

Minnesotans' Attitudes Toward Wolves and Wolf Management

Summary Report



UNIVERSITY OF MINNESOTA



DEPARTMENT OF
NATURAL RESOURCES

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Background

The Minnesota Department of Natural Resources' Division of Fish and Wildlife (DNR) is engaged in an update to the Minnesota Wolf Management Plan. A critical element of this plan update is gathering information about stakeholders' values, beliefs, attitudes, and behaviors with respect to wolves and wolf management, in order to make informed decisions. This is particularly important in a context like wolf management where diverse publics hold divergent preferences and values. This study was undertaken with these concerns in mind, and to provide data to technical and stakeholder advisory committees convened to support the wolf plan update. The collection of statistically representative data of stakeholder preferences can enhance the transparency of decision making and provide a voice for all stakeholders affected by wolf management. This study was conducted to understand the values, beliefs, attitudes, and behaviors of three stakeholder groups in particular, a) livestock producers, b) deer hunters, and c) Minnesota residents.

Results presented in this summary report are a snapshot of the broader study. For more details on the collection methods and results please consult the full study report.

Methods

There were 3 primary study groups:

1. Cattle and sheep producers operating in a county considered part of the current wolf range
2. Minnesota resident firearm deer hunters, aged 18+
3. Minnesota residents, aged 18+

Livestock producers ($n=2,500$) were randomly selected for participation from a list of known individuals obtained from the Minnesota Board of Animal Health.

Deer hunters ($n=2,000$) were randomly selected from license data obtained from the Minnesota Department of Natural Resources.

For residents, a random sample of Minnesota households ($n=5,250$) was obtained from the firm Marketing Systems Group using address-based sampling. Data were selected within counties corresponding to Minnesota DNR administrative regions, and the Twin Cities Metro (e.g., Hennepin and Ramsey Counties) for ease of data collection and to ensure that minority demographics (e.g., rural) were captured by the collection procedure. Post-stratification weights were applied to account for the relative proportion of regional populations, by age, gender, and hunting participation in statewide estimates. More detail on these methods is found in the full study report.

All data collection occurred through postal mail. Participants received a maximum of 4 solicitations containing a cover letter explaining the study purpose, a survey questionnaire, and a self-addressed postage-paid return envelope. Contact lists were adjusted for responses between rounds. Collection occurred between September and December, 2019.

Effective response rates were 33%, 47% and 53% for the Resident ($n=1,466$), Hunter ($n=895$), and Livestock Producer ($n=1,139$) groups respectively, after accounting non-deliverable addresses and invalid responses.

Livestock Producers

Livestock producers are important stakeholders in wolf management, and it is critical that their attitudes and opinions are considered in the 2020 wolf management plan update. Data presented in this section are a summary of livestock producers responses to key questions included in the broader study.

Livestock producers were asked their general attitude toward wolves (**Fig. 1**). Responses were recoded on a scale with a negatively anchored pole on one end, and positively anchored pole on the opposite. Anchor pairs included bad/good, dangerous/harmless, harmful/beneficial, and negative/positive. Responses were averaged, and values collapsed to reflect negative (scores ranging from -3 to -1), neutral (score of 0), and positive (scores ranging from 1 to 3). Results show that livestock producers evaluation of wolves is more negative than positive. On average, 62% of livestock producers expressed a negative attitude toward wolves. This is compared to 32% that expressed a positive attitude, and 6% that expressed a neutral attitude.

Similarly, livestock producers were asked to report their agreement with the statement: "It is important to maintain a wolf population in Minnesota." Responses were recorded on a 7 point agreement scale, where 1 = strongly disagree, 4 = neither, and 7 = strongly agree. On average, 42.5% of respondents reported disagreement with the statement, while 47.2% agreed that maintaining a wolf population in Minnesota was important. A minority of respondents (10%) neither agreed nor disagreed that maintaining a wolf population in Minnesota was important (**Fig. 2**).

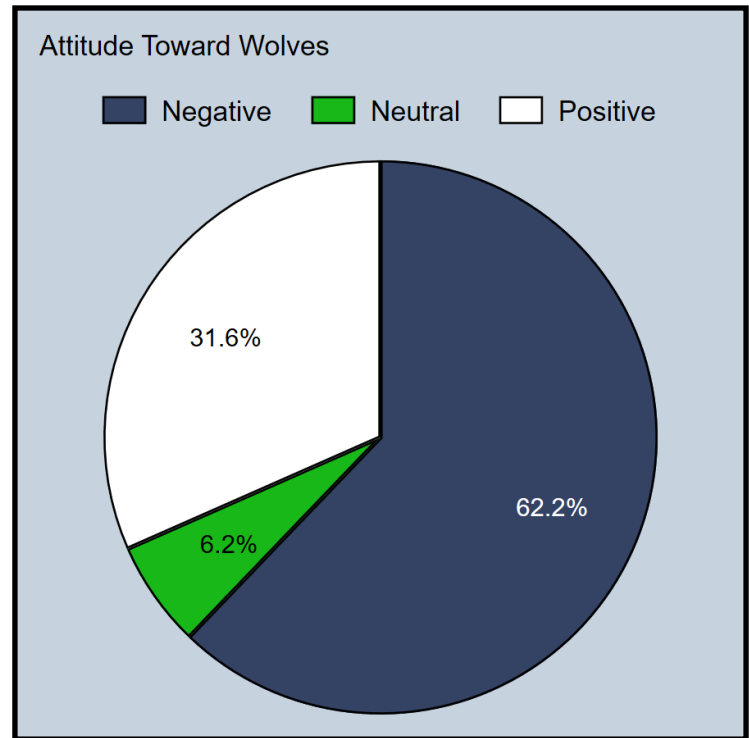


Fig. 1. Livestock producers' general attitude toward wolves. Average of responses to 4 questions asking if wolves are, bad/good, dangerous/harmless, harmful/beneficial, and negative/positive.

