

Responsive Management Report



Specializing in Survey Research on Natural Resource and Outdoor Recreation Issues

Summer 2013

Public Attitudes Toward and Expectations Regarding Management of Nuisance Wildlife Issues in the Northeast United States

Fish and wildlife agencies nationwide are under increasing pressure to respond to calls and situations related to problems with wildlife. Yet many agencies receive no funding for these activities—it simply constitutes an added-on, unfunded responsibility. Furthermore, there are varied opinions and divergence in public opinion, and even among agency personnel, regarding common dilemmas related to wildlife problems, funding, and public expectations. What level of involvement should fish and wildlife agencies have in managing nuisance wildlife?

A scientific survey conducted for the Northeast Wildlife Damage Management Research and Outreach Cooperative (hereinafter referred to as the Cooperative) helps wildlife professionals better understand public attitudes toward and expectations regarding management of problems caused by wildlife in the Northeast United States.

The ultimate goal of this project is to help state fish and wildlife agencies develop sustainable nuisance wildlife management strategies and viable solutions—in short, to help ensure that agencies are allocating their limited resources and funding based on the priorities and programs that best meet the needs of their constituents.

The Cooperative was established in 1999 as a partnership between state and federal wildlife agencies and universities in the Northeast. The Cooperative consists



Photo: Lupico

of, and the survey was conducted in, 13 Northeastern states.

For this study, Responsive Management obtained a total of 3,962 completed interviews overall. The states surveyed, with the number of completed interviews, are Connecticut (307), Delaware (302), Maine (300), Maryland (300), Massachusetts (303), New Hampshire (308), New Jersey (302), New York (311), Pennsylvania (302), Rhode Island (305), Vermont (320), Virginia (301), and West Virginia (301).

The study entailed a scientific telephone survey of residents of those 13 Northeastern states (random digit dialing sampling with supplemental cellular telephone numbers in representative proportions). The study culminated in a full report with state-level data.

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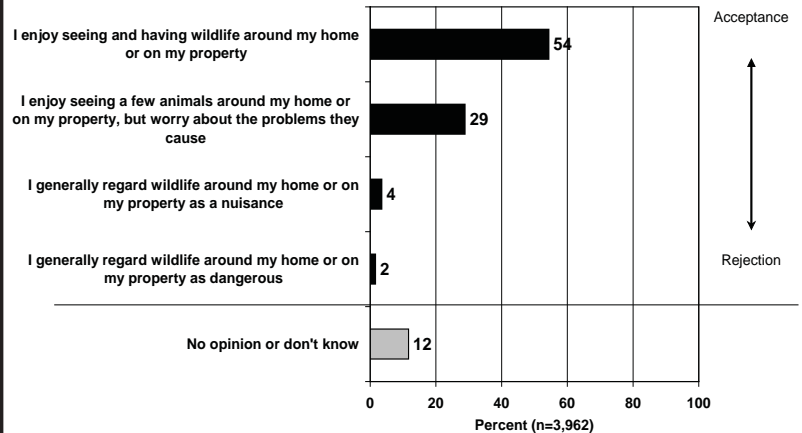
Residents' Experience With Wildlife

Residents' General Feelings About Wildlife

The survey presented a continuum to respondents regarding their general opinion of wildlife near their home, running from wide acceptance ("I enjoy seeing and having wildlife around my home or on my property") to complete rejection ("I generally regard wildlife around my home or on my property as dangerous"). The overwhelming majority of Northeast Region residents (83%) chose one of the two "acceptance" responses. On the other end, only 5% regard wildlife around their home as a nuisance or as dangerous (note that rounding on the graph causes the apparent discrepancy in the sum).

Who are those who fall toward the rejection end of the continuum? The analysis found them to be correlated with having had wildlife problems; being particularly concerned with rabies, human safety, and diseases such as Lyme disease; having a negative opinion about the state fish and wildlife agency; living in an urban or suburban area; and being female and/or older than the median age.

Generally, which of the following statements best describes your feelings about wildlife around your home or on your property?



(Does not sum to 100% because of rounding on the graph.)

