WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

Cougar Outreach and Education in Washington State

November 2010

Prepared for the Washington Department of Fish and Wildlife by Insight Wildlife Management

Washington Department of FISH and WILDLIFE

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0.1 Executive Summary

Many people in Washington know little about cougar ecology and behavior, or what steps are necessary to avoid encounters. With the increase of human and cougar populations, and the migration of humans into cougar habitats over the last thirty years, a well-coordinated Washington Department of Fish and Wildlife (WDFW) response is needed to raise public awareness and keep both people and cougars safe.

In order to better understand and address the human dimensions of cougar management in Washington State, the WDFW initiated a research phase to identify attitudes toward cougars in Washington. Toward this end, WDFW contracted Insight Wildlife Management (IWM) to complete needs-assessment research and report recommendations in the form of an Outreach and Education Plan. This planning phase, initiated by the WDFW and managed by IWM, consisted of research conducted from January 2008 through June of 2009.

Recommendations in the form of this outreach plan and the following overarching goals were derived from the research conducted:

- reduce cougar-human encounters, conflicts, and complaints
- improve public understanding of cougar ecology, behavior, and safety tips
- achieve consistent cougar messages, responses, and policies within WDFW

Four overarching assessment measures were used to assess existing public attitudes about cougars among Washingtonians: statewide phone survey, key informant interviews, focus groups, and personnel interviews of WDFW personnel, outside agencies, and NGO's.

This plan provides guidelines for program development and supports the WDFW long-term cougar management by directing efforts toward reducing human-cougar encounters and conflicts. Minimizing human-cougar conflict in Washington State requires that the public know how to prevent human-cougar encounters. It also requires that the public understand the importance of and be motivated to adopt behaviors in the interest of human-cougar coexistence. Therefore, not only must the appropriate information be made widely available to Washington residents, but it must also be consistently delivered with appropriate messages.

Key themes emerge from the research:

- the importance of dialogue about coexistence with cougars
- the need for fair, timely, and coordinated response to cougar incidents
- people value cougars and are often misinformed about their ecology and behavior
- people want information about cougars and hold themselves responsible for reducing encounters with the animals

The needs assessment thus reveals the importance of making appropriate information widely available, correcting misinformation about cougars, and developing regional approaches. Minimizing human-cougar conflict requires knowing how to prevent encounters. It also requires that people be motivated to adopt certain behaviors in the interests of human-cougar coexistence.

Section 2 and the appendices to this plan provide the research results and interview materials. Implications are analyzed in Section 3. Section 4 presents detailed recommendations for an education campaign integrating a range of outreach strategies. Public engagement is a trademark of the plan. The three broad goals—human safety, better public understanding of cougars, and consistent WDFW response—give rise to nine goals involving specific groups and activities: agency personnel, livestock owners, hunters, rural communities, traditional media, legislators and officials, organizations, the agency's web presence, and digital social media.

To reach the stated goals, cougar information disseminated to the public must be accurate, compelling, and targeted at key audiences with different levels of knowledge about cougars, different experiences with cougars, and different values and attitudes toward cougars. A long-term approach to improved outreach about cougar ecology and behavior will facilitate wise decisions that keep both cougars and people safe.

0.2 Acknowledgments

This final report documents the outcome of a highly collaborative investigation into the current status and emerging needs of cougar outreach education in Washington State. Many people offered their time and resources along the way, and we are profoundly grateful for and dependent upon these partnerships.

Special thanks are owed to the Washington Department of Fish and Wildlife, first to Dave Ware and Donny Martorello, who provided invaluable support and guidance in this planning phase of the Cougar Outreach Project. We also want to thank other WDFW personnel: Michael O'Malley, Rich Beausoleil, Madonna Luers, Bruce Richards, Gary Koehler, Sean Carrell, Dave Nysewander, and Margaret Tudor for offering feedback, advice and resources to Insight Wildlife Management. Additionally, there are scores of Department biologists and enforcement officers not mentioned above who took time out of their busy schedules in order to assist in developing a clear picture of the human dimensions of cougar management in Washington State.

We gratefully acknowledge Responsive Management for executing the statewide phone survey and delivering results in a timely manner. In addition, we would like to thank Mark Duda, Executive Director of Responsive Management, and his staff Mary Jones and Carol Schill, for their additional insights and contributions to the telephone survey analysis portion of this report.

Professor Gene Myers of Huxley College was extremely generous with his time while crafting components of the social research. And Jim Davis also went out of his way to provide critical input on multiple project components. Finally, we would like to thank especially Greg Winter, of Cornerstone Strategies, Inc., for his expertise and assistance with the focus groups; Kate Lamson for her exceptional attention to detail in conducting the informant interviews; and, Erin Green for her thorough investigative survey analysis. The time, resources, and encouragement of all these individuals served to maintain the momentum of this planning phase and helped to deliver this final report to Washington Department of Fish and Wildlife. Thank you to all these people and many more who helped to make this planning phase of the Cougar Outreach Project a success.

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SECTION 1:

Introduction and Goals

Washington State has experienced rapid human population growth in recent years. Washington's population reached 6.6 million in 2009, an increase of 61% since 1980 . As human populations fuel rural and suburban development, more people are living near the wildland-urban interface (WUI). In Washington people are living, working, and recreating in cougar habitat that is altered and fragmented by development. As a result of the changes on the landscape and depending on the year, the Washington Department of Fish and Wildlife (WDFW) responds to a sizable number of cougar reports and complaints (see fig. 1).

Human-wildlife encounters at the WUI intensify challenges for wildlife managers who may be held responsible for cougar population dynamics or even cougar behavior—a tall order when cougar habitat is becoming reduced or fragmented. Wildlife management personnel often find themselves in a reactive pattern, responding to reports of "problem animals" and educating a sometimes misinformed public about the issues surrounding cougars.

Ideally, human residents at the WUI will have realistic expectations of a lifestyle that includes living near cougars, and they will have an accurate understanding of cougar ecology, behaviors, and appropriate safety measures. Thus, a well-coordinated response to public concern and an ongoing outreach campaign that educates the public about cougars can proactively address some of the challenges inherent to the human dimensions of cougar management.

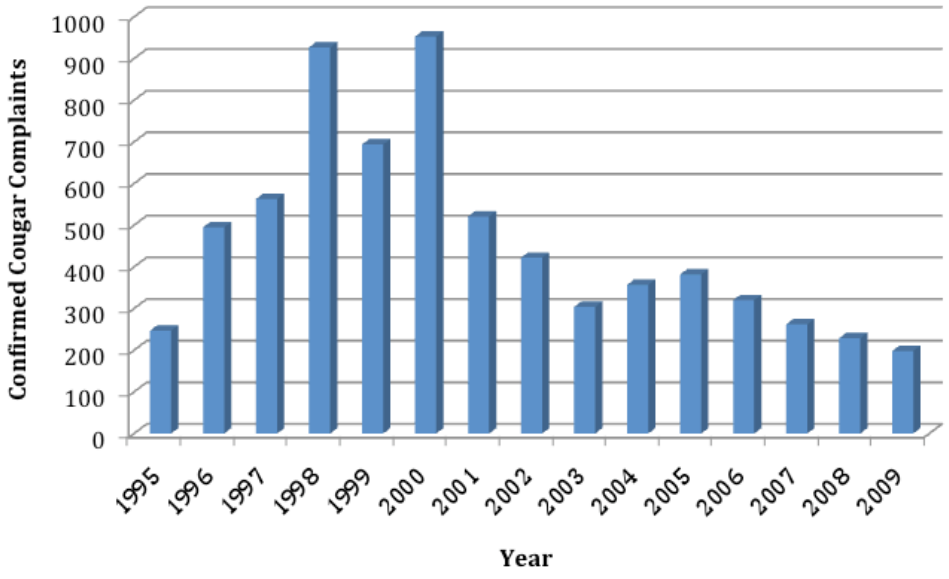

Figure 1. Confirmed cougar complaints in Washington State from 1995-2009. Courtesy of Washington Department of Fish and Wildlife.

1.1 Overarching and Targeted Goals

Three overarching goals drive this plan, and nine more specific goals were identified in order to target particular audiences and settings. Goals are summarized here and presented more fully in Section 4, along with strategies recommended to achieve them.

Overarching Goals

- Increase human safety and protection of property so that the per capita complaint rate is stable or declining.
- Increase the public's understanding of cougar ecology, behavior, safety measures and safe coexistence with cougars in Washington State.
- Strengthen communication mechanisms and develop a common language within WDFW for use in interaction with the public and media.

Targeted Goals

- Strengthen internal communications within the WDFW.
- Stabilize or reduce complaints of cougars by livestock owners in Washington's northeast target counties.
- Increase understanding among hunters of cougar ecology, behavior, gender and species identification, predator-prey dynamics, safety, and coexistence information.
- Build knowledge, partnerships, and awareness of cougars in communities and provide opportunities for community members to talk with staff, to share concerns and ask questions.
- Build trusting relationships with the media and increase their knowledge of cougar ecology, behavior, and coexistence tips to ensure accurate reporting.
- Expand and improve the current WDFW website to facilitate wider public access to information and allow for more timely response to current news and alerts.
- Increase accessibility of information to a broader audience by enhancing WDFW's use of social media tools.
- Build relationships with elected and appointed officials and increase their knowledge of cougar and management policies.
- Establish strategic cougar awareness partnerships with local, state, and federal agencies, and key organizations and businesses.

1.2 Scope of the Research

The locations of human-cougar conflict areas appear to be related in part to areas with the highest increase of human population (i.e., eastern Washington; fig. 2, 3). To better understand and address the human dimensions of cougar management in Washington State, WDFW contracted with Insight Wildlife Management (IWM) to create a Cougar Outreach and Education Plan as part of a Cougar Outreach Project.

Cougar Outreach and Education Plan goals were developed in coordination with the WDFW and further the agency's Long-term Cougar Management Plan by directing efforts toward reducing human-cougar encounters and conflicts. The outreach plan goals also aim to facilitate cougar awareness and human-cougar coexistence through accurate and widely available information about cougar behavior and ecology.

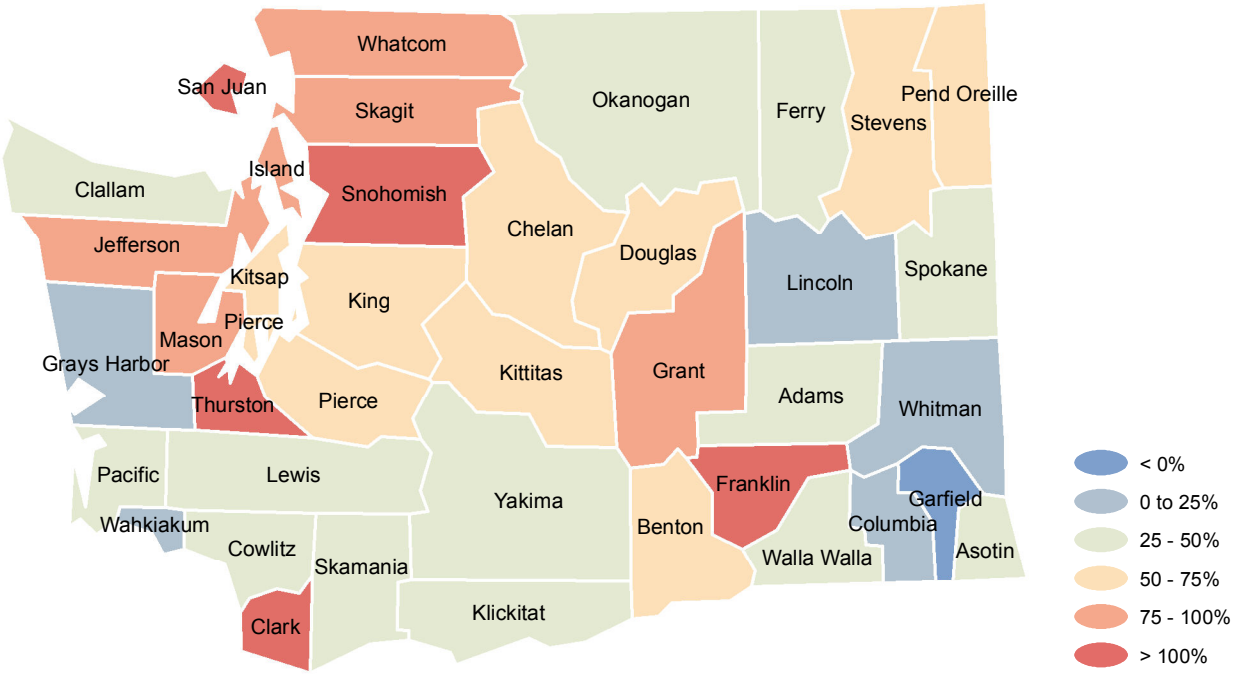

Figure 2. Human population growth rate in Washington State from 1980 to 2010 by county. Courtesy of Washington State Office of Financial Management.

The planning phase consisted of needs assessment research and educational program planning. The work described in this document was completed by IWM under contract with WDFW, and this report and its recommendations for outreach represent the culmination of the research and planning phase.

A comprehensive needs assessment is a requisite first step in outreach program development. It is important to assess the informational needs as well as existing public attitudes about cougars before an effective outreach and education program is developed. The three sources queried for this data came from the general public, agency personnel, and environmental educators.

Methods employed were:

- Telephone survey
- Key informant interviews
- Focus groups
- Researching state wildlife agencies in North America
- Researching cougar conservation non-governmental organizations
- WDFW personnel interviews

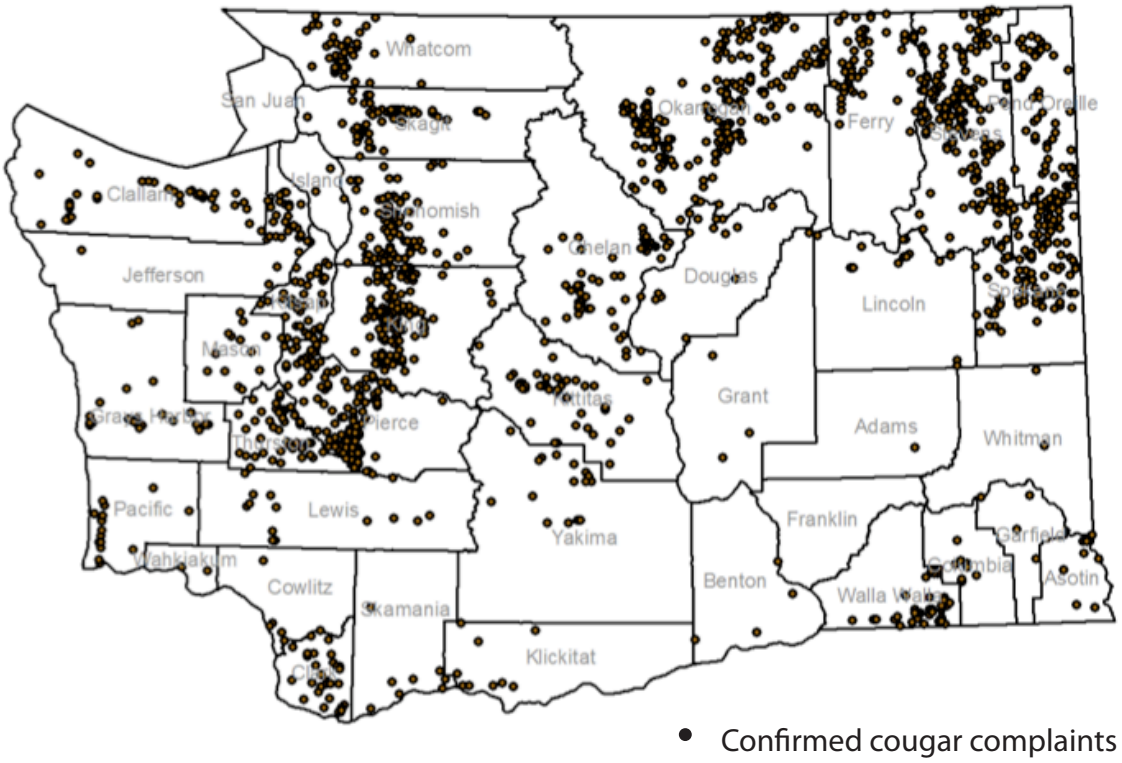

Figure 3. General distribution of repeated cougar complaints in Washington State. Courtesy of Washington Department of Fish and Wildlife.

SECTION 2:

Research Methods and Results

2.1 Statewide Telephone Survey

A statewide telephone survey was conducted in Washington State as part of the planning phase for this cougar outreach education effort. The purpose of the survey was twofold. First, to gain insight into the general public's knowledge, attitudes, and perceptions relating to the cougar (*Puma concolor*). Second, to determine the most appropriate and effective means of disseminating accurate information regarding cougar ecology, behavior, and guidelines for living in cougar country. The WDFW contracted with Responsive Management to conduct the survey in April 2008. With a response rate of approximately 50%, Responsive Management obtained a total of 1,208 completed interviews.

Section 2.1 summarizes the survey results as reported in Responsive Management's Final Report Washington State Residents' Knowledge of and Attitudes toward Cougars (Responsive Management 2008) which has helped to produce a report manageable in size and salient content. This summary focuses on the survey results that reveal public attitudes and knowledge of cougars, suggesting the most important and appropriate methods for outreach education in Washington. For a full treatment of the telephone survey results and methods see Washington State Residents' Knowledge of and Attitudes toward Cougars by Responsive Management on their website (www.responsivemanagement.com/wildlifereports.php).

2.1.1 Survey Methods

The telephone survey questions were divided into categories based on criteria such as content, tone, and common objective. The categories were as follows:

Public Attitudes and Values of Cougars

Questions were intended to investigate the degree to which people value cougars as part of Washington's native wildlife.

Perceived Risk of Cougars

Questions were intended to identify the general public's perceptions of threats to human safety, human interests and property posed by cougars.

Potential Avenues for Communication

Questions were intended to determine respondents' common and preferred means of acquiring information about cougars.

Public Awareness and Knowledge

Questions were intended to determine respondents' understanding of cougar ecology and behavior, leading to knowledge gaps among Washington residents.

2.1.2 Data Analysis

Responsive Management examined how survey responses related to behavioral, attitudinal, and demographic characteristics. That is, would it be possible to predict attitudes of an individual, or of a group, based on demographic or lifestyle variables? For instance: Are there trends in valuation of cougars depending on where a respondent gets information about cougars? Are hunters more likely than non-hunters to answer cougar ecology questions correctly? Survey responses were tested by means of z-scores for relationships to behavioral, attitudinal, and demographic characteristics as revealed by responses to other questions in the survey. A positive z score means that a particular response to a question is positively correlated to a particular characteristic.

Additional analyses via cross tabulations sought to understand subgroups within the total population of Washington State residents. Cross tabulating entailed creating groups of respondents based on specific survey responses. Cross tabulations were conducted under direct guidance by WDFW. Circumstances motivating the cross tabulations included uneven geographic distribution of several phenomena: cougar reports and complaints, human population densities, and demographic and lifestyle characteristics.

The following five cross tabulations were run on the data:

1. Cross tabulation by residents living in the Puget Sound counties (Whatcom, Skagit, Snohomish, King, Pierce, Thurston, Mason, and Kitsap) versus residents not living in the Puget Sound counties (fig. 4).

2. Cross tabulation by residents living in one of Washington State's five northeastern counties (Pend Oreille, Stevens, Ferry, Okanogan, and Chelan) versus residents not living in one of the five northeastern counties (fig. 4).

3. Cross tabulation by type of residential area (large city or urban area, suburban area, small city or town, rural area).

4. Cross tabulation by those who have hunted in Washington State in the past 12 months versus those who have not.

5. Cross tabulation by Cougar Management Unit (CMU). The nine CMUs are Coastal, Puget Sound, North Cascades, South Cascades, East Cascades North, East Cascades South, Northeastern, Blue Mountains, and Columbia Basin (fig. 5).

As a secondary look at regional data, the aforementioned z-scores included county data for those counties in which the sample was large enough. These shed light on the characteristics of those who hold certain views on cougars.

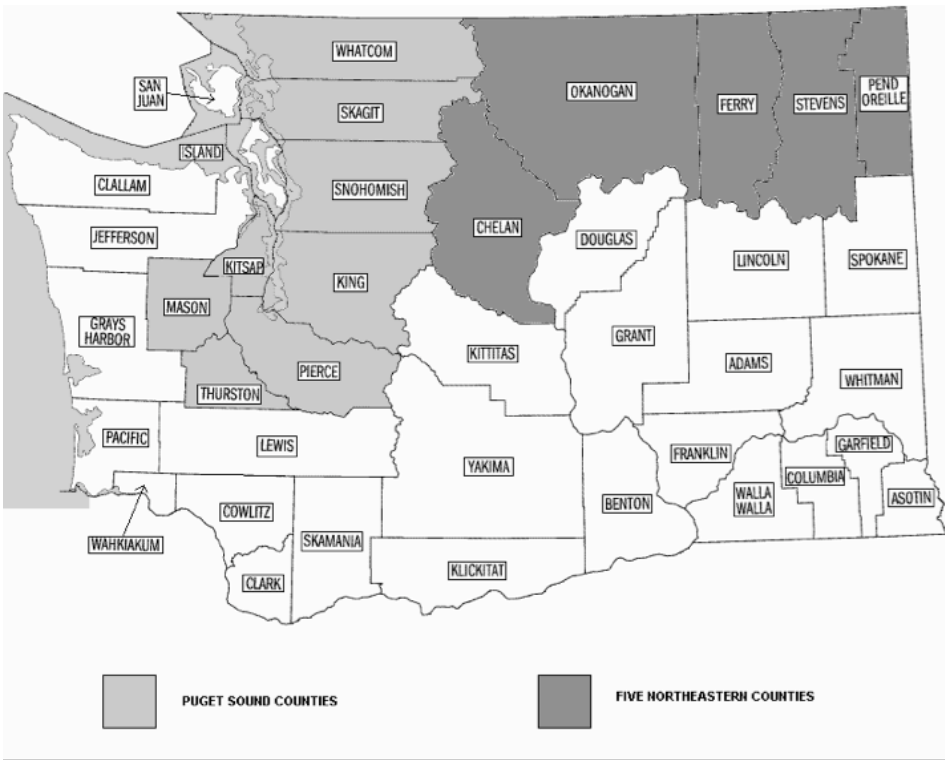

Figure 4. Regional clusters of Washington State counties for survey data cross tabulation.

Figure 5. Washington Department of Fish and Wildlife Cougar Management Units (CMUs). Courtesy of Washington Department of Fish and Widllife.

2.1.3 Key Survey Findings

2.1.3.1 Positive Valuation of Cougars among Washington Residents

The majority of survey respondents hold positive values of cougars as a wildlife species (fig. 6). For example, when analyzing the total response from all survey respondents (i.e., those who agree and strongly agree) 92% agree with the statement that cougars are an important and essential component of Washington ecosystems, and 92% agree with the statement that cougars have an inherent right to live here. Conversely, 87% of Washington residents disagree with the statement that cougars are a nuisance animal damaging rural economies, and the same percentage disagree that cougars spotted in or near towns should be killed.

2.1.3.2 Human-Cougar Coexistence

Washingtonians view humans as partially responsible for preventing conflicts with cougars. Most survey respondents indicated that people should accept responsibility for preventing conflicts with cougars. An overwhelming majority (90%) of respondents believe it is the responsibility of people to help prevent cougar conflicts when living in or near cougar habitat. A similar majority (93%) of respondents believe pet and livestock owners should take steps for securing their animals against the threat of cougar depredation. Similarly, 81% of Washington residents support regulations/bylaws that aim to prevent encounters.

Survey results show that there is a correlation to believing that people have a responsibility to minimize human-cougar conflicts and having positive opinions toward cougars. Two questions pertained to people's responsibilities regarding conflicts: one asked whether humans should be responsible for taking steps to minimize the chance of a human-cougar conflict, and another asked whether livestock and pet owners should be responsible for taking steps to secure their animals. These questions were cross tabulated against other attitudinal questions. Those who disagree that people in general and pet and livestock owners have responsibilities show a greater likelihood to have a negative opinion toward cougars, compared to those who agree that people have responsibilities. For instance, almost all respondents who disagreed that "cougars are an important and essential component of Washington ecosystems" were from the group who also disagreed that humans have a responsibility to minimize human-cougar conflicts.

In short, if one were to seek those who disagree that people should take steps to minimize human-cougar conflict, one would look to those who have generally negative opinions about cougars. Yet, no more than 7% disagree that humans have responsibilities when it comes to cougars.

2.1.3.3 Hunters vs Non-Hunters

A cross tabulation of hunters and non-hunters showed that hunters tend to be more knowledgeable and to have heard or seen more about cougars, compared to non-hunters. For instance, 58% of hunters, compared to only 29% of non-hunters, had heard a lot or a moderate amount about cougars in the past 5 years. Additionally, 55% of hunters correctly knew that the cougar population in the state had increased in the past 30 years; among non-hunters, 24% knew the correct answer.

Hunters appear to show an ambivalence regarding the threat that cougars pose to humans. While hunters are more likely than are non-hunters to agree with the statement, "Cougars are a threat to public safety in Washington State" (38% to 24%), hunters are also more likely to agree that they would take their family "to recreate in an outdoor setting where cougar sightings have been reported in the past year" (85% to 63%). Hunters are also more likely to agree, compared to non-hunters, that cougars spotted in or near town should be killed (18% to 8%).

On most of the value questions, such as whether cougars are an important and essential component of Washington ecosystems or whether cougars are part of the legacy for future generations of Washingtonians, hunters and non-hunters are quite similar.

Finally, in a basic question regarding the management of the cougar population in Washington, hunters are more likely than are non-hunters to say that cougars should be managed to decrease numbers (19% to 6%). The follow-up question regarding reasons for wanting a decrease sheds light on why some hunters want to decrease numbers of cougar—about a quarter of hunters who wanted a decrease said that it should be done to relieve pressure on game populations. Yet, 55% of hunters want to maintain the current numbers of cougar, while 16% want to increase their numbers.

