

Trap-Neuter-Return & FELIX: Developing an Effective Strategy for the Permanent Reduction of Feral and Stray Cat Populations in New York City

Foreword

“The ASPCA supports Trap-Neuter-Return (TNR) as the most humane and effective strategy for managing the feral cat population. . . . TNR is an integral part of the ASPCA’s long-term strategy to end the euthanasia of adoptable animals in New York City.”¹

Edwin J. Sayres, ASPCA President

“The Mayor’s Alliance for NYC’s Animals unequivocally endorses Trap-Neuter-Return (“TNR”) as the only humane and effective method - from a cost reduction and implementation standpoint - of permanently reducing NYC’s feral cat population. The NYC Feral Cat Council, a program of the Mayor’s Alliance, was created to support and network those organizations that are already working successfully and effectively on TNR in their communities. One of the goals of the Council is to permanently and humanely reduce the feral cat population with its attendant benefit of reducing the killing of cats in AC&C shelters. Considerable and demonstrable successes have already been achieved.”²

Jane Hoffman, President, Mayor’s Alliance for NYC’s Animals

“The Humane Society of New York strongly supports trap/neuter/return (“TNR”) programs as a means to curtail the overpopulation of feral cats. We have been an active participant in such programs for 25 years. Our veterinary hospital spays/neuters feral cats every day of the week. We have extended our hospital hours during weekends solely to spay/neuter feral cats. This has been done because we see TNR as the only viable means to reduce the population of feral cats in our city. This, in turn, reduces the number of cats the city has to euthanize.”³

Virginia Chipurnoi, President, Humane Society of New York

Introduction

Operation FELIX (*Feral Education & Love Instead of X-termination*) is an animal control program designed to resolve New York City’s severe feral and stray cat overpopulation crisis through the use of Trap-Neuter-Return, popularly known as TNR. Among its program elements, FELIX includes hosting workshops to train members of the public in how to perform TNR, providing support services such as trap banks, free or low cost spay/neuter, referring feral and stray cat complaints to the program, and implementing shelter policies designed to encourage the use of TNR by the public. The

¹ See Appendix 1 for full ASPCA Statement on Trap-Neuter-Return.

² See Appendix 2 for full Mayor’s Alliance for NYC’s Animals Statement on Trap-Neuter-Return.

³ See Appendix 3 for full Humane Society of NY Statement on Trap-Neuter-Return.

question now before the Board is whether to endorse FELIX and make Trap-Neuter-Return official Animal Care & Control (AC&C) policy for dealing with feral and stray cats.⁴

To properly evaluate this issue, we must recognize that the current system of feral and stray cat control in New York is failing to correct the problem. While exact figures on the cats' population are elusive, informal surveys in early 2001 of professionals in regular, direct contact with the cats turned up estimates for the city as a whole ranging from 40,000⁵ to 1 million.⁶ Neighborhood Cats, NYC's leading feral cat organization, roughly estimates there are 100,000 to 200,000 feral cats total in the five boroughs. Dr. Julie Levy, DVM, a professor at the University of Florida, Gainesville and one of the leading academicians in the feral cat field, recently evaluated demographic studies on the topic and concluded that, "[f]or purposes of estimating the size of a community's feral cat population, it is reasonable to estimate 0.5 cats per household."⁷ In New York City, there are approximately 3 million households,⁸ leading to an estimate of 1.5 million feral cats by this formula.

Whether their total is in the tens of thousands or the hundreds of thousands, free-roaming cats can be found on almost any city block, whether in Brooklyn, Staten Island, Queens, the Bronx and even most parts of Manhattan. Their unchecked reproduction has created a significant burden on the community in terms of quality of life. As catalogued by Dr. Margaret Slater, DVM, of Texas A&M, another leading veterinarian in the field, complaints include such behaviors as, "spraying, fouling yards and gardens with feces, yowling and fighting; sick, injured, or dead cats; and dirty footprints on cars."⁹ In New York City, the cats have commonly been accused of driving people from their gardens and backyards with the noxious odor of unaltered males spraying, and waking residents up night after night from the noise of fighting and mating.¹⁰ An estimated 1 of every 5 calls that comes into the AC&C Call Center from the public relates to feral cats.¹¹ This amounts to approximately 100 feral cat calls per day on average,¹² or 36,500 calls annually.

The impact of the feral and stray cat population goes beyond quality of life issues and reaches far into the cost and effectiveness of the city's animal control system. The unneutered street cat population serves as a constant source of new cats and kittens. Many of these animals find their way into city shelters, taking up badly needed space,

⁴ "Feral" refers to cats that are living outside human homes and have reverted to a wild state, while "stray" refers to cats that have been recently abandoned and are still domesticated. Most street cats are feral and tend to live in family groups referred to as colonies.

⁵ Mike Pastore, Field Director, Animal Care & Control of New York City.

⁶ Humane Law Enforcement officers, American Society for the Prevention of Cruelty to Animals (ASPCA).

⁷ Levy, Julie, DVM, "Feral Cat Management," Chap. 23, p. 378, in *Shelter Medicine for Veterinarians and Staff* (Blackwell Publishers, 2004).

⁸ U.S. Census 2000.

⁹ Slater, Margaret R., DVM, *Community Approaches to Feral Cats*, p. 39 (Humane Society of US Press, 2002).

¹⁰ Neighborhood Cats.

¹¹ Stephanie Easter, Call Center Director, Animal Care & Control of New York City.

¹² Ibid.

making it more difficult to adopt out cats already rescued, and contributing to a financial burden of millions of dollars a year from the cost of euthanizing thousands of cats.¹³

To date, the prevalent policy at AC&C for dealing with free-roaming cats has been a mixture of “trap-and-kill” - so named because ferals are unadoptable and invariably end up being euthanized when captured - and doing nothing. Both approaches have failed and will continue to fail if further pursued.

As will be explained fully, because of feral cat population dynamics, trap-and-kill has no impact on the overall number of free-roaming cats, creating no more than short-lived dips in their levels. The method is particularly ineffective when practiced sporadically and in random locations, as has been the case for many years in New York.

Doing nothing simply allows a bad situation to get worse, yet ignoring the problem has been the dominant approach so far.¹⁴ The reason for this is simple: lack of resources. There are currently a total of fourteen AC&C field officers to contend with at least tens of thousands of rapidly reproducing, elusive feral cats on almost every block of the city. Even if the officers spent every working hour trying to capture the cats, they would never get more than a small percentage. The officers’ limited time is considered better spent on more immediate and solvable problems.

In sum, the situation in New York is characterized by many feral and stray cat problems needing to be addressed. Current methodologies have failed in the past and have no reasonable chance of success in the future. Clearly the time has come for AC&C to take a new approach.

An alternative that has proven effective at controlling the cats’ population does exist and, thanks to the work of many of the city’s foremost animal welfare organizations, is already beginning to thrive here. Trap-Neuter-Return (TNR) was first introduced to New York City on an organized scale in the fall of 1999 by Neighborhood Cats, a locally based group now regarded as one of the nation’s premier feral cat organizations.¹⁵

TNR involves three steps: (1) trapping the cats in a colony, (2) veterinary intervention in the form of neutering, eartipping,¹⁶ and rabies vaccination, and (3) return of the cats to their home territory where they are then fed, sheltered and monitored on an ongoing basis by a designated caretaker. Whenever possible, kittens and friendly, adoptable adults are removed from the colony and offered for placement in homes.

In the five years since the method was brought to New York City, a great deal has been accomplished. Hundreds of local feral cat caretakers have been trained to practice TNR. Free spay/neuter services for ferals are provided by both the American Society for the Prevention of Cruelty to Animals (ASPCA) and the Humane Society of New York, and thousands of feral cats have been altered. Several city agencies have utilized TNR

¹³ Mary Martin, Director of Shelter Medicine for AC&C, estimates that 35% of kittens entering city shelters originate from feral mothers.

¹⁴ Most feral and stray cat complaints coming into AC&C have traditionally been placed at the bottom of the waiting list and usually are never addressed. (Per AC&C personnel.)

¹⁵ Neighborhood Cats is regularly featured in local and national media, consults regularly with individuals and organizations around the country, and was named “Feral Cat Organization of the Year” in 2002 by Alley Cat Allies, the leading national feral cat advocacy group.

