

Summary of Research



Trends in Montanans' Views Regarding Wolves and the Management of Wolves in Montana

HD Program Research Summary No. 56

Alexander L. Metcalf, Elizabeth C. Metcalf, Max Birdsong, Michael S. Lewis, and Justin Gude

January 2024

Abstract: *Following the 2022-23 wolf hunting and trapping seasons, FWP partnered with the University of Montana to conduct surveys of resident Montanans to assess their views regarding wolves and the management of wolves in Montana. This research builds upon similar research conducted in 2012 and 2017. Survey findings reveal that tolerance for wolves on the Montana landscape is increasing with time. This is particularly true for general residents, resident deer/elk license holders, and resident private landowners. There continues to be considerable tolerance for the concept of wolf hunting in Montana across all four study groups. However, general residents are slightly intolerant of wolf trapping. Moderately low levels of satisfaction with wolf management in the state were identified for all four groups studied. And while general residents and resident deer/elk license holder report being somewhat confident in FWP to manage wolves, resident private landowners and resident wolf license holders report low levels of confidence in FWP. General residents have the most positive attitudes towards wolves in the state. Resident deer/elk license holders also tend to have more positive attitudes towards wolves, at least compared to resident private landowners and resident wolf license holders. These research results speak to the contentious nature of wolf management in Montana, and the importance of continued efforts of FWP to involve the public in wolf-related outreach/education, wolf management decisions, and wolf season setting processes.*

BACKGROUND INFORMATION

In 2023, Montana Fish, Wildlife & Parks (FWP) partnered with the University of Montana Human Dimensions Lab to conduct surveys of resident Montanans to better understand their views regarding wolves and wolf management in Montana. Survey sampling and methods afforded estimates for four populations of Montanans: (1) general residents, (2) resident private landowners with at least 160 acres in rural parts of the state, (3) resident wolf hunting license holders, and (4) resident deer/elk hunting license holders. This research extends similar survey efforts conducted in 2012 and 2017 and provides trend data over these years.

The survey effort described herein was designed to provide information directly referenced in formal wolf season objectives. Beginning in 2010, 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 dimensions of wildlife management were also 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 lastly (3) enhancing open and effective communication to better inform decisions.

2023 SURVEYS

General Montana Resident Survey. Surveys were mailed to a randomly selected sample of n=5,000 Montana households and included a within-household randomization procedure. This sample was purchased from Dynata (a well-respected national business specializing in survey sampling solutions). A 34 percent response rate was achieved for this survey, with a diverse range of Montanans completing and returning the survey. Weighting of survey data was conducted to provide unbiased estimates for the population of adult Montana residents and correct for non-response bias. Additional surveys were mailed to three subsets of Montanans:

- **Resident Private Landowners.** Surveys were mailed to a randomly selected sample of n=2,500 resident MT landowners who owned at least 160 acres in rural parts of the state. This sample was drawn from the MT State Cadastral Database and was representative of this population. A 33 percent response rate was achieved for this survey.
- **Resident Wolf License Holders.** Surveys were mailed to a randomly selected sample of n=1,000 resident wolf hunting license holders from the 2022 hunting season. This sample was drawn from FWP's automated license system database and was representative of resident wolf license holders from across the state. A 40 percent response rate was achieved for this survey.
- **Resident Deer/Elk License Holders.** Surveys were mailed to a randomly selected sample of n=1,500 resident deer/elk hunting license holders from the 2022 hunting season. This sample was drawn from FWP's automated license system database and was representative of resident deer/elk license holders across the state. A 36 percent response rate was achieved for this survey.

This research summary provides selected human dimensions research results from this survey effort conducted in 2023, and where possible, compares survey results to results obtained in 2012 and 2017. Key questions addressed in the surveys included:

- **Overall tolerance with wolves being on the Montana landscape.**
- **Satisfaction with the 2022-23 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 & beliefs regarding wolves.**

In the future, this research can be further 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.



