BALTIMORE CITY COUNCIL
JUDICIARY AND LEGISLATIVE INVESTIGATIONS COMMITTEE

Mission Statement

On behalf of the Citizens of Baltimore City, *the mission of the Judiciary and Legislative Investigations Committee is to investigate and study the continuing operations, efficiency, and functions of Baltimore City government in accordance with the laws of Baltimore City, the State of Maryland, and the United States.*

As a result of its investigations and studies, the Committee will recommend and oversee reforms to improve the operations of Baltimore City's government through legislative, administrative, and/or budgetary processes.

The Honorable Eric T. Costello
Chairman

PUBLIC HEARING

Tuesday, September 26, 2017
10:05 AM
CLARENCE "DU" BURNS COUNCIL CHAMBERS

Council Bill 17-0042R
Informational Hearing - Feral Cats

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Rev. 1/3/17

CITY OF BALTIMORE
CATHERINE E. PUGH, Mayor

OFFICE OF COUNCIL SERVICES
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BILL SYNOPSIS

Committee: Judiciary and Legislative Investigations

Bill 17-0042R

Informational Hearing - Feral Cats

Sponsor: *Councilmember Henry, et al*
Introduced: *September 11, 2017*

Purpose:

For the purpose of requesting that representatives from the Health Department's Office of Animal Control appear before the City Council to discuss feral cats in Baltimore and whether the City's current approach to feral cats should be modified or remain the same.

Effective: 30 days after the date it is enacted.

Hearing Date/Time/Location: September 26, 2017/10:05 a.m./Clarence "Du" Burns Chamber

Agency Reports

Health Department — Comments

ANALYSIS

Current Law

Under § 10-104(5) of the Baltimore City Health Code, the Health Commissioner may adopt rules and regulations regarding the "approval of programs to trap, alter, vaccinate for rabies, ear tip, and return feral cats." Under §10-403(e), a feral cat caregiver is exempt from the prohibition against abandoning animals. The Baltimore City Health Commissioner issued regulations for the City's trap-neuter-return ("TNR") programs, which provide guidance as to which organizations may participate.

Participation criteria include using "humane trapping techniques," temporarily boarding and feeding community cats in compliance with applicable law, using "a person authorized... to alter, tip ears," "[vaccinating] community cats," returning said cats to their original location or to a shelter, and ensuring that any cats "not suitable for return to their original locations" are surrendered to an animal shelter. The agency's regulations also include certain definitions, guidelines for Animal Control when dealing with surrendered animals, the responsibilities and acceptable standards of care for TNR programs, and the responsibilities of Animal Control in overseeing TNR programs.

Background

Council Bill 17-0042R calls upon representatives of the Baltimore City Health Department, specifically the Office of Animal Control, to provide a report on the efficacy of the City's TNR programs. The Health Department has provided comments on this Resolution, and notes that TNR "has been extremely effective in reducing the stray cat population by ending the cycle of breeding, which has reduced the number of free-roaming cats." It added that the program "prevents unwanted litters, stops the growth of the population, and reduces nuisance behaviors like spraying, fighting, and roaming." The program receives funding from "State and private grants," including a 2013 grant from PetSmart Charities and Best Friends Animal Society.

According to the Baltimore Sun, Best Friends Animal Society states that "there are more than 1,100 [feral cat] colonies in [Baltimore City]." The Office of Animal Control notes that there are two participants in its TNR program including "BARCS and Community Cats of MD, Inc." Both programs assist in spaying or neutering cats.

Additional Information

Fiscal Note: Not Available
Information Source(s): Health Department; Baltimore Sun

D'Paul S Nibber

Analysis by: D'Paul S. Nibber Direct Inquiries to: (410) 396-1268
Analysis Date: September 22, 2017

CITY OF BALTIMORE
COUNCIL BILL 17-0042R
(Resolution)

Introduced by: Councilmembers Henry, Reisinger, Clarke, Middleton
Introduced and read first time: September 11, 2017
Assigned to: Judiciary and Legislative Investigations Committee
REFERRED TO THE FOLLOWING AGENCIES: Health Department

A RESOLUTION ENTITLED

A COUNCIL RESOLUTION concerning

Informational Hearing – Feral Cats

FOR the purpose of requesting that representatives from the Health Department's Office of Animal Control appear before the City Council to discuss feral cats in Baltimore and whether the City's current approach to feral cats should be modified or remain the same.

Recitals

Feral cats, cats that are unsocialized to humans and have a temperament of extreme fear of and resistance to contact with humans, are a reality in all communities, and Baltimore is no exception. Over time, understandings about how they should be treated have evolved and a number of different approaches to managing their presence in urban areas have been tried.

Nearly 10 years ago Baltimore changed its laws on, and approach to, feral cats to encourage efforts by the City and private individuals to trap, alter, vaccinate, ear tip, and return feral cats. Provisions were also added to the law to allow feral cat caregivers to engage with feral cats and feral cat colonies without violating City law.

A decade into this approach it is appropriate to review how it is working in Baltimore and whether or not changes may be required. The effects of this policy on cats, communities, and Animal Control employees should be examined to see if it is succeeding in its goals or if modifications to the current approach would benefit everyone involved.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF BALTIMORE, That the Council requests that representatives from the Health Department's Office of Animal Control appear before it to discuss feral cats in Baltimore and whether the City's current approach to feral cats should be modified or remain the same.

AND BE IT FURTHER RESOLVED, That a copy of this Resolution be sent to the Mayor, the Health Commissioner, the Director of Animal Control, and the Mayor's Legislative Liaison to the City Council.

