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Free-Ranging Cats: Understanding Conflict and the Potential for Engagement

Natural Resource Report NPS/NRSS/BRD/NRR—2021/2297

ON THE COVER
An old bridge along a carriage road hike at Acadia National Park.
Photo by Eva DiDonato.

Free-Ranging Cats: Understanding Conflict and the Potential for Engagement

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Abstract

Free-ranging domestic cats (*Felis catus*)—cats that spend any of their time outside and unconfined—pose a challenge to the National Park Service (NPS) because of their potential negative impacts to biodiversity and because of the history of stakeholder conflict around their management. In the face of recent calls for a more collaborative approach to management, we examined the conflict among free-ranging cat stakeholders and explored how engagement could be used to help inform NPS decision making. First, we analyzed position statements on free-ranging cats from key national-level organizations to understand how they differ and their implications for approaches to engagement. Second, we interviewed twelve stakeholders who have been involved with free-ranging cat issues at the national level to explore, at a deeper level, what contributes to free-ranging cat conflict, whether engagement is possible, and what might support a collaborative approach. We found that despite the frequent framing of free-ranging cat management as a two-sided issue, 1) all groups agreed upon the goal of having fewer free-ranging cats, and 2) management preferences reflected greater diversity than simple polarization. In addition, interviewees widely, although not unanimously, agreed on the need for a more collaborative and less conflictual approach to free-ranging cat management and highlighted two key factors that could help: 1) recognizing the importance of ecological and social contexts in considering the impact of free-ranging cats and appropriate management actions, and 2) navigating polarization, in part by improving relationships. We conclude by offering eight recommended approaches for NPS free-ranging cat engagement.

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Author Contributions

JD, KR, AK, EL, and TC envisioned project and obtained funding. JD, KR, and AK designed the research protocol for analyzing position statements and interviewing stakeholders. Supervised by JD, AK conducted interviews, analyzed position statement and interview data, and drafted and revised manuscript. JD, KR, TC, EL, JS, and DT provided feedback on study design, position statement and interview analysis, and manuscript. All authors approved of the final version of the manuscript.

Introduction

One challenge facing the National Park Service (NPS) in its mission to protect unimpaired the natural resources of the National Park System is addressing the biodiversity implications of free-ranging domestic cats (*Felis catus*). Free-ranging cats, here, refers to all cats that spend any of their time outside and unconfined, including feral cats, semi-owned cats, and owned cats. Research has shown that free-ranging cats pose a potential threat to natural resources in the National Park System (Dayer et al. 2019). However, efforts to manage free-ranging cats are complicated by a variety of factors, including: 1) the different understandings concerning what constitutes significant harm to wildlife from free-ranging cats; 2) the different social and ecological factors that influence how free-ranging cats impact wildlife; 3) the different relationships that people have to free-ranging cats; and 4) the history of conflict between people supporting cat welfare and those supporting wildlife conservation (Peterson et al. 2012; Palmer 2014; Crowley et al. 2020; Wald and Peterson 2020).

The domestic cat has a dual existence, at once a pet that is highly valued and also an animal that can cause harm to natural resources (Crowley, Cecchetti, and McDonald 2020). This duality makes free-ranging cats conceptually difficult as a subject for human relationships and decision making: they are simultaneously potential threats to what we love and also beloved creatures and companions themselves. It is not surprising, therefore, that the topic of free-ranging cats and how to make decisions about them generates conflict between different groups of stakeholders (Peterson et al. 2012; Palmer 2014; Wald and Peterson 2020).

There have been a variety of recent calls in academic scholarship for a collaborative approach to free-ranging cat management, one that does not reproduce historical conflicts and their consequences such as stalemate, protest, and personal attacks (Crowley et al. 2020; Wald and Peterson 2020). Within the context of the NPS, the central cat-related question is whether pursuing engagement to inform decision making on free-ranging cats could help navigate this conflict-prone issue and what form such engagement could take. Engagement, or the bringing together of people with differing perspectives, values, and knowledge, has been shown to be a productive way to navigate conflict surrounding other contentious natural resource issues including, for example, those involving invasive species (Estévez et al. 2015; Shackleton et al. 2019) and conservation (Madden and McQuinn 2014; Sterling et al. 2017).

In this paper, we examine the conflict that exists around free-ranging cats and whether key stakeholders at the national level view a collaborative approach as desirable. First, we analyze position statements on free-ranging cats from key national-level organizations to understand how they differ and their implications for engagement. Second, we discuss interviews of twelve stakeholders who have been involved with free-ranging cat issues at the national level to explore, at a deeper level, what contributes to free-ranging cat conflict, whether engagement is possible, and what might support such a collaborative approach. We conclude by proposing, based on these findings, a set of recommended approaches to inform NPS free-ranging cat engagement efforts.

Before analyzing our own data, we begin with a review of the roots and breadth of the conflict surrounding free-ranging cats, as well as recent shifts that emphasize the potential for collaboration to address conflict and improve management.

One of the main areas of conflict surrounding free-ranging cats is the different views stakeholders hold towards trap-neuter-return (TNR) programs and trap-euthanize (TE) programs. TNR, also at times referred to as trap-neuter-vaccinate-return or trap-neuter-vaccinate-return-manage, is a form of management for free-ranging cats, especially those that are unowned and unadoptable. There are a variety of potential actions that can be part of a TNR program including: initial monitoring of a cat colony, establishing a feeding station, prebaiting, trapping, triage, neuter/spay, vaccinate, marking (i.e., by ear tipping), returning (to where the cats were found), and managing (e.g., looking for new cats or cats in need of veterinary care). Proponents of TNR see it as a better alternative to trap-euthanize management where cats that are taken to shelters and found to be unadoptable are euthanized (Schmidt 2012).

To better understand some of the factors behind these varying positions on TNR and TE, Palmer (2014) describes three types of value conflicts that underlie the questions of whether to support TNR or TE: the value of life, the value of animal welfare and suffering, and the value of species. First, there is the question of how one values individual free-ranging cats and how that relates to one's value of individual wildlife. For example, those who value individual free-ranging cats more than individual wildlife may argue against lethal management of cats and for TNR, even if it leads to the death of more individual wildlife. Alternatively, those who value individual wildlife in a similar way to individual cats are likely to take issue to the TNR practice of returning cats back onto the landscape because of their impact on wildlife (Palmer 2014). Second, there is the question of how one values the suffering of both free-ranging cats and wildlife. For free-ranging cats this has to do with one's view of the suffering involved with euthanasia and whether one believes that cats that are trapped and returned outdoors as part of a TNR program have lives worth living or are subject to short, suffering-filled lives as a result of threats such as vehicles, predation from coyotes, or extreme weather. For wildlife, the value of suffering relates to the value given to the suffering of wildlife at the hands of free-ranging cats, and the question of whether cats prey on wildlife which are sick and likely to suffer regardless. Third, the value of species considers how one values a particular animal species as a whole as opposed to individuals from that species—therefore whether one is more concerned if free-ranging cats put an entire species at risk. Related to the value of species is whether that species is likely to be threatened even if the threat from cats is removed. These values may come into conflict with one another and lead to the complexity of views found on TNR and TE.

