

**REPORT OF THE
FREE-ROAMING CAT STAKEHOLDER
WORKGROUP**

**TO THE
HOUSE AGRICULTURE, CHESAPEAKE AND
NATURAL RESOURCES COMMITTEE
OF THE
VIRGINIA GENERAL ASSEMBLY**

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REPORT OF THE FREE-ROAMING CAT STAKEHOLDER WORKGROUP

I. Executive Summary and Summary of Recommendations

This report is the result of continued extensive discussions among the members of the workgroup that was created in response to a Chairman's Letter from Delegate Kenneth Plum seeking legislation to reduce the number of free-roaming cats in Virginia and mitigate their impact on wildlife, natural resources and public health. Ten of the workgroup's nineteen members are signatories to this report, three have joined the report as Technical Resource Participants, and one has joined as a Contributor. Four members of the Workgroup are submitting their own report.

There are an estimated 2.1 million free-roaming cats in Virginia, of which 1.2 million cats are unowned. Free-roaming cats are one of the most significant threats to wildlife, and they present numerous risks to public health. Free-roaming cats also are subject to numerous risks themselves, including high mortality rates, particularly for kittens.

Reducing the number of free-roaming cats is a complex task that requires the utilization of multiple strategies and the adoption of state-wide policies and best practices. The removal of unowned free-roaming cats from the landscape is the quickest way to reduce the impact of the cats on wildlife and public health. Trap, Neuter and Return (TNR) programs might help to reduce the number of free-roaming cats, provided they are implemented properly, but they return cats to the environment, where they will continue present risks to wildlife and the public health. Public education campaigns on preventing cats from roaming, the importance of spaying or neutering, and on alternatives to abandoning cats also are critical to reducing the number of free-roaming cats.

Comprehensive cat management plans, enacted by localities, would facilitate the management and reduction of populations of free-roaming cats. A suite of minimum standards and best practices would ensure the efficacy of such plans. The plans would provide for support, oversight and training of persons and organizations engaged in management of free-roaming cats, as well as standards of operation, including the maintenance of records.

Virginia should conduct research on how to improve education and outreach with respect to free-roaming cats, how to reduce the number of abandoned cats, locations where cats pose greater risks to wildlife or public health, and the impact of management activities on free-roaming cat populations. The research should be undertaken simultaneously with localities' development of cat management plans.

II. Introduction

On March 10, 2021, Delegate Plum requested that the Secretaries of Public Health and Human Resources, Natural Resources, and Agriculture and Forestry create a work group to “develop legislation to reduce and control the population of free-roaming cats and mitigate the impact of free-roaming cats on the Commonwealth’s native wildlife, natural resources, and public health” Appendix A. In August 2021, the Office of the Secretary of Natural and Historic Resources (SNHR) convened a workgroup composed of five representatives from animal shelters and animal control associations; three representatives of national animal welfare associations; five state and university employees; four representatives of wildlife and environmental groups; one representative of a spay/neuter organization; and one representative of a trap, neuter, and return (TNR) organization. Consistent with the Chairman’s Letter, the persons chosen to participate in the workgroup represented interest groups (i.e., stakeholders) rather than specific viewpoints on how best to address the problems posed by free-roaming cats. The workgroup conducted four in-person meetings over 20 hours under the guidance of Mark E. Rubin as mediator. Subsequently, many members of the workgroup participated in five additional online sessions without a mediator, and two members of the workgroup engaged in several online sessions in an effort to reach consensus on a report.

While the workgroup agreed on many principles, it could not reach agreement on several key issues, including the emphasis to place on trap, Neuter and Return (TNR). However, all the signatories to this Report are willing to support including TNR as one of the tools to manage the population of free-roaming cats, *provided that the TNR program is operated in a way that minimizes wildlife and public health risks, supports the humane treatment of cats, and is likely to successfully reduce the free-roaming cat population.* Four members of the Workgroup are submitting a separate report.

III. It Is Critically Important to Manage and Reduce the Population of Free-roaming Cats in Virginia.

A. The Large Free-roaming Cat Population Is the Result of Several Factors.

Free-roaming cats are domestic cats (*Felis catus*) that may be owned or unowned, including lost or abandoned cats, that are roaming off an owner's property while not under a person’s direct control. The number of free-roaming cats in Virginia is substantial. A model often used to calculate the free-roaming cat population [comes from the Koret Shelter Medicine Program](#) at the University of California Davis. Their [Outdoor Cat Calculator](#) generates an estimate of 2.1 million free-roaming cats in Virginia, of which 1.2 million cats are unowned.¹ This large number of unowned free-roaming cats is the result of several factors, including:

1. Some owners allow unsterilized cats to roam outdoors, resulting in unintended pregnancies and corresponding growth of the population of free-roaming cats.

¹ The estimate is derived from the study’s conclusion, based on an analysis of multiple studies, that there is about one unowned free-roaming cat for every seven persons and one owned free-roaming cat for every ten persons. Based on Virginia’s population in 2020 of 8.6 million, there are an estimated 1.2 million unowned, free-roaming cats and 860,000 owned, free-roaming cats in the state.

2. Some owners allow their cats to roam outdoors, where they kill wildlife and present risks to public health.
3. Other owners allow their cats to roam and do not ensure that they return home, resulting in them becoming abandoned free-roaming cats. Some of these cats are admitted to shelters, and very few of them are reclaimed by their owners. A 2021 VDACS report indicates that only 7% of cats in shelters were reclaimed by their owners, whereas 60% of dogs in shelters were reclaimed.² This very low rate of cat recovery by owners is called “passive abandonment.”
4. Some owners deliberately abandon cats, sometimes in areas where they know a free-roaming cat colony exists. The magnitude of this problem varies by locality.
5. Some individuals feed free-roaming cats without taking steps to reduce their numbers, such as rehoming adoptable cats, which results in an increase in the number of free-roaming cats.
6. There is a lack of access to affordable veterinary services, which has resulted in large backlogs of cats waiting for appointments to be sterilized, as well as cost deterrents and other barriers to services for cat owners.

B. Free-roaming Cats Have a Substantial Adverse Impact on Wildlife.

Free-roaming cats have a substantial adverse impact on wildlife. Organizations such as the Humane Society of the United States (HSUS) and the American Bird Conservancy, both of which were represented on the workgroup, the American Veterinary Medical Association (AVMA), and The Wildlife Society advocate for keeping cats indoors, on leashes, or in outdoor enclosures, in significant part to reduce their harm to wildlife.³

In the United States and Canada, free-roaming cats are the top source of direct, human-caused bird mortality.⁴ Free-roaming cats kill an estimated 2.4 billion birds and 12.3 billion small mammals every year in the United States alone.⁵ In Virginia, free-roaming cats are a leading cause of wildlife intakes at The Wildlife Center of Virginia and have been documented attacking 21 mammal species and 62 bird species, which subsequently suffered 71% and 81% mortality

² <https://arr.vdacs.virginia.gov/Reports06/BuildPublicReport?vCategory=All&vReportYear=2021>.

³ E.g., “Cats, Wildlife and You,” The Humane Society of the United States; [Common Ground for Cats and Wildlife](#), The Humane Society of the United States; [Free-roaming Abandoned and Feral Cats](#), American Veterinary Medical Association; [Feral and Free-ranging Domestic Cats](#), The Wildlife Society.

⁴ Loss, S.R., T. Will, and P.P. Marra. 2015. [Direct Mortality of Birds from Anthropogenic Sources](#), Annual Review of Ecology, Evolution, and Systematics, 46: 99-120.

⁵ Loss, S.R., T. Will and P.P. Marra. 2013. [The Impact of Free-Ranging Domestic Cats on Wildlife in the United States](#), *Nature Communications* 4:1396.

rates, respectively, despite professional veterinary care.⁶ The magnitude of this level of wildlife mortality by an introduced predator has contributed to significant conservation impacts.⁷

Free-roaming cats also negatively impact wildlife indirectly through competition for resources, wildlife behavioral changes, and the transmission of parasites and diseases. For example, the mere presence of a domestic cat in the environment has been shown to reduce the amount of food provided to birds in the nest and reduce reproductive success through fear-based effects.⁸ Free-roaming cats may also transmit parasites and diseases to native wildlife.⁹ Toxoplasmosis, in particular, represents a pervasive risk due to its large transmission quantities in domestic cat feces (up to hundreds of millions of infectious oocysts), persistence in the environment from months to years, and infectiousness to all birds and mammals.