EXPLANATION: Underlining indicates matter added by amendment.
~~Strike-out~~ indicates matter deleted by amendment.

dk17-0349~1st/12Sep17
ccres/cb17-0042R~1st/tw:nbt

JUDICIARY AND LEGISLATIVE INVESTIGATIONS COMMITTEE

Council Bill 17-0042R

Hearing Date: September 26, 2017

Agency Reports:

- **Health Department**
  - **Comments**

FROM				
	Name & Title	Dr. Leana Wen	Health Department	
	Agency Name & Address	Health Department 1001 E. Fayette Street Baltimore, Maryland 21201	MEMO	
	Subject	17-0042R – Informational Hearing – Feral Cats		

To: President and Members
of the City Council
c/o 409 City Hall

September 21, 2017

The Baltimore City Health Department (BCHD) is pleased to have the opportunity to review 17-0042R – Informational Hearing – Feral Cats. The purpose of this resolution is to review the City's approach to feral cats and determine whether it needs to be modified.

Issues associated with stray cat populations are of national importance because of the animal welfare and public health concerns. The two options used to manage the overpopulation have been to either trap and euthanize or Trap-Neuter-Return (TNR) programs.

For many years, the Office of Animal Control trapped and euthanized thousands of cats in an attempt to control the steadily increasing population. This policy did not demonstrate success in reducing the number of stray and abandoned cats in the community. Concurrently, feeding bans – which were ineffective and difficult to enforce – were put in place. In addition to being ineffective, these bans were extremely inhumane, as they forced cats that were already dependent on a source to find a new, likely insufficient resource of food.

Ten years ago, BCHD, with the assistance of local residents and animal advocates, researched best practices to adopt a more humane and effective method in handling the City's stray cat population. This process emanated from the realization that mass euthanasia and feeding bans were not successful in actually reducing the stray cat population. Studies have been conducted to determine the efficacy of such programs, and found that euthanasia required greater effort and financial burden to control the population compared to comprehensive TNR programs.

As a result of this process, the City's Health Code was amended to allow for a TNR program. This program has been extremely effective in reducing the stray cat population by ending the cycle of breeding, which has reduced the number of free-roaming cats. TNR prevents unwanted litters, stops the growth of the population, and reduces nuisance behaviors like spraying, fighting, and roaming.

This program has been successfully utilized in other cities throughout the U.S. and has significantly progressed in Baltimore City over the years as more resources have been made

available to fully implement the program. In 2013, the City accepted a $1million grant from Petsmart Charities and Best Friends Animal Society to fund staff and resources to TNR thousands of cats each year, and the program continues to receive funding through State and private grants to continue its mission.

BCHD appreciates the opportunity to present this information to the Council, and highlight the success the TNR policy has demonstrated in the decade since its inception.

JUDICIARY AND LEGISLATIVE INVESTIGATIONS COMMITTEE

Council Bill 17-0042R

Hearing Date: September 26, 2017

Attachments:

- **Office of Animal Control's Trap, Neuter, and Release program regulations**
- **"Fight brewing in Baltimore over wild, stray cats" – WBAL**
- **"These feral cats aren't put down, they're put to work" - 9news**
- **Public Testimony**
  - **Matthew Barrett**
  - **Donna Belbeck**
  - **Melanie Berry**
  - **Kelsey Bettridge**
  - **Ruth Canan**
  - **Emily Chalmers**
  - **Dana Coyle**
  - **Moira Horowitz**
  - **Gretchen Knell**
  - **Cherron Kofford**
  - **Sonya Kunkle**
  - **Susanne MacKenzie**
  - **Samantha Morrow**
  - **Daniel Reiner**
  - **Kate Schulz**

BALTIMORE CITY HEALTH DEPARTMENT

REGULATIONS
FOR
TRAP-NEUTER-RETURN PROGRAMS

December 5, 2013

Supersedes all prior versions

OFFICE OF ANIMAL CONTROL

301 STOCKHOLM STREET

BALTIMORE, MARYLAND 21230

I. Summary

The Commissioner of Health of Baltimore City is amending the Department's Trap-Neuter-Return Program Regulations to include all free roaming cats.

II. Background

A. Legal Authority

In 2009, pursuant to Sections 10-104 and 10-308 of the City Health Code, the Commissioner of Health adopted regulations governing approval of programs to trap, neuter and return (TNR) feral cats. At the time, the Commissioner recognized that some feral cats have become accustomed to human interaction, and noted that these cats would continue to be recognized as a feral cats as long as they were not adopted, which means taken into a home for the purpose of being kept and maintained as a pet.

Under Title 10, Animal Control and Protection, of the City Health Code, the Commissioner is responsible for adopting regulations that, among other things, may govern the general care and control of animals, and define or further define terms used in the Title. Section 2-104 of the City Health Code provides that the Health Commissioner is responsible for preventing disease and nuisances affecting public health; the Health Commissioner has the duty to "to remove and abate nuisances" and to require "the removal of all nuisances ..." Health Code §§ 2-105(5) and 5-102. Section 5-101(b) of the Code inclusively defines nuisances as "any other health or safety hazard." Finally, under§2-106 of the Baltimore City Health Code, the Health Commissioner may adopt and enforce regulations to carry out her duties described above. All of these provisions support the Commissioner's effort to regulate the number, health, and reproduction of cats roaming free in the City.

B. Need for Regulation

Since 2009, the problem of feral cats has been recognized as involving not just cats extremely afraid of humans but also cats that are free roaming but not fearful of humans. These free roaming cats pose the same animal control, nuisance, and health issues as feral cats and similarly need to be neutered or spayed and vaccinated to limit their population.