Northeast residents care about wildlife (see above), and the majority of them engage in some type of wildlife-associated activity, as shown in the graph below: 75% watch wildlife, 44% maintain a birdfeeder, 35% photograph wildlife, 24% maintain plantings to benefit or attract wildlife, 22% feed wildlife other than by birdfeeder, and 18% maintain nest boxes or other structures for wildlife.

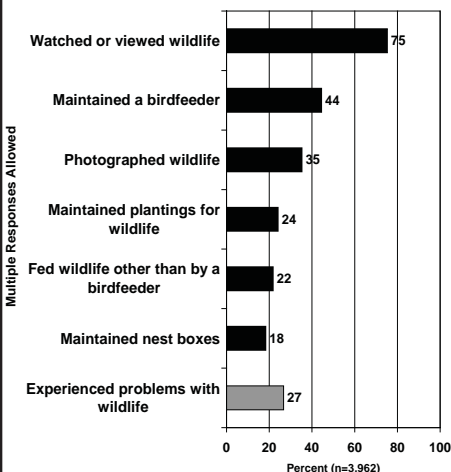
However, along with these positive interactions with wildlife come

problems. Just more than a quarter of Northeast residents (27%) experienced problems with wildlife in the year prior to the survey, ranging from 18% in Delaware to 35% in Maine (see tabulation of state-by-state data on experiencing problems below).

The top species causing problems are deer (27%), raccoon (18%), skunk (17%), and squirrel (17%). The tabulation on the following page compares each state on the top 10 species overall.



Has done (or experienced) the following in the year prior to the survey.



Have you had any problems with wildlife in the past year? (Percent giving response.)

	Yes	No	Don't know
Maine	35	63	1
Connecticut	31	68	0
Vermont	31	67	2
Maryland	30	69	1
Massachusetts	28	72	0
New Hampshire	28	72	1
Pennsylvania	27	73	0
Virginia	27	72	1
New Jersey	26	73	2
New York	25	74	1
West Virginia	25	74	0
Rhode Island	22	77	1
Delaware	18	82	1
Region	27	72	1

Residents' Experience With Wildlife

Which wildlife species have caused you problems in the past year?
 (Asked of those who experienced wildlife damage in the past year.)
 (Top 10 species.) (Percent giving response.)

	Deer	Raccoon	Skunk	Squirrel	Groundhog or Woodchuck	Bear	Fox	Coyote	Rabbit	Chipmunk
Connecticut	37	12	21	17	7	4	5	5	3	9
Delaware	24	13	23	20	13	0	10	1	18	0
Maine	16	15	29	17	14	6	6	9	0	0
Maryland	37	19	0	17	8	3	9	0	3	2
Massachusetts	22	20	16	15	11	6	2	14	4	13
New Hampshire	18	11	24	14	2	23	6	9	1	4
New Jersey	39	20	9	14	18	7	5	1	8	10
New York	36	26	10	18	9	6	2	3	7	4
Pennsylvania	15	10	29	10	16	9	4	1	11	1
Rhode Island	25	20	36	36	2	0	2	15	5	0
Vermont	8	23	21	17	10	27	8	7	2	2
Virginia	22	20	11	20	7	9	6	2	2	0
West Virginia	47	29	2	6	9	5	7	11	3	1
Region	27	18	17	17	10	8	6	5	5	4



Photo: Steve Creek, www.stevcreek.com

The Northeast Wildlife Damage Management Research and Outreach Cooperative (WDM Coop)

This study was conducted for the WDM Coop, a unique collaboration between state and federal wildlife agencies and universities in the Northeast focused on developing new approaches for addressing important wildlife management issues. In particular, the WDM Coop targets its efforts at minimizing or preventing the impacts of nuisance wildlife problems through consistent, multi-state approaches designed to help resolve stakeholders' concerns.

WDM Coop funds are administered by the Wildlife Management Institute. This study was initiated and funded by the WDM Coop. The report that was published based on these survey findings, *Public Attitudes Toward and Expectations Regarding Management of Wildlife Problems in the Northeast United States*, can be accessed at http://www.responsivemanagement.com/download/reports/NE_Nuisance_Wildlife_Report.pdf. To learn more about the WDM Coop, visit <http://wildlifecontrol.info/newdm>.



Photo: Alison Bowden / Fotolia.com

What are residents' concerns?