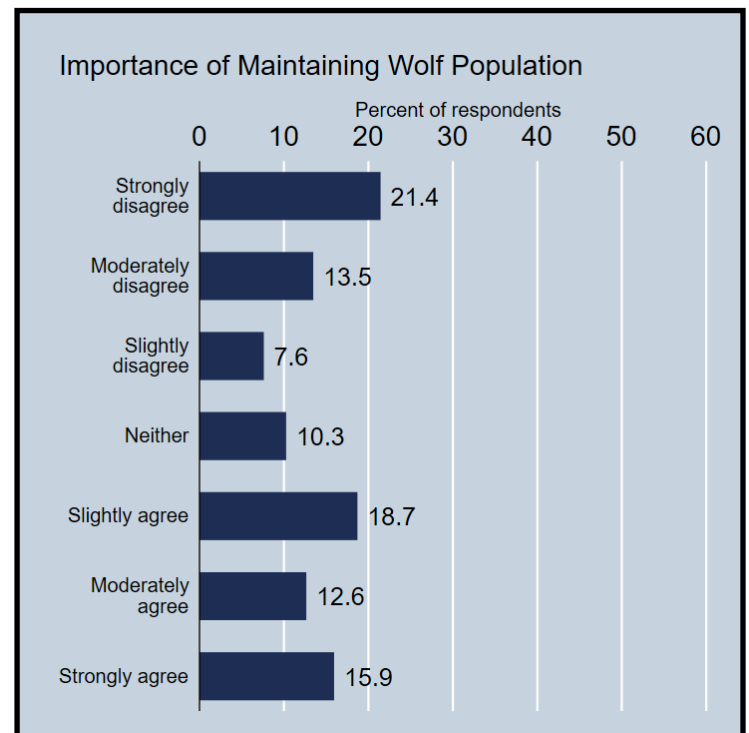


Fig. 2. Percent of livestock producers that agreed or disagreed with the statement "It is important to maintain a wolf population in Minnesota."

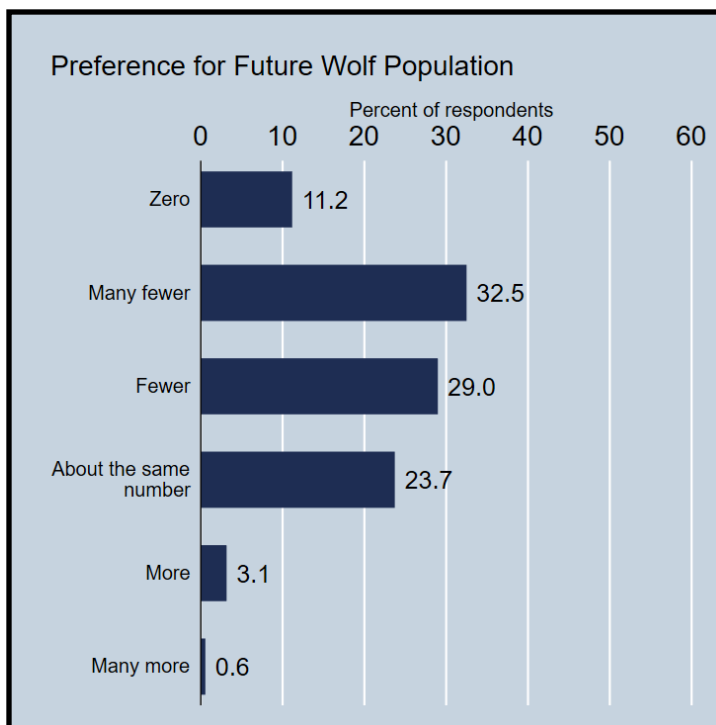


Fig 3. Livestock producers' preference for a future wolf population. Response followed the question: "There were an estimated 2,655 wolves in Minnesota in winter 2017/18. In the future, I would like to have _____wolves in Minnesota."

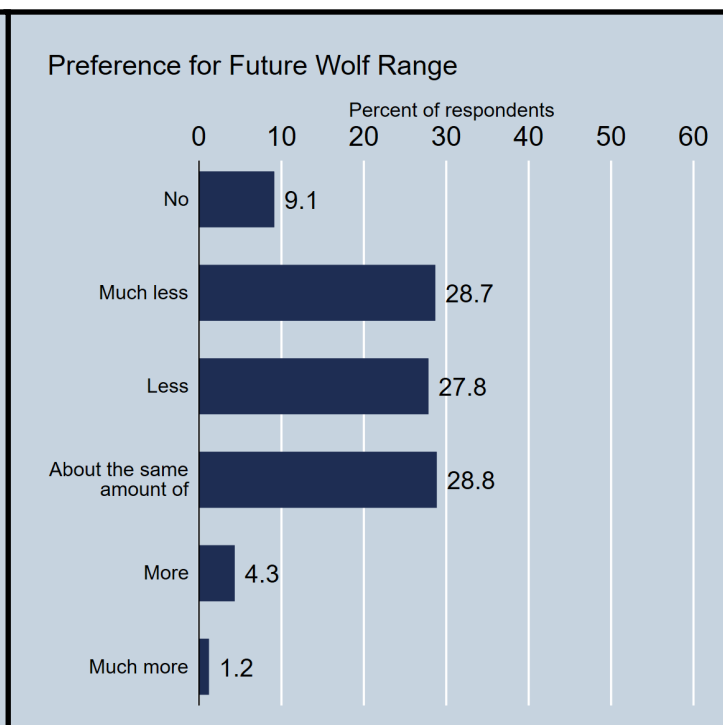


Fig 4. Livestock producers' preference for a future wolf range. Responses followed the question: "Compared to today, I would like to see wolves occupy _____ territory in Minnesota."