REGULATIONS
FOR
TRAP-NEUTER-RETURN PROGRAMS

A. Definitions

1. "Abandoned/Lost Cat" means a customarily indoor cat who is found outside, due to being abandoned or lost, but is not acclimated to living outdoors as evidenced by its overall poor condition or anecdotal evidence provided by a person with credible knowledge of the cat's current or former owned status."Cat" means a member of the species *Felis Catus*.
2. "Community cat" means a cat that is either a feral cat or a free-roaming cat. Free-roaming cats may be considered feral for purposes of a TNR program unless identified otherwise but excludes an Abandoned/Lost Cat.
3. "Community cat colony" means a group of cats that congregate together. Although not every cat in a colony may be a community cat, any cats owned by individuals that congregate with a colony are considered part of it.
4. "Feral Cat" means a cat that is un-socialized to humans and has a temperament of extreme fear of and resistance to contact with humans.
5. "Feral Cat Caregiver" means any person who, in accordance with a Trap-Neuter-Return program approved by the Commissioner:
    a. provides care, including food, shelter, or medical care, to Community Cats; or
    b. has temporary custody of Community Cats.
6. "Free-roaming cat" means a cat without discernible signs of ownership or microchip or owner identification of any kind, that has its claws and is homeless, either due to being abandoned or lost, and that is presumed cared for because it is healthy and in overall good condition and is acclimated to outdoor living. All free-roaming cats may be considered feral for purposes of a TNR program. "Office" means the Baltimore City Health Department, Office of Animal Control
7. "Trap-Neuter-Return Program" (TNR) means a program approved by the Baltimore City Health Department to trap, alter, vaccinate for rabies and distemper, ear tip, and return Community Cats to their original location.

B. Approval Trap-Neuter-Return Programs.

1. An organization that wishes to operate a TNR Program in the City shall submit an application in the form and with the information required by the Health Commissioner.

2. The Commissioner will approve the organization's application to operate a TNR Program in the City if the organization demonstrates that it will:

a. only use humane trapping techniques
b. temporarily board and feed trapped Community Cats humanely in compliance with City and State law
c. use a person authorized under the Maryland Agriculture Code to alter, tip ears (in the style directed by the Commissioner)
d. vaccinate Community Cats
e. return the trapped Community Cats to their original location or in cases where a willing adoptive family is present, surrender the Community Cat to the animal shelter responsible for arranging the adoption and
f. any Community Cats not suitable for return to their original locations will be surrendered to an animal shelter for adoption, fostering, or euthanasia. An organization authorized to operate a TNR Program shall operate in accordance with its approval by the Commissioner.

3. Each TNR Program will not knowingly include an unacclimated Abandoned/Lost Cat in their TNR Program.

4. Each TNR Program will return Community Cats to their original locations unless Animal Control deems it inadvisable because conditions in the original location pose a direct threat to the cats' lives.

5. Each TNR Program will use reasonable effort to identify feral cat caregivers and others who will feed the returned cats at their original locations.

6. Each TNR Program will check each trapped cat to see if it has visibly discernible signs of ownership or microchip or owner identification of any kind.

7. Each TNR Program will use reasonable efforts to contact the owner of cats with such signs of ownership or will surrender the cat(s) to an animal shelter that will make such contact efforts. If the TNR program cannot contact the owner, it will surrender the cat to an animal shelter.

C. Surrendered Cats

1. Before accepting a surrendered cat, the Office of Animal Control or its contracted animal shelter shall tell the person directly surrendering the cat that the cat may be included in a TNR Program. The TNR Program parameters must be explained to the person surrendering the cat and written materials about the program provided.

2. Presumed Owners surrendering a cat that they can no longer care for may opt out of a TNR program.

D. Responsibilities of the Feral Cat Caregiver and Acceptable Standards of Care

1. Feral Cat Caregivers will make reasonable, good faith efforts to have all cats in a Community cat colony altered, ear-tipped for identification, vaccinated against rabies and distemper, and returned to their home site following full recovery from surgery.
2. Feral Cat Caregivers will make reasonable, good faith efforts to have any new cat(s) that comes to the Community cat colony altered, ear tipped, and vaccinated against rabies and distemper as soon as possible.
3. Feral Cat Caregivers shall provide food and water to the Community cat colony on a regular basis, year round, using best practices to minimize, as reasonably as possible, any nuisance and/or unsanitary conditions.
4. Feral Cat Caregivers will provide adequate shelter (in number and quality) for the Community cat colony using best practices to minimize nuisance.
5. Feral Cat Caregivers will make reasonable, good faith efforts to provide needed veterinary care to cats in the Community cat colony that are visibly ill or injured.
6. Feral Cat Caregivers shall keep and maintain records for each cat in a Community cat colony, including each cat's rabies vaccination record/certificate.
7. Feral Cat Caregivers shall make reasonable, good faith efforts, using best practices, to exclude cats from yards, gardens or similar property upon request of the property owner.
8. Feral Cat Caregivers will generally make reasonable efforts to address and resolve complaints regarding Community cat colony cats.
9. Feral Cat Caregivers will ensure that a substitute caregiver is in place during the Feral Cat Caregiver's temporary or permanent absence.

E. Responsibilities of the Office of Animal Control

1. The Office will continue to trap and seize those Community or other cats that pose an imminent health risk to the public, or are severely injured or sick.
2. A citizen aware of Community Cats without ear tips may call the 311 Call Center for assistance in locating a TNR Program's phone number, e-mail, or address for further assistance or questions,
3. The Office will enforce the standards of care applicable to Feral Cat caregivers. The Office may refer violations of the standards of care to the appropriate TNR Program for assistance in correcting the violations. A caregiver has up to 60 days to come into compliance with the standards of care. The Office may reduce the time to come into compliance if the Office or the assisting TNR Program concludes that the Feral Cats' conditions place their welfare or that of human beings in jeopardy.