¹⁶ “Eartipping” is the universal sign of a neutered feral cat and involves removing the tip of the left ear in a straight line cut.

to successfully address their own feral cat problems, including the Parks Department, the Correction Department, the NYPD and the Department of Sanitation. In addition, the Mayor's Alliance for NYC's Animals has embraced TNR by forming the New York City Feral Cat Council, a coalition of local organizations involved in implementing the technique.¹⁷

The increasing popularity of TNR can be attributed to its many proven advantages over more traditional methods of animal control, including permanent reduction of feral and stray cat populations, cost savings to animal control, less negative environmental impact such as wildlife predation, and the elimination of nuisance behaviors like spraying and fighting. In addition, by returning the ferals to their territory, TNR allows the neutered and vaccinated cats to provide the public health benefits of rat abatement and protection against rabies transmission from wildlife species.

Unlike any other method known, Trap-Neuter-Return holds out the realistic possibility of a permanent, long-term solution to feral and stray cat overpopulation and all its associated ills. AC&C, as the agency primarily responsible for our city's animals, must join in the work already begun and take its rightful place at the head of this promising movement. That is what FELIX is all about.

The Advantages of TNR

- Feral and Stray Cat Population Reduction

TNR reduces free-roaming cat populations through two means – first, by the removal of adoptable cats,¹⁸ and, second, through attrition outpacing births over time.

An excellent example of both means is provided by the twelve year old TNR program practiced with municipal approval and cooperation in Newburyport, a popular coastal town in Massachusetts. In 1992, after attempts to eradicate the approximately 300 cats living on the town's waterfront had failed, the municipality agreed to allow a TNR project. In 1992 through 1993, a private organization, Merrimack River Feline Rescue Society,¹⁹ trapped all of the cats and kittens. 200 were removed for adoption, resulting in an immediate population decline of over 66 percent.²⁰ The other 100 cats were returned and then closely monitored over subsequent years. Some died or disappeared, while others became adoptable and were removed. Presently in 2004, there are 17 cats left, representing a decline of 83 percent from the original number returned, and a drop of 94 percent from the 300 cats present prior to the initiation of TNR.²¹

The first feral cat colony worked on in New York City by Neighborhood Cats lives in the inner courtyards of an Upper West Side block. From September, 1999 through June, 2000, a total of 29 out of 32 cats and kittens were trapped.²² 20 of the cats were removed and adopted out, 1 was removed and placed in a sanctuary, while 8 were released back to

¹⁷ See www.nycferalcat.org for a list of member organizations and services.

¹⁸ Slater, p.14.

¹⁹ www.mfrfs.org

²⁰ Correspondence of Stacey LeBaron, President, Merrimack River Feline Rescue Society, to Bryan Kortis, Executive Director, Neighborhood Cats, July 15, 2004.

²¹ Ibid.

²² See Appendix 4 (Neighborhood Cats progress report).

the site. Of the 8 released, within the first year 1 died and 2 went missing, leaving a total population remaining at the site in June, 2000, of 8 cats (5 neutered, 3 untrapped and unneutered), a total population reduction in less than one year of 75 percent.²³ Currently, as of July, 2004, there are 5 cats residing in the territory, representing a drop of 84 percent following the advent of TNR at the site.²⁴

Other TNR success stories in New York City in terms of population control are abundant. On Rikers Island, from March through August, 2002, the Correction Department, the then Center for Animal Care & Control, ASPCA, the Humane Society of NY and Neighborhood Cats joined to TNR 239 cats.²⁵ Fewer than a dozen litters have been discovered on the island since.²⁶ In March 2003, 45 cats were trapped at the Fresh Kills Landfill with the permission of the Dept. of Sanitation and the population now stands at approximately 30.²⁷ The Parks Department has benefited from TNR as well. In Riverside Park, south of West 125th Street, four colonies with a total of approximately 65 cats were identified in 2001. With the support and assistance of park personnel, a neutering rate of close to 100 percent has now been achieved and the feral population is no more than 30, a reduction of over 50 percent.²⁸ All the cats in a colony at Flushing Meadows Corona Park were neutered in May, 2003, and no kittens have been reported.²⁹ Parks Commissioner Adrian Benepe wrote a letter of thanks to Neighborhood Cats for the effort.³⁰ Recently, in June, 2004, 21 of 26 ferals were neutered at Marine Park, with 4 being removed immediately for adoptive placement.³¹

In addition, a feral colony of 27 cats was TNR'ed at the NYPD pistol firing range in October 2002, and only one litter of kittens has been reported since.³² Other NYC success stories include the entire Upper West Side of Manhattan, Brookdale University Hospital, Brooklyn College, the Department of Transportation yard at the base of the Brooklyn Bridge (Manhattan side), a row of abandoned buildings at the South Street Seaport owned at the time by the Economic Development Corporation, and many more private residential and commercial sites throughout the city. All have seen dramatic reduction in the local feral cat population as a direct result of the implementation of TNR by local feral cat activists, the ASPCA and the Humane Society of NY.³³

When TNR has been taken to the next level and practiced not just anecdotally at select sites, but on a community-wide basis, feral cat population reduction has been dramatic, as reflected by lower intake and euthanasia rates.³⁴ In San Diego County, from

²³ Ibid.

²⁴ Bryan Kortis, Neighborhood Cats.

²⁵ See Appendix 5 (Easterly, Susan, "Feline Reprieve from Overpopulation: Saving Feral Cats on Rikers Island" *Cat Fancy*, January 2003, pp. 38-39.)

²⁶ Neighborhood Cats.

²⁷ Ibid.

²⁸ Id., also see Appendix 6 (*Alley Cat Action*, Fall 2001) and Appendix 7 (letter from Crista Carmody, Director of Landscape Initiatives, Riverside Park Fund).

²⁹ Appendix 8 (*Daily Plant*, May 2003).

³⁰ Appendix 9 (letter from Parks Commissioner Adrian Benepe).

³¹ Neighborhood Cats.

³² Neighborhood Cats.

³³ Ibid.

³⁴ Reducing the feral population lowers euthanasia rates in primarily two ways. First, fewer feral cats are brought into shelters and euthanized. Second, fewer feral kittens means friendly cats already in the system face less competition for shelter space and homes.

1988 through 1991, stray cat intake rates for municipal shelters were rising at a rate of approximately 10% a year, peaking in fiscal year 1991-1992 at a total of 19,077 cats, of whom 15,525 were euthanized.³⁵ In 1992, the Feral Cat Coalition of San Diego was founded and began implementing TNR on a county-wide basis. Two years and 3100 neutered feral cats later, stray intake rates had dropped by 35% and euthanasia by 40% with no other plausible explanation for the declines other than the TNR efforts.^{36 37}

In San Francisco, beginning in 1993, the San Francisco SPCA combined with San Francisco Animal Control to introduce a comprehensive city-wide TNR program, one that combined no cost spay/neuter with educational initiatives and incentives for getting feral cats altered. From 1993 through 1999, cat impounds dropped by 28%, euthanasia rates for feral cats dropped by 73%, and euthanasia rates for all cats fell by 71%.³⁸

Maricopa County, Arizona, is one of the most heavily populated and rapidly growing regions in the country with an animal control system of comparable size to New York City. Under the leadership of Edward Boks, AC&C's current executive director, Operation FELIX was part of a comprehensive spay/neuter and adoption program that contributed to a drop in the euthanasia rate from 25 cats per 1000 county residents to only 9 cats per 1000.³⁹ FELIX was considered so successful that the Maricopa County Board of Supervisors passed a resolution declaring TNR the official county policy for feral cat control.⁴⁰

In southern Florida, where local TNR programs were introduced in the early 1990's, euthanasia by animal control has dropped by half with most of the decline attributed to fewer cats being killed. For example, in 2001, all shelters combined in the Fort Lauderdale/Miami corridor euthanized 14.1 cats and dogs per 1000 residents, compared to 33.0 per 1000 in 1997.⁴¹ In Tampa, where TNR has not been implemented, the euthanasia rate in 2001 was 32.4 cats and dogs per 1000 residents, while across the bay in St. Petersburg where TNR has been widely practiced, the rate is only 13.7.⁴²

Proof that TNR effectively reduces feral populations in the long term also comes from the academic community. Dr. Levy conducted an eleven year TNR project at her campus at the University of Florida, Gainesville.⁴³ The program resulted in a 66% decline in the feral population over the course of the study. Dr. Levy concluded that, "A comprehensive long-term program of neutering followed by adoption or return to the resident colony can result in reduction of free-roaming cat populations in urban areas."

At Dr. Slater's campus at Texas A&M University, a TNR project was begun in 1998. Over the course of the next five years, the feral cat population is reported by the

³⁵ Appendix 10 (Chappell, Michelle, DVM, "A Model for Humane Reduction of Feral Cat Populations," *California Veterinarian*, Sept/Oct 1999.)