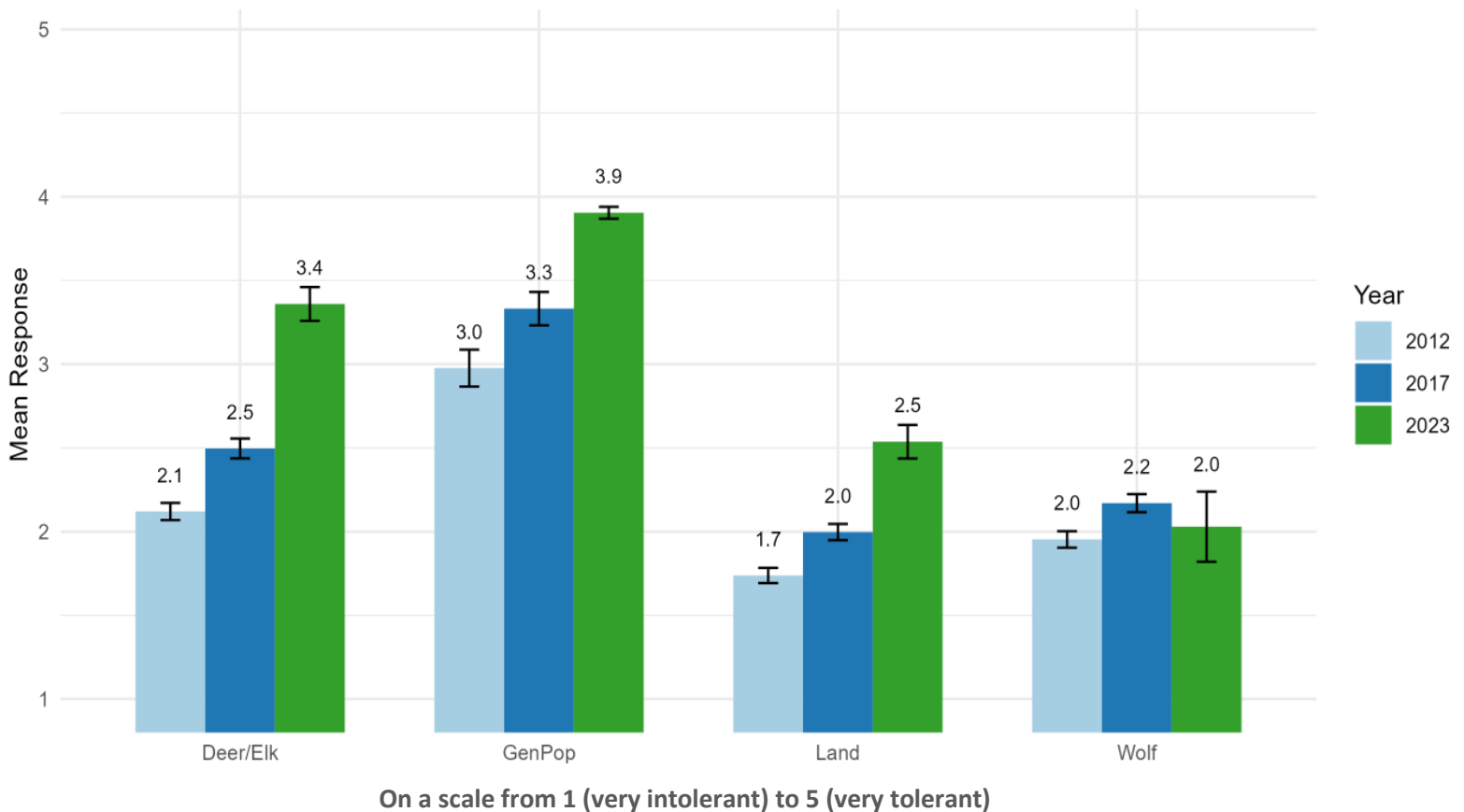
SURVEY RESULTS

OVERALL TOLERANCE OF WOLVES IN MONTANA

Results show that tolerance for wolves on the Montana landscape has increased over the past 10 years for general residents, resident deer/elk license holders, and resident private landowners, but remained constant and lower for resident wolf license holders over the same time period (see Figure 1 below).

A large majority of general residents are now tolerant or very tolerant of wolves on the Montana landscape (32 percent tolerant and 42 percent very tolerant, respectively in 2023; up from 11 percent and 30 percent, respectively in 2012).

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? (Deer/Elk = Resident Deer/Elk License Holders; GenPop = General Residents; Land = Resident Private Landowners; and Wolf = Resident Wolf License Holders. Error bars show the standard error of each estimate.)



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

- Using wildlife biologists, the Montana Fish & Wildlife 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 Montana Fish & Wildlife Commission approved the following regulations for the 2022-23 WOLF HUNTING season:
 - A license is required to legally hunt a wolf.
 - Quotas are used to limit the number of wolves that can be harvested in any trapping district or 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. Baiting is also legal for the hunting of wolves, though restrictions apply to the Lynx Protection Zone. Night hunting with artificial lights is also legal for wolves on private lands. However, it is illegal 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 20 wolves per person during the 2022-23 season. Persons may take up to 10 wolves via hunting and 10 wolves via trapping (maximum harvest of 20 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 2022-23 WOLF HUNTING REGULATIONS & TOLERANCE WITH THE CONCEPT OF WOLF HUNTING IN MONTANA

Satisfaction with wolf hunting regulations has remained generally stable around the midpoint (neither satisfied nor unsatisfied), although satisfaction with wolf hunting regulations among wolf license holders has increased markedly (see Figure 2 on the next page of this summary).

