their Consumption of Fish Caught in West Virginia*. Marty also co-authored the 2008 publication *The Future of Hunting and the Shooting Sports: Research-Based Recruitment and Retention Strategies*, one of the largest studies on hunter recruitment and retention ever conducted. Marty and Mark's strategic recommendations, outlined in this report, became the action plan for the NSSF's *Task Force 20/20*.

Most recently, Marty served as the Project Manager for a study conducted to assess Virginia lapsed hunters' reasons for not purchasing a hunting license or participating in hunting activities, including motivations for, constraints against, and satisfaction with hunting in Virginia; to test messages to determine those that resonate with lapsed hunters; and to develop recommendations for outreach strategies to encourage and increase hunting participation. Marty has served as the lead technical writer for more than 200 studies conducted for state natural resource and fish and wildlife agencies throughout the country, as well as studies for major conservation organizations such as Ducks Unlimited, the Izaak Walton League, and the Rocky Mountain Elk Foundation. Projects include, but are certainly not limited to, *The Opinions of Residents, Hunters, and Landowners on Deer Management in Maryland*, *Survey Regarding Hunting and Wildlife Management in Kentucky*, *Survey Regarding Recreation in the Peabody Wildlife Management Area in Kentucky*, *Anchorage, Alaska Residents' Attitudes Toward Bears and Bear Management Issues*, *Resident Hunters' Opinions on Potential Changes to the Deer and Moose Hunting Seasons in Vermont*, and *Factors Related to Hunting Participation in Pennsylvania*, to name only a few examples. Marty has also written all of the hunter harvest survey reports under a term contract with the Georgia Department of Natural Resources, as well as all reports for the term contract with the South Carolina Department of Natural Resources.

“I have known Mark Duda and Responsive Management for several years, but had the opportunity to work collaboratively with him and his staff over the past two years on a major project for the Commonwealth of Virginia. I have been impressed by the work of the whole Responsive Management organization. They produce good work and lots of it. Mark and his staff have done a lot to promote sound market-based research for natural resource management agencies.”

–Dr. Brett Wright, (Former) Director, Center for Recreation Resources Policy, George Mason University (currently Chairman for Department of Parks, Recreation, and Tourism Management, Clemson University)

Marty has been with Responsive Management for almost a decade and has been directly involved in the data analysis and development of nearly all of the firm's reports and planning documents. With few exceptions, Marty was the primary research associate and lead technical writer for many of the aforementioned studies.

Andrea M. Criscione

Andrea Criscione is a Research Associate with Responsive Management and a leader in survey design and development. Since joining Responsive Management more than five years ago, Andrea has assisted with and served as project manager for numerous studies related to natural resources, fish and wildlife, and outdoor recreation issues. She is credited with writing and developing over 150 surveys focused on attitudes toward natural resource and fish and wildlife issues. She holds a Master's degree in English from Virginia Tech, with a concentration in communication studies, and a Bachelor's degree in sociology from Bridgewater College.

Andrea is currently serving as the project manager for a contract with the Virginia Department of Game and Inland Fisheries to update Virginia's bear management plan. Andrea has worked on numerous studies on hunting-related and wildlife management issues, including developing the surveys for *West Virginia Residents' Participation in Deer Hunting and Harvest of Deer*, *West Virginia Residents' Opinions on Black Bears and Black Bear Hunting*, and *West Virginia Residents' Attitudes Toward Wildlife, Their Participation in Wildlife-Related Recreation, and Their Consumption of Fish Caught in West Virginia*. Other relevant studies in which Andrea served as the primary survey author include: *The Opinions of Residents, Hunters, and Landowners on Deer Management in Maryland*; *Factors Related to Hunting Participation in Pennsylvania*; and a telephone survey of both licensed resident and non-resident Wyoming hunters to assess hunters' opinions on and attitudes toward deer management in Wyoming. In addition to developing surveys and managing projects, Andrea also writes and edits reports and conducts focus groups.

Carol Schilli

Carol Schilli is a Research Associate Statistician with Responsive Management. Carol received her Bachelor's degree in mathematics, with a minor in biology and concentration in statistics, from Old Dominion University. Since joining Responsive Management, Carol has been responsible for computer coding survey instruments and performing data analyses on numerous natural resource, fish and wildlife, and outdoor recreation studies.

Carol's recent projects include a survey to determine residents' participation rates in deer hunting and their harvest of deer in West Virginia; *Hunters' Opinions on Wildlife Management and Other Hunting Issues in Washington*; a trends analysis to assess participation in outdoor recreation, as well as opinions on and attitudes toward the Game and Fish Department and outdoor recreation in Arizona; *The Future of Hunting and the Shooting Sports: Research-Based Recruitment and Retention Strategies*; a hunting participation and harvest study in West Virginia; a study of attitudes toward and participation in youth hunts in Vermont; and a study of public attitudes toward and opinions on deer management in Maryland. As Lead Statistician for this project, Carol will assist in project design and development and complete the comprehensive data analysis.

“On behalf of the New Hampshire Fish and Game Department, I would like to thank you and your staff for the outstanding job done in completing the New Hampshire Freshwater Angler Survey. The survey results are already in use by the Inland Fisheries Division staff when making fisheries management decisions and in developing work plans for fisheries research programs.

. . . I greatly appreciate all your efforts, and I look forward to working with you and your staff in the future.”

–Stephen G. Perry, Chief, New Hampshire Fish and Game Department, Inland Fisheries Division

Tom Beppler

Tom Beppler is a Research Associate with Responsive Management. He received his Bachelor's degree in English with a minor in world literature from James Madison University. Tom has managed several projects while at Responsive Management, written reports of survey results, developed survey instruments, conducted on-site intercepts, and written a handbook for conducting scientifically defensible survey research.

Tom is currently serving as the project manager for a study designed to assess and evaluate national and selected statewide recruitment and retention programs for hunters, anglers, and sport shooters. Funded through the International Association of Fish and Wildlife Agencies' Multistate Conservation Grant Program, Responsive Management and the National Wild Turkey Federation have partnered for this study designed to (1) measure interest and participation in hunting, fishing, and sport shooting before and after participation in various recruitment and retention programs and (2) identify specific, research-based recommendations and strategies to enhance hunting, fishing, and sport shooting recruitment and retention programs. In addition to this project, several of the numerous natural resource and outdoor recreation studies Tom has been involved in include: *New Hampshire Residents' Opinions on and Participation in Outdoor Recreation*, the *Iowa Survey for the State Comprehensive Outdoor Recreation Plan (SCORP)*, a *Survey Regarding Recreation in the Peabody Wildlife Management Area in Kentucky*, and a recent survey of Delaware residents and stakeholders to assess their knowledge of and opinion on climate change and rising sea levels and its impact on the State of Delaware.

Amanda C. Ritchie

Amanda Ritchie is a Research Associate with Responsive Management. She holds a Master's degree in English from James Madison University and a Bachelor's in English from Bridgewater College. Amanda is primarily responsible for proposal writing; since Amanda joined Responsive Management, the company has been awarded approximately \$3.0 million in research funding by various federal, regional, and state natural resource and wildlife agencies and organizations to conduct public opinion research on natural resource and outdoor recreation issues.

Most recently, Amanda served as the project manager in the development of a marketing plan to increase freshwater fishing in the State of Washington; for a study to assess the impact of fishing license structure and fee changes on angler participation, license sales, and state revenue in Maryland; and for a study of educators and students in ten participating states regarding the impact of the National Archery in the Schools Program. She has also assisted in study and survey design for several projects, including a recent survey on outdoor recreation in New Hampshire, *Hunters' Opinions on Wildlife Management and Other Hunting Issues in Washington*, an assessment to determine the value of commercial and recreational fishing for tourists visiting local California communities, a needs assessment of boating providers in Washington State, a survey on Washington State Parks for Washington State, and a study of recreational use of the Ohio River.