4. The Office may recommend to the Health Commissioner the revocation of approval and the Health Commissioner may revoke approval of a TNR Program if that TNR Program fails to meet the standards set forth in this regulation, in addition to any other applicable penalties under the Baltimore City Health Code.
5. Anyone aware of a Community Cat (with an unknown owner) bite must report it to the Office.

The above Regulations for Trap-Neuter-Return Programs are hereby adopted:

Approved: Oxiris Barbot 12/4/13

Oxiris Barbot, M.D.
Health Commissioner

Date

Effective date when filed with the Department of Legislative Reference: 12-5-13

Received on behalf of the Department of Legislative Reference
Nancy Boyd Kay

Fight brewing in Baltimore over wild, stray cats

Program designed to reduce stray cat population

Updated: 3:56 PM EDT May 16, 2016

Barry Simms
I-Team Reporter

BALTIMORE — There's a catfight brewing in a Baltimore City neighborhood, where residents are angry about the number of cats roaming the streets, fed by a neighbor, all as part of a city program designed to reduce the number of wild and stray cats.

Mark Weisner is tired of damage to his car and around his home that's blamed on feral cats in his Ednor Gardens-Lakeside neighborhood of Baltimore City.

"My biggest frustration is the first thing I see every night is a cat, if not two cats or three or four cats," Weisner said.

Neighbor Kate Bruffett said she has tried all kinds of deterrents to keep the cats away from her home, including coyote urine and an electronic device.

"(I use a) cat sonar system. It's supposed to emit a sound cats don't like and prohibits them from coming into your yard. It does not work whatsoever," Bruffert said. "They are all over the place. They are constantly on my porch, leaving me gifts in my yard and using it as a litter box."

There's a front porch that looks like a shelter on the same block with cats coming and going all day long and a food supply sitting out for hours. Neighbors call it an eyesore, saying it attracts not only cats, but flies and possibly rats.

But a public nuisance for some is considered a public service by others. Sheri Artz, who owns the house, said the cats are not her pets. She said she is a volunteer caregiver with the city's trap-neuter-return program.

"No one asked me to step forward, and I didn't do it of my own. I did it with compassion and a great deal of responsibility," Artz said.

The three-year pilot is run by an organization called Best Friends Animal Society. It said it's designed to reduce the problem of feral and free-roaming cats over time by trapping, spaying or neutering, and then releasing them back to the same neighborhoods where they were originally found.

Best Friends said 19 feral cats belong to the colony in this neighborhood, and there are more than 1,100 colonies in the city.

Residents complained to the city, and Weisner eventually got an administrative hearing.

"It's a quality-of-life and a property value and quality-of-the-neighborhood issue," Weisner said.

Weisner said he thinks the cats have more rights than people. He's so fed up that he wants the city to go back to what it did in prior years.

"I want the City Council to re-examine the trap-neuter-return program and think about going back to the trap-and-euthanize program," Weisner said.

But the city wants to keep the trap-neuter-release program.

"Our goal is to decrease the number of cats, and we know this is a humane solution. There is no other solution that works," said Jennifer Brause, executive director of the Baltimore Animal Rescue and Care Shelter.

Best Friends said fewer kittens are entering the shelter, which it said is a strong indicator of a reduction in outdoor cats breeding.

As for complaints about the scratching posts, broken blinds and food left on Artz's front porch, Artz said, "Yes it did get messy, and yes, I completely take ownership that I had it up too long. I work long hours, not to make excuses, I kept putting it off."

Best Friends recently helped clean up the mess.

"It's still a work in progress. We've been working with the caregiver to make changes to her property as well," said Rebecca Sass-Crews, with Best Friends Animal Society.

The group had Artz move the feeding bowls to the backyard and told her the cat food should only be placed outside for a short time twice a day.

Neighbors said they hope the actions will help, but the dispute may not end until all the cats are gone, which could take years.

Best Friends said that before cats are returned to the neighborhood, they are ear-tipped for identification purposes and vaccinated as necessary.

These feral cats aren't put down, they're put to work

Diana Kruzman, USA TODAY , KUSA *12:37 PM. MDT July 12, 2017*

(Photo: Diana Kruzman, USA TODAY)

USA TODAY - In a large brick warehouse east of Los Angeles, Richard Medina hired a pair of guards to keep intruders from pillaging the pallets of gourmet drinks and snacks that were stored there.

They were lazy from the start, and one even ran off. But the one that remained, a feline with the utilitarian name of "Black Cat," is getting the job done: protecting Los Angeles Distributing Company from rodents.

Black Cat is one of many neutered feral cats that "no-kill" shelters are giving to businesses and individuals to help control pests, and to spare the felines' lives. They are not considered pets, but rather "working cats."

Medina, who helped found the food and beverage distributor, received his animals through a working cat program at the Los Angeles shelter of the Best Friends Animal Society. The organization, based in Kanab, Utah, is trying to end unnecessary pet euthanasia. "We're guided by a desire to make this a country where that doesn't happen anymore," said Gregory Castle, CEO of Best Friends.

So far, the program has placed 75 cats since starting last year. And it's happening elsewhere around the country:

St. Paul. At the Animal Humane Society in greater Minneapolis-St. Paul, the Barn and Business Cat program has placed 336 of the animals since the initiative began in January 2015, says shelter spokesman Zach Nugent.