C. Free-roaming Cats Present Public Health Risks.

Free-roaming cats contribute to potentially serious public health risks. Free-roaming cats may bite or scratch individuals who try to interact with them. Such interactions can result in serious injury and infection and are considered a potential rabies exposure.¹⁰ In addition, free-roaming cats may also transmit a wide variety of parasites and diseases to people through direct exposure (e.g., cat-scratch disease, rabies, tularemia) or indirect exposure, such as environmental contamination (e.g., toxoplasmosis).¹¹

Because of its high human mortality rate, rabies from cats is a significant disease concern. Cats are the domestic animal most commonly diagnosed with rabies in the United States with, on average from 2010-2019, 264 cats being laboratory-confirmed with rabies annually, which is nearly four times higher than the national average for rabid dogs (69/year).¹² In Virginia, since 1999, there have been approximately 8 times more cats laboratory confirmed with rabies than

⁶ McRuer D.L., L.C. Gray, L. Horne, and E.E. Clark. 2013. [Free-roaming Cat Interactions with Wildlife Admitted to a Wildlife Hospital](#). *The Journal of Wildlife Management* 81(1): 163-173.

⁷ Loss S.R. and P.P. Marra. 2017. [Population Impacts of Free-ranging Cats on Mainland Vertebrates](#). *Frontiers in Ecology and the Environment* 15(9): 502-509; Woinarski J.C.Z., A.A. Burbidge, and P.L. Harrison. 2015. [Ongoing Unraveling of a Continental Fauna: Decline and Extinction of Australian Mammals since European Settlement](#). *PNAS* 112(15): 4531-4540; Doherty T.S., A.S. Glen, D.G. Nimmo, E.G. Ritchie, and C.R. Dickman. 2016. [Invasive Predators and Global Biodiversity Loss](#). *PNAS* 113(40): 11261-11265.

⁸ Bonnington C, K.J. Gaston, and K.L. Evans. 2013. [Fearing the Feline: Domestic Cats Reduce Avian Fecundity through Trait-mediated Indirect Effects that Increase Nest Predation by Other Species](#). *Journal of Applied Ecology* 50: 15-24.

⁹ Gerhold R.W. and D.A. Jessup. 2013. [Zoonotic Diseases Associated with Free-roaming Cats](#). *Zoonoses and Public Health* 60(3): 189-195.

¹⁰ Babovic N., C. Cayci, and B.T. Carlsen. 2014. [Cat bite infections of the hand: assessment of morbidity and predictors of severe infections](#). *The Journal of Hand Surgery* 39(2): 286-290; Blackburn J., E. Tremblay, C. Tsimiklis, B. Thivierge, and V. Lavergne. 2013. [Overwhelming sepsis after a cat bite](#). *Canadian Journal of Infectious Diseases and Medical Microbiology* 24(2): e31-e32.

¹¹ Aguirre A.A., T. Longcore, M. Barbieri, H. Dabritz, D. Hill, P.N. Klein, C. Lepczyk, E.L. Lilly, R. McLeod, J. Milcarsky, C.E. Murphy, C. Su, E. VanWormer, R. Yolken, and G.C. Sizemore. 2019. [The One Health approach to toxoplasmosis: epidemiology, control, and prevention strategies](#). *EcoHealth* 16: 378-390.

¹² Compilation of data collected by the Centers for Disease Control and published each year in the *Journal of the American Veterinary Medical Association*. See, e.g., *JAVMA*, July 2022, Vol. 260 Issue 10 pages 1157-65, available at <https://avmajournals.avma.org/view/journals/javma/260/10/javma.22.03.0112.xml>.

dogs, and a study in Montgomery County Virginia found that “cat bites or scratches were involved in the majority of incidents in which rabies post-exposure prophylaxis (PEP) was recommended.”¹³ An average of 30 cats are diagnosed with rabies each year in the Commonwealth, and, on average, 75% of these are stray or feral.¹⁴

People who undergo the series of PEP injections to prevent rabies may be faced with significant costs. According to the Centers for Disease Control and Prevention, “[a]lthough the cost varies (typically from about \$1,200 to \$6,500), a course of rabies immune globulin and four doses of vaccine given over a two-week period average about \$3,800, not including costs for hospital treatment or wound care.”¹⁵ Because free-roaming cats who bite humans are rarely successfully trapped, the victim of the bite almost always has to undergo prophylactic treatment out of an abundance of caution.

The presence of free-roaming cats that are not vaccinated against rabies creates a public health risk. To protect cats and people, the National Association of State Public Health Veterinarians recommends that all cats be vaccinated against rabies and revaccinated after one year and thereafter in accordance with vaccine manufacturer guidelines.¹⁶

Cats are also the definitive host for the parasite *Toxoplasma gondii*, which causes toxoplasmosis. An infected cat can excrete hundreds of millions of oocysts (an environmentally-resistant stage of the parasite), and these oocysts remain infective for months to years in soil, freshwater, or marine environments, where they can infect any bird or mammal.¹⁷ In people, the consequences of infection can include flu-like symptoms, ocular disease, organ failure, and death.¹⁸ Pregnant women and people with compromised immune systems are particularly vulnerable. *T. gondii* infection risks (e.g., miscarriage) are why doctors regularly advise that pregnant women avoid changing cat litter. Toxoplasmosis is also the second leading cause of death from foodborne illness.¹⁹

¹³ Virginia Department of Health Animal and Human Health Statistics, <https://www.vdh.virginia.gov/animal-contact-human-health/animal-contact-human-health-statistics/>, last accessed September 20, 2022.; Hensley J.A. 1998. [Potential rabies exposures in a Virginia County](#). Public Health Reports 113: 258-262.

¹⁴ Compilation of public health data from Virginia Department of Health Animal and Human Health Statistics, <https://www.vdh.virginia.gov/animal-contact-human-health/animal-contact-human-health-statistics/>, last accessed September 20, 2022.

¹⁵ Centers for Disease Control and Prevention, Cost of Rabies Prevention, <https://www.cdc.gov/rabies/location/usa/cost.html>. Last accessed September 2022.

¹⁶ National Association of State Public Health Veterinarians. 2016. [Compendium of Animal Rabies Prevention and Control, 2016](#). Journal of the American Veterinary Medical Association 248(5): 505-517.

¹⁷ Taetzsch S.J., K.R. Gruszynski, A.S. Bertke, J.P. Dubey, K.A. Monti, A.M. Zajac, and D.S. Lindsay. 2018. [Prevalence of zoonotic parasites in feral cats of Central Virginia, USA](#). Zoonoses and Public Health 65: 728-735. Torry E.F. and R.H. Yolken. 2013. [Toxoplasma oocysts as a public health problem](#). Trends in Parasitology 29(8): 380-384. Dubey, J.P. and J.L. Jones. 2008. *Toxoplasma gondii* infection in humans and animals in the United States. International Journal for Parasitology 38: 1257–1278.

¹⁸ <https://www.cdc.gov/parasites/toxoplasmosis/disease.html>; Aguirre A.A., T. Longcore, M. Barbieri, H. Dabritz, D. Hill, P.N. Klein, C. Lepczyk, E.L. Lilly, R. McLeod, J. Milcarsky, C.E. Murphy, C. Su, E. VanWormer, R. Yolken, and G.C. Sizemore. 2019. [The One Health approach to toxoplasmosis: epidemiology, control, and prevention strategies](#). EcoHealth 16: 378-390.

¹⁹ Scallan E., R.M. Hoekstra, F.J. Angulo, R.V. Tauxe, M. Widdowson, S.L. Roy, J.L. Jones, and P.M. Griffin. 2011. Foodborne illness acquired in the United States – major pathogens. Emerging Infectious Diseases 17(1): 7-15.

Research near Richmond observed that over 22% of free-roaming cats tested positive for *T. gondii*, among other zoonotic parasites, and that 82% of these free-roaming cats were within roaming distance of public elementary or preschool grounds, public parks, or community gardens.²⁰ A study in Lexington found that 29% of produce collected from grocery stores and farmers markets was contaminated with *T. gondii* oocysts, which the authors called a “significant concern” because “many fresh vegetables are eaten raw, and thus the oocysts would be potential sources of human infection.”²¹

D. Free-roaming Cats Are Subject to Numerous Risks.

Free-roaming cats are subject to a variety of risks that can lead to a reduced quality and length of life. Extreme weather events; unpredictable access to food, water, or shelter; attacks by other animals, including other cats, dogs, coyotes and other wild animals, as well as people;²² parasites and diseases; and injury from vehicles are just some of the risks free-roaming cats may experience. These risks have led the American Association of Feline Practitioners (AAFP) to conclude that “the welfare of [free-roaming] cats is significantly diminished” and may be particularly severe for cats born outdoors. According to the AAFP, “[t]he mortality rate of kittens born in an outdoor environment can reach 75% by six months of age. Their life expectancy is often less than 5 years, during which time they have a poor quality of life.”²³ The HSUS website states that 75% of kittens born outdoors die before reaching 6 months of age.²⁴

The AVMA agrees that free-roaming cats, whether owned or unowned, can have a reduced quality of life.²⁵ Its policy on free-roaming and abandoned cats states, “[m]ost [free-roaming] cats will suffer premature mortality from disease, starvation, weather extremes, or trauma” and that these risks result in a “radically reduced” life expectancy for free-roaming cats.²⁶

Jones J.L., D. Kruszon-Moran, M. Wilson, G. McQuillan, T. Navin, and J.B. McAuley. 2001 [Toxoplasma gondii infection in the United States: Seroprevalence and risk factors](#) American Journal of Epidemiology 154(4): 357-65; Centers for Disease Control and Prevention. Disease. <https://www.cdc.gov/parasites/toxoplasmosis/disease.html>, accessed 9/20/2022. Batz M.B., S. Hoffmann, and J.G. Morris. 2012. [Ranking the disease burden of 14 pathogens in food sources in the United States using attribution data from outbreak investigations and expert elicitation](#) Journal of Food Protection 75 (7): 1278–1291. Jones J.L., M.E. Parise, and A.E. Fiore. 2014 [Neglected parasitic infections in the United States: Toxoplasmosis](#). American Journal of Tropical Medicine and Hygiene 90(5) 794–799.