Opinions regarding the length of the wolf hunting season reveal varied opinions. For example, 34 percent of deer/elk license holders think the 2022-23 wolf hunting season is too short or much too short as compared to 43 percent of landowners and 79 percent of wolf license holders. Only 13 percent of general residents believe the season is too short or much too short. Thirty-four percent of general residents think the length of wolf hunting season is too long or much too long.

Perspectives on bag limits for wolf hunting/trapping also vary among groups. For example, 30 percent of deer/elk license holders, 45 percent of landowners, and 63 percent of wolf license holders think the bag limit for the 2022-23 wolf hunting/trapping season is too few or way too few. This compares to only 12 percent of general residents. Fifty-three percent of general residents think the current bag limit allows too many or way too many wolves.

Survey participants were also asked how tolerant they were with wolf **hunting** in Montana. Tolerance for wolf hunting is high for all groups and has remained steady since 2012 among resident deer/elk license holders and resident private landowners, increased slightly for resident wolf license holders, and decreased somewhat for general residents (see Figure 3 on the next page of this summary). Today, 58 percent of general residents are tolerant or very tolerant of wolf hunting, down from 71 percent in 2012.



Figure 2. Response to...“Overall, on a scale from 1 (very dissatisfied) to 5 (very satisfied), how satisfied are you with the 2022-23 Montana wolf hunting regulations.” (Deer/Elk = Resident Deer/Elk License Holders; GenPop = General Residents; Land = Resident Private Landowners; and Wolf = Resident Wolf License Holders. Error bars show the standard error of each estimate.)