2.1.3.4 Washington Residents' Knowledge of Cougars

Telephone survey results reveal some understanding among Washington residents of human-cougar interactions. The majority of respondents (68%) think that cougar encounters and attacks are unlikely events. A majority (58%) know that dawn and dusk are the hours of peak cougar activity, and another 26% identified night as the peak time of cougar activity

However, survey results also show a clear need for an information-based outreach effort in Washington State. Of the Washington residents contacted for the survey, 75% reported knowing a little or nothing at all about cougars. This self-reported result is verified by respondents' misunderstandings of cougar ecology and behavior.

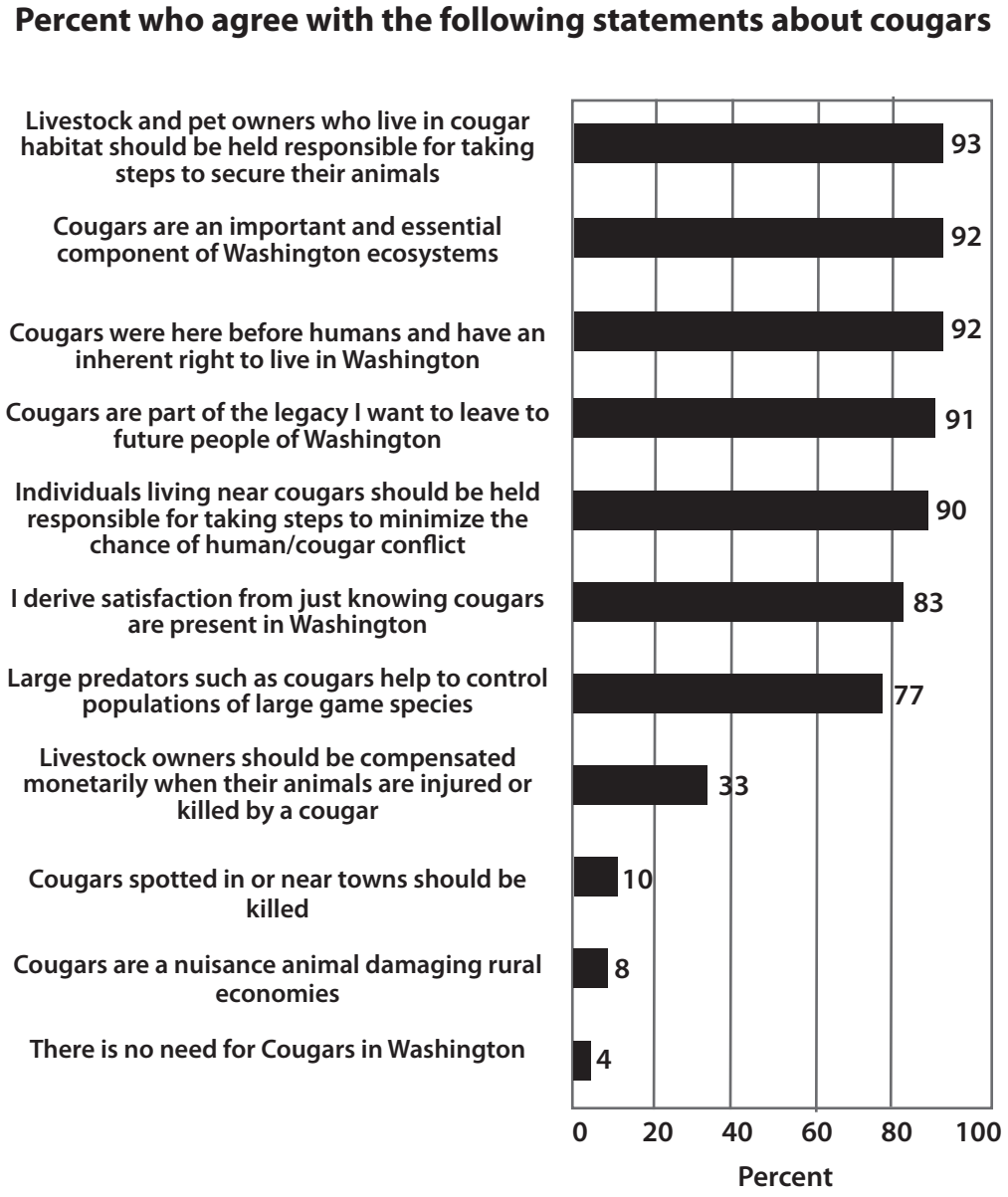

Figure 6. Percentage of all Washington State residents' surveyed who agreed with statements about cougars and human-cougar coexistence (Responsive Management, 2008).

Survey results also indicate widespread misperceptions and inflation of the risks posed by cougars. Furthermore, the public lacks knowledge regarding the best approach to mitigating real cougar risks. Following are some key gaps in knowledge highlighting needs for a comprehensive outreach and education program.

Misperceptions and knowledge gaps among survey respondents

- Misperceptions regarding cougar ecology and population:
  - 90% did not know the number of cougars in Washington State.

    The state's cougar population is about 1,900 to 2,100 resident animals.

  - 73% did not know the most likely reason a cougar would attack, most commonly saying the cougar is most likely to attack when surprised.

    Response to moving prey is the most likely reason for a cougar to attack.

  - 31% believe cougars mostly prey on small mammals.

    Deer are the cougar's main prey in Washington.

  - Only 30% believe 3 to 5 cougars occupy 100 square miles.

    Density in Washington is estimated at one adult cougar per 20 square miles of habitat, or one male and one female in about 50 square miles of habitat.

- Misperceptions related to risks associated with cougars:
  - 98% of respondents did not know when Washington last had a cougar-related fatality. This includes 48% "don't know," 47% who gave an incorrect year, and 3% said "never."

    The last cougar-related human fatality in Washington was in 1924.

  - 66% of respondents do not know what to do if attacked.

    People should fight back if attacked.

  - 57% overestimate cougar-related injuries in the lower 48 states, and another 36% said they did not know; only 6% knew the correct answer.

    It is estimated that less than 1 person per year is injured by a cougar in the lower 48 states. In all of North America, there were 117 documented attacks on humans from 1890 to 2005.

  - 27% believe cougars are a threat to public safety in Washington.

    Being attacked by a cougar in Washington state is extremely rare. Since 1900 there have been 18 documented human-cougar incidents in Washington state involving 12 adults and 6 children; resulting in the death of 1 person in 1924.

  - Of the 8% who want cougar populations to be reduced, just more than half cite public safety as the reason cougar populations should be managed for reduction.

2.1.4 Regional Data Analyses

2.1.4.1 Negative Attitudes Toward Cougars

The data offer a picture of respondents from different parts of Washington State. Negative values and greater perceived threat of injury from cougars correlate with several demographic variables. To generalize, those who hold a more negative attitude about cougars include older people who live in small or rural areas in one of the five northeast counties (Chelan, Okanogan, Ferry, Stevens, or Pend Oreille County), and has been a Washington resident longer than the mean respondent.

2.1.4.2 Regional Findings – Washington Counties with Negative Attitudes Toward Cougars

The nonparametric analysis that was conducted for this study included the county of residence as one of the variables examined. The nonparametric analysis finds correlations between a response on a question and responses on other questions, allowing for further information about where residents with negative values regarding cougars might live. Some counties had a sample size that was too small for data analysis on the county level, including all but five counties east of the Cascades (although those five counties were correlated with negative attitudes toward cougars).

The analysis suggests that residents of the following counties have a higher likelihood of having a positive attitude toward cougars, compared to those not in these counties: Clallam, King, Pierce, and Thurston.

Conversely, the nonparametric analysis suggests that residents of the following counties have a higher likelihood of having a negative attitude toward cougars, compared to those not in these counties: Benton, Cowlitz, Franklin, Grays Harbor, Mason, Stevens, Spokane, and Yakima.

Meanwhile, five counties had a high enough sample for the nonparametric analysis but were neutral in the findings. In other words, no findings, positive or negative, emerged for these counties: Clark, Kitsap, Skagit, Snohomish, and Whatcom.

2.1.4.3 Regional Findings – Puget Sound Counties

Comparing respondents from the Puget Sound counties to the rest of Washington State reveals some general differences. Respondents from the Puget Sound area are more likely to live in urban and suburban areas, have completed more formal education, and have a greater household income.

Respondents in one of the eight Puget Sound counties (King, Kitsap, Mason, Pierce, Skagit, Snohomish, Thurston, and Whatcom), compared to those who do not reside in one

of those counties, are more likely to want to see an increase in the cougar population, and they are less likely to view cougars as a threat. Additionally, those from the Puget Sound are more likely to hold positive values toward cougars, based on the value questions in the survey. In particular, Puget Sound residents had a higher percentage (compared to non-Puget Sound residents) saying that cougars are an important and essential component of Washington ecosystems, that cougars are part of the legacy they want to leave to future people of the state, that cougars have an inherent right to live in Washington, and that they derive satisfaction from just knowing that cougars are present in Washington.

2.1.4.4 Regional Findings – Variation within the Puget Sound Counties (CMU cross tabulation)

Cross tabulating survey data by CMU allows us to isolate the dense human population centers of Puget Sound (the western part of those counties) from the more rural parts. Specifically, the Puget Sound CMU and the North Cascades CMU are of interest. Therefore, differences in survey responses between these two CMUs were tested for statistical significance.

The data analyses suggest, based on a comparison of survey cross tabulations of the two CMUs, that North Cascades CMU residents differ from their more urban Puget Sound CMU neighbors on three questions of note. Specifically, North Cascades CMU residents are more likely to say that they have heard "a lot" (the top of the scale for the question) about cougars in the past five years, and they are more knowledgeable (North Cascades CMU residents are more likely to know that cougars most commonly prey upon deer, and they are more likely to know approximately when the last cougar-related fatality in Washington occurred).

On the other hand, many of the differences on the value questions were not statistically significant (these questions include whether cougars are an important and essential component of Washington ecosystems, whether cougars are part of the legacy they want to leave for the future, whether cougars have an inherent right to live in Washington, whether they derive satisfaction just knowing cougars exist in Washington). Likewise, the questions regarding whether cougars are a threat to public safety or a threat to livestock had no statistically significant differences between the results for the North Cascades CMU and the Puget Sound CMU.

2.1.4.5 Regional Findings—Northeastern Counties

Recall the grouping of Chelan, Okanogan, Ferry, Stevens, and Pend Oreille counties for the purposes of cross tabulation with the rest of Washington State. These counties were chosen because they all participate in a WDFW pilot cougar hunting program with the aide of dogs. It was speculated that they may represent a human population with distinct perspectives of cougars.

Generally, people living in the rural northeast counties are older than the rest of Washington State. These respondents are also more likely to engage with wildlife through hunting, fishing, and wildlife watching. When compared to the rest of Washington State, residents of the northeast counties are more knowledgeable about cougar population status, behavior, and biology. They report learning about cougars mostly from friends and family but also place trust in print media.

Respondents from the northeastern counties assign a higher degree of risk to living near cougar habitat than do respondents in the rest of the state. Residents of the northeastern counties also generally prioritize human interests over those of wildlife and do not support regulating human behavior in the interests of reducing human-cougar conflict.

2.1.4.6 Regional Findings—Variation within the Northeastern Counties (CMU cross tabulation)

The five northeast counties that were grouped for cross tabulation fall into one of two CMU's: the Northeastern CMU with Spokane, Pend Oreille, Stevens, Ferry and Eastern Okanogan counties; and the East Cascades North CMU with western Okanogan, Chelan, and Kittitas counties. Cross tabulation by CMU revealed insignificant difference among the five northeast hound-hunting counties. However, survey respondents from the Northeastern CMU expressed higher perceived threat posed by cougars.

2.1.5 Variation along the Urban-Rural Interface

The aforementioned z-score analysis found some differences between urban and rural residents. Specifically, the z-score analysis looked at residents of large cities/urban areas and suburban areas versus residents of small cities/towns and rural areas. The urban/suburban residents tend to be more educated and have higher incomes, compared to their small town/rural counterparts. Urban/suburban residents are more likely to have received information about cougars from television. They are more likely to perceive cougars as a threat to livestock, compared to small town/rural residents, but they are also more likely to agree that individuals living near cougars should be held responsible for taking steps to minimize the chance of human/cougar conflict.

Small city/town and rural residents, as a group, have a better understanding of the predatory nature of cougars as a reason that they would attack a human. They are more likely, compared to their urban/suburban counterparts, to agree that cougars in or near towns should be killed (although neither group had a high percentage saying that cougars should be killed in this situation). Small city/town and rural residents are more likely than their urban counterparts to hear or learn about cougars from family or friends or from personal experience.

2.2 Focus Groups

2.2.1 Focus Group Methods

Four focus groups were conducted by IWM in Washington State between March 27 and April 11, 2009. Cornerstone Strategies, Inc. and WildFutures provided consulting services for the focus group research. The four separate recruitment regions for the four respective focus groups are as follows: eastern King County, Spokane Valley and surrounding areas, the area encompassed by a ten-mile radius around Colville, and the Methow Valley. These four areas were selected as a sampling across different regions considered to be human-cougar hotspots.

Participants were led through a series of discussion topics. Facilitators also used handouts to obtain direct feedback from participants. These handouts served as data sheets, collecting quantitative data. Questions to participants and resulting discussions provided qualitative data. Focus groups lasted 90 minutes and were audio recorded and transcribed verbatim. See Appendix 1a-g for the Focus Group Discussion Guides and the handouts used during the sessions.

Focus group research is highly qualitative and uses a non-random, relatively small sample. Therefore, unlike the telephone survey, the results from the focus groups cannot be generalized across Washington State. It is important to note that focus group results do not seek to be statistically significant but ultimately allow for more fine-tuned educational and messaging approaches. Focus groups are beneficial because they provide information about participants' life experiences and their resulting viewpoints and values associated with a topic. The benefits of focus group research include gaining insights into people's shared understandings of everyday life and the ways in which individuals are influenced by others in a group situation. Focus group interviewing is particularly suited for obtaining several perspectives about the same topic. It is also important to acknowledge limitations to this research due to recruitment bias. For example, participants must be motivated and willing to attend focus group discussions, and a spectrum of public attitudes regarding cougars, wildlife, and management policies can impact the nature of the focus group sample.

Focus group recruitment targeted residents from suburban and rural fringe areas of the WUI, where human-cougar conflict is historically high. County Assessor data was used for each focus group location to create a random mailing list of 200 permanent residences per focus group. For each focus group location, 200 recruitment invitations were mailed. These invitations included a letter of explanation on WDFW letterhead and a return postcard to RSVP for participation. From these 200 solicitations, we expected to recruit 8 to 12 participants per focus group, the optimal range for focus group size (Krueger and Casey 2000). The recruitment invitations requested only one participant per household. Recruitment effort yielded the following numbers of participants:

1. **Issaquah, WA: 27 March 2009, 8 participants**
2. **Spokane, WA: 3 April 2009, 11 participants**
3. **Colville, WA: 4 April 2009, 14 participants**
4. **Winthrop, WA: 11 April 2009, 9 participants**

Focus group objectives were designed to answer two lines of inquiry. First, focus groups sought to determine the participants' attitudes, beliefs, and behaviors associated with a series of cougar-related prevention behaviors. The behaviors presented are among those commonly suggested by wildlife agencies and conservation NGOs to prevent encounters with cougars when living in the WUI. Figure 7 provides the list of behaviors used by IWM for these focus groups. Specifically, facilitators sought to identify whether participants were currently taking cougar-related prevention measures, why they were or were not motivated to do so, and whether the participants thought the prevention measures would actually prevent cougar encounters. The facilitators also asked questions to identify to what degree focus group participants felt responsible for preventing human-cougar conflict.

The second line of inquiry addressed by the focus groups involved message testing. Focus group participants were led through a series of interactive exercises involving handouts to complete, several with sample messages and one with images (see Appendix 1a-c). The handouts and the guided discussion were designed to identify ways to promote integration of cougar encounter prevention into everyday behavior of the public. This was accomplished by presenting specific messages and photographs that may help motivate prevention behaviors and asking participants to identify which were most compelling. In addition, focus groups were conducted to probe participants' preferences for and levels of trust in different messengers, such as WDFW biologists and enforcement officers, local authorities, and NGO or other third party experts.

Following the first three focus groups, IWM modified the focus group objectives and approach to be used for the fourth and final focus group in Winthrop, WA. By convention, focus group efforts often cease or change direction when facilitators feel they have reached a saturation point; that is, when results are consistent from one focus group to the next. The changes IWM implemented were based on the results of the Issaquah, Spokane, and Colville focus groups, where the participants were consistently supportive of cougar populations on the landscape. Also, a majority of participants attending the first three focus groups were unreceptive to the prevention behaviors because they did not deem those behaviors to be necessary based on their experiences living in cougar country to date.

In response to these generally consistent reactions from participants, IWM abandoned portions of the focus group script that focused on prevention behaviors and used the last focus group as an opportunity to explore more fully the public acceptance of different examples of large carnivore educational messaging materials and approaches. It is important to reiterate that focus group data cannot be used to generalize across certain populations, as the phone survey data can. Focus group results do not reveal that carnivore support exists among Washington residents (regardless of whether we may think that support exists). But part of the value of qualitative data (as from focus groups) is that they can point to some of the social mechanisms at work within a group who may live in or adjacent to cougar habitat. Thus modification of focus group scope and methods does not compromise data as it would in a quantitative scientific inquiry. Appendix 1c contains facilitation materials for the modified, final focus group.

2.2.2 Key Findings from Focus Groups

Analysis compiled data from focus group handouts, audio recordings, and transcripts. From these data, IWM identified themes in focus group discussions that are salient to developing cougar outreach materials and strategies.

2.2.2.1 Human-Cougar Coexistence Themes across Four Focus Groups

- Participants support having cougar populations in Washington.
- Residents living in or near cougar habitat should be responsible for preventing cougar encounters.
- WDFW is responsible for controlling cougar populations and for responding to cougars in residential areas.
- The general level of concern held by a community over a cougar incident depends on its proximity to town. Cougars are thought to belong outside of town and are generally not tolerated in town.
- People are less tolerant of cougars when children are threatened.
- Media often play a role in coloring cougar encounters/sightings/incidents negatively.
- Hound hunting is seen as important in mitigating the public safety threat posed by cougars.
- The hound hunting ban is thought to have caused a spike in cougar populations and to have resulted in reducing cougars' fear of humans.

2.2.2.2 Cougar Encounter Prevention Behaviors

Focus group participants in Issaquah, Spokane, and Colville discussed their personal relationships to seven specific behaviors believed to prevent cougar encounters (see fig. 7). Participants were asked to complete a form listing each behavior prevention action. For each action they placed a check in the corresponding box if they were currently undertaking this action, willing to undertake this action if they were not currently, or not willing to take the action (see Appendix 1d for the form and Table 1 for the percentage responses for each action in the three focus groups). While the data cannot be generalized across Washington State because of the relatively small sample size of the focus groups, they give us clues to the public's current behaviors and also to the relative ease with which WUI residents may adopt each behavior.

Generally, focus group participants did not perceive a significant public safety threat from cougars, and therefore did not think it important to adopt prevention measures. A common response was that if the threat posed by cougars increased, they would be motivated to adopt more of the preventive behaviors.

Actions to Reduce Cougar Encounters- Focus Group Handout

- **Don't feed wildlife:** Feeding deer and raccoons attracts cougars and can increase the likelihood of an encounter.
- **Bring pet food inside:** Leaving pet food outside attracts raccoons, opossums, coyotes and other wildlife that lures cougars who might otherwise move on.
- **Keep pets inside from dusk until dawn:** Don't allow pets to roam outside during dusk, dawn and at night. Bring them inside or secure them in a kennel with a secure top. Loose pets are easy prey.
- **Landscape for safety:**
  - Remove plants that attract wildlife (deer, raccoons, etc). Cougars are attracted to deer who may gather in your yard or on your property.
  - Prune dense vegetation near your house and buildings where cougars can hide. Cougars avoid open areas without brush to serve as cover.
- **Keep outdoor areas well lit:** Adding motion detecting lighting to areas around your home can deter cougars who prefer to move about undetected. Light walkways where people frequent.
- **Provide sturdy, secure covered shelters to protect hobby livestock at night:** Secure live stock in enclosed barns and sheds at night.
- **Keep children safe in cougar country:** Because of their small size children seem to be more vulnerable to cougars. Talk to your kids about what to do if they see a cougar. Supervise children – do not leave them unattended.

Figure 7. Cougar encounter prevention behaviors proposed to focus group participants. This list was distributed and discussed in terms of each behavior's barriers and motivators.

	Does not apply to me				I do this now				I'm willing				I'm not willing			
Behavior	Issaquah	Spokane	Colville	All Groups	Issaquah	Spokane	Colville	All Groups	Issaquah	Spokane	Colville	All Groups	Issaquah	Spokane	Colville	All Groups
Don't Feed Wildlife	25%	18%	36%	27%	75%	64%	43%	58%	0%	0%	7%	3%	0%	18%	14%	12%
Bring pet food inside	38%	27%	43%	36%	50%	55%	36%	45%	13%	18%	7%	12%	0%	0%	14%	6%
Keep pets inside from dusk until dawn	13%	18%	36%	24%	50%	36%	43%	42%	0%	9%	14%	9%	38%	36%	7%	24%
Remove plants that attract wildlife	13%	9%	29%	18%	25%	27%	14%	21%	13%	27%	7%	15%	50%	36%	50%	45%
Prune dense vegetation near your house	25%	27%	43%	33%	13%	36%	43%	33%	50%	18%	7%	21%	13%	18%	7%	12%
Keep outdoor areas well lit	13%	0%	14%	9%	63%	36%	64%	55%	38%	18%	7%	18%	0%	36%	14%	18%
Provide shelters to protect hobby livestock at night	88%	55%	71%	70%	0%	18%	14%	12%	0%	9%	7%	6%	13%	18%	7%	12%
Keep children safe in cougar country	75%	18%	50%	45%	25%	55%	57%	48%	0%	27%	0%	9%	0%	0%	0%	0%

Table 1. Focus group participants' responses to cougar encounter prevention actions. See fig. 7 above for complete text of behaviors. Sample sizes for focus groups: Issaquah, n=8; Spokane, n=11; Colville, n=14.

The data results in Table 1 and the discussion with focus group participants on prevention behaviors revealed the following themes:

- Focus group participants believe those with children may be more likely to take precautionary actions.
- Landscaping to avoid deer traffic is unclear to many.
- Feeding deer is common and enjoyed by many people who live in cougar habitat.
- Outdoor lighting has a negative impact on some people's aesthetic ideals of living in a non-urban area. People like the dark and the night sky and some referred to floodlights as light pollution.

In all four focus groups it was common to hear of participants' affinity for feeding wildlife. Seeing wildlife, in particular deer, is one of the reasons commonly cited for residing in a non-urban area. Some participants perceive the deer to need human assistance in the form of feeding, especially in winter. These views of feeding surfaced in all four focus groups but were strongest in Colville.

2.2.2.3 Message and Image Testing

Focus group facilitators asked participants in the first three focus groups to evaluate twelve images relating to cougars and cougar encounter prevention measures (see Appendix 1g for images). Participants evaluated and reported which images might best accompany outreach materials intended to reduce human-cougar encounters and conflicts. Although the participants' evaluation methods proved to be subjective and problematic for comparison and compilation, discernible themes emerged from the data. For example, a majority of the participants disliked the images portraying cougars as threatening and stated that the images would perpetuate irrational perceptions of the danger associated with cougars. In contrast, a second common sentiment expressed by focus group participants valued images portraying the threat posed by cougars, stating that these images would motivate the public to take responsibility in preventing cougar encounters in the WUI.

Participants in the fourth and final focus group, in Winthrop, performed a comparison evaluation of four examples of existing carnivore brochures. The four outreach materials consisted of a cougar brochure from Montana, WDFW's Living with Wildlife - Cougars brochure, a Bear Safe brochure, and a bear fact sheet distributed by the Grizzly Bear Outreach Project. Below are several key points made by the participants during this discussion.

- Participants did not like what they detected as fear-promoting tones in the cougar brochures and advised that cougar brochures need to communicate prevention measures while fostering cougar appreciation.
- Participants indicated that they want information about local cougar population trends and other statistics.

Table 2 shows messages tested in the focus groups. Participants were asked to circle the most compelling messages. The results from three focus groups revealed some distinctions between different focus group locations, see also fig. 8 and 9. Some highlights of the messaging testing results include:

- Participants across focus groups consistently found messages 1 & 3 least compelling.
- Messages 2 & 4 were compelling to Issaquah participants, but not to Colville participants.
- Participants in the Issaquah and Colville focus groups differed consistently, with opposite preferences.
- Message 5 was found compelling by participants in Spokane, Colville, and Winthrop, but not Issaquah.
- A majority of participants in Issaquah disliked messages that mentioned cougar danger; they appeared least ready to accept that cougars posed a threat to human interests.