Fig 5. Livestock producers' stated importance for wolf management actions. Response followed the question: "How important do you personally think it is that the Minnesota DNR do each of the following concerning wolves in Minnesota?" Where 1=not at all important, and 5=very important

Livestock producers indicated their preferences for a future wolf population (**Fig. 3**) and range (**Fig 4**). On average, livestock producers expressed a preference for a reduction in wolf numbers, compared to today (Fall 2019). Around 73% indicated that compared to today, they would prefer to see "zero", "many fewer", or "fewer" wolves in Minnesota. A similar pattern held for livestock producers' preference for wolf range. Around 66% indicated that they would like to see wolves occupy "no", "much less" or "less" territory in Minnesota.

Respondents were asked to rate the importance of several potential management actions the MN DNR can pursue with respect to wolves (**Fig. 5**). For livestock producers, the 3 most important management actions were; 1) compensate livestock producers for animals lost to wolves, 2) kill wolves that show aggressive or threatening behavior toward people, and 3) kill wolves in areas where they are attacking domestic livestock.

Livestock producers reported their agreement with statements about why people value having wolves in Minnesota (**Fig. 6**). While, on average, livestock producers disagreed or were neutral toward all of the statements evaluated, the three highest rated values included; 1) because they have a right to exist, 2) for the opportunity to hunt or trap them, and 3) because they are an important part of the ecosystem.

Support for regulated wolf hunting (**Fig. 7a**) and trapping (**Fig. 7b**) seasons were assessed among respondents. A clear majority of livestock producers indicated that they either “slightly support”, “moderately support”, or “strongly support” establishing both a regulated wolf hunting (88%) or trapping (84%) season. Minorities of livestock producers were opposed to establishing a wolf hunting (7%) or trapping (11%) season.

Fig 6. Livestock producers’ values for wolves. Responses followed the question: “People value having wolves in Minnesota for a number of reasons, how much do you agree or disagree with the following statements? I value having wolves in Minnesota...” 1=strongly disagree, 4=neutral, and 7 = strongly agree.

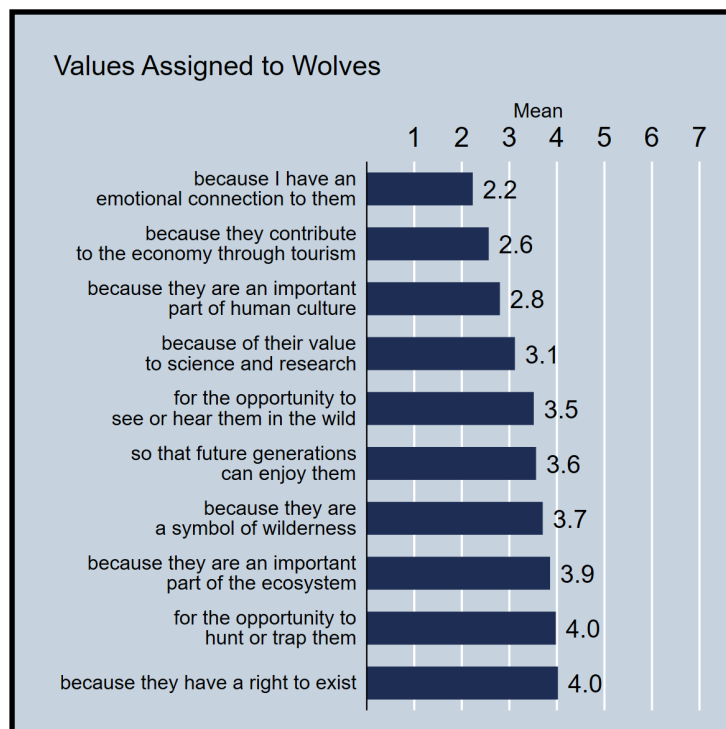
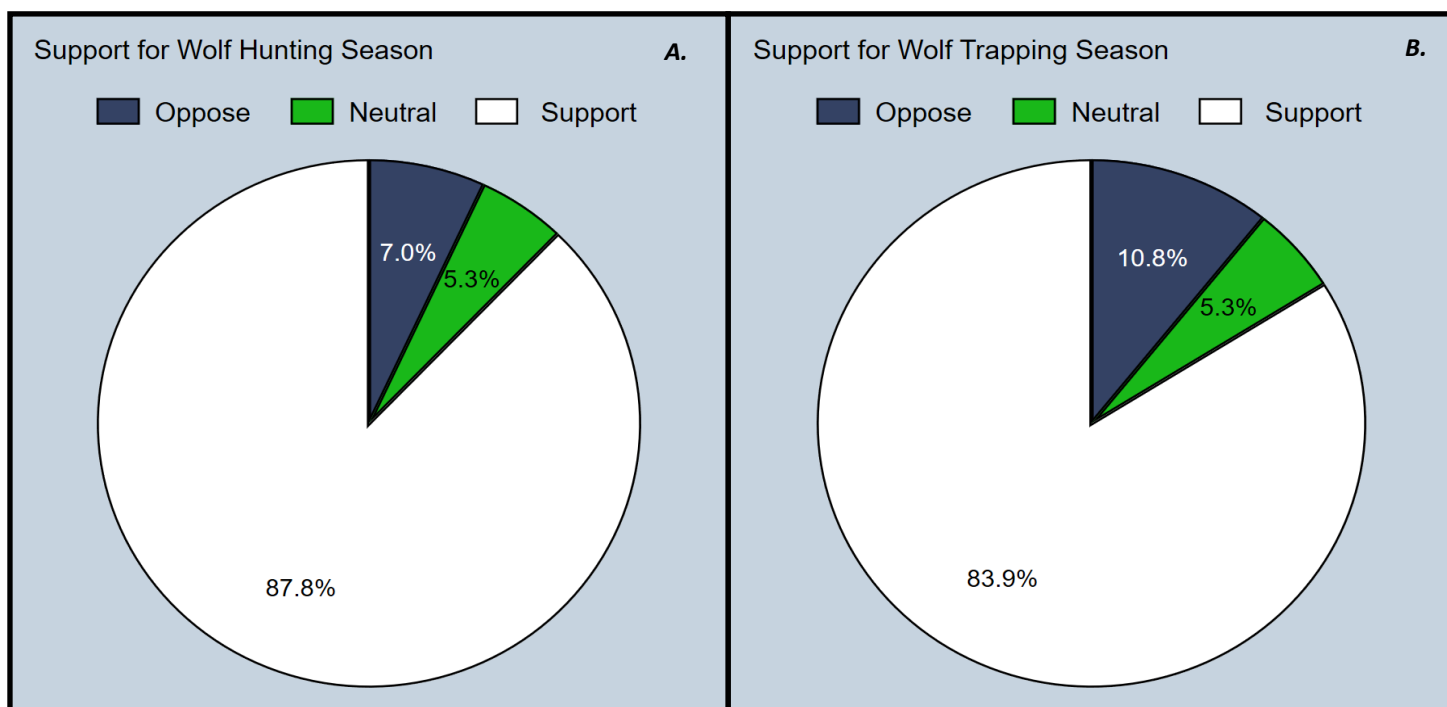