Value differences and management differences have also been shown in empirical studies of stakeholder views (Peterson et al. 2012; Wald et al. 2013). For example, Peterson et al. (2012) found that the views of cat colony caretakers and bird conservation professionals were largely opposing and polarized with regards to statements on the impacts of feral cats on wildlife, appropriate management of feral cat colonies, and the efficacy of TNR programs. Wald et al. (2013) surveyed the general public, members of TNR organizations and members of Audubon chapters and found significant differences between TNR and Audubon stakeholders in their attitudes about outdoor cats and the

impact cats have on people, wildlife, and the environment. Furthermore they found that public views generally landed in between those of the stakeholder groups, emphasizing the importance of not assuming surveys of the general public capture the polarization of stakeholder views.

Cat owners themselves have been shown to face a variety of conflicting considerations when making decisions about whether to allow their cats outdoors (Crowley, Cecchetti, and McDonald 2019). When it comes to how owners see cat hunting behavior, some may see it as not a problem because it helps eliminate unwanted wildlife like mice, others may see it as a problem because it is harmful to wild populations, cruel, or unpleasant, while still others may see it as a problematic but natural behavior. Even when owners feel that they have some responsibility for managing the hunting behavior of their cats, they may feel conflicted over what to do because of the belief that cat behavior is challenging to control, that confining cats has negative welfare implications, or that large scale collective rather than individual action is needed, especially with regards to vulnerable wildlife (Crowley et al. 2019).

Disagreement also exists in the scientific literature itself, most notably over a key scientific study that quantified the annual number of wildlife killed by cats (Loss et al. 2013). Some within the cat welfare community have questioned the specific methodology used to arrive at the findings of this study and the conclusions drawn from it (Wolf 2013; Lynn et al. 2019). Loss et al. have responded by defending the study and arguing that the campaign is part of an effort to discredit research showing the impacts of free-ranging cats (Loss and Marra 2018; Loss et al. 2018). In addition to the contestation over the number of wildlife killed yearly by free-ranging cats, there is also conflict over the efficacy of TNR and TE as management techniques (Longcore et al. 2009; Spehar and Wolf 2017; Calver and Fleming 2020).

While there is no shortage of conflicts surrounding free-ranging cats, their impacts, and the decisions being made about them, there is also an emergence of academic literature pointing towards the need for a less conflictual and more collaborative approach to these issues (Crowley et al. 2020; Wald and Peterson 2020). This literature builds on the argument that the dual status of cats needs to be recognized. Crowley et al. (2020) articulate this insight:

> ...the roles of cats in both human societies and wider ecosystems are complex and not reducible to claims that cats are either an innocent blessing or an invasive scourge (p.1)… The dual status of the species as both wild predator and domestic companion underpins much of this division among people. Cat advocates primarily recognise and value the 'domestic' side of cats. They believe that the longstanding relationship of cats with, and reliance upon, humans means that people should demonstrate compassion towards them, even when they are living beyond direct human control. Conversely, wildlife advocates primarily recognise the 'wildness' of cats; that, despite their domestication, the continuance of their lives beyond the backyard means they cannot be ignored as agents of ecological harms. There is truth in both analyses, because cats as a species, and indeed as individuals, are, in practice, simultaneously domestic and wild, companions and hunters, valuable and harmful (p.29).

Instead of trying to choose which aspect of this dual nature of the cat is true in an absolute sense, this dual nature of the cat can be a starting point for engagement. In this context, then, comes a call to recognize this complexity and work within it:

> What is needed to move this debate forward is greater recognition from each human 'side' that there is the other 'side' of cats to be taken into account, and a greater willingness to recognise and work within the messy, difficult, multispecies histories and legacies of human–cat relations (Crowley et al. 2020 p. 6).

With this understanding, the dual existence of cats pivots from a challenge to be overcome to a necessary, and potentially effective, starting point because of the partial truths located on each side. Approaching the issue of free-ranging cats from only one of the two perspectives will always be limiting and will provide an incomplete view of reality.

Wald & Peterson (2020) argue that the common ground held by all parties around this subject, such as the desire to reduce populations of free-ranging cats and the desire to minimize harm and death to animals of all sorts, are often neglected with the polarized framing of this issue. They argue for a collaborative approach that emphasizes the importance of the local context for determining appropriate management actions. Engagement across different groups and perspectives is essential for this:

> Only broad conversations, incorporating people with clear disagreements, as well as those who have already identified common values and goals, will lead to policies and practices that can garner broad public support and achieve the goals of both conservation and animal welfare advocates (Wald and Peterson 2020 p. 110).

While there are increasing calls of this sort for engagement to be integrated into free-ranging cat decision making, there is a need to better understand whether key stakeholders support such collaboration, what would get in the way of it, and what would support it.

Methods

Organization position statements

In the first part of this research, we analyzed position statements on free-ranging cats from national level organizations most active on free-ranging cat issues, asking: how do the positions held by these organizations on free-ranging cats differ and what are the implications for engagement? National organizations, given their reach and messaging, play an important part in the conflicts around free-ranging cats, so their position statements represent one key site to examine the conflict around free-ranging cats and the potential for engagement. The seven organizations we chose were frequently cited in the literature and in conversations with colleagues who have been involved with this issue. They also represent a diversity of perspectives across the spectrum of national-level organizations active on this issue. The organizations chosen included: Alleycat Allies (ACA), American Bird Conservancy (ABC), American Society for the Prevention of Cruelty to Animals (ASPCA), Best Friends Animal Society (BFAS), Humane Society of the United States (HSUS), People for the Ethical Treatment of Animals (PETA), and The Wildlife Society (TWS). We found the position statements from these organizations on their public-facing websites and qualitatively analyzed them to identify key areas of difference and similarity.

Stakeholder interviews

In the second part of this research, we wanted to delve deeper into the nuances of the conflict that exists around free-ranging cats and to inquire about the potential role of engagement to help inform the management of free-ranging cats. To do this, we conducted in-depth, semi-structured interviews with 12 free-ranging cat stakeholders. Our sample included individuals that we deemed, from their presence online or in free-ranging cat-related literature, to be actively involved with the issue of free-ranging cats and influential at the national level. These individuals almost exclusively worked for nationally-recognized organizations involved with free-ranging cats. We chose to interview individuals influential at the national level because they hold the potential for broad levels of influence and are likely to be aware of and have experience with the conflictual history around this issue. We chose to conduct individual, confidential interviews to create conditions where participants would be more likely to share their views openly. This study received approval from North Carolina State University's Institutional Review Board (protocol #20586).

Of the 14 individuals that we invited to participate, one did not respond to our request and one chose not to participate. Of these two who did not participate, one was associated with wildlife conservation and one was associated with cat welfare. Of the 12 interviewees overall, 5 are best described as holding a cat welfare perspective, 5 are best described as holding a wildlife conservation perspective, and 2 individuals are best categorized as holding both a cat welfare and wildlife conservation perspective. While we expected different levels of nuance across our interviewees, we did not expect to find individuals who held both cat welfare and wildlife conservation perspectives. Two such individuals did emerge, however, in our sample. The interviews were conducted by Zoom web conference or Zoom voice call between December 2019 and February 2020 and generally lasted between 1 and 2 hours. The interview was structured around the following questions about free-ranging cats and their management:

1. What are your overarching goals concerning free-ranging cats?
2. Which management actions do you support for free-ranging cats?
3. What are the most important disagreements that exist around free-ranging cats and their management?
4. What are the most important scientific questions that need to be answered to improve the management of free-ranging cats?
5. What actions would support collaboration on free-ranging cats and their management?
6. What are the barriers to collaboration on free-ranging cats and their management?