Baltimore. In Maryland's Baltimore Animal Rescue and Care Shelter, Amber Ketchum has found homes for 54 cats since December 2016, from urban warehouses and breweries to rural horse farms and a vineyard.

Phoenix. The Arizona Humane Society has saved 730 cats from euthanasia since January 2014, says shelter spokeswoman Bretta Nelson — mostly those with behavioral issues that prevent them from living indoors.

But placing cats in businesses is only a dent in the problem of unwanted pets.

Though the number of animals euthanized in shelters has been decreasing, about 860,000 cats are still killed each year, according to the American Society for the Prevention of Cruelty to Animals. Many city shelters simply don't have space to house them and many are too wild to make good house pets.

That's where working cats programs come in – as a last-chance solution. Many cities have programs that trap, neuter and release feral cats to prevent them from reproducing while keeping them on their home turf. But in some areas, that's either impossible or illegal, and working cat programs are the only alternative to euthanasia.

"There has to be a place in society for these cats," says Melya Kaplan, the founder of the Voice For The Animals Foundation in Los Angeles. "They have no other option."

Typically, working cats start out living on the streets, where they learn to fear human contact, says Marc Peralta, who runs Best Friends' Los Angeles shelter. Some are captured by animal control officers and brought to shelters run by the city — which is where Best Friends gets the majority of its working cats.

"It's a different way to save their lives," Peralta said. His organization keeps around 50 cats at a time in an open-air enclosure a short walk away from Best Friends' main adoption area. There, after being spayed or neutered so they can no longer breed, they receive food, shelter and medical attention until someone decides to adopt them.

If they start working, the cats don't have to actively seek out rats or mice. Medina, for instance, said his warehouse has never had a rodent problem. Rodents stay away when they pick up the scent of a cat.

Besides businesses, the program has placed cats with individuals who need rodent control in more rural areas.

Brittany Sorgenstein, a 35-year-old resident of Santa Clarita, Calif. raises turkeys, goats and a rabbit on a 2.5-acre parcel of land that includes a barn and a pasture, less than an hour away from downtown Los Angeles. She says that for five years, she could not get rid of the rats, which ate the food she stored for her animals.

Sorgenstein says she was hesitant to use solutions like poison or rat traps that she saw as cruel. Through her work at the Best Friends Animal Society – where she is a dog caretaker – she found out about the working cat adoption program and decided to give it a try. In May of last year, she adopted two cats, Bonnie and Clyde.

It's not always perfect. They may occasionally kill birds or other wildlife, which is why some environmental activists are against releasing feral cats back into society, says Rebekah DeHaven, an attorney for the animal rights organization Alley Cat Allies. But she added that most communities don't see feral cats as a large problem if they are fixed and disease-free.

"People would rather leave cats in their outdoor homes than have them brought to a shelter and killed," DeHaven said. "It's not a politically viable option."

From: Best Friends Animal Society [mailto:Legislative@bestfriends.org] On Behalf Of Matthew Barrett
Sent: Wednesday, September 20, 2017 11:56 AM
To: Henry, Bill (email)
Subject: Please support Baltimore's TNR program

Sep 20, 2017

Council Member - Baltimore City Council - District 04 Bill Henry Room 502
100 Holliday Street
Baltimore, MD 21202-3427

Dear Council Member - Baltimore City Council - District 04 Henry,

As a Baltimore resident and taxpayer, I am deeply concerned that the city council is now questioning "whether the city's current approach to feral cats should be modified or remain the same."

In fact, Baltimore's trap-neuter-return (TNR) program, now 10 years old, has become a model for communities across the country. Through a series of innovative, collaborative partnerships, supported by the tireless efforts of hundreds of volunteers, several thousand cats have been sterilized, vaccinated and returned to their neighborhoods.

This common-sense approach protects public health and saves tax dollars. It's also more animal-friendly and reduces the burden on our city's animal shelters. For example, over the span of just three years, intake of kittens to the Baltimore Animal Rescue and Care Shelter was reduced by 39 percent. No wonder other cities are looking to Baltimore as a model of progressive animal control policies!

Rather than second-guessing this kind of success, the city council should double down on its commitment to support such programing.

I urge you to support Baltimore's TNR efforts.

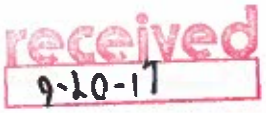
Thank you for your consideration in this important matter.

Sincerely,

Mr. Matthew Barrett
5815 Meadowood Rd
Baltimore, MD 21212-2434
(410) 537-5461
mbarrett@brownadvisory.com

From: Alley Cat Allies [mailto:info@alleycat.org]
Sent: Wednesday, September 20, 2017 6:25 PM
To: Henry, Bill (email)
Subject: I support Baltimore's Trap-Neuter-Return Program

Sep 20, 2017



Council Member Bill Henry
Baltimore, MD

Dear Council Member Henry,

I, Donna Belbeck, believe in the program TNT to best take care of feral cats in Baltimore. This program works and does keep population down. I am not physically involved, but will continue to add my voice in favor of keeping the cats from multiplying and starving. My own pets have been rescue cats and have clipped ears marking them as been neutered. From what I see as a past city resident, we needed the program in more neighborhoods.
Without TNT, more kittens will be born to a harsh climate and starvation will end many lives if the male don't eat them first. Plus, more unsanitary conditions and disease will pop up. We owe it to protect feral cats.