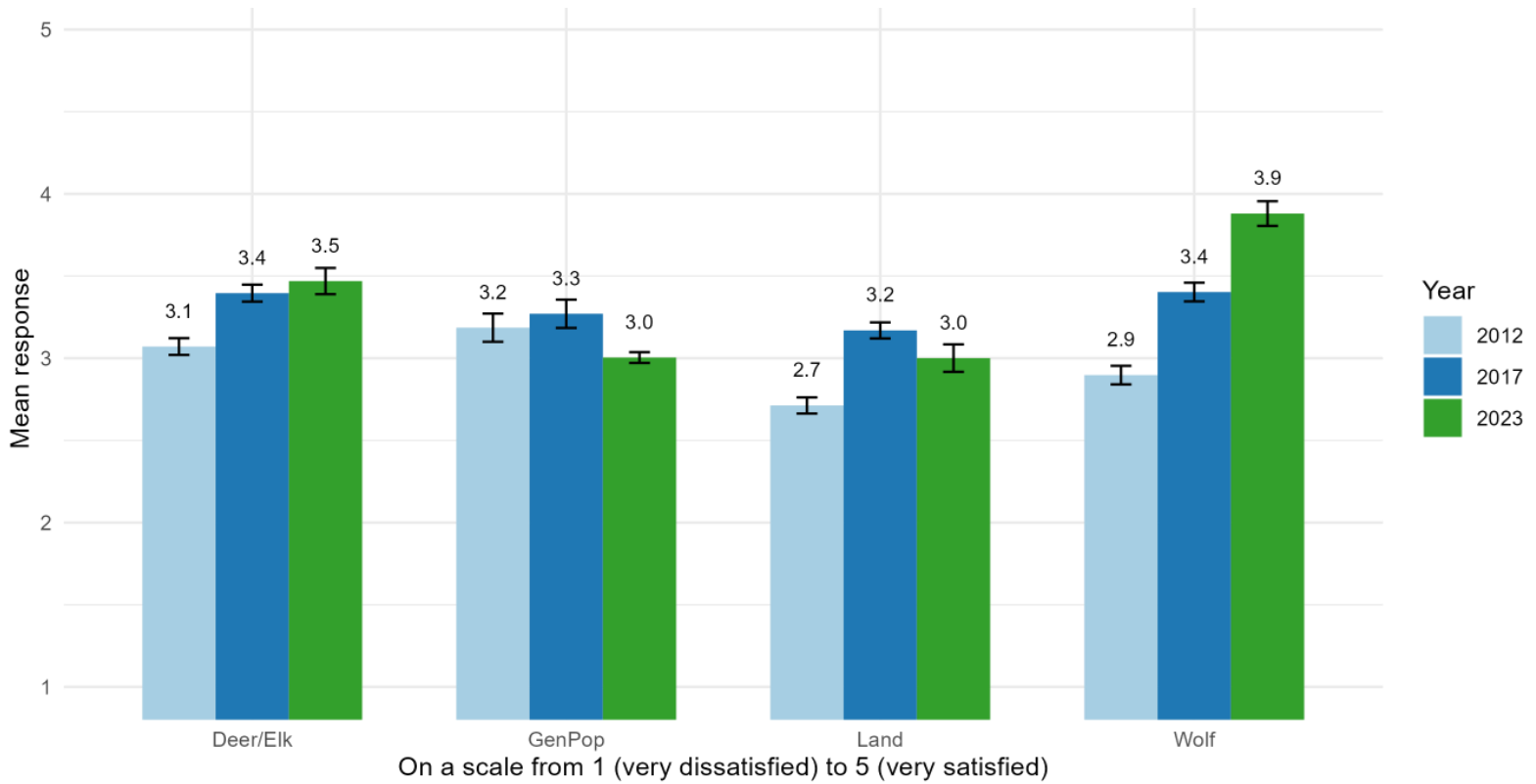
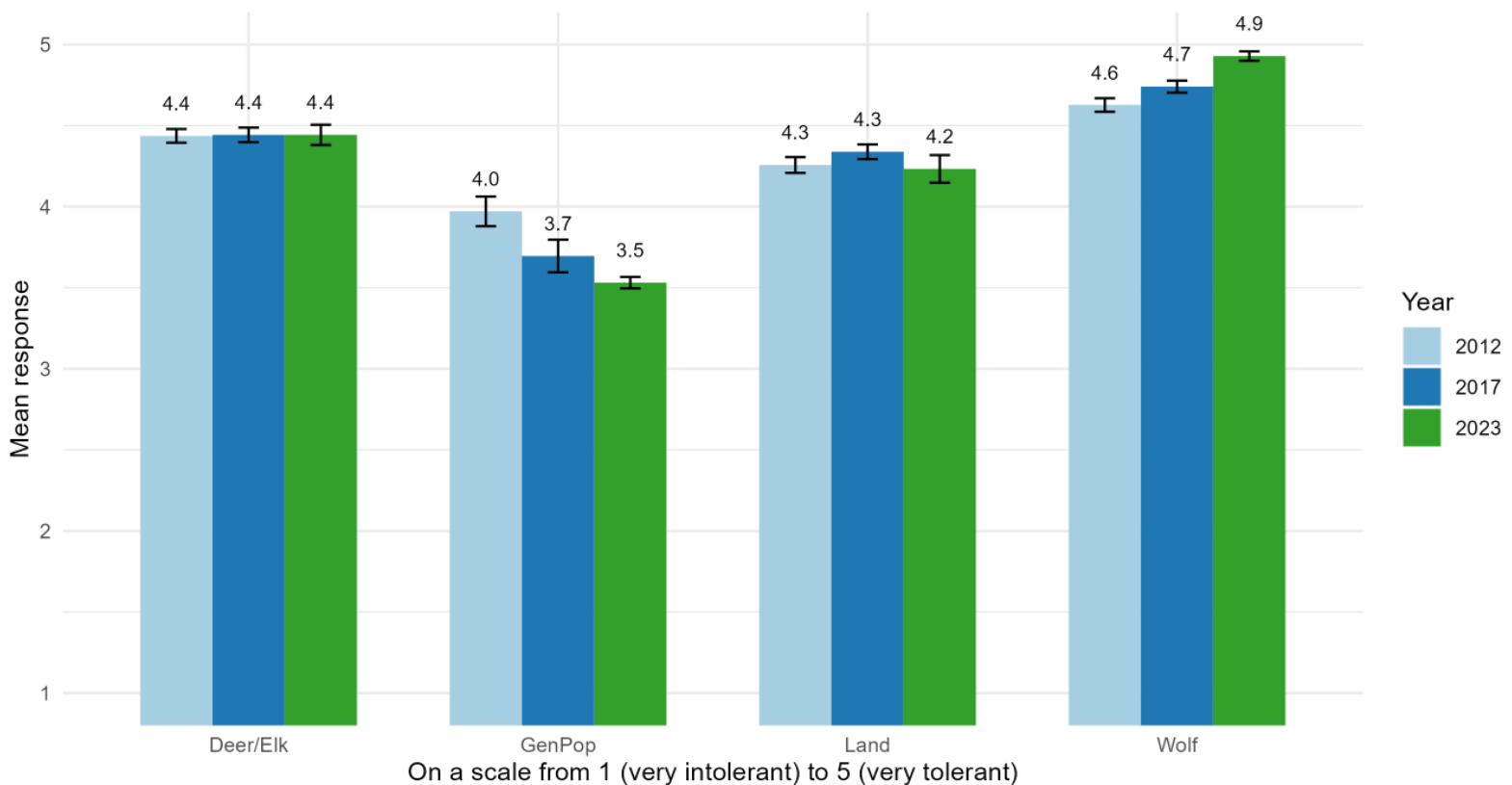


Figure 3. Response to...“Overall, on a scale from 1 (very intolerant) to 5 (very tolerant), how tolerant are you with wolf hunting in Montana?” (Deer/Elk = Resident Deer/Elk License Holders; GenPop = General Residents; Land = Resident Private Landowners; and Wolf = Resident Wolf License Holders. Error bars show the standard error of each estimate.)