³⁶ Ibid.

³⁷ Cat Fanciers Association Almanac (1995), www.cfainc.org/articles/trap-alter-release.html

³⁸ Appendix 11 (SFSPCA report, Sept. 2000).

³⁹ Leonard, Christina, "Animal Control sets records with more adoptions, less euthanasia," *The Arizona Republic*, July 15, 2002.

⁴⁰ Appendix 12 (Maricopa County Board of Supervisors Resolution).

⁴¹ Clifton, Merritt, "Where cats belong--and where they don't," *ANIMAL PEOPLE*, June 2003.

⁴² Ibid.

⁴³ Levy, J., "Evaluation of the effect of a long-term trap-neuter-return and adoption program on a free-roaming cat population," *Journal of the American Veterinary Medical Association*, Vol. 222, No. 1, January 1, 2003.

campus group now running the program to have declined by approximately 90% from 100 to around 10.⁴⁴

- Cost Savings

TNR provides substantial cost savings to animal control in two ways. First, there is the volunteer manpower generated to get the cats fixed and stop them from reproducing. Even now, at its early stages in New York City, TNR has brought countless hours of volunteer labor to bear on getting the feral cat situation under control, none of which has cost the city a cent. Through workshops hosted by the ASPCA and now by AC&C, Neighborhood Cats has trained over 340 local caretakers on the TNR method.⁴⁵ Given the magnitude of the problem here, there is no realistic possibility the municipality could ever itself fund a large enough animal control work force to resolve the overpopulation crisis. The volunteers and the cost savings they represent are crucial to move beyond the current state of essentially doing nothing except sporadic trap-and-kill.

Substantial cost savings are also realized when TNR is implemented on a large enough scale to realize lower euthanasia rates in city shelters. In San Diego, during the period of 1992 through 1994, the average cost of interning and then euthanizing a cat was \$121. The 40% drop in euthanasia over those two years from the privately funded county-wide TNR program saved the county approximately \$796,000.⁴⁶

AC&C estimates that the cost of processing and euthanizing a cat surrendered to a city shelter is \$61. In fiscal year 2003-2004, a total of 18,417 cats were euthanized by AC&C at an approximate total cost of \$1,123,437.⁴⁷ Every 10% reduction in the number of cats euthanized would save over \$112,343 per year.

AC&C euthanasia figures for cats over the last four years are in sharp contrast to the progress and cost savings demonstrated in communities with successful TNR programs. Cat intake and euthanasia figures for the past four fiscal years at AC&C were as follows:⁴⁸

	<u>Intake</u>	<u>Euthanized</u>	<u>% euthanized</u>
2000-2001	28,707	21,085	73%
2001-2002	25,638	19,314	75%
2002-2003	24,316	17,982	74%
2003-2004	27,222	18,417	68%

Thus, in fiscal year 2000-2001, AC&C euthanized 21,085 cats, equaling 73% of all cat intakes whereas in fiscal year 2003-2004, AC&C euthanized 18,417 cats, equaling 68% of intakes. Little progress has been made in four years. Indeed, cat euthanasia in absolute terms rose 2% in 2003-2004 compared to the year before, while cat intakes rose 12%.⁴⁹ In other words, AC&C expended more funds this past year to intake and

⁴⁴ Appendix 13 (Five Year Summary) www.cvm.tamu.edu/afcat/5years.htm

⁴⁵ Neighborhood Cats.

⁴⁶ Appendix 10 (*see fn. 35, supra*).

⁴⁷ Appendix 14 (Intake and Outcome Totals for Cats: Animal Care & Control of NYC).

⁴⁸ *Ibid.*

⁴⁹ *Id.*

ethanize cats than it did the year before, despite lowering the percentage of cats euthanized. These higher numbers may well reflect a growing street cat population. Unless the feral cat population is brought under control, not only will cost savings go unrealized, costs could actually rise further.

AC&C intends to fund Operation FELIX entirely through private donations and not from funds provided under its city contract. However, studies have found that there is a significant cost savings when the municipality does fund TNR efforts. Orange County, Florida, implemented a TNR program for two and a half years from 1995 through 1998. Previously, when they received a feral cat complaint, they sent out an officer to trap the cat, held the animal for the mandatory waiting period, and then euthanized. This cost \$105 per cat. By contrast, having volunteers trap the cats and then providing spay/neuter and vaccination services cost the county \$56 per cat, a savings of \$109,172 over the length of the study (2228 cats).⁵⁰

A recent FELIX project performed in the Bronx this past June 2004, exemplifies how TNR, by creating public-private partnerships, can solve animal control problems while at the same time reducing costs to the city. Annette R., a resident of the Castlehill area, was feeding a large colony of unneutered feral cats in her backyard when a neighbor called AC&C to complain about kittens on his property. Rather than proceeding to make a costly and time-consuming attempt to trap, remove and euthanize the colony, AC&C contacted Neighborhood Cats, who agreed to coordinate a TNR project. Annette was trained at a workshop and subsequently, using personnel and equipment provided by Neighborhood Cats, all 11 adults and 12 kittens in the colony were trapped. The adults were neutered at no cost by the ASPCA in its mobile spay/neuter van and then returned to the property, while all the kittens were placed for socialization and adoption with another local nonprofit. The result was an immediate population reduction of over 50 percent, the prevention of future litters of kittens, greatly diminished nuisance behavior for the neighborhood, and all at zero cost to AC&C.

- Reduced Nuisance Behavior and Fewer Complaints

Neutering the cats resolves most quality of life issues. The noxious odor associated with the spraying of unaltered males is caused by testosterone in the urine. Once the cat is fixed, this is no longer a problem. The cessation of reproductive activity also brings an end to mating behavior and the noise associated with it – both the yowling of females in heat and the fighting among male cats. It has also been repeatedly observed that neutered feral colonies tend to roam much less and so become much less visible. On Rikers Island, a year after the cats were neutered and returned, Correction Officers reported far fewer sightings of the animals.⁵¹

According to Dr. Slater's research, "Managed colonies of feral cats can be part of the solution to nuisance complaints."⁵² Dr. Slater cites one animal control agency in Florida that found complaints in a six-square block area dropped by half after

⁵⁰ Appendix 15 ("Orange County, Florida," Alley Cat Allies fact sheet).

⁵¹ Appendix 16 (Jackson, Taylor, "Rikers Island TNR Program Revisited," *ASPCA Animal Watch*, Winter 2003).

⁵² Slater, p. 39.

implementation of a TNR program.⁵³ In the city of Cape May, New Jersey, complaints to animal control about cats dropped by 50 percent after four years of sanctioned TNR.⁵⁴ After funding and running its own TNR program, the Animal Services Department of Orange County, Florida, also reported decreased complaints about cats.⁵⁵

The approximately 36,500 complaints received per year by AC&C about feral cats is truly a staggering number. The need for an effective approach to reduce this total is plain.

- Caretaker Cooperation

No effective animal control policy for feral cats can be implemented on a large scale without the cooperation of the people who feed and watch over the cats on a daily basis. Trapping cats is generally accomplished by baiting humane box traps that close behind a cat when he enters to eat the bait. If food is not withheld the day prior to trapping, many cats will not enter the traps.⁵⁶ Caretaker cooperation in withholding food is thus essential. Caretakers also possess unique knowledge regarding the cats, including their numbers, habits and whereabouts. As a result, a caretaker can either greatly assist or effectively thwart animal control efforts.

A survey of cat caretakers who presented cats for sterilization in a TNR program revealed that they are intensely bonded to the cats they feed and will not participate in animal control programs that threaten their felines' welfare.⁵⁷ At the same time, caretakers are easily recruited to perform much of the labor involved in getting the cats controlled through sterilization, representing, as mentioned, a substantial cost savings compared to traditional animal control programs using paid staff.⁵⁸ Thus, TNR is an effective tool for enlisting public support to solve a vexing community problem while at the same time mitigating public anger resulting from either the "trap-and-kill" or "do nothing" methodologies.

The Lack of Effective Alternatives for Feral Cat Control

One of the most powerful arguments for Trap-Neuter-Return as a method of feral and stray cat control is also one of the most basic – nothing else works. Whatever its imperfections in practice and theory, TNR is the *only* animal control methodology that has shown a reasonable chance of controlling free-roaming cat populations in an urban environment like New York City. Whatever ills one may rightly or wrongly associate with feral cats – whether its public health concerns, wildlife predation or anything else –

⁵³ Ibid.