²⁰ Taetzsch S.J., K.R. Gruszynski, A.S. Bertke, J.P. Dubey, K.A. Monti, A.M. Zajac, and D.S. Lindsay. 2018. [Prevalence of zoonotic parasites in feral cats of Central Virginia, USA](#). Zoonoses and Public Health 65: 728-735; Taetzsch S.J., A.S. Bertke, K.R. Gruszynski. 2018. [Zoonotic disease transmission associated with feral cats in a metropolitan area: a geospatial analysis](#). Zoonoses and Public Health 65: 412-419.

²¹ Lilly E.L. and N.J. Webster. 2021. [Detection of Toxoplasma gondii oocysts on organic and conventionally grown produce](#). Food Microbiology 99: 103798.

²² Free-roaming cats are the targets of cruelty and attack by humans. They are shot with bb guns, arrows and other devices; poisoned with antifreeze and other chemicals by those who don’t want them around; and captured and tortured both for “fun” and for the cruelty itself. The very presence of free-roaming cats on the landscape subjects them to suffering and death at the hands of humans who want to deter them or to eliminate them.

²³ AAFP [Position Statement, Free Roaming, Abandoned and Feral Cats](#). See Stoskopf MK and Nutter FB, [Analyzing Approaches to Feral Cat Management - One Size Does Not Fit All](#), J Am Vet Med Assoc. 225: 1361–1364 (2004).

²⁴ <https://www.humanesociety.org/resources/outdoor-cats-faq#dangerous>, accessed 11/2/2022.

²⁵ AVMA <https://www.avma.org/resources-tools/avma-policies/free-roaming-abandoned-and-feral-cats>.

²⁶ AVMA <https://www.avma.org/resources-tools/avma-policies/free-roaming-abandoned-and-feral-cats>.

IV. The Commonwealth, Localities, Organizations, and Individuals Can Take Steps to Reduce the Problems Caused by Free-roaming Cats.

A. Development of a Plan to Address the Overpopulation of Free-roaming Cats Requires Consideration of Multiple Factors and the Adoption of Multiple Strategies.

The problem of overpopulation of owned and unowned free-roaming cats is complex and defies one simple solution. The development of solutions to the problem of the overpopulation of free-roaming cats is made even more complex by the wide variations in resources, culture, and issues pertaining to free-roaming cat management across the Commonwealth. For example, the number of free-roaming cats varies widely from region to region. Some public shelters do not accept any cats or do not offer any resources to address free-roaming cats, which may increase intake on neighboring localities that do accept cats. The only way to reduce the number of free-roaming cats in the Commonwealth is to take into consideration multiple factors and adopt a multi-pronged approach.²⁷

B. A Strategy of Trap, Neuter and Return Will Not by Itself Reduce the Number of Free-roaming Cats or Protect Wildlife.

A TNR strategy cannot by itself result in a meaningful reduction in the number of free-roaming cats. Numerous studies indicate that to achieve a stable or declining population of free-roaming cats in a colony through sterilization, at least 70% of the cats must be spayed or neutered annually.²⁸ The HSUS asserts that at least 75% of the cats in a colony must be sterilized each year in order to achieve “good results” over ten years.²⁹ Sterilizing such a high percentage of the cats is both impracticable and cost-prohibitive for Virginia’s estimated 2.1 million free-roaming cats.³⁰

²⁷ The HSUS notes that multiple approaches should be taken with respect to free-roaming cats, including “Truly accessible spay/neuter and TNR services for pet and community cats; Support and implementation of best practices for managing community cat colonies; and Pet food pantries, behavior assistance, and other programs to help people keep their cats in their homes...” among other recommendations. <https://www.humanesociety.org/resources/our-position-cats#:~:text=and%20eventually%20eliminated,Collaboration%2Fhumane%20communities,available%20resources%20in%20their%20community>.

²⁸ Andersen M.C., B.J. Martin, and G.W. Roemer. 2004 [Use of Matrix Population Models to Estimate the Efficacy of Euthanasia Versus Trap-Neuter-Return for Management of Free-Roaming Cats](#) *Journal of the American Veterinary Medical Association* 225(12): 1871-1876; Foley P., J.E. Foley, J.K. Levy, T. Paik. 2005. [Analysis of the Impact of Trap-Neuter-Return Programs on Populations of Free-Roaming Cats](#), *Analysis of the Journal of the American Veterinary Medical Association* 227(11): 1775-1781.

²⁹ <https://humanepro.org/blog/blog-making-most-tnr>, April 2022.

³⁰ To achieve a 70% sterilization rate, 1,470,000 cats would have to be sterilized in the first year, or 4,027 cats per day, and some number in following years. At a cost of at least \$50 to spay/neuter each cat, the first-year cost would be at least \$73,500,000. The actual cost per cat is likely to be significantly higher. Adding rabies vaccination for those cats would cost an additional \$25 per cat, or another \$36,750,000. If it takes longer to reach a 70% sterilization rate, the total costs will increase, as unsterilized cats continue to reproduce. This cost estimate does not include the substantial cost, logistical challenges, and dangers of capturing and transporting unowned free-roaming cats.

Reliance on TNR to reduce the population of free-roaming cats also will be ineffective because there are already months-long backlogs of cats waiting for spay/neuter services in Virginia.³¹ Numerous studies and articles confirm the serious shortage of veterinarians and veterinary technicians.³² It is unrealistic to expect that greater emphasis on TNR would be successful in reducing the population of unowned cats because veterinarians in the Commonwealth cannot keep up with the current requests for sterilization and would be unable to sterilize enough free-roaming cats to have an impact on their numbers.

An additional challenge of TNR programs is that many of them are not operated in a way that is likely to result in a reduction in the population of unowned free-roaming cats. Section VI.B of this report discusses minimum standards for operation of TNR programs.

The “return” component of TNR also is illegal. Sections 3.2-6546(D) and 6548(A), which apply to public shelters and private shelters, respectively, limit the disposition of unowned cats to release to another releasing agency, adoption, or euthanasia. Release of cats to the location where they were trapped is not permitted. Individuals also are prohibited from releasing unowned cats to the location where they were trapped. Virginia Code § 3.2-6504 states that “[n]o person shall abandon or dump any animal.” Releasing a cat without securing an owner or custodian or providing it food, water, shelter and medical care constitutes abandonment and dumping under Virginia Code 3.2-6500. The return strategy undermines the longstanding approach to humane animal welfare practice which prohibits such abandonment of domestic animals.

Finally, a TNR strategy for unowned cats returns the cats to the location where they were trapped, where they will continue to harm wildlife and contribute to public health risks for the rest of their lives.

³¹ Marge Hackett, a member of the workgroup who is a TNR practitioner in Newport News, recently indicated that there is a four-month waiting period for spay/neuter services. The Margaret Mitchell Spay/Neuter Clinic in Bristol, VA, who is represented in the workgroup by Tabitha Treloar, recently had no available appointments for spaying or neutering. <https://clinichq.com/online/9875c6e9-caf7-4cb2-b319-e2c16a20004b>. The Lynchburg Humane Society Spay/Neuter Clinic currently has a waitlist of 1400 dogs and cats. The unavailability of spaying and neutering appointments is consistent with reports from programs across the state. A recent study published in *Frontiers in Veterinary Science* found that the COVID-19 pandemic, which caused a sharp reduction in “nonessential” veterinary services across the U.S., created a deficit of more than 2.7 million spay/neuter surgeries from January 2020 through December 2021. Guerios SD, Porcher TR, Clemmer G, Denagamage T, Levy JK. COVID-19 associated reduction in elective spay-neuter surgeries for dogs and cats. *Front. Vet. Sci.* (2022). <https://doi.org/10.3389/fvets.2022.912893>.

³² E.g., The Great Veterinary Shortage, <https://www.theatlantic.com/health/archive/2022/07/not-enough-veterinarians-animals/661497/>; Mars Veterinary Health, the world’s largest employer of veterinary professionals, states that there will be a shortage of nearly 15,000 veterinarians by 2030. <https://www.marsveterinary.com/tackling-the-veterinary-professional-shortage/>.