	Message	3 Focus Groups		Issaquah (n=8)		Spokane (n=11)		Colville (n=14)	
		like	don't like	like	don't like	like	don't like	like	don't like
1	The best way to avoid conflict with cougars is to not attract them.	12%	12%	13%	0%	9%	9%	14%	21%
2	Feeding wildlife places wildlife at risk and puts them on a collision course with humans. Help keep wildlife from coming into conflict with people. When that happens, everyone loses.	18%	12%	38%	0%	18%	0%	7%	29%
3	While you may be willing to tolerate the presence of wildlife at your home, your neighbors may not. Their call to a government agency may result in the death of a cougar.	6%	18%	0%	13%	9%	18%	7%	21%
4	Young animals that learn to rely on food from human sources may never develop normal foraging behavior. Feeding wildlife causes problems for wild populations including disease and starvation.	27%	18%	50%	13%	27%	0%	14%	36%
5	Cougars prefer deer, but if allowed, they also eat pets and livestock. In extremely rare cases, even people have been attacked by cougars.	42%	12%	0%	38%	64%	0%	50%	7%
6	By taking reasonable actions around the home we can keep our children, pets, and property safe, while protecting the wildlife we share the land with.	42%	0%	63%	0%	27%	0%	43%	0%
7	Be a good neighbor. Protect both humans and the wild residents of your community.	33%	0%	38%	0%	27%	0%	36%	0%
8	Keep children safe in cougar country. Supervise your kids when they play outside and teach them how to prevent and react to cougar encounters.	33%	3%	25%	0%	27%	9%	43%	0%
9	By being responsible stewards, we can ensure that cougars continue to be an important part of our natural landscapes and wilderness heritage.	33%	6%	63%	0%	0%	18%	43%	0%
10	We owe it to our children and grandchildren to maintain the natural health of this region by being good stewards of the land and our wildlife neighbors.	52%	3%	63%	13%	64%	0%	36%	0%

Table 2. Focus Group participants' responses to cougar encounter prevention messages. Sample sizes for focus groups: Issaquah, n=8; Spokane, n=11; Colville, n=14.

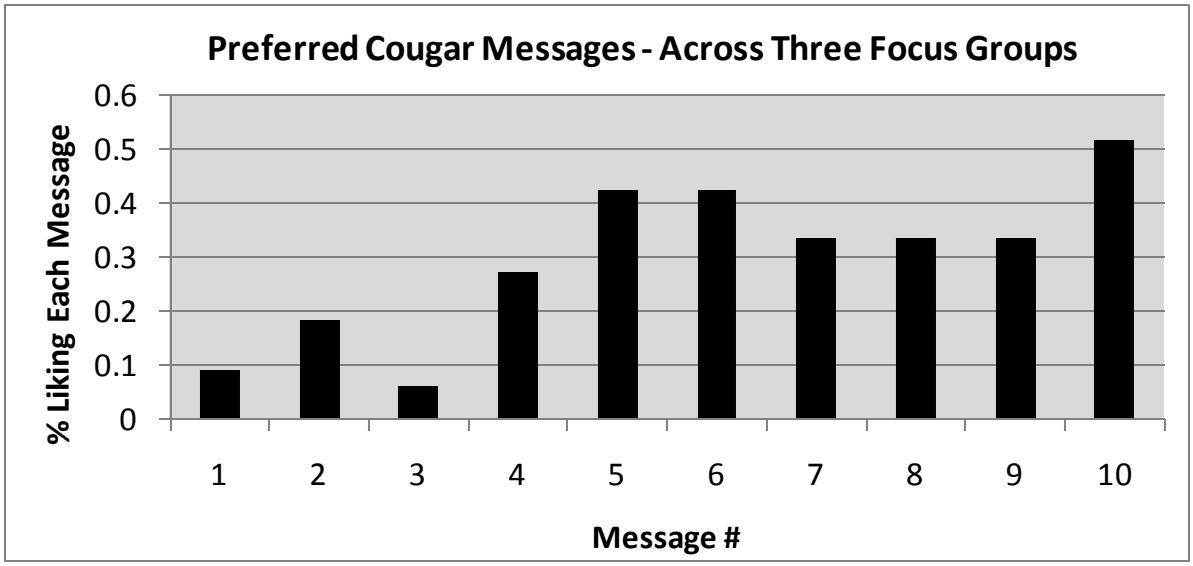

Figure 8. Preferred message testing results for Issaquah, Spokane, and Colville focus groups combined. For complete text of messages, see fig. 7. Conducted for WDFW by Insight Wildlife Management, 2009.

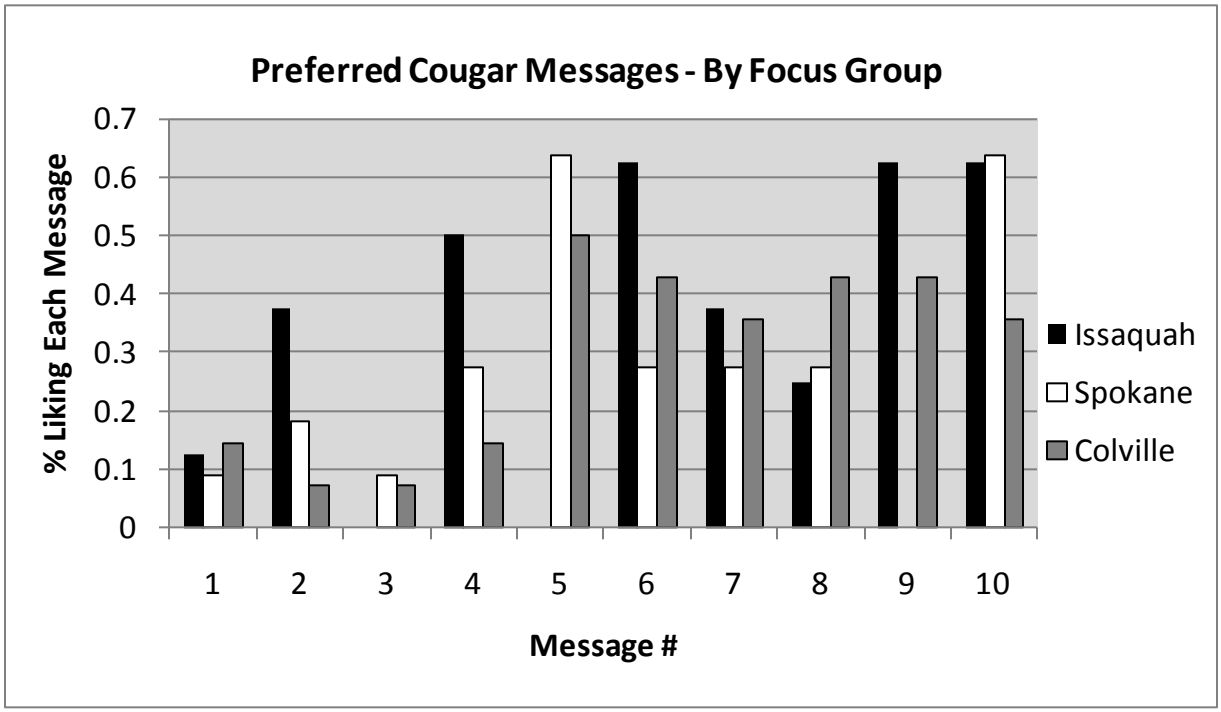

Figure 9. Preferred messages testing results for Issaquah, Spokane, and Colville focus groups compared. For complete text of messages, see fig. 7. Conducted for WDFW by Insight Wildlife Management, 2009.

2.3 Key Informant Interviews

Adapted from *Key Informant Interviews Summary and Conclusions* by Kate Lamson (also see Appendices 2a-d)

2.3.1 Key Informant Interview Methods

Key informant interviews help to uncover central themes. The interviews allow the researcher to see the interviewees' "worldview" by allowing respondents to use their own words to explain their world (Rubin and Rubin 1995). Key informants are people who are strategically selected to provide insight into a wide array of views and beliefs held by members of the community as well as the collectively shared understandings of their community (Rubin and Rubin 1995). Insight Wildlife Management (IWM) selected key informants based on high social exposure whereby they regularly encounter local community members. Key informants included elected officials, wildlife agency employees, local industry leaders, educators, and local business owners. Those who were interviewed in this study included mayors, county commissioners, representatives of the Cattlemen's Association of Washington, hunting outfitters, general/feed store owners, state patrol officers, members of the recreation organization Backcountry Horsemen Association of Washington, chamber of commerce presidents, teachers, and newspaper media representatives.

Key informant interviews conducted by IWM identified discourse and dialogue about cougar issues and uncovered themes regarding the experiences Washington residents have had with cougars. Such qualitative data reveal clues about what shapes public perceptions; what people know about cougars; and how they feel about cougars, cougar management, and their personal safety. This type of qualitative data is valuable for guiding outreach and education development. Subsequent key informant contacts can also serve to monitor changes in cougar-related dialogue, thereby tracking impact of the program activities on these local dialogues by region.

The interviews took place from October 2008 through March 2009. Nineteen people were interviewed. Interviews varied in length from 15 minutes to 2 hours. The interview question set consisted of twenty-five total topics. However, seven main questions (each with at least two sub-questions) were designated as priority and all participants were usually asked all of these.

The nineteen key informant interviews were conducted in areas where cougar-human conflicts are prevalent. The interviews were distributed geographically within three regions in order to identify potential regional differences.

Regions	Counties included	Number of interviews
Northeastern counties (NE)	Chelan, Okanogan, Stevens, Ferry, and Pend Oreille	7
I-5 corridor counties (I-5)	Whatcom, Skagit, Snohomish, King, Pierce, and Klickitat	8
Olympic Peninsula counties (OP)	Kitsap and Jefferson	4

Table 3. Number of key informant interviews by region and county. Conducted for WDFW by Insight Wildlife Management, 2008-2009.

Key informant interviews provide a more detailed and in-depth understanding of people's awareness of and attitudes toward cougars compared to the Responsive Management survey. However, it is important to note that key informant interviews use a non-random, relatively small sample. Therefore the results cannot be generalized across Washington State, as the telephone survey can be. Key informant interview results do not seek to be statistically significant, but allow for more fine-tuned educational approaches. The following summary is a compilation of the nineteen interviews.

2.3.2 Findings – Awareness and Knowledge about Cougars

Topics explored during the interviews under this category included: level of cougar incidents in the region, influence of past incidents on perceptions, level of awareness of being in cougar country, knowledge of cougar ecology and behavior, knowledge of cougar incident prevention techniques, who is less knowledgeable about cougars, who is responsible for preventing human-cougar conflict, and level of human-cougar habitat separation.

The following highlights were learned from this category:

Who is less knowledgeable about cougars?

- Almost two-thirds of key informants replied that it is newcomers who need to be educated about living with cougars. Notably, 85% of northeast respondents and 50% of I-5 respondents were of this view.
- Other groups believed to be less knowledgeable about cougars include wilderness supporters, the less educated, people who feed wildlife, and non-livestock owners.

Only one respondent blamed cougars for conflict between humans and cougars.

2.3.3 Findings – Beliefs, Attitudes, and Values Associated with Cougars

Topics explored under this category included: attitudes toward cougars, children's influence on attitudes, support of the pilot program, willingness to take steps to coexist with cougars through regulations, willingness to take steps to coexist with cougars voluntarily, and regulation versus education.

The following highlights were learned from this category:

- Only one respondent in the Olympic Peninsula (OP) replied entirely positive as to the community's view of cougars.
- Most people indicated that presence of children has a moderate to high influence on their views of cougars. Children's safety is often thought of when people think about cougars.
- Overall, no one could be categorized as very supportive of regulation.
- The majority of people seemed very willing to coexist with cougars through voluntary measures to prevent incidents.
- Regulations cannot be counted on to provide a reliable measure of people's willingness to coexist with cougars.
- Overwhelmingly, people replied or suggested that education is a far better route to take than regulation to prevent future cougar incidents.

2.3.4 Findings – Perceived Risk Posed by Cougars

Topics explored under this category included: level of fear associated with cougars, level of risk for humans, level of risk for domestic animals, level of risk for livestock, and additional causes of higher perceived risk.

The following information was learned from this category of questions:

- A majority of respondents answering questions reported low levels of fear associated with cougars.
- All of the Olympic Peninsula respondents reported low fear.
- Over half of all respondents reported that there is low risk to humans.
- A majority of the respondents reporting risk to domestic animals stated that there is a moderate to high risk of predation from cougars.
- Three-fourths of the Olympic Peninsula respondents stated that there is moderate risk to domestic animals.
- Additional reasons communities have a higher perceived risk from cougars include negative media coverage, the hound-hunting ban, an increased number of incidents, and the perceptions and number of cougar incidents in neighboring counties.

2.3.5 Findings—Education Methods and Communication Approaches Best Suited to Cougar Outreach

Topics explored under this category included: openness to cougar education, information people are most interested in receiving, acceptable organization information sources, level of anti-government sentiment, and education suggestions.

The following information was learned from this category of questions.

- The majority of respondents are moderately to highly open to cougar education.
- Three-fourths of I-5 respondents are highly open to education.
- One-third of northeast respondents are highly open to education and one-third are moderately open to education.
- Three-fourths of Olympic Peninsula respondents are highly open to education.
- Communities are most commonly interested in learning about cougar safety, cougar biology, behavior, and ecology.
- Communities are receptive to both governmental and NGO outreach educators.
- "Local experts" are the most trusted outreach educators.
- Four of the six respondents reporting moderate to high levels of anti-government sentiment are all northeast Washington respondents.

2.3.6 Most Common Education Suggestions

Where:

- Provide cougar education in schools because it spreads to the parents through the children.
- Education needs to be more widespread than through meetings.
- It would help if the outreach took place in community venues where people feel comfortable.
- Pre-existing public events are usually good places for education.
- Information about cougars should be put in high-visibility areas and easily accessible.

About Communication:

- Communication methods need to be diverse and should include traditional methods.
- Newspapers are good conduits of information.
- Provide continuous education.
- To make predator education less confusing, combine educational programs for several animals.

Educational Content and Audiences:

- Provide new residents with tips on living in cougar country.

Valuable Partnerships:

- Outreach should be in collaboration with local information sources.

2.4 Summary of Government Agency Cougar Education in North America

In 2008, Beausoleil and colleagues research helped to identify components of existing carnivore/cougar education programs that provided useful insights for developing a cougar outreach and education program in Washington State. This section summarizes the most relevant data from Beausoleil et al. (2008) as it applies to outreach education

2.4.1 Findings from Cougar Management Protocols Report

Beausoleil and colleagues surveyed cougar managers in North America and provide useful insights into outreach education strategies by government agencies in "Cougar Management Protocols: A Survey of Wildlife Agencies in North America" (Beausoleil et al. 2008). Their report describes human-cougar conflict across western North America and wildlife agencies' efforts to better address the human dimensions of cougar management through educating the public. These results lend valuable information to the development of outreach strategies in Washington and inform us about the most common methods used to educate the public.

2.4.1.1 The Need for Education

Their findings provide a comprehensive treatment of current cougar management challenges and strategies across western North America. Included is research into human-cougar dynamics across the West and management agencies' responses, which together serve as a comprehensive baseline of cougar education needs and a clear look into efforts to meet those needs. While 73% of agencies stated that the need for cougar education was increasing, only 13% of agencies described their education efforts as "comprehensive" (Table 4) and only 40% allocated staff time to the needs of cougar education (Beausoleil et al. 2008).

Jurisdiction	Do You Have a Cougar Education Program?	How Would You Describe Your Agency's Efforts?	Is the Need For Education Increasing or Decreasing?
Alberta	Yes	Needs attention	Increasing
Arizona	Yes	Comprehensive	Increasing
California	Yes	Adequate	Stable
Colorado	Yes	Comprehensive	Stable
Florida	Yes	Adequate	Increasing
Idaho	No	Needs attention	Increasing
Montana	No	Needs attention	Increasing
Nevada	Yes	Adequate	Increasing
New Mexico	No	Minimal	Increasing
Oregon	Yes	Needs attention	Increasing
South Dakota	Yes	Adequate	Stable
Texas	No	Minimal	Increasing
Utah	Yes	Adequate	Increasing
Washington	Yes	Needs attention	Increasing
Wyoming	Yes	Adequate	Stable

Table 4. Status of cougar education programs by jurisdiction (Beausoleil et al. 2008).

In Beausoleil et al. (2008) report, it states, "Across all jurisdictions, we found that social and political factors may have the single most prominent influence on cougar management." As the need for cougar education arises from challenges posed by the human dimensions of cougar management, findings of trends in human-cougar conflict and sociopolitical pressures on cougar management are of particular interest. The need for outreach to address human-cougar tension is verified by the significant role played by human dimensions in cougar management.

With human interests identified as a key source of tension within cougar management, it is useful to identify more closely the specific human-cougar conflicts most in need of mitigation and prevention. Beausoleil et al. categorize those cougar-human interactions that are reported and present a synopsis of cougar events as experienced by management agencies in western North America (fig. 10).

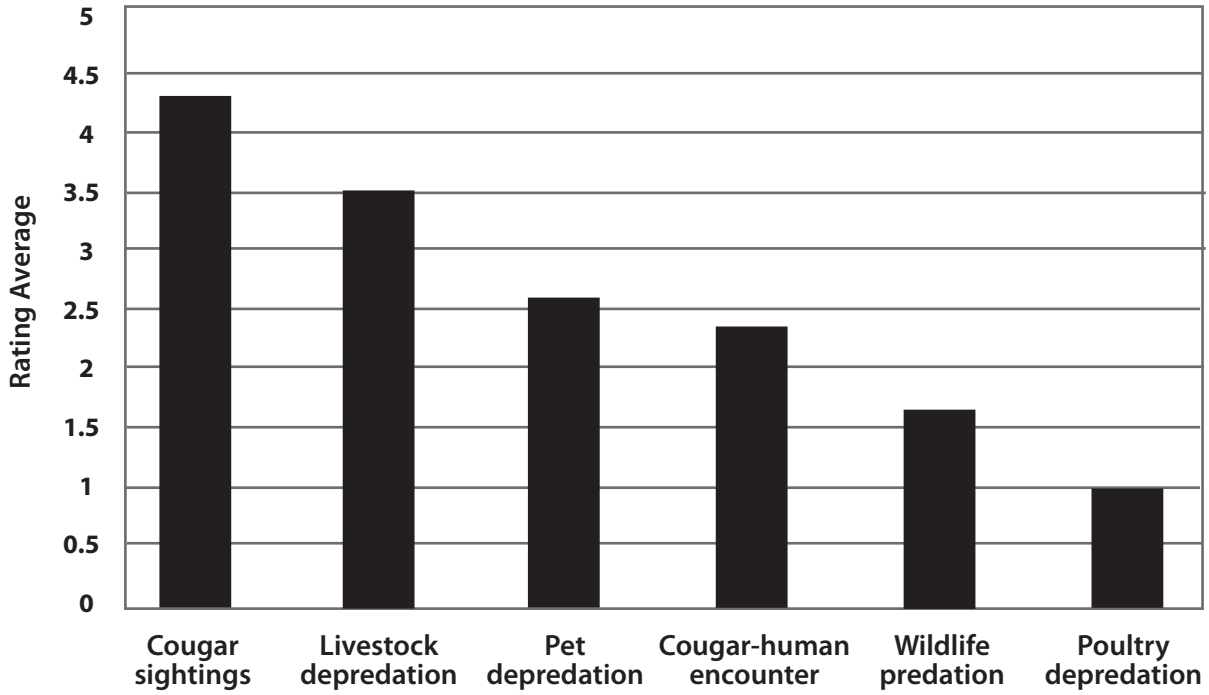

Figure 10. Ranking of cougar-human interactions in order of occurrence, 6=most common to 1= least common, (Beausoleil et al. 2008).

According to Beausoleil et al., sheep were the most common species involved in cougar depredations (85%), followed by pets (64%), goats (57%), cattle (43%), horses (15%), and poultry (8%). These numbers represent all jurisdictions from the survey. The identification of species commonly depredated across all jurisdictions can be used to help agencies narrow education efforts to reduce livestock depredation and associated conflict. For example, both northwest and southwest agencies identified sheep and goats as the top two livestock species depredated, and the majority of agencies reported that spring was the season when most depredation occurred. Therefore, agencies may want to focus education efforts on sheep and goat producers and do so in winter, when producers are preparing for reproduction. Similarly, pet depredation was common across all jurisdictions and occurred overwhelmingly during winter. Agencies may want to focus education efforts in the fall, when it would be most beneficial (similar to addressing bear conflict education in spring when bears emerge from dens).

2.4.1.2 Status of Cougar Education among Western Agencies

In Beausoleil et al. report 73% of the fifteen wildlife agencies surveyed have cougar education programs currently in place. Thirteen percent of these agencies stated they had a comprehensive approach to education; 40% thought their approach was adequate; and 47% rated their efforts as minimal or needing attention (see Table 4). Agencies used a variety of ways to educate the public. While the most commonly reported education methods are brochures or pamphlets, newspapers or press releases, department website, individual landowner contact, and radio or television, the approach most valued by agencies is direct contact with individuals (fig. 11).

When agencies were asked what types of outreach approaches they would like to see more of in the future, the three most common responses were education materials, individual contact to user groups, and the use of television, radio, and newspapers (fig. 12).

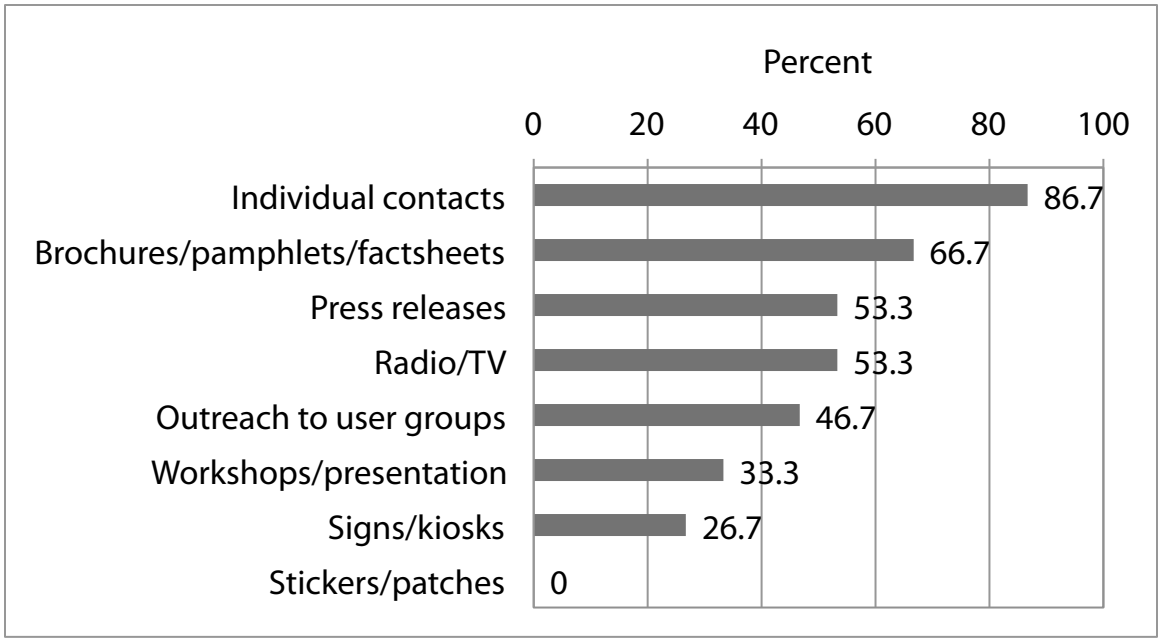

Figure 11. Most successful cougar education methods identified by wildlife agencies (Beausoleil et al. 2008).

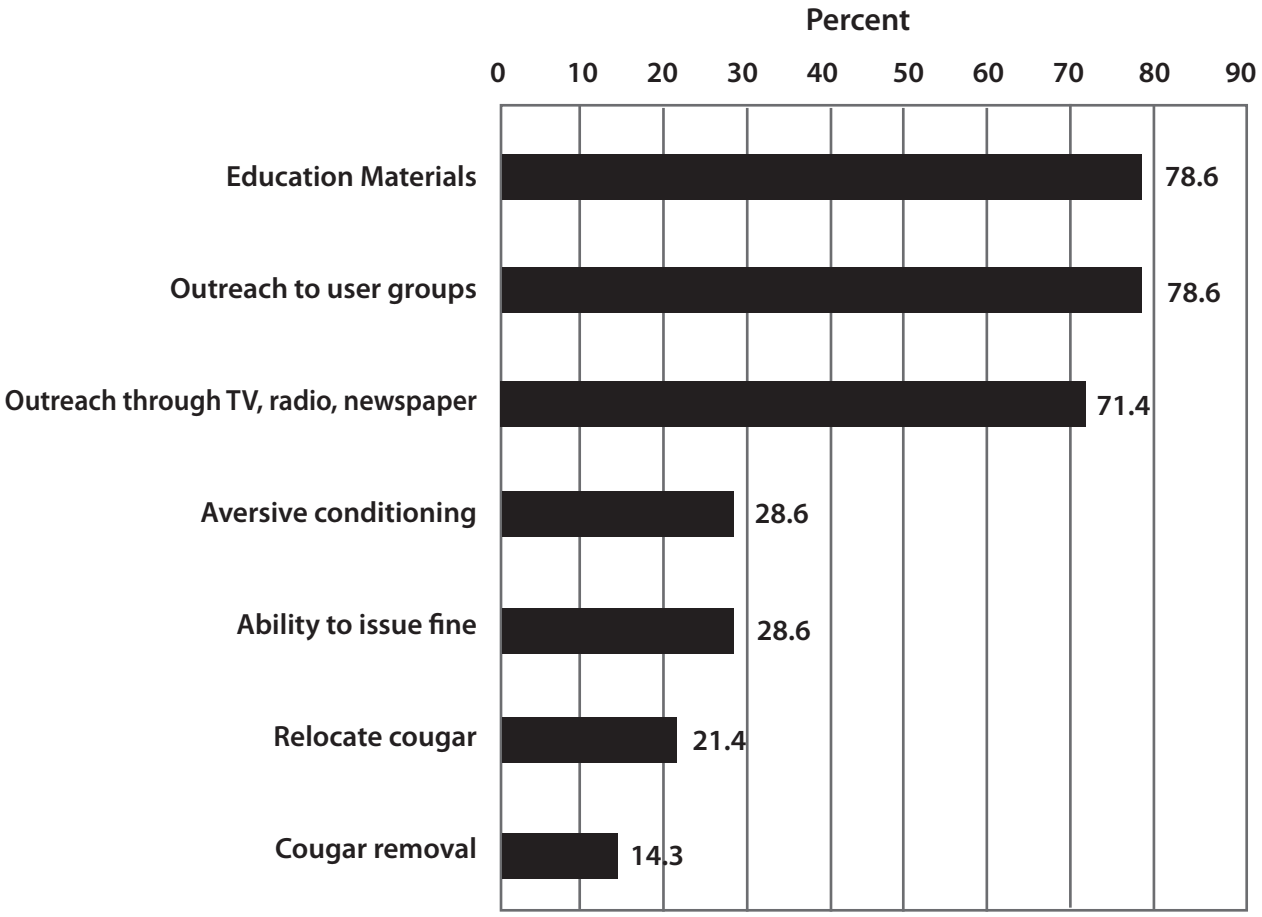

Figure 12. Preferred agency approaches for responding to cougar-human complaints (Beausoleil et al. 2008).

