

Summary of Research



Better Understanding Montanans Thoughts Regarding Wolves and Wolf Management in Montana

HD Unit Research Summary No. 42

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Abstract: *Following the 2016-17 wolf hunting/trapping seasons, Montana Fish, Wildlife & Parks (FWP) conducted four separate surveys of resident Montanans to better understand their views regarding wolves and wolf management in Montana. This research builds upon previous work of the agency to survey state residents in 2012. Survey finding revealed that tolerance for wolves on the Montana landscape remains relatively low. However, comparing the 2017 survey data to identical data collected in 2012 shows a slight shift in the direction of more tolerance for wolves over time, particularly among Montana households. Results also showed continued tolerance for wolf hunting in Montana across all four survey groups. In contrast, tolerance of wolf trapping varied substantially. While hunters and landowners were very tolerant of wolf trapping, nearly half of the respondents to the Montana household survey were not tolerant of wolf trapping in the state. Lastly, for each of the four survey groups there was little agreement among respondents regarding whether the regulations for the Montana wolf hunting and trapping seasons were satisfactory or not. These survey results speak to the contentious nature of wolf management in Montana, and the importance of continue efforts on the part of FWP to involve the public in wolf-related outreach and education, wolf management decisions, and season setting processes.*

BACKGROUND

Montana Fish, Wildlife & Parks (FWP) recently completed four separate surveys of resident Montanans to better understand their thoughts regarding wolves and wolf management in Montana. Following the 2016-17 wolf hunting/trapping seasons, FWP conducted surveys of Montana households, resident private landowners, resident wolf hunting license holders, and resident deer/elk hunting license holders. This work builds upon similar surveys conducted by the agency in 2012 (Lewis et. al., 2012).

The four surveys described herein were designed to provide information directly referenced in formal wolf season objectives. Beginning in 2010, Montana Fish, Wildlife and Parks (FWP) took a comprehensive and formal approach to build upon previous experience in setting and implementing wolf harvest seasons. FWP staff and Commissioners used a facilitated, structured decision-making process to frame the season-setting decision, including defining the decision problem and fundamental objectives for setting the season (Keeney 1992, Hammond et al. 1999, Lyons et al. 2008). The fundamental objectives defined during this process have been instrumental in application of wolf harvest as a tool to manage wolves and ungulate populations, as well as livestock depredation in Montana. Yet, the objectives defined in this process justifiably included a focus broader than wildlife population and conflict management. Objectives related to the human dimensions¹ of wildlife management were also

2017 SURVEYS

General Montana Household Survey. Surveys were mailed out to a randomly selected sample of N=1,500 Montana households. This sample was purchased from Survey Sampling, Inc. (a well recognized international business that specializes in survey sampling solutions) and was deemed representative of households across the state. A 34 percent response rate was achieved for this survey, and a diverse range of resident Montanans (including private landowners, hunters, and non-hunters) completed and returned this survey. Weighting of the data was conducted to correct for lower response among women and younger Montanans. And, a non-response bias check revealed no significant differences between survey respondents and non-respondents on key survey questions. In addition to this survey, three additional surveys were conducted by FWP that focused on the following specific subsets of Montanans:

- **Resident Private Landowners.** Surveys were mailed out to a randomly selected sample of N=1,500 resident Montana landowners who own at least 160 acres in the state. This sample was pulled from the Montana State Cadastral Database and was deemed representative of resident landowners (with 160 acres or more) across the state as a whole. A 50 percent response rate was achieved for this survey.
- **Resident Wolf License Holders.** Surveys were mailed out to a randomly selected sample of N=1,000 resident wolf license holders from the 2016 hunting season. This sample was pulled from FWP's automated license system database and was deemed representative of resident wolf license holders from across the state as a whole. A 50 percent response rate was achieved for this survey.
- **Resident Deer/Elk License Holders.** Surveys were mailed out to a randomly selected sample of N=1,500 resident deer/elk license holders from the 2016 hunting season. This sample was pulled from FWP's automated license system database and was deemed representative of resident deer/elk license holders from across the state as a whole. A 42 percent response rate was achieved for this survey.

¹ Human dimensions is the [people aspect of natural resource management \(including fish and wildlife management\)](#).

defined. They included the following: (1) maintaining positive and effective working relationships with livestock producers, hunters, and other stakeholders; (2) increasing broad public acceptance of harvest and hunter opportunity as part of wolf conservation; and, (3) enhancing open and effective communication to better inform decisions.

This research summary provides selected human dimensions research results from each of the four surveys conducted in 2017, and where possible, compares survey results to results obtained in 2012. Key questions addressed in each survey included:

- Overall tolerance with wolves being on the Montana landscape.
- Satisfaction with the 2016-17 Montana wolf hunting and trapping regulations.
- General tolerance with the concept of wolf hunting and trapping in Montana.
- Overall satisfaction with wolf management and confidence in FWP’s ability to manage wolves in Montana.
- General opinions and beliefs regarding wolves.

In the future, these surveys can be replicated to provide insight as to whether or not Montana’s wolf management is meeting a broad array of human dimensions related objectives over time.