Joanne Nobile

Joanne Nobile is a Research Associate with Responsive Management. Her primary duties include writing and editing reports, developing survey instruments and typologies, recoding

"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 requests 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, (Retired) Executive Director, Pennsylvania Fish & Boat Commission

qualitative survey responses, and editing submissions to scholarly journals and other written products. Joanne was lead editor on two recent Responsive Management projects: *The Future of Hunting and the Shooting Sports: Research-Based Recruitment and Retention Strategies*, and *The Sportsman's Voice: Hunting and Fishing in America*. She also served as lead editorial consultant on *Strengthening America's Hunting Heritage and Wildlife Conservation in the 21st Century: Challenges and Opportunities*, a forthcoming publication of a Technical Workshop held in April 2008 in response to Executive Order 13443, "Facilitation of Hunting Heritage and Wildlife Conservation," signed by the President in August 2007. Joanne holds a Bachelor's degree in communications with a concentration in creative writing from Glassboro State College and has worked with several nationally and internationally respected organizations, including The National Geographic Society and The Bureau of National Affairs.

Timothy L. Winegord

Tim Winegord is the Survey Center Manager with Responsive Management. Tim is responsible for survey implementation and project supervision, including direct supervision of 50 professional interviewers. Tim conducts in-depth project briefings with interviewing staff prior to working on each study and also closely monitors telephone workstations, thereby providing strict control over the data collection process.

Since joining Responsive Management, Tim has managed the survey portion of many studies on hunting participation and attitudes toward hunting related issues, including *Public Opinion on Fish and Wildlife Management Issues and the Reputation and Credibility of Fish and Wildlife Agencies in the Southeastern United States*; *Opinions and Attitudes of Georgia Residents, Hunters, and Landowners Toward Deer Management in Georgia*, which surveyed the state's general population, hunters, and landowners to determine opinions and attitudes toward deer management; *Attitudes Toward and Participation in Youth Hunting Weekends in Vermont*; *Sunday Hunting in North Carolina*; *Indiana Hunting Retention and Recruitment Report*; *The Effects of Mandatory Basic Hunter Education and Advanced Hunter Training on Hunter Recruitment and Retention*; and *Factors Related to Hunting Participation in Pennsylvania*.

Alison J. Lanier

Alison Lanier has worked as the Business Manager for more than a decade with Responsive Management and is familiar with all logistical aspects of survey research. Alison performs all administrative duties; maintains all databases, accounts, and payroll; and conducts business planning. Although Alison's primary duties relate to her position as Business Manager, she also coordinates Responsive Management's focus group projects. Alison received her Bachelor's degree in international business from James Madison University.

Interviewers

Responsive Management maintains a full-service, state-of-the-art computer-assisted telephone and mail survey center with 50 professional interviewers who conduct surveys only on attitudes toward natural resource, hunting and fishing, and outdoor recreation issues. To ensure that the data collected are of the highest quality, the interviewers are trained through lectures, role-playing, and video training, according to the standards established by the Council of American Survey Research Organizations.

“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

PROPOSED METHODOLOGY AND OVERALL APPROACH

The proposed telephone survey of West Virginia residents will quantify data to determine big and small game hunting participation, success, and pressure at the county level in West Virginia. Specifically, this study will be designed to achieve the following major objectives, as outlined in the RFQ:

- Estimate the number and success of white-tailed deer hunters by hunting season type and within all of West Virginia's 55 counties
- Estimate the number of spring wild turkey, fall wild turkey, and black bear hunters by county
- Assess hunter attitudes towards their preference for spring or fall wild turkey seasons
- Estimate the number of small game hunters by species in West Virginia's 6 ecological regions
- Estimate the number of trappers by species in West Virginia

Responsive Management will conduct all phases of the survey, including but not limited to, designing the survey instrument, pretesting the survey instrument, meeting with Division staff as necessary (via telephone conference call), coding the survey instrument for use with the computer-assisted telephone interviewing system, training and supervising interviewers, collecting data, conducting statistical analysis, interpreting results, preparing a final written report, and providing all other administrative activities necessary to successfully complete the project.

TASK 1: CONVENE AN INITIAL PLANNING SESSION

Responsive Management envisions a collaborative partnership with the WVDNR that will involve internal staff and stakeholders throughout the entire research process. This project will begin with an initial meeting between Responsive Management's project team, representatives from the WVDNR, and the WVDNR's survey liaison team. The initial meeting will offer an opportunity for everyone to review the research plan, to identify all of the issues that the overall approach addresses, and to determine any areas and issues that the design does not adequately address. Further, this initial planning session will provide an opportunity for everyone to get acquainted and for the project managers to set the parameters for research design and the development of the final report. The initial meeting will be an in-person meeting, and the project team will meet at the WVDNR in order to ensure flexibility and convenience for WVDNR representatives and the survey liaison team.

TASK 2: DEVELOP SAMPLING FRAME

Sample Size and Selection

The complexity and scope of this study requires that the sample size is large enough to provide representative results at the county level and based on ecological regions within the state, meaning that responses will be stratified to show similarities and differences at the local level. Determining the appropriate sample size and selection of respondents will prove crucial to providing the most accurate and statistically reliable hunting participation data. In order to ensure accuracy and unbiased results, Responsive Management recommends a survey of the

“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, U.S. Department of the Interior

general population to determine an accurate total of big and small game hunters in West Virginia, to measure hunting participation and harvest success, and to determine hunting pressure at the county level.

For a survey of the general population, Responsive Management uses random digit dialing (RDD) to collect data representative of the general population and to ensure that each state resident has an equal chance of being selected, in accordance with the standard telephone survey methodology guidelines established by Dillman (1978).⁴ RDD is used for many purposes, including political polling, where accurate survey results are subject to “verification.” Random selection of a sample from county residents, ages 15 and older, in each of West Virginia’s 55 counties will be obtained from Survey Sampling International (SSI). A random selection of household telephone numbers is obtained from Survey Sampling International, an established global survey sample provider. Responsive Management also obtains wireless telephone numbers to reach elusive populations and further ensure the representativeness of the sample population.

The survey sample size will be large enough to complete 4-5 initial survey questions with a representative sample of the general population on a per county basis and large enough to complete *each* question with 5,500 active hunters in the State of West Virginia. Responsive Management will complete telephone interviews with a representative sample of the general population to provide general population data on a per county basis. Responsive Management will also obtain 100 completed telephone interviews with West Virginia *hunters* in each county, resulting in a total of 5,500 completed interviews with big and small game hunters statewide. The sampling frame will be designed to ensure a 95% confidence level and will provide representative results at the state and county levels.

Because approximately 14% of West Virginia’s population age 16 years old and older participate in hunting activities⁵ and this survey will be administered to the general population, Responsive Management estimates that approximately one out of every seven residents contacted will have participated in hunting in West Virginia (i.e., approximately 200,000 West Virginia residents are hunters). Based on the assumption that only about half of the sample population will agree to complete the survey, Responsive Management estimates that a sample population of approximately 80,000-90,000 West Virginia residents will have to be contacted initially statewide in order to obtain 5,500 completed telephone interviews with hunters⁶, as well as to obtain a representative number of completed interviews with the general population. It is important to note that the size of the sample may vary (i.e., increase in most cases) in order to achieve representative results at the county level.

⁴ Dillman, D.A. (1978). *Mail and telephone surveys: The total design method*. New York: John Wiley & Sons.

⁵ 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. Retrieved on September 2, 2010 from <http://www.census.gov/prod/2008pubs/fhw06-nat.pdf>.

⁶ This estimate was derived using the following formula: 5,500 completed interviews X 7 (one out of every seven interviews will be with hunters) = 38,500 sample population to complete 5,500 with hunters. Because it is assumed that only half of the sample population will complete the interview, the sample size will have to be doubled to obtain the number of completions required: 38,500 sample population X 2 (half will complete) = 77,000 total sample population. This estimate is only approximate and the sampling plan will be finalized, pending a contract with the WVDNR.

“This is just a short note to thank you . . . for the outstanding service you provided in the recent survey effort. You delivered a product that precisely fits our needs and in a time frame that allows us to begin using the information immediately. I truly appreciate your dedication and professionalism. It’s not an exaggeration to say that you exceeded my expectations.”