The interviewer took notes during the interview and asked follow-up questions to ensure comprehension of the nuances of the answers from each interviewee. Each interview was also audio recorded. The analysis of the interviews took place in two parts. First, the interview notes were analyzed to identify the key themes that emerged in participant responses to each question. Interviews were then selectively transcribed with the aid of the software program otter.ai, and then each audio recording and transcription was analyzed to confirm the accuracy of the initial analysis and to identify exemplary quotations.

We present findings from these interviews in two main ways. First, we present the answers from each question in tables, to highlight the breadth of responses received. Each question was an open-ended question, meaning the answers provided represent how each interviewee individually thinks about the issue. We did not, to be clear, provide a list of possible answers for interviewees to select from. Some answers were provided by multiple interviewees, and we track the number of interviewees who mention each answer in the tables. Similar answers are grouped together in a single row. Second, we supplement the presentation of findings tables with quotations from the interviews to specifically speak to the overarching questions we sought to address: What contributes to free-ranging cat conflict? What might support such a collaborative approach to management?

Results

Organization position statements

While the conflict around free-ranging cats is sometimes reduced into two simple camps, "pro-cat" vs. "pro-wildlife", we found a more complex reality reflected in the position statements. Specifically, we found three key areas of differences: 1) level of concern over free-ranging cat impacts on wildlife; 2) view on trap-neuter-return (TNR) as a management method for free-ranging cats; and 3) view on euthanasia as a management method for free-ranging cats. We present a summary of these positions in Table 1 and provide excerpts from their position statements in Appendix A.

Table 1. Summary of organizational positions on free-ranging cat (FRC) impacts on wildlife and on trap-neuter-return and euthanasia as management methods for free-ranging cats.

Organization	Level of concern over FRC impacts on wildlife	View on trap-neuter-return as a management method	View on euthanasia as a management method
Alleycat Allies (ACA)	Low	Support	Oppose
Best Friends Animal Society (BFAS)	Moderate	Support	Oppose
American Society for the Prevention of Cruelty to Animals (ASPCA)	Moderate	Support, but not in ecologically sensitive areas	Oppose
Humane Society of the United States (HSUS)	Moderate	Support, but not in ecologically sensitive areas	Oppose
People for the Ethical Treatment of Animals (PETA)	High	Acceptable when under strict conditions that protect wildlife and cat welfare	Do not oppose
American Bird Conservancy (ABC)	High	Oppose	Do not oppose
The Wildlife Society (TWS)	High	Oppose	Do not oppose

These position statements on free-ranging cats reveal that there is agreement across these groups and complex forms of disagreement, both which challenge a simple "pro-cat" vs. "pro-wildlife" framing of this issue. First, there is broad agreement on reducing the population of free-ranging cats, encouraging the adoption of adoptable cats, and being humane to cats. In other words, no one argues for interventions that would actively increase the number of free-ranging cats. Second, there are diverse forms of disagreement on topics such as the level of concern over free-ranging cat impacts on wildlife and views on trap-neuter-return as a management option for free-ranging cats. For example, while some groups state that they support TNR (ACA, BFAS) and others state that they oppose it (ABC, TWS), some groups support TNR but not in ecologically sensitive areas (ASPCA, HSUS) and some support TNR under only strict conditions that protect wildlife and cats (PETA).

The level of concern over free-ranging cat impacts on wildlife reveals this complexity of disagreement. ACA (2020) sees free-ranging cats as a natural part of the ecosystem and sees them

causing no significant problems to humans or wildlife, stating that free-ranging cats "live full, healthy lives" and "are part of the natural ecosystem". PETA and ABC, on the other hand, see the existence of free-ranging cats on the landscape as causing a host of suffering to both wildlife and the free-ranging cats themselves. PETA (2020a) states that free-ranging cats "live short, hard lives" and that "they terrorize, maim, and kill", and ABC (1997) says that free-ranging cats "are efficient predators estimated to kill billions of native birds and small mammals, as well as countless reptiles and amphibians each year" and "are subject to pain, suffering, and early death". Yet, other groups articulate a different view of the issue. For example, ASPCA and BFAS both point to the impact free-ranging cats can have on wildlife but then question whether cats receive too much blame:

> While the challenges faced by wildlife are significant and complex, community cats are, at times, erroneously singled out as a convenient target… It is unscientific and irrational to choose a single factor, like the presence of cats, and assign blame for the challenges faced by wildlife (ASPCA 2020).
>
> We believe ideally that all owned cats belong safely indoors… which also keeps them away from wildlife… Whatever ills one might associate (rightly or wrongly) with free roaming cats — whether public health concerns, wildlife predation, or anything else — it's clear that these problems cannot be addressed in a comprehensive manner without the stabilization and eventual reduction in the level of the community cat population (BFAS 2020).

The HSUS (2020) emphasizes the impact on wildlife and argues for the protection of cats and wildlife: "Predation by outdoor cats on birds and other wildlife is a real and legitimate concern. While the HSUS believes that outdoor cats are entitled to protection, it also believes that wildlife populations need to be protected from cats."

There are also, however, instances of more straight forward disagreement across these groups. For example, with regards to being humane to cats, all groups frame their desired approach to management as being humane; yet, these groups differ over whether the use of euthanasia as a management method for free-ranging cats can be humane. For example, TWS (2020) states that it is for the "humane euthanasia of unadoptable cats" and PETA (2020b) states that it "cannot in good conscience oppose euthanasia as a humane alternative to dealing with cat overpopulation." Alternatively, for example, the ASPCA (2020) states that it "does not consider TE [trap and euthanize] programs to be humane or effective."

Instead of approaching an organization and wondering if they are "pro-cats" or "pro-wildlife," these position statements suggest that attention needs to be paid to the nuances that exist within an organization's position towards free-ranging cats. For example, those who oppose euthanasia and support TNR may still want to avoid TNR near ecologically sensitive areas. Alternatively, those who express a high level of concern about FRC impacts on wildlife may still be open to TNR, if it is completed under strict conditions that protect wildlife and free-ranging cats. The presence of both areas of agreement and a wide variety of different perspectives in these position statements supports the need to better understand the diversity of stakeholder views on free-ranging cats and whether and how collaboration could be fostered to improve decision making on free-ranging cats.

Stakeholder interviews

Offering a more fine-grained view of the diversity of positions on free-ranging cat management, our stakeholder interviews highlight additional areas of agreement and divergence and reveal a broad, although incomplete, openness towards a collaborative approach to free-ranging cat management. The findings from these stakeholder interviews are presented in three sections: 1) Considering context in free-ranging cat management, 2) Navigating polarization in free ranging cat management, and 3) Understanding the infrequent perspective against collaboration.

Considering context in free-ranging cat management

A foundational area of agreement emerged when interviewees were asked about their overarching goals for free-ranging cats. In their response to this question, all interviewees mentioned the objective of having fewer free-ranging cats on the landscape (Table 2). While some interviewees named just the single overarching goal of having fewer free-ranging cats on the landscape, others supplemented it with other goals.