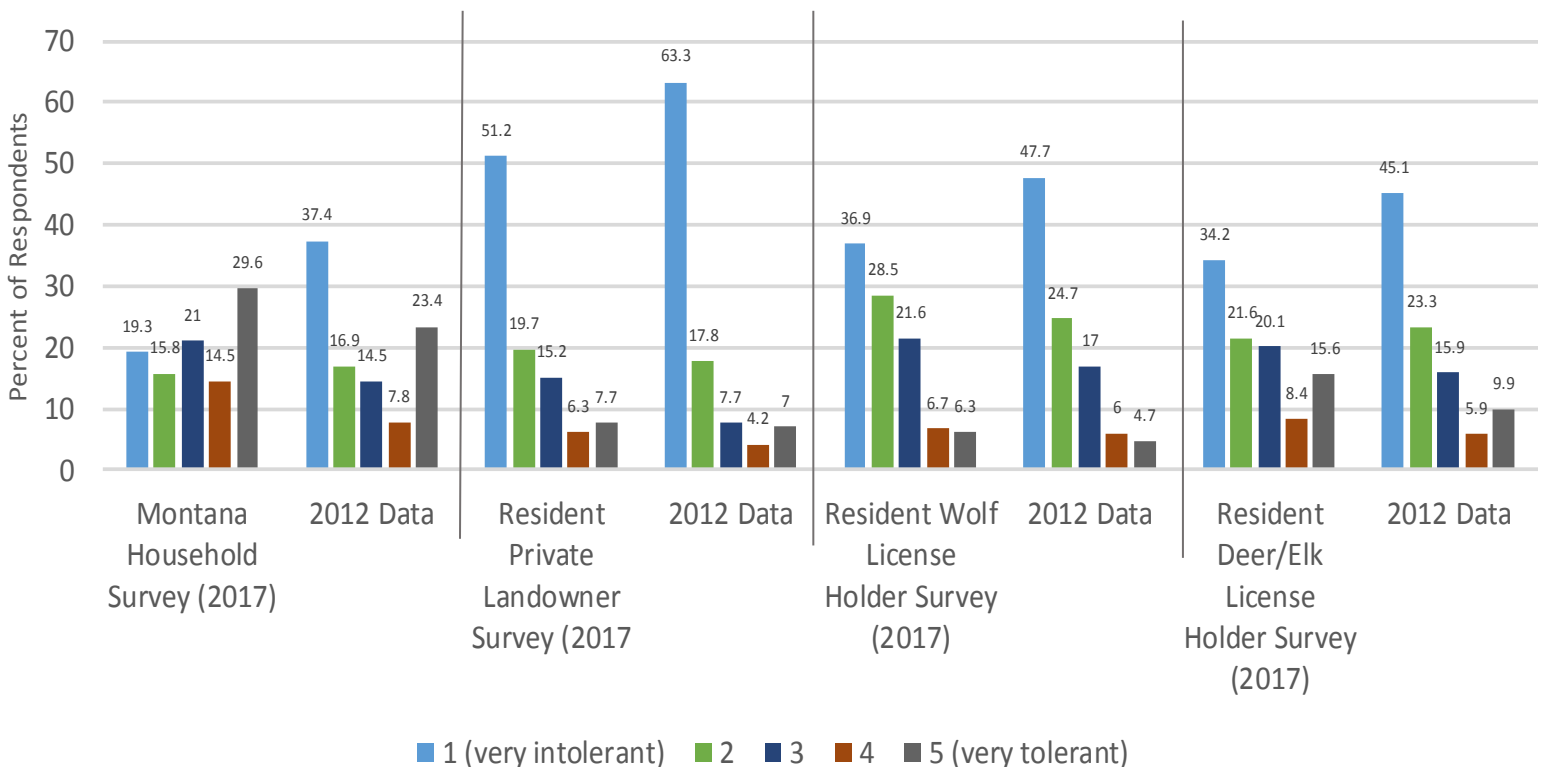
SURVEY RESULTS

OVERALL TOLERANCE OF WOLVES IN MONTANA

In general, as indicated in Figure 1 below, reported tolerance with wolves being on the Montana landscape was quite low for the resident private landowner, resident wolf license holder, and resident deer/elk license holder surveys. Overall, the highest level of tolerance, and the most diversity in tolerance, was seen in the Montana household survey.

Comparing the 2017 survey data to identical data collected in 2012, revealed a slight shift in the direction of more tolerance for wolves. The most significant shift in tolerance was in the household survey.

Figure 1. Response to...“On a scale from 1 (very intolerant) to 5 (very tolerant), how tolerant are you with wolves being on the Montana landscape? Note: The general Montana household survey included a diverse array of Montanans (including private landowners, hunters, and non-hunters). The resident private landowner, resident wolf license holder, and resident deer/elk license holder surveys focused on specific subsets of Montanans.