Fig 7. Livestock producers’ support or opposition to potential wolf hunting and trapping seasons. Responses followed the question: “Some Minnesotans’ want the opportunity to hunt and trap wolves, while others feel the hunting and trapping of wolves is wrong. If wolves were removed from the endangered species list and management authority moves to the state of Minnesota, how much do you support or oppose the following? **A.** Establishing a regulated wolf hunting season. **B.** Establishing a regulated wolf trapping season.



Deer Hunters

Deer hunters are important stakeholders in wolf management, and it is critical that their attitudes and opinions about are considered in the 2020 wolf management plan update. Data presented in this section are a summary of deer hunters' responses to key questions included in the broader study.

Deer hunters were asked their general attitude toward wolves (**Fig. 8**). Responses were recoded on a scale with a negatively anchored pole on one end, and positively anchored pole on the opposite. Anchor pairs included bad/good, dangerous/harmless, harmful/beneficial, and negative/positive. Responses were averaged, and values collapsed to reflect negative (scores ranging from -3 to -1), neutral (score of 0), and positive (scores ranging from 1 to 3). Results show that deer hunters' evaluation of wolves is more negative than positive. On average, 52% of deer hunters expressed a negative attitude toward wolves. This is compared to 39% that expressed a positive attitude, and 10% that expressed a neutral attitude.

Similarly, deer hunters were asked to report their agreement with the statement: "It is important to maintain a wolf population in Minnesota." Responses were recorded on a 7 point agreement scale, where 1 = strongly disagree, 4 = neither, and 7 = strongly agree. Around 67% of respondents reported agreement with the statement, while only 26% disagreed that maintaining a wolf population in Minnesota was important. A minority of respondents (7%) neither agreed nor disagreed that maintaining a wolf population in Minnesota was important (**Fig. 9**).

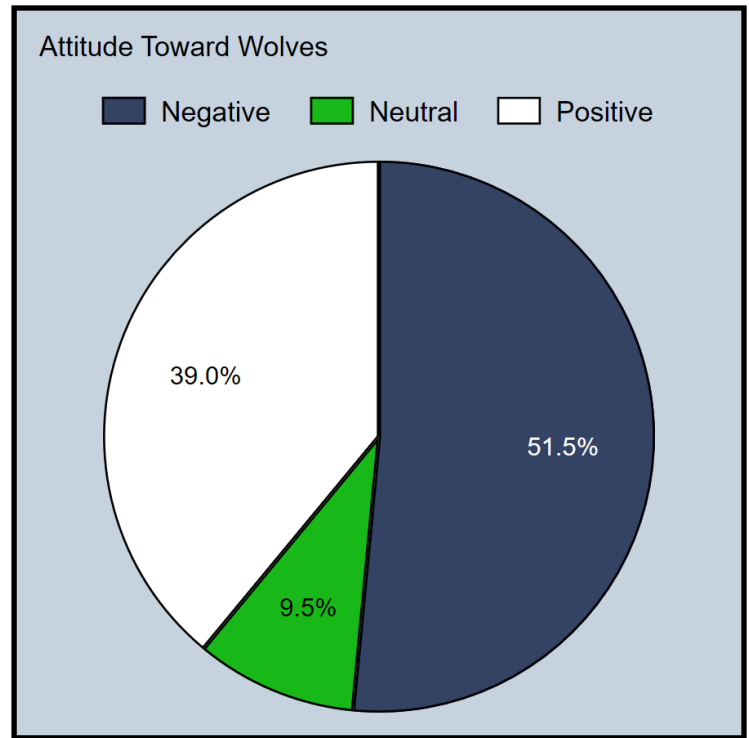


Fig. 8. Deer hunters' general attitude toward wolves. Average of responses to 4 questions asking if wolves are, bad/good, dangerous/harmless, harmful/beneficial, and negative/positive.

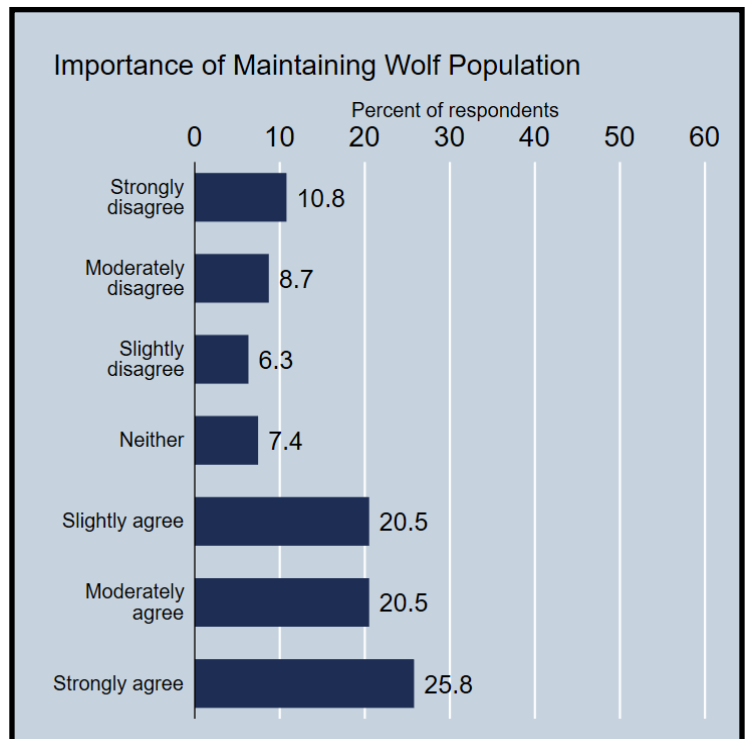


Fig. 9. Percent of deer hunters that agreed or disagreed with the statement "It is important to maintain a wolf population in Minnesota."