–Rob Manes, (Former) Assistant Secretary, Kansas Department of Wildlife & Parks (currently with The Nature Conservancy)

Although some of these numbers will be non-working numbers, fax machines, and businesses, the RDD process requires numerous calls to identify hunters, as well as non-hunters, which will also be used to determine total numbers of participants and participation rates. To do this, Responsive Management will begin the study with several initial screening questions (approximately 4-5 questions) to determine hunting participation. These questions will be asked of all West Virginia residents. Responses will be recorded for both active hunters and non-hunters in order to provide the most accurate participation totals. An example of a screener question may be "In the past 12 months, have you or has someone in your household hunted in West Virginia?" At this point, respondents who answer *yes* are asked a series of follow-up questions that will be designed to obtain additional information regarding hunters in the state; if the respondent replies *no*, they will only be asked 4-5 initial questions but will not participate in the entire survey. These responses will be recorded and used in determining the total number of hunters at the county level, as well as hunting participation rates.

This methodology will provide the most statistically accurate estimates of hunters and standard deviations for these estimates at the county and state levels and assist the WVDNR in successfully assessing the capacity for hunting pressure at the county level. Another possibility, which may be considered to enhance harvest data, would be to augment the general population sample with a sample of licensed hunters in the State of West Virginia. Responsive Management will work closely with the WVDNR to determine the most effective methodology for meeting study requirements and objectives.

TASK 3: DESIGN AND PRETEST SURVEY

Questionnaire Design and Pretesting

For this project, Responsive Management will design the telephone survey instrument in collaboration with the WVDNR's survey liaison team and based on its extensive experience with natural resource, fish and wildlife, and outdoor recreation studies. Responsive Management will plan, design, and computer code a universal survey module that consists of 4-5 questions (i.e., universal module) designed to determine overall hunting participation, specific dates and number of days spent hunting, species hunted, harvest rates, and opinions regarding deer populations. These initial questions will be asked of everyone within the general population. For example, all respondents within the general population will be asked about the deer populations in their county to determine if they think the population levels are too high, too low, or about right.

Additional survey modules will also be developed for implementation in the different counties of the state and to obtain information from specific hunter subpopulations. Final surveys of active hunters will be designed to be completed by respondents over the telephone in no more than 8 minutes. Responsive Management will work collaboratively with WVDNR representatives to develop a survey designed to measure overall hunting participation and harvest success for each county and to determine number of days spent hunting. Responsive Management will submit draft questionnaires and will work collaboratively with the Division to develop additional questions or make revisions to the survey instrument as necessary to meet the goals and objectives of the study.

Responsive Management ensures rigorous quality control efforts. Its surveys are subject to detailed in-house review by associate staff and professional interviewers prior to pretesting.

"I want to thank you for your efforts in assessing public knowledge, attitudes, and opinions regarding grizzly bear reintroduction to the Bitterroot Mountains of central Idaho. The professional rigor in the design, implementation and analysis of the random telephone survey was outstanding. I particularly valued and appreciated the close working relationship we had in developing this project and the prompt completion of the final report. We were quite pleased with every aspect of the job by Responsive Management."

–John Weaver, Team Leader, Bitterroot Grizzly Bear EIS, U.S. Fish and Wildlife Service

Responsive Management's professional associates will review the questionnaire for content, format, question-flow, and computer-assisted telephone interviewing (CATI) adaptability and provide any recommended modifications to the WVDNR based on their previous experience conducting similar surveys. Responsive Management's research associates will then computer code the survey for the CATI system, and its professional interviewers will complete an internal review of the questionnaire.

During Responsive Management's internal review of the questionnaire, each interviewer will complete the survey several times using many different answer sets to ensure the accuracy of phrasing, flow, and skip patterns. After completing an internal review, Responsive Management will pretest the survey instrument with a representative sample of West Virginia residents and recommend revisions based on pretest results. Responsive Management will submit a draft questionnaire and will work collaboratively with the WVDNR to develop additional questions or make revisions to the survey instrument as necessary to meet the goals and objectives of the study, based on pretest results. This design process will ensure that the survey instrument meets the exact needs of the WVDNR. Final approval of the methodology and survey instrument will be obtained from the WVDNR prior to survey implementation.

TASK 4: ADMINISTER SURVEY

Telephone Interviewing Procedures and Facilities

High-quality data collection is critical to survey research. Responsive Management maintains its own centrally located, in-house telephone interviewing facilities. These facilities are staffed by professional interviewers with experience conducting computer-assisted telephone interviews on the subjects of natural resources and outdoor recreation, working under the close supervision of the Responsive Management professional staff. Because Responsive Management specializes in researching public opinion on natural resource issues, interviewers conduct surveys *only* on these issues and understand the nuances involved in conducting the interviews.

To ensure that the data collected are of the highest quality, the interviewers are trained through lectures, role-playing, and video training, according to the standards established by the Council of American Survey Research Organizations. The Survey Center Manager will conduct in-depth project briefings with the interviewing staff prior to their work on this study. Interviewers will be instructed on survey goals and objectives, the type of study, handling of survey questions, interview length, termination points and qualifiers for participation, reading of interviewer instructions, reading of the survey, reviewing of skip patterns, and probing and clarifying techniques necessary for specific questions on the survey instrument.

Through use of the computer-assisted interviewing facilities, the survey data will be entered into the computer as the interview is being conducted, thereby eliminating any potential subsequent data-entry errors. After the interviews are obtained, the Survey Center Manager and/or statisticians will check each completed survey to check for clarity, understanding, completeness, and format. The Survey Center Manager will also monitor the telephone workstations without the interviewers' knowledge of which interviews will be monitored, thereby allowing the Survey Center Manager to maintain strict quality control over the data collection process.

"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 were 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 should 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 that would have been difficult to manage on our own. I have utilized his graphs which he provided in Microsoft Power Point to develop programs for training of employees and presentations 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 Bredehoff, Chief of Law Enforcement, Colorado Division of Wildlife

Interviews will be conducted Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday from 10:00 a.m. to 4:00 p.m., and Sunday 3:00 p.m. to 9:00 p.m., local time. A five-callback design will be used to maintain the representativeness of the sample, avoid bias toward people easy-to-reach by telephone, and provide an equal opportunity for all to participate. The five-callback system uses a total of at least four subsequent calls, often as many as eight, to each not-answered number selected in the original sample. Subsequent calls will be placed at different times of the day and different days of the week. In addition, respondents who decline to participate because of inconvenience will be called again to encourage their participation or to set an appointment for their participation. Converting refusals into completed interviews is an important part of Responsive Management's contact plan to help minimize nonresponse. Responsive Management does not "double screen" its respondents (i.e., calling potential respondents by asking them if they would like to participate in a survey and then later calling only those who said that they would participate and recording the rate at which these people responded).

Questionnaire Programming Language

The accuracy and quality of input is vital to providing scientifically defensible survey research. For this reason, Responsive Management will conduct telephone interviews using Questionnaire Programming Language (QPL), which is a comprehensive system for computer-assisted telephone interviewing (CATI) that provides complete capabilities for designing, administering, and managing telephone-based research operations. Using this program will enhance the flow of data entry by eliminating unnecessary questions (e.g., follow-up questions will only be shown for questions that apply). The survey instrument will be programmed to automatically skip, code, and/or substitute phrases in the survey based upon previous responses, as necessary, for the logic and flow of the interview. Any respondent-specific data provided can be programmed to appear to the interviewer as part of the text of any question or as a branching control or skip pattern. Use of a CATI system is crucial for the successful implementation of this survey. Because numerous county-specific modules will be used for this project, the CATI system must offer complex branching and skip patterns to ensure that respondents are asked applicable questions based on their county of residence.

Because Responsive Management uses CATI software for telephone interviews and data entry, it is very familiar with questionnaire design that requires complex skip logic and branching patterns and will ensure accurate survey design and QPL coding. Although the QPL system automates the telephone survey process and data entry, it *is not* an automated system: a live, professionally-trained interviewer will conduct the surveys with respondents and enter the data into the QPL system as the interview is conducted, thereby ensuring the accuracy and instantaneous availability of data. Survey data is not recorded on paper with pen and pencil; rather, survey data will be entered into the computer as the interview is being conducted, thereby eliminating any potential subsequent data-entry errors. Additionally, QPL can automatically check data upon entry for inconsistencies to ensure the integrity of data collection.