⁵⁴ Id.

⁵⁵ Levy, p. 381.

⁵⁶ Neighborhood Cats.

⁵⁷ Centonze LA, Levy JK, "Characteristics of feral cat colonies and their caretakers," *J Am Vet Med Assoc* 2002; 220:1627-1633.

⁵⁸ See caretaker participation in sterilization clinics described in: Williams LS, Levy JK, Robertson SA, Cistola AM, Centonze LA, "Use of the anesthetic combination of tiletamine, zolazepam, ketamine, and xylazine for neutering feral cats," *Journal of the American Veterinary Medical Association* 2002; 220:1491-1495.

those problems will not be reduced without a reduction in the level of the feral cat population. To achieve this, TNR is the only approach with hope of success, as an examination of the available alternatives makes clear.

- Trap-and-kill

Trap-and-kill has been the traditional approach of animal control in the United States towards free-roaming cats for decades. It should be enough to conclusively establish the complete failure of this method by pointing out that current estimates of the number of feral cats in this country now run into the tens of millions.⁵⁹ Trying to remove the cats doesn't work to lower their numbers. It's a clumsy, simplistic technique that completely fails to take into account critical environmental factors and feral cat population dynamics. Trap-and-kill results in nothing but turnover – new feline faces, but not fewer. There are a number of reasons for this, including (a) the “vacuum effect,” (b) over breeding by untrapped cats, (c) abandonment of domestic cats and, (d) lack of animal control resources.

The Vacuum Effect

The “vacuum effect” was first chronicled by wildlife biologist Roger Tabor during his studies of London street cats. He observed that when a colony of feral cats was suddenly removed in toto from its territory, cats from neighboring colonies soon moved in and began the unchecked cycle of reproduction anew until the population was back up to its former level.⁶⁰ As explained in another study, “the presence of feral cats in a place indicates an ecologic niche for approximately that number of cats; the permanent removal of cats from a niche will create a vacuum that then will be filled through migration from outside or through reproduction within the colony, by an influx of a similar number of feral cats that are usually sexually intact; and removal of cats from an established feral colony increases the population turnover, but does not decrease the number of cats in the colony.”⁶¹

Migration of new cats into recently vacated territory can be traced to two factors: first, feral cats are present at a particular location for a reason - the habitat provides adequate food and shelter. Second, no feral colony is an island, but is part of an extensive ecosystem containing similar colonies, one adjoining the next. As a result, if a colony is removed from its territory, but the habitat is left unchanged, neighboring cats will move right in to take advantage of the food source and shelter that remains. Reproduction and population growth ensue until the natural ceiling is again reached, that being the number of cats the habitat can support.⁶²

⁵⁹ Slater, p. xi.

⁶⁰ Tabor, Roger, “The Wild Life of the Domestic Cat,” p. 183 (1983).

⁶¹ Zaunbrecher, Karl I., DVM, & Smith, Richard E., DVM, MPH, “Neutering of Feral Cats as an Alternative to Eradication Programs,” *Journal of the American Veterinary Medical Association*, Volume 203, Number 3, August 1, 1993.

⁶² Clifton, Merritt, “Seeking the truth about feral cats and the people who help them,” *ANIMAL PEOPLE*, Nov. 1992.

Eliminating all food sources is virtually impossible.⁶³ Once a cat is spotted by a kind soul who starts to leave food, a food source is created. People are going to feed outdoor cats no matter what, as the ineffectiveness of feeding bans with serious civil and criminal consequences has demonstrated.⁶⁴ It is also difficult in institutional settings, whether it's jails, restaurants or apartment complexes, to adequately seal dumpsters and other garbage containers to keep out feral cats.

Over Breeding

The trapping and removal of every member of a feral colony is a difficult and time-consuming task. Even TNR activists have great difficulty in capturing 100 percent of a colony and must allow for several days of trapping efforts to accomplish this.⁶⁵ When busy animal control personnel attempt to trap a feral colony, inevitably some cats are left behind. With less competition for the food and shelter that remains, these cats reproduce faster and more of their offspring survive until the carrying capacity of the habitat is again reached.⁶⁶

Abandonment

Unaltered domestic cats are constantly being abandoned into our streets, often by uneducated owners who do not realize problem behaviors by sexually intact cats could be readily resolved by neutering. Without monitors and caretakers in place to quickly capture and either fix or adopt out these former domestics, they too, are available to repopulate any suitable habitat made vacant by trap-and-kill efforts.

Lack of animal control resources

In a city the size of New York, with a feral population in the tens of thousands and possibly hundreds of thousands, and with 20% of calls to AC&C being about free-roaming cats, implementation of a "trap-and-kill" approach is wholly impractical from a resource standpoint.

Waukegan, Illinois: a case study in the failure of trap-and-kill

Waukegan, Illinois is a township of 88,000 located on the shore of Lake Michigan. Waukegan's long-standing method for controlling their feral cat population has been the traditional trap-and-kill.⁶⁷ Recently, the town has made news by trying to effectively ban TNR. The town's council enacted an ordinance that forbids the release of any cat except into an outdoor enclosure. To build and operate such an enclosure, a kennel license must be sought and paid for. In addition, a prior ban against feeding stray cats is in effect. Stiff fines enforce these provisions.⁶⁸

⁶³ Hartwell, Sarah, "Why Feral Eradication Won't Work," (1994, 2003), www.messybeast.com/eradocat.htm.

⁶⁴ E.g., a court in Fort Lee, NJ, where feeding any animal outdoors is banned, recently fined a stray cat feeder \$300 and threatened her with a 30 day jail term if she continued. Nonetheless, Neighborhood Cats has documented the ongoing feeding and care of scores of feral cats in the township.

⁶⁵ Neighborhood Cats.

⁶⁶ Clifton, Merritt, "Street Dog & Feral Cat Sterilization and Vaccination Efforts Must Get 70% or Flunk," *ANIMAL PEOPLE*, October 2002.

⁶⁷ Hamill, Sean, "Neuter, release program for feral cats stirs debate," *Chicago Tribune*, July 7, 2004.

⁶⁸ *Ibid.*

According to Tina Fragassi, the local animal control warden, her agency has trapped and removed approximately 500 feral cats each of the past eleven years.⁶⁹ In Ms. Fragassi's view, this steady number reflects the success of Waukegan's policies in controlling the cats.⁷⁰ The truth is just the opposite and points to the futility of trap-and-kill.

That every year 500 cats need to be trapped indicates the feral population is remaining at the same level. The feline faces may be changing, but the total number of cats is staying the same. As a result, every year in Waukegan the same amount of time and wages is invested in animal control seizing 500 cats, the same cost is incurred by the township in adhering to mandatory waiting period and euthanasia requirements, and the same numbers of complaints are made. By contrast, a successful animal control approach would mean fewer and fewer feral cats in the community as reflected by continually *falling* seizures, costs and complaints. This is the goal of TNR. As explained by Dr. Slater, TNR "should be considered an interim solution to the problem of feral, free-roaming cats – the first step towards reducing the size of the colony through attrition."⁷¹

- Eradication

Eradication of feral cats, defined as the one hundred percent removal of all ferals from an area, has been advocated since at least 1916.⁷² The method has proven successful, however, only on small, uninhabited islands after decades of intensive control measures including poisoning, hunting, trapping and introduction of infectious feline diseases.⁷³ One of the best-known examples of the difficulty of eradication is Marion Island, a small uninhabited island (12 miles x 8 miles) located southeast of South Africa between South Africa and Antarctica.⁷⁴

In 1949, a group of scientists left the island, leaving behind 5 unneutered cats. By 1977, there were an estimated 3,400 cats preying on ground-nesting seabirds.⁷⁵ Deliberate infection of the feral cat population with Feline Panleukopenia Virus (feline enteritis) followed and killed around 65% of the cat population by the early 1980's.⁷⁶ Many of the remaining 35% developed immunity to the disease and continued to breed.⁷⁷ Between 1986 and 1989, 897 cats were further exterminated by hunting. Traps with poison baits were then used to kill the cats that eluded the guns. No cats have been seen since 1991. In 1993, sixteen years after it was begun, the eradication program was declared a success.⁷⁸

The methods used on Marion Island – introduction of infectious disease, shooting and poisoning – would be unfeasible in a populated area such as New York City for

⁶⁹ As related by Sean Hamill, Chicago Tribune reporter, during his interview of Bryan Kortis of Neighborhood Cats, June 21, 2004, for the article cited in footnote 64, *supra*.