Who is responsible for addressing problems with wildlife?

The survey presented 15 potential issues to respondents and, for each, asked residents to rate their concern about the issue on a 0 to 10 scale, with 0 being no concern and 10 being the most concern.



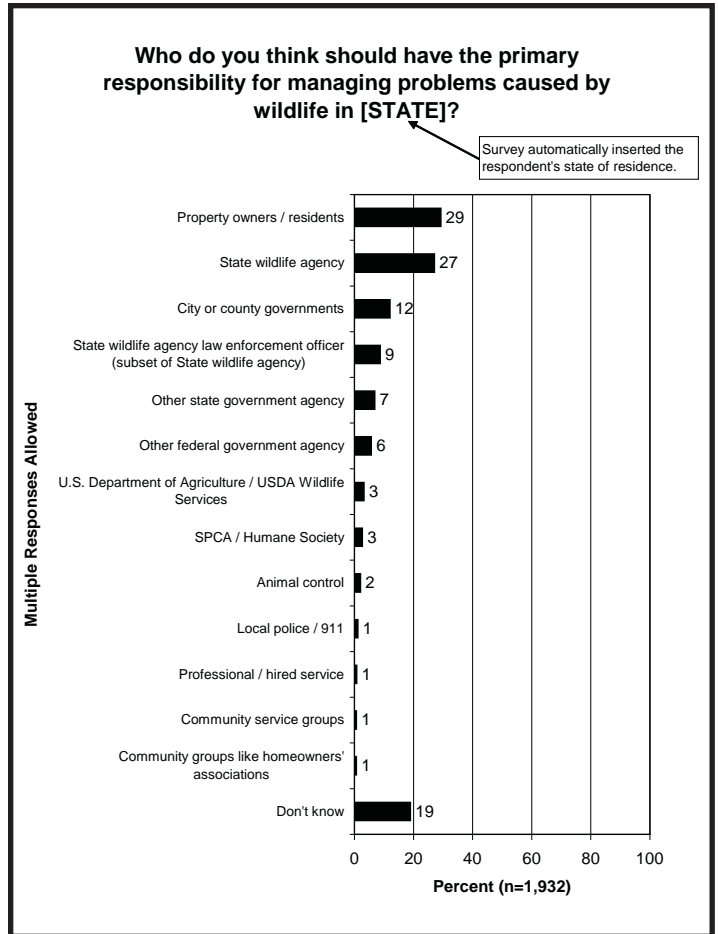
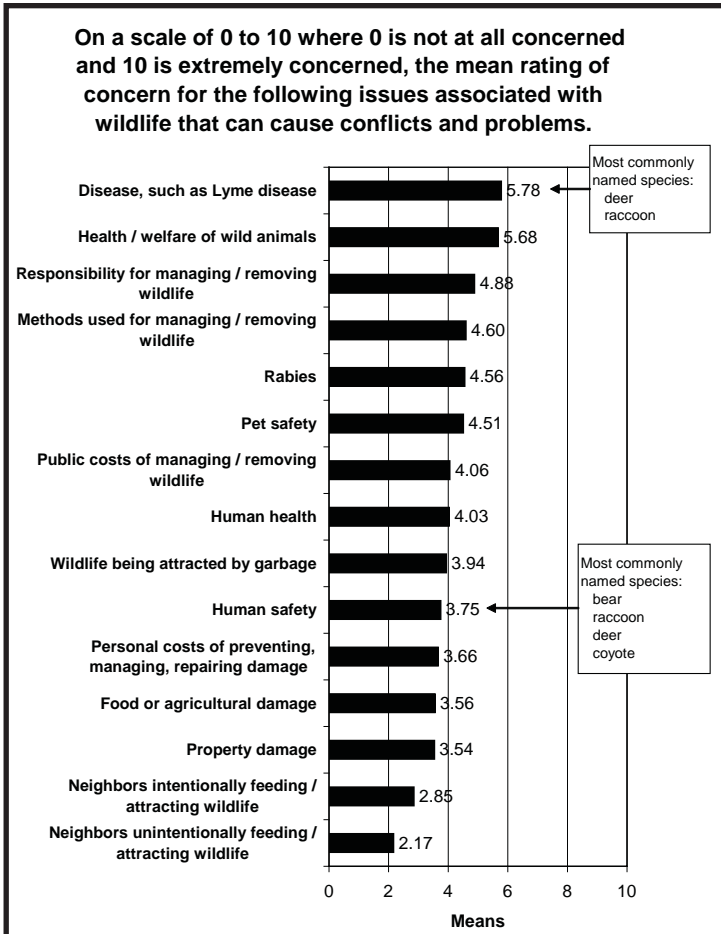
Photo: Carsten Volkwein