Response Rates

Responsive Management's method for calculating response rates will be as follows: Response rate will be calculated by dividing the number of completed interviews by the number of all eligible telephone numbers. An eligible number is a working telephone number in a residence with someone with whom we can speak (e.g., not hearing disabled) and who meets the criteria

“Thanks very much for the extra fast delivery of the final reports. It appears to be another great product. Our meeting is later this week, so we are now in great shape in terms of survey distribution. Thanks again for your fine attention to detail, and extraordinary efforts to accommodate our interests and concerns I look forward to crossing paths with you on future projects, and to adding a third year to our survey trend data in 2014!”

–Mark Ellingwood, New Hampshire Fish and Game Department

for this study. Therefore, the only numbers not included in the response rate are business or government office numbers, deaf/language-barrier calls (languages other than English or Spanish), non-eligible respondents, and bad or disconnected numbers.

TASK 5: ANALYZE SURVEY RESULTS

Analysis of Survey

All survey data will be processed and analyzed using SPSS for Windows software and proprietary software developed by Responsive Management. Data processing and analysis will include coding, preparation of straight tabulations, and preparation of study printouts. Responsive Management will create graphs showing differences among counties within West Virginia. All data will be available in both hard copy and electronically in SPSS or Excel formats.

Responsive Management can provide a wide variety of statistical methods for this study. Descriptive analyses can be used to examine the characteristics of the samples, while inferential statistics will be used to project these analyses to make statements about the populations as a whole, where applicable. Nonparametric analyses can be performed on data that are entirely categorical (e.g., gender) or entirely ordinal (i.e., increasing levels of support of a statement), and parametric analyses can be performed on interval data (e.g., age). Univariate procedures examine relationships and differences among individuals on a single characteristic. Multivariate procedures examine these same relationships and differences among individuals using multiple characteristics.

This project will have two stages of statistical analysis. The first stage will be the descriptive analysis. This is the stage where attitudes, perceptions, opinions, and characteristics are described and summarized in graphs and tables. The exact method to be used to summarize the data will be dependent on the characteristics of the data (i.e., whether the data are categorical, ordinal, or interval). Categorical and ordinal data will be summarized as percents and sometimes in the form of measures of central tendency using medians. Interval data will be summarized in the form of central tendency using the mean.

The second stage of analysis will be the inferential analysis. This stage will analyze the relationships and differences among attitudes, perceptions, opinions, and characteristics being measured in the study. Selection of the type of statistical tests to be used will begin by deciding whether the questions are best answered by examining differences (e.g., analysis of variance) or by examining relationships (e.g., Pearson product-moment correlation). Within these two broad categories of differences and relationships are a multitude of statistical tests. The best one for each situation will be selected depending on whether the analysis is descriptive or inferential, whether the data are parametric or nonparametric, and whether the analysis is univariate or multivariate. In special cases, unique or less common analyses will be applied to clarify results that are otherwise difficult to interpret.

Statistical analyses identify significant findings. Survey results will be analyzed to obtain descriptive statistics as well as to examine relationships among variables. When cross-

“Thank you, Mark, for the tremendous effort you and your staff have provided us in developing our recreation plan. From the survey design through data analysis, you and your dedicated staff have graciously assisted us throughout the process and beyond your contractual obligation. I am proud to present these survey findings and am confident in their source and meaning.

Mark, I want to extend a special thanks to Dr. Peter De Michele, who willingly provided me with much needed technical support. I appreciate his kindness, patience and most of all his sincerity in helping me understand and use the SPSS software. Also, it was a pleasure working with Alison Lanier. Whether by phone or e-mail, I came to expect a cheerful and responsive Alison at the other end graciously willing and able to assist me.”

–Bob Ehemann, Division of Parks and Recreation, Delaware Department of Natural Resources and Environmental Control

tabulations of survey results are run, Pearson chi-square significance values will be used to confirm whether the relationship occurred by chance, using the formula below (Vaske, 2008)⁷:

Chi-Square Formula

$$\chi^2 = \sum \frac{(f_o - f_e)^2}{f_e}$$

where: f_o represents the observed frequency in each cell
 f_e represents the expected frequency for each cell

P-values will be calculated to determine the statistical significance of the relationship between variables. If the p -value is .05 or less, there is a 95% chance that the relationship did not occur by chance, meaning that if the survey were conducted 100 times on different samples that were selected in the same way, the findings of 95 out of the 100 surveys would fall within the sampling error range. Sampling errors will be calculated using the following formula.

Sampling Error Equation:

$$B = \left(\sqrt{\frac{N_p(.25)}{N_s} - .25} \right) (1.96)$$

Where: B = maximum sampling error (as decimal)
 N_p = population size (i.e., total number who could be surveyed)
 N_s = sample size (i.e., total number of respondents surveyed)

Derived from formula: p. 206 in Dillman, D. A. 2000. *Mail and Internet Surveys*. John Wiley & Sons, NY.

Note: This is a simplified version of the formula that calculates the maximum sampling error using a 50:50 split (the most conservative calculation because a 50:50 split would give maximum variation).

The following graphs are examples of Responsive Management's presentation of data analyses and survey results taken from *West Virginia Residents' Participation in Deer Hunting and Harvest of Deer*. This study was conducted for the West Virginia Division of Natural Resources (WVDNR) to determine residents' participation rates in deer hunting and their harvest of deer. The study entailed a telephone survey of West Virginia residents aged 15 years old and older. For the survey and the subsequent analysis, West Virginia was divided into 24 regions. To ensure that there would be enough respondents in each region for accurate analyses, the survey obtained at least 100 completed interviews with deer hunters in each region. To find deer hunters to interview, the research team used RDD of West Virginia households (i.e., a completely random sampling of households) and then located a person within the household who hunted deer, if there was a deer hunter in the household. The information on those people/households without deer hunters was recorded for determining the rate of participation, but these non-participants were not given the complete interview. If the household contained a deer hunter, he/she was interviewed.

⁷ Vaske, J.J. (2008). *Survey research and analysis: Applications in parks, recreation and human dimensions*. State College, Pennsylvania: Venture Publishing, Inc.

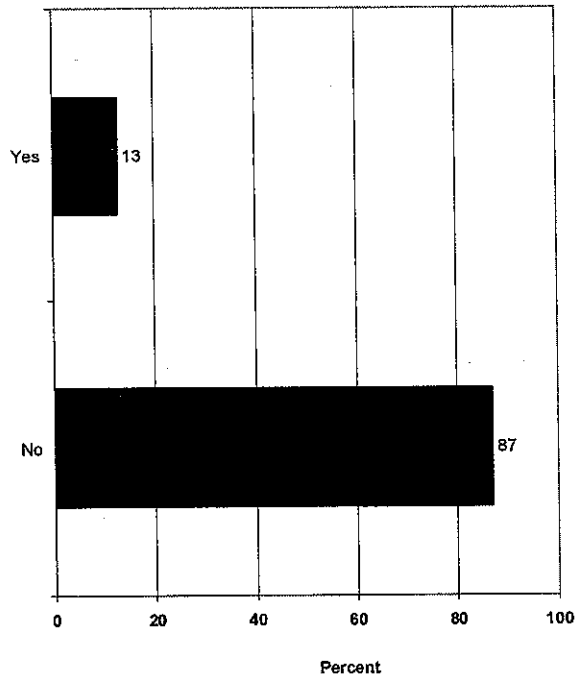
“Responsive Management is one of the top research firms in the nation when it comes to our market and the shooting and hunting industry. During the research phase of this project, [Responsive Management] conducted both qualitative and quantitative research Needless to say, we learned a great deal in this process, and we are now better able to target our efforts and our resources.”