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

- Using wildlife biologists, the Montana Fish & Wildlife 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 Montana Fish & Wildlife Commission approved the following regulations for the 2022-23 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 are used to limit the number of wolves that can be harvested in any trapping district or 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).
 - To avoid the non-target capture of grizzly bears, wolf trapping within occupied grizzly bear habitat has a floating start date dependent on den entry of collared bears.
 - Foothold traps and snares are legal methods during the wolf trapping season, though snaring is not permitted on public lands within the Lynx Protection Zone. 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 the non-target capture of smaller species. No trap may be set within 30 feet of an exposed carcass or bait that is visible from above. Wolf snares must be equipped with a loop stop that will close to a loop no smaller than 2.5 inches in diameter, have a breakaway device rated at 1,000 lbs. or less installed on the loop end, and must be placed such that the bottom of the snare loop is at least 18 inches above the surface. Power-assisted (spring-loaded) snare locks are prohibited on wolf snares on public lands. Body Gripping traps may NOT be used to take wolves. Traps and snares are required to be visually checked at least once every 48 hours.
 - A 150-foot setback is required for wolf traps and snares along open roads and hiking trails on public federal and state lands, though there are exceptions. While most areas of the state require a 500-foot setback for high recreational use trails and roads, no setbacks are required in several areas in Trapping District 1. On publicly owned lands, foothold traps and snares 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 20 wolves per person during the 2022-23 season. Persons may take up to 10 wolves via hunting and 10 wolves via trapping (maximum harvest of 20 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 2022-23 WOLF TRAPPING REGULATIONS & TOLERANCE WITH THE CONCEPT OF WOLF TRAPPING IN MONTANA

In 2023, satisfaction with wolf trapping regulations was lower than satisfaction with wolf hunting regulations for general residents and has remained stable since 2017 for all four groups (see Figure 4 on the next page of this summary).

Opinions regarding the length of the wolf trapping season reveal that 30 percent of deer/elk license holders, 37 percent of landowners, and 66 percent wolf license holders think the 2022-23 wolf trapping season is too short or much too short. This compares to only 12 percent of general residents. Forty percent of general residents think the length of wolf trapping season is too long or much too long.

Survey participants were also asked how tolerant they were with wolf **trapping** in Montana. Tolerance for wolf trapping

has held steady or decreased slightly for all groups since 2017 (the first year we asked this question), with resident license holders (deer/elk and wolf) and resident private landowners being tolerant to very tolerant of wolf trapping (69-92 percent tolerant or very tolerant within these groups), and general residents slightly intolerant (49 percent intolerant or very intolerant; 36 percent tolerant or very tolerant). See Figure 5 on the next page of this summary.



Figure 4. Response to...“Overall, on a scale from 1 (very dissatisfied) to 5 (very satisfied), how satisfied are you with the 2022-23 Montana wolf trapping regulations.” (Deer/Elk = Resident Deer/Elk License Holders; GenPop = General Residents; Land = Resident Private Landowners; and Wolf = Resident Wolf License Holders. Error bars show the standard error of each estimate.)