The top issues are disease such as Lyme disease (a mean rating of 5.78), health and welfare of wild animals (5.68), responsibility for managing or removing wildlife (4.88), methods used for managing or removing wildlife (4.60), rabies (4.56), and pet safety (4.51)—all with mean ratings of at least 4.50.

Northeast Region residents most commonly said in response to an open-ended question (meaning that no response set is given and that respondents can name anything that comes to mind) that property owners should have primary responsibility for managing problems caused by wildlife (29%), closely followed by the state wildlife agency* (27% gave an agency-related response, and 9% specifically said the agency's law enforcement officers).

Other common responses include city/county governments (12%) or a state agency other than the wildlife agency (7%).

*Although more than a quarter of the public think that the state wildlife agency should have responsibility for addressing problems that residents have with wildlife, most states allocate little to no funding for these agencies to do so.



Paying for Problems With Wildlife

Vehicle Collisions

In the past year, 4% of respondents had a vehicle collision with any type of wildlife while driving in their home state that caused damage to the vehicle or injury to its occupants. The species most commonly involved in vehicle collisions is deer (at 77% of those who had a collision, by far the top answer). Other notable species include raccoon (5%), squirrel (4%), chipmunk (4%), and birds in general (3%). (It appears that some damage may have been caused by the vehicle swerving to avoid a collision with these smaller animals rather than by an actual collision.) A follow-up question asked about out-of-pocket expenses incurred because of the collision: the median amount is \$400 across all the states in the Northeast Region.

In the past year, have you personally had a vehicle collision with any wildlife that caused damage or injury while driving on [STATE]'s roads or highways? (Please do not include collisions while you were riding as a passenger only and not driving the vehicle.)

	Has had collision while driving	Median amount spent out of pocket (i.e., excluding damage paid by insurance)	Mean amount spent out of pocket (i.e., excluding damage paid by insurance)
Connecticut	5%	\$1,000	\$1,999.93
Delaware	3%	\$300	\$417.52
Maine	6%	\$100	\$1,412.80
Maryland	3%	\$100	\$499.39
Massachusetts	1%	\$500	\$562.07
New Hampshire	4%	\$600	\$2,539.48
New Jersey	3%	\$250	\$715.43
New York	6%	\$250	\$288.24
Pennsylvania	3%	\$100	\$572.78
Rhode Island	2%	\$0	\$362.84
Vermont	4%	\$420	\$2,523.01
Virginia	9%	\$358	\$659.54
West Virginia	10%	\$500	\$1,927.36
Region	4%	\$400	\$1,456.29

The Cost of Problems With Wildlife

Most Northeast Region residents (58%) oppose having the property owner who experiences problems pay the costs of removal and/or relocation of the problem wildlife. Nonetheless, 30% support this type of requirement.

It is interesting to note that, currently, those who experience damage typically pay about \$100 to manage, repair, or replace damaged or lost property. Also, 14% of Northeast residents currently spend money to prevent damage or loss from wildlife, paying a median of \$50 (among those who spend money) on preventative measures.

In total, however, Northeast residents spend more than \$880 million per year to prevent, manage, and repair nuisance wildlife damage:

- Nuisance animals cost Northeast residents approximately \$241,313,915 per year to manage, repair, or replace damage or loss from wildlife.
- Northeast residents spend approximately \$184,159,197 per year preventing damages or loss from wildlife.

➤ Vehicle collisions* with wildlife are costing Northeast residents approximately \$454,559,502 per year in out-of-pocket expenses.

*The survey asked about vehicle collisions within their state of residence; it did not ask about out-of-state collisions.