—Peter J. Dart, President and CEO, Rocky Mountain Elk Foundation

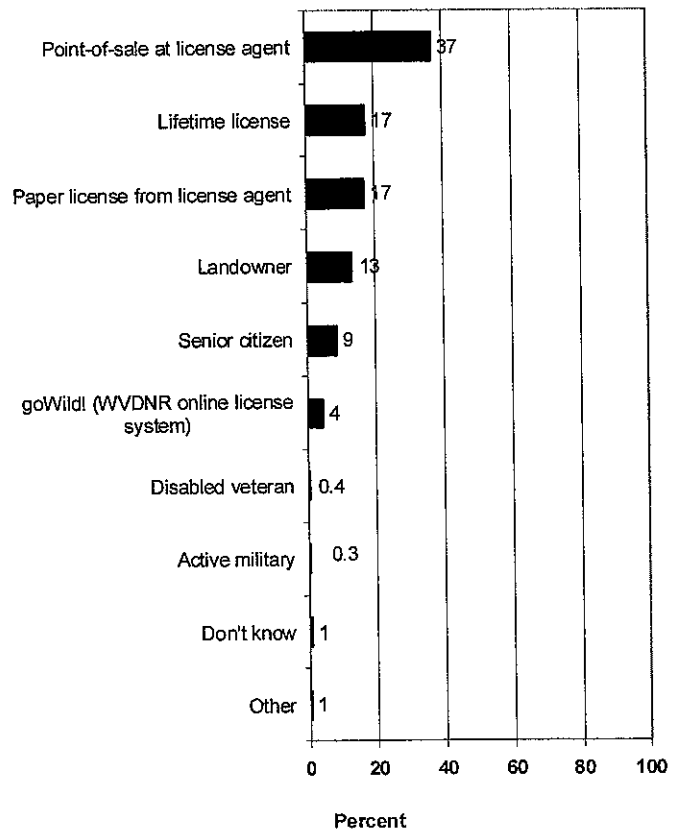
For statewide analyses, the data were weighted so that the proportions of the sample among the regions matched the distribution of the population statewide. (Otherwise, the least populous regions would have counted the same as the most populous region.) In other words, the results were weighted so that 6.20% of the sample was from Region 1, which matches the state population, 6.20% of which reside in Region 1. According to the results, 13% of all residents aged 15 years and older have either deer hunted in the past 12 months or have a household member who has deer hunted in the past 12 months. The most common source for hunting license purchases for the 2006 season was an electronic purchase at a store or business, referred to as a “point-of-sale at license agent,” the source for 37% of 2006 license holders. Lifetime licenses accounted for 17% of 2006 license holders, and paper licenses from a license agent also accounted for 17%. These findings are shown in the graphs below.

Sample Presentation of Data

Q11. In the past 12 months, have you, or has anyone 15 years of age or older in your household, gone deer hunting in West Virginia? (Of all West Virginia residents.)



Q18 and Q20. Source of license for 2006 season. (Among licensed deer hunters.)



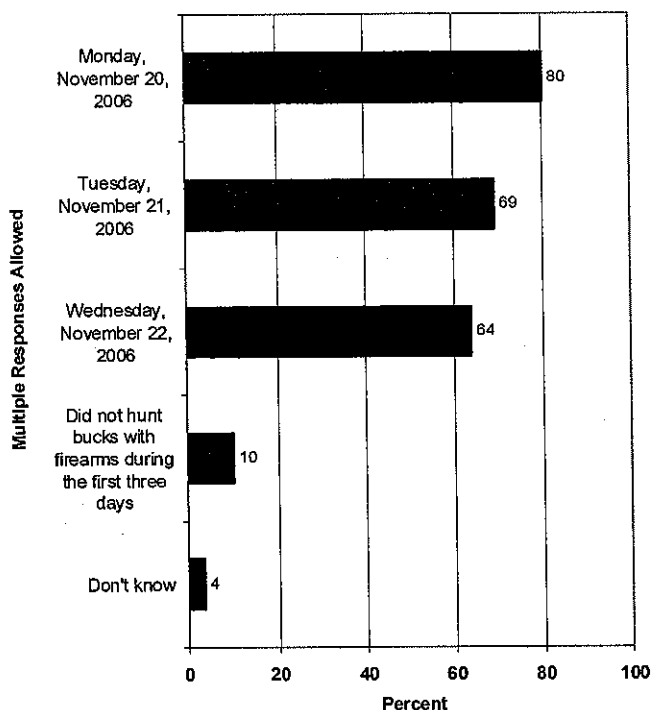
“The admonition to ‘Know Thyself’ was never more true than when it is applied to business. And helping us define our Bowhunting Market and who we are has recently been masterfully done for us by Mark Damian Duda and the folks at Responsive Management. In my 34 years in the Archery Industry, I have never 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 (former), The Archery Manufacturers & Merchants Organization

As shown in the graph below, participation in the first day of buck firearms season was quite high: 80% hunted on the first day of the buck firearm season. Indeed, at least 86% of those who hunted deer with a firearm did so within one of more of the first three days of the season.

Sample Presentation of Data

Q40. The first three days of buck firearms season were Monday November 20, Tuesday November 21, and Wednesday November 22, 2006. On which of these three days did you hunt bucks with a firearm in West Virginia? (Asked of those who hunted bucks with a firearm in West Virginia in 2006.)



Regional and County Breakdowns

Responsive Management also routinely presents data by regional or county breakdown. Post-stratification (Pedhazur & Schmelkin, 1991)⁸ will be used to ensure appropriate weighting of the results during the data analysis phase. During data analysis, results will be weighted so that the proportions of the sample among the counties match the distribution of the population statewide. The following graphs are examples of Responsive Management's presentation of regional analyses taken from the *Harvest of Wildlife in Georgia 2008-2009*. Responsive Management has been conducting a hunter harvest survey for the Georgia Department of Natural Resources (GDNR) since 2004. The most recent study was conducted to determine participation in hunting and harvest of deer and bear. The study entailed a telephone survey of Georgia resident licensed hunters from among the following license types: Resident Combination Hunting and Fishing

⁸ Pedhazur, E.J. and L.P. Schmelkin. (1991). *Measurement, design, and analysis: An integrated approach*. New York: Psychology Press.

“On behalf of Ducks Unlimited, I wish to thank you and your team at Responsive Management for your outstanding work You and your staff were pleasant, easy to work with, and very professional The questions and analysis were right on target to address important issues in habitat conservation.”

—James K. Ringelman, Director of Conservation Programs, Ducks Unlimited Inc.

license, Resident Hunting license, Resident Primitive Weapon license, and Resident Sportsman license.

Sample Presentation of Data Breakdown by Region

Table 9 shows harvest by region; the Piedmont Region had the most deer harvested, although the Upper Coastal Plain Region had a substantial harvest as well.

Deer Management Unit	Deer Harvest	Percent of Total Harvest	Buck Harvest	Doe Harvest	Percent Does	Total Hunters	Number of Deer per Hunter
Blue Ridge Region	2,710	1.22	1,275	1,435	52.94	5,182	0.52
Lower Coastal Plain Region	28,777	12.97	13,631	15,146	52.63	26,864	1.07
Piedmont Region	104,667	47.18	38,343	66,324	63.37	90,079	1.16
Ridge and Valley Region	16,421	7.40	6,138	10,283	62.62	14,668	1.12
Upper Coastal Plain Region	69,273	31.23	28,857	40,416	58.34	56,758	1.22
**Metro Atlanta area	638	0.29	80	558	87.50	3,029	0.21
Total	221,849	100.00	88,245	133,604	60.22	*NA	1.23

*Sum of the DMUs would be greater than the total number of hunters because some hunters hunted in more than one DMU.
 **The Metro Atlanta area is not included in any totals because the numbers are already represented in the Piedmont region.

Source: *Harvest of Wildlife in Georgia 2008-2009*, conducted by Responsive Management.

Table 10 shows trends in hunting since 2001; note that the table is broken into two parts, 10a showing all deer, and 10b showing bucks and does.