The following information is relevant to WOLF HUNTING regulations in Montana:

- Using wildlife biologists, the FWP Commission monitors population numbers of many species, including wolves. This information is used to set specific annual hunting regulations, and ensure that wildlife populations are not adversely impacted.
- With this information, the FWP Commission approved the following regulations for the 2016-17 WOLF HUNTING season:
 - A license is required to legally hunt a wolf.
 - Quotas may be used to limit the number of wolves that can be harvested in any wolf management unit.
 - All licensed wolf hunters are required to report their harvest of a wolf within 24 hours of the time of harvest by calling a toll-free telephone number.
 - Wolf hunters are encouraged to avoid harvesting wolves with radio collars. Collared wolves provide wildlife biologists with important information.
 - Wolf hunting is not allowed during the wolf denning season (generally after April 1)
 - Electronic calls can be used for wolf hunting. However, it is illegal to hunt wolves over bait; to use artificial scents or lures to hunt wolves; or, to hunt wolves with dogs.
 - For hunter safety reasons, all licensed wolf hunters are required to wear a minimum of 400 square inches of hunter orange (fluorescent) material above the waist, visible at all times—during times when wolf hunting season overlaps with the general rifle season for deer and elk.
 - The maximum hunting and trapping bag limit is five wolves per person during the 2016-17 season. Persons may take up to five wolves via any combination of hunting and trapping (maximum harvest of five wolves per person).
 - Those licensed wolf hunters who legally harvest a wolf and choose to retain the skull and hide are required to personally present the skull and hide (with evidence of sex naturally attached) to a designated FWP employee within ten days after harvest. There is no requirement to possess any part of a harvested wolf.

SATISFACTION WITH THE 2016-17 WOLF HUNTING REGULATIONS

Figure 2 on the following page provides results from each of the four surveys regarding satisfaction with the 2016-17 Montana wolf **hunting** regulations. In general, there was little agreement among respondents for each of the four surveys regarding whether the regulations were satisfactory or unsatisfactory. The 2017 survey, as compared to identical data collected in 2012, showed an increase in satisfaction for the private landowner, wolf license holder, and deer/elk license holder surveys. However, the household survey revealed no significant change in satisfaction over time.

Opinions regarding the length of the hunting season revealed that 45-62 percent of the respondents for the landowner, wolf license holder, and deer/elk holder surveys think the hunting season is not long enough. This compares to only 24 percent of the respondents in the household survey. Concerning the bag limit for wolf hunting/trapping, 48-52 percent of the respondents for the landowner, wolf license holder, and deer/elk license holder survey think the current bag limit for wolf hunting/trapping is too low. This compares to only 27 percent of the respondents in the household survey.

Across each of the four surveys, the most frequently received open-ended comments regarding the 2016-17 Montana wolf hunting regulations included:

- *Higher harvest is needed in areas of the state that have a high population of wolves. Increase harvest in general.*
- *The hunting season should be open year-round. There is a need to consider a longer hunting season for wolves.*
- *There should no limitation on hunting wolves. Treat wolves like coyotes. No licenses. No limits.*
- *Allow baiting.*



TOLERANCE WITH THE CONCEPT OF WOLF HUNTING IN MONTANA

Survey participants were also asked how tolerant they were with wolf **hunting** in Montana. Figure 3 on the following page provides results from each of the four surveys. In general, tolerance levels across each survey group was quite high, with the lowest levels of tolerance being reported in the household survey.

Additionally, survey participants were asked whether their tolerance of wolf hunting had changed any at all based on Montana's experience with a wolf hunting season during the past five years. Between 78 and 82 percent of the respondents for each of the four surveys reported their tolerance had not changed. Eighteen to 22 percent of the respondents reported their tolerance had changed. Of these respondents, approximately 90-93 percent for the private landowner, wolf license holder, and deer/elk license holder surveys reported they are more tolerant of wolf hunting now. This is in stark contrast to the Montana household survey where only 43 percent of those who reported a change in tolerance indicated they were now more tolerant of wolf hunting.

Figure 2. Response to...“Overall, on a scale from 1 (very dissatisfied) to 5 (very satisfied), how satisfied are you with the 2016-17 Montana wolf hunting regulations.” *Note: The general Montana household survey included a diverse array of Montanans (including private landowners, hunters, and non-hunters). The resident private landowner, resident wolf license holder, and resident deer/elk license holder surveys focused on specific subsets of Montanans.*