⁷⁰ *Ibid*.

⁷¹ Slater, p. 14.

⁷² Berkeley, Ellen Perry, *Maverick Cats*, p. 121 (New England Press, 1982, 2001).

⁷³ Levy, p. 380.

⁷⁴ Hartwell, Sarah, "Why Feral Cat Eradication Won't Work," (1994, 2003), www.messybeast.com/eradicat.htm.

⁷⁵ *Ibid*.

⁷⁶ *Id.*; Berkeley, pp. 123-124.

⁷⁷ Hartwell (see fn. 71, *supra*).

⁷⁸ *Ibid*.

safety, cost and aesthetic reasons.⁷⁹ Even assuming such techniques could be employed, the vacuum effect discussed earlier, which was not present in a geographically isolated situation like Marion Island, would likely outpace eradication efforts.

Despite these considerations, Akron, Ohio recently undertook an attempt to eradicate all free-roaming cats within its city limits. On June 25, 2002, the City Council passed a cat confinement law that authorized the animal control warden to seize and euthanize any cat at large if left unclaimed.⁸⁰ Animal control reportedly requested an additional annual budget of \$410,385 to trap-and-kill what they estimated would be a total of 3500 cats.⁸¹

Over the next two years following the law's enactment, a total of 2750 cats were picked up and killed.⁸² It is too soon to say whether the law will eventually have its desired effect of eliminating free-roaming cats or whether, as in Waukegan, animal control will continue to seize a consistent number of cats on an annual basis. But it is already abundantly clear that the trap-and-kill program has had serious negative side effects. The killing has spawned extreme divisiveness within the community between animal advocates and municipal officials,⁸³ has given rise to at least one lawsuit,⁸⁴ has created negative publicity for Akron on a national scale,⁸⁵ has cost the city hundreds of thousands of dollars between the trapping efforts and litigation, and has ship-wrecked the county animal shelter because of the sudden deluge of cats.⁸⁶

Akron represents the antithesis of what is needed to successfully control feral cat populations on a large scale. According to Dr. Levy, "Clearly, any realistic plan to control feral cats must recognize the magnitude of the feral cat population, the need to engage in continuous control efforts, and the significance of the public's affection for feral cats. The most successful examples of enduring community-wide animal control have incorporated high-profile non-lethal feral cat control programs into integrated plans to reduce animal overpopulation."⁸⁷

⁷⁹ Levy, p. 381.

⁸⁰ Akron OH Municipal Code, Title 9, sec. 92.15; *see also*, Sangiacomo, Michael, "Akron law to trap, kill cats is OK, judge rules," *Cleveland Plain Dealer*, May 6, 2004.

⁸¹ Pet FBI (2002), www.petfbi.com/issuetravel.htm

⁸² Sangiacomo, Michael, "Akron law to trap, kill cats is OK, judge rules," *Cleveland Plain Dealer*, May 6, 2004.

⁸³ Protest held in front of City Hall (Wallace, Julie, "Akron may help cats get to homes," *Akron Beacon Journal*, Feb. 11, 2004); City Council received 1200 letters protesting the ordinance, 10 in favor (Cat Fanciers' Association Legislative Group, "Trends in Animal Legislation: The Year 2002 in Review," www.cfainc.org/articles/legislative/legislation-review02.html); nonprofit organization called Citizens for Humane Animal Practices formed to fight the Akron law (USA Today.com, "Ohio city council considers electronic tracking of cats," Feb. 10, 2004).

⁸⁴ Lawsuit filed by Animal Legal Defense Fund and six Akron residents with cats (Animal Legal Defense Fund [Akron, Ohio], pub. 10/27/03, www.aldf.org/article.asp?cid=249).

⁸⁵ Akron referred to by Florida resident as having "a national reputation for using the most ineffective, expensive and morally reprehensible means of dealing with feral cats," (Letter to the Editor, *Miami Herald*, December 21, 2003); Akron website's message board closed down due to deluge of angry emails from around the world (Sangiacomo, *supra*, *Cleveland Plain Dealer*).

⁸⁶ Summit County Executive Director James McCarthy "has blamed Akron's cat law for worsening shelter problems," (Abraham, Lisa, "Animal Shelter Review Approved – Summit County will bring in national experts to evaluate the troubled program," *Akron Beacon Journal*, Jan. 23, 2004).

⁸⁷ Levy, p. 381.

- Trap-and-remove

Compassionate callers reporting feral cats often initially seek the adoptive placement of the cats or their relocation to a safer place.⁸⁸ This “trap-and-remove” approach is impractical on a large scale. Socialization of feral cats is an uncertain process, and even if the time and resources existed to implement socialization on a widespread basis, there are not enough available homes for them. As it is, completely tame cats already in city shelters and up for adoption are regularly euthanized for lack of space. Regarding relocating the cats, Dr. Slater writes, “Transfer to a new location is rarely recommended because finding a suitable site can be difficult, time consuming, and stressful for the cats and often has low survival rates at the new site.”⁸⁹

Furthermore, trap-and-remove creates the same vacuums in the original territory as trap-and-kill and so will likewise have no long-term impact on feral population levels.

- Do nothing

The growth of an uncontrolled feral cat population, as with any wild species, will level off when the cats exceed the capacity of the habitat. Beyond capacity, population control comes in the form of starvation and disease.⁹⁰ The problems associated with unneutered feral cats remain. Usually, doing nothing, “results in continued breeding, increased cat mortality, continuing complaints by those near the colony, public health concerns, animal welfare concerns (often generated by high kitten mortality rates), and eventual financial costs in personnel, transportation, and euthanasia to animal care and control agencies and local governments.”⁹¹

The latter passage accurately describes the present situation in much of New York City.

Issues Surrounding Trap-Neuter-Return

- Wildlife Predation

Despite its proven track record for reducing feral cat populations and animal control costs, and despite the lack of any effective alternatives, TNR is still controversial. Much of this controversy can be traced to concerns that feral cats are responsible for a disproportionate amount of predation on birds and other forms of small wildlife. The American Bird Conservancy, sponsor of the “Cats Indoors!” campaign, claims feral cats, “are efficient predators estimated to kill hundreds of millions of native birds representing 20-30% of the prey of free-roaming cats, and countless small mammals, reptiles, and amphibians each year...”⁹² The argument goes that by returning feral cats to their

⁸⁸ Neighborhood Cats.

⁸⁹ Slater, p. 12.

⁹⁰ Clifton, Merritt, “Street Dog & Feral Cat Sterilization and Vaccination Efforts Must Get 70% or Flunk,” *ANIMAL PEOPLE*, Oct. 2002.

⁹¹ Slater, p. 15.

⁹² American Bird Conservancy’s Resolution on Free-Roaming Cats, www.abcbirds.org/cats/resolution.pdf

territory, TNR encourages this predation to continue and so should be outlawed for the protection of wildlife.⁹³

The American Bird Conservancy's position suffers from two key defects. First, no reliable studies support the predation levels being claimed and none identify feral cats as a contributing factor to the decline of any bird or wildlife species. Second, TNR does not encourage but actually discourages predation – in the long run, by reducing the feral cat population in a given area, it reduces whatever level of predation already existed

Available research does not support the conclusion feral cats have a species level impact on bird or wildlife populations

Studies that claim feral cats are responsible for substantial numbers of bird deaths over wide geographical areas, like a state or an entire country, are based on insufficient data and highly questionable extrapolations, and have been repeatedly discredited.⁹⁴ One example is the oft-cited study of predation by cats conducted in a village in the English countryside.⁹⁵ The researchers counted the number of prey brought home by 77 cats. Based on this one small sample, they projected a total of 70 million prey by Britain's entire free-roaming cat population, with birds accounting for 30 to 50 percent of the catch.⁹⁶ Obviously, extrapolating from one non-randomly selected village to the whole of Great Britain lacks all scientific validity.⁹⁷ Yet this and similar small-scale studies have been repeatedly subjected to extrapolation and have been sensationalized.⁹⁸ Their use by the American Bird Conservancy and other organizations to make the case that feral cats are killing hundreds of millions of birds annually in the United States and negatively impacting entire species amounts to no more than sheer propaganda. "In mainland ecosystems, no published data have shown that cats have a detrimental impact on wildlife populations of particular species."⁹⁹

The American Bird Conservancy's claim that birds make up 20 to 30 percent of a free-roaming cat's diet is also based on misinterpretation of several studies.¹⁰⁰ The assertion is "misleading, inflammatory, self-serving, and undeserving of the repetition it has received in the media."¹⁰¹ To the contrary, reputable studies have repeatedly demonstrated that birds are a relatively small percentage of a feral cat's diet, which relies much more on ground mammals when they're available.¹⁰²

⁹³ Ibid.; see also Wildlife Society's Policy Statement on Feral and Free-Ranging Domestic Cats, www.wildlife.org/policy/index.cfm?tname=policystatements&statement=ps28

⁹⁴ "Many studies indicate that claims about wildlife mortality due to cat predation are overblown, not based on data or scientific study, or are extrapolated to dissimilar populations or environments." *The Animal Policy Report*, p. 1, Tufts University School of Veterinary Medicine, March 2000.