C. A Strategy of “Trap and Remove” Has Several Benefits as Compared to TNR and Should Be Used in Conjunction with Other Approaches.

A strategy of “Trap and Remove” (TR) free-roaming cats requires less-intensive efforts to achieve a reduction in their numbers than TNR; only 50% must be removed annually,³³ as compared to 70% to 75% using TNR. Many of the removed cats, and in particular kittens, can be rehomed. TR also results in considerably less harm to wildlife and public health than TNR because cats are not returned to the outdoors, where they can kill wildlife, spread diseases, cause nuisances, etc. for the rest of their lives.

However, a TR strategy alone also is unlikely to be successful. No cat management initiative can be successful unless it addresses the abandonment of cats and other contributors to the free-roaming cat population. Also, trapping even 50% of unowned free-roaming cats presents a nearly-impossible task. Some free-roaming cats are unadoptable. Although only a small number of cats placed in shelters are euthanized,³⁴ some volunteer trappers in TNR programs may be unwilling to trap cats that could be subject to euthanasia.

D. Public Education Can Help Reduce the Number of Free-roaming Cats.

Education campaigns can help to resolve the free-roaming cat crisis. A consistent and well-substantiated message that emphasizes the need to reduce the free-roaming cat population is necessary to reinforce management activities. Such combinations have proven successful in the past, including with dog control. Forty years ago, it was common to see dogs roaming freely. Today, because of public education and policy changes, dogs running off-leash and without supervision are an unusual sight. The success of public education and leash laws in substantially reducing the number of free-roaming dogs indicates that public education can, over time, have a significant impact on the number of free-roaming cats.³⁵

1. Education should encourage people to keep cats indoors or prevent them from roaming freely when they are outdoors.

A wide variety of animal welfare, wildlife conservation, and human health organizations support public education to encourage people to keep their pet cats under their direct control, such as indoors or on a leash. For example, the HSUS recommends that people should not let their cats roam outdoors because they face risks, may cause conflicts between neighbors, or injure or kill wildlife, and instead recommends keeping cats indoors or providing outdoor time in an enclosed cat patio (“catio”) or by walking them on a harness and leash.³⁶ The American Bird

³³ Andersen M.C., Martin B.J., Roemer G.W., Use of matrix population models to estimate the efficacy of euthanasia versus trap-neuter-return for management of free-roaming cats, *Journal of the American Veterinary Medical Association*, 225 (2004), pp. 1871-1876.

³⁴ ASPCA, Pet Statistics, <https://www.aspc.org/helping-people-pets/shelter-intake-and-surrender/pet-statistics>. (2019). (An estimated 3.2 million cats enter U.S. animal shelters annually, and less than 17%, or 530,000, are euthanized.) Rand, J., Fisher, G., Lamb, K., & Hayward, A. , [Public Opinions on Strategies for Managing Stray Cats and Predictors of Opposition to Trap-Neuter and Return in Brisbane, Australia](#)), *Front. Vet. Sci.*, 18 Feb. 2019.

³⁵ E.g., Tummers L. 2019 [Public policy and behavior change](#) *Public Administration Review* 79(6): 925-930.

³⁶ <https://www.humanesociety.org/resources/outdoor-cats-faq#roam>.

Conservancy's [Cats Indoors program](#) similarly recommends keeping cats indoors or using catios, cat-safe fencing, backpacks, or harnesses as alternatives to free-roaming, to protect cats, people, and wildlife.

Public messaging encourages people to keep their dogs under direct control when they are off their owners' property for the protection of the dogs, wildlife, and the public. Public education on cats should send the same message – that free-roaming is bad for the cats, wildlife and the public. Messages that suggest that free-roaming cats are fine outdoors confuse and undermine efforts to manage free-roaming cat populations. Education on this issue must be consistent.

2. Education should address the importance of spaying or neutering all owned cats.

One of the most important ways to limit the population of free-roaming cats is to encourage owners of all cats to have them spayed or neutered unless the owner intends the cats to reproduce. Sterilization also can reduce nuisance behaviors, such as spraying and yowling, which may cause their owners to abandon them.

3. Education should emphasize the risks to abandoned cats.

Cat abandonment, which is already prohibited by law, is a significant contributor to the free-roaming cat population and should be actively discouraged through education programs. The AVMA's Policy on free-roaming and abandoned cats³⁷ provides a good starting point from which to develop broad guidelines for public education about the harm caused by abandoning cats, as well as the need to keep cats indoors. The AVMA policy is as follows:

Public education about the risks posed by free-roaming abandoned and feral cats, prevention through the responsible care of privately owned cats, and various management approaches directed toward existing abandoned and feral cat populations is critical. Specific educational elements include:

- *The welfare of these cats may be significantly diminished. Their life expectancy is radically reduced due to death from trauma, disease, starvation, and weather extremes. These same factors may also contribute to an overall poor quality of life.*
- *Feline abandonment and feral cat populations adversely affect wildlife, ecosystems, and public health.*
- *Responsible care of privately owned cats is an effective preventative. This includes appropriate identification, vaccination, sterilization, and confinement.*

4. Education should help owners find alternatives to common situations and causes for abandonments.

Human welfare concerns (e.g., poverty) can also contribute to the free-roaming cat problem. Free or low-cost veterinary services, pet-friendly housing, and free or low-cost sterilization services

³⁷ <https://www.avma.org/resources-tools/avma-policies/free-roaming-abandoned-and-feral-cats>

have all been identified as services that could help with pet retention.³⁸ Public education should focus on how individuals can access low-cost or free pet services for all cats, including veterinary care and spay/neuter services. It should also ensure pet owners are aware of the availability and location of pet food pantries, low-cost or free behavior assistance programs, and any available support for finding and securing pet-friendly housing. While abandonment is a complex issue, these strategies can help keep some cats in their homes.

V. Reducing the Number of Free-roaming Cats Requires a State-wide Solution.

A. There Is No State-Wide Standard Concerning Animal Shelters' and Releasing Agencies' Policies with Respect to Acceptance of Cats.

Finding solutions to the problem of the large number of free-roaming cats is made more complex by the wide variation in approaches taken by the localities in the Commonwealth. At least 56 localities have local ordinances that prohibit the roaming at large of cats or address other issues associated with free-roaming cats, but some jurisdictions have no such ordinances. Also, each public or private agency sets its own intake, adoption, and disposition policies. Furthermore, the Virginia Code does not require localities to accept any cats into their taxpayer-funded sheltering facilities. While some localities accept all cats presented to them from anywhere, others refuse to accept any cats. Instead, people calling about cats that need help or are a nuisance may be instructed to leave/return cats to where they found them and not to rescue even kittens or friendly cats. Shelters with limited-admission/managed-intake policies (i.e., those that keep waiting lists, charge admission fees, use appointment systems or other obstacles to surrender, etc.) may also refer citizens to open-admission shelters, which may be prohibitively far away. The lack of shelter intake uniformity confuses residents and complicates free-roaming cat management efforts.

Annual submissions to the Virginia Department of Agriculture and Consumer Services (VDACS) indicate that there are an estimated 489 public and/or private animal shelters and home-based releasing agencies in the Commonwealth. While the law requires each agency to submit its intake policy to VDACS annually, there is no guidance on the format in which such a policy should be written or what it should include. The lack of uniformity in intake policy makes it nearly impossible to evaluate shelter policies on a statewide basis.

³⁸ Weiss E., S. Gramman, C.V. Spain, and M. Slater. 2015. [Goodbye to a good friend: An exploration of the rehoming of cats and dogs in the U.S.](#) Open Journal of Animal Sciences 5: 435-456.

B. A Comprehensive Free-roaming Cat Management Plan Should Include Minimum Requirements but Give the Locality Flexibility to Develop Its Own Plan.

Adoption of a Virginia-wide framework for development of plans to manage and reduce the population of free-roaming cats is necessary to ensure that localities have tools to address the problems caused by free-roaming cats. The Commonwealth could enact legislation requiring each locality to develop a comprehensive free-roaming cat management plan. This approach is consistent with the position of the American Veterinary Medical Association, which advocates the adoption of state and local ordinances that prohibit the abandonment of cats, require sterilization of cats adopted from shelters, ensure the identification of owned cats, and prohibit owned cats from roaming outdoors.³⁹ A survey by the Virginia Alliance for Animal Shelters, which represents 205 animal control officers and shelter personnel from across the Commonwealth, found that 69% of the 68 jurisdictions that responded to the survey support the adoption by localities of an outdoor cat management plan.

There is such variation among localities in the magnitude of the outdoor cat problem, the resources available to address it, the ordinances already in effect, and cultural views on outdoor cats, that it is responsible and respectful to allow each jurisdiction to develop its own comprehensive plan for the management of cats, subject to limited statutory requirements. All plans should have as their goal the reduction and control of the population of free-roaming cats and should include action plans that reduce the impact of free-roaming cats on the Commonwealth's native wildlife, natural resources, and public health. Other aspects of the plan should include a requirement to seek input from an array of community interests; requirements to limit the public health, wildlife, and other impacts of any plan; oversight of the plan; and assessments of its effectiveness.