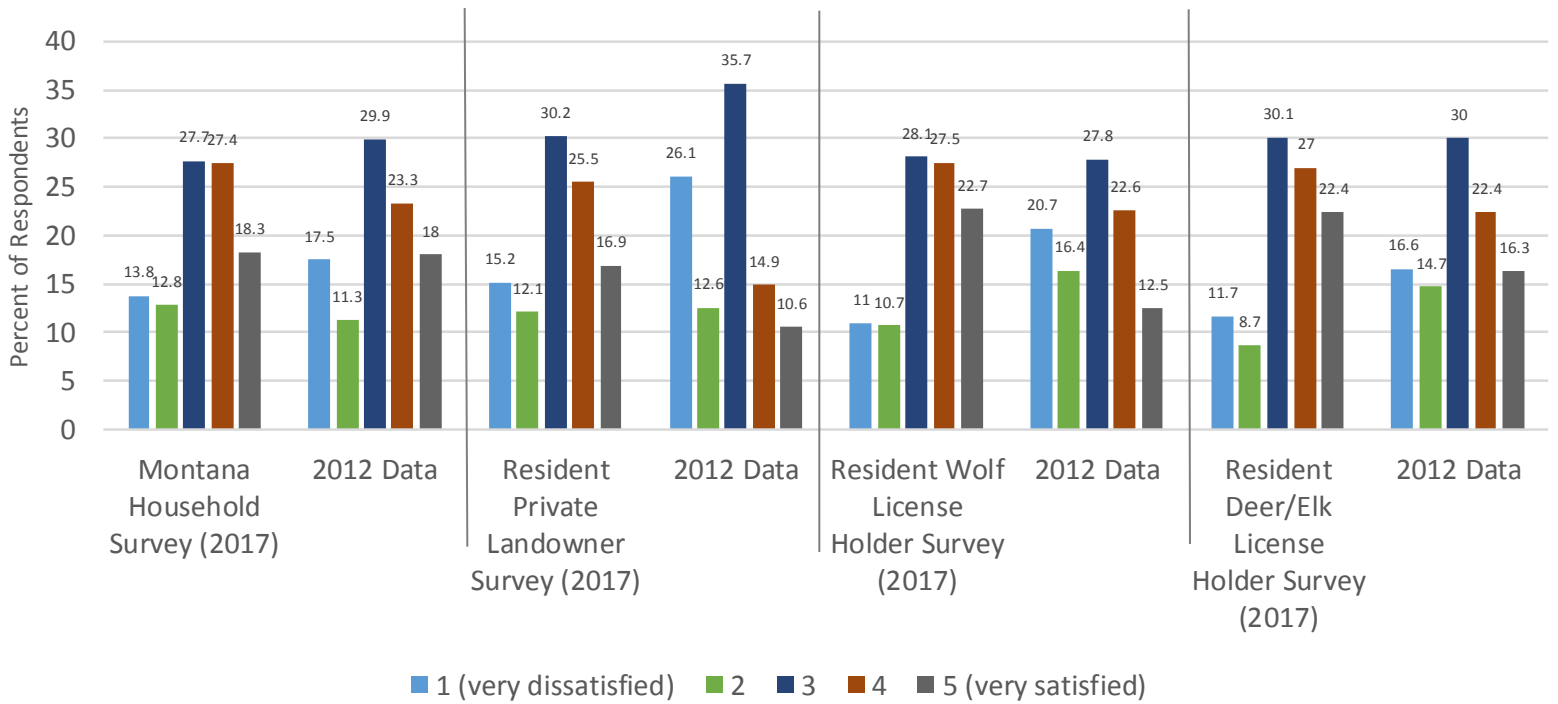
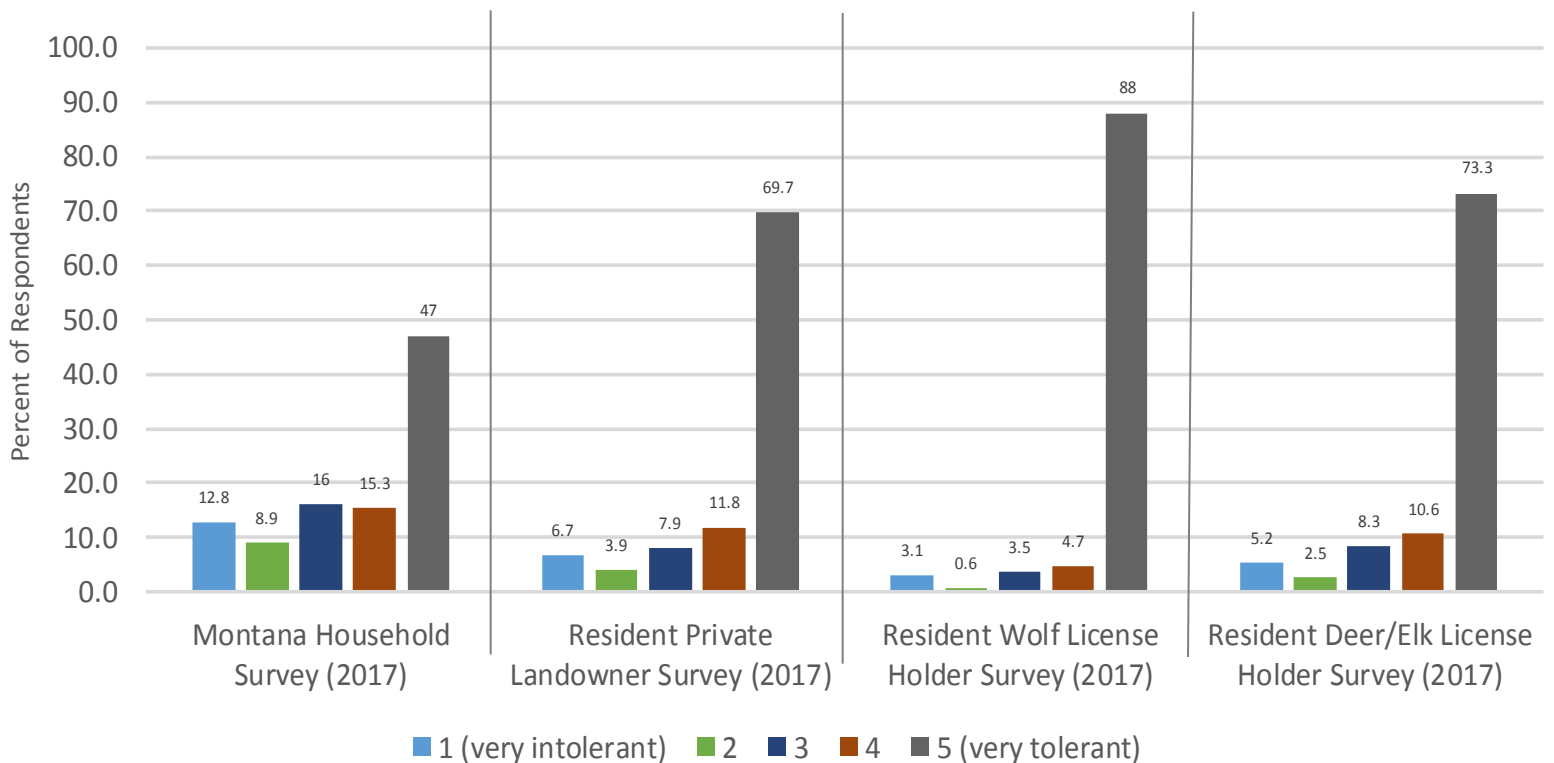