Photo: Dennis Hamilton, Creative Commons License

Paying for Problems With Wildlife

Who pays?

This study confirms what many already thought: problems with wildlife are pervasive and fairly ubiquitous. They are happening all over, and they are also proving quite costly.

In addition to the costs of wildlife damages, there is an often overlooked burden and cost associated with the removal and/or relocation of the problem wildlife. Although sometimes not considered, this is an important issue related to nuisance wildlife management issues. Ultimately, whose responsibility is it to pay the costs of removal and/or relocation?

The survey asked respondents if they support or oppose having the property owner who experiences problems pay the costs of removal and/or relocation of the problem wildlife. The majority of Northeast Region residents (58%) oppose; meanwhile, 30% support such a requirement. While a majority oppose having the property owner pay the costs of removal and/or relocation, public opinion can be changed with additional information and outreach regarding agency funding for nuisance wildlife management issues.

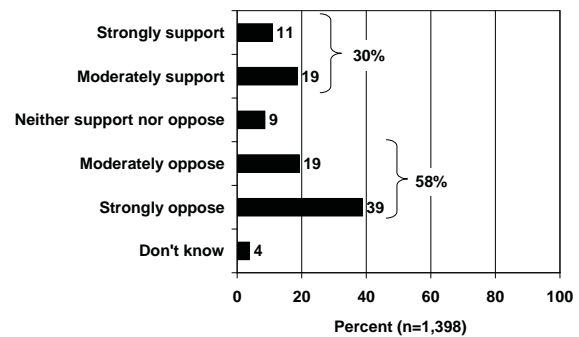
In fact, two follow-up questions were asked about support or opposition to the property owner paying for the removal/relocation. The findings show that when the respondent is informed that the state agency does not receive funds specifically for managing wildlife that cause problems, support for the property owner paying for the removal/relocation increases, with 50% supporting and 36% opposing (rounding on the graph causes the apparent discrepancy in sum).

Similarly, when the respondent is informed that most cases in which removal/relocation is required could have been prevented by the property owner, support increases again, with 69% supporting and 21% opposing.

These results suggest that the public will support having the property owner absorb at least some of the burden and costs associated with removal/relocation of problem wildlife, but they need more information on agency funding limitations and preventative measures to do so. Thus, although experiencing problems with nuisance wildlife can sometimes lead to increased negative attitudes toward the state wildlife agency, this negativity can often be counteracted with information and education.

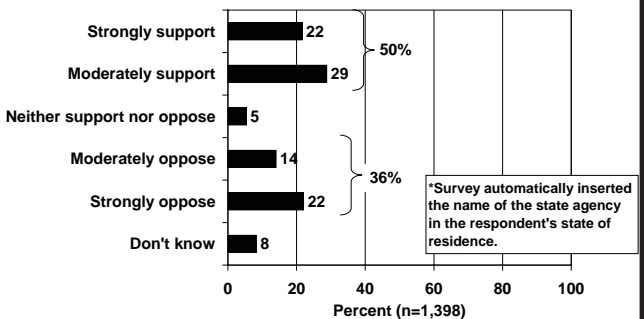
EDUCATION IS THE KEY

If a wild animal causing problems needs to be removed or relocated, do you support or oppose the property owner or resident experiencing problems with that specific animal having to pay for the removal or relocation costs? (Regional)



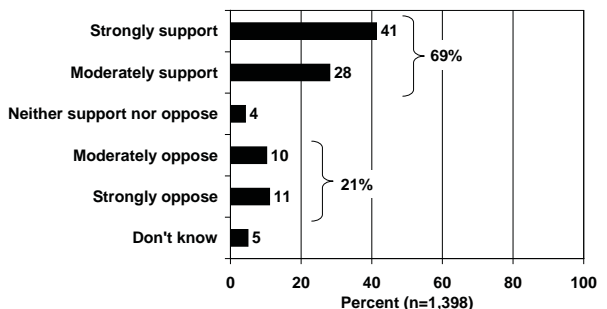
Increasing education and information increases support.

What if you knew that the [*STATE AGENCY] does not receive funds specifically for managing wildlife that cause conflicts or problems? (Would you support or oppose the property owner or resident experiencing problems with that specific animal having to pay for the removal or relocation costs?) (Regional)



Increasing education and information increases support.