Sincerely,
Donna Belbeck
catdeedeerae@aol.com

Sincerely,

Mrs. Donna Belbeck
1253 Elm Rd
Halethorpe, MD 21227-3939
(443) 813-0615
catdeedeerae@aol.com

From: Melanie
To: Nibber, Dpaul; Henry, Bill (email)
Subject: Informational Hearing on TNR
Date: Monday, September 18, 2017 10:22:50 PM

Hello,

I will not be able to attend the meeting on Tuesday, but wanted to express my full support of the TNR program in Baltimore. In recent years, several of my Radnor-Winston neighbors have "adopted" cats through this program and I now see several "regulars" around my home and yard. What I do not see are the rats, which in the past had become a challenge, due to the close proximity of York Road and a Popeye's restaurant.

The TNR cats have greatly reduced the rat population, without the use of dangerous chemicals or traps. While feral cats generally avoid human contact, neighbors who agreed to provide food and cold weather shelter (as mandated by the TNR program) have followed through on their commitments and the cats appear to be healthy and well adjusted. I'm grateful for the contribution they make in keeping my yard rodent-free for the past several years and eliminating the need to use city services such as the Rat Rub-Out program, which has previously provided poison and traps.

I urge you to continue to support this program as a benefit to the citizens of Baltimore and of course - to the cats who deserve our support and protection.

Thank you.

Melanie Berry
400 Rossiter Avenue
Baltimore, MD 21212

Nibber, Dpaul

From: Kelsey Bettridge <kelsey.bettridge@gmail.com>
Sent: Thursday, September 21, 2017 4:54 PM
To: Nibber, Dpaul
Subject: re: TNR program for feral cats in Baltimore City

Hi Mr. Nibber,

I urge the Baltimore City Council to keep the Trap-Neuter-Release (TNR) program in place instead of switching to extermination. Not only are TNR programs the most successful programs for controlling feral cat populations to date, they are also the most cost-effective.

Please feel free to share these studies with the council members:
https://www.animalsheltering.org/page/community-cats-scientific-studies-and-data

Best wishes,

Kelsey

Kelsey Bettridge
Hopkins Swim Club President
Ph.D. Candidate, Xiao Lab
Johns Hopkins School of Medicine
(410) 614-1760

Ruth Canan
5006 Beaufort Avenue
Baltimore, Maryland 21215
Phone: 443-340-9870
E-mail: R.Canan30@gmail.com

September 19, 2017

Baltimore City Councilman Eric Costello,
Chairman of the Judiciary & Legislative
Investigations Committee
Eric.Costello@baltimorecity.gov

Re: Resolution 17-0042R, Informational Hearing – Feral Cats

Dear Councilman Costello:

I am writing to provide information responsive to the above Resolution. I have been a feral cat caretaker since 2002 for colonies in two neighborhoods where I have lived in Baltimore City – in Ten Hills 21229 (from 2002 through 2011) and in Langston-Hughes 21215 (from 2012 to the present). Additionally, I was a volunteer and then Board member of Community Cats MD, Inc. ("CCMD") from 2009 through March, 2016; and I have been a member of the City's Animal Hearing Panel since July 2013, and Chairman of the Panel since 2015. I am an attorney by trade. The information that I provide here is specific to my own experience as a feral cat colony caretaker. I attempt to answer, at least for my part/experience as a caretaker[1], the Council's questions about the effects of the City's TNR policy and regulation on both the cats and the community. And, within my answers here, the Council may also find information that may generally educate on TNR practice/experience. This letter is organized into two sections, including: A. The Effects of the City's TNR Policy/Regulation on Cats; and B. The Effects of the City's TNR Policy/Regulation on the Community. Each section will be subdivided per my colony in Ten Hills-21229 (from 2002 through 2011), and the colony I currently care for in

1 Note: Although I have volunteered extensively with CCMD, including as a Board member in the past, and am currently a member of the City's Animal Hearing Panel, I am providing you with information only from my perspective and experience as a feral cat care-taker. You will hear from others at CCMD, including its founder, Peg Nemoff, who will share their long experience and authoritative expertise on TNR practice as well as CCMD's vital low-cost TNR medical clinic experience; and although I am a member of the City's Animal Hearing Panel, with experience in interpreting Title 10 the Baltimore City Health Code, this experience has only to do with cases brought before the Panel and does not have to do with the expertise of the Animal Control Bureau relative to enforcing Title 10 of the Baltimore City Health Code on a day-to-day basis in the City on behalf of the public's and animals' welfare and protection, including free-roaming cats (feral and stray/abandoned friendlies).

Langston-Hughes-21215 (from 2012 to the present).

A. THE EFFECTS OF THE CITY'S TNR POLICY/REGULATION ON CATS.

1. **Colony at Ten Hills-21229 [*i.e.*, that portion of Ten Hills at Kensington Rd/Drury Ln, Brook Green, Woodside Rd, and N. Chapel Gate Ln, including the wild ravine bordering the curve from Brook Green, Drury Ln, Kensington Rd, to N. Chapel Gate Ln]. Care-taking period: 2002 through 2011.**

(a) Background for Ten Hills colony:

The environment is very green, with forest-like ravine and surrounds, lots of wildlife (foxes, raccoons, deer, hawks, etc.) middle economic class residents, single-family homes built in the early 1900's, historic district, each home with lush green yards including grass, brush and bush, ground-cover, gardens, and old old tall canopy, fur, evergreen, and fruit/flowering trees, and with very light automobile traffic once inside Ten Hills.

The population of free-roaming cats in the Ten Hills colony – was/is 95% feral – very few friendly stray/abandoned free-roamers.