It is both necessary and desirable to require localities to develop a plan for the management of free-roaming cats. While localities may incur costs in developing a plan, the alternative of doing nothing imposes bigger costs. The current practices, including the wide variation in approaches to outdoor cats and the lack of oversight of cat management programs, have been ineffective in reducing the number of free-roaming cats. The number of free-roaming cats will continue to increase if nothing is done. Establishing requirements for the management and reduction of free-roaming cats while giving localities flexibility in creating their plans is the best way to address what is becoming a crisis in Virginia while respecting the differences in the scope of the problem, localities' existing cat management measures, and the capabilities of the localities.

C. Other States Are Taking Action to Reduce the Impact of Outdoor Cats on Public Health, Wildlife, and the Environment.

The Pennsylvania One Health Task Force, a multi-disciplinary coalition of environmental, animal, and human health professionals representing government agencies, universities, and non-profit organizations, recently released its [Recommendations on the Management of Domestic Cats](#). The report addressed the impact of domestic cats on the health of humans, domestic

³⁹ <https://www.avma.org/resources-tools/avma-policies/free-roaming-abandoned-and-feral-cats>

animals, and wildlife (i.e., One Health) and recommended fourteen management solutions to address those impacts, including implementing strategies to reduce the number of free-roaming cats, developing procedures for property owners to remove unwanted free-roaming cats from their property, encouraging cat owners to keep their cats under their direct control, and encouraging the sterilization of all cats not intended for breeding.

The [Hawaii Invasive Species Council](#), an inter-departmental collaboration of state agencies and the University of Hawaii, has listed free-roaming cats as an invasive species⁴⁰ and issued Resolution 19-2, which supports “keeping of pet cats indoors or otherwise contained to a pet owner’s property through the use of cat patios, fencing, or other tools” and opposes the use of TNR and other programs “that support the feeding or re-release of [free-roaming] cats into the wild or into public spaces.”⁴¹ Hawaii’s Division of Boating and Ocean Recreation (DOBOR) similarly adopted regulations 13-232-57 and 13-232-57.1 to prohibit the abandonment and feeding of free-roaming cats on DOBOR properties.

VI. The Number of Free-Roaming Cats and the Problems They Cause Can Be Reduced by Adopting Standards and Practices for their Management.

A. Owners and Custodians of Cats Should Be Responsible for Not Allowing Their Cats to Roam on the Property of Others without Permission.

Consistent with widely-accepted leash laws that require dog owners to keep dogs off the private property of others rather than placing a burden of dog exclusion on property owners, cat owners should be required to keep their cats from trespassing. Cat owners, like dog owners, should be responsible for not letting their pets roam where they are not wanted. Enhanced enforcement of existing laws prohibiting trespass and the adoption of ordinances prohibiting cats from roaming off their property are just two of several approaches to this problem.

Any individual who participates in free-roaming cat management activities, such as feeding unowned cats, should never operate on property other than their own without the consent of the property owner. Animal control officers and other organizations assisting with the management of free-roaming cats can offer humane conflict mitigation and nuisance abatement. However, the property owner has the right to humanely remove any undesirable free-roaming cats.

Cats also should not be permitted to roam onto public lands where they create risks to wildlife or public health or create other problems. Under the North American Model of Wildlife Conservation, wildlife is considered a public trust resource that the Commonwealth has an obligation to protect.⁴² The Virginia Department of Wildlife Resources has a responsibility to ensure that threats to wildlife are abated, particularly, but not solely, with regard to areas supporting endangered or threatened wildlife. The purpose of many public lands is inconsistent with the presence of free-roaming cats. These areas may include national, state, or local parks or forests; wildlife management areas; national wildlife refuges; designated critical habitat for

⁴⁰ <https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/feral-cats/>

⁴¹ <https://dlnr.hawaii.gov/hisc/files/2019/01/HISC-Reso-19-2-Feral-Cats-and-TNR-1.pdf>

⁴² Virginia has adopted the Wildlife Violator Compact, which states in part “Wildlife resources are managed in trust by the respective states for the benefit of all residents and visitors...” [Virginia Code § 29.1-530.5](#).

wildlife; daycare centers; athletic fields; and other areas where the presence of free-roaming cats is inconsistent with the use of the property. Given the wide variation in the nature of public lands, the owners or managers of the public land are in the best position to evaluate the risks to wildlife and public health and decide whether to permit free-roaming cats on their land.

B. Free-roaming Cat Management Programs Should Implement Practices that Are Consistent with Reducing the Population of Free-roaming Cats, Respect Private Property, and Avoid Harms to Wildlife and Risks to Public Health.

1. Feeding of unowned free-roaming cats should occur in conjunction with a program to reduce or eliminate the free-roaming cat population.

Feeding of unowned free-roaming cats should only take place in conjunction with a program to reduce or eliminate the free-roaming cat population. Feeding free-roaming cats without taking steps to reduce their population promotes breeding and results in more free-roaming cats and greater threats to wildlife and public health.

2. Individuals who feed free-roaming cats outdoors should adopt practices for feeding the cats that protect the cats, wildlife, and themselves.

An individual who feeds free-roaming cats outdoors should feed cats during daylight hours, no more than twice per day, and for not more than 30 minutes at a time, except as necessary to trap a cat. Food should be placed in sanitary feeding receptacles and placed above ground to deter wildlife from eating the food. The individual should stay within sight of the feeding station until they remove leftover food. These practices are essential to ensure that wildlife are not attracted to the food, which could result in dangerous cat-wildlife or human-wildlife conflicts and the transmission of diseases to or from wildlife.⁴³ Also, following these practices enables the individual to evaluate the health of the free-roaming cats and determine whether they need immediate veterinary care.

3. Individuals participating in unowned free-roaming cat management programs should receive training to protect the cats, public health, wildlife, and themselves.

Education regarding the care and feeding of unowned free-roaming cats, as well as how to prevent wildlife interactions, is essential for managers of those cats. Such training can ensure that individuals participating in free-roaming cat management programs properly care for the cats and do not inadvertently create risks for wildlife. These individuals also should receive training on the threats to wildlife and public health caused by the increasing number of free-roaming cats

⁴³ The Humane Society of the United States' [Feeding Guidelines for Community Cats](#) recommends avoiding feeding after dark, placing food on elevated stations to avoid attracting wildlife, limiting feeding times to regular 30-minute periods, and cleaning up food receptacles and leftover food after each feeding. HSUS states that 30-minute feeding times are sufficient because the colony cats quickly learn when they will be fed.

and on the importance of management programs to reduce the free-roaming cat population.⁴⁴ Training should not be controversial because training is standard practice for virtually all volunteers in the animal welfare and rehabilitation domain. Since several organizations offer free training resources for managers of unowned free-roaming cats already, it does not appear to be necessary for state agencies, such as VDACS, to create a novel training program. The signatories to this report can work together to create training programs, subject to approval by subject matter experts at the three state agencies represented on the workgroup.

B. If A Locality Permits TNR Programs, the Programs Should Adhere to Minimum Standards.

The managers of the TNR programs should follow minimum standards to avoid contributing to an increase in the free-roaming cat population or harming wildlife.

1. TNR programs should seek to spay or neuter all cats in a free-roaming cat colony.

Managers of TNR programs for free-roaming cats should make every effort to spay or neuter all cats in the colony that are not removed. Numerous studies indicate that a cat colony's population will not stabilize or decline unless at least 70% of the cats are spayed or neutered.⁴⁵

2. TNR programs should seek to remove all adoptable free-roaming cats, as well as sick, injured, and/or suffering cats.

Research has shown that 75% of outdoor kittens do not survive longer than six months.⁴⁶ Due to the substantial risks to the health and lives health of kittens and the high likelihood of socialization and adoption, all kittens should be removed from a colony, sterilized, and placed for adoption.

Cats that are injured and/or suffering should be removed and taken to a veterinarian for care or, when appropriate, euthanized to alleviate suffering. This is the only humane and responsible approach to colony care.

⁴⁴ Those programs could include trap/neuter/return programs and the removal and adoption of kittens and adult cats that can be socialized to humans.

⁴⁵ Andersen M.C., B.J. Martin, G.W. Roemer. 2004. [Use of matrix population models to estimate the efficacy of euthanasia versus trap-neuter-return for management of free-roaming cats](#), Journal of the American Veterinary Medical Association 225(12): 1871-1876; Foley P., J.E. Foley, J.K. Levy, and T. Praik. 2005. [Analysis of the impact of trap-neuter-return programs on populations of feral cats](#). Journal of the American Veterinary Medical Association 227(11): 1775-1781; The Humane Society of the United States' Blog [Making the Most of TNR](#) asserts that to control or eliminate the population of a free-roaming cat colony, it is necessary to trap, neuter and release ("TNR") at least 75% of cats in the colony immediately and then ensure that the population of sterilized cats never drops below 75%; and to curb immigration and abandonment of new cats into the colony.