⁹⁵ Churcher PB, Lawton JH., "Predation by domestic cats in an English village," *J Zool (London)* 1987; 212:439-455.

⁹⁶ Ibid.

⁹⁷ Slater, p. 34; see also Elliot, J. "Of Cats and Birds and Science: A Critique of the Churcher Study," (1994).

⁹⁸ Slater, p. 34.

⁹⁹ Ibid.

¹⁰⁰ Berkeley, pp. 137-138.

¹⁰¹ Berkeley, p. 137.

¹⁰² Coman, Brian J. and Brunner, Hans, "Food Habits of the Feral House Cat in Victoria," *Journal of Wildlife Management* 36:3 (1972) 848-853; Fitzgerald BM. Chapter 10: "Diet of domestic cats and their

Further pointing to the complexity of the issue is a recent study by Britain's Royal Society for the Protection of Birds. The study was designed to determine the causes of the decline of Britain's most common garden birds. It was found that cats and magpies preyed on robins, chaffinches, collared doves and wood pigeons, but these bird species were actually rising in number.¹⁰³ This study, as well as others, demonstrates that predation alone does not necessarily have a negative impact on the total prey population.¹⁰⁴

Factors which have been reliably demonstrated to significantly contribute to the decline of bird and wildlife species include, foremost, habitat destruction, then also pollution, competition from other bird species, and predators such as raccoons and opossum.¹⁰⁵ An exhaustive study of the causes of migratory bird decline in the United States published in the spring of 2003 by David I. King of the USDA Forest Service Northeastern Research Station and John H. Rappole, a research scientist with the Smithsonian Conservation and Research Center effectively exonerates feral cats.¹⁰⁶ The study was commissioned by the Defenders of Wildlife,¹⁰⁷ a prominent national organization whose mission is the protection of native wild animals and plants in their natural environments.

The researchers, after reviewing annual bird census data and 36 earlier studies, reached three important conclusions: (1) the migrant bird populations have declined in numerous species, (2) the most threatened group of species are long distance migrants, and (3) the most important threat to migrants is the destruction of breeding, stopover and, especially, winter tropical habitat.¹⁰⁸ Specifically, they identified 106 different types of migrant birds and listed the proposed or documented causes for the decline of each. Loss of habitat was by far the cause listed most often. Other causes included human disturbance of breeding sites, pesticides, poisons, and hunting. "Cats" was not listed once.¹⁰⁹ At least one wildlife author has concluded this study indicates that, "[W]indows, cats, West Nile virus, wind turbines — all those specific causes of death that are apparent in people's backyards -- are not, at present, having any known effect on the population size of any continental bird species."¹¹⁰

TNR reduces rather than encourages predation

Rather than encouraging predation, TNR can actually aid in the protection of wildlife and bird interests. It must be kept in mind that before any TNR work is done at a given

impact on prey populations," in: Tuner DC, Bateson P, eds. *The domestic cat*. Cambridge: Cambridge University Press, 1988; 123-147.

¹⁰³ "Cats in Clear re: Birds," *Best Friends*, July/Aug. 2004.

¹⁰⁴ See "Predation by house cats, *Felis catus*, in Canberra, Australia. I. Prey composition and preference," *Wildlife Research* 1997, 24:263-277 & H. "Factors affecting the amount of prey caught and estimates of the impact on wildlife," *Wildlife Research* 1998, 25:475-487.

¹⁰⁵ Slater, p. 34.

¹⁰⁶ King, D., Rappole, J., *Population Trends for Migrant Birds in North America: A Summary and Critique*, www.defenders.org/wildlife/new/birds.html (2003)

¹⁰⁷ www.defenders.org/wildlife/new/birds.html.

¹⁰⁸ *Ibid.*

¹⁰⁹ See Appendix 3, *ibid.*

¹¹⁰ Yakutchit, Maryalice, "Plight of the Vanishing Songbirds," *Defenders of Wildlife Magazine*, Spring 2003; www.defenders.org/defendersmag/issues/spring03/plightsongbird.html.

site, the cats are already there, preying upon other species to whatever extent they do. If the cats are then neutered, returned and monitored by a caretaker, reproduction ceases and the population goes down over time, with the fewer cats leading to less predation.

The American Bird Conservancy argues wildlife would be best protected if the first step of trapping is taken, but not the second of return. Euthanasia, they believe, is a more acceptable solution.¹¹¹ This amounts to no more than advocacy of the trap-and-kill method and suffers from all its flaws – the vacuum effect of cats migrating into newly vacant habitat to take advantage of food sources, the over breeding of any cats in the colony left behind, the lack of adequate animal control resources, and the opposition of caretakers to trapping efforts.

What many bird and wildlife advocates fail to come to grips with is the impossibility of quickly ridding the environment of feral cats in order to protect other species – it simply cannot be done. The only known way to eliminate feral cat colonies, as has been accomplished in Newburyport, is gradually through the TNR process. In Newburyport, where 300 feral cats resided twelve years ago, there are now 17. Plainly, whatever predation existed in 1992 is far lower now. The return of the neutered ferals was not an encouragement for more predation – it was part of the method for permanently lowering the cats’ numbers.

Ironically, and sadly, groups like the American Bird Conservancy are actually harming their own interests by opposing the only known method of feral cat control with any reasonable chance of success. By advocating what amounts to either “trap-and-kill” or “trap-and-remove” instead of TNR, they help perpetuate the failed methods of the past – the methods which have led to a national overpopulation of feral cats in the tens of millions. To protect the birds, new approaches and open minds are needed.

It’s also important in considering the predation issue to draw a distinction between two very different situations which the current debate tends to muddle together. It’s one thing if the particular site in question serves as a unique and critical habitat for wildlife, especially endangered species or migrating birds that might be vulnerable to a cat attack because of factors like their ground-nesting behavior. It’s another thing if the geographical area in question is an entire major urban area.

Whether TNR is a good solution in places with vulnerable wildlife populations must be carefully examined. It’s possible it still might be appropriate in such cases if repeated eradication efforts have failed to lower the feral population and thereby failed to lower the risk to wildlife. For example, Floyd Bennett Field in Brooklyn is part of the Gateway National Recreation Area and is home to the piping plover, an endangered, ground-nesting species. Floyd Bennett has also been home for at least the last twenty years to a feral cat colony.¹¹² In pursuit of its mandate to remove exotic species from the grounds, the National Park Service (NPS) has performed trap-and-kill on the cat colony during this entire time, removing an average of 20 to 25 cats per year, every year.¹¹³ The constant level indicates the feral population is experiencing turnover, but not reduction in numbers.¹¹⁴ The threat posed by the cats to the plovers thus remains unchanged. A TNR

¹¹¹ American Bird Conservancy’s Resolution on Free-Roaming Cats, www.abcbirds.org/cats/resolution.pdf

¹¹² Meeting with National Park Service, AC&C Executive Director Ed Boks & Neighborhood Cats Executive Director Bryan Kortis, April 29, 2004.

¹¹³ Ibid.

¹¹⁴ Trap-and-kill efforts at Floyd Bennett Field fail to achieve eradication primarily because of the unwillingness of caretakers to share information on the habits and locations of the cats, the migration of

program would improve the situation by lowering the feral population level on a long-term basis.

However, there may be instances where removal of the cats is a plausible permanent solution and TNR simply shouldn't be attempted because of the sensitivity of the ecosystem. But the issue of whether to implement TNR in ecologically sensitive areas because of the possible impact on wildlife should have little bearing on the appropriateness of TNR as a method of animal control for the entire community. As a matter of common knowledge, in the vast majority of urban feral cat colonies, the cats only have contact with common, overpopulated non-native bird species, such as, starlings, house sparrows, cowbirds, and pigeons. In other words, because TNR might not be appropriate for a bird sanctuary in Brooklyn doesn't mean it should be rejected for all of New York City.