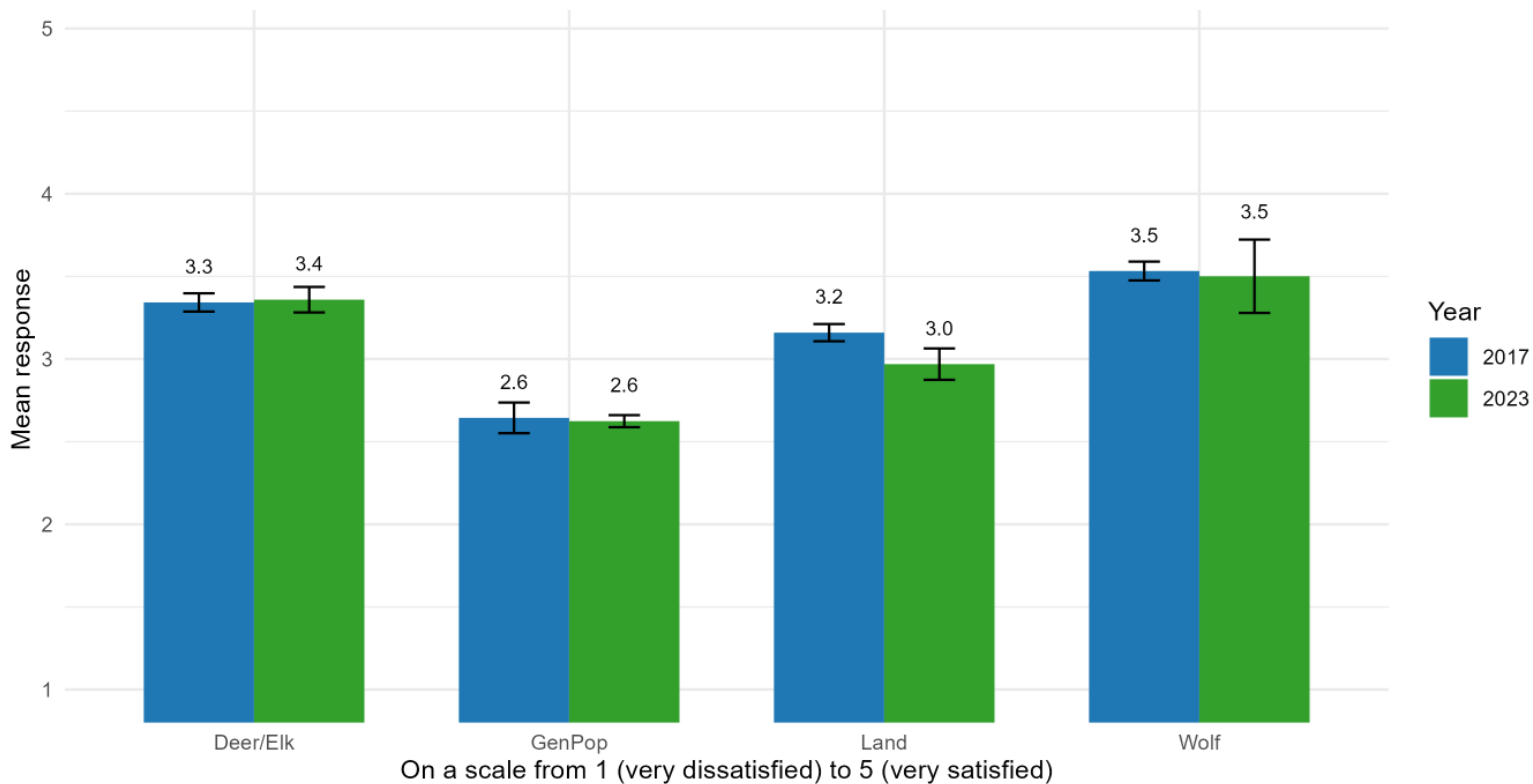
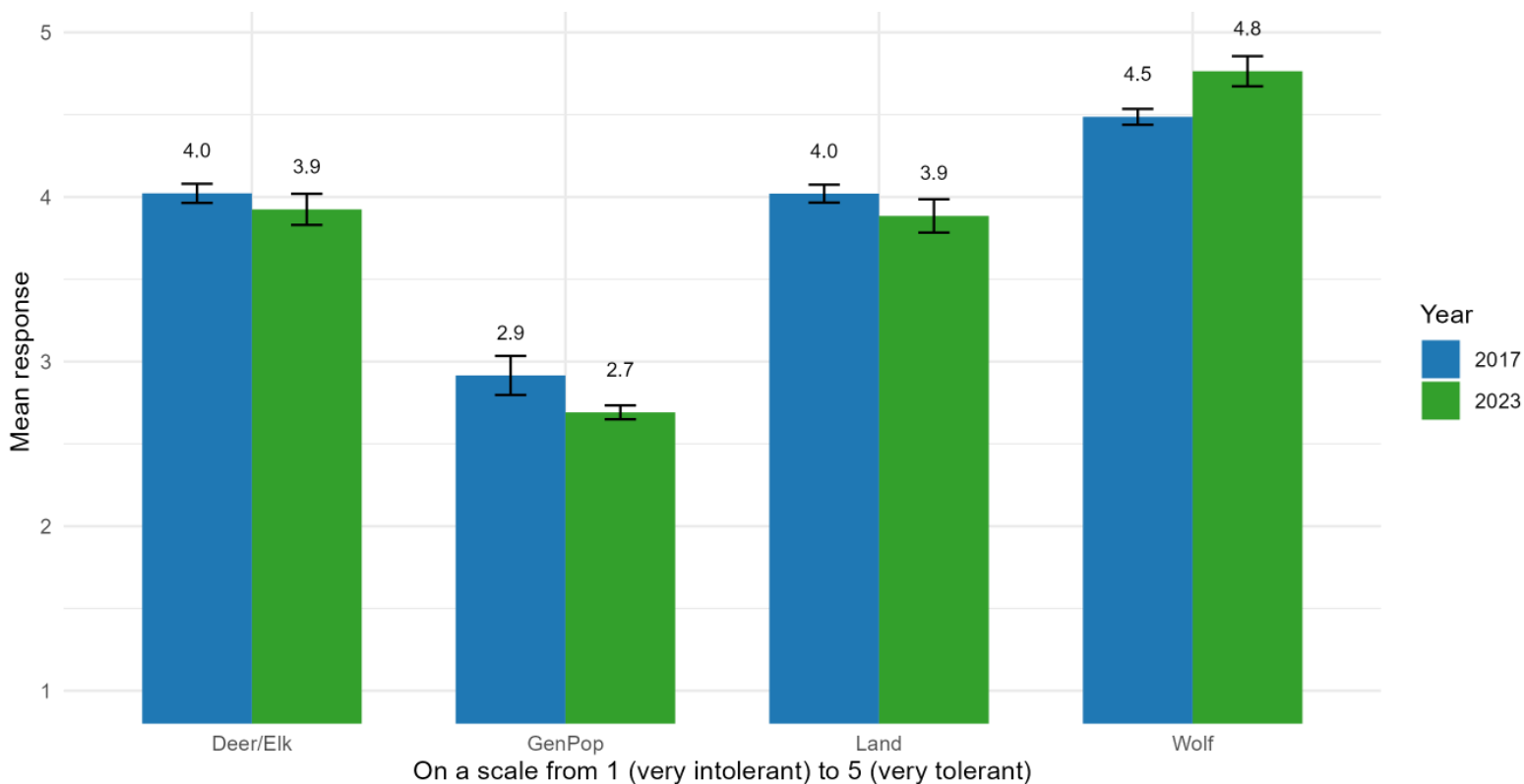