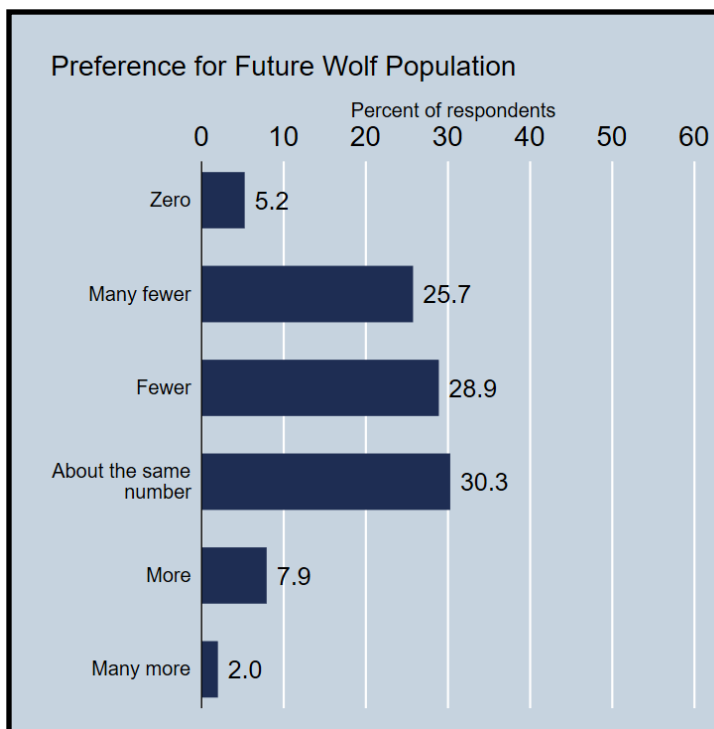


Fig 10. Deer hunters' preference for a future wolf population. Response followed the question: "There were an estimated 2,655 wolves in Minnesota in winter 2017/18. In the future, I would like to have _____wolves in Minnesota."

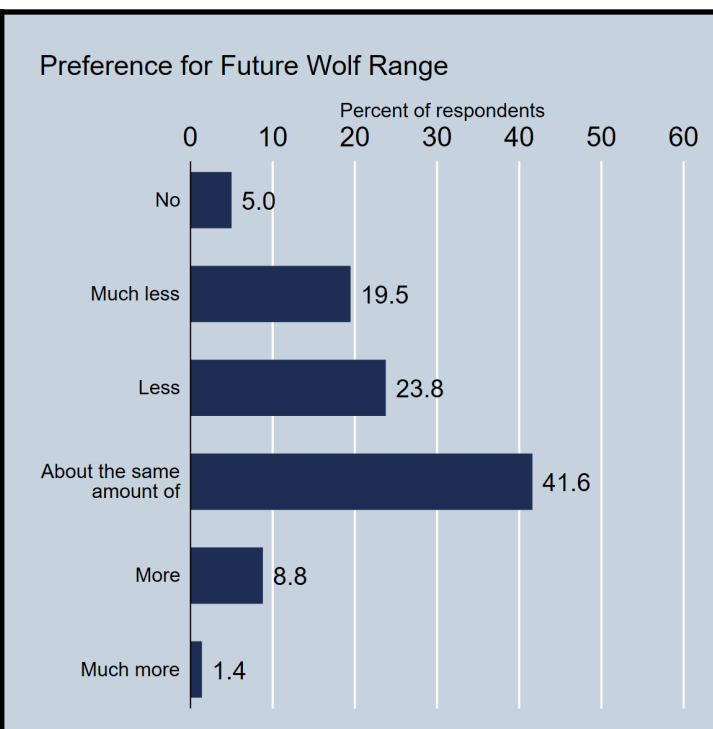


Fig 11. Deer hunters' preference for a future wolf range. Responses followed the question: "Compared to today, I would like to see wolves occupy _____ territory in Minnesota."



Fig 12. Deer hunters' stated importance for wolf management actions. Response followed the question: "How important do you personally think it is that the Minnesota DNR do each of the following concerning wolves in Minnesota?" Where 1=not at all important, and 5=very important

Deer hunters indicated their preferences for a future wolf population (**Fig. 10**) and range (**Fig 11**). On average, deer hunters expressed a preference for a reduction in wolf numbers, compared to today (Fall 2019). Around 60% indicated that compared to today, they would prefer to see "zero", "many fewer", or "fewer" wolves in Minnesota. A similar pattern held for deer hunters' preference for wolf range. Around 48% indicated that they would like to see wolves occupy "no", "much less" or "less" territory in Minnesota. However, 42% would like wolves to occupy "about the same amount of" territory.

Respondents were asked to rate the importance of several potential management actions the MN DNR can pursue with respect to wolves (**Fig. 12**). For deer hunters, the 3 most important management actions were; 1) kill wolves that show aggressive or threatening behavior toward people, 2) kill wolves in areas where they are attacking domestic livestock, and 3) educate livestock producers about best management practices to prevent conflict.