□ Public Health

From the perspective of public health, feral cats and TNR touch upon three major issues: (1) rabies, (2) other zoonotic diseases, and (3) rat abatement. An examination of these issues demonstrates that on balance, the public health benefits of maintaining neutered, rabies-vaccinated feral cats in their environment through TNR far outweigh any possible public health threats.

Rabies

In 2001, according to the Centers for Disease Control and Prevention (CDC), wild animals accounted for 93% of reported cases of rabies in the United States. Among wild animals, the leading species were raccoons (37.2% of all animal cases in 2001), followed by skunks (30.7%), bats (17.2%), foxes (5.9%) and other wild animals, including rodents (0.7%). Only 6.8% of reported rabies cases were domestic animals.¹¹⁵ The total number of cases attributed to cats in 2001 was 270. This total included 31 cases in New York State and 1 in New York City. Since 1975, there have been no reported cases of a cat transmitting rabies to a human in this country.¹¹⁶ Three large-scale exposures of humans to rabid or potentially rabid cats were reported from 1990 through 1996.¹¹⁷

The risk that feral cats, who tend to be shy by nature and fearful of people, could transmit rabies to humans while at large is thus minimal judging by past experience.¹¹⁸ But the risk does exist to at least a slight degree in the New York City region, in large part because of the prevalence of rabies in raccoons that often inhabit the same territory as feral cats. Most raccoon rabies occurs in the northeast/mid-Atlantic region (69.1% in 2001).¹¹⁹ Most cat rabies occurs (214 of the 270 reported cases in 2001) in states where

cats from surrounding communities, and the unauthorized introduction of cats to the park for purposes of rodent control (as reported by caretakers to Bryan Kortis, Neighborhood Cats).

¹¹⁵ Krebs, J., Noll, H., Rupprecht, C., Childs, J., "Rabies surveillance in the United States during 2001," *Journal of the American Veterinary Medical Ass'n* 221(12):1690-1701 (2002): see www.cdc.gov

¹¹⁶ Levy, p. 379.

¹¹⁷ Slater, p. 32.

¹¹⁸ Ibid.

¹¹⁹ Krebs, J., Noll, H., Rupprecht, C., Childs, J., "Rabies surveillance in the United States during 2001," *Journal of the American Veterinary Medical Ass'n* 221(12):1690-1701 (2002): see www.cdc.gov

the raccoon-variant of rabies is present.¹²⁰ In 1999, it was discovered that, “Nearly all [rabid domestic] animals (229 cats and 78 dogs) were infected via spillover with the predicted terrestrial variant of the rabies virus, i.e., the variant maintained by and circulated in the dominant terrestrial reservoir species in the geographic location where the infection occurred.”¹²¹ Consequently, “...feral cats may form an interface between wildlife reservoirs and humans.”¹²²

TNR can remove much of the opportunity for rabies to be transmitted from raccoons to feral cats and then to humans by having the cats vaccinated against the virus at the time of neutering. This is the current practice of the TNR programs run by the ASPCA and the Humane Society of NY, and is a recommended guideline of the New York City Feral Cat Council, of which the aforementioned organizations are members.¹²³ Vaccination of a large percentage of the feral cats in a given location may then create a barrier species for transmission of the virus from raccoons to humans: “By keeping a critical mass (usually 80 percent) of feral cats vaccinated against rabies in managed colonies, a herd immunity effect may be produced, potentially providing a barrier between wildlife and humans and preventing one of the major public health threats caused by feral cats.”¹²⁴

Using TNR to rabies-vaccinate the feral population also makes sense when the lack of suitable alternatives to remove the public health threat is considered. As discussed earlier, eradication of the feral population is not feasible. Trapping and removing a portion of the population results only in turnover, not diminishing numbers, and leaves the feral cat population unvaccinated and susceptible to rabies infection from raccoons. Doing nothing also leaves the ferals unvaccinated and fails to lessen the risk of rabies transmission from wildlife to cats to humans. A managed colony approach, where the cats are vaccinated, monitored on a regular basis and gradually diminish in number, is far more effective in removing the rabies threat.

Supporting the view that vaccinating the feral population can create a barrier against rabies for humans is past experience with domestic dogs. “[A]nimal control and vaccination programs begun in the 1940’s have practically eliminated domestic dogs as reservoirs of rabies in the United States.”¹²⁵ While feral cats may not be a reservoir for rabies to the same magnitude that domestic dogs once were, widespread implementation of TNR could eliminate even the possibility of that happening. This is a matter of great significance as, “A single incident involving a case of rabies in a companion species can result in large expenditures in dollars and public health efforts to ensure that human disease does not occur.”¹²⁶

The hands-on practice of TNR entails close interaction between feral cats and humans during the initial phase of trapping and neutering, potentially creating opportunities for bites and rabies transmission. Access to TNR services should, as a result, be conditioned upon training in safe handling techniques – a component of the FELIX program.

¹²⁰ Ibid.

¹²¹ Id.

¹²² Levy, p. 385.

¹²³ www.nycferalcat.org/guidelines.htm

¹²⁴ Slater, p. 32.

¹²⁵ Krebs, J., Noll, H., Rupprecht, C., Childs, J., “Rabies surveillance in the United States during 2001,” *Journal of the American Veterinary Medical Ass’n* 221(12):1690-1701 (2002): see www.cdc.gov

¹²⁶ Ibid.

Other zoonotic diseases

A common misconception is that feral cats pose a health hazard through risk of transmission of other zoonotic diseases besides rabies. Available evidence indicates this is not true. For example, the 8000 acre campus of Stanford University is home to one of the oldest TNR programs in the country. The university-approved, but privately funded and operated program began operation in 1989.¹²⁷ Subsequently, when a graduate student complained that the cats presented a health risk, campus administration took up the issue.¹²⁸ The Environmental Health & Safety Department of the university, in consultation with the Santa Clara County Health Department, “determined that there is a general consensus that feral cats pose little health and safety risk to individuals on campus.”¹²⁹ The Stanford TNR program continues to the present date, claiming reduction of the feral population from a total of 1500 cats at inception to 200 currently.¹³⁰

A transmissible disease often associated with cats is toxoplasmosis which is caused by a common parasite (toxoplasma) probably already found in more than 60 million people in the United States.¹³¹ Very few people display symptoms, but infection can be serious in pregnant women and those with compromised immune systems.¹³² The parasite can be transmitted through the accidental ingestion of contaminated cat feces, but infection is more commonly the result of eating or handling raw meat, or gardening.¹³³ A study conducted in Norway found that living in a neighborhood with cats is not by itself a risk factor for contracting toxoplasmosis.¹³⁴

Plague can be transmitted by feral cats that catch the disease from infected fleas, but this concern appears to be geographically limited to the southwestern United States.¹³⁵ In these regions, flea control and care in handling feral cats with symptoms of pneumonia is recommended.¹³⁶

“Cat scratch fever,” caused by the bartonella bacteria, is relatively common; although it is not clear the risk factor is any higher with the feral cat population as compared to the domestic cat.¹³⁷ Given ferals’ wariness towards humans and their tendency to keep a distance, presumably the risk factor is lower for them.

Ringworm transmission requires physical contact with the cat and is most likely to be a problem only for caretakers fostering injured or ill feral adults, or fostering kittens.¹³⁸

Transmission of roundworms to humans is another health risk mentioned in the literature, but is not unique to feral as opposed to domestic cats.¹³⁹

¹²⁷ <http://www.stanford.edu/group/CATNET/about.html>

¹²⁸ Correspondence from Carole Miller, co-founder of Stanford Cat Network, April 29, 2002.

¹²⁹ Appendix 17 (Letter from Gary W. Morrow, Biosafety Officer and General Safety Manager, Environmental Health and Safety Dept., Stanford University, Nov. 24, 1992.)

¹³⁰ <http://www.stanford.edu/group/CATNET/about.html>

¹³¹ www.cdc.gov/healthypets/animals/cats.htm

¹³² *Ibid.*

¹³³ *Id.*

¹³⁴ Slater, p. 33, citing Kapperud, G., et.al, “Risk factors for *Toxoplasma gondii* infection in pregnancy; Results of a prospective case-control study in Norway,” *American Journal of Epidemiology* 144: 405-412, (1996).

¹³⁵ Slater, p. 33.

¹³⁶ *Ibid.*

¹³⁷ *Id.*; www.cdc.gov/healthypets/animals/cats.htm

¹³⁸ Slater, p. 33.