Table 2. Summary of interviewee responses to the question, "What are your overarching goals concerning free-ranging cats?" The number of mentions for each response are indicated for each group. "Cat" refers to interviewees aligned with cat welfare (n=5), "Wildlife" refers to those aligned with wildlife conservation (n=5), and "Both" refers to those aligned with both cat welfare and wildlife conservation (n=2). Color shading indicates the percentage of interviewees who mentioned each item: Dark green = 80–100% of interviewees in that category; Medium green = 40–60%; Light green = 20%; No color = 0%.

What are your overarching goals for free-ranging cats?	**Cat**	**Both**	**Wildlife**
Have fewer free-ranging cats on the landscape	100%	100%	100%
Reduce impacts of FRCs on wildlife and human health	40%	0%	40%
Reduce cat suffering & help cats have a high quality life	40%	50%	0%
Use a pragmatic approach to management with collaboration	20%	50%	0%
For every cat to have a home	20%	50%	0%
Ensure every cat has access to spay/neutering	40%	0%	0%
Use monitoring approaches in management	0%	50%	0%

While interviewees were in alignment on the overarching goal of having fewer free-ranging cats on the landscape, they expressed a wider diversity of views in response to the questions: 1) What management actions do you support? (Table 3); and 2) What are some of the most important disagreements that exist around free-ranging cat management? (Table 4) Yet, even in the context of issues where a broader diversity of views exists, the lines were not as sharply drawn as is sometimes portrayed. In Table 3, for example, we can see the expected differences in views towards TNR and euthanasia, but there were at least some individuals from all positions that support these actions. In addition, there was wide agreement on the importance of education and outreach to encourage responsible pet ownership. As described in the methods, these answers were in response to an open-ended question, so they represent the main management actions that come to mind for interviewees.

Table 3. Summary of interviewee responses to the question, "What management actions do you support?" The number of interviewees in each group who mentioned each response in their open ended answer are indicated. For example, while all wildlife conservation interviewees likely support keeping cats out of high value conservation, only one of them mentioned this specifically in their answer. "Cat" refers to interviewees aligned with cat welfare (n=5), "Wildlife" refers to those aligned with wildlife conservation (n=5), and "Both" refers to those aligned with both cat welfare and wildlife conservation (n=2). Color shading indicates the percentage of interviewees who mentioned each item: Dark green = 80–100% of interviewees in that category; Medium green = 40–60%; Light green = 20%; No color = 0%. Responses are organized by category for clarity (e.g., "Management actions for free-ranging cats").

Category	*What management actions do you support?*	Cat	Both	Wildlife
Management actions for free-ranging cats	TNR that is managed, targeted, and done well (e.g., spay/ neuter, vaccinate, vet care, return to where they came from)	100%	50%	20%
	Euthanasia, as last resort	40%	100%	100%
	Relocation (e.g., to cat sanctuaries)	40%	50%	60%
	Adoption	20%	0%	60%
	Keep cats out of high value conservation areas	40%	50%	20%
Management actions to change human behavior	Education/outreach to encourage responsible pet ownership including, e.g., sterilization, vaccination, and identification	80%	100%	100%
	Encourage people to keep cats indoors and/or pass ordinances to prevent roaming freely on landscape (e.g., leash laws)	20%	100%	40%
	Addressing systemic and socio-economic context (e.g., affordable vet care to prevent abandonment)	60%	0%	0%
	Eliminate feeding stations	0%	0%	20%

One important insight from these interviews involved the importance of context for developing decision making on free-ranging cats. Interviewees raised concerns about how management actions are normally discussed in a way that neglects context. Many interviewees took issue with how management actions such as TNR and euthanasia are often talked about as single actions that simply work or do not work in all situations. The framing of free-ranging cat conflict as TNR vs. euthanasia was seen as neglecting the important nuances concerning both how TNR is conducted (e.g., Is it actively managed? What rates of sterilization are achieved?) and how euthanasia is conducted (e.g., What suite of management actions is it part of? Under what conditions is it used?). As one interviewee said, "TNR is a tool. How you use that tool is going to impact how effective that is."

Table 4. Summary of interviewee responses to the question, "What are some of the most important disagreements that exist around free-ranging cat management?" Interviewee largely articulated these disagreements as questions they felt there was conflict over. These questions that capture the disagreement are listed in the table as are the number of mentions each response received in each group. Questions that are similar are grouped together in a single row. For rows that contain groups of questions, the number of interviewees who mentioned one or more of the questions is indicated. "Cat" refers to interviewees aligned with cat welfare (n=5), "Wildlife" refers to those aligned with wildlife conservation (n=5), and "Both" refers to those aligned with both cat welfare and wildlife conservation (n=2). Color shading indicates the percentage of interviewees who mentioned each item: Dark green = 80–100% of interviewees in that category; Medium green = 40–60%; Light green = 20%; No color = 0%. Responses are organized by category for clarity (e.g., "Management actions").

Category	***What are some of the most important disagreements that exist around free-ranging cat management?***	**Cat**	**Both**	**Wildlife**
Disagreements relating to management actions	Does TNR work to reduce free-ranging cat populations? Under what conditions?	60%	100%	100%
	What is the right approach to management?	60%	50%	40%
	Does trap and euthanize work to reduce free-ranging cat populations? Under what conditions?	40%	0%	20%
	Should socio-economic issues be considered in FRC management?	40%	0%	0%
	Are scientific studies on FRCs are ignored, misinterpreted or misused?	20%	0%	20%
	How should free-ranging cat population size be monitored?	0%	50%	0%
	Will removal of FRCs achieve the desired ecological outcome?	20%	0%	0%
Disagreements relating to the impacts from free-ranging cats	What are the impacts on wildlife from FRCs? Under different conditions? At the local level?	20%	100%	80%
	What are the impacts on human health from FRCs?	0%	50%	40%
	Should cats be kept indoors? Do cats need to be free-ranging to live their best lives? Do FRCs significantly suffer?	0%	50%	40%
	Should individual animals or populations be valued?	0%	50%	20%
	What is the number of free-ranging cats on the landscape?	0%	0%	20%

This same importance of context was raised with respect to the impacts on wildlife of free-ranging cats. One component of this raised by interviewees was the need to understand the ecological complexity in the relevant system, so that the removal of cats does not lead to other unintended consequences on wildlife. For example, could the complete removal of free-ranging cats in a particular ecological context lead to an increase in a rodent population which would itself cause significant harm to a valued bird species? Another component articulated by interviewees was the need to understand the social context that impacts free-ranging cats. For example, is there a particular set of factors that is leading to a continual source of free-ranging cats that need to be addressed before any management action will successfully reduce the number of free-ranging cats on the landscape? Finally, many interviewees questioned the conservation value of universal or national-

level statements about the impact of free-ranging cats. Those holding this view emphasized that conservation decisions are made at more local scales, so notions that cats never have significant impacts or impact billions of birds at the national level become less helpful for informing decision making. One interviewee explained, "You are saying they [cats] have impacts—[but] which species do they impact, to what degree, and where? Now you are getting into conservation questions."