Figure 5. Response to...“Overall, on a scale from 1 (very intolerant) to 5 (very tolerant), how tolerant are you with wolf trapping in Montana?” (Deer/Elk = Resident Deer/Elk License Holders; GenPop = General Residents; Land = Resident Private Landowners; and Wolf = Resident Wolf License Holders. Error bars show the standard error of each estimate.)



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

Survey participants were asked how satisfied they are with wolf management in Montana. In 2023, we found moderately low levels of satisfaction across each group studied. In general, satisfaction was largely unchanged from 2017.

	2023 Percent Satisfied or Very Satisfied with Wolf Mgt.
General Residents	33.0
Resident Private Landowners	20.5
Resident Wolf License Holders	29.8
Resident Deer/Elk License Holders	31.3

Survey participants were also asked about their confidence in FWP's ability to manage wolves. Private landowners and resident wolf license holders show the least amount of confidence in FWP. General residents and resident deer/elk license holders reported the highest levels of confidence. Confidence in FWP has dropped among private landowners and resident wolf license holders since 2017.

	2023 Percent Confident or Very Confident in FWP
General Residents	43.9
Resident Private Landowners	17.2
Resident Wolf License Holders	18.0
Resident Deer/Elk License Holders	45.0

GENERAL OPINIONS AND BELIEFS REGARDING WOLVES

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

I think wolves are beautiful animals.

I think wolves pose a safety risk to people I care about.

I think wolves have a right to exist in Montana.

Wolves negatively affect my economic well-being.

I enjoy knowing wolves exist in Montana, even if I never see one.

I am concerned about wolves damaging things I care about.

Across each of these questions, we saw a consistent pattern where general residents had the most positive attitudes toward wolves. Resident deer/elk license holders also tended to have positive attitudes toward wolves. Resident private landowners' attitudes varied between the midpoint of the scale and slightly negative for these questions, but resident wolf license holders' attitudes toward wolves were consistently negative.

For example:

- Among general residents, 80 percent agreed or strongly agreed that wolves are beautiful animals, as did 69 percent of resident deer/elk license holders. In contrast, only 46 percent of resident private landowners agreed or strongly agreed with this statement along with only 37 percent of resident wolf license holders.
- Large majorities of resident wolf license holders (90 percent) and resident private landowners (72 percent) agreed or strongly agreed they were concerned about wolves damaging things they care about; 53 percent of resident deer/elk license holders agreed or strongly agreed with this statement, whereas only 29 percent of general residents did.
- Most general residents (71 percent) and just over half of resident deer/elk license holders (51 percent) agreed or strongly agreed that they enjoy knowing wolves exist in Montana, even if they never see one; a minority of resident private landowners (28 percent) and few resident wolf license holders (18 percent) agreed or strongly agreed with this statement.
- Attitudes toward wolves in 2023 were generally more positive than they were in 2017 among general residents, resident deer/elk license holders, and resident private landowners; attitudes among resident wolf license holders were slightly more negative in 2023 than in 2017.