When TNR succeeds in lowering free-roaming cat populations – which no other method has been shown to accomplish – then whatever risk exists of transmission of these diseases is lowered as well.

Rat abatement

The rat problem in New York City is chronic and growing. According to recent statistics from the NYC Department of Health, as reported by the Daily News, complaints about rats have risen 40% in the past two years.¹⁴⁰ Complaints continued to rise in the past year despite significantly increased efforts at inspections and exterminations.¹⁴¹

The usefulness of feral cats in controlling rat populations is well documented. Roger Tabor, in his studies of London street cats, noted that one particularly adept tabby female was recorded as having caught 12,480 rats over a six year span (an average of 5 to 6 per day.)¹⁴² Farmers and stable owners have long employed feral cats for rodent control.¹⁴³ Thomas Gecewicz, while serving as Director of Health for the city of Fall River, Massachusetts, found that a TNR'ed colony of feral cats at a local landfill resulted in a cost savings for rodent control.¹⁴⁴ In Pennsylvania's Longwood Gardens, feral cats "are part of the integrated pest management control program to protect certain plant life from damage by small rodents."¹⁴⁵ One researcher, Paul Leyhausen, suggests that in urban environments where food sources such as garbage and rats cannot be permanently removed, "the feral cat population serves a very useful purpose and should rather be encouraged than fought."¹⁴⁶ Some researchers believe the Black Death during the Middle Ages in Europe was exacerbated when the disease was blamed on witches and their feline companions, causing cats to be exterminated and thereby reducing a significant control on the transmission of the disease from flea-infested rats.¹⁴⁷

The role of feral cats in rat abatement is especially significant in an area like New York City which has such a substantial rat population. Experience has shown that when feral cats are removed at a location, the rat population increases. For example, during the TNR project performed on Rikers Island, Correction Officers expressed concern that the cats would not be returned. They cited an earlier attempt at eradication which had succeeded in temporarily depressing the cat population. Before the cat population rebounded, rats overran the island, causing the officers great stress when they would beat bushes during escape attempts as required and rats would run out.¹⁴⁸

More recently, Neighborhood Cats was authorized by AC&C to trap and remove a managed colony of neutered feral cats that had been living under the base of the Brooklyn Bridge, Manhattan side, for many years. The base of the Bridge has been designated a terrorist target and the Mayor's Office was uncomfortable with an ongoing TNR program at the site. During trapping operations, Department of Transportation

¹³⁹ Ibid.

¹⁴⁰ "City's scurry worry: Rat complaints up despite crackdown," *Daily News*, August 16, 2004.

¹⁴¹ Ibid.

¹⁴² Tabor, pp. 112-113.

¹⁴³ Slater, pp. 38-39.

¹⁴⁴ Correspondence to Ed Boks, July 16, 2004.

¹⁴⁵ Slater, p. 39.

¹⁴⁶ Berkeley, p. 122.

¹⁴⁷ Clifton, Merritt, "Where cats belong – and where they don't," *ANIMAL PEOPLE*, June 2003.

¹⁴⁸ Per conversations with officers by Bryan Kortis, Neighborhood Cats.

personnel complained about the removal of the cats, explaining their work area was one of the few in the city located near water that did not have rats.¹⁴⁹

TNR allows the cats to remain in the environment and continue to provide no-cost rat control, while at the same time stemming future population growth and curbing nuisance behavior such as noise and odor.

TNR has the growing support of public health officials, academics, animal control officers and animal welfare organizations

Thomas Gecewicz, who in addition to his service in Fall River also served as the Director of Public Health in Bridgeport, Connecticut from 2000 through 2004, writes: “I can unequivocally state that I, as a public health official, do openly endorse any and all trap, spay, and neuter programs as a public health benefit and cost savings to any community to which it is offered.”¹⁵⁰ Dr. Jonathan Weisbuch, M.D., the Chief Medical Officer for Maricopa County, states, “The effectiveness of TNR has been demonstrated by the Maricopa County Animal Care and Control Agency in resolving a complex problem of feral cats overpopulating the streets and alleys of 24 of the most populated cities and towns in Arizona. The program has reduced the number of strays, diminished the number of kittens and resulted in a managed community of felines that no longer stimulate the number of community complaints that were common prior to our initiating the program.”¹⁵¹ Ron Cash, Director of Health for Atlantic City, New Jersey, has also found TNR to be a useful public health tool: “We serve a population of approximately 35 million people who visit this community every year. I need to operate a safe city for the tourists of Atlantic City. When we went shopping for a solution to the feral cat concerns in our community, we found TNR. TNR works.”¹⁵²

Dr. Slater concludes, “In communities where basic services are already available, support for feral cat caretakers (including education) and evaluation of options besides ‘wait and see’ or trap and euthanize should be seriously considered as long-term investments.”¹⁵³ Likewise, Dr. Levy states, “TNR has emerged as one viable alternative for nonlethal cat control capable of reducing cat populations over the long term.”¹⁵⁴ Dr. James Ross, DVM, a Distinguished Professor at Tufts University, concurs: “My experience with feral cat control using the trap, neuter, release (TNR) method in the British Virgin Islands has been very positive. It is a humane way to control the feral cat population. I endorse it in most of the ecosystems I’ve experienced.... I trust you will find it as useful as I and others have.”¹⁵⁵

¹⁴⁹ *Ibid.*

¹⁵⁰ Correspondence with Ed Boks, July 16, 2004. Mr. Gecewicz also served as Director of Health in Braintree, Mass., from 1977 through 1990, and as Executive Health Officer in Braintree from 1996 through 1999.

¹⁵¹ Correspondence with Ed Boks, July 16, 2004.

¹⁵² “The Humane Solution: Reducing Feral Cat Populations with Trap Neuter Return” [video], Alley Cat Allies, 2001.

¹⁵³ Slater, p. 76.

¹⁵⁴ Levy, p. 387.

¹⁵⁵ Correspondence with Ed Boks, July 16, 2004.

In Dallas, Texas, Kent Robertson, manager of Dallas Animal Services, fully endorses TNR and works with local feral cat groups to implement the method: “TNR is much better than killing cats! I hate doing that, but I didn’t know what else to do.”¹⁵⁶ In Seattle, Don Jordan, executive director of the Seattle Animal Shelter, has also turned his animal control agency towards TNR. “Based on the studies out there, we have to take a more active role in helping to manage feral cats. Communities must recognize that there is value in getting populations fixed and stable. This problem is not going to go away unless we all become involved.”¹⁵⁷

The ASPCA, which is a powerful force locally for animal welfare and one of the nation’s oldest and most respected animal organizations, promoted TNR in a cover story for the Fall 2003 edition of its magazine, *Animal Watch*¹⁵⁸ and runs its own thriving TNR program.¹⁵⁹ As noted, the Mayor’s Alliance for NYC’s Animals, an organization that has increasingly become a national model for creating community solutions to chronic companion animal overpopulation, strongly backs TNR,¹⁶⁰ as does the long-established Humane Society of NY, another trailblazing institution.

Conclusion

AC&C stands in a unique position with respect to the free-roaming cat crisis in New York City. It receives the bulk of complaints from the public, must be the first agency to decide how to respond, and is forced to deal with the negative consequences of too many cats, including overcrowded shelters and financial burdens. The methods of the past – a mixture of trap-and-kill and doing nothing – have had no impact. Even if the resources were available for AC&C to attempt a wholesale removal of the cats, which they’re not, the effort would fail due to feral population dynamics and public opposition.

Trap-Neuter-Return alone holds out the possibility of turning the crisis around, stemming the flood of homeless cats into shelters, and lowering costs. To fully realize the potential of TNR to solve our city’s severe and costly feral cat overpopulation crisis, it is critical for AC&C to get involved and help coordinate the effort. Otherwise, the practice of TNR will remain out of the hands of AC&C, while the ramifications of the technique’s success or failure will fall fully upon it. AC&C, as the city’s official animal control agency, must assume a role of leadership in the implementation of this most crucial animal control method. Therefore, it is respectfully requested that the Board of Directors endorse Operation FELIX.

¹⁵⁶ *Alley Cat Action*, Summer 2004, p. 5.

¹⁵⁷ *Id.* at p. 6.

¹⁵⁸ Appendix 18 (Comings, Karen, “TNR: The Humane Alternative,” *ASPCA Animal Watch*, Fall 2003, p. 22.)

¹⁵⁹ See www.aspc.org/tnr

¹⁶⁰ Richard, Julie, “Great Expectations! New Mayor’s Alliance comes to the rescue of New York animals,” *Best Friends*, July/August 2004.