⁴⁶ AAFP Position Statement, Free roaming, Abandoned and Feral Cats; See Stoskopf MK and Nutter FB., [Analyzing Approaches to Feral Cat Management - One Size Does Not Fit All](#), J Am Vet Med Assoc 225: 1361–1364 (2004); Humane Society of the United States, <https://www.humanesociety.org/resources/outdoor-cats-faq#roam> .

All adult free-roaming cats that are adoptable should be placed for adoption rather than being returned to the wild after they are sterilized and vaccinated. The willingness of shelters and other organizations to remove adoptable cats and give them homes varies widely from locality to locality, with some encouraging volunteer trappers to return sterilized and vaccinated cats to the location where they were trapped. Adoption of a state-wide minimum standards on what to do with trapped cats will help reduce the number of unowned free-roaming cats and the problems they cause.

3. TNR programs should spay or neuter all trapped cats, ear-tip and vaccinate them, and regularly provide necessary medical care.

Cats that are trapped in a TNR program should be spayed or neutered and ear-tipped to identify them as spayed or neutered. They also should be vaccinated against rabies and re-vaccinated in accordance with guidelines established by the National Association of State Public Health Veterinarians.⁴⁷

4. TNR programs should microchip all cats.

Microchipping of cats is a valuable tool to help maintain records on the trapped cats. Microchipping makes it possible to identify the cat to determine its age and medical history (for instance rabies vaccinations) and address other data collection needs. Both the cost and the availability of microchipping could be improved if the Board of Veterinary Medicine were to expand the group of practitioners who can perform microchipping to include veterinary technicians or other trained shelter personnel.

5. Trapped free-roaming cats should be returned to the location they were trapped only in limited circumstances.

The return of trapped cats to the location where they were trapped is highly controversial. Unless returned to an enclosure, those cats will continue to harm wildlife; be subject to injury, disease, and other risks discussed previously; and present risks to public health for their remaining life. Also, returning cats to the location they were trapped infringes on the rights of the property owner unless the property owner has agreed to having unowned free-roaming cats on their property. Returning cats to the outdoors also is inconsistent with the treatment of cats as companion animals, since state law requires that all companion animals must be given proper care.

The impact of trapped and neutered free-roaming cats on public health, wildlife, and property owners can be reduced by ensuring that all free-roaming cats that can be rehomed, such as kittens, are placed for adoption. Unowned cats that are not suitable for adoption should be returned to the location where they were initially trapped only if a locality chooses to include this option in its outdoor cat management plan. To the extent practicable, any trapped and neutered cats should only be returned to an enclosed space, such as a catio, rather than being returned to the place they were trapped. Enclosures can be simple and cheap and provide the benefit of a

⁴⁷ National Association of State Public Health Veterinarians. 2016, [Compendium of animal rabies prevention and control, 2016](#). Journal of the American Veterinary Medical Association 248(5): 505-517.

defined space where cats may be easily counted, identified, assessed, and re-trapped, as necessary. Enclosures also prevent conflicts with people and other animals.

6. Individuals engaged in trapping free-roaming cats should receive training on proper trapping procedures.

Training of trappers is important to ensure that the interests of wildlife, the public and the cats are protected and that trappers do not risk harm to themselves. Training should include instruction on how and when to trap, trapping humanely (for instance, by closely monitoring the trap and promptly taking any trapped animal for proper treatment), how to avoid trapping non-target wildlife, and what to do if wildlife is trapped. Any trapped wildlife, even if released, must be reported by the trapper to the Department of Wildlife Resources. Training can be provided online or in person and can be supplemented with educational pamphlets. Trappers should receive periodic retraining to reinforce the original training and to update them on new developments.

7. Localities should require caregivers of unowned free-roaming cats and trappers participating in TNR programs to maintain or have access to records on the cats.

Maintaining records on free-roaming cat management activities is important to understanding the number, physical condition, and medical care for the cats. Recordkeeping also is necessary to gauge the effectiveness of management. The collection and reporting of appropriate data indicates to lawmakers, regulators, and the public that cat management programs are organized, effective, and can help ensure compliance with relevant state and local laws. Collected data are necessary to instill trust in the cat management activities, identify success, and to provide a means of accountability and oversight. Such data are also a tool for addressing any emerging domestic animal, wildlife, or public health concerns. The December 2021 Report states that recordkeeping “informs the evaluation” of cat management programs, including whether such programs are “actually achieving the goal of [cat] population reduction,” and “facilitates and expedites access to information...to address a public health or wildlife concern”

Records should include the location of the cat colony; information about each cat in the colony, including information on each cat that is trapped and sterilized; and information on the colony caregivers and trappers. The local animal control agency can maintain a summary of the records for the purposes of evaluation, coordination and reporting as has been done in the City of Newport News for more than 15 years.

Inasmuch as TNR activities may be controversial, the records should be made available only to animal control, public health or other law enforcement officials. The December 2021 Report states that recordkeeping “informs the evaluation” of cat management programs, including whether such programs are “actually achieving the goal of [cat] population reduction.” These records will be used to determine whether, for instance, at least 70% of free-roaming cats in a colony have been sterilized and whether the cat management programs are having their intended effect. The chief ACO in Newport News, which has required the registration of cat colonies for more than 15 years, recently informed workgroup member Sharon Adams that he was not aware of any harassment of the colony caretakers. The only registered complaints related to the activities of the cats in the

colonies such as climbing on cars, defecating in yards, etc. Incidents of “harassment” probably would be eliminated if the feeders and trappers of unowned cats follow the practices outlined in this Report A.

Appendix B contains recommended recordkeeping requirements for TNR and other free-roaming cat management programs. Much of that information is already required by the Code of Virginia § 3.2-6557B. There is no need to duplicate the collection of that information so long as it is available to the local animal control agency.

C. Localities Can Choose to Implement Other Strategies to Manage Free-Roaming Cat Populations

Public education, establishing support and guidance for the management of free-roaming cats, implementing TR and/or TNR programs, and re-homing all kittens and social adult cats are only a few of the tools that localities could use to manage and reduce the population of free-roaming cats. Other effective tools include prohibitions on cats roaming outdoors, requiring shelters to accept cats, and containing outdoor cats in structures that prevent the cats from leaving the property. Each locality should make its own decisions on whether to adopt these or other approaches to the problem as part of its cat management plan.

Localities should be committed to pursuing and reviewing science-based information related to the various strategies and impacts related to outdoor cat management. These public policy decisions should not rely on emotions or anecdotes but on the rigorous application of science and evaluation.⁴⁸

VII. Research Can Assist in Evaluating the Effectiveness of Efforts to Manage Free-roaming Cat Populations and Indicate Ways to Improve the Programs.

Rationale: At the completion of the five mediated workgroup sessions in November 2021, Dr. Sarah Karpanty (Professor, Fish and Wildlife Conservation, Virginia Tech) and Dr. Laura Hungerford (Professor and Department Head, Population Health Sciences and VT Public Health Program, Virginia Tech) developed a document based on points raised by members throughout the workgroup sessions entitled “Ideas for Monitoring/Research to further advance issues around Trap-Neuter-Vaccinate-Release (TNVR) and Free Roaming Cats in Virginia” and provided it to each member of the workgroup. The workgroup subsequently discussed and prioritized potential topics for further research to assist in evaluating the effectiveness of efforts to manage free-roaming cat populations and identify ways to further improve implemented programs.

Following is a summary of the most important research topics identified by this group through its efforts in 2021 and 2022. Additional details and needs are described in Appendix C.

⁴⁸ See, for instance, Loss, et al., Responding to Misinformation and Criticisms Regarding United States Cat Predation Estimates, <https://wichitaferal.com/wp-content/uploads/2018/12/Responding-to-misinformation-and-criticisms-regarding-United-States-cat-predation-estimates.pdf>.

Research should not take the place of implementing other agreed-upon solutions identified above but ideally should be done concurrently with the implementation of those solutions to monitor and assess their efficacy and adapt as needed.

Advisory Panel: *Virginia Tech scientists that would lead these research efforts would also build an Advisory Panel composed of members of the 2021 legislative panel that led to these research ideas so that all stakeholders and partners in these issues in the Commonwealth have input and detailed understanding on the objectives, methods, and output from these endeavors.* This unique Advisory Panel should lead to greater trust in the findings and collaborative implementation of the recommendations than any effort of an individual organization engaged in these efforts. Additionally, the Advisory Panel will help identify additional funding sources for key research needs. We propose the Advisory Panel would meet at least quarterly with the Virginia Tech project leads, using a web-based meeting format to reduce costs, in order to receive updates and provide input on the efforts.