SUMMARY & DISCUSSION

The information from the collaborative study 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:


- Tolerance for wolves on the Montana landscape is increasing with time. This is particularly true for general residents, resident deer/elk license holders, and resident private landowners. 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 study groups. However, less tolerance for wolf trapping was identified from this study, particularly among general residents. Tolerance for wolf trapping has held steady or decreased slightly for all four groups from 2017 to 2023.

- While satisfaction with the Montana wolf hunting regulations has remained generally stable at the midpoint for three of the groups studied, satisfaction amongst resident wolf license holders has increased markedly from 2012 to 2023.
- Overall, satisfaction with wolf trapping regulations in the state has remained fairly stable from 2017 to 2023. General residents are by far the most dissatisfied with trapping regulations compared to the other three study groups.
- Across all four groups studied, moderately low levels of satisfaction were identified regarding wolf management in Montana and satisfaction is slightly down from 2017.
- While general residents and resident deer/elk license holder surveys reported the highest levels of confidence in the FWP to manage wolves, resident private landowners and resident wolf license holders show low levels of confidence in FWP.
- General residents have the most positive attitudes towards wolves in the state. Resident deer/elk license holders also tend to have more positive attitudes towards wolves, at least compared to resident private landowners and resident wolf license holders.

All these findings suggest that wolf management in Montana will continue to be a contentious issue among Montanans. Tolerance for wolves in Montana has increased over the past 10 years. That said, tolerance remains relatively low for some, particularly among wolf license holders and private landowners, despite some evidence that attitudes towards wolves in general may be improving. Furthermore, while there was agreement among survey respondents on some survey topics related to wolves and wolf management, there continues to be much disagreement. For instance, while most survey respondents are tolerant of wolf hunting, we see less tolerance with wolf trapping, particularly among general residents. Furthermore, while general residents and resident deer/elk license holders have somewhat modest levels of confidence in FWP's ability to manage wolves, private landowners and wolf license holders currently show little confidence in the agency to manage wolves at this time.

How does FWP address the contentious nature of wolf management in Montana? Clearly, FWP will need to continue balancing the differences in values, attitudes, and opinions about wolves and wolf management among hunters and landowners versus general residents when setting wolf regulations. Just as clearly, FWP and the Fish & Wildlife Commission need to recognize that many of these differences are deep-seated and will remain to one degree or another for a long time, and 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 management plan and season setting process.

FWP intends to replicate this survey research in the future to monitor trends in Montanans opinions and views 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. 

REFERENCES

- Keeney, R. L. 1992. Value-focused thinking. Harvard University Press, Cambridge, Massachusetts, USA.
- Hammond, J. S., R. L. Keeney, and H. Raiffa. 1999. Smart choices: a practical guide to making better life decisions. Broadway, New York, New York, USA.
- Lyons, J. E., M. C. Runge, H. P. Laskowski, and W. L. Kendall. 2008. Monitoring in the context of structured decision making and adaptive management. *Journal of Wildlife Management* 72:1683-1692.

ABOUT THE AUTHORS

- Alexander L. Metcalf, Associate Professor, University of Montana, Missoula, Montana.
- Elizabeth C. Metcalf, Distinguished Professor and Senior Associate Dean, University of Montana, Missoula, Montana.
- Max Birdsong, Postdoctoral Scholar, University of Montana, Missoula, Montana.
- Michael S. Lewis, Human Dimensions Program Supervisor. Research Unit of FWP, Helena, Montana.
- Justin Gude, Research Administrator, Research Unit of FWP, Helena, Montana.

TO OBTAIN COPIES OF THIS SUMMARY

Contact the Human Dimensions Unit of FWP by phone (406) 444-4308 or visit FWP's website at fwp.mt.gov.

Note regarding human dimensions wolf survey research data compiled by FWP from 2012-2023: During the past ten years, FWP in working with the University of Montana, has steadily improved the methodologies for conducting wolf human dimensions surveys as well as the methodologies used for analyzing wolf human dimensions survey data. Some of what has been learned from conducted the 2023 study presented in this research summary (including new insights on weighting procedures to correct for nonresponse bias suggested by the Bureau of Business and Economic Research at the University of Montana) has been applied to the 2012 and 2017 wolf human dimensions research conducted by FWP. As such, there are slight differences in some of the 2012 and 2017 survey results presented in this research as compared to what was presented in previous research summaries compiled by FWP prior to 2023.