Region	Deer per Hunter							
	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008*	2008-2009*
Blue Ridge	0.60	0.46	NA	0.82	0.51	0.52	0.32	0.52
Lower Coastal Plain	1.37	1.50	NA	1.16	1.46	1.46	1.23	1.07
Piedmont	1.31	1.24	NA	1.22	1.22	1.15	1.10	1.16
Ridge and Valley	1.34	1.23	NA	1.15	1.07	1.39	1.20	1.12
Upper Coastal Plain	1.45	1.36	NA	1.19	1.17	1.22	1.22	1.22
State	1.53	1.47	NA	1.29	1.31	1.32	1.23	1.26

Note: Table 11b shows results for bucks and does.

Source: *Harvest of Wildlife in Georgia 2008-2009*, conducted by Responsive Management.

*Does not include Non-Resident Licenses and Honoraries.

"It is quite an understatement to say that I couldn't have done it without you all! From our very first conversations about survey design, timeline, budget, and data handling, you were attentive to my concerns as a graduate student and a newly initiated human dimensions researcher. Your professionalism and expertise made me feel quite confident about our partnership and about the quality of data. Furthermore, you included me in every aspect of the process and made me feel that my comments were valued

Upon my visit to Responsive Management . . . , it became quite clear to me why your firm is so highly praised throughout the field of human dimensions research. It was an absolute delight to see you guys in action

A world of thanks."

—Salinda Daley, graduate student, North Carolina State University (currently with the North Carolina Wildlife Resources Commission)

Region	Bucks per Hunter								Does per Hunter							
	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008*	2008-2009*	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008*	2008-2009*
Blue Ridge	0.40	0.21	NA	0.36	0.28	0.31	0.24	0.25	0.20	0.25	NA	0.46	0.24	0.21	0.08	0.28
Lower Coastal Plain	0.67	0.64	NA	0.63	0.64	0.68	0.62	0.51	0.70	0.85	NA	0.53	0.82	0.78	0.61	0.56
Piedmont	0.53	0.48	NA	0.44	0.48	0.43	0.43	0.43	0.78	0.77	NA	0.77	0.73	0.72	0.67	0.74
Ridge and Valley	0.66	0.54	NA	0.43	0.44	0.49	0.46	0.42	0.68	0.69	NA	0.72	0.63	0.91	0.74	0.70
Upper Coastal Plain	0.63	0.47	NA	0.46	0.47	0.48	0.47	0.51	0.81	0.89	NA	0.74	0.70	0.74	0.75	0.71
State	0.66	0.54	NA	0.51	0.53	0.52	0.50	0.50	0.87	0.93	NA	0.78	0.78	0.80	0.73	0.76

Note: Table 11a shows results for all deer.

Source: *Harvest of Wildlife in Georgia 2008-2009*, conducted by Responsive Management.

*Does not include Non-Resident Licenses and Honoraries.

Table 11 shows the number of hunters and harvest in the Metro Atlanta area for the extended season there.

	Estimate	Standard Error
Number of Deer Hunters (with metro-area (extended season) archery)	3,029	488
Deer Harvest (with metro-area (extended season) archery) (0.3% of total harvest)	638	225
Days Hunted (with metro-area (extended season) archery)	22,958	135
Days per Hunter (with metro-area (extended season) archery)	7.58	
Days per Deer (with metro-area (extended season) archery)	36.00	
Deer per Hunter (with metro-area (extended season) archery)	0.21	
Percent Does (with metro-area (extended season) archery)	87.50	

Source: *Harvest of Wildlife in Georgia 2008-2009*, conducted by Responsive Management.

"I am writing to extend my appreciation to you and your staff for the exemplary job you did with the development and production of Saving Lives and Preventing Boating-Related Accidents: An Assessment of State Recreational Boating Safety Needs for the . . . Aquatic Resources (Wallop-Breaux) Trust Fund

The needs assessment has been very well received, and we anticipate utilizing the document as the primary educational tool for conveying our state resource needs to members of Congress and the Administration. The content, format and 'look' of the publication are first rate

I want to take this opportunity to thank you personally for your commitment, involvement and contribution to NASBLA's research agenda over the last few years. You have been a part of some of our most exciting and significant trend analysis and policy development to date."

—Alvin Taylor, President, National Association of State Boating Law Administrators

Sample Presentation of Regional and County Breakdowns

As another example, below is a county-level analysis taken from the aforementioned 2007 study conducted in West Virginia. According to study findings, the total estimated harvest was 154,185 deer in West Virginia in 2006. Responsive Management provided overall deer harvest totals, antlerless deer harvest totals, and totals related to equipment used. The table below shows overall harvest numbers for West Virginia.

Overall Deer Hunters and Harvest

Location	No. of Hunters	Confidence Interval	No. of Stamps	Confidence Interval	Harvest Sum	Confidence Interval	Success Rate
Total	184,608	+/-1,938	110,526	+/-6,702	154,185	+/-8,603	83.52%
District 1	44,520	+/-2,699	30,387	+/-3,577	42,551	+/-4,576	95.58%
District 2	22,320	+/-2,432	15,273	+/-3,162	22,923	+/-4,540	100.00%
District 3	30,621	+/-2,821	13,306	+/-2,612	17,738	+/-3,285	57.93%
District 4	25,265	+/-2,552	14,897	+/-2,892	16,694	+/-3,262	66.08%
District 5	36,135	+/-2,579	16,363	+/-2,521	21,094	+/-3,169	58.38%
District 6	36,986	+/-3,146	20,300	+/-3,230	33,185	+/-5,065	89.72%
Region 1	10,755	+/-1,367	8,081	+/-1,853	12,879	+/-2,508	100.00%
Region 2	8,903	+/-1,551	5,511	+/-1,840	6,829	+/-2,288	76.70%
Region 3	12,604	+/-1,556	6,657	+/-1,659	9,185	+/-2,115	72.87%
Region 4	13,204	+/-1,374	10,137	+/-1,879	13,658	+/-2,409	100.00%
Region 5	4,361	+/-1,157	4,241	+/-1,961	5,560	+/-2,492	100.00%
Region 6	12,738	+/-1,684	8,381	+/-2,080	12,301	+/-2,675	96.57%
Region 7	6,107	+/-1,597	2,651	+/-1,358	5,062	+/-2,758	82.89%
Region 8	13,173	+/-1,700	6,511	+/-1,751	7,444	+/-1,819	56.51%
Region 9	9,358	+/-1,509	3,353	+/-1,086	4,614	+/-1,468	49.31%
Region 10	4,798	+/-1,420	1,900	+/-1,057	3,109	+/-1,540	64.80%
Region 11	3,984	+/-1,539	1,541	+/-1,191	2,571	+/-1,817	64.53%
Region 12	8,514	+/-1,282	4,636	+/-1,241	4,366	+/-1,209	51.28%
Region 13	6,264	+/-1,401	3,312	+/-1,421	3,774	+/-1,529	60.25%
Region 14	8,310	+/-1,684	4,538	+/-1,841	6,408	+/-2,324	77.11%
Region 15	3,807	+/-1,205	2,412	+/-1,066	2,146	+/-1,114	56.37%
Region 16	10,257	+/-1,509	4,423	+/-1,348	7,319	+/-2,020	71.36%
Region 17	10,953	+/-1,165	5,013	+/-1,116	6,364	+/-1,487	58.10%
Region 18	13,351	+/-1,757	5,480	+/-1,508	5,890	+/-1,654	44.12%
Region 19	3,247	+/-1,123	1,447	+/-907	1,521	+/-1,052	46.84%
Region 20	7,849	+/-1,636	3,450	+/-1,215	6,869	+/-2,162	87.51%
Region 21	5,444	+/-1,690	3,153	+/-1,424	3,915	+/-2,344	71.91%
Region 22	4,112	+/-1,509	1,917	+/-1,357	4,226	+/-2,590	100.00%
Region 23	12,623	+/-1,503	6,613	+/-1,637	10,589	+/-2,100	83.89%
Region 24	7,673	+/-1,663	5,167	+/-1,698	7,587	+/-2,528	98.88%
Barbour	3,898	+/-956	2,159	+/-907	3,833	+/-1,438	98.33%
Berkeley	2,881	+/-946	1,990	+/-1,323	3,115	+/-1,903	100.00%
Boone	2,088	+/-748	951	+/-619	951	+/-619	45.55%
Braxton	4,639	+/-1,034	1,272	+/-619	2,221	+/-971	47.88%
Brooke	1,921	+/-584	2,147	+/-931	2,259	+/-963	100.00%
Cabell	4,883	+/-799	1,911	+/-751	3,878	+/-1,286	79.42%
Calhoun	2,140	+/-946	1,245	+/-827	1,769	+/-1,151	82.66%
Clay	1,874	+/-693	609	+/-449	641	+/-471	34.20%
Doddridge	2,724	+/-1,221	1,824	+/-1,040	2,001	+/-1,629	73.46%
Fayette	4,050	+/-870	2,649	+/-993	1,706	+/-680	42.12%
Gilmer	2,781	+/-1,229	1,329	+/-982	1,914	+/-1,704	68.82%
Grant	3,084	+/-1,132	1,643	+/-1,161	2,964	+/-2,395	96.11%
Greenbrier	4,052	+/-1,190	2,040	+/-1,176	2,598	+/-1,290	64.12%
Hampshire	4,165	+/-986	2,812	+/-1,236	4,281	+/-1,859	100.00%
Hancock	2,372	+/-649	1,356	+/-602	2,824	+/-1,108	100.00%