Goal A: Human values and decisions are at the heart of the free-roaming cat problem. Understanding the perceptions of stakeholders in the Commonwealth of Virginia about free-roaming cats is crucial to design effective education campaigns and cat management plans. Through each of these objectives, methods will be designed to capture and quantify variation in experiences based on socio-economic status and suburban, urban or rural landscape background.

Goal B1: Provide outdoor cat policy- and decision-makers with spatially-explicit and quantitative data on wildlife- and public health-sensitive areas in Virginia and the locations, sizes and uncertainties surrounding colony cats in Virginia. Accomplishing this goal will require the trust and buy-in of all stakeholders. One way to secure trust is that data could be protected through careful use of research protocols as approved by Virginia Tech's Institutional Review Board and Institutional Animal Care and Use Committee and through close collaboration with the Advisory Board mentioned above.

Goal B2: Quantify the efficacy, strengths and weaknesses of implemented outdoor cat management plans on populations of free-roaming and other outdoor cat populations, wildlife and public health. This research would begin after comprehensive outdoor cat management plans are in place and require a minimum of 5 years of data collection.

Goal C: Identify limitations and solutions to the successful implementation of trap-neuter-vaccinate (and release or return to field in some cases) initiatives, especially related to 1) challenges in removal for adoptions of kittens and suitable cats from the roaming or colony cat populations, 2) physical assistance in management of cat colonies (e.g., feeding), and 3) costs and access to veterinary care for spay, neuter, vaccinations and other routine medical needs for roaming or colony cats.

Appendix A. Letter of Request from Chairman, House Agriculture, Chesapeake, and Natural Resources Committee, Virginia General Assembly



COMMONWEALTH OF VIRGINIA
HOUSE OF DELEGATES
RICHMOND

KENNETH R. PLUM
2073 COBBLESTONE LANE
RESTON, VIRGINIA 20191-4039
THIRTY-SIXTH DISTRICT

COMMITTEE ASSIGNMENTS:
AGRICULTURE, CHESAPEAKE AND NATURAL RESOURCES
APPROPRIATIONS
COMMUNICATIONS, TECHNOLOGY AND INNOVATION
PUBLIC SAFETY

March 10, 2021

The Honorable Bettina Ring
The Honorable Matthew J. Strickler
The Honorable Daniel Carey, MD
P.O. Box 1475
Richmond, VA 23218

Dear Secretaries Ring, Strickler, and Carey,

In your roles as the Secretaries of Agriculture and Forestry, Natural Resources and Health and Human Services, I am writing to you as the Chairman of the House Agriculture, Chesapeake, and Natural Resources Committee to respectfully request you convene a workgroup to develop legislation to reduce and control the population of free-roaming cats and mitigate the impact of free-roaming cats on the Commonwealth's native wildlife, natural resources, and public health.

During the 2021 Session of the General Assembly, Senator Lynwood Lewis patroned SB 1390, a bill related to Trap, Neuter and Release (TNR) of cats. I thank Senator Lewis for his leadership in addressing this important issue, which bears serious implications throughout the Commonwealth.

In 2013-2014, the Virginia Department of Agricultural and Consumer Services convened the Comprehensive Animal Care Laws Working Group that provided Agency and stakeholder recommendations on cat population management strategies for the General Assembly to consider. Since that time, some localities have begun to practice TNR programs with different requirements or restrictions, if any, and with or without local ordinances.

Given the jurisdictions of your three Secretariats, I am respectfully asking that you harmonize existing local free-roaming cat population management practices with animal protection and control and wildlife conservation stakeholder input to draft legislation for the 2022 Session of the General Assembly.

It is my hope that a work group would be overseen by the Department of Agriculture and Consumer Services and include representatives of the State Veterinarian, the Department of Public Health, the Department of Wildlife Resources, and the Department of Conservation and Recreation, as well as animal shelter and control professionals, wildlife conservation and environmental experts, veterinary and human health experts, and representatives of local governments, agricultural interests, and property owners.

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Continued strengthening of the Commonwealth's free-roaming cat population management policy is a priority for me and the House Agriculture, Chesapeake Natural Resources Committee. Your work in convening a work group can ensure broad stakeholder input, review and support and make certain that local control and proven best practices are considered by the 2022 General Assembly.

Thank you for your time and for considering this request.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth R. Plum". The signature is written in a cursive style with a large initial "K".

Kenneth R. Plum

**RECOMMENDED STANDARDS FOR RECORDKEEPING ON
MANAGEMENT OF UNOWNED FREE-ROAMING CATS**

The person or organization responsible for the management of unowned free-roaming cats should maintain or have access to the following records concerning the management activities, trapping, and the cats' medical information, including any sterilization or vaccination. The person should provide the records to local or state officials as required. Records would not be required if the individual managing free-roaming cats is conducting management activities, including but not limited to feeding and trapping free-roaming cats, exclusively on the individual's own property.

Caregiver Information

- Name and contact information of the individual or organization responsible for managing the free-roaming cats, including providing cats with duties of care pursuant to Virginia Code 3.2-6503
- Date of initiating the free-roaming cat management and total number of cats at that time and currently
- Address where free-roaming cat management is being provided
- Name and contact information for the owner of the property where free-roaming cat management is located
- Record of authorization from property owner to the manager of the free-roaming cats to engage in free-roaming cat management activities, with specific authorization to return and provide care for free-roaming cats on the property if such activities are included in the cat management plan

Capture/Rescue Information (for trapping free-roaming cats)

- Name and contact information of the recordkeeper
- Name and contact information of the individual or organization capturing the cat
- The date of the making of the record
- The date on which the cat was taken into custody
- A description of the cat, including the cat's species, color, breed, sex, approximate age, and approximate weight
- The reason for taking custody of the cat and the location where custody was taken
- The name and address of the cat's owner, if known
- Any license or rabies tag, tattoo, collar, or other identification number carried by or appearing on the cat
- The disposition of the cat (adoption, transfer, return to free-roaming, return to enclosure, or death and name of new custodian and disposition address when applicable)
- Name and contact information for the owner of the property where the cat was captured
- Record of authorization from the property owner to capture cats on the property

- Date on which information concerning the trapped cat was reported to the locality's public animal shelter pursuant to Virginia Code 3.2-6551
- Report of any wildlife trapped in the process of capturing cats, including disposition (released from trap, transported to a wildlife rehabilitation facility, etc.)

Medical Information

- The veterinary practice, address, and veterinarian name
- The cat's veterinary medical record, including rabies vaccination status and date of vaccination expiration, date and description of treatment, and sterilization status
- Physical description and description of the cat's temperament (socialized, semi-social, fractious, etc.)
- Microchip ID if microchipped
- Date of discharge and name and contact information of person taking custody of the cat

All records should be retained for the life of each free-roaming cat management program, plus one year.

APPENDIX C

PROPOSED RESEARCH TOPICS

Goal: Research Can Assist in Evaluating the Effectiveness of Efforts to Manage Free-roaming Cat Populations and Indicate Ways to Improve the Programs.

Rationale: At the completion of the five mediated workgroup sessions in November 2021, Dr. Sarah Karpanty (Professor, Fish and Wildlife Conservation, Virginia Tech) and Dr. Laura Hungerford (Professor and Department Head, Population Health Sciences and VT Public Health Program, Virginia Tech) developed a document based on points raised by members throughout the workgroup sessions entitled “Ideas for Monitoring/Research to further advance issues around Trap-Neuter-Vaccinate-Release (TNVR) and Free Roaming Cats in Virginia” and provided it to each member of the workgroup. The workgroup subsequently discussed and prioritized potential topics for further research to assist in evaluating the effectiveness of efforts to manage free-roaming cat populations and identify ways to further improve implemented programs. Following is a summary of the most important research topics identified by this group through its efforts in 2021 and 2022.

The research ideas are summarized below to follow the sections of this report. Research should not take the place of implementing other agreed-upon solutions identified above but ideally should be done concurrently with the implementation of those solutions to monitor and assess their efficacy and adapt as needed.

Advisory Panel: *Virginia Tech scientists that would lead these research efforts would also build an Advisory Panel composed of members of the 2021 legislative panel that led to these research ideas so that all stakeholders and partners in these issues in the Commonwealth have input and detailed understanding on the objectives, methods, and output from these endeavors.* This unique Advisory Panel should lead to greater trust in the findings and collaborative implementation of the recommendations than any effort of an individual organization engaged in these efforts. Additionally, the Advisory Panel will help identify additional funding sources for key research needs. We propose the Advisory Panel would meet at least quarterly with the Virginia Tech project leads, using a web-based meeting format to reduce costs, in order to receive updates and provide input on the efforts.

A. Research/Monitoring Needs Related to Education/Outreach

Goal A: Human values and decisions are at the heart of the free-roaming cat problem. Understanding the perceptions of stakeholders in the Commonwealth of Virginia about free-roaming cats is crucial to design effective education campaigns and cat management plans. Through each of these objectives, methods will be designed to capture and quantify variation in experiences based on socio-economic status and suburban, urban or rural landscape background.