Research results showed that 87% of agencies identified individual landowner contacts as the most effective means of relevant information dissemination. Survey respondents found this type of outreach is often the most labor intensive, and that efforts may be stifled due to funding limitations.

In regards to education and outreach involving sport hunters, 27% of responding agencies offered some type of education to help hunters distinguish gender or age of cougars; two agencies had mandatory programs.

Surveys explore public opinion, knowledge, and behavior related to the human-cougar dynamic, and can gauge the efficacy of wildlife outreach programs if conducted on a regular basis. Surveys can be costly, but identifying knowledge gaps and opinions early on can inform agencies on methods and tone with which to deliver the most critical information about cougars to the public. According to Beausoleil et al., two-thirds of the agencies had conducted surveys in the past, but most did not do so with any regularity. Only 33% said they had surveyed their public in the past five years.

2.4.2 Western State Agency Personnel Interviews

Insight Wildlife Management (IWM) sought information from agency personnel from several western states to learn more detail about their outreach strategies that could potentially enhance Washington State's cougar outreach efforts. The states contacted were Arizona, California, Colorado, and Montana. These interviews yielded useful information about human dimensions of cougar management and assisted in the interpretation of findings from other research conducted during this cougar outreach project planning phase.

Arizona Game and Fish Department

Ron Thompson of Arizona Game and Fish Department (AGFD) spoke to IWM regarding the human dimensions of cougar management in Arizona and the associated need for outreach education. Ron spoke to the importance of engaging the public's interests regarding mitigating conflicts with wildlife. Through a process of public involvement, people can express their level of risk acceptance associated with cougars and what they feel the role of a management agency to be. In 2004, AGFD responded to public interests in cougar management by intensively engaging the public in a process that would develop a protocol for responding to human-cougar conflicts. The resulting Department Policy I1.10 is still the guiding policy for the agency's response to calls concerning several categories of human-cougar conflicts. The policy has enabled the agency to respond to human-cougar conflict in predictable ways and with the confidence that their actions are generally supported by the public.

Arizona Game and Fish Department strategies for human-wildlife conflict resolution are presented in "Mountain Lion and Bear Conservation Strategies Report", issued in December 2008. Most of the strategies recommended entail educating and engaging the public. Included in these conflict resolution strategies are the following:

1. Continued public venue/town hall type meetings, individual outreach, and planned dialogue with the media, combined with lethal removal, have proven to be the most appropriate approach to managing human-mountain lion conflicts.
2. Continue to educate the public using department biologists familiar with mountain lions and human-mountain lion conflicts in addition to administrators, public information personnel, and outside consultants.
3. Continue to provide specialized carnivore conflict resolution training for specific personnel focused in areas where projected growth will occur and places likely to result in continued human-mountain lion interactions.
4. Invest in a science-based educational program, such as Washington State's Project CAT (Cougars and Teachers), using the Department's Focus Wild lesson plans to assist in educating the public and agency personnel.
5. Pursue regulations prohibiting feeding of wildlife into additional counties, cities, or portions of counties as Arizona's population increases and urban areas and high-use recreation areas interface with high mountain lion density habitats. Build partnerships with other agencies that are also responsible for enforcement of wildlife feeding regulations.

Ron Thompson spoke positively regarding strategy number 4 above, which entails developing a program resembling Washington's Project CAT. Combining the promotion of higher education with community-wide awareness of wild felids, Arizona's proposed Project CAT will work toward the following goals (courtesy Ron Thompson, AZGFD):

- Increase awareness and understanding of the ecology and social issues involving bobcats, mountain lions and jaguars, including the value of top carnivores in ecosystem function, the impacts of urbanization on wildlife, and the role that AZGFD has in conservation and wildlife management.
- Provide opportunities for students from low-income communities and Native American tribes to interact with AZGFD wildlife professionals and University of Arizona faculty, students and staff to present them with role models for college and potential careers in wildlife-related fields.
- Create a template program that can be used by teachers and schools throughout Arizona, Mexico and South America.

California Department of Fish and Game

In "Cougar Management Protocols", Beausoleil and colleagues identified California as one of two states using innovative approaches to cougar outreach. The California Department of Fish and Game (CDFG) uses billboards to display messages on cougar awareness. Lorna Bernard of CDFG's Office of Communication, Education and Outreach offered insight into the details of this outreach strategy. The billboards are located on arterial highways connecting urban areas with the wildland-urban interface, making the cougar message visible to residents commuting to work, and to urban dwellers traveling into cougar country for recreation. These billboards reach two key audiences that can prevent human-cougar encounters.

The department manages cougars without a hunting season. The agency has found that human behavior is a key variable in the frequency of human-cougar conflict. With cougar depredation of livestock the leading cause of cougar mortality, the department strives to prevent depredation of livestock by urging animal husbandry techniques that reduce predation. California Department of Fish and Game also educates the general public with accurate information, sending the message that cougar sightings rarely indicate any danger to humans. California's Keep Me Wild Campaign uses messaging that places responsibility of coexisting safely with wildlife on humans. With regard to cougars, the campaign emphasizes that cougars are always nearby on the landscape and that people can control the risk they pose by taking appropriate steps. This approach to education can result in decreased human-cougar conflict and less public reactions to cougar sightings. Nevada Department of Wildlife has adopted California's Keep Me Wild Campaign.

Colorado Division of Wildlife

Beausoleil et al. mention a second innovative strategy to prevent human-cougar conflict. This is an effort to develop a partnership between the realty industry and the Colorado Division of Wildlife (CDOW). According to the report, initial steps were taken to establish regulations for realtors whereby cougar awareness would become part

of disclosure in purchases. Cougar awareness education in the form of land purchase disclosures has the potential to reach new residents of the WUI, who may be unfamiliar with their new wildlife neighbors. This initiative is on hold as stakeholders struggle to maximize mutual benefit (Jerry Apker, personal communication).

Insight Wildlife Management contacted Jerry Apker and Ken Logan with the Colorado CDOW. Jerry Apker spoke to the importance of framing prevention messages in terms of human responsibility: living in the WUI means having a lifestyle compatible with wildlife, including cougars. Ken Logan emphasized the importance of a sustained effort in carnivore outreach; that is, an approach aimed at normalizing carnivores for those unfamiliar with living near them. Ken recommends cougar natural history as the focus of education programs. This program illustrates how small the risk posed by cougars is while giving the public an understanding of how and why prevention measures work.

Montana Fish, Wildlife and Parks

Jim Williams of Montana Fish, Wildlife and Parks (FWP) spoke to IWM about the human dimensions of cougar management in Montana. Jim also recommended a continuous and sustained outreach effort. He emphasized the prevention message and believes human-cougar conflicts to be valuable educational opportunities to increase the public's awareness of cougar issues. It is worth noting that Montana has six full-time staff positions dedicated to human-carnivore conflicts. These staff are distributed throughout the state and located in areas where human-carnivore conflict is prevalent.

As an example of Montana's approach to human-wildlife conflict, Montana FWP personnel provided the report Northwest Montana—FWP Region 1: Wildlife Conflict and Safety Management, 2007 & 2008. Their Region 1 lies in northwest Montana and includes the growing population center of the Flathead Valley. All of FWP Region 1 is suitable cougar habitat, and cougar densities are relatively high, according to the report. The report includes the following outreach approaches as part of the agency's effort to manage human-wildlife conflict in northwest Montana:

- Continued to develop and present programs directed at attractant reduction, safety, and general bear and cougar biology and life history strategies.
- During 2008, presented numerous bear and/or cougar programs to various area schools, homeowner associations, and civic groups, with a combined audience of approximately 350 people.
- Assisted with safety courses and training seminars for personnel at a variety of businesses and outdoor-related organizations or agencies including Flathead Electric Cooperative, the Glacier Institute, Glacier National Park, and the Flathead National Forest.
- Continued efforts with a community based "welcome wagon" program to distribute bear and cougar educational materials to new area residents.

2.5 Washington Department of Fish and Wildlife Personnel Interviews

A second source of expert information was the WDFW personnel. Enforcement staff, wildlife biologists, and other personnel were surveyed using structured, in-depth interviews. These data have helped determine outreach needs and strategies from the perspective of those who deal firsthand with public concerns, questions, and reports of cougars.

2.5.1 Interview Methods

Eighteen WDFW staff were interviewed to determine outreach needs from the perspective of those who are dealing with reports, complaints, and inquiries from the public in Washington State. The interviews took from 40 to 120 minutes and were conducted between November 2008 and February 2009. Interview methods followed conventional qualitative methodology for unstructured, open-ended interviews using prepared interview forms. Individual interviews were transcribed from notes and studied for emerging themes.

Wildlife biologists and enforcement officers were selected from the six regional offices. Additional WDFW staff were interviewed to gain additional information when needed. These personnel included communications and education staff whose jobs are relevant to outreach education. Respondents were selected to cover as wide a geographic area as possible within each operational WDFW region. Interviews focused on the respondents' experience in interacting with the public on cougar issues. These interviews allow a more accurate identification of knowledge gaps and subject areas for outreach.

2.5.2 Findings

Enforcement officers interact with the general public more than any other WDFW staff. Officers execute and serve all criminal processes related to enforcement activities, safeguard department lands and equipment, present programs to the public, respond to reports of dangerous wildlife, and provide assistance to other law enforcement agencies. The WDFW wildlife biologists interact with the public at hunting check stations, by giving presentations, and sometimes by responding to dangerous wildlife incidents along with enforcement officers.

2.5.2.1 Hunters at Check Stations

Common concerns voiced by hunters include the misperception that there are too many cougars on the landscape, and ungulate populations are at risk. Boot hunters who shoot cougars as a secondary effort while they are hunting deer or elk voice these concerns. It was suggested that educational materials be created specifically for hunters and that they should include reports on cougar population status and trends. Some WDFW staff view the Living with Wildlife—Cougars brochure as a poor match for

hunters. Department personnel reported frequent requests by hunters at check stations for information about cougar population trends, dispersal behaviors, and general ecology.

2.5.2.2 Responding to Cougar Reports and Educational Opportunities

Human-cougar encounters that threaten public safety demand immediate response by WDFW enforcement officers. The WDFW's policy 5401 requires them to respond to all reported dangerous wildlife conflicts, while enforcement program employees provide the overarching response.

Enforcement officers must also respond to depredation reports and respond in person within 48 hours. However, the bulk of depredation reports are alleged sightings of cougar or cougar sign, and the WDFW response-protocol for these calls allows more discretion on the part of the regional enforcement officers. Enforcement officers follow up on these reports with either phone calls or site visits, depending on a host of factors including staffing resources, other associated cougar reports, and the nature of the report.

Most WDFW staff interviewed acknowledged that responding to cougar reports was a good opportunity to educate the public. In fact, all enforcement officers spoke of engaging the public with educational cougar information. One staff member remarked that the public is most interested and motivated to learn from WDFW staff after a sighting. The WDFW Living with Wildlife— Cougars brochure commonly guides these impromptu cougar discussions. Common information offered to the public while responding to reports includes ways to prevent cougar encounters and the actual risk posed by cougars on the landscape.

2.5.2.3 Public Reactions to WDFW Cougar-Sighting Responses

In most cases WDFW personnel believe the public appreciates a quick response to cougar reports. Whether a cougar sighting sign or pet depredation occurs, the public is calmed when WDFW is able to respond in person. These one-on-one meetings provide an opportunity for public concerns to be heard and WDFW staff to address the specific need of the individual at that moment. Meeting face-to-face allows staff to tailor specific messages to the individual and to the circumstances of a particular cougar report. Acknowledging the concerns of each person who calls WDFW is good customer service.

A quick response builds public trust of WDFW in smaller communities. Most staff interviewed agreed that responding to cougar reports in person is the optimal public relations approach. However, staffing resources make this difficult in regions with denser human populations or in rural areas.

Expectations of WDFW's response to cougar reports vary among the public. Some residents want WDFW to take action when cougar presence is confirmed. They believe the presence of cougars indicates danger. People who perceive this risk expect enforcement officers to relocate or kill the cougar. Multiple WDFW staff emphasized that this fearful portion of the public is not a majority.

2.5.2.4 Common Misperceptions about Cougars

Common themes emerged from WDFW staff's experiences with public misperceptions about cougars. Misperceptions about cougar population dynamics and behavior can be an obstacle to understanding how to best live in cougar habitat. Following are misperceptions encountered regularly and across the state by WDFW staff.

- "There's a cougar behind every bush!" WDFW often encounter misperceptions of cougar densities across the landscape.
- People associate cougar sightings with a high likelihood of attack. Understanding is needed about cougar movements—that cougars regularly traverse large areas and are quite likely "just passing through."
- Many people think relocation is a quick fix for human-cougar conflict. The long-term inefficacy, monetary cost, and mortality risk to the cougar associated with relocation are not well understood by the public.

2.5.2.5 Key Educational Themes

The WDFW staff provided insight into educating Washington residents based on their experience interacting with the public. As interviewees reflected on common misperceptions, concerns, and attitudes among those who report cougars, some messaging themes emerged. These messages are important to creating attitudes and behaviors among the public that will minimize human-cougar conflict.

- Cougars are here on the landscape to stay—it's important to do what we can to prevent encounters.
- Here's how they behave—now you know why these prevention measures are important.
- Carnivores have ecological importance.
- Relocation is expensive and hard on the cougars. People can help reduce the need to intervene with wildlife following preventive tips.
- Informing the public about cougar biology and behavior helps them understand risk and why prevention measures work.

2.5.2.6 Identifying Audiences and Appropriate Messaging

During the interview process, WDFW staff also made suggestions regarding how outreach should be approached. The experience of WDFW biologists and enforcement officers indicates that cougars can be a sensitive subject. As with other emotionally charged topics, people tend to hear educational messages selectively, based on what they already believe. The WDFW staff have encountered this challenge across Washington State. Those interviewed also commented that different outreach approaches should be tailored to different audiences as much as possible.

Department personnel repeatedly spoke of the need to educate newcomers. Whether they are new additions to rural communities or live in newly developed suburban areas in the WUI, newcomers are novices at living with wildlife and commonly react with alarm

when encountering cougars near their homes. Longer-term residents of cougar country react to cougar sightings with less alarm. The following is a selection of insights derived from the interviews with WDFW staff members' in their interactions with the public:

- It is important to consider varying demographics and their cultures.
- Newcomers to the "New West" comprise a key audience.
- A brochure specifically for ranchers and livestock owners is needed.
- The message "cougars were here first" does not resonate with residents whose families have lived in cougar country long enough to remember very low cougar numbers due to extirpation. These residents perceive cougars to be moving into human territory.
- Outreach should consider the uneven distribution of cougar-related risks. While most Washington residents support human-cougar coexistence, a minority of residents live with the threat associated with cougars and do not support coexistence.
- Messages of prevention should be accompanied by information about cougar ecology and behavior. This way the public understands the "why" as a well as the "how" regarding living with cougars.
- The way to give people a sense of control is by arming them with knowledge of cougar-encounter prevention measures and the belief that the measures will keep them safe.
- Responding to common concerns of family and livestock safety can motivate cougar awareness.

The WDFW's response to cougar reports is currently the most frequent opportunity to engage the public on the subject of cougars. With this in mind, the interviews probed for staff members' suggestions for improving and enhancing this interaction with the public to maximize its educational potential. Following are key insights from WDFW personnel:

- Enforcement officers respond more often to complaints but may not always be well informed about cougars in Washington. Consequently, educational opportunities can be missed or cougars may be killed unnecessarily.
- Limited staffing resources present challenges for WDFW personnel who want to educate people more thoroughly and build trust with the public; doing so requires spending time and resources on cougar complaints.
- Develop communication links between enforcement officers and wildlife biologist to ensure consistent messages are provided to the public by WDFW staff.
- Enforcement officer training about cougars is worth the commitment of resources. Information on cougar behavior, biology, and population trends would richly enhance training on how to identify carnivore sign such as tracks and evidence of depredation. Training also presents opportunities for personnel to share challenges and successful strategies so as to help develop clear and consistent messages about cougars.
- The public is more receptive to outreach efforts that come from locals. Opportunities for public concerns to be heard should be provided. Frequent, information-based local discussions will build trust.

2.6 Cougar Non-Govermental Organization Messaging Strategies

2.6.1 Methods

While Non-Governmental Organizations (NGOs) may have agendas that diverge from those of state management agencies, it is nevertheless beneficial to examine some of their outreach mechanisms. Five individuals who have been involved with large carnivore outreach efforts in the western United States were interviewed. Open-ended telephone interviews were conducted, and interviewees will remain anonymous. The interviews were focused on learning from those outreach campaigns that sought to impact public knowledge and opinion as a means to leverage wildlife management policy.

2.6.2 Findings

The most common outreach approaches we found employed by the NGOs included: website resources, public presentations, media spots, posters, and brochures. Interview subjects spoke of the importance of employing a diversity of outreach methods and emphasized repetition in messaging. Discussion of the results is focused on the subjects' experience with framing messages of carnivore importance.

The following themes emerged from the interviews that have bearing on the content of outreach program messages:

- Emphasize the rarity of cougar encounters.
- Convince people that they can prevent cougar encounters and manage an encounter should one occur. Tell them how.
- Debunk misperceptions about cougars by referencing research.
- Frame cougar importance in terms of landscape/ecological integrity, again by referencing research.
- Emphasize human responsibility for maintaining the wild landscape by taking measures to avoid human-cougar conflict.
- Consider your audience. Acknowledge the challenges that living with cougars pose for some people.
- Recognize that intolerance of cougars may be a function of deeper social tensions, such as rural-urban animosity or frustration with government regulations or resource allocation.

SECTION 3:

Discussion and Implications for Outreach

Needs assessment research during 2008-2009 identified significant variations in public attitudes toward cougars and also significant consistencies. Data gathered during this needs assessment research provide a much more comprehensive matrix of perspectives about the cougar-human interface in Washington State than has previously been available. Telephone survey results establish a statewide picture; focus groups refine this for key regions; and reviews of carnivore-related activity and experience in other states and in NGOs offer additional insight about the content of outreach messages. Analysis in this section assesses key findings and implications from these data. Combined, these findings help set the foundation for a targeted cougar outreach and education program in Washington State that is presented in Section 4 of this report.

3.1 Research Findings

3.1.1 Target Information Gaps and Misperceptions

Gaps in cougar-related knowledge among Washington residents are evident from the research. Filling in the information gaps and correcting misperceptions about cougars will help meet the goals and objectives of the cougar outreach program.

To accomplish this, outreach materials should include information on cougar ecology, behavior, safety tips, and where appropriate, population trends. Outreach information should also address gaps and misperceptions such as "cougars are behind every bush," seeing a cougar is likely to instigate an attack, and relocation of cougars is the quick fix for human-cougar conflict (see also page 20). The relative level of risk of cougar to humans and livestock, steps residents can take to prevent encounters, and what to do when an encounter occurs should also be part of any outreach materials. Information included can be targeted for specific audiences, such as hunters and ranchers.

Beyond knowledge gaps, negative views of cougars and of cougar management often stem from misperceptions about cougar ecology, behavior, and management policies. Science-based information provided by a local expert and trusted source in a non-advocacy approach can help the public and in particular some target audiences be more receptive to new information. This in turn will give the public more of a sense of control over preventing cougar encounters and an increased understanding and awareness of the role cougars play on the landscape.

3.1.2 Strengthen WDFW Communication and Protocols

The WDFW is the first to respond to cougar reports and the agency the public turns to for reliable information on cougar management, population trends, ecology, behavior, and safety information. Telephone interviews reveal, however, that the WDFW staff does not always provide the most accurate, or the most up-to-date, information to the public, which leads to confusion and the spread of misinformation within communities. Thus, standardizing the educational messaging portion of the agency's response protocol should be a top priority and is essential to a successful cougar outreach effort (see Section 4.3.1).

A training that includes staff from different programs will allow the department personnel to familiarize themselves with cougar guidelines, messages, and protocols, and foster a more unified approach and response to the public on a variety of cougar issues. In addition, this method of training will strengthen relationships and decrease confusion within and between departments on various cougar policies.

Finally, a well-coordinated outreach program with consistent and accurate information distributed to the media, decision-makers, and other individuals with local influence can build WDFW's credibility and, in turn, build Washington residents sense of trust in the agency.

3.1.3 Diversify Outreach and Cast a Broad Net

Reaching both rural and urban residents will be important to increasing awareness about cougars and reducing encounters. Disseminating cougar outreach materials through various channels ensures that information will reach a wider and more diverse audience. Outreach that is repetitious with multiple forms of delivery is most effective. Beyond mainstream outreach on television, radio, and in newspapers, messages can be supported via multiple means, including websites, blogs, networks like Facebook and Twitter, public presentations, and partner organizations.

Using social media technology also allows important information on cougars to reach a broad and growing audience in a timely manner. While rural areas currently have less access to Internet and social media venues, and rely more on trusted sources to receive information, this is likely to change in the near future. The number of people on social networking and blog sites has increased exponentially in the last few years. People in the United States continue to spend more time on social networking and blog sites, the total minutes increasing 210% year-over-year. The top five social sites in the United States saw increases from 2.7 million visitors in December 2008 to 18.1 million in December 2009. Tremendous growth has occurred among users of Facebook and Twitter where visitors have outpaced the growth for all social networking sites (Nielsenwire 2010). These rapid changes in how people receive information make it important for WDFW to be adaptive in distributing information on cougars.

3.1.4 Invoke Trusted Local Sources

Residents of rural areas and small towns in Washington report that their social networks of family and friends are an important source of how they receive information on cougars. Changes in ideas and beliefs often happen through social networks of peers (Gladwell 2000). Thus, having local WDFW personnel or another designated non-advocacy entity distribute information to communities builds trust and social capital and can help to change attitudes and beliefs, especially in more rural communities.

Research findings also indicate that engaging one-on-one with the public is among the best means to address specific questions, ease public concerns, and establish trust in a wildlife agency and its personnel. For bear smart programs, research showed that face-to-face meetings are often a better use of time and resources than traditional media in reducing encounters and conflict (Davis and Morgan 2005).

3.1.5 Build Strategic Partnerships

Partnering with other wildlife and land agencies, local businesses, community leaders, and organizations who have a trusted presence in the community and who adopt the non-advocacy science-based approach to outreach will allow for a more broad distribution of materials. Partnering can also be cost-effective where staff is limited and residences and ranches are often hard to reach.

3.1.6 Use Effective Messages

We know from the research results, Washington residents generally have a positive attitude toward cougars. They understand the cougar's ecological importance and they want them to be a part of legacy they leave for future generations. They also believe strongly that people should be held responsible for reducing human-cougar encounters and yet may not see cougars as a threat nor understand why safety measures in and around the home are necessary.

In contrast, we know that a small minority of Washington residents hold a negative view of cougars. They generally see cougars as more of a threat, and they want to see their population numbers decreased. Some who hold a negative view of cougars also believe that people should not be held responsible for reducing human-cougar encounters.

Different outreach approaches and messages will be important in reaching different communities holding different attitudes toward cougars. Successful outreach messages in rural eastern Washington, for example, will differ from those in other parts of the state.

Beyond consistency with the theme of personal responsibility for encounter prevention, messages need to honor the sovereignty of rural communities. Residents in the less-populated areas in eastern Washington are sensitive to being subjected to centralized cougar management policies, especially when residents view themselves as bearing a disproportionate amount of the risk associated with human-cougar coexistence.

In addition, many Washington residents acknowledge that they know little about cougars. Therefore, the first step to outreach should be to provide a clear presentation of the basic facts about cougar ecology, behavior and safety. It will be important to balance messages about the relative threat of cougars with the value they play on the landscape and as part of Washington State's natural heritage.

Finally, a broad approach to information distribution is most effectively employed when messaging is limited in scope, repeated often, and is delivered by a credible and trusted messenger.

The following are suggested recommendations for how to inform the public and change behaviors to meet the goals of the Cougar Outreach and Education Plan. These recommendations represent a small sample of many messaging options. They are a result of collaborative process and have not been tested in the field.

3.1.6.1 Issue: Value and Awareness

We know from the surveys that the public has a strong positive attitude about cougars. In all CMUs other than the East Cascades South, 90% or more of respondents agree that cougars are an important and essential component of Washington ecosystems.

For instance, when survey respondents in the Columbia Basin, Blue Mountains, and Northeastern regions were asked if they agreed that cougars were an important and essential part of the Washington ecosystem, the range of response was from 90% to 95%. In the East Cascades South the percentage was slightly less, at 83%. In other words, the positive value of cougars is a predominant sentiment in both urban and rural communities.

Recommended Action: Integrate messages that promote the value of cougars when discussing the presence of cougars, and what steps to take to avoid a cougar encounter or attack. The following messages should be incorporated into outreach materials:

- Cougars are an important and essential component of Washington ecosystems.
- Cougars are part of the legacy we can leave to future generations of Washingtonians.
- We are fortunate to live in a state that still has healthy populations of cougars and other wildlife. While the chances of encountering a cougar are extremely low, precautions are needed when we live and recreate where cougars are known to be present.

3.1.6.2 Issue: Population Trends

Many respondents both in the telephone survey and in the focus groups were misinformed about cougar population levels and trends. When asked how many cougars live in Washington state, respondents most commonly answered they did not know (45%). In the telephone survey only 10% knew the current number of cougars in Washington State. Several focus group participants believed incorrectly that the hound-hunting ban contributed to cougar population increases.