Figure 3. Response to...“Overall, on a scale from 1 (very intolerant) to 5 (very tolerant), how tolerant are you with wolf hunting in Montana?” *Note: The general Montana household survey included a diverse array of Montanans (including private landowners, hunters, and non-hunters). The resident private landowner, resident wolf license holder, and resident deer/elk license holder surveys focused on specific subsets of Montanans.*



The following information is relevant to WOLF TRAPPING regulations in Montana:

- Using wildlife biologists, the FWP Commission monitors population numbers of many species, including wolves. This information is used to set specific annual trapping regulations, and ensure that wildlife populations are not adversely impacted.
- With this information, the FWP Commission approved the following regulations for the 2016-17 WOLF TRAPPING season:
 - A trapping license is required to legally trap a wolf, and wolf trappers must have proof of completing a Montana or Idaho wolf trapper certification class.
 - Quotas may be used to limit the number of wolves that can be harvested in any wolf management unit.
 - All licensed wolf trappers are required to report their harvest of a wolf within 24 hours of the time of harvest by calling a toll-free telephone number.
 - Wolf trappers are encouraged to avoid harvesting wolves with radio collars. Collared wolves provide wildlife biologists with important information.
 - Wolf trapping is not allowed during the wolf denning season (generally after April 1)
 - Foothold traps are legal methods during the wolf trapping season. The inside jaw spread of foothold traps must not exceed nine inches. A minimum trap pan tension setting of 10 pounds is required in most regions of the state to help avoid unintended take of smaller non-targeted species. No trap may be set within 30 feet of an exposed carcass or bait that is visible from above. Conibears or snares may NOT be used to take wolves. Traps are required to be visually checked at least once every 48 hours.
 - A 150-foot setback is required for wolf traps along open roads and hiking trails on public federal and state lands (in some areas of the state a 500-foot setback is required for high recreational use trails and roads). On publicly owned lands, foothold traps are prohibited within 1,000 feet of a designated campground, recreation site, or marked trailhead that is accessible by highway vehicle. Foothold traps are also prohibited within 1,000 feet of an occupied dwelling without written notification of the occupant.
 - The maximum hunting and trapping bag limit is five wolves per person during the 2016-17 season. Persons may take up to five wolves via any combination of hunting and trapping (maximum harvest of five wolves per person).
 - Those licensed wolf trappers who legally harvest a wolf and choose to retain the skull and hide are required to personally present the skull and hide (with evidence of sex naturally attached) to a designated FWP employee within ten days after harvest. There is no requirement to possess any part of a harvested wolf.

SATISFACTION WITH THE 2016-17 WOLF TRAPPING REGULATIONS

Figure 4 on the following page provides results from each of the four surveys regarding satisfaction with the 2016-17 Montana wolf **trapping** regulations. Again, there was little agreement among respondents for each of the four surveys regarding whether the regulations were satisfactory. Comparisons to 2012 survey results were not possible because Montana first implemented a wolf trapping season in late 2012, after the 2012 survey was completed.

Opinions regarding the length of the trapping season revealed that 50-63 percent of the respondents for the landowner, wolf license holder, and deer/elk holder surveys think the trapping season is not long enough. This compares to only 30 percent of the respondents in the household survey. Forty-two percent of the respondents to the household survey think the trapping season is too long.

Across each of the four surveys, the most frequently received open-ended comments regarding the 2016-17 Montana wolf trapping regulations included:

- *Against trapping. Not supportive of trapping. Not tolerant of trapping. Trapping is cruel and inhumane. Hunting only; no trapping.*
- *Allow snares and conibears.*
- *There should be no limitation on trapping wolves. Raise quotas. No licenses. No limits.*
- *Setbacks are too short.*
- *Dislike trapping; but, recognize the importance of trapping wolves to help control their population.*
- *There are too many restrictions related to trapping wolves.*



TOLERANCE WITH THE CONCEPT OF WOLF TRAPPING IN MONTANA

Survey participants were also asked how tolerant they were with wolf **trapping** in Montana. Figure 5 on the following page provides results from each of the four surveys. In general, tolerance levels across each survey were somewhat high, with the exception of the household survey where the lowest levels of tolerance were identified.