What if you knew that most situations that require removal or relocation could have been prevented by the property owner or resident by doing such things as removing a birdfeeder, storing garbage properly, or putting up a fence around a garden? (Would you support or oppose the property owner or resident experiencing problems with that specific animal having to pay for the removal or relocation costs?) (Regional)



Increasing education and information increases support.

Managing Problems With Wildlife

Regarding preventative measures to help minimize wildlife problems, residents show a willingness to use animal-proof garbage containers (a



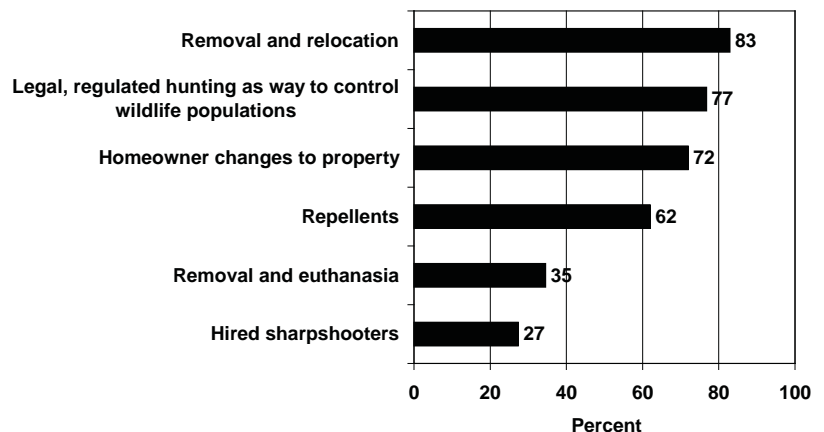
mean rating of 8.44 on a 0 to 10 scale, with 10 being the most willing) and to keep pets indoors when not supervised (7.27). This top tier is followed by a second tier consisting of keeping garbage inside (6.92), putting a fence around the yard or garden (6.70), no longer putting food out for wildlife other than birds (6.46), no longer leaving food for pets outside (6.42), and putting a fence or kennel up for pets outside (6.18). The remaining actions have mean ratings of less than 6.00 (the graph shows the full listing of potential actions).

Residents were also asked about six options for managing wildlife. Among the options presented to survey respondents, the most support is for removal and relocation of the problem wildlife (83% support); legal, regulated hunting (77%); and having the homeowner make changes to the property, such as putting up a fence or removing a birdfeeder (72%). There is still a majority in support of the use of repellents (62%), but less than a majority who support removal and euthanasia (35%) or hired sharpshooters (27%). Crosstabulations found for each option but one that those who had experienced problems were more likely to give overall support to the option, compared to those who had not experienced problems.

On a scale of 0 to 10 where 0 is not at all likely and 10 is extremely likely, the mean rating of likeliness of doing the following if they knew it would prevent or reduce problems with wildlife in their area.



Percent who strongly or moderately support the following options in general for managing wildlife that cause conflicts or problems.



Managing Problems With Wildlife

The survey specifically asked about support for or opposition to lethal methods to manage wildlife that cause conflicts or problems: 52% support (including 21% who strongly support) (rounding in the table causes the apparent discrepancy in the sum), while 34% oppose (including 20% who strongly oppose); the remainder are neutral. The tabulation below shows state-by-state results.

State by State Results: Support for or Opposition to Lethal Methods to Manage Wildlife Problems

In general, do you support or oppose lethal methods to manage wildlife that cause conflicts or problems in [STATE]? (Percent giving response.)						
	Strongly support	Moderately support	Neither support nor oppose	Moderately oppose	Strongly oppose	Don't know
	Overall support			Overall opposition		
Connecticut	20	26	9	14	24	7
	46			38		
Delaware	17	29	18	15	18	3
	46			33		
Maine	24	32	9	14	19	2
	56			33		
Maryland	25	26	15	11	18	5
	51			29		
Massachusetts	21	38	14	6	17	3
	59			23		
New Hampshire	15	31	12	15	23	4
	46			38		
New Jersey	19	29	10	19	17	1
	48			36		
New York	19	31	6	17	24	3
	50			41		
Pennsylvania	28	24	8	18	20	1
	52			38		
Rhode Island	18	30	9	17	25	2
	48			42		
Vermont	16	35	8	22	16	3
	52			38		
Virginia	28	32	16	11	13	1
	60			23		
West Virginia	29	32	5	6	25	3
	62			31		
Region	21	30	11	14	20	4
	52			34		