Recommended Action: Provide messages about population trends and predator-prey dynamics where and when it is appropriate. Include the following facts:

- There is no robust survey method to assess cougar populations annually, and harvest or complaint levels are poor indices of cougar trends. Until a cost effective survey method is developed, capturing and collaring all the resident cougar in a defined area is the best method for assessing population size and growth.
- Relevant trends vary by region and include the proportion of female and young cougars taken each year by hunters.
- There is no evidence that cougar numbers have increased since Initiative 655 was passed in 1996, which banned the hunting of cougars with the use of hounds. Since then, the number of cougars harvested by hunters has been similar to or greater than before the ban on hound hunting.
- Washington's cougar population is about 1,900 to 2,100 resident animals (excludes transient subadults), including kittens. This estimate is based on studies in five areas of the state between 2001 and 2010, where cougar densities are estimated to be one adult cougar per 20 square miles of habitat, or one male and one female in about 50 square miles of habitat

3.1.6.3 Issue: Behavior and Characteristics

Telephone survey respondents did not know why cougars attack, the number of cougars that occupy 100 square miles, or what cougars eat and how often (i.e., the average number of deer taken).

Recommended Action: Messages addressing these knowledge gaps should be incorporated into outreach materials or clarified when talking to the public. Include the following facts:

- With high prey densities in good habitat, males may use 75–150 square miles; females 25–50. When prey is scarce and scattered, males may range over 700 square miles or more.
- The number of deer a cougar kills per week depends on prey availability, whether the cougar is a female with young, and the time of year. Predation rate also varies with prey density, habitat type, and terrain. On average, a mature male cougar will kill and consume one average-sized deer every 7 to 10 days. A female accompanied by older kittens will kill more frequently. Larger animals such as elk and moose are killed less frequently. Bighorn sheep and mountain goats are even less frequently preyed on by cougars in Washington.
- Threatening encounters and attacks by cougars are rare. Reasons for such encounters and attacks are not well understood. The science on the behaviors and actions that lead to attacks is limited. A cougar attack could be a result of a multitude of factors, including an individual cougar's genetics, age, health, and availability of other prey.
- Research on cougars near human development indicates that most cougars avoid people. In areas where humans and cougars share habitats, cougars tend to use those habitats during times when human use is minimal.

3.1.6.4 Issue: Safety

Most of the telephone survey respondents did not have basic facts about cougar encounters and what to do if attacked.

While 34% of respondents said that they knew what to do when attacked by a cougar (the most common answer), 66% did not know, including 27% who said that they believed playing dead is the best response when attacked.

Because only 2% of respondents were able to give an answer within the correct range regarding when the last cougar-related human fatality occurred in Washington State, and only 6% were able to state correctly the number of people injured during encounters in the lower 48 states, facts about relative safety should be provided to homeowners and others to increase safety and to reduce misinformation about the relative risk of being attacked or injured.

Overall, most respondents in the survey and in the focus groups do not believe that cougars are a threat to public safety in Washington. This belief can be a double-edged sword and a public relations challenge: if people do not believe there are risks, they may be less likely to take safety precautions.

Recommended Action: Messages that explain the relative risk of a cougar encounter and what to do if attacked. Messages should emphasize the following:

- Cougar attacks on humans are rare. Regardless of the frequency of attacks, it is always wise to take precautions while recreating in cougar country by being prepared in case you encounter a cougar—just as we take responsibility for our own safety when we fasten the seat belt to drive a car.
- Since 1900 there have been 18 documented human-cougar incidents in Washington, involving 12 adults and 6 children, resulting in the death of one person in 1924.
- While the risk posed by cougars is small, people in cougar country should know why prevention measures are important and why they work.
- Compare the rarity of being attacked by a cougar to attacks by domestic dogs. From 1979 to 1996, 8 people were killed by dogs in Washington. Each year approximately 400 people are hospitalized in Washington due to bites and bee stings.
- Between 1890 and 2005 there were 117 verified cougar attacks on humans in the United States and Canada, with 19 resulting in human fatality. On average, in all North America there have been about 3.5 verified cougar attacks per year since 2000. Nevertheless, it is always wise to take precautions while recreating in cougar country and to be prepared in case you encounter a cougar.
- If people encounter a cougar they should wave their arms and clothing in the air, shout, and try to make themselves look bigger. Emphasize that people should not run from a cougar encounter. If attacked, they should fight back.

3.1.6.5 Issue: Responsibility

Survey results showed that 85% of Washington residents were willing to take steps around their homes to reduce the likelihood of cougar encounters; yet most survey respondents and focus group participants did not think of cougars as a significant public safety threat. And many focus group participants saw no harm in feeding deer. Those who fed the deer did so because they enjoyed viewing the animals or believed deer would starve during winter when food was scarce.

In discussing why it is important not to attract deer, educators need to acknowledge that many people like deer around their houses and enjoy watching wildlife in general, and can be reluctant to remove the kinds of landscaping that attract deer. Convincing this audience to take steps in and around their homes to reduce cougar-human encounters can present a challenge. Focus group research indicates that the public may not be motivated to act to prevent encounters until they or their neighbors have a negative encounter with a cougar.

Strong, consistent messages should therefore be directed to homeowners on why feeding wildlife may increase the likelihood of encountering a cougar, and thus increase the risk to children. Research shows that incorporating messages about children being especially vulnerable to cougars can have an affect on changing behaviors.

In contrast, there are also homeowners who loathe deer in their yards, and providing messages on how to reduce human-cougar encounters will also be important. People who understand the importance of their own actions are better equipped to reduce cougar-human encounters. Although few expect ever to encounter a cougar, reducing the likelihood of encountering a cougar should be framed as the personal responsibility of the individual.

There is also strong support statewide (93%) for the idea that livestock and pet owners are responsible for taking steps to secure their animals. Providing information to livestock owners on how to secure their livestock and reduce depredation—such as web links, cost comparisons of different products, and testimonials by livestock owners about different practices—can prove beneficial to encouraging behavior change. In the northeastern counties where there are negative attitudes toward cougars, there is nevertheless relatively strong support for livestock and pet owners to be held responsible for minimizing human-cougar conflict (81%).

Recommended Action: Regardless of how the public views cougars, negative or positive, the consequences of an individual's inaction needs explanation in terms of public safety, especially where children are involved. For those who hold a positive view of cougars, emphasize messages about potential consequences of agency response to an offending cougar when complaints are received.

Along with providing an understanding of the relative risk of cougar encounters, stress the repercussions of feeding deer or other wildlife and the impact this can have on the safety of one's family, neighbors, and community, especially children. Messages should emphasize the following:

- Cougar ecology and behavior—knowing more about cougars allows the public to understand the "why" as a well as the "how" of coexisting with cougars.
- Cougars are by nature secretive and elusive; they can move about in close proximity to people without ever being detected. This is why it is important to avoid feeding deer close to your home so as to avoid drawing cougars close to your home.
- Artificially feeding deer can cause problems for the deer. Ironically, supplemental feeding of deer can lead to overbrowsed vegetation, spread of disease, unnaturally increased population numbers that damage natural habitats; and human-deer conflicts such as deer/vehicle collisions.
- For pet and livestock owners, emphasize that preventing encounters is one of the cheapest form of insurance and provide owners with resources for protecting stock and pets (see Section 4.3.2).
- When discussing taking steps around the home, also discuss fairness and responsibility to neighbors and the community.
- Provide information on why eliminating vegetation that attracts deer is important for reducing human-cougar encounters.

3.2 Target Regions and Audiences

Limited staff and resources can make it difficult to reach all communities equally with an effective cougar outreach effort. Therefore, targeting specific audiences and regions in human-cougar hotspots is more economically feasible. Hotspots may have dense human populations, growing human populations, robust cougar populations, negative attitudes toward cougars, or any combination of these factors.

Based on the research, the following hotspots areas are suggested for a targeted cougar outreach and education effort: Northeastern counties (Chelan, Okanogan, Ferry, Stevens, Pend Oreille), Puget Sound counties (portions of Whatcom, Skagit, Snohomish, King, Pierce, and Thurston), and southern most counties (Klickitat and Columbia).

3.2.1 Residents at the Wildland-Urban Interface (WUI)

Washington State's human population growth has brought more people to live close to wildlands. It is no coincidence that cougar complaints are clustered in the most recently developed and most easterly residential lands of Pierce, King, Snohomish, and Skagit counties; these are counties with dense human population centers. Residents at the WUI east of the Interstate 5 corridor are in a prime human-cougar hotspot. In eastern Washington human immigration into the Methow, Wenatchee, and Spokane areas highlights human-cougar hotspots in the growing WUI areas of Okanogan, Chelan, Douglas, Kittitas, and Spokane counties.

To promote human safety, reduce complaints, and promote appreciation for cougars, residents in these areas need access to information about cougar ecology, behavior, hazards of feeding deer, and how to protect pets and small stock.

3.2.2 Northeastern Washington Residents

Negative attitudes and intolerance toward cougars are most evident in Chelan, Okanogan, Ferry, Stevens, and Pend Oreille counties, according to the telephone survey results. Residents of these five counties, along with people in Douglas and Spokane counties, are also among those most likely to view cougars as a threat to human interests and to be more vocal about their anti-carnivore sentiment. Conversely, the telephone survey, focus group, and WDFW personnel interview data indicates that in these counties, the majority of the public has a positive view toward cougars.

In these counties, outreach explaining cougar population data and ecological roles is needed and will be more effective in smaller communities when conducted through the favored conduit of trusted local sources.

Experience with bear outreach in Okanogan County has shown that one of the most important factors in promoting public acceptance of bears is not only the message and the delivery mechanism, but also the person delivering the message. In fact, individuals can become more open to the idea of carnivore coexistence simply because they like or respect the person delivering the message, especially when it is delivered in a non-advocacy manner. Selection of the right outreach educator is therefore an important factor to consider.

Northeast Washington does not have dense human populations but does have proportionately high levels of cougar complaints. Again, it will be important to pay special attention to promoting safety and reducing complaints through reaching community members with effective outreach about cougar behavior, protecting small stock, and hazards of feeding deer.

3.2.3 Newcomers to the Wildland-Urban Interface (WUI)

Residents who are new to rural living were repeatedly identified as an important target audience throughout the needs assessment research. Focus group participants, key informant interviewees, WDFW personnel, and wildlife managers from other western states all indicated that newcomers to the WUI are an audience in need of cougar outreach and among whom early outreach can eliminate unwarranted fears and promote behaviors that reduce the likelihood of encounters.

While newcomers were said to react with alarm to non-threatening cougar encounters and were said to be intolerant to even close encounters, nevertheless, they hold high value for natural landscape and wildlife. This perspective can motivate behaviors consistent with human-cougar coexistence once accurate information dispels unsubstantiated fears. Homeowners who have pets or hobby livestock could also benefit from information about how to keep their animals safe. Welcome brochures and partnering with housing and homeowners associations and realtors in hotspot areas are among ways to reach new residents.

3.2.4 Sheep and Goat Owners

In all western states sheep and goats are the first and second most common targets of depredation (Beausoleil et al. 2008). To reduce depredation frequency in Washington State, residents owning sheep or goats should be targeted with materials focused on husbandry techniques consistent with cougar encounter prevention. Meeting individually with livestock owners to hear concerns and deliver information on reducing cougar-livestock conflicts by a trusted source has proven beneficial in other states Providing resources on a website and in brochures that point livestock owners to a range of cost-effective practices can be beneficial in helping them reduce depredation to their stocks..

3.2.5 Hunters

We know from telephone survey results that hunters tend to be more knowledgeable about cougar and to have heard and seen more about them. They are also more likely to want to see decreases in cougar numbers to support game populations. At the same time, we know that some hunters can be misinformed about cougars, especially where cougars and deer and elk are concerned.

Providing accurate information about cougar population trends, predator-prey dynamics and gender identification should be targeted toward hunters using multiple communication methods. Improving their knowledge base can be beneficial in reaching beyond them to their social networks. Information should be provided at hunter checkpoints, in one-on-one meetings, in state hunting regulations and trainings, and through social media channels where hunters are likely to visit.

3.2.6 Print Media and Television

Telephone survey respondents reported that television and print media were their two preferred and most commonly used means of obtaining information on cougars. Statewide, television was the most common medium for learning about cougars (25% of respondents), followed by newspapers (18%) and personal exchange (11.9%). The implications of these results are twofold. First, outreach should use the power of the traditional mainstream media through which most people receive information. Second, intensified effort via other underutilized media will likely be productive in selected contexts, especially in rural areas, as more people have access to television and print media via the Internet.

Indeed, these media outlets, even radio, grant the capability to reach large numbers of people. Focus group research and WDFW personnel interviews identified a tendency for the media to sensationalize human-cougar encounters and heighten public fear of cougars. Being proactive by providing regular updates to the media on management policies, research, ecology, behavior, safety tips and coexistence measures can build stronger relationships with the media and can encourage more accurate and less sensationalized

reporting. Outreach to the media through regular press releases and updates will also raise the profile of WDFW as the "go-to organization" for accurate information about cougars.

3.2.7 Elected Officials

State, city, and county elected officials are often the first to hear from constituents who are sometimes misinformed about cougars or cougar incidents. It is therefore essential to inform elected officials about basic cougar ecology, policies, and recent research findings. Including data on the knowledge and attitudes of constituents toward cougars, especially given that their perception of local attitudes is often derived from a negative vocal minority. When elected officials (and media) are informed, engaged, and updated regularly, they become allies of and carriers for the distribution of accurate information.

SECTION 4:

Recommendations

When people are armed with accurate information, they feel a stronger sense of fairness and control over their lives, families, and community. The research results and findings in the previous sections point the way to targeted programs for WDFW to use to reduce human-cougar encounters, increase awareness and appreciation of cougars, and provide a more consistent, coordinated, and strategic approach to cougar outreach and education in Washington.

To achieve the goals defined by the plan, a diversity of strategies will need to be implemented to reach a broad public holding different values and attitudes about cougars. Specific recommendations are tied to each of nine action goals (see Section 4.3) and provide a multi-targeted and proven approach for reaching the public effectively. The strategies and recommendations all derive from the research findings reported earlier in this plan.

Given limited resources, these recommendations can be implemented initially in the identified hotspot areas of the state, and later expanded elsewhere or statewide if additional funding becomes available. Resources for the outreach program can be maximized if WDFW is able to partner with other wildlife agencies and non-advocacy organizations that have established trust and credibility in local communities.

4.1 Implementation of a Cougar Outreach and Education Plan

The priority areas for targeting an outreach and eduction plan include the northeastern counties (Chelan, Okanogan, Ferry, Stevens, Pend Oreille); Puget Sound counties (portions of Whatcom, Skagit, Snohomish, King, Pierce, and Thurston); and the southern most counties (Klickitat and Columbia). Priority audiences are those proportionately more impacted by living in close proximity to cougars (homeowners on the urban fringe, livestock owners, hunters) and those who affect cougar policy and public opinion (elected officials, media).

The first step to laying the foundation of a successful outreach plan is a training to strengthen internal channels of communication between programs (e.g., wildlife management, enforcement, public affairs, education) within the WDFW.

Next come stakeholder meetings, one-on-one and small group meetings, and development and distribution of materials (e.g., websites, PowerPoint presentations, brochures, fact cards, media and elected official packs) specifically targeting audiences in regions with high frequencies of cougar encounters or complaints. The messaging in the materials will be based on knowledge gaps identified in the research data.

Targeting specific regions or counties calls for a focused and consistent outreach approach that allows more saturation of messages and a more economical means to evaluate programs.

Targeting specific audiences calls for different messages and approaches and enables messages to reach those who may be more impacted by the presence of cougars or have the ability to reach large audiences or influence decisions regarding cougars. In more rural areas, for example, family and friends are reported to be the primary sources of information, whereas respondents in more urban areas report hearing about cougars through media.

No size fits all when developing an outreach program, and changes occur over time with any given audience or region. With this in mind, regions, audiences, strategies, and benchmarks deserve revisiting and updating over time. Employing several outreach methods will ensure that a broad net is cast.

4.2 Overarching Goals, Strategies, Recommended Actions, and Benchmarks

The three major goals driving this plan are to:

- Increase human safety and protection of property so that the per capita complaint rate is stable or declining.
- Increase the public's understanding of cougar ecology, behavior, safety measures and safe coexistence with cougars in Washington State.
- Strengthen communication mechanisms and develop a common language within WDFW for use in interaction with the public and media.

4.2.1 Diversity of Strategies

Following are nine targeted strategies for actions directed toward particular audiences and regional settings. All nine derive from the three overarching goals above and are based on the research data discussed.

Effective outreach calls for a range of products customized for a range of delivery systems. The recommendations in the following section are therefore highly specific.

Overall, the outreach approach encompasses but is not limited to the following:

- Non-advocacy information that combines science with outreach.
- Utilization of local trusted staff.
- Acknowledgement and respect for all viewpoints and opinions.

- Strategies that aim to increase the public's sense of fairness, familiarity, and control with respect to cougars.
- Working relationships with strategic partners which include other government and non-government organizations.
- Utilizing research data to frame content and outreach strategies to reduce conflict and disseminate accurate science-based information.
- Pro-active information distribution with emphasis on target audiences and hotspot areas.
- Responding quickly after sightings or incidents, when the public is receptive while also being pro-active to promote awareness, safety, and responsibility.
- Adoption of a "Keep Me Wild" style campaign.

These strategies may be implemented by WDFW, while others may more effectively be contracted to appropriate non-government entities. Should WDFW opt to work in collaboration or partnership with a non-government entity for implementation, a fully cooperative arrangement can increase the reach and cost-effectiveness of any or all elements of the Cougar Outreach and Education Plan.

4.3 Action Goals

Below are nine action goals directed to the WDFW for a comprehensive cougar outreach and education plan that will reach diverse audiences with emphasis in key target areas.

4.3.1 Washington Department of Fish and Wildlife

A Cougar Outreach and Education Plan creates a forum and platform for WDFW staff, providing key messages to be used in outreach, and building a consistent and unified approach and response to cougar incidents and conflicts. Staff will have the opportunity to discuss challenges and successful efforts and to practice role-playing with different situations while applying key messages. There will also be an opportunity for WDFW staff to share strategies with one another.

Goal One: ***Strengthen internal communications within the WDFW by December 2011.***

(a) Conduct an internal training workshop to be convened with local WDFW staff, including enforcement personnel, biologists, managers, educators, and administrators, by August 2011.

(b) Include such topics as:

- protocols for cougar encounters, using "Strategies to Manage Cougar-Human Conflicts" (chapter 7, Cougar Management Guidelines, 2005);
- messaging based on experience and research;
- protocols and messages for how to respond to misstatements in the press;
- a system for improved internal communication between biologists and enforcement, education, administration, and management departments;
- how to identify various carnivore sign (i.e., tracks and depredation signs);
- sensitive issues as identified by the WDFW.

(c) Produce a message map with top messages, and an internal talking points manual that addresses cougar ecology, behavior, population dynamics, safety information, key contacts, protocols, and a question and answer section, by June 2011. See details below.

Internal Talking Points Manual

Developed for WDFW staff, a talking points manual works to reduce confusion and the spread of misinformation by providing messages to be used in a variety of situations involving cougars and the public. The manual can address an array of cougar questions and situations: facts about cougar ecology and behavior, regional information, and contact information.

Specifically, the document would include guidelines for how personnel respond to situations ranging from cougar sightings to attacks, and how to talk to the media or a concerned resident. Key messaging would be provided, giving a unified and consistent response by agency personnel to the public and media.

4.3.2 Livestock Owners

Livestock owners, primarily sheep and goat ranchers, represent an important audience. Ranchers are kept informed on the basic facts on cougar ecology and behavior, predator-prey dynamics, gender identification, and population trends. Because the majority of survey respondents hold livestock owners responsible for securing their animals to avoid depredation, outreach materials should provide information and resources to livestock owners on husbandry practices. Education and outreach focuses on the winter months to benefit sheep and goat ranchers as they prepare for the reproductive period of their livestock (Beausoleil 2008).

Goal Two: *Stabilize or reduce complaints of cougars by livestock owners in Washington's northeast target counties, relative to 2000 levels by 2014*

(a) Conduct at least 20 **one-on-one meetings** with livestock operators per year statewide, with at least half of the operators residing in the northeastern counties, beginning in spring 2012. See details below.

One-on-One Meetings

One-on-one meetings between cougar outreach staff and selected community members allow a two-way information exchange with key community members. Meetings allow local residents and leaders to learn firsthand about cougar behavior and ecology, ask questions, and share their experiences and concerns. Community members to contact for these meetings include:

- *elected officials*
- *tribal representatives*
- *agricultural commissioners*
- *local/state/federal resource agency staff*
- *local law enforcement officers*
- *ranchers (emphasis on goat and sheep stockowners)*
- *chamber of commerce representatives*
- *conservation groups*
- *recreational user groups (outfitters, hunting groups, hiking clubs)*
- *school district representatives*
- *real estate industry representatives*
- *hunters*
- *housing associations*
- *cattlemen associations*
- *media*

(b) Develop and distribute a **brochure** for livestock owners, with special attention to goat and sheep stockowners, providing information about how to avoid depredation, by January 2012. See details below.

Livestock Owners

Suggested content: husbandry practices to reduce depredation; statistics regarding risk relative to other livestock mortality factors; predator-prey dynamics, cougar ecology, biology, and behavior, gender identification, WDFW contact information, and relevant websites for additional information.

(c) Submit a minimum of **one article per year** to livestock magazines and local newsletters on cougar ecology and husbandry practices to reduce livestock losses, by January 2012.

(d) Develop an **e-mail list serve** on the WDFW website for interested livestock organizations, individual ranchers, and others. Provide useful tips, WDFW updates, cougar ecology, husbandry practices, and appropriate web links, by spring 2012.

(e) Develop **partnerships** with local livestock organizations, individuals, and businesses to help distribute outreach materials, by 2011.

(f) Include information on the WDFW **website** on husbandry practices that have been shown to reduce depredation, by December 2011.

(g) Give at least 3 **presentations** to livestock organizations per year on cougar ecology, behavior, coexistence, and how to reduce cougar depredation, beginning in spring 2012.

4.3.3 Hunters

Hunters when well informed can be a reliable and trusted source of information to family, friends, and community members, particularly in rural areas.

Goal Three: ***Increase understanding of cougar ecology, behavior, gender and species identification, predator-prey dynamics, safety, and coexistence information among hunters, with special emphasis on hunters in target counties, by December 2012.***

(a) Conduct at least 10 **one-on-one meetings** with hunters per year statewide, with at least half of them residing in the northeastern counties, beginning in spring 2012.

(b) Give 3 or more **presentations** to hunter organizations per year on cougar ecology, behavior, management policies, and coexistence, beginning in spring 2012.

(c) Provide hunters with **hunter-oriented data** (i.e., cougar population trends, predator-prey dynamics, behavior, and cougar identification) on the WDFW **website**, by spring 2013.

(d) Produce and distribute hunter **brochures and/or fact cards**, by June 2013. See details below.

---→ ***Hunters Brochure***

Content includes predator prey dynamics, cougar ecology, biology, and behavior, ungulate relative risk, gender identification, WDFW contact information, and relevant websites for additional information.

---→ ***Fact Cards***

Fact cards contain only one fact each and are easy to pick up and read. Less distracting than a flyer or brochure, a card provides audiences with only the facts they need or want. Each card might include a fact on cougar behavior, ecology, predator-prey dynamics, safety tips, or gender identification. Make them audience-specific with targeted messaging and distribution – (e.g., feed stores for livestock owners, outfitter stores for hunters).

(e) Develop **partnerships** with hunter organizations, local sporting goods stores, and other businesses to distribute outreach materials for hunters, by December 2013.

4.3.4 Homeowners and Key Community Members at the Wildlife Urban Interface (WUI)

Targeting homeowners in and adjacent to the WUI with information about cougar presence, coexistence, and safety, is key to reducing human-cougar encounters and unnecessary fear about cougars. Emphasis is on new homeowners and key community members. Programs are given through a variety of means to reach a wide audience and are emphasized in high-impact regions. More attention to the distribution of safety information occurs in the fall to reduce pet depredation in the winter months.

Goal Four: ***Build knowledge, partnerships, and appreciation of cougars in communities and provide opportunities for residents and community members to talk with staff and share concerns or ask questions, beginning in January 2012.***

(a) Increase outreach to 3,000 **homeowners** statewide, with 50 percent of the homes being in the target communities, by January 2013.

(b) Conduct at least 40 **one-on-one meetings** annually, with 50 percent of those meetings occurring in target counties, beginning in June 2013.

(c) Conduct at least 5 **house/kitchen meetings** a year statewide, with 75 percent of those meetings occurring in the target counties, beginning June 2013. See details below:

> ***House/Kitchen Meetings***
>
> Residents invite friends into their homes for an informal but informative gathering. A knowledgeable educator attends and gives a short presentation, answers questions, and hears directly from local residents.
>
> Meeting in comfortable informal settings encourages collaboration between neighbors and instills responsible behaviors. Having local residents host meetings provides a personal and cost-effective way to reach broad audiences and instill ownership in local residents and processes. These meetings encourage two-way communication and information sharing –critical, especially for audiences who may be more negatively inclined toward cougar or management.

(d) Distribute 5,000 copies of **printed material** annually to key identified communities, homeowners associations, and other partners, by June 2012.

(e) Attend 2 **local events**, conduct presentations to schools and at community events statewide, with emphasis in target communities, beginning January 2012.

> ***Attend Community Events***
>
> Attend local events heightens visibility of the cougar program in the community and provides a forum to meet and talk with local residents, hand out materials, answer questions, and listen to local concerns. Participating in these events allows for large numbers of people to be reached while building trust and acceptance of educators in local communities.

Community Presentations

After significant one-on-one meetings have been conducted to establish community presence and clarity of your role in a region, audiences can be more receptive to presentations, the presenter, and the information provided. Unlike one-on-one meetings, community presentations allow educators to reach large number of people quickly. In some areas, it is essential to implement community presentations only after significant groundwork has been accomplished in the form of one-on-ones and in smaller venue meetings.

(f) Produce a modular **PowerPoint presentation** with script that can be adapted for multiple audiences by December 2012. See details below.

PowerPoint Presentations

A compelling fact-filled presentation can be easily adapted to different audiences. Presentation topics include cougar ecology, biology, behavior, and safety tips for living and recreating in cougar country.

(g) Provide 2 **exhibitor displays f**or public events and conferences, by December 2012. See details below.

Exhibitor Displays

Visually appealing and informative booth displays are effective at drawing the public's attention to important information. Displays allow viewers to learn about cougars and can promote community involvement by facilitating one-on-one discussions.

(h) Update WDFW **general cougar brochure** similar to the existing one based on message findings, by December 2012.

(i) Work with **realtors** to provide newcombers information on cougar coexistence and how to live and recreate safely in cougar country, with focus in hotspot counties, by spring 2013.

4.3.5 Media

Building trusting relationships with the media (including print, radio, and television) and providing these networks with factual, regulatory and timely information and updates contributes to more accurate reporting of cougars and cougar incidents. Emphasis is given to reaching television media and newspapers in the northeastern counties since these are the preferred ways for Washington residents to get information.

Goal Five: ***Build trusting relationships with and increase the knowledge of the media to ensure accurate reporting by providing information such as cougar safety, ecology, behavior, coexistence tips, and updates, beginning December 2011.***

(a) Conduct at least 5 **one-on-one meetings** with local and statewide media each year, with focus in target counties, beginning December 2011.

(b) Contact **reporters** immediately after an incident to ensure accurate reporting via press release, Twitter, website postings, and Facebook. Respond to misinformation, incidences, and sightings by providing safety and contact information to local papers in a timely manner, beginning December 2011.

(c) Develop a **media kit** and fact packet that can be used for elected and appointed officials, by January 2012. See details below.

> ***Media Kits and Elected Official Fact Packs***
>
> A well-designed packet filled with information on cougar ecology, behavior, and management would also include regional survey results on Washington State residents' opinions and attitudes about cougars, current research findings, FAQs, a Washington cougar range map, photographs, WDFW contact information, background on outreach efforts in the region, etc.

(d) Provide **email updates** to media outlets twice annually with safety tips, updates, and links to cougar information in Washington, beginning in 2011.

(e) Send the media **timely updates** and **responses to encounters** and incidents, beginning January 2012.

(f) Secure a section for the media on **WDFW's website**, by spring 2013.

(g) Produce and distribute two **radio Public Service Announcements (PSAs)** annually to local stations in the northeastern counties on cougar awareness and safety, beginning in 2012. See details below.

(h) Produce and distribute **television PSAs** to local stations in the target communities, by spring 2014. See details below.

> ***PSAs for Radio and Television***
>
> Local radio stations playing compelling 60-, 30-, and 15-second PSAs that promote cougar appreciation and discuss how to live peacefully and safely in cougar country can reach thousands of listeners in targeted regions. Content of the PSAs could include steps homeowners can take around the home or while camping, negative affects of feeding deer, and general appreciation for cougars as part Washington State's wildlife heritage.

4.3.6 Internet

Customizing and expanding the information on the WDFW website provides multiple opportunities to reach a broader audience in a more timely manner.

Goal Six: ***Expand and improve the current WDFW website to facilitate wider public access to information and allow for more timely response to current news and alerts, by spring 2012.***

The following steps are recommended:

- Improve accessibility to cougar information with drop-down menus taking visitors to Living with Wildlife information.

- Provide downloadable PDF of safety tip information.
- Provide key information to target audiences (livestock owners, hunters, homeowners, media).
- Provide links to other websites (i.e., husbandry practices, etc.).
- Improve visibility of how to report sightings.
- Provide pass-along features built in (email, print, bookmark, share this article) for press releases or important updates.
- Promote the use of emerging social media as a tool for reaching technologically immersed audiences.
- Develop a web page solely for the media.
- Allow visitors to subscribe on the WDFW mailing list page for receiving regional alerts and updates concerning cougars or other wildlife in their area. An optional zip code request allows visitors to receive regional alerts.
- Post YouTube videos and podcasts on various topics related to cougars (i.e., how to be safe in cougar country, what to do if you encounter a cougar, problems associated with feeding deer, cougar's ecological role). See an example at: http://wildlife.state.co.us/NewsMedia/Videos/mountainlionsafety.htm.

4.3.7 Social Media

Once engaging chiefly the young, social media are expanding their audience rapidly and creating new outreach options not available until recently.

Goal Seven: ***Increase accessibility of information to key audiences and enhance the use of social media tools, by spring 2013.***

(a) Expand use of **social networks** like Twitter, Facebook, Flickr, YouTube, and MySpace to engage diverse audiences and a broader public and inform them on cougar ecology, behavior, and safety tips in a timely and ongoing manner, by spring 2013.

(b) **Tools** can include but are not limited to:

- Listening: Use keyword searches on cougars and related terms to monitor talk of cougars across the social web: Google search, Google News Alerts, Technorati, Delicious, Digg, StumbleUpon, Yahoo Buzz, NewsVine, BackType and Twitter are all useful listening tools.
- Twitter: Use hashtags (searchable keywords) such as ***cougars*** or ***cougarsWA*** on Twitter to track and respond to talk of cougar sightings and to disseminate general cougar information and updates.
- Utilize TweetDeck to track, review and respond to cougar-related tweets and mentions on multiple social networks.
- Create a Facebook Fan Page to reach a broad and diverse audience.
- Post regular updates, press releases, and alerts on Facebook, MySpace and Twitter.

4.3.8 Elected and Appointed Officials

Providing elected and appointed officials with updated science and policy information builds relationships and enables officials to accurately address their constituents' questions and concerns and make more informed decisions regarding cougars.

Goal Eight: ***Build relationships with elected and appointed officials and increase their knowledge of cougar and management policies, beginning December 2012.***

(a) Produce and distribute a **fact packet** filled with information to key elected and appointed officials, by February 2012. See details below.

> ***Fact packet for press and elected officials***
>
> Suggested content: cougar brochure, FAQs, photographs, relevant press articles, selected survey results, cougar management policies, Washington cougar range map, recent research results if appropriate, and WDFW contact information.

(b) Conduct at least five **one-on-one meetings** annually with local and statewide appointed and elected officials with an emphasis in target counties, beginning spring 2011.

(c) Provide **semi-annual email updates** on cougar research, population trends, and other information affecting Washington State cougars to designated officials, beginning June 2012.

4.3.9 Partnerships

Partnering with established organizations and agencies can have many benefits. Partners can help to meet the cougar outreach and education goals, assist with dissemination of materials, monetary support, and build legitimacy and trust in communities.

Goal Nine: ***Establish strategic partnerships with key local, state, and federal agencies, and with organizations and businesses, especially in target counties, to help carry out the education plan, by 2012.***

(a) Conduct **regional strategic partnership meetings** to build relationships, identify collaborative opportunities, and share relevant information, beginning in spring 2012. See details below.

> ***Partnerships***
>
> Partnerships bring diversity of expertise to outreach programs. They give staff time and resources and can provide access to new and diverse audiences. They instill ownership and buy-in and are instrumental in extending the program's reach and impact. A community-based outreach approach that actively seeks, updates, includes, and works with effective local partners is far more likely to succeed.

Potential partners include:

- *Local, state, and federal wildlife and land agencies*
- *NGOs (i.e., Cattleman's Association, Washington Outfitters and Guides, conservation groups)*
- *Local businesses*
- *Schools and universities (research and extension departments)*
- *Restaurants*
- *Feed stores*
- *Realtors*

(b) Provide information and regular **updates to partners** (i.e., new research information, policy changes, press releases, etc.).

4.4 Program Evaluation

In an adaptive management approach, evaluation is conducted throughout the program, looking inward to gauge efficacy and gather information and adjusting program elements as needed to fine-tune goals, strategies, and activities.

4.4.1 First Year

During the first year, evaluations should be conducted verbally or through written feedback forms used after internal WDFW sessions, community presentations, and meetings. In some cases, pre-and post-session knowledge assessments could be made to determine effectiveness of materials and presentations.

4.4.2 Year-End Review

After year one of the program a formal evaluation is recommended, The evaluation could include a website Survey Monkey poll of website users to assess functionality and effectiveness of program elements. This user survey and other internal evaluations will serve to determine whether goals and objectives have been met; assessing work accomplished and measuring the impact and reach of each component of the plan. An analysis of local newspaper content, and government and organization communications, will also be conducted.

4.4.3 Follow-Up Report

A final report summarizing the evaluation will be submitted in the 16th month of the program. Photos of the first year's activities and a summary of follow-up surveys will be included. Along with reporting the twelve-month assessment, further evaluation will involve a telephone survey with WDFW regional staff, key partners, civic leaders, and specific target audiences in high-impact communities. To assess how well this outreach program has met its goals, the report will include a review of what worked well, and what did not go as planned, as well as recommendations for improving the program.

4.5 References

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Appendix 3: WDFW Personnel Open Ended Interview Questions

Appendix 4a: Non-Governmental Organization Interview Questions

Appendix 4b: Non-Governmental Organization Survey Responses

Appendix 1a: Focus Group Discussion Guide – Issaquah

Objective	Overarching question (or instruction)	Suggested probing questions (depending on time and responses)
Introduction	1. Introduction, purpose and ground rules 2. Let's go around the table and please introduce yourself and tell us the general area where you live and why you volunteered to participate today.	
Exploring participants' attitudes and beliefs about cougars.	3. Each of you has a pen and paper. Let's take just a minute to write words that first come to mind when you hear the word: "cougar". [wait 30 seconds] Go ahead and keep writing if you want, but who's already got something written down? Tell us what you have and why you think those words come to mind.	• Has anyone ever encountered a cougar? • Where do you think cougars like to live? Or What does ideal cougar habitat look like?
Identifying participants' experiences with and orientation to cougars.	4. Tell us about the reactions in your community when a cougar is spotted/reported in the area. 5. What is it about cougars that makes people afraid of them? What is it about cougars that people like or respect?	• Are there places where you expect or would be more comfortable seeing a cougar?
Identifying what people know and don't know about the species.	6. Tell us about the cougar population in your area? [Are there a lot of sightings? What are they eating? Is the population increasing, decreasing or staying the same?]	
Assess participants' assignment of responsibility for managing risks associated with human/cougar interactions.	7. [PROVIDE BRIEF DESCRIPTION OF THE COUGAR SITUATION IN WA STATE 8. Who, would you say, is responsible for managing any risks associated with cougars? 9. To what extent are property owners (including homeowners) responsible?	• Does responsibility vary depending on where the encounter/conflict occurs? (ie., In the wilderness, in an urban area, near a school?) • Are they doing a good job?
Introduce desired behavior changes to reduce human/cougar encounters.	10. Handout a list of cougar encounter prevention measures one can take at home (i.e.- pets indoors, kids supervised, cougar cover reduced) and how each works to prevent encounters. 11. [INSTRUCT PARTICIPANTS TO READ THE HANDOUT, selecting the actions they feel most and least likely to take, AND LET THEM KNOW WE'LL BE DISCUSSING ITS CONTENT AFTERWARDS]	
Assess behavior change barriers and motivators.	12. Which actions would be the easiest for you to implement at home? Why? 13. Which ones would be more difficult? Why? 14. Do You think it is important to implement these at home? Why?	
Determine whether "cougar-safe" behaviors will give the target audiences a sense of control over the risks associated with residing in cougar country.	15. Considering everything we've discussed so far, to what extent do you think adopting these behaviors will reduce the risks associated with cougars? 16. Making these changes may not completely prevent cougar movement through your property. Under what conditions is that acceptable to you? 17. What will you do if you see a cougar on your property?	• What level of risk is acceptable?

Objective	**Overarching question (or instruction)**	**Suggested probing questions** (depending on time and responses)
Test specific messages that will help motivate behaviors/attitudes.	18. [HAND OUT BROCHURE TITLE LIST] Here is a list of brochure titles various organizations use to educate the public about cougars. Please take a minute or two to read them and then circle the three that you would be most likely to pick up and read. Also, circle any words or phrases that you find compelling and cross out any that are not effective in getting your attention.	General reactions: How motivating is it? What do you like most/least about it?
Test specific images that will help motivate behaviors/ attitudes.	19. [HAND OUT MESSAGES LIST] Here are some statements about cougars that could be used to educate the public or encourage certain behaviors related to cougars. Please take a minute or two to read them and then circle the three that are most likely to compel you personally to take steps to avoid cougar encounters. Also, circle any words or phrases that you find compelling and cross out any that are not effective in getting your attention.	• Messenger: Who do you rely on most for trusted information about living with wildlife?
Test messengers (i.e.- WDFW biologist, WDFW enforcement officers, local authority/expert, NGO).	20. [HAND OUT IMAGE LIST] Here are some images that might be used in brochures or other educational materials to educate the public or encourage certain behaviors related to cougars. Please take a minute or two to look at them and then circle the three that are most likely to compel you personally to take steps to avoid cougar encounters or to appreciate the existence of cougars. Also, cross out any that are not effective.	• Communication pathways: What is the best way to deliver this kind of information to you so that you are most likely to pay attention to it?
Wrap up	21. Finally, what do you want to know about cougars that we didn't talk about today?	

Appendix 1b: Focus Group Discussion Guide – Spokane, Colville

Objective	Overarching question (or instruction)	Suggested probing questions (depending on time and responses)
Introduction	1. Introduction, purpose and ground rules 2. Let's go around the table and please introduce yourself and tell us the general area where you live and why you volunteered to participate today.	
Exploring participants' attitudes and belief about cougars.	3. Each of you has a pen and paper. Let's take just a minute to write words that first come to mind when you hear the word: "cougar". [wait 30 seconds] Go ahead and keep writing if you want, but who's already got something written down? Tell us what you have and why you think those words come to mind. 4. Tell us about the reactions in your community when a cougar is spotted/reported in the area. 5. State wildlife agencies and some Washington residents want to balance cougar conservation with concerns for public safety. Do you think a balance can be reached? 6. Tell us about the cougar population in your area? [Are there a lot of sightings? What are they eating? Is the population increasing, decreasing or staying the same?]	• Has anyone ever encountered a cougar?
Identifying participants' experiences with and orientation to cougars.		• What is it about cougars that makes people afraid of them? What is it about cougars that people like, respect, or appreciate them? • Need some probing questions for #5
Identifying what people know.		
Assess participants' assignment of responsibility for managing risks associated with human/cougar interactions.	7. PROVIDE BRIEF DESCRIPTION OF THE COUGAR SITUATION IN WA STATE . 8. Who, would you say, is responsible for managing any risks associated with cougars? 9. To what extent are property owners (including homeowners) responsible?	• What are some of the risks as you see them? • Does responsibility vary depending on where the encounter/conflict occurs? (I.e., In the wilderness, in an urban area, near a school?) • Are they doing a good job?
Introduce desired behavior changes to reduce human/ cougar encounters.	10. Handout a list of cougar encounter prevention measures one can take at home (i.e. - pets indoors, kids supervised, cougar cover reduced) and how each works to prevent encounters. 11. [INSTRUCT PARTICIPANTS TO READ THE HANDOUT, selecting the actions they feel most and least likely to take, AND LET THEM KNOW WE'LL BE DISCUSSING ITS CONTENT AFTERWARDS]	
Assess behavior change barriers and motivators.	12. Which actions would be the easiest for you to implement at home? Why? 13. Which ones would be more difficult? Why? Do You think it is important to implement these at home? Why or why not?	• What would motivate you to take some of these steps • (if not inclined to see prevention measures as important) Can you think of a situation where you would decide to take some of these steps? Which steps?
Determine whether "cougar-safe" behaviors will give the target audiences a sense of control over the risks associated with residing in cougar country.	14. Considering everything we've discussed so far, to what extent do you think adopting these behaviors will reduce the risks associated with cougars? 15. Making these changes may not completely prevent cougar movement through your property. Under what conditions is that acceptable to you? 16. What will you do if you see a cougar on your property?	• What level of risk is acceptable? • Will you respond differently depending on where the cougar is on your property? How close it is to your house? • What do expect from WDFW?

Objective	Overarching question (or instruction)	Suggested probing questions (depending on time and responses)
Exploring whether participants feel it is fair for them to be held responsible for human/cougar encounter prevention as residents of cougar country.	17. Earlier I asked the extent to which individual property owners are responsible for human/cougar encounter. How have your views changed – if at all – as a result of the discussion we've had since then? 18. How would you respond to these actions being required by law or by your homeowners association?	
Test specific messages that will help motivate behaviors/attitudes	19. [SET OUT BROCHURES] Look at the brochures displayed on the tables here. Each is labeled with a letter for identification. Please judge these brochures by their covers. Pick them up if you want.. Which brochures are most appealing? Which brochures would you be inclined to pick up? Pick your two favorites and note which letters you chose. 20. Now tell us what information you'd like to see inside. 21. [HAND OUT BROCHURE TITLE LIST] Here is a list of brochure titles various organizations use to educate the public about cougars. Please take a minute or two to read them and then circle the three that you would be most likely to pick up and read. Also, circle any words or phrases that you find compelling and cross out any that are not effective in getting your attention. 22. [HAND OUT MESSAGES LIST] Here are some statements about cougars that could be used to educate the public or encourage certain behaviors related to cougars. Please read them and then circle the three that are most likely to compel you personally to take steps to avoid cougar encounters. Also, circle words or phrases that you find compelling and cross out any that are not effective in getting your attention. 23. Think about where you turn for trusted information? From where would you want to receive cougar information?	General reactions: How motivating is it? What do you like most/least about it?
Test messengers (i.e.- WDFW biologist, WDFW enforcement officers, local authority/expert, NGO		• Communication pathways: What is the best way to deliver this kind of information to you so that you are most likely to pay attention to it? • Local organizations? WDFW biologists or Enforcement Officers? Non-government wildlife experts?
Wrap up	24. Finally, what do you want to know about cougars that we didn't talk about today?	

Appendix 1c: Focus Group Discussion Guide – Winthrop

Objective	Overarching question (or instruction)	Suggested probing questions (depending on time and responses)
Introduction	1. Introduction, purpose and ground rules. 2. Let's go around the table and please introduce yourself and tell us the general area where you live and why you volunteered to participate today.	
Exploring participants' attitudes and belief about cougars.	3. Each of you has a pen and paper. Let's take just a minute to write words that first come to mind when you hear the word: "cougar". [wait 30 seconds] Go ahead and keep writing if you want, but who's already got something written down? Tell us what you have and why you think those words come to mind.	• Has anyone ever encountered a cougar?
Identifying participants' experiences with and orientation to cougars.	4. Tell us about the reactions in your community when a cougar is spotted/reported in the area. 5. Tell us about the cougar population in your area? 6. Referring back to the handout do you think the cougar population increasing, decreasing or staying the same?	• Why do people react this way? • What is it about cougars that people fear like, respect, or appreciate?
	7. Can people in this part of Washington coexist with cougars? Are there challenges to coexistence?	• Are there a lot of sightings? • Would you say there are cougar issues in this area?
Assess participants' assignment of responsibility for managing risks associated with human/cougar interactions.	8. Instruct participants to read first paragraph from Close Encounters portion of the WDFW living with wildlife brochure – cougars. 9. Does this information seem relevant to where you live? 10. Instruct participants to read If living in cougar country, especially wooded foothills portion of the WDFW living with wildlife brochure – cougars. 11. Do you think these are important precautions to take? 12. To what extent are property owners (including homeowners) responsible?	• Does the passage change the way that you look at the area where you live? • Are there risks that go along with living where you live, due to wildlife? • Can you imagine a scenario where you'd be motivated to take these precautions? • Would your opinion on this be affected if you knew the cougar population was decreasing? Increasing?
	13. What will you do if you see a cougar on your property?	
	14. [Pass out Montana cougar brochure] Spend some time with the Montana cougar country brochure and the WDFW brochure. Open the brochure. I will give you a few minutes to look through it and then ask you what you notice. 15. Now compare the two. What brochure would you most like to read and why? 16. Now tell us what information you think is important to include in brochures like this. 17. [Pass out GBOP materials] Now let's look at some similar outreach materials about bears. 18. What do you see that you like or what are you drawn to? Why? 19. What would you like to see in outreach materials similar to these bear materials, but for cougars?	• General reactions: What did you notice first? What were you most interested in reading and why? Did anyone notice the headlines? Did you like the photos in this brochure? Would you prefer color or? What do you like most/least about them? • Spend time on brochure titles and cover messages. What stands out. What headings do you like? Don't like? • Do you have suggestions on how to improve the brochure that would make it more readable for you or more interesting? • How would you compare the two cougar country brochures?

Objective	Overarching question (or instruction)	Suggested probing questions (depending on time and responses)
Test messengers (i.e.- WDFW biologist, WDFW enforcement officers, local authority/expert, NGO)	20. Now we're going to take the discussion in a different direction. We'd like you to think about attending an informational presentation about how to coexist with cougars. First, would you be interested in an informational meeting about cougars? If so, what interests you? 21. What would motivate you to attend meetings or presentations about cougars? 22. Think about where you turn for trusted information? Who would you want to run the meeting? 23. [***Public Involvement Handout***] Last handout! Tell us how you might want to be involved in wildlife issues in your community or state wide. Why are you interested in the activities you chose? 24. **If time permits…** [HAND OUT MESSAGES LIST] Here are some statements about cougars that could be used to educate the public or encourage certain behaviors related to cougars. Please take a minute or two to read them and then circle the three that are most likely to compel you personally to take steps to avoid cougar encounters. Also, circle any words or phrases that you find compelling and cross out any that are not effective in getting your attention.	• Do you feel you have information about cougars that would be of interest to your friends or neighbors, or to WDFW? • Local organizations? WDFW biologists or Enforcement Officers? Non-government wildlife experts?
Wrap up	25. Finally, what do you want to know about cougars that we didn't talk about today?	

Appendix 1d: Focus Group Actions to Reduce Cougar Encounters: Handout

Actions to Reduce Cougar Encounters

	Does not apply to me	I do this now	Willing to do this	Not willing to do this
1. **Don't feed wildlife**: Feeding deer and raccoons attracts cougars and can increase the likelihood of an encounter.	☐	☐	☐	☐
2. **Bring pet food inside:** Leaving pet food outside attracts raccoons, opossums, coyotes and other wildlife that lures cougars who might otherwise move on.	☐	☐	☐	☐
3. **Keep pets inside from dusk until dawn:** Don't allow pets to roam outside during dusk, dawn and at night. Bring them inside or secure them in a kennel with a secure top. Loose pets are easy prey.	☐	☐	☐	☐
4. **Landscape for safety:**				
a. Remove plants that attract wildlife (deer, raccoons, etc). Cougars are attracted to deer who may gather in your yard or on your property.	☐	☐	☐	☐
b. Prune dense vegetation near your house and buildings where cougars can hide. Cougars avoid open areas without brush to serve as cover.	☐	☐	☐	☐
5. **Keep outdoor areas well lit:** Adding motion detecting lighting to areas around your home can deter cougars who prefer to move about undetected. Light walkways where people frequent.	☐	☐	☐	☐
6. **Provide sturdy, secure covered shelters to protect hobby livestock at night:** Secure livestock in enclosed barns and sheds at night.	☐	☐	☐	☐
7. **Keep children safe in cougar country:** Because of their small size children seem to be more vulnerable to cougars. Talk to your kids about what to do if they see a cougar. Supervise children – do not leave them unattended.	☐	☐	☐	☐

Appendix 1e: Focus Group Message Testing: Handout

Test Messages

1. The best way to avoid conflict with cougars is to not attract them.
2. Feeding wildlife places wildlife at risk and puts them on a collision course with humans. Help keep wildlife from coming into conflict with people because when that happens, everyone loses.
3. While you may be willing to tolerate the presence of wildlife at your home, your neighbors my not, and their call to a government agency may result in the death of a cougar.
4. Animals that learn to rely on food from human sources may never develop normal foraging behavior. Feeding wildlife causes problems for wild populations including disease and starvation.
5. Cougars prefer deer, but if allowed, they also eat pets and livestock. In extremely rare cases, even people have been attacked by cougars.
6. By taking reasonable actions around the home we can keep our children, pets, and property safe, while protecting the wildlife we share the land with.
7. Be a good neighbor. Protect both humans and the wild residents of your community.
8. Keep children safe in cougar country. Supervise your kids when they play outside and teach them how to prevent and react to cougar encounters.
9. By being responsible stewards, we can ensure that cougars continue to be an important part of our natural landscapes and wilderness heritage.
10. We owe it to our children and grandchildren to maintain the natural health of this region by being good stewards of the land and our wildlife neighbors.

Appendix 1f: Focus Group Sample Brochure Cover Text: Handout

Brochure Cover Text

1. What every homeowner should know about living with Cougars
2. Keep Me Wild - Feeding wildlife is dead wrong
3. I don't want a cougar in my backyard, what can I do?
4. Living in Cougar Country - 5 easy ways to keep you and your family safe
5. Cougars: pointers for peaceful coexistence with cougars and bears
6. Co-exist with our wildlife neighbors with these safety tips
7. Stay safe in cougar country - Tips to keep you, children, pets, livestock, and wildlife safe.
8. Safety guidelines while living and recreating in cougar country
9. Best practices around the home for living safely in cougar country.
10. Living in cougar country - guidelines for protecting people, property, and wildlife

Appendix 1g: Focus Group Image Testing

A

B

C

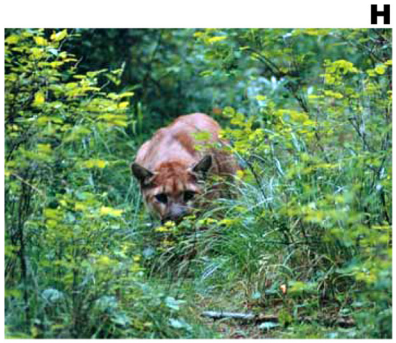
D

E

F

G

H



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K

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Appendix 2a: Key Informant Interviews: Responses

Excerpted from *Key Informant Interviews Summary and Conclusions* by Kate Lamson, prepared for Insight Wildlife Management

Awareness and Knowledge

- **Awareness/Knowledge Level of Cougar Incidents:** The level was determined by their response to the first question which asked for them to tell about incidents with cougars in their community. All 19 respondents indicated some level.
  - Northeast (NE): Two-thirds of the respondents reported moderate (1 respondent) to high (3 respondents) levels of cougar incidents near their community.
  - Interstate 5 (I-5): Five out of eight respondents reported moderate (2 respondents) to high levels (3 respondents) of incidents and three out of eight reported low levels of incidents.
  - Olympic Peninsula (OP): Three-fourths of respondents reported moderate levels of incident
  - The overall level of incidents is fairly even between low, moderate, and high.
- **Influence of Past Incidents on Perceptions:** The answers were determined by how often the informant brought up past events to explain what they mean when answering other questions. Informants sometimes explicitly stated how much the community was affected by past events. Ten out of 19 respondents indicated an answer to this topic.
  - NE: Two-thirds of respondents reported moderate (2 respondents) to high (2 respondents) influence of past incidents on their perceptions of cougars.
- **Level of Awareness of Being in Cougar Country:** This was determined based upon the respondents answer to how comfortable their community is with being in cougar country or it was inferred from other answers. Eighteen out of 19 respondents gave measurable answers.
  - NE : The majority (5/6) of respondents reported their communities as being highly aware of being in cougar country.
  - I-5: Three-fourths of respondents reported their communities as being moderately (1) to highly (5) aware of being in cougar country.
  - OP: Half of respondents reported their communities as being mostly unaware of being in cougar country and the other half reported their communities as being highly aware.
- **Knowledge of Cougar Ecology and Behavior:** This was either directly stated by respondents or inferred from other answers. Eight out of 19 respondents gave measurable answers.
  - There were not enough responses in order to make an educated guess about trends; however, the responses are tending toward low to moderate levels of cougar ecology and behavior.
- **Knowledge of Cougar Incident Prevention Techniques:** This was either directly stated by respondents or inferred from other answers. Eighteen out of 19 respondents answered.
  - NE: The majority (5/6) of respondents reported moderate to high knowledge of prevention techniques.
  - I-5: The majority of respondents (7/8) reported low knowledge.
  - OP: Two out of four respondents reported low knowledge, one reported moderate levels, and one reported high levels.
  - Overall, almost half of all respondents do not seem to have much knowledge regarding prevention techniques.

- **Who is Less Knowledgeable about Cougars:** This was either directly stated by respondents or inferred from other answers. Fourteen out of 19 respondents gave measurable answers but one respondent had two answers.
  - Nine out of 14 respondents alluding to who is less knowledgeable replied that it is the newcomers who do not know about cougars and who need to be educated about living with cougars. Notably, five out of six NE respondents and half of I-5 respondents were of this view.
  - Other groups believed to be less knowledgeable about cougars include wilderness supporters (1 of 14 and I-5 respondent), the less educated (2 of 14 and both I-5 respondents), people who feed wildlife (1 of 14 and OP respondent) and non-livestock owners (1 of 14 and OP respondent).
- **Who is Responsible for Conflict:** This was directly stated by respondents when asked. Eighteen out of 19 respondents answered.
  - Only one respondent blamed cougars for conflict.
  - Nine respondents place the responsibility on humans. Notably, five out of eight I-5 respondents and half of OP respondents believe humans are the main source of conflict. A large source of how humans conflict with cougars is through encroachment.
  - Eight respondents place the responsibility on both humans and cougars. Half of the NE and half of the OP respondents believe that both cougars and humans are at fault.
- **Level of Human/Cougar Habitat Separation:** This was inferred from other answers. Twelve out of 19 respondents alluded to this.
  - The majority (10 of 12) of respondents alluding to this have a moderate to high view of human/cougar habitat separation. Nearly all (5/6) NE respondents (also the main respondents to allude to this category) and half of OP respondents believe this. Not very many I-5 respondents alluded to human/cougar habitat separation but the three out of eight that did reported moderate to high views of separation.
  - While this does not necessarily mean that people do not view cougars as a part of the landscape in which they live, this does indicate how they wish to live with cougars. Beliefs, Attitudes, and Values
- **Views of Cougars:** This was directly stated by respondents. Nineteen out of 19 respondents answered.
  - Only one respondent (OP) replied positively as to their community's view of cougars.
  - Four respondents replied negatively toward cougars (one is a NE respondent, one is a state representative of the Cattlemen's Association, one an I-5 respondent, and one an OP respondent).
  - Seven respondents replied positively and negatively (4 I-5 and 3 NE).
  - Four respondents replied neutrally (meaning cougars are just a part of where they live)
  - One respondent replied neutrally (meaning cougars are just there) to positively.
  - Two respondents replied negatively to neutrally (reason for this was that different population segments hold different views or just because people view cougars as part of the area does not mean that they are not scary).
  - Overall, responses are mixed with a slight skew toward negative views of cougars. For many respondents, views tend to depend on which segment of the population we are examining. The populations seen as holding more negative views by respondents include: rural people, livestock owners, sportsmen/hunters, and newcomers, particularly those newcomers from the west side of the state.

- **Children's Influence on Attitudes:** This was directly stated by respondents. Thirteen out of 19 respondents gave measurable answers.
  - Most people (11 out of 13) replied that children have a moderate to high influence on their views of cougars. Children's safety is often thought of when people think about cougars.
- **Support of Pilot Program:** This was either directly stated by respondents or inferred from other answers. Seven out of 19 respondents alluded to this.
  - Only seven respondents alluded to the pilot program and so consequently there is not a sufficient number from which to draw conclusions. However, the majority of the respondents who brought up this topic were from the NE and Klickitat County. This is not surprising considering that the program involves only these counties.
- Willingness to Take Steps to Coexist with Cougars through Regulation: This was directly stated by respondents. Nineteen out of 19 respondents answered.
  - Overall, no one could be categorized as eager for regulations. Only five respondents indicated any willingness (moderate levels) through regulations to coexist with cougars and no one reported a high willingness. Two of the five moderately willing are from I-5 corridor counties, two are from OP counties, and one is from NE counties.
- **Willingness to Take Steps to Coexist with Cougars through Voluntary Means:** This was directly stated by respondents. Eighteen out of 19 respondents answered.
  - The majority of people seem very willing (14 in the high category) to coexist with cougars through voluntary measures that would help to prevent incidents. Interestingly, two-thirds of the people who are only moderately willing are from the NE counties. No one said that their community would not be very willing.
  - Clearly regulations cannot be counted on to provide a reliable measure of people's willingness to coexist with cougars. There is something else reacting with willingness to coexist such as anti-government sentiment, the desire to be independent and left alone, or a strong desire to not be told what to do.
- **Regulation Versus Education:** This was either directly stated by respondents or inferred from other answers. Eighteen out of 19 respondents alluded to this.
  - Overwhelmingly (17 out of 18), people replied or suggested that education is a far better route to take than regulation in order to prevent future cougar incidents. One of these 17 respondents did qualify their response with a stipulation – that tax payer money should not be used to fund the education. The only person who did not prefer education simply does not believe that either education or regulation is needed.

Perceived Risk

- **Level of Fear Associated with Cougars:** This was either directly stated by respondents or inferred from other answers. Seventeen out of 19 respondents gave measurable answers.
  - A majority (12 out of 17) of respondents reported low levels of fear associated with cougars.
  - Those that reported moderate fear are from NE (2 respondents) and I-5 (2 respondents) counties.
  - All OP respondents reported low fear.

- **Level of Risk for Humans Associated with Cougars:** This was either directly stated by respondents or inferred from other answers. The difference between fear and risk is that risk relates to how people view the possibilities/chances of having an encounter or worse, being attacked. Seventeen out of 19 respondents gave measurable answers.
  - Even though over half of respondents (10 out of 17) reported that there is low risk, there were still seven respondents reporting moderate to high risk.

  One respondent reporting high risk is from the NE and the other respondent reporting high risk is the state representative from the Cattlemen's Association.
- **Level of Risk for Domestic Animals Associated with Cougars:** This was either directly stated by respondents or inferred from other answers. Eleven out of 19 respondents alluded to this.
  - Five of the eleven respondents alluding to domestic animal risk reported moderate levels while three reported high levels and three reported low levels.
  - Notably, three of the four OP respondents believe that there is moderate risk.
- **Level of Risk for Livestock Associated with Cougars:** This was either directly stated by respondents or inferred from other answers. Six out of 19 alluded to this.
  - Unfortunately, only six respondents alluded to livestock risk and two of those are cattle people (one of which is the Cattlemen's Association state representative). Therefore, there is not a sufficient number of responses from which to draw conclusions.
- **Additional Causes of Higher Perceived Risk:** This was either directly stated by respondents or inferred from other answers. Seven out of 19 respondents brought this up.
  - While only seven people mentioned other reasons for having a higher perceived risk of cougars, these are worth listing to expand the list of potential reasons for perceived risk. These additional causes include the media (3 respondents), the hound hunting ban (2 respondents), an increase in incidents (1 respondent), and neighboring counties perceptions and their number of cougar incidents (1 respondent from OP).

Education Methods/Communication Approaches for Conflict Reduction

- **Openness to Cougar Education:** This was directly stated by respondents. Eighteen out of 19 respondents gave a measurable answer.
  - Overwhelmingly, 17 out of 18 respondents are moderately to highly open to cougar education.
    - One-third of NE respondents are highly open to education and one-third are moderately open to education.
    - Three-fourths of I-5 respondents are highly open to education.
    - Three-fourths of OP respondents are highly open to education.
  - The one respondent reporting a low openness to education believes that their community already knows about cougars.
- **Information Communities are Most Interested in:** This was directly stated by respondents. Nineteen out of 19 respondents answered this and many mentioned more than one topic.
  - General Safety = 7 (3 from OP, 2 from NE, and 1 from Cattlemen's Association state representative)

- Specific Safety Topics:
  - Level of Risk = 3 (2 from I-5, 1 from NE)
  - Prevention and Encounter Tips = 7 (2 from NE and 4 from I-5, and 1 from OP)
  - Government Risk Mitigation Measures = 1 (from I-5)
  - Easy Ways to Differentiate between Safety Tips for Different Predators = 1 (from I-5)
  - General Cougar Information and Facts = 4 (2 from I-5, 1 from NE, and 1 from OP)
  - Specific Cougar Information and Facts:
  - Biology, Behavior, and Ecology = 7 (2 from NE, 2 from I-5, and 2 from OP)
  - Identification = 1 (from OP)
  - Defining Cougar Habitat = 1 (from I-5)
  - Laws = 1 (from I-5)
  - History = 1 (from I-5)
  - Reasons for Conflicts Between Humans and Cougars = 1 (from I-5)
  - Population Trends into the Future = 1 (from I-5)
- Human Behavior Affecting Encounters = 1 (from NE)
- Cougar Population Health and How to Improve = 1 (from OP)
- Cougar Population Trends Correlated with Food Levels and Hound Hunting Ban = 1 (from I-5)
- Living in Cougar Country = 1 (from I-5)

❖ **Acceptable Organizations/Traits of Organizations as Sources of Outreach and Information:** This was either directly stated by respondents or inferred from other answers. Eighteen out of 19 respondents alluded to this.

- Acceptable Organizations/People:
  - General Government = 6
  - Federal = 3
  - Enforcement Agency = 1 (I-5)
  - County Commissioner = 1 (NE)
  - Senator = 1 (NE)
  - WDFW/State = 3 (2 from NE and 1 from Cattlemen's Association state representative)
  - Private Consultant = 1 (NE)
  - Newspapers = 1 (I-5)
  - Public Utility District = 1 (NE)
  - Non-Governmental = 4
  - Hound Hunters = 2 (1 from Cattlemen's Association state representative and 1 from I-5)
  - Desired Traits to Open People Up to Listening:
  - Middle Ground = 1 (NE)
  - Non-Advocacy = 2 (I-5)
  - Credible = 2
  - Wildlife Person = 2
  - Local Organizations/People = 6
  - Non-Profit = 1 (I-5)
  - Experts = 3

- **Level of Anti-Government Sentiment:** This was either directly stated by respondents or inferred from other answers. Thirteen out of 19 respondents gave measurable answers.
  - While slightly more than half of the 13 respondents answering this question reported low anti-government sentiment, six of 13 reported moderate to high levels of anti-government sentiment with four of these being high levels.
  - Notably, four of the six respondents reporting moderate to high levels of anti-government sentiment are all NE respondents.

- **Respondents' Education Suggestions:** The following are direct statements by respondents and inferred from other answers given. Eighteen out of 19 respondents answered this but many gave more than one answer.
  - Incentives are needed to help people voluntarily take certain measures. The local sheriff's department should be contacted instead of WDFW when there is a cougar incident so that the number of incidents can be recorded and because WDFW has not given a good response to reports in the past. (NE mayor)
  - There needs to be cougar education in schools. The information should be made easily accessible to the public. (I-5 mayor)
  - Kids should be taught about cougars. Information about cougars should be put in high visibility areas. Newspapers are good conduits of information. (I-5 County Commissioner)
  - Volunteers and local organizations should be included in providing outreach and communication methods need to be diverse (to match ways of learning). (OP County Commissioner)
  - There should be a variety of distribution methods including traditional methods and information should be dispersed quickly so that no one gets hurt. (Cattlemen's Association state representative)
  - There needs to be continuous education in order to remind people how to live with cougars. It would also be good to put living in cougar country tips in the "neighbor's handbook" that the Methow Conservancy hands out to real estate offices, as well as hand out a brochure of what to be aware of when living in cougar country. (NE Cattlemen's Association)
  - The actual number of cougars should be determined. These surveys could be conducted during bad winters when their tracks are more easily spotted (NE Hunting Outfitter)
  - Conduct education within schools (as schools impact and direct culture and adults can more easily accept change when learning from their children). Provide long-term/ continuous education. (I-5 hunter)
  - For outreach, use local organizations or agency personnel that already have the trust of people (OP General/Feed Store Owner)
  - Newspapers are good conduits of information. There should be continuous cougar education. (I-5 General/Feed Store Owner)
  - To make predator education less confusing, combine educational programs for several animals. People need to know the consequences of their actions and inactions. There should be education in schools. Outreach should be in collaboration with local information sources. (I-5 State Patrol Officer)
  - Volunteers and local organizations should be included in providing outreach and communication methods need to be diverse (to match ways of learning). (OP County Commissioner)
  - There should be a variety of distribution methods including traditional methods and information should be dispersed quickly so that no one gets hurt. (Cattlemen's Association state representative)

- There needs to be continuous education in order to remind people how to live with cougars. It would also be good to put living in cougar country tips in the "neighbor's handbook" that the Methow Conservancy hands out to real estate offices, as well as hand out a brochure of what to be aware of when living in cougar country. (NE Cattlemen's Association)
- The actual number of cougars should be determined. These surveys could be conducted during bad winters when their tracks are more easily spotted (NE Hunting Outfitter)
- Conduct education within schools (as schools impact and direct culture and adults can more easily accept change when learning from their children). Provide long-term/ continuous education. (I-5 hunter)
- For outreach, use local organizations or agency personnel that already have the trust of people (OP General/Feed Store Owner)
- Newspapers are good conduits of information. There should be continuous cougar education. (I-5 General/Feed Store Owner)
- To make predator education less confusing, combine educational programs for several animals. People need to know the consequences of their actions and inactions. There should be education in schools. Outreach should be in collaboration with local information sources. (I-5 State Patrol Officer)
- In order for outreach to be successful, there should be active community involvement in the outreach process. There is also a specific order to the outreach strategies and presentation of education materials so as not to alienate any segment of audience. Also, in order to include all audience segments, there should be a diversity of communication methods, viewpoints, and organizations involved. It would also help if the outreach took place in community venues where people feel comfortable. (I-5 Backcountry Horsemen Association)
- Emphasize consequences of actions or inactions. Partner with local organizations/ information sources. (OP Chamber of Commerce President)
- There should be a balance between education and not alarming people about potential cougar incidents. Public events are usually good places for education. Education for children is good because then it spreads to the parents through the children. (NE Chamber of Commerce President)
- Outreach should only give facts and it should not try to persuade people. Kids should be taught because they are interested and can grow up to be responsible adults. Use community assets (like schools and libraries) to attract audiences. Integrate outreach into pre-existing events to reach adults. Free things (prompts) are good enticements to get people interested in what you are saying. (I-5 Teacher)
- Put literature in a local paper or at kiosks as they are more effective in reaching a wider audience than meetings. Redevelop communities trust with government agencies. (NE Teacher)
- Education needs to be more widespread than through meetings. Information should be distributed at trail heads and through developers who are building new housing developments on the fringe of rural areas about living in cougar country. Combine predator information tips to make less confusing. (I-5 Newspaper Media Representative)
- Incorporate education into existing events or club meetings. Include safety education in schools about what to do if you encounter a cougar and how to prevent attracting cougars. A coloring book about cougars could be developed for this in-school education. Provide outreach to service groups. Post a video presentation about cougars on the internet, like on a newspaper website. (OP Newspaper Media Representative)

Appendix 2b: Key Informant Interviews: Views of Cougars

From *Key Informant Interviews Summary and Conclusions* by Kate Lamson

Category	Level	Views of Cougars					
		Positive	Negative	Positive and Negative	Neutral	Neutral to Positive	Negative to Neutral
Level of Cougar Incidents	high		3	3 (2 NE, I-5)	1 (I-5)		
	moderate		1 (OP)		2 (OP, I-5)	1	2
	low	1		4 (3 I-5, NE)	1 (NE)		
Influence of Past Cougar Incidents	high		3	1 (NE)			
	moderate			1 (NE)	1 (NE)		1 (I-5)
	low		1 (OP)		1 (I-5)		1 (NE)
Level of Awareness of Being in Cougar Country	high		4	4 (2 NE, 2 I-5)	3 (2 I-5, NE)	1	2
	moderate			1 (I-5)			
	low	1		1 (I-5)	1 (OP)		
Ecology Knowledge	high						
	moderate		1 (OP)	2 (I-5)	1 (I-5)		
	low	1		2 (I-5)	1 (OP)		
Prevention Knowledge	high		2 (CA, OP)		1 (NE)		
	moderate			2 (NE)	1 (I-5)	1	1 (NE)
	low	1	2 (NE, I-5)	4 (I-5)	2 (OP, I-5)		1 (I-5)
Support of Pilot Program	high		2 (NE, CA)	2 (NE)	1 (I-5)		
	moderate			1 (NE)			
	low		1 (I-5)				
Willingness	high						
	moderate		1 (OP)	1 (I-5)	1 (NE)	1	1 (I-5)
	low	1	3	6	3 (OP, 2 I-5)		1 (NE)
Willingness (voluntary)	high	1	3	6	3		1 (NE)
	moderate		1 (NE)	1 (NE)	1 (I-5)	1	
	low						
Level of Fear	high		1 (CA)				
	moderate		2 (NE, I-5)	1 (NE)			1 (I-5)
	low	1	1 (OP)	4 (2 I-5, 2 NE)	4	1	1 (NE)
Level of Risk	high		1 (CA)	1 (NE)			
	moderate		1 (I-5)	2 (NE, I-5)	1 (I-5)		1 (I-5)
	low	1	1 (OP)	3 (2 I-5, 1 NE)	3	1	1 (NE)
Level of Risk for Domestic	high		1 (CA)	2 (I-5, NE)			
	moderate	1	1 (OP)	1 (I-5)	1 (I-5)	1	
	low						1 (I-5)
Level of Risk for Livestock	high		2 (CA, I-5)				
	moderate		1 (OP)	1 (NE)	1 (OP)		
	low			1 (NE)			

*CA = state representative from the Cattlemen's Association

Respondent's Views of Cougars Regionally					
Positive =	1 - from OP	Positive/ Negative =	7 - 4 from I-5 and 3 from NE	Neutral to Positive =	1 - from OP
Negative =	4 - 1 NE, 1 CA, 1 I-5, and 1 OP	Neutral =	4 - 1 from OP, 1 from NE, and 2 from I-5	Negative to Neutral =	2 - 1 from NE and 1 from I-5

Appendix 2c: Stakeholder Summary – *Mayors & County Commissioners*

From *Key Informant Interviews Summary and Conclusions* by Kate Lamson

		Mayors		County Commissioners	
Question Categories	**Answer Categories**	**NE Counties**	**I-5 Corridor Counties**	**I-5 Corridor Counties**	**Olympic Peninsula Counties**
Awareness/Knowledge Questions	level of cougar incidents	high	low	low	low
	influence of past incidents on perceptions	high			
	level of awareness of being in cougar country	high	high	moderate	low
	knowledge of cougar ecology and behavior		low	moderate	low
	knowledge of cougar incident prevention techniques	low	low	low	low
	who is less knowledgeable about living with cougars	newcomers	newcomers, wilderness supporters	less educated	newcomers
	who is responsible for conflict	humans (encroachment, allow habituation)		humans (enter territory and surprise them)	humans (conflicting terrritory and sense of ownership)
	level of human/cougar habitat separation	high		high	high
Beliefs, Attitudes, and Values	views of cougars	depends, mostly fearful	broad	depends on education - rural people view as threat	mostly positive
	children's influence on attitudes		moderate		high
	support of hound hunting	high			
	willingness to take steps to coexist with cougars (mandated)	low	moderate	low	low
	willingness to take steps to coexist with cougars (voluntary)	moderate	high	high	high
	regulation versus education	education	education	education	education
Perceived Risk	level of fear associated with cougars	moderate	varies with person	low	low
	level of risk for humans associated with cougars	"realistic" - awareness	low	low	low
	level of risk for domestic animals			high	moderate
	level of risk for livestock				
	additional causes of higher perceived risk			media	
Education Methods/Communication Approaches for Conflict Reduction	openness to cougar education	moderate	high	high	high
	information most interested in	safety, pilot program and implications	general, ease concerns	general facts	general facts and safety
	acceptable organization information sources	middle ground, Senator Morton	non-advocacy, credible	diversity, many local	diversify
	level of anti-government sentiment	high for WDFW	low		depends on group
	education suggestions	incentives needed to do unwanted things, contact local sheriff's department not WDFW	education in schools, easy public access	teach kids, newspapers good conduits, put in high visibility areas	volunteers and local organizations in providing outreach, diversify communication methods (ways of learning)

Appendix 2c: Stakeholder Summary – *Cattlemen's Association & Hunters, Part 1*

		Cattlemen's Association		Hunters	
Question Categories	**Answer Categories**	**State Representative**	**NE Counties**	**NE Counties**	**I-5 Corridor Counties**
Awareness/Knowledge Questions	level of cougar incidents	high	high	low	high
	influence of past incidents on perceptions	high	moderate		high
	level of awareness of being in cougar country	high	high	(low for newcomers)	high
	knowledge of cougar ecology and behavior	moderate for livestock owners but low for other people		(low for newcomers)	
	knowledge of cougar incident prevention techniques	high	moderate		low
	who is less knowledgeable about living with cougars		newcomers	newcomers, who need to know deer hunting keeps cougars away	
	who is responsible for conflict	cougars (lost fear of humans and think of humans as prey), humans (encroachment and hound hunting ban)	cougars (search for easy prey) and humans (encroachment and reduction of cougar prey)	humans (encroachment into cougar and deer habitat) and cougars (follow deer)	humans (lack of hound hunting) and cougars
	level of human/cougar habitat separation		moderate	moderate	
Beliefs, Attitudes, and Values	views of cougars	threat to livestock business	depends on if own livestock (protect vs. not protect), part of wildlife people live there for	mixed like and dislike, sportsmen dislike because competion	livestock owners (want eliminated) and the general hunting population (competion) dislike
	children's influence on attitudes		high	high	
	support of hound hunting	high	high	low - cannot hunt by foot, brings west side hound hunters in	low - cannot hunt by foot, people do not like the quota, and ethics of hound hunters questionable
	willingness to take steps to coexist with cougars (mandated)	low	low	low	low
	willingness to take steps to coexist with cougars (voluntary)	high, provided they know the costs/benefits and consequences of doing or not doing things	high	moderate	high
	regulation versus education	education	education	education	education
Perceived Risk	level of fear associated with cougars	high	low (events infrequent)	moderate	moderate - low if never seen a wild one or have not encountered one and high if have
	level of risk for humans associated with cougars	high	high (aware of possibilities)	moderate	moderate - depends on experience
	level of risk for domestic animals	high		high	
	level of risk for livestock	high	moderate	low	high
	additional causes of higher perceived risk	public took away only effective management tool - hound hunting	media		

Appendix 2c: Stakeholder Summary – *Cattlemen's Association & Hunters, Part 2*

		Cattlemen's Association		Hunters	
Question Categories	**Answer Categories**	**State Representative**	**NE Counties**	**NE Counties**	**I-5 Corridor Counties**
Perceived Risk	level of fear associated with cougars	high	low (events infrequent)	moderate	moderate - low if never seen a wild one or have not encountered one and high if have
	level of risk for humans associated with cougars	high	high (aware of possibilities)	moderate	moderate - depends on experience
	level of risk for domestic animals	high		high	
	level of risk for livestock	high	moderate	low	high
	additional causes of higher perceived risk	public took away only effective management tool - hound hunting	media		
Education Methods/Communication Approaches for Conflict Reduction	openness to cougar education	high - livestock owners deal with cougars, other people need to know how	high	moderate, newcomers need more	moderate - depends on personal experience and presentation method
	information most interested in	safety	general biology and behavior info and how relate to human safety	cougar habitat needs, general information	impact on people and related safety of humans and animals, government danger mitigation, safety tips, future for cougars
	acceptable organization information sources	WDFW - 1st, Wildlife Services, houndsmen, livestock producers, FWS - maybe	Methow Conservancy (local), WDFW, Forest Service	private consultant	non-governmental, especially if local people with similar demographic background; researchers
	level of anti-government sentiment	low	moderate - keep out of business but also know gov knows info	high	high
	education suggestions	variety of distribution methods including traditional methods, get information out quickly so no one gets hurt	continuous education to remind people, living in cougar country tips in "neighbor's handbook" that Methow Conservancy hands out to real estate offices, brochure of what to be aware of	actual number of cougars should be found out which could be conducted during bad winters when their tracks are more easily spotted	conduct education within schools (as schools impact and direct culture and adults can accept change more easily when learning from their children), long-term/continuous education

Appendix 2c: Stakeholder Summary – *General/Feed Store Owners & Backcountry Horsemen Association, Part 1*

		General/Feed Store Owners		Backcountry Horsemen Association	
Question Categories	**Answer Categories**	**Olympic Peninsula Counties**	**I-5 Corridor Counties**	**I-5 Corridor Counties**	**NE Counties**
Awareness/Knowledge Questions	level of cougar incidents	moderate	moderate	high (as of recent), encounters increasing	low
	influence of past incidents on perceptions		low		moderate
	level of awareness of being in cougar country	low for most (high for livestock owners)	high	high	high
	knowledge of cougar ecology and behavior	low		moderate	
	knowledge of cougar incident prevention techniques	low	moderate	low	high
	who is less knowledgeable about living with cougars	people who don't own livestock	newcomers (small proportion of pop right now)	newcomers	
	who is responsible for conflict	humans and cougars (territory conflicts)	"local circumstances" - cougars look for quick meal, mostly young cougars; perhaps encroachment	humans (encroachment and deer habit alteration and better livestock management practices)	cougars (going around human habitation)
	level of human/cougar habitat separation				moderate
Beliefs, Attitudes, and Values	views of cougars	part of the landscape in which they live	part of the landscape in which they live, "live and let live" attitude	depends on length of residence and reason for living there	nobody really views as a problem, more problems with coyotes
	children's influence on attitudes	moderate	high	high	low
	support of hound hunting		probably high, supports hound hunting		
	willingness to take steps to coexist with cougars (mandated)	low	low	low	moderate - already doing these things
	willingness to take steps to coexist with cougars (voluntary)	high	high	high	high
	regulation versus education	education	education	education	neither
Perceived Risk	level of fear associated with cougars	low	low		low
	level of risk for humans associated with cougars	low	low	moderate - varies seasonally	low
	level of risk for domestic animals		low, although increasing with more "city people" moving out there	moderate	low
	level of risk for livestock	moderate			
	additional causes of higher perceived risk		possibility of having encounter increased because of hound ban	increase in incidents in last few years	

Appendix 2c: Stakeholder Summary – *General/Feed Store Owners & Backcountry Horsemen Association, Part 2*

		General/Feed Store Owners		Backcountry Horsemen Association	
Question Categories	**Answer Categories**	**Olympic Peninsula Counties**	**I-5 Corridor Counties**	**I-5 Corridor Counties**	**NE Counties**
Education Methods/Communication Approaches for Conflict Reduction	openness to cougar education	high	moderate	depends on how outreach is conducted, high interest if try to attract newcomers and older residents	low - people already think they are well educated about cougars and won't pay attention
	information most interested in	general biology and behavior info and how relate to safety	awareness of cougars in how relates to safety, general info	laws, biology, ecology, behavior, history, pop trends correlated with food levels and hunting ban, why conflicts	nothing
	acceptable organization information sources	Stillwaters Environmental Education Center, combo of gov and non-gov		combo of non-profit, government, local hound hunting groups, enforcement agencies with one organizer	WDFW
	level of anti-government sentiment				
	education suggestions	use local organizations or agency personnel that already have the trust of people	newspapers good conduit of information, continuous education	community involvement in outreach process; specific order to outreach strategies and presentation of ed materials; diversity of communication, viewpoints, and organizations to include all audience segments; community venues	

Appendix 2c: Stakeholder Summary – *Chamber of Commerce Presidents & Teachers, Part 1*

		Chamber of Commerce Presidents		Teachers	
Question Categories	**Answer Categories**	**Olympic Peninsula Counties**	**NE Counties**	**I-5 Corridor Counties**	**NE Counties**
Perceived Risk	level of fear associated with cougars	low	low - people are mostly aware that they are around than fearful and do things to prevent incidents	moderate (mostly after sighting)	low - most people don't think about cougars until after an incident
	level of risk for humans associated with cougars	low	low - but viewed higher in other parts of the state	moderate (mostly after sighting)	low - until after an incident and then high
	level of risk for domestic animals	moderate		low (people know the risk of having outside pets)	
	level of risk for livestock				
	additional causes of higher perceived risk	county to the north has more negative views of cougars (and maybe more incidents)			
Education Methods/Communication Approaches for Conflict Reduction	openness to cougar education	high - people move there for environment and cougars are a part of that environment	high	high	depends on methods of communication - literature more effective than meetings
	information most interested in	cougar welfare (pop, health, how make better, food source) and safety tips for humans (level of threat, what to do)	behavior of cougars and humans that affect interactions, techniques for preventing cougars from coming near homes and staying	preventing cougars from coming around homes, risk, biology, ecoloyg, habits	biology, ecology, and behavior and associated risk to humans; how to prevent attracting cougars
	acceptable organization information sources	proper credentials (level of expertise), recognized experts in the community	WDFW - both anti-government and anti-environmental sentiments so WDFW might be best because wildlife oriented and already funded	wildlife agencies or even the Forest Service, non-gov organizations that are non-advocacy	Public Utility District, County Commissioners
	level of anti-government sentiment	low	low - does exist in some parts of the population	low - mostly landowners but thinks most people can see if info is factual and take it and use it	high - but trust should be redevloped because ones who should do outreach
	education suggestions	emphasize consequences of actions or inactions, partner with local organizations/information sources	balance between education and not alarming people about potential cougar incidents, public events good places, education for children good because then spreads to parents	only give facts, don't try to persuade; teach kids, they are interested and can grow up to be responsible; use community assets (like schools and libraries) to attract audience; integrate outreach into already existing events to reach adults; prompts good enticement	literature in a local paper or at kiosks more effective in reaching a wider audience than meetings; redevelop trust with government agencies

Appendix 2c: Stakeholder Summary – *Chamber of Commerce Presidents & Teachers, Part 2*

		Chamber of Commerce Presidents		Teachers	
Question Categories	**Answer Categories**	**Olympic Peninsula Counties**	**NE Counties**	**I-5 Corridor Counties**	**NE Counties**
Perceived Risk	level of fear associated with cougars	low	low - people are mostly aware that they are around than fearful and do things to prevent incidents	moderate (mostly after sighting)	low - most people don't think about cougars until after an incident
	level of risk for humans associated with cougars	low	low - but viewed higher in other parts of the state	moderate (mostly after sighting)	low - until after an incident and then high
	level of risk for domestic animals	moderate		low (people know the risk of having outside pets)	
	level of risk for livestock				
	additional causes of higher perceived risk	county to the north has more negative views of cougars (and maybe more incidents)			
Education Methods/Communication Approaches for Conflict Reduction	openness to cougar education	high - people move there for environment and cougars are a part of that environment	high	high	depends on methods of communication - literature more effective than meetings
	information most interested in	cougar welfare (pop, health, how make better, what eat) and safety tips for humans (level of threat, what to do)	behavior of cougars and humans that affect interactions, techniques for preventing cougars from coming near homes and staying	preventing cougars from coming around homes, risk, biology, ecoloyg, habits	biology, ecology, and behavior and associated risk to humans; how to prevent attracting cougars
	acceptable organization information sources	proper credentials (level of expertise), recognized experts in the community	WDFW - both anti-government and anti-environmental sentiments so WDFW might be best because wildlife oriented and already funded	wildlife agencies or even the Forest Service, non-gov organizations that are non-advocacy	Public Utility District, County Commissioners
	level of anti-government sentiment	low	low - does exist in some parts of the population	low - mostly landowners but thinks most people can see if info is factual and take it and use it	high - but trust should be redevloped because ones who should do outreach
	education suggestions	emphasize consequences of actions or inactions, partner with local organizations/information sources	balance between education and not alarming people about potential cougar incidents, public events good places, education for children good because then spreads to parents	only give facts, don't try to persuade; teach kids, they are interested and can grow up to be responsible; use community assets (like schools and libraries) to attract audience; integrate outreach into already existing events to reach adults; prompts good enticement	literature in a local paper or at kiosks more effective in reaching a wider audience than meetings; redevelop trust with government agencies

Appendix 2c: Stakeholder Summary – *Newspaper Media Representatives & State Patrol Officers, Part 1*

		Newspaper Media Representatives		State Patrol Officers
Question Categories	**Answer Categories**	**I-5 Corridor Counties**	**Olympic Peninsula Counties**	**I-5 Corridor Counties**
Awareness/Knowledge Questions	level of cougar incidents	high	moderate - seasonal	low
	influence of past incidents on perceptions		low	
	level of awareness of being in cougar country	high	high	low
	knowledge of cougar ecology and behavior	moderate - local zoo with lots of information about cougars	moderate - some don't know feeding wildlife can attract cougars	low
	knowledge of cougar incident prevention techniques	low	high	low
	who is less knowledgeable about living with cougars	newcomers	people who feed wildlife	less educated
	who is responsible for conflict	humans - fear of unknown and focus on negative events	humans - feed wildlife and encroachment	humans (encroachment and low understanding of cougar survival needs)
	level of human/cougar habitat separation	moderate	low	
Beliefs, Attitudes, and Values	views of cougars	part of living around there	mostly regarded as pests who eat their cats and potentially dangerous to livestock and pets	range from anit-cougar to pro-cougar portions of the pop
	children's influence on attitudes	high	high	
	support of hound hunting			
	willingness to take steps to coexist with cougars (mandated)	low	moderate	low
	willingness to take steps to coexist with cougars (voluntary)	moderate	high	high
	regulation versus education	education	education as long as taxpayer money not being spent for it	education
Perceived Risk	level of fear associated with cougars	low	low	low - don't even know they are around
	level of risk for humans associated with cougars	moderate - people should bring protection along in the woods	low	
	level of risk for domestic animals	moderate	moderate	
	level of risk for livestock		moderate	
	additional causes of higher perceived risk			media

Appendix 2c: Stakeholder Summary – *Newspaper Media Representatives & State Patrol Officers, Part 2*

		Newspaper Media Representatives		State Patrol Officers
Question Categories	**Answer Categories**	**I-5 Corridor Counties**	**Olympic Peninsula Counties**	**I-5 Corridor Counties**
Education Methods/Communication Approaches for Conflict Reduction	openness to cougar education	high	moderate - no tax money spent	high
	information most interested in	how to prevent attracting cougars, encounter tips, easy ways to differentiate between predators on what to do	ecology; safety information (encountering and prevention); identification	living in cougar country, prevention and encounter tips, what is cougar habitat
	acceptable organization information sources	any knowledgeable individual; could include (but not limited to) WDFW, park rangers, or naturalists	people connected with the community who have wildlife connection and non-governmental organization is best	someone trained in wildlife arena, Snoqualmie Valley Bulletin
	level of anti-government sentiment	low	moderate - rural section/farmers don't want government telling them what to do	low if the person is local and "not full-blown government" like a biologist
	education suggestions	education needs to be more widespread than meetings, distribute information at trail heads, get developers to distribute information about living in cougar country in new housing developments on the fringe of rural areas	incorporate education into existing events or club meetings; include education in schools about encountering and prevention; develop a coloring book about cougars for school education; provide outreach to service groups; post a video presentation about cougars on the internet like on a newspaper website	combine educational programs for several animals, people need to know consequences of actions and inactions, education in schools, collaboration with local info sources

Appendix 2d: Key Informant Interview Form

From *Key Informant Interviews Summary and Conclusions* by Kate Lamson

Key Informant Interviews

Insight Wildlife Management – Cougar Outreach Project

Interviewee Name: _____Occupation: _____

Date: _____ Interview Location: _____

Interview Description

Thank you for allowing me to talk with you today.

- We are working with the Washington Department of Fish and Wildlife to learn about how your community views cougars.
- The interviews are a way for us to learn about how your community feels about cougars, cougar management, and personal safety.
- Your answers will be helping us to develop an educational program that is designed around you and your community's needs.
- The interview should take approximately 30 minutes to one hour to complete.
- I will NOT use any information I get from you in any way that can identify you, and all information will be kept confidential.

Preliminary: Tell me about your relationships within your community with your neighbors, parents, teachers, local businesses, or local government? (i.e. through community activities for business, personal, or volunteer reasons)

Awareness/Knowledge Questions: The first set of questions revolves around your community's awareness and knowledge of cougars.

1. Tell me what you have heard about encounters with cougars in this area.
    a. How do people talk about these encounters? (Positive/Negative)
    b. What are some ways that could help your community to avoid these encounters? What can you do around your home, while recreating, or while working that might reduce encounters?
        i. i.e. better livestock management, bringing animals in at night, keeping an eye on children at dusk, etc

2. Why do humans and cougars get into conflicts?
    a. Is this a widely held view in your community? Do you think many other people agree with your view?

Beliefs, Attitudes, and Values About Cougars: This next section explores your community's beliefs, attitudes, and values about cougars.

3. Tell me about your community's beliefs, attitudes, and values concerning cougars. *(How do you think other people view cougars?)*
    a. How might your opinions about cougars change when thinking about the safety of children?
4. How would your community feel about regulations being passed that would prohibit wildlife feeding?
    a. How about regulations being passed that would require owners to protect their livestock? (*geared toward non-herd livestock/sheep and goats; regulations would include actually enclosing the animals, keeping the area well lit, and clearing brush within borders of "developed" part of property*)
    b. Or regulations that would require people living in cougar country to secure trash?
    c. How would your community react to voluntarily placing these restrictions on themselves?
        i. What might help to increase the likelihood of people voluntarily doing these activities?

Perceived Risk: These next questions revolve around people's safety.

5. How comfortable are other people in your community with living in or being out in cougar habitat?
    a. Tell me about people's concerns about cougar encounters.
        i. How do people's activities/habits change while in cougar country?
    b. What are some ways you think that your community could improve on animal and livestock safety? *(If not already answered in Awareness/Knowledge section)*

Education Methods/Communication Approaches for Conflict Reduction: These questions ask about cougar education.

6. How do you feel your community would react to cougar education? Do you see a need for cougar education? *(If they answer yes, then ask the next questions)*
    a. What kinds of information would your community like to know about cougars? *(If they do not know or cannot come up with anything then prompt with: such as how to be safe in cougar country; cougar population trends; biology, behavior, and life cycle; types of prey; state management plan; cougar sightings; statistics on numbers of livestock or pets killed by cougars; affect on game animals; habitat; human conflicts/interactions with cougars; how to protect cougars; or hunting information)*
    b. Who would you and people you know trust to provide information about cougars?
        i. Would a government body or non-governmental organization be best?
7. Considering all that we have talked about, do you have any other suggestions for educational

materials for your community? *(If there was something striking that came up in the previous questions you may want to prompt them here with that response)*

Demographic Information: These next few questions are demographic questions. I just want to remind you that all information will be kept confidential and I will NOT use any information I get from you in any way that can identify you. Like the other questions, answers are voluntary. These answers will be used strictly for evaluating interviewee demographic distribution in relation to your answers.

8. May I ask your occupation? *(If not already known)*
9. May I ask where you live? *(May not be necessary since already breaking down by region)*
10. Do you live in Washington State full time?
11. Do you have any children? *(If not already known)*
    a. What age? *(If they do not say)*
12. Do you have any pets? *(If not already known)*
    a. What kind?
    b. How many?

Lastly, would you be interested in us keeping you posted on our progress with cougar education? Thank you again for your time, I really appreciate it!

Additional Questions

Awareness/Knowledge Questions

1. How much do the people you talk with know about cougars?
2. Do you see much of any wildlife around your home or neighborhood? *(If they do not say anything, prompt with examples like raccoons, deer, etc.)*
3. Do you know what you can do around your home, while recreating, or while working that may reduce conflict between yourself and cougars?
    a. Do people in your area know what to do to minimize human-cougar conflicts?
4. If you saw a cougar near your home or while out recreating or working, would you report it?
    a. Who would you contact? *(Trying to get at who they most trust)*
    b. Do you think other people would report it?
5. How do people feel about how WDFW manages cougars?
    a. How supportive of WDFW are other people you talk with?
    b. Does anyone mention how WDFW could do a better job with cougars?

Beliefs, Attitudes, and Values About Cougars

6. Do you think people know how to prevent cougar encounters?
    a. Have you heard about anyone else doing anything to reduce the likelihood of conflict between themselves and cougars?
7. Do you think cougars or humans are more responsible for conflicts?
    a. What would your neighbors say?
8. How do you and other people see the future for cougars in your area?
9. How could WDFW improve cougar management? *(Would first have to make sure they know what WDFW currently does)*
    a. Do you wish that future generations will still have cougars present in the wild?
        i. Do other people you know?
10. Would most people in your area like to see the cougar population decrease or increase? *(Prompt them to expand on why/why not)*
    a. Do you agree with this?
11. As of 1996, it has been illegal to hunt cougars with dogs in most counties in Washington. Do other people in your area believe this is an appropriate management strategy?
    a. Do you agree with this?
    b. Was there support for the Hound Hunting Ban (WA Public Initiative 655) of 1996 in your community? *(If Informant is from one of the six counties – the 5 NE plus Klickitat – involved in the Hound Hunting Pilot Program, which permits hound hunting of "problem" cats, then we could ask the follow up question)*
    c. Does the community feel the Pilot Program to be an acceptable solution to the Hound Hunting Ban?
12. How do most people feel about monetary compensation for livestock or pets which cougars killed?
13. Do cougars have an economic value for rural communities? *(If they are not sure, then prompt with ecotourism, etc.)*

Perceived Risk:

14. Are you comfortable living in cougar country?
15. How likely is it that you will see a cougar?
    a. Are you concerned about a cougar attacking you?
    b. Are other people concerned about cougars attacking them?
16. Do you take any preventative measures with your animals at night? *(If not already answered)*
    a. Do you know if any of your neighbors do?

Education Methods/Communication Approaches for Conflict Reduction

17. Need for cougar education:
    a. Who do you believe would benefit most from this education?
    b. Should children receive cougar education? *(If not already answered)*
        i. In school?
    c. What are the easiest means of receiving information for you? *(If they do not know or cannot come up with anything then prompt with: such as e-mail, magazines, pamphlets, newspapers, television, presentations, letters, etc.)*
        i. How about for other people?
    d. Where have you heard about cougars in the past?
18. Is there an economic benefit from cougar sport hunting in the area where you live?
19. Do you think having some type of alert system that notifies people about problem cougars in their area would be helpful?
    a. What would be the best method of alerting people?

Appendix 3: WDFW Personnel Open Ended Interview Questions

Interview #_____

Interviewer:_____ Date:_____

Name of Interviewee:_____

(Check one job title.) Enforcement Officer_____ Biologist_____

Region:_____ WDFW Office Location:_____

Phone introduction:

– I'm working under contract for WDFW on a project to plan a cougar education program. I want to talk with Agency Enforcement Officers about their interactions with the public while dealing with cougar issues.

– The plan is to target parts of the state where cougar complaints/reports are the highest.

– This is an official part of our formal investigation because we think you have valuable insight into educational needs of the general public.

1. Describe your position with WDFW.
2. How long have you been in this position?
3. How much of your job consists of interacting on cougar conflict issues with the public?
4. Describe the protocol for responding to cougar reports.
   – What about depredation reports?
5. Do you respond to events/calls that involve wildlife other than cougars?
6. What is a common cougar situation you respond to?
7. From your dealings with the public around cougar issues, can you tell when the public is satisfied with WDFW actions? Dissatisfied?
8. Do you have a sense the public expects a specific outcome from your call/visit?
9. Are there common concerns/comments you hear from the public regarding cougar?
10. Are there common misperceptions you encounter among the public?
11. Is your interaction with the public generally a good opportunity to present educational cougar info?
    – Do you feel people are open to receiving information or advice from you?
12. Is education an official part of your role? An unofficial part of your role?
13. Is the education component of your job important?
14. Do you enjoy the education component of your job?
15. Do you regularly present info when responding to a cougar report/complaint?
16. How do you determine what cougar information to provide?
17. Tell me a little about the cougar information you provide to the public.
18. What key messages are you trying to deliver or convey?

19. What would make the information-delivery part of your job easier?
    - Training?
    - Educational resources on hand, products to hand out?
    - Consistent, rehearsed message?
    - Separate staff whose job could be to educate the public?
20. How do the roles of Bio and Enforcement differ in responding to cougar reports or complaints?
21. Do you think the structure of WDFW is setup well for responding to these types of cougar issues? (whatever type of cougar issues the respondent encounters)
    - What could be done differently?
22. Does anything stand out in your mind that makes cougar complaints different from other large carnivore complaints (Black Bear, Coyote, other)?
23. While you've held this position, has the nature of your complaint-responses changed at all?

Public Opinion/Knowledge Survey

24. Are you familiar with the state wide telephone survey conducted in WA State?
25. What types of things would you see as valuable to learn from such a survey?
26. Do you have any questions for me?

Appendix 4a: Non-Governmental Organization Interview Questions

Investigating Cougar Outreach Approaches

Explore the contact's outreach experience

1. Tell me about the role that outreach plays in accomplishing your goals/mission.
2. How much importance do you give to linking outreach efforts to specific objectives? (such as changes in knowledge, attitudes, or behavior)
3. Has your organization framed messages to target particular audiences?
4. Tell me a little about the range of audiences and venues of your outreach efforts.
5. How do you decide which outreach methods are right for your organization? (i.e. presentations, meetings, media spots)
6. What are the costs and benefits associated with outreach involving media tools (from door hangers to TV spots)
7. How do you evaluate, formally or informally, the success of the outreach efforts?
8. Do any successes stand out in your mind? What factors played into the success of the outreach?

Investigate NGO's development and use of social capital

1. Is it important for the work of your organization to build collaboration between groups with different views of cougars within the community?
2. Do you pursue partnerships with local organizations in areas where on the ground outreach is happening?
    - Neighborhood groups
    - Conservation groups
    - Hunting/fishing groups
3. Is national or international collaboration useful in outreach?

Explore contact's experience working in partnerships with wildlife management agencies

1. Does an agency partnership change your outreach materials, content, messaging?
2. Does an agency partnership effect which audiences you reach?

Investigate characteristics of cougar conservation and compare to issues of other large carnivores.

3. Cougars are not listed as threatened or endangered, as grizzly bears and wolves have been. As a result, do you think people respond differently to cougar outreach?

    (Prompt) Differences might include:

    - Cougar issues have less political baggage than those associated with the involvement by the federal government (i.e. wildlife reintroduction by USFWS).
    - Audiences' heartstrings not so vulnerable if species is not in clear, immediate crisis; leaving NGO with less wide spread public buy-in (cougar conservation is not "Save The Whales").

Appendix 4b: Non-Governmental Organization Survey Responses

Respondent 1

- **Consider audience:** express respect for their way of life, acknowledge the hardships they may face including dealing with carnivores.
- **Outreach Approach:** Diversify - Employ all the outreach methods you can, cast a wide net (from presentations to bookmarks).
- **Foresight:** Agencies should look ahead to determine where human-wildlife conflict may develop or increase.
- **Evaluation is tough.** Nothing formal applied, but public opinion may be evident and indicate level of program success.
- **Develop partnerships and build social capital.** Engage diverse interests: consumptive user groups, neighborhood organizations, conservation groups.
    - Inter-Agency partnerships valuable
    - Although not always a natural fit, agencies need to partner with NGO's
- **Messaging:**
    - Maintain ecological integrity
    - People bear responsibility in their relationship with nature and wildlife

Respondent 2

- **Outreach Approach:** informational slideshows at public forums.
- **Goal:** Influence management practices in order to conserve cougar population.
- **Messaging: Just the facts…** People listen to science, so the presentations focus on debunking cougar myths by citing research - history, ecology, and life history of cougars.
    - This includes a focus on females and kittens and their importance in population dynamics. This is factual message laden with value: mother-child scenario appeals to human interest/emotions.
    - Also message of coexistence: research shows reducing cougar numbers doesn't reduce human-cougar conflict.

Respondent 3

- **Outreach Approach:** Diversify - informational presentations, large media presence (TV, radio, and print PSAs).
- **Goal:** Influence management practices in order to conserve cougar populations.
- **Messaging**
    - **Fairness** is very important in USA – acknowledge audiences' sovereignty.
    - **"Cougar as Non-Threat" Messaging:**
        - Sense of control – let people know they can prevent the encounters that they see as dangerous.
            A. What to do if you see a cougar,

B. How to avoid it in the first place

- "Let the lion move on" – a phrase indicating a low level of threat posed by cougar presence; they're here but they'll leave, and that's OK.

- **Message Framing within Anthropocentric Values:** Frame well being for humans as dependent upon ecological balance, starting at top with large carnivores. Safety and stability for economics and agriculture need intact landscapes.
- **"Motivate Cougar Conservation" Message:** 3 sequential messages
    1. cougars are important
    2. you have the power to save them (empowerment)
- Cougars as important for the land – "if you haven't saved the cougar, you haven't saved the land."

Respondent 4

- **Messaging: "Cougar as Non-Threat"**
    - Emphasize rarity of cougar encounters, while not denying small threat exists
    - Sense of control – let people know they can prevent the encounters that they see as dangerous.
        A. What to do if you see a cougar,
        B. How to avoid it in the first place
- Underlying tensions of carnivore debate: urban-rural tension; government imposed control. Human debates and conflicts will surface until diverse interests gain intimate understanding (and respect?) of one another.