Interviewees identified four reasons why paying attention to context could improve the management of free-ranging cats. First, paying attention to specific contexts where free-ranging cats are most damaging to wildlife can help prioritize areas for management. Similarly, understanding what conditions are needed for certain management actions to achieve desired outcomes will help decide which management action is appropriate. Second, the acknowledgement of context will help the accrual of knowledge, as it only becomes possible to study the conditions under which free-ranging cats are problematic and management actions work when it is recognized that they are not the same everywhere. Third, it may impact credibility not to acknowledge context because it is not scientifically honest to characterize these things in universal ways. Fourth, and relatedly, this reduction in credibility may lead to the alienation of certain stakeholders who recognize that such nuance is present. As one interviewee explained, "If you fail to make that discernment... it just alienates even the best potential partners from the other side of the fence because they think they are dealing with zealots instead of collaborators."

The degree of context and nuance brought to these questions was seen as directly relating to one's openness to collaboration. Interviewees viewed those who see free-ranging cats as *always* or *never* having a significant impact on wildlife as less likely to collaborate. Those who always or never see TNR (or euthanasia) as the right management action were also seen by interviewees as less likely to collaborate. An interviewee characterized this point in the following way:

> There is a set of players on both sides who have posited these relatively inflexible positions. Either cats need to be dispensed with by any means necessary and pretty much everywhere—on the conservation side. Then you have those on the animal welfare side who insist that just by virtue of doing TNR, however badly, it must be working and there can't possibly be a better solution to cat management… But there are a number of other players who are less publicized who are eager to look for at least some common ground and some pragmatic solutions, and are willing to concede a little bit of ground to the other faction if they feel like they can work in good faith with them towards the objectives that they do share.

As articulated by this interviewee and others, this type of pragmatic approach to management considers local ecological and social contexts when: 1) understanding the impacts of free-ranging cats on birds, and 2) determining the appropriate management actions. It would not rule out or assume any particular management technique a priori. In such a pragmatic approach, interviewees viewed there to be a potential role—depending on the context—for both TNR and, under certain circumstances, euthanasia. In the appropriate specific ecological and social context, TNR could be appropriate if it were well-designed, targeted to achieve certain rates, and managed. In the appropriate specific ecological and social context, euthanasia could be appropriate if it were a last resort after trap and adoption or relocation. When interviewees were asked to name the most

important scientific questions that need to be answered to improve the management of free-ranging cats, the questions they identified can be seen as being in alignment with such a pragmatic approach due to their nuanced attention to context (Table 5).

Table 5. Summary of interviewee responses to the question, "What are the most important scientific questions that need to be answered to improve the management of free-ranging cats?" The number of interviewees who mentioned each question is indicated. Questions that are similar are grouped together in a single row. For rows that contain such groups of questions, the number of interviewees who mentioned one or more of the questions is indicated. "Cat" refers to interviewees aligned with cat welfare (n=5), "Wildlife" refers to those aligned with wildlife conservation (n=5), and "Both" refers to those aligned with both cat welfare and wildlife conservation (n=2). Color shading indicates the percentage of interviewees who mentioned each item: Dark green = 80–100% of interviewees in that category; Medium green = 40–60%; Light green = 20%; No color = 0%. Responses are organized by category for clarity.

Category	***What are the most important scientific questions that need to be answered to improve the management of free-ranging cats?***	Cat	Both	Wildlife
Questions about social science/human behavior	How can effective messaging on free-ranging cats be crafted?	20%	0%	40%
	What are factors that influence someone's decision to abandon a cat? Whether to let cats outdoors or keep them indoors?	60%	0%	0%
	What leads people to care for a colony of free-ranging cats?	0%	50%	0%
	How does a community react to different management actions?	0%	0%	20%
Questions about FRC impacts, behavior, and number	What are FRC impacts on wildlife and human health? At the local level? Where are cats problematic on the landscape? Are there predictive criteria?	60%	50%	40%
	How many FRCs exist? How can we improve counting methodologies?	60%	50%	40%
	How to track FRCs? How do FRCs move in and out of populations? What distance will FRCs travel?	20%	0%	20%
	How do the kill rates of well-fed, sterilized cats and feral cats differ?	20%	0%	0%
Questions about management	What is the effectiveness of different types of TNR? Under what conditions and in what environments is TNR effective?	80%	0%	40%
	How can management actions be complementary to each other?	20%	0%	20%
	What are the ways to reduce cat/wildlife interactions?	20%	0%	0%
	Can we create effective non-surgical sterilization?	20%	0%	0%
Questions about cat welfare	How can we measure FRC welfare? How much are FRCs suffering?	20%	50%	0%
	How are cats, themselves, impacted by management techniques?	0%	50%	0%
	What happens to barn cats & working cats in terms of quality of life?	20%	0%	0%

Navigating polarization in free ranging cat management

A second key finding involves the importance of fostering good relationships with those holding different views towards free-ranging cats as a means to avoid factionalism. With only a couple of

exceptions (see *Acknowledging the infrequent perspective against collaboration*), interviewees were widely aware of both the historically conflictual nature of the relationships between those supporting cat welfare and those supporting wildlife conservation as well as the consequences of this conflict. Interviewees identified how easy it was to fall back into factions and work in an "us vs. them" mentality. Improving relationships was viewed as essential to: reduce this conflict, make collaboration more likely, and improve management. Interviewees largely agreed that polarizing statements hinder collaboration and reinforce conflict (Table 6). Such polarizing statements included the universal statements discussed in *Considering context in free-ranging cat management* as well as statements that were blatantly attacks on people with opposing views. For example, as one interviewee said, "You can't expect to do collaboration if you're constantly attacking somebody else, you know, telling them they're a murderer… Either side, you're a bird murderer or you're a cat murderer. You're not going to get anywhere."

Table 6. Summary of interviewee responses to the question, "What hinders collaboration around free-ranging cats?" The number of mentions for each response are indicated for each group. "Cat" refers to interviewees aligned with cat welfare (n=5), "Wildlife" refers to those aligned with wildlife conservation (n=5), and "Both" refers to those aligned with both cat welfare and wildlife conservation (n=2). Color shading indicates the percentage of interviewees who mentioned each item: Dark green = 80–100% of interviewees in that category; Medium green = 40–60%; Light green = 20%; No color = 0%. Responses are organized by category for clarity (e.g., "Polarization & poor relationships").

Category	*What hinders collaboration around free-ranging cats?*	Cat	Both	Wildlife
Answers relating to polarization & poor relationships	Polarizing statements	80%	50%	60%
	People who challenge everything, don't listen, don't compromise, act like a primadona, or act unhinged	40%	100%	40%
	Breakdown of trust or not working in good faith	20%	50%	20%
	Staff turnover, leadership turnover	20%	0%	0%
Answers relating to poor deliberative process	Fights over science or over-concentration on the science	20%	0%	20%
	Unrealistic shared goal	0%	50%	0%
	Getting sidetracked by arguments that nobody can win	20%	0%	0%
	Not seeing everyone who is impacted by the issue	20%	0%	0%
	Taking certain management actions off the table (e.g., TNR)	20%	0%	0%
	Keeping to simplistic, easy solutions that haven't worked	0%	0%	20%

Interviewees also highlighted the factors they saw contributing to polarization and conflict. One interviewee discussed how social media has made it easier to exacerbate conflict:

> The weapons that people have to fight battles are so easily accessible now that I see even small issues just getting exploded very quickly... As I'm looking for common ground, they look for the quick win. I see the ability to inflict damage on each other at an all-time high because of the [social media] tools we now have. You don't need to have a lot of resources, time, energy or depth on an issue to turn it into a very conflicted situation… It makes doing this work much more challenging.