Implications

General Implications

➤ The data suggest that experiencing nuisance animal problems can lead to increased negative attitudes toward the state wildlife agency. Whether the state agency is responsible for managing the wildlife problems or not, the state agency suffers when wildlife problems go unresolved. Therefore, it may be that the agency needs to be proactive on this issue or suffer the blame for the problems.

Receptivity of Residents to Outreach and Agency Credibility

➤ Outreach campaigns about managing problems with wildlife start with a large interest base: a majority of residents of the Northeast enjoy having wildlife around and are interested in wildlife. Outreach can use this intrinsic interest to get people's attention.

- Problems with wildlife are pervasive and fairly ubiquitous. They are happening all over, contributing to interest and concern regarding nuisance wildlife issues. There will be plenty of residents who are interested in the subject.
- While interest is high, knowledge levels regarding the state's fish and wildlife agency (or agencies in the case of Pennsylvania) is only moderate, suggesting that residents may not know where to look for information or assistance.
- Interestingly, despite moderate knowledge levels among respondents regarding their state's fish and wildlife agency, the agency is one of the most common entities that residents think is responsible and should be responsible for addressing problems that wildlife cause. This may provide some amount of public support for securing funding to address these problems, since so many residents think the state agency should address these problems.
- The above perception is coupled with the perception that general taxes are used to address problems with wildlife—this is the most commonly named source of funds for addressing these wildlife problems, despite the fact that general taxes may not be the primary source of funding used to address problems with wildlife. This misperception should be addressed.

➤ Along with the concern about the effects that wildlife problems can have on human health and safety, there is an equally high concern about the health and welfare of the wildlife itself. This concern can be used in outreach and communications to justify why property owners should undertake efforts to prevent problems with wildlife. Protecting wildlife can be a primary reason given to encourage property owners to take measures on their own to address problems with wildlife.

➤ Ratings of agency performance in addressing problems with wildlife are much more positive than negative. This gives the agency credibility on this issue and improves state fish and wildlife agencies' outreach and communications efforts. (It is also worth noting that state fish and wildlife agencies are seen as credible sources of information about wildlife in general; anti-government feelings that are so prevalent regarding so many other agencies apparently do not apply to state fish and wildlife agencies. See *The Sportsman's Voice: Hunting and Fishing in America* by Duda, Jones, and Criscione, page 127, for more information about studies showing that agencies have high credibility.)

➤ Note that problems with wildlife are a way to introduce, in a positive way, the agency to its constituents, many of whom currently do not know which agency is most responsible for managing wildlife in the state. By being proactive about problems with wildlife, the agency becomes known to state residents and is elevated in residents' opinions.

➤ In addition to prevention, wildlife agencies might also consider providing online technical fact sheets and best management practices for property owners tackling wildlife problems. Agencies that don't already have one should consider developing a nuisance wildlife (or wildlife damage) call center to provide direct telephone-based technical assistance and guidance to residents and property owners who experience nuisance wildlife problems.

Occurrence of Problems

➤ While 39% of Northeast Region residents had a problem with wildlife in the past 5 years, only 20% had chronic problems (i.e., problems during at least 3 of the past 5 years).

➤ Ultimately, it is property owners who will and should be most responsible for addressing problems with wildlife. It is important for property owners to understand that they should take responsibility, but, that in doing so, they can use technical information provided by the state agencies.

➤ Prevention is key. Encouraging more proactive efforts by property owners before wildlife cause problems is important. The survey found that only about a third of residents who contacted their state fish and wildlife agency had attempted to manage or prevent the problems before they contacted the agency. This would seem to be a large potential target market in outreach. Additionally, the survey found willingness among residents to take actions to reduce and prevent damage.

➤ While problems caused by deer and bear are often the most publicized, there are many other types of wildlife that many residents do not readily think about as being problematic, such as raccoons and squirrels. It may be that more information is needed concerning these smaller species and the problems they may cause.