Additionally, survey participants were asked whether their tolerance of wolf hunting had changed any at all based on Montana's experience with a wolf trapping season during the past five years. Between 80 and 87 percent of the respondents for each of the four surveys reported their tolerance had not changed. Thirteen to 20 percent of the respondents reported their tolerance had changed. Of these respondents, approximately 75-88 percent for the private landowner, wolf license holder, and deer/elk license holder surveys reported they are more tolerant of wolf trapping now. This is in stark contrast to the Montana household survey where 70 percent of those who reported a change in tolerance indicated they were now less tolerant of wolf trapping.

Figure 4. Response to...“Overall, on a scale from 1 (very dissatisfied) to 5 (very satisfied), how satisfied are you with the 2016-17 Montana wolf trapping regulations.” *Note: The general Montana household survey included a diverse array of Montanans (including private landowners, hunters, and non-hunters). The resident private landowner, resident wolf license holder, and resident deer/elk license holder surveys focused on specific subsets of Montanans.*

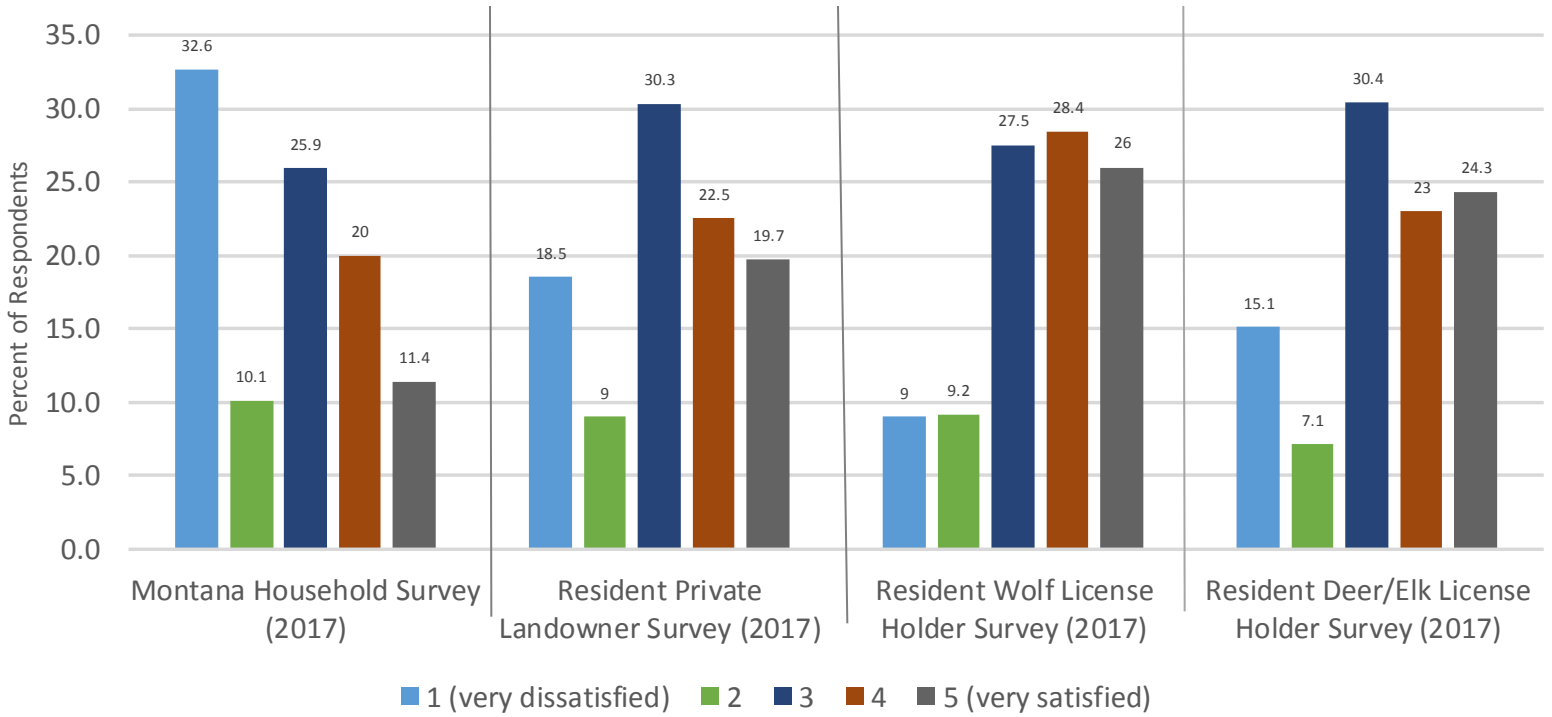
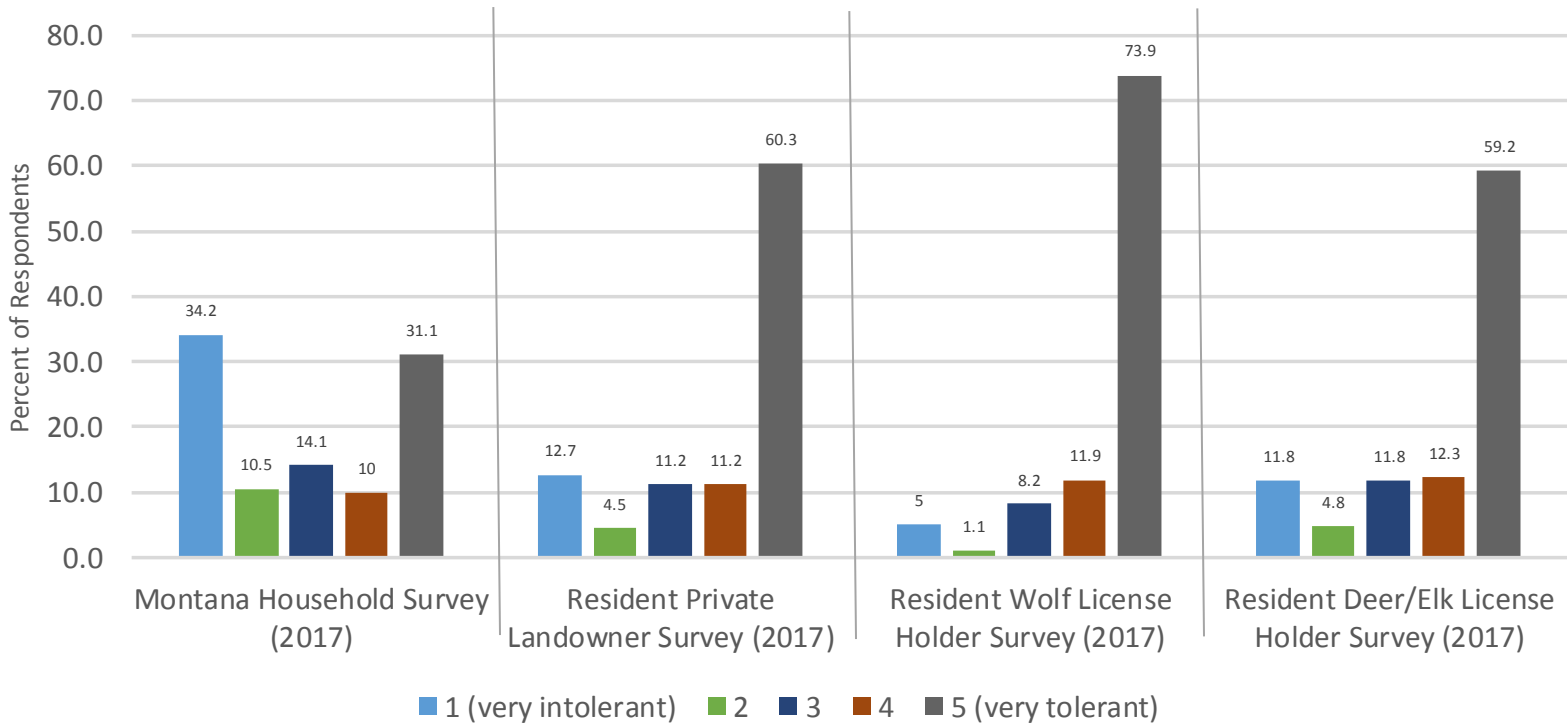