Natural dangers that the cats faced in the neighborhood includ[ed] predators (foxes), human bb gun shooting, injury, disease, continuing pregnancies, hardship from harsh weather elements, territorial fighting (among the male cats especially), institutionalized euthanasia if trapped and surrendered to a shelter or Animal Control (because adult feral cats are not adoptable).

(b) The benefit to the Ten Hills cats, in general, of TNR practice (and confirmed by City TNR policy/regulation):

The practice of TNR, (daily feeding and watering, monitoring when possible, initial trapping for spay/neuter and vaccinating, subsequent trapping [if possible] for any subsequent injury or disease/distress, etc.), prior to and after confirmation of the practice in 2007 through the City's TNR regulations and policies, benefited (and continues to benefit) the cats by reducing and/or eliminating the following dangers (sufferings): (1) injury, (2) disease, (2) continuing pregnancies, (3) hardship from harsh weather elements, (4) institutionalized human killing. Additionally, the practice of TNR benefits the cats with human companionship. Even though the feral cats will never become socialized to allow touching, they respond positively to caring human companionship and direct relation. And, through this relating the cats do form a style of trust, so that should they ever become in distress and need assistance, they do know where they can find assistance – even though they must still be trapped in order to assist[2].

2 For example, in 2003 I had bonded with one particular feral – a female. In November of that year, she was shot in the ravine by a person with a bb gun. The shot shattered her leg. I came home from work, after dark, and found her in my

i. *Some[3] Detail of Note Related to the Benefits to Ten Hills Colony Cats:*

– Initial colony size at the time I first started caring for the cats through TNR in 2002/2003 – **approximately 20**; Colony size at the time I moved away[4] from the neighborhood at the end of 2011 – **approximately 8 cats**.

– Number of kittens removed from the colony and found homes for from 2003 through 2007 or so (by 2007 or so the colony was fully TNR'd – no kittens after 2007 or so) – **approximately 18**. NOTE: *Prior to 2006 I was spaying/neutering and vaccinating the cats through my own veterinarian, which was quite costly and it took a while, given this cost, to spay and neuter the cats – this work then went quite slowly until in 2006 I became informed of the low-cost TNR clinic run by Peg Nemoff of the Maryland Feline Association up at the MD SPCA pump house and then found I could spay/neuter and vaccinate the cats "en masse." This low cost TNR clinic resource moved eventually to be run out of BARCS by Peg Nemoff through the 501c3 she founded – Community Cats MD, Inc. ("CCMD").*

– Number of adult cats over the years able to received medical care for injuries and disease, or who received humane euthanasia intervention to prevent a terrible suffering death – **approximately 5.**

– All cats of the colony received daily food and fresh water; all cats were eventually spayed/neutered and vaccinated against rabies and distemper, and ear-tipped; all cats received bolstered shelters during the hard cold winters. While I performed most of the TNR clinic trapping and

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back yard shelter. I knew immediately that something was wrong as she did not come out for food (and, she was in the shelter, in the first instance – which never happened until all humans were in bed for the night in the house). She timidly poked her head out the front of the shelter and hissed at me. I could not see her, but knew something was wrong as this behavior was so unusual for her. I packed up the whole shelter (it was a transformed old huge guinea pig cage – the old style) with her in it, and brought her to my vet. My vet, practiced in feral cats, was able to safely get her out of the shelter/cage, and sedate her to examine her. My vet found that the cat had been shot by a bb gun, that had shattered the cat's rear leg. I authorized surgery for the cat, and I later cared for the cat in my home for months, for recovery. Upon speaking with my neighbors about this cat, one of them informed me that she had observed the cat from her window during the day. The cat came limping and dragging herself up out of the ravine, up the street, and up my driveway. To this day I am so grateful I had formed a bond of trust with this cat – or she never would have come to me, to my shelter, for assistance. And, she would have died a horrible death either from foxes, or from painful infection.

3 It is impossible to set down all of the detail of colony care experience.

4 My neighbors, who by that time had also become involved in caring for the cats, took over my care-taking tasks. Although I asked the purchasers of my house to take over the care tasks, they could not because they had a very large dog and hectic schedules. At the time of my move – and just before – my neighbors and I were able to successfully acclimate the cats I cared for at my house – to move to their houses for care. This included my next door neighbors, my neighbors two doors down from my, and my neighbors kitty-corner from me across the street.

spaying/neutering/vaccinating etc. – as time went on – three neighbors joined me in the daily care of the cats by feeding and providing water, and also providing bolstered shelters during the hard cold winters. One neighbor, during the hard snow winters of 2009-2011 left his heated garage door open all winter and put cats shelters in his garage for some of the cats to go in and out at will and shelter in his garage.

– All of the cats found comfort in the companionship and reliability of their caretakers – myself and eventually my neighbors who joined me in caring for this colony. The cats came to know the names that I (and my neighbors) gave them. And, while they never became socialized, would nonetheless appear out of the bushes or elsewhere and simply sit with me in the back yard while I worked in the garden, or simply sat on my back steps and had a cigarette.