Objectives for Goal A:

- Conduct a literature review to summarize what is known in Virginia, elsewhere in the U.S., and globally, relevant to the origins of the free-roaming cat problem in Virginia, reasons that people abandon cats to shelters or outdoors in colonies or elsewhere, and solutions to the problem.
- Assess public perception of free-roaming cats in Virginia and determine reasons that people abandon cats to shelters or outdoors in colonies or elsewhere.
- Quantify public and stakeholders' perceptions of the impact of free-roaming cats on wildlife and public health.
- Share with stakeholders' options for managing roaming cat populations as identified from the literature review and collect stakeholders' unique ideas for options in Virginia.
- Ascertain the public's perception of barriers to implementation of potential policies and programs to address the problem of roaming cats in Virginia.

Outcomes for Goal A:

- A report and peer-reviewed publication summarizing the literature and survey results in Virginia on 1) origins of the free-roaming cat problem in Virginia, 2) reasons that people abandon cats to shelters or outdoors in colonies or elsewhere, and 3) solutions to the problem with particular focus on variation according to socio-economic status and suburban, urban or rural landscape background.
- Summary of the major beliefs and values of surveyed stakeholders in Virginia on the topics above and recommendations on behaviors and beliefs to be targeted in education campaigns and policies seeking to reduce the population of roaming cats in Virginia.
- Advisory Panel recommendations on next steps and funding to implement education campaigns and selected policies.

General needs to accomplish this work:

- Estimated cost of \$355,000; Timeline: 18 months
- Cost components include 2 weeks each salary and fringe for staff supervision, project management, data analyses and writing by Drs. Karpanty and Hungerford and Dr. Willa Chaves (a wildlife conservation social scientist); 18 months of salary and fringe for a post-doctoral scientist and research technician to conduct the research activities, laptop computer for data collection and analyses, travel funds to meet with key stakeholder groups in the Commonwealth, contractual costs for administering a survey Commonwealth-wide to key stakeholder groups, publication costs for peer reviewed journal and 26% indirect rate on total direct costs. Detailed budget and justification can be provided and negotiated as this project moves forward.

B. Research/Monitoring Needs Related to Outdoor Cat Management Plans

Goal B1: Provide outdoor cat policy- and decision-makers with spatially-explicit and quantitative data on wildlife- and public health-sensitive areas in Virginia and the locations, sizes and uncertainties surrounding colony cats in Virginia. Accomplishing this goal will require the trust and buy-in of all stakeholders. One way to secure trust is that data could be protected through careful use of research protocols as approved by Virginia Tech's Institutional Review

Board and Institutional Animal Care and Use Committee and through close collaboration with the Advisory Board mentioned above.

Objectives for Goal B1:

- Compile a geographically-referenced database and web-based interactive maps of public and private shelters and their intake and adoption and euthanasia policies on cats. This should be publicly available data and not need to be protected.
- Create a geographically-referenced database and web-based interactive map of wildlife-sensitive areas in Virginia through collaboration with VDWR, VADCR, and federal resource management agencies that can be used in the context of outdoor cat management planning.
- Create a geographically-referenced database and web-based interactive map of public health-sensitive areas in Virginia through collaboration with VDH and VDACS that can be used in the context of outdoor cat management planning.
- Consult with public and private shelters, key community members, and animal control officers and conservation officers to create an access-controlled database and map of the numbers and sizes of cat colonies per locality. Data collection protocols and Institutional Review Board permitting can allow Virginia Tech to keep exact locations and names of individuals private, and only report summary statistics per locality. Participation by colony caretakers should be incentivized: by explaining how this information will be used; how participation will lead to better understanding of the situation and better welfare of cats; and if there are opportunities for it to lead to additional resource availability. Uncertainty metrics will be included in this endeavor by comparing interview results with random field-based surveys of select rural, urban and suburban localities.
- Conduct Advisory Board reviews and collect recommendations based on these data sources.

Outcomes for Goal B1:

- A report summarizing the methodologies and findings related to 1) spatially-explicit data on public and private shelters and their intake and adoption and euthanasia policies for cats; 2) spatially-explicit data on wildlife- and public health sensitive areas, and 3) locality-specific data, and uncertainty in that data, on the presence and sizes of colonies of cats and needs of colony caregivers in those areas.
- Advisory Board summary of next steps for member organizations based on policy recommendations in the above report.

General needs to accomplish this work:

- Estimated cost of \$488,000; Timeline: 2 years
- Cost components include 2 weeks each year salary and fringe for staff supervision, project management, data analyses and writing by Drs. Karpanty and Hungerford and Dr. Willa Chaves (a wildlife conservation social scientist); 24 months of salary and fringe for a post-doctoral scientist and research technician to conduct the research activities, laptop computer for data collection and analyses, travel funds to meet with key stakeholder groups in the Commonwealth, field supplies for on-ground sampling needs, contractual costs for administering a survey Commonwealth-wide to key stakeholder groups,

publication costs for peer reviewed journal and 26% indirect rate on total direct costs. Detailed budget and justification can be provided and negotiated as this project moves forward.

Goal B2: Quantify the efficacy, strengths and weaknesses of implemented outdoor cat management plans on populations of free-roaming and other outdoor cat populations, wildlife and public health. This research would begin after comprehensive outdoor cat management plans are in place and require a minimum of 5 years of data collection.

Objectives for Goal B2:

- Quantify changes in the free-roaming and colony cat population in selected localities (e.g., on a rural to suburban to urban continuum across the Commonwealth) from the beginning through the end of the study period. Metrics will be quantified through varied sampling techniques and close collaborations with colony managers and animal control and conservation officers.
- Quantify wildlife and public health impacts of free-roaming and colony cat populations in selected localities from the beginning through the end of the study period. Metrics will be quantified through varied sampling in close collaborations and interviews with colony managers, conservation officers, public health officials and animal control officers.
- Identify strengths and weaknesses in implemented outdoor cat management plans in selected localities based on above findings and work with policy- and decision-makers to suggest revisions to the outdoor cat management policies to mitigate and observed weaknesses or gaps in desired outcome.

Outcomes for Goal B2:

- Report and peer-reviewed publication summarizing the efficacy, strengths and weaknesses of implemented outdoor cat management plans in localities that vary in socioeconomic background and urban, suburban and rural landscape background.
- Recommendations on changes needed to improve efficacy and success of each locality's outdoor cat management plan based on the findings of this study.
- Advisory Board summary of next steps for member organizations based on policy recommendations in the above report

General needs to accomplish this work:

- Estimated cost of \$1,908,000; Timeline: 5 years
- Cost components include 2 weeks each year salary and fringe for student supervision by Drs. Karpanty and Hungerford, 5 years of stipend, tuition and fringe for two PhD students in Fish and Wildlife Conservation, 4 years of salary and fringe for 2 research technicians to assist in every stage of data collection and analyses, travel funds for student and supervisors to meet with key stakeholder groups in the Commonwealth, publication costs for peer reviewed journal and 26% indirect rate on total direct costs. Detailed budget and justification can be provided and negotiated as this project moves forward.

C. Research/Monitoring Needs Related to TNVR Programs

Goal C: Identify limitations and solutions to the successful implementation of trap-neuter-vaccinate (and release or return to field in some cases) initiatives, especially related to 1) challenges in removal for adoptions of kittens and suitable cats from the roaming or colony cat populations, 2) physical assistance in management of cat colonies (e.g., feeding), and 3) costs and access to veterinary care for spay, neuter, vaccinations and other routine medical needs for roaming or colony cats.

Objectives for Goal C:

- Summarize the known literature on successful efforts of other localities and veterinary institutions, shelters and other organizations related to the above challenges.
- Quantify Virginia stakeholders' opinions on the desirability and expected success of identified solutions, and possible barriers to implementation and success.
- Identification of resource needs and best mechanisms for distributing resources to stakeholders to accomplish this goal.

Outcomes for Goal C:

- Report and peer-reviewed publication summarizing the options related to reducing challenges and costs associated with TNVR efforts, and Virginia stakeholders' opinions and needs related to those options.
- Recommendations on best options for rural, suburban and urban areas to address these options and financial and other resources needed.
- Advisory Board summary of next steps for member organizations based on policy recommendations in the above report
- Advisory Board recommendations on sources for increasing resources to address the pinch points leading to poor cat welfare and wildlife and human health.

General needs to accomplish this work:

- Estimated cost of \$102,000; Timeline: 1 year
- Cost components include 2 weeks each salary and fringe for student supervision by Drs. Karpanty and Hungerford, 1 year of stipend, tuition and fringe for a Master of Public Health graduate student, travel funds for student and supervisors to meet with key stakeholder groups in the Commonwealth, publication costs for peer reviewed journal and 26% indirect rate on total direct costs. Detailed budget and justification can be provided and negotiated as this project moves forward.