Another interviewee discussed the tension within large organizations involved with free-ranging cats between those who wish to foster a more nuanced and less polarized approach and those trying to sell a message:

> You know the marketing folks in this matter, not to pick on them, they want 8 to 10 words. And I'm giving them footnotes and citations and stuff and they want to kill me. The bumper sticker kind of stuff—again we can't eliminate that entirely, depending on the organization you work for that kind of comes with the territory—but it's important when we have the microphone to insert that nuance.

Another interviewee articulated a similar critique of the conflictual national-level discourse and highlighted how they thought that those on the local level were actually more willing and able to work productively on this issue:

> I think that the national leaders are not setting the right example, to the more local level. And I think people are actually starting not to really listen to them to be perfectly frank, and they're solving their own problems in their own backyards, and trying to work things out.

Ultimately, many interviewees viewed the conflictual approach as not productive for achieving the goal of reducing the number of free-ranging cats on the landscape. In justifying their use of a collaborative approach to management, one interviewee said, "We believe that what we can achieve together is more than what we could achieve independently, or if we were opposed."

Some of the interviewees grappled explicitly with how they or their colleagues had contributed to polarization and lacked nuance, while highlighting the need for change. One interviewee reflected, "In the early days… I almost certainly was not as careful… but now I try to put the qualifiers in there. I try more and more to refer to it as targeted TNR, and it's never 'TNR works', it's 'TNR can work'." Another interviewee who worked in wildlife conservation explained the need for change:

> Well, there's plenty of people I've spoken to in wildlife management, who are really just hateful towards cats. And they want to kill every stray cat. And so they're extreme on that side. And they don't have any compassion for any other ideas. They're just fed up with a situation and want to just take care of it… There's more than one way to remove the impact from cats… That way of exterminating the cat is not looking at all the other options and it's going to really, really upset and anger the people who have a lot of compassion for cats. And that's just going to build more animosity towards wildlife conservation. It's not productive.

Of the many things interviewees identified as supporting collaboration (Table 7), one of the most agreed upon involved improving relationships. One of the key components discussed was for people from different positions and worldviews around free-ranging cats to spend time together and build understanding. One person who had been involved in a great deal of free-ranging cat conflict sincerely expressed an openness to, and need for, spending time with those who hold differing views. They proposed, for example, cat welfare and wildlife conservation people spending a Saturday going first birding together and then to a low cost cat clinic. They viewed this type of activity as something that would reduce polarization by helping all involved better understand each other's worldview and

relationship to this issue. Other interviewees echoed that improving relationships in this way would make it harder for people on each side to see the other side as faceless, anonymous foes that are easy to simply write off. Another action that was highly recommended was working together on a collaborative project—for example, having individuals from both cat welfare and wildlife conservation perspectives design and conduct scientific studies that could help inform decision making in a certain location.

Table 7. Summary of interviewee responses to the question, "What supports collaboration around free-ranging cats?" The number of mentions for each response are indicated for each group. "Cat" refers to interviewees aligned with cat welfare (n=5), "Wildlife" refers to those aligned with wildlife conservation (n=5), and "Both" refers to those aligned with both cat welfare and wildlife conservation (n=2). Color shading indicates the percentage of interviewees who mentioned each item: Dark green = 80–100% of interviewees in that category; Medium green = 40–60%; Light green = 20%; No color = 0%. Responses are organized by category for clarity (e.g., "Good deliberative process").

Category	*What supports collaboration around FRCs?*	Cat	Both	Wildlife
Good deliberative processes	Define the issue and the goal of the collaboration in an upfront and shared way; find areas of overlap between organizations	40%	50%	60%
	Facilitated meetings	20%	0%	20%
	Open communication & transparency	20%	0%	20%
	Successful case studies to share	20%	0%	0%
Good relationships & being productive	Get to know people, spend time together, build respect & trust, get past seeing people as the abstract "other", and avoid falling back to us vs. them	60%	50%	60%
	People who will be productive (i.e., willing to listen, learn, be open minded, compromise, and not be defensive)	60%	50%	40%
	Not shaming people, but starting where they are	20%	0%	20%
	Not talking in absolutes, not taking anything off the table, but considering many tools for many contexts	20%	0%	0%

Acknowledging the infrequent perspective against collaboration

Finally, there was a minority of interviewees, two out of the total of twelve, who expressed polarized views and who believed that collaboration was not possible around this issue. These interviewees expressed strong views about management positions and dismissive views of those who opposed them. For example, they characterize those opposing them as the "loony bin" and some of their ideas as "insane" and "stupid". These interviewees challenged the idea that collaboration with those on the other side was possible or desirable saying things like: "There is no talking to these people," "These people lie," and "They challenge everything". In describing their view towards collaboration, one interviewee said "We need legal mechanisms that are top down, not bottom up hugs and kisses." The harsh, dismissive, and polarized rhetoric used in these answers is not unique to these interviewees, as examples outside these interviews can be found in individual statements on social media and websites from those on all sides of this issue. It is an example of the fact, however, that there remains

a split between those stakeholders who continue to build on a more polarized view of the issue and those open to something else.

Discussion: Approaches for NPS to consider in free-ranging cat engagement

The findings from this study point to the potential for a collaborative approach to the management of free-ranging cats. Such an approach might encourage agencies such as the NPS to foster engagement with those from cat welfare and wildlife conservation organizations. First, we revealed that national level organizations active on this issue are not simply for or against free-ranging cats, but hold a diversity of views on the impacts on wildlife from free-ranging cats and the desired management actions for free-ranging cats. In the face of polarized conflict, emphasizing that a diversity of views exist within each perceived side of the conflict can help prevent the hardening of the conflict (Northrup 1989). Second, we found that many of the stakeholders interviewed for this study stressed how free-ranging cat science and decision making can be improved by emphasizing context when determining the impacts of free-ranging cats and appropriate management actions. Furthermore, such an approach was seen as a starting place for collaboration because of the way it avoids universal and polarized views. Third, we found that interviewees strongly felt that better relationships need to be fostered between individuals from cat welfare and wildlife conservation organizations in order to improve collaboration and free-ranging cat management in general. Finally, we found that the minority of interviewees who dismissed the potential for collaboration held polarized and universal views on free-ranging cats and their management. And while the interviews were framed around all free-ranging cats, including owned, semi-owned, and feral, interviewees did not discuss owned cats as often as semi-owned and feral. This area of focus suggests that participants were most concerned with, and/or saw the most controversy surrounding, semi-owned and feral cats.

Given the findings from this study, we suggest the following approaches for potential NPS free-ranging cat engagement:

1. **Consider the specific ecological and social context** (See *Considering context in free-ranging cat management*)**.** Ecological and social contexts vary in significant ways that affect the severity of the problem and the range of feasible solutions. For example, understanding local ecological complexity helps ensure that the removal of cats does not lead to an increase in some other species that has even more severe consequential impacts on wildlife. In addition, the effectiveness of management actions, such as Trap-Neuter-Return or Trap-Euthanasia, depends upon how and when they are conducted.