“Aloha! Two reasons for this letter. First is to say 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 surveys has given us a wealth of information. The opportunities provided for both the supporters of freshwater fishing and the environmentalists to work together is wonderful.”

–Lynn McCrory, President, Kauai Economic Development Board

Location	No. of Hunters	Confidence Interval	No. of Stamps	Confidence Interval	Harvest Sum	Confidence Interval	Success Rate
Hardy	3,416	+/-935	2,323	+/-1,228	3,290	+/-1,306	96.31%
Harrison	6,569	+/-1,089	2,715	+/-1,144	4,320	+/-1,389	65.76%
Jackson	7,178	+/-1,132	3,923	+/-1,236	6,319	+/-1,588	88.03%
Jefferson	1,608	+/-708	2,252	+/-1,439	2,445	+/-1,567	100.00%
Kanawha	6,070	+/-859	3,101	+/-827	2,486	+/-751	40.96%
Lewis	4,767	+/-1,025	2,919	+/-1,194	2,585	+/-1,228	54.23%
Lincoln	5,800	+/-1,157	2,449	+/-896	2,130	+/-776	36.72%
Logan	1,958	+/-870	886	+/-695	980	+/-875	50.05%
Marion	5,860	+/-914	3,857	+/-1,089	5,449	+/-1,636	92.99%
Marshall	5,256	+/-966	3,223	+/-1,228	5,536	+/-1,671	100.00%
Mason	5,637	+/-1,132	2,887	+/-1,097	4,265	+/-1,694	75.66%
McDowell	1,753	+/-812	1,073	+/-649	1,133	+/-764	64.63%
Mercer	3,423	+/-1,052	1,292	+/-802	1,707	+/-982	49.87%
Mineral	3,713	+/-892	1,739	+/-709	3,222	+/-1,142	86.78%
Mingo	1,290	+/-721	562	+/-585	541	+/-586	41.94%
Monongalia	4,535	+/-824	4,511	+/-1,211	4,894	+/-1,360	100.00%
Monroe	4,387	+/-1,259	2,497	+/-1,395	3,810	+/-1,935	86.85%
Morgan	1,636	+/-601	1,507	+/-898	1,507	+/-898	92.11%
Nicholas	3,743	+/-996	1,306	+/-695	2,055	+/-1,022	54.90%
Ohio	1,544	+/-531	1,356	+/-751	2,259	+/-1,171	100.00%
Pendleton	3,062	+/-1,165	1,008	+/-709	2,098	+/-1,385	68.52%
Pleasants	1,226	+/-903	631	+/-851	1,009	+/-1,276	82.30%
Pocahontas	3,984	+/-1,539	1,541	+/-1,191	2,571	+/-1,817	64.53%
Preston	7,021	+/-1,401	4,544	+/-1,737	5,746	+/-2,171	81.84%
Putnam	4,874	+/-1,043	1,536	+/-790	3,054	+/-1,115	62.66%
Raleigh	4,464	+/-956	1,987	+/-750	2,659	+/-1,003	59.57%
Randolph	4,798	+/-1,420	1,900	+/-1,057	3,109	+/-1,540	64.80%
Ritchie	4,784	+/-1,332	2,780	+/-1,393	4,372	+/-1,919	91.39%
Roane	5,743	+/-1,367	2,205	+/-895	5,099	+/-1,842	88.79%
Summers	3,019	+/-976	2,020	+/-1,107	2,067	+/-1,125	68.47%
Taylor	2,367	+/-664	1,783	+/-777	1,032	+/-666	43.60%
Tucker	1,882	+/-693	967	+/-619	1,083	+/-738	57.55%
Tyler	2,914	+/-1,237	1,286	+/-1,061	3,217	+/-2,255	100.00%
Upshur	4,040	+/-986	2,321	+/-1,116	2,638	+/-949	65.30%
Wayne	5,553	+/-1,157	2,080	+/-1,033	2,810	+/-1,331	50.60%
Webster	4,038	+/-976	1,439	+/-618	1,918	+/-930	47.50%
Wetzel	2,809	+/-649	1,769	+/-953	3,315	+/-1,153	100.00%
Wirt	2,888	+/-1,034	2,387	+/-982	3,215	+/-1,665	100.00%
Wood	5,661	+/-1,034	2,690	+/-1,080	4,270	+/-1,359	75.43%
Wyoming	2,054	+/-903	1,339	+/-850	1,014	+/-815	49.37%

Nonparametric Analysis (Z-Scores) to Assess Differences Among Responses by Demographic, Geographic, and Attitudinal Characteristics

For this study, Responsive Management can also run a z-score analysis. Nonparametric analyses are invaluable for identifying subgroups within the population that have particular opinions. Nonparametric analyses allow for targeted planning and messaging in the development of strategies for implementing efforts to communicate with and meet the needs of West Virginia's constituents based on specific opinions, interests, or characteristics of a particular subgroup within the study population.

A nonparametric analysis will examine how various responses relate to demographic, geographic, and attitudinal characteristics. Responses for nearly all questions will be tested by means of "z-scores" for relationships to all other responses. Responsive Management has

“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 and 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

developed proprietary software that allows nonparametric analyses to be run on *all* questions based on *all* available demographic, geographic, and attitudinal characteristic variables. No other research firm can provide this extensive level of statistical analysis on all the variables within the study. In short, Responsive Management's method unites 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.

The z-scores will be shown in tabulations that have identified all the statistically significant variables and ranked them according to the strength of the correlation. Often, research firms will run "generic" crosstabulations on all variables that compare percentages but do not take the additional step to determine if these crosstabulations are *statistically significant* or place those significant variables in order by the strength of the correlation. Statistical tests are important, objective criteria that identify the statistically significant variables, allowing researchers to make decisions about the relative importance of the differences in percentages. In many cases, large differences in percentages are not significant differences because one or both of the groups being examined are very small. However, other research firms often do not perform the statistical tests necessary to prevent erroneous conclusions based on merely comparing those percentages. Statistical tests balance the size of the difference in percentages with the number of respondents affected and compare the size of the difference to a known standard. It is possible for a small difference affecting many respondents to be significant and a large difference affecting few respondents to not be significant. The statistical tests that Responsive Management employs when running z-scores standardize decisions on what is significant and minimizes error in the z-score results. The z-scores will be calculated as shown in the formula that follows (Sheskin, 2000).⁹

Z-Score Formula

$z = \frac{(p_1 - p_2)}{\sqrt{p(1-p) \left[\frac{1}{n_1} + \frac{1}{n_2} \right]}}$	<p>where:</p> <p>n_1 represents the number of observations in Group 1. n_2 represents the number of observations in Group 2. $p_1 = a/(a + b) = a/n_1$ and represents the proportion of observations in Group 1 that falls in Cell a. It is employed to estimate the population proportion Π_1 (% of Group 1 who had specific characteristic). $p_2 = c/(c + d) = c/n_2$ and represents the proportion of observations in Group 2 that falls in Cell c. It is employed to estimate the population proportion Π_2 (% of Group 2 who had specific characteristic). $p = (a + c)/(n_1 + n_2) = (a + c)/n$ and is a pooled estimate of the proportion of respondents who had specific characteristic in the underlying population.</p>
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As mentioned, a nonparametric analysis examines how various responses relate to behavioral, participatory and demographic characteristics. A positive z-score means that the response and characteristic are positively related; a negative z-score means that the response and characteristic are negatively related. A z-score that has an absolute value of 3.30 or greater indicates that the relationship is so strong that it would happen by chance only 1 out of 1,000 times ($p \leq 0.001$;

⁹ Sheskin, David J. (2000). *Handbook of Parametric and Nonparametric Statistical Procedures, 2nd Edition* Boca Raton, FL: Chapman & Hall/CRC.