Figure 5. Response to...“Overall, on a scale from 1 (very intolerant) to 5 (very tolerant), how tolerant are you with wolf trapping in Montana?” *Note: The general Montana household survey included a diverse array of Montanans (including private landowners, hunters, and non-hunters). The resident private landowner, resident wolf license holder, and resident deer/elk license holder surveys focused on specific subsets of Montanans.*



OVERALL SATISFACTION WITH WOLF MANAGEMENT IN MONTANA AND CONFIDENCE IN FWP'S ABILITY TO MANAGE WOLVES IN THE STATE

Survey participants were asked how satisfied they are with wolf management in Montana. Little agreement was identified among respondents for each of the four surveys; and, moderately low levels of satisfaction were identified overall.

	Percent Satisfied or Very Satisfied with Wolf Mgt.
Household Survey	30.9
Private Landowner Survey	25.9
Wolf License Holder Survey	36.4
Deer/Elk License Holder Survey	35.4

Survey participants were also asked about their confidence in FWP's ability to manage wolves. Again, little agreement was found among the respondents for each of the four surveys. Private landowners showed the least amount of confidence in FWP. Meanwhile, respondents from the household and deer/elk license holder surveys reported the highest levels of confidence.

	Percent Confident or Highly Confident in FWP
Household Survey	45.7
Private Landowner Survey	29.6
Wolf License Holder Survey	39.6
Deer/Elk License Holder Survey	46.3

Finally, survey participants were asked about whether their confidence in FWP's ability to manage wolves had changed any at all based on Montana's experience managing wolves in the state during the past five years. Between 64 and 77 percent of the respondents for each of the four surveys reported their confidence had not changed. Twenty-three to 36 percent of the respondents reported their confidence had changed. Of these respondents, approximately 56-63 percent for the private landowner, wolf license holder, and deer/elk license holder surveys reported they are now more confident in FWP's ability. This compares to 43 percent of the household respondents.