2. **<u>Colony in Langston-Hughes-21215</u> [i.e., the small, immediate surrounds of my home on Beaufort Avenue and the alleyway behind my home – which is a square surrounded by the backs of houses facing front out towards Garrison, Beaufort, Spaulding, and Litchfield]. <u>Care-taking period: 2012 to present.</u>**

(a) *<u>Background for Langston-Hughes colony</u>*:

The cats live primarily in the back alleyway square surrounded by the backs of row homes that face out onto Garrison Avenue, Beaufort Avenue, Spaulding, and Litchfield Roads, including the many abandoned and dilapidated-fallen in, moldy and dirty abandoned houses. The alleyway can be beautiful in the Spring and Summer and Fall, with wildflowers including Chicory, Queen Anne's Lace, Purple Clover, Wild Marguerite daisies, tons of Dandelions and Violets in the Spring, and old Oaks, Maples, and Mulberry trees. However, because of on-going illegal dumping in this back alleyway, of furniture, appliances, and all sorts of heavy debris dumped by contractors from out of the neighborhood who do not want to wait in line at the Reisterstown dump, the back alleyway is now an unsanitary cesspool of debris.[5] The dumping and abandoned houses aside however, this neighborhood is incredibly naturally beautiful green – with old flowering/fruit trees (apples, mulberries) tall old canopy trees, with grass aplenty, as well as the wild flowers mentioned previously.

The population of free-roaming cats in the Langston-Hughes colony is half-and half – i.e., half feral, half abandoned stray friendlies – and is indicative of the severe pet abandonment

5 Myself and other neighbors constantly make 311 calls to the City for removal of this debris and the City comes out about a little over the month after each call – meanwhile the trash heaps get bigger and bigger. This has been going on for years, with myself and other neighbors requesting "No Dumping" signs from the City and Video Cameras – such requests all for naught. My own opinion is that the City has allowed the entire back alley to become a public nuisance that threatens the health and welfare of the residents here (not to mention the cats I care for) – given that the City has taken our calls for clean-up for years and has refused to provide "No Dumping" signs and Video Cameras. The City has full knowledge of this situation. And – this is a situation that I will take up more seriously with the City very, very soon.

problem that Baltimore City has and must face.

Natural dangers that the cats face in this neighborhood include disease and suffering death from a dirty and unsanitary environment; injury and suffering death from injury from abandoned house debris – sharp nails, broken windows; injury and suffering death from trash debris; continuing pregnancies; hardship from harsh weather elements; territorial fighting (among the male cats especially) – and thus injury and suffering from this fighting; getting trapped, or having floors fall down upon the cats, within the dilapidated-fallen-in, and condemned abandoned houses. Note: unlike the Ten Hills colony, there is not much danger of the cats being trapped and surrendered to a shelter or Animal Control and thus of institutionalized euthanasia. People in Langston-Hughes generally leave the cats alone. Additionally, there is not a high degree of danger from natural predators as there is no large fox population where I live (though I have seen a fox in the neighborhood last winter, and assumed it had roamed here from the fox dens around Preakness Way).

(b) The benefit to the Langston-Hughes cats, in general, of TNR practice:

The practice of TNR (daily feeding and watering, monitoring when possible, initial trapping for spay/neuter and vaccinating, subsequent trapping [if possible] for any subsequent injury or disease/distress, etc.), as confirmed by the City's TNR policy and regulation, benefits the cats in Langston-Hughes in the same manner as the cats in the Ten Hills colony are benefited – i.e., by the reduction and/or elimination of many of the same danger (sufferings) including (1) injury, (2) disease, and (3) continuing pregnancies, among other things. Additionally, the practice of TNR benefits the cats here with human companionship – both the ferals and the friendly stray/abandoned cats. In fact, because of TNR practice in Langston-Hughes where there are many adult friendly stray/abandoned cats, these friendly stray/abandoned adult cats have a better chance of being rescued – i.e., taken off the streets, vetted, and found good homes. Note: While Langston-Hughes cats are vulnerable to danger/suffering from harsh weather elements, the cats have access to the inside of many abandoned houses here, and sometimes prefer those houses to outside cat shelters provided in TNR practice.

i. *Some Detail of Note Related to the Benefits to Langston-Hughes Colony Cats:*

– Initial colony size at the time I first started caring for the cats through TNR in approximately 2012 – **approximately 8.** Through the years, the colony membership has fluctuated with additional cats coming around, and with the loss of some cats who simply did not show up any more to the feeding stations. Since 2012 I have **rescued and taken off of the streets and found homes for (or had euthanized because of disease) approximately 8 adult friendly stray/abandoned cats and approximately 19 kittens.** At this current time the colony's numbers are relatively stable, with **7 regular colony members, all of whom are feral – except for one female who is semi feral/friendly** (she is

someone's an abandoned pet who has been "out" a long time and who employs her feral instinct when necessary).

– All of the cats in the colony receive daily food and fresh water; all female cats are spayed and vaccinated against rabies and distemper, and ear-tipped; most of the males cats are neutered and vaccinated against rabies and distemper (I have two more male cats to "TNR," a newcomer, and a regular [since Fall, 2014], who I have just not had time to trap to neuter, given other colony crisis occurring – i.e., saving/rescuing/pulling sick kittens, finding homes for them, rescuing friendly adults, etc. It should be noted that TNR practice is intensive work, many times. And sometimes requires an emergency response facility in the care-taker. It actually could be a full-time job. But those who do it, work other jobs, and so TNR'ing a whole colony can take some time. ***It should be mentioned that a benefit of the City's TNR policy and regulation is also the low-cost TNR medical resources that have become available to care-takers through entities like CCMD, as well as an extensive, committed, independent volunteer network of animal welfare lovers and workers who provide constant support and help to care-takers in their practice of TNR.***

– The 7 regular colony members now make my yard their home base and find comfort in my companionship and regular provision of food, water, and care (including two years in a row, rescuing one of the ferals – with the help of many animal welfare friends and a particularly dedicated Animal Control Officer, AEO McWilliams – from the roof of an abandoned house in the alleyway, from which he could not get down [I have since determined he has an eyesight problem that affects his depth perception]. This rescue effort was highly intensive – requiring manpower of at