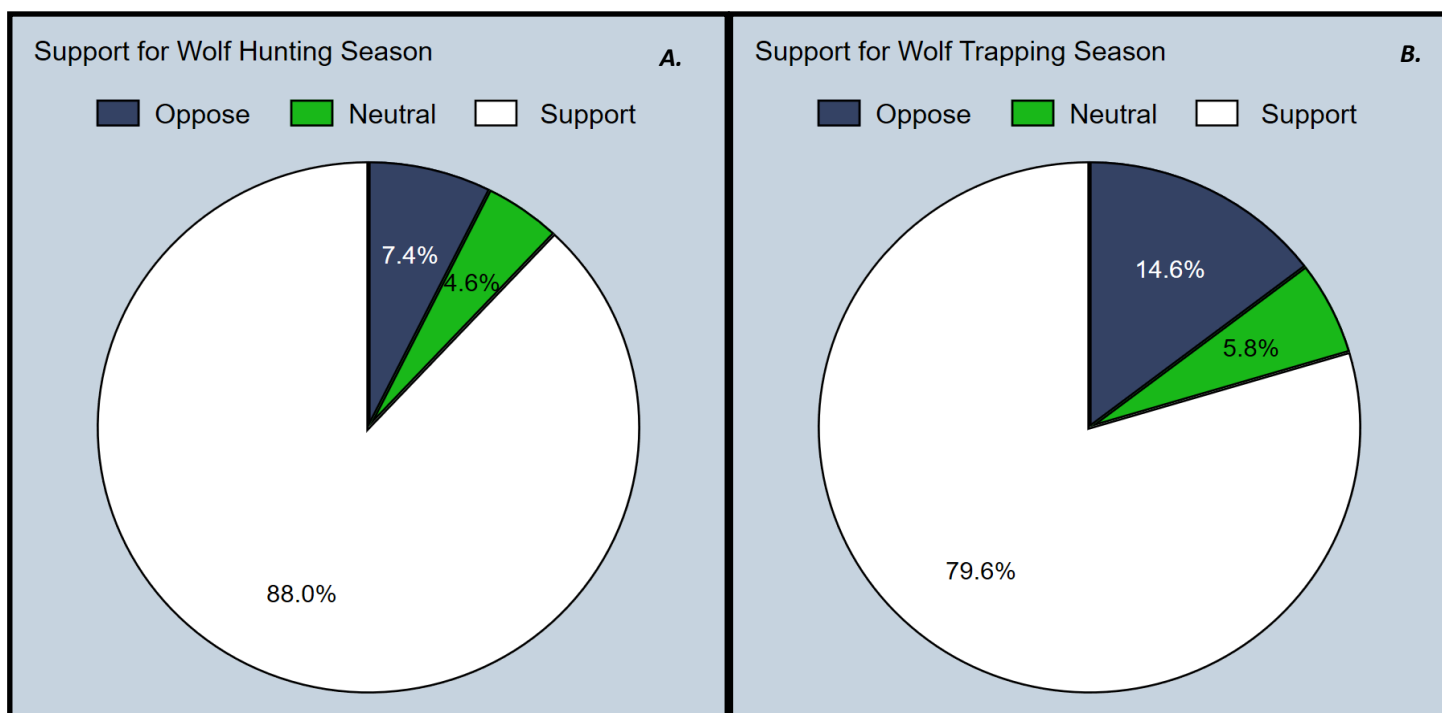
Deer hunters reported their agreement with statements about why people value having wolves in Minnesota (**Fig. 6**). For deer hunters, the three highest rated values included; 1) because they have a right to exist, 3) because they are an important part of the ecosystem, and 3) for the opportunity to hunt or trap them.

Support for regulated wolf hunting (**Fig. 7a**) and trapping (**Fig. 7b**) seasons were assessed among respondents. A clear majority of deer hunters indicated that they either “slightly support”, “moderately support”, or “strongly support” establishing both a regulated wolf hunting (88%) or trapping (80%) season. Minorities of deer hunters were opposed to establishing a wolf hunting (7%) or trapping (15%) season.

Fig 13. Deer hunters’ values for wolves. Responses followed the question: “People value having wolves in Minnesota for a number of reasons, how much do you agree or disagree with the following statements? I value having wolves in Minnesota...” 1=strongly disagree, 4=neutral, and 7 = strongly agree.



Fig 14. Deer hunters’ support or opposition to potential wolf hunting and trapping seasons. Responses followed the question: “Some Minnesotans’ want the opportunity to hunt and trap wolves, while others feel the hunting and trapping of wolves is wrong. If wolves were removed from the endangered species list and management authority moves to the state of Minnesota, how much do you support or oppose the following? **A.** Establishing a regulated wolf hunting season. **B.** Establishing a regulated wolf trapping season.



Residents

All Minnesotans are important stakeholders in wolf management, and it is critical that the full diversity of their attitudes and opinions are considered in the 2020 wolf management plan update. Data presented in this section are a summary of residents' responses to key questions included in the broader study.

Residents were asked their general attitude toward wolves (**Fig. 8**). Responses were recoded on a scale with a negatively anchored pole on one end, and positively anchored pole on the opposite. Anchor pairs included bad/good, dangerous/harmless, harmful/beneficial, and negative/positive. Responses were averaged, and values collapsed to reflect negative (scores ranging from -3 to -1), neutral (score of 0), and positive (scores ranging from 1 to 3). Results show that residents' evaluation of wolves is more positive than negative. On average, 68% of respondents expressed a positive attitude toward wolves. This is compared to 20% that expressed a negative attitude, and 12% that expressed a neutral attitude.

Similarly, residents were asked to report their agreement with the statement: "It is important to maintain a wolf population in Minnesota." Responses were recorded on a 7 point agreement scale, where 1 = strongly disagree, 4 = neither, and 7 = strongly agree. Around 87% of respondents reported agreement with the statement, while only 6.4% disagreed that maintaining a wolf population in Minnesota was important. A similar minority of respondents (7%) neither agreed nor disagreed that maintaining a wolf population in Minnesota was important (**Fig. 9**).

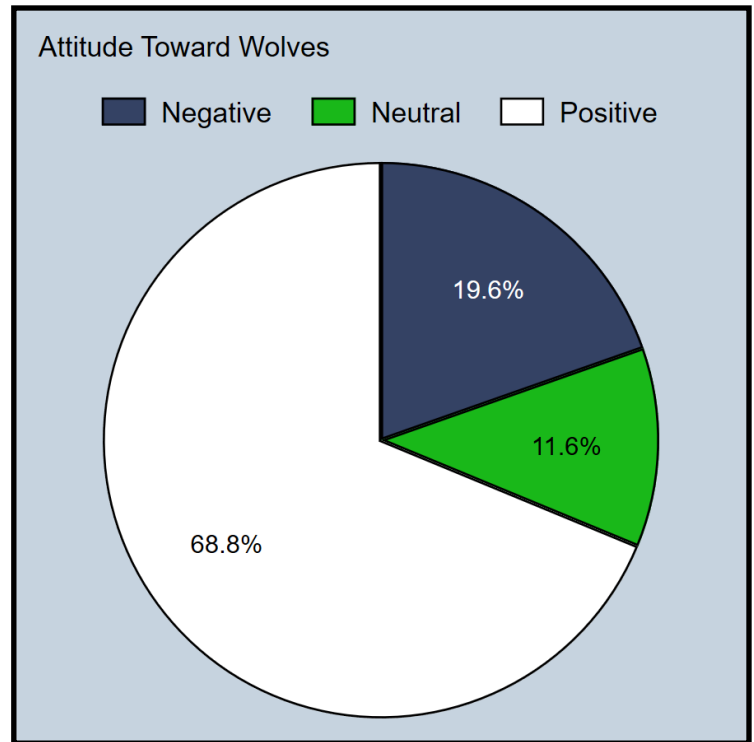


Fig. 15. Residents' general attitude toward wolves. Average of responses to 4 questions asking if wolves are, bad/good, dangerous/harmless, harmful/beneficial, and negative/positive.

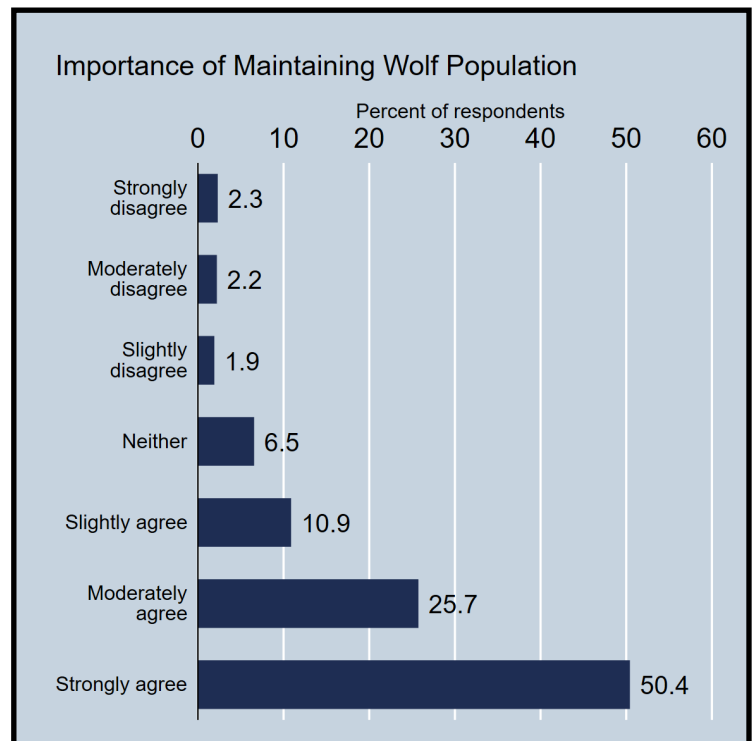


Fig. 16. Percent of residents that agreed or disagreed with the statement "It is important to maintain a wolf population in Minnesota."

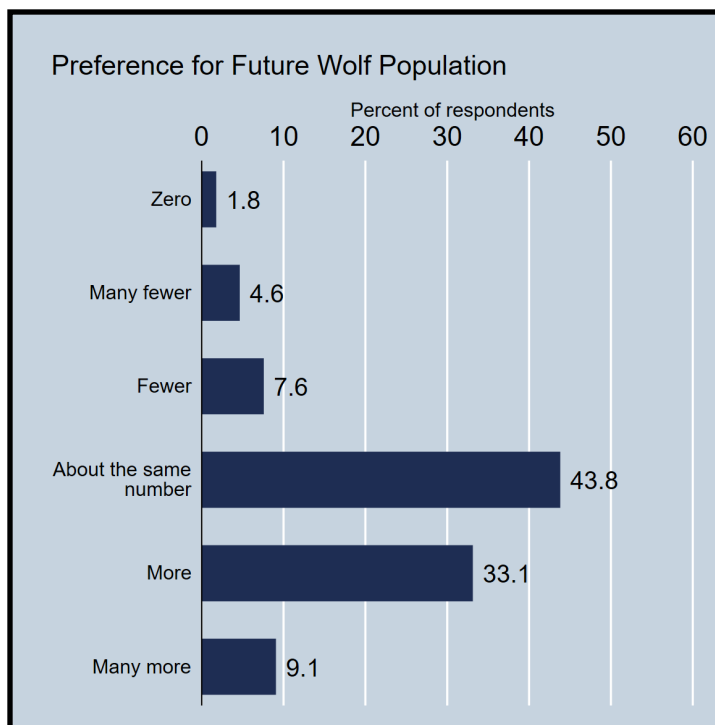


Fig 17. Residents' preference for a future wolf population. Response followed the question: "There were an estimated 2,655 wolves in Minnesota in winter 2017/18. In the future, I would like to have _____wolves in Minnesota."

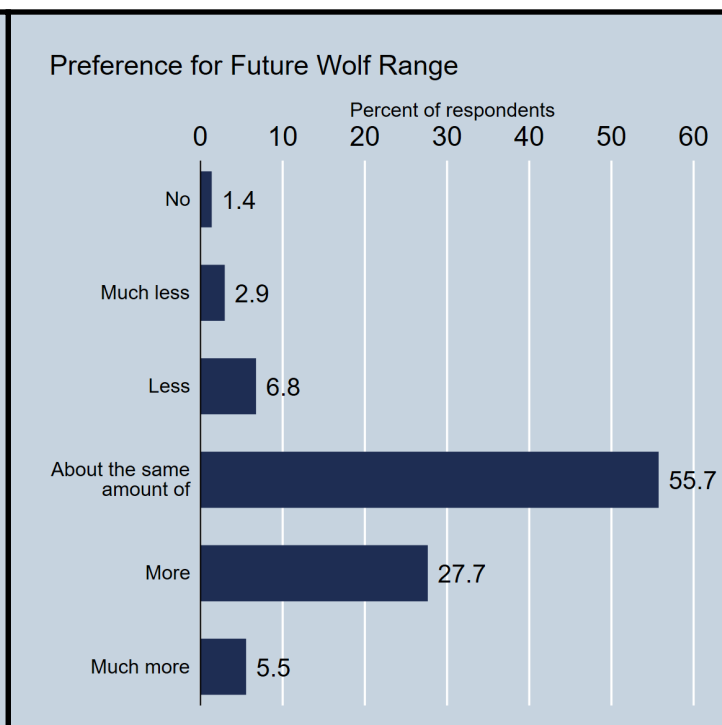


Fig 18. Residents' preference for a future wolf range. Responses followed the question: "Compared to today, I would like to see wolves occupy _____ territory in Minnesota."



Fig 19. Residents' stated importance for wolf management actions. Response followed the question: "How important do you personally think it is that the Minnesota DNR do each of the following concerning wolves in Minnesota?" Where 1= not at all important, and 5=very important

Residents indicated their preferences for a future wolf population (**Fig. 17**) and range (**Fig 18**). On average, respondents expressed a preference for either an increase (42%), or similar wolf numbers (44%), compared to today (Fall 2019). A similar pattern held for residents preference for wolf range. Around 33% indicated that they would like to see wolves occupy "more" or "much more" territory in Minnesota. While 55% would like wolves to occupy "about the same amount of" territory.

Respondents were asked to rate the importance of several potential management actions the MN DNR can pursue with respect to wolves (**Fig. 19**). For residents, the 3 most important management actions were; 1) educate livestock producers about best management practices to prevent conflict, 2) educate people about wolves, and 3) study wolf populations.

Residents reported their agreement with statements about why people value having wolves in Minnesota (**Fig. 20**). For residents, the three highest rated values included; 1) because they are an important part of the ecosystem, 2) because they have a right to exist, and 3) so that future generations can enjoy them.

Support for regulated wolf hunting (**Fig. 21a**) and trapping (**Fig. 22b**) seasons were assessed among residents. Respondents were relatively split between support (41%) and opposition (49%) to establishing a wolf hunt. However, a larger proportion (58%) indicated that they either “slightly opposed”, “moderately opposed”, or “strongly opposed” establishing a regulated wolf trapping season.

Fig 20. Residents’ values for wolves. Responses followed the question: “People value having wolves in Minnesota for a number of reasons, how much do you agree or disagree with the following statements? I value having wolves in Minnesota...” 1=strongly disagree, 4=neutral, and 7 = strongly agree.

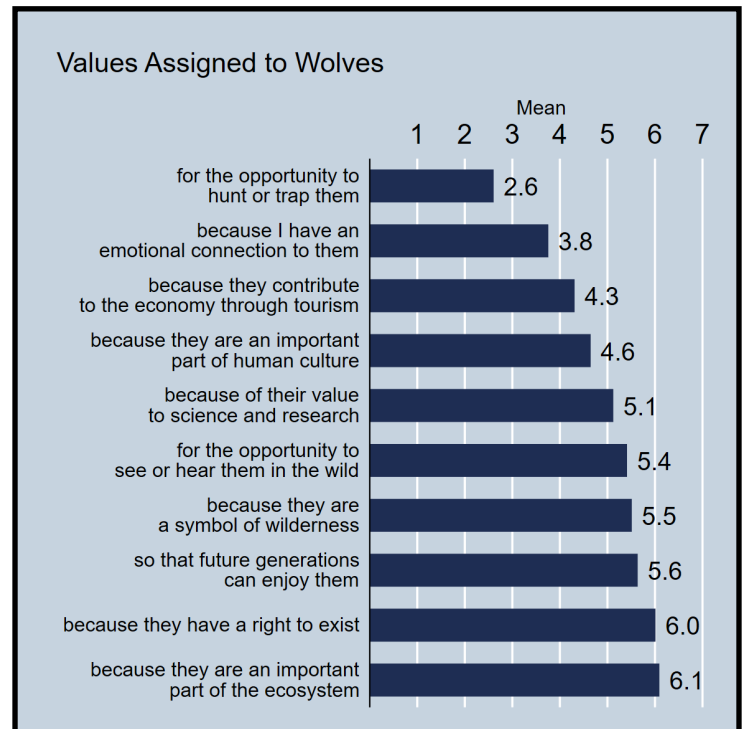


Fig 21. Residents’ support or opposition to potential wolf hunting and trapping seasons. Responses followed the question: “Some Minnesotans’ want the opportunity to hunt and trap wolves, while others feel the hunting and trapping of wolves is wrong. If wolves were removed from the endangered species list and management authority moves to the state of Minnesota, how much do you support or oppose the following? **A.** Establishing a regulated wolf hunting season. **B.** Establishing a regulated wolf trapping season.