2. **Involve both local cat welfare and wildlife conservation organizations** (See *Stakeholder Interviews*)**.** Work with local cat welfare and wildlife conservation groups to help assess where, under what conditions, and with what intensity free-ranging cats impact the natural resources of a particular National Park. For many National Parks, local stakeholders may hold important local knowledge about free-ranging cat abundance and behaviors. Furthermore, some local stakeholders may be willing to participate in management actions such as trap and adoption or trap and relocate if a relationship of trust can be established.

3. **When considering how to engage with a diversity of stakeholders, emphasize the importance of defining clear NPS goals, communicating openly and transparently, and facilitating multiple-way conversations.** These contribute to having good processes for engagement, which was identified by interviewees as important (See *Navigating polarization in free ranging cat management*) and is also emphasized in the academic literature (Rowe and Frewer 2000; e.g., Reed et al. 2018).

4. **Foster improved relationships among free-ranging cat stakeholders and between them and the NPS**. Good relationship is the foundation for collaboration (See *Navigating polarization in free ranging cat management*). While there is a history of conflict around this issue and a diversity of views about desired management (See *Organization position statements* & *Navigating polarization in free ranging cat management*), there is also a widely shared goal by both cat welfare and wildlife conservation organizations and a willingness by many to engage (See *Considering context in free-ranging cat management*). Fostering understanding and trust through well facilitated actions on shared goals can help these relationships between stakeholder groups. For the NPS itself, in the context of local cat welfare organizations, for example, this may include building trust with them by working on widely agreed-upon management actions (e.g., local spay/neutering, vaccinations, and outreach on responsible pet ownership).

5. **Explore a diverse toolbox of management actions** (See *Considering context in free-ranging cat management*). There are many potential management actions that can reduce the impacts of free-ranging cats on wildlife. Because of ecological and social complexities and diversity, no one tool is likely to be best in all situations. In addition, approaching stakeholders with a strongly preferred option may alienate them and lead to greater public conflict if they perceive their participation as more to do with public relations than substantive input.

6. **Avoid universally framing *all* free-ranging cats as an "invasive species" or "pests," which can be highly polarizing statements** (See *Stakeholder Interviews*). While free-ranging cats may meet the technical definition of an "invasive species" in a particular place, referring to *all* free-ranging cats as invasive species or pests neglects the importance of context for determining whether, where, and under what conditions they cause significant environmental, economic, or human health harm. In addition, the universal invasive species framing may alienate potential collaborators as it is generally associated with the goal of widespread eradication through lethal means. The choice to refer to specific free-ranging cats as "invasive species" or "pests" should be made deliberately and carefully.

7. **Build interdisciplinary teams when working on issues involving free-ranging cats**. Interdisciplinary teams, including social scientists and other engagement experts, can provide a broader set of expertise to productively engage a diversity of stakeholders (See *Navigating polarization in free ranging cat management*).

8. **Strategically navigate entrenched conflict**. There are still people who, for many reasons, believe in and even benefit from a polarized view of free-ranging cats (See *Navigating polarization in free ranging cat management & Acknowledging the infrequent perspective against collaboration*). Expect to encounter these views both from individuals and from organizations, and strategize on how to navigate them. If, for example, there is a highly structured engagement process to understand the local social and ecological conditions that are leading to the presence of free-ranging cats, polarized views may be manageable—with strong facilitation—as long as they are contributing substantively. If the goal is to establish better relationships through trust and understanding, then it is likely a better idea not to involve stakeholders who are convinced that the other side is "evil" or "foolish" and are unwilling to modify their views. For resources on designing engagement processes to navigate conflict, see Bryson et al. (2013) and Dietz and Stern (2008).

From the perspective of one of the two historically entrenched sides of this issue (cat welfare or wildlife conservation), talk of engagement informing decisions and collaboration with those who hold different views may seem like a losing proposition—just pressure to move from their "right" position and work with those who are "wrong". However, these inflexible positions, while familiar, have not led to widespread successful management and are unlikely to do so. Viewed from a broader lens, the results of this research that show an openness to moving past entrenched conflict represent an opportunity, especially for the NPS. Supporting a collaborative approach by improving relationships and acknowledging context in free-ranging cat management could result in a wider set of local knowledge to draw upon and new opportunities for cooperation in the management of free-ranging cats. For the NPS, this may mean considering different perspectives and compromising when determining which management actions are appropriate for a particular area, but it may also mean productive collaboration to remove cats from the most important conservation hotspots and an overall reduction in controversy. And while popular sound bites, ingrained assumptions, and established identities will slow the move away from entrenched conflict and make it likely that collaboration will not work everywhere, this paper suggests that a collaborative approach is worthy of pursuit. We envision, for example, a pilot study at one or more specific National Parks that face free ranging cat conflicts—engaging diverse stakeholders in productive dialogue, promoting collaborative management decisions, and monitoring the mixture of ecological and social outcomes. Such an effort would both inform the design and implementation of interventions at broader scales and position the NPS as an agency committed to responding to entrenched conflict with creativity and transparency.

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Appendix

Table A-1. Excerpts from organization position statements on free-ranging cats. These statements were confirmed as current on July 15, 2020.

Organization	View on impacts of free-ranging cats on wildlife	View on TNR and euthanasia as management methods for free-ranging cats
Alleycat Allies (ACA) https://www.alleycat.org/resources/get-informed-discover-the-truth-about-feral-cats/	"Community cats, also called feral cats, are generally not socialized—or friendly—to people. They live full, healthy lives with their feline families (called colonies) in their outdoor homes… Studies show community cats are just as healthy as pet cats, with equally low disease rates. Community cats also live just as long as pet cats. Community cats are not a threat to public health. Since community cats aren't friendly to people and avoid contact, it is almost impossible for them to transmit diseases... Cats have coexisted outdoors with wildlife for thousands of years. Reliable science shows that cats are part of our natural ecosystem and do not significantly impact wildlife populations. As animal lovers, we want what is best for all animals. That means we must address the true threats to all species: human-lead activities like habitat destruction and pollution."	"Grounded in science, TNR stops the breeding cycle of cats and therefore improves their lives while preventing reproduction. It is a fact that the removal and killing of outdoor cats that animal control has been pursuing for decades is never ending and futile… Trap-Neuter-Return is the only humane, effective approach to community cats, and it helps them and the communities where they live."
American Bird Conservancy (ABC) https://abcbirds.org/program/cats-indoors/learn-more/ https://abcbirds.org/program/cats-indoors/	"Free-roaming domestic cats are efficient predators estimated to kill billions of native birds and small mammals, as well as countless reptiles and amphibians each year… Free-roaming domestic cats are subject to pain, suffering, and early death, such as from debilitating and potentially fatal diseases, being hit by cars, poisoning, attacks by other animals, or being lost or stolen… Bites, scratches, and fecal contamination from free-roaming cats pose a health risk to the general public through transmission of diseases such as toxoplasmosis, roundworm, catscratch fever, and rabies."	"Our Cats Indoors Program educates the public and policy makers about the many benefits to birds, cats, and people when cats are maintained indoors or under an owner's direct control. In addition to advocating for responsible pet ownership, we also oppose Trap, Neuter, Release (TNR) for feral cats because of the persistent and severe threats posed by these cats... American Bird Conservancy calls for all cats to be kept indoors or under close supervision and the humane removal of all free-roaming cats beginning with areas important to wildlife."