Implications

Potential Actions to Address Wildlife Problems

➤ While there is high acceptance regarding the use of animal-proof garbage containers, the survey found much less acceptance for removing birdfeeders or changing habitat conditions and landscaping on the property. Outreach may be needed to gain acceptance for the full range of potential actions that help to reduce problems with wildlife.

- Lethal methods in general are acceptable to just over half of residents of the Northeast Region; however, this leaves a substantial percentage who are opposed or undecided. Even when not the majority, opponents may be vocal about their opinions. It is important for agencies to be prepared to address the opposition, even when less than a majority oppose an action, and not be complacent because they think the majority of people support an action.
- Hunting is an interesting option: Results were mixed on its acceptance as an option for addressing problems with wildlife. It may be useful for agencies to make hunting more acceptable, such as by emphasizing that hunting is regulated and controlled.

➤ One of the top reasons for being satisfied with an agency's response to a call about problems with wildlife is simply that the response was timely. Even if little can be done, a timely response reduces residents' frustration about how an agency may be addressing a problem with wildlife. Conversely, a top dissatisfaction with the way an agency responded to a wildlife problem complaint was simply that the agency's response was not timely. A timely response, even if not otherwise wholly satisfactory, may greatly influence attitudes toward the agency.

Coordination With Other Entities in Addressing Wildlife Problems

➤ Common entities other than the state fish and wildlife agency to which people turn for problems with wildlife include hired services, local police/911, the SPCA, and city/county governments. Any cohesive strategy to address problems with wildlife needs to include coordination with these entities.

➤ Outreach materials, particularly website addresses, that provide information on addressing and preventing problems with wildlife should be provided, if possible, in retail locations where people purchase birdseed, garden supplies, and any other items that have a potential to create interactions with wildlife.

➤ Explore the possibility of working with insurance agents in providing information about problems with wildlife, as the agents should have a vested interest in preventing problems.

Funding for Addressing Wildlife Problems

➤ Although a majority of residents oppose having property owners pay for addressing problems and damage from wildlife, their opposition declines precipitously when they are informed that their state fish and wildlife agency does not generally have funds allocated for this service. Their opposition is further lessened when they learn that many problems are preventable. Outreach should emphasize that, as funding stands now, there is generally little to no funding allocated for having the agency address problems with wildlife.

➤ The issue of obtaining funding is tied to the relevance of the agency to the general population. All too often, state wildlife agencies are seen as solely hunting and fishing agencies. Problems with wildlife present an opportunity for agencies to become more relevant to the general population. Conversely, not confronting the issue may make it seem to the general population that the agency is not concerned about the issues that the general population cares about. This opportunity to become more relevant to the general population may, in turn, provide leverage for obtaining funding to address problems with wildlife. Not taking action leaves a void that another agency may step in to fill, despite other agencies being less equipped to address problems with wildlife.

➤ The study findings on estimated economic impacts of problems with wildlife is another way to leverage funding for the agency. Money spent on prevention is a good investment to avoid later costs associated with damage, and prevention can be guided and facilitated by the state agencies.



Photo credit: New Jersey Division of Fish and Wildlife



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

Utilizing our in-house, full-service, computer-assisted telephone, mail, and web-based survey center with 50 professional interviewers, we have conducted more than 1,000 telephone surveys, mail surveys, personal interviews, and focus groups, as well as numerous marketing and communication plans, needs assessments, and program evaluations.

Clients include the federal natural resource and land management agencies, most state fish and wildlife agencies, state departments of natural resources,

environmental protection agencies, state park agencies, tourism boards, most of the major conservation and sportsmen's organizations, and numerous private businesses. Responsive Management also collects attitude and opinion data for many of the nation's top universities, including Stanford University, University of Southern California, Duke University, and many others.

Responsive Management has conducted public opinion research in almost every state in the United States, as well as in Canada, Australia, the United Kingdom, France, Germany, Japan, and in several African countries.

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

Responsive Management conducts:

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

Responsive Management develops:

- Marketing plans
- Communication plans
- Outreach plans
- Program evaluations
- Needs assessments
- Policy analysis
- Public relations plans