“On behalf of the entire staff at The Conservation Fund, I would like to extend my sincerest thanks to you and your wonderful team at Responsive Management for the work on our survey. Your professionalism and diligent work was truly outstanding. Your brilliant team’s expertise shined through in every step of the survey process, delighting not only myself, but also our staff and in turn our partners.

I personally sincerely appreciated working with you and your impressive staff. There were many late nights when I was thankful to be working with such a competent and hard-working team. My expectations were considerably surpassed. The meaningful work that you and your staff put in to the survey allowed for our July Real Estate Summit to be a great success. In addition, your presentation at the Summit allowed for all of our staff to properly understand the results and how we need to interpret our partners’ needs in order to plan for the future of The Conservation Fund. Your candor, critical thoughts, and vast expertise have allowed for us to move forward on a firm foundation.

Thank you again and the best wishes to you and your team at Responsive Management for the future.”

–Meg McCants, The Conservation Fund

denoted with three asterisks). A z-score that has an absolute value of 2.58 to 3.29 indicates that the relationship is so strong that it would happen by chance only 1 out of 100 times ($p \leq 0.01$; denoted with two asterisks). Finally, a z-score that has an absolute value of 1.96 to 2.57 indicates that the relationship is so strong that it would happen by chance only 5 out of 100 times ($p \leq 0.05$; denoted with one asterisk). Note that the strongest positive statistically significant correlations are at the top of the table, with the positive correlations getting weaker as one moves down the table (nonetheless, all variables in the table are statistically significant). The significance level is shown for each variable.

Below is an example z-score table from the aforementioned *West Virginia Residents' Participation in Deer Hunting and Harvest of Deer*. For instance, in considering hunting participation in the respondent's household, a z-score analysis was conducted to determine which characteristics are statistically related to hunting participation. The table below shows variables that are significantly correlated with households who report more hunters than the median number. The results show the following:

- Note that "female" is first on the tabulation with a z-score of $p \leq 0.001$. This means that females have a greater likelihood of having more than the median number of people in their households who have gone deer hunting in West Virginia than do males, and the correlation is strong.
- Likewise, those who are the median age or younger are more likely to have more than the median number of people in their households who have gone deer hunting in West Virginia than are those who are older than the median age. The correlation is also strong but not as strong as the correlation with "female."
- Finally, those who live in Region 9 are more likely to have more than the median number of people in their households who have gone deer hunting in West Virginia than are those who do not live in Region 9, but the correlation is not strong (although it is statistically significant nonetheless).

Sample Presentation of Z-Score Analysis

More than the median number of people in his/her household have gone deer hunting in West Virginia	Z-SCORE
Is female	14.84***
More than the median number of people live in his/her household	12.19***
Is the median age or younger	4.77***
Hunted deer in West Virginia more than the median number of days in 2006	2.73**
Hunted antlerless deer in West Virginia in 2006 with a firearm	2.21*
Lives in Region 9	2.04*
INSIGNIFICANT AND NEGATIVE Z-SCORES OMITTED	

TASK 6: PREPARE FINAL REPORT

Responsive Management will provide a detailed report outlining the results of the study designed to determine hunting participation, success, and pressure in the State of West Virginia and develop a final report of study findings. The results will help the Division assess the capacity for hunting pressure at the county level and determine where additional time and resources are needed. In short, this study will help inform WVDNR decisions regarding hunting seasons and

"On behalf of the Freshwater Fisheries Division of the South Carolina Department of Natural Resources, I would like to thank Responsive Management for the outstanding job that they did on the recently completed survey of licensed anglers in South Carolina. Under your innovative guidance, we were able to ascertain public opinion on many fishery management issues. Your competence in assisting our staff to develop the survey in the most cost-effective manner was extremely important in these times of restricted funding. I was especially pleased with your staff's ability to work with colloquial names of places and species during the survey. In past surveys with other firms, many errors in data analysis occurred due to lack of training of the interviewers. Our requests for additional cross-referencing of data were handled promptly.

The product you provided fulfilled our needs and will play a major role in taking our department into the twenty-first century. It provides the catalyst for the department to recognize and adapt to change, to meet the needs of our constituents.

I want to sincerely thank you and your staff for producing a most informative document. The professional quality of the work, coupled with the personal approach of your organization, made the project most enjoyable to facilitate. I can think of no one that I would rather have do future surveys than Responsive Management."

-David Allen, Fisheries Biologist, South Carolina Department of Natural Resources

regulations. The final report will include an executive summary with a “bullet” narrative of key findings and a brief description of methodology; an introduction; survey methodology, including a discussion of data analysis and statistical procedures; survey graphs and tables, including graphs by county and region; verbatim comments from open-ended survey questions; and, if desired, crosstabulations (z-scores). In addition to the written report, all data will be available in hard copy or on CD in SPSS or Excel format.

TIMELINE AND COSTS

For this study, Responsive Management will design and administer a public opinion survey to determine hunting participation totals, success, and pressure at the county level, conduct comprehensive data analysis on survey results, and develop a final report of study findings. Responsive Management will conduct approximately 80,000-90,000 telephone interviews with West Virginia residents, 15 years old and older, to determine an accurate total number of and participation rates for big and small game hunters in each county and statewide. The survey sample size will be large enough (1) to complete 4-5 initial survey questions with a representative sample of the general population on a per county basis and (2) to obtain 5,500 completed telephone interviews with hunters. The cost and timeline for providing the services, as outlined in above proposal, are shown below.

Task	Timeline
Task 1: Convene an Initial Planning Session	October 2010
Task 2: Develop Sampling Frame	November 2010
Task 3: Design and Pretest Survey	November-December 2010
Task 4: Administer Survey	January-February 2011
Task 5: Analyze Survey Results	February-March 2011
Task 6: Prepare Final Report	March-April 2011
<i>Submission of Final Report to WVDNR</i>	<i>NO LATER THAN JUNE 30, 2011</i>
Total Cost \$124,488*	

* This cost estimate is based on a total of 80,000-90,000 telephone interviews with West Virginia residents, 15 years old and older, (1) to complete 4-5 initial survey questions with a representative sample of the general population on a per county basis and (2) to obtain 5,500 completed telephone interviews with hunters. Please note that our cost breakdowns include GSA-approved Responsive Management services through the General Service's Administration (GSA) Federal Supply Schedules program by using the Mission Oriented Business Integrated Services (MOBIS) Schedule. GSA established this Federal Supply Schedule to create an expedited procurement process by pre-qualifying contractors that provide professional management services. This streamlined system makes it faster and easier for you to select qualified contractors who best support your needs. Based on GSA rates, rates used in cost calculations include all associated direct costs and indirect costs including wages, telephone charges, printing, prepaid insurance, and all standard overhead charges.

“[T]he information you provided is exactly what we were looking for.

Thank you for the more detailed insights to certain survey responses and analyzing the data by level of avidity for the specified outdoor recreation activities. This information is useful in assessing how well current Department programs are meeting the broader needs of these stakeholders.”

–Stephen Perry, Chief of Inland Fisheries Division, New Hampshire Fish and Game Department