Table A-1 (continued). Excerpts from organization position statements on free-ranging cats. These statements were confirmed as current on July 15, 2020.

Organization	View on impacts of free-ranging cats on wildlife	View on TNR and euthanasia as management methods for free-ranging cats
American Society for the Prevention of Cruelty to Animals (ASPCA) https://www.aspca.org/about-us/aspca-policy-and-position-statements/position-statement-community-cats-and-community-cat	"Community cat issues are complex and varied, impacted by geography, climate, the presence of other animals including predators, past and current community cat programming, cultural norms and numerous other factors... In spite of rigorous debate between advocates of cats and advocates of wildlife, the desired outcome for each of these groups is the same—a reduction in the population of community cats... While the challenges faced by wildlife are significant and complex, community cats are, at times, erroneously singled out as a convenient target... It is unscientific and irrational to choose a single factor, like the presence of cats, and assign blame for the challenges faced by wildlife. Furthermore, even if the presence of cats is shown to impact wildlife, community cat programs, which have as their goal a humane reduction in cat population, remain a desirable solution to minimizing any actual (rather than perceived) threats to other species."	"The ASPCA supports humane, lawful, and effective strategies for humanely managing community cat[1] populations…It is the ASPCA's position that unsocialized community cats are best served by focusing resources on TNRM and RTF programs, distribution of exclusionary devices (such as fencing and keeping garbage bins closed) and deterrents, and public education concerning the humane management of community cats. Socialized community cats are best served by placement into new homes whenever possible... The ASPCA does not support the management of cat colonies in ecologically sensitive areas…The ASPCA does not consider trap and euthanize programs to be humane or effective options for addressing community cat issues."
Best Friends Animal Society (BFAS) https://bestfriends.org/about-best-friends/position-statements	"We believe ideally that all owned cats belong safely indoors. Indoor cats can easily receive all the exercise and stimulation they require to be happy and healthy while safely indoors, which also keeps them away from wildlife... Whatever ills one might associate (rightly or wrongly) with free roaming cats — whether public health concerns, wildlife predation, or anything else — it's clear that these problems cannot be addressed in a comprehensive manner without the stabilization and eventual reduction in the level of the community cat population."	"Best Friends Animal Society endorses and practices trap-neuter-return (TNR) as the most humane and effective way to manage community cats. Killing, by contrast, is simply a revolving door. Any cat removed from a colony and killed will likely be replaced by another."

Table A-1 (continued). Excerpts from organization position statements on free-ranging cats. These statements were confirmed as current on July 15, 2020.

Organization	View on impacts of free-ranging cats on wildlife	View on TNR and euthanasia as management methods for free-ranging cats
Humane Society of the United States (HSUS) https://www.humanesociety.org/resources/our-position-cats#unowned_cats https://www.humanesociety.org/resources/common-ground-cats-wildlife	"Our ultimate goal is to dramatically and humanely reduce the number of cats outdoors, leading to much less risk and harm to the cats, no predation of birds and wildlife and the elimination of potential public health concerns and nuisance-related issues. Predation by outdoor cats on birds and other wildlife is a real and legitimate concern. While The HSUS believes that outdoor cats are entitled to protection, it also believes that wildlife populations need to be protected from cats. That's one of the reasons we actively promote TNR, and why we have been involved in programs such as the removal of feral cats from San Nicholas Island, Calf., in an effort to balance the needs of all animals, and not promote one species at the expense of others."	"We support Trap-Neuter-Return (TNR) and similar sterilization programs, legislation that allows for and supports non-lethal population control, and coalition-based approaches that involve community leaders, citizens, and stakeholders to implement effective community cat management programs. Programs that attempt to use lethal control to eliminate cat populations are inhumane, ineffective, and wasteful of scarce resources. The HSUS does not support managed colonies in ecologically sensitive areas... Through wildlife-sensitive-area mapping, cat-colony relocation or feeding modification, the establishment of appropriate sanctuaries, and other innovative solutions, the negative impacts can be lessened and eventually eliminated."
People for the Ethical Treatment of Animals (PETA) https://www.peta.org/about-peta/why-peta/outdoor-cats/ https://www.peta.org/issues/animal-companion-issues/overpopulation/feral-cats/ https://www.peta.org/about-peta/faq/what-is-petas-stance-on-programs-that-advocate-trapping-spaying-and-neutering-and-releasing-feral-cats/	"Feral cats live short, hard lives on the streets. They never die of "old age." Contagious diseases such as herpes viral conjunctivitis, feline AIDS, leukemia, and infectious peritonitis are common in cats left outdoors… Minor cuts or puncture wounds can turn into raging infections and abscesses… If cats miraculously escape these perils, they may still fall prey to agonizing deaths at the hands of cruel people… They terrorize, maim, and kill countless native birds and other small wild animals, who are struggling to survive existing challenges (such as development in their habitats) and aren't equipped to deal with such predators… The street is no place for a cat... Fortunately, cats can live happy lives indoors, and they can be given opportunities to explore the outdoors under supervision."	"Sadly, our experience with trap, spay-and-neuter, and release programs and "managed" feral cat colonies has led us to question whether or not these programs are truly in the cats' best interests… Having witnessed firsthand the gruesome things that can happen to feral cats and to the animals they prey on, PETA cannot in good conscience oppose euthanasia as a humane alternative to dealing with cat overpopulation... Nevertheless, PETA's position has never been that all feral cats should be euthanized. We believe that trap, vaccinate, spay/neuter, and release programs are acceptable when the cats are isolated from roads, people, and other animals who could harm them; regularly attended to by people who not only feed them but care for their medical needs; and situated in an area where they do not have access to wildlife and where the weather is temperate."

Table A-1 (continued). Excerpts from organization position statements on free-ranging cats. These statements were confirmed as current on July 15, 2020.

Organization	View on impacts of free-ranging cats on wildlife	View on TNR and euthanasia as management methods for free-ranging cats
The Wildlife Society (TWS) https://wildlife.org/tws-issue-statement-feral-and-free-ranging-domestic-cats/	"Feral and free-ranging domestic cats are exotic species to North America. Exotic species are recognized as one of the most widespread and serious threats to the integrity of native wildlife populations and natural ecosystems… A growing body of literature strongly suggests that domestic cats are significant predators on small mammals, birds, reptiles, and amphibians. Feral and free-ranging cats also serve as reservoirs for several diseases, including rabies, toxoplasmosis, bartonellosis, typhus, and feline immunodeficiency virus, that can have significant effects on the health of humans, wildlife, and other domestic animals."	"The policy of The Wildlife Society regarding feral and free-ranging domestic cats is to: Support and encourage the humane elimination of feral cat populations, including feral cat colonies, through adoption into indoor-only homes of eligible cats and humane euthanasia of unadoptable cats; Support the passage and enforcement of local and state ordinances prohibiting the feeding of feral cats, especially on public lands, and the release of unwanted pet or feral cats into the wild; Oppose the passage of any local or state ordinances that legalize the maintenance of "managed" (trap/neuter/release) free-ranging cat colonies."

The Department of the Interior protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its special responsibilities to American Indians, Alaska Natives, and affiliated Island Communities.

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