GENERAL OPINIONS AND BELIEFS REGARDING WOLVES

Survey participants were asked whether they agreed or disagreed with a variety of general attitude statements about wolves, including the following:

Wolves help maintain the balance of nature

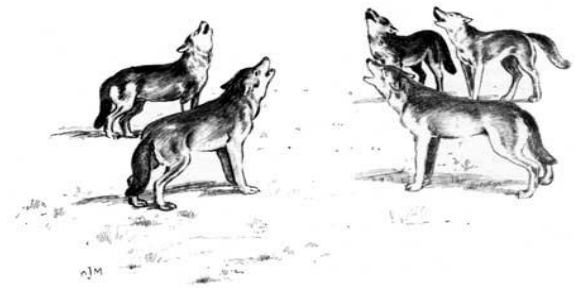
Wolves threaten the things I care about

I like knowing wolves are out there, even if I don't see them

Wolves should be considered a nuisance animal

Humans should manage wolf populations so humans benefit

The rights of wolves are more important than human interest



In general, there was a strong disconnect between private landowners, deer/elk hunters, wolf hunters, and respondents to the household survey with respect to the responses to these statements:

- Those who responded to the household survey tended to agree or strongly agree that wolves help maintain the balance of nature, while hunters and landowners were either neutral or disagreed with this statement.
- Hunters and landowners strongly agreed that wolves threaten the things they care about, and that wolves should be considered a nuisance animal. Respondents to the household survey were split about whether wolves threaten things they care about—however, they generally disagreed that wolves should be considered a nuisance animal.
- Hunters and landowners tended to agree that wolves should be managed so that humans benefit, while respondents to the household survey were more divided on this question.
- Lastly, all groups tended to disagree that the rights of wolves are more important than human interest.

Survey participants were also asked whether they agreed or disagreed that wolf populations should be controlled when they threaten big game populations, livestock, pets, and people. Hunters and landowners were generally intolerant of any impacts from wolves; they tended to agree that wolves should be controlled in almost all circumstances. Respondents to the household survey were generally more tolerant of impact from wolves when they threaten big game populations or pets; they were more likely to support wolf control only when wolves threaten livestock or people.

SUMMARY & DISCUSSION

The information from the four surveys described herein will assist FWP in monitoring whether key human dimensions objectives of Montana's wolf management are being met over time as new hunting and trapping seasons are implemented across the state. A great deal was learned from these surveys, including the following:

- While tolerance for wolves remains relatively low in Montana, comparing the 2012 and 2017 survey results reveals a slight shift in the direction of more tolerance for wolves over time. This positive shift in tolerance was most substantial in the Montana household survey. However, a slightly positive shift in tolerance for wolves was also noted in the private landowner, deer/elk license holder, and wolf license holder

surveys. These findings suggest that attitudes and beliefs regarding wolves may not be as highly resistant to change as previously thought.

- There continues to be considerable tolerance for the concept of wolf hunting in Montana across all four survey groups. However, less tolerance for wolf trapping was identified. While hunters and landowners are very tolerant of wolf trapping, respondents to the household survey revealed about an even split of those who are tolerant and those who are not tolerant of wolf trapping.
- There was little agreement among survey respondents regarding whether the regulations for Montana's recent wolf hunting or trapping seasons were satisfactory or not. However, comparing 2017 survey results to identical data collected in 2012 shows an increase in satisfaction with the wolf hunting regulations amongst landowners and hunters. Little or no change in satisfaction was noted among respondents to the household survey. Future surveys will be needed to identify trends in satisfaction with evolving wolf trapping regulation in Montana as they are developed in the state.
- Across all four surveys, moderately low levels of satisfaction were identified regarding wolf management in Montana. However, more favorable survey results were identified with respect to public confidence in FWP's ability to manage wolves. While respondents from the household and deer/elk license holder surveys reported the highest levels of confidence in the agency, private landowners showed the least amount of confidence in FWP.
- Hunters, private landowners, and the general public at large have a wide range of opinions and beliefs regarding wolves as a wildlife species and what management is most appropriate for this species.

All of these findings suggest that wolf management in Montana will continue to be a contentious issue in Montana. Tolerance for wolves remains relatively low in the state, especially among hunters and landowners, despite some evidence that attitudes towards wolves in the state may be improving over time. Furthermore, while there was agreement among survey respondents on some survey topics related to wolves and wolf management, there was much more disagreement. For instance, while most survey respondents were tolerant of wolf hunting in the state, there was little agreement regarding whether or not Montana's wolf hunting regulations were satisfactory. And, while hunters and landowners were generally tolerant of wolf trapping in Montana, a significant proportion of the respondents to the Montana household survey were not tolerant of this management tool.

How does FWP address the contentious nature of wolf management in Montana? Clearly, FWP will need to continue

balancing the differences in attitudes and opinions about wolves and wolf management among hunters and landowners versus Montana households when setting wolf regulations. Just as clearly, FWP and the Fish and Wildlife Commission needs to recognize that many of these differences are deep-seated and will remain to one degree or another for a long time—more than some other topics, consensus may not be likely. It will be important for the agency to continue to make efforts to involve the public in wolf management and season setting processes. Fortunately, maintaining positive and effective working relationships with stakeholder groups, increasing public acceptance of wolf harvest, and enhancing open communication to better inform decisions are all important objectives of Montana's wolf harvest season setting process. FWP intends to replicate these surveys in the future to monitor trends in public attitudes and opinions regarding wolves and wolf harvest management in Montana. Human dimensions research of this nature is one of the many ways FWP is working to involve the public in the important work it does for the state and its valued residents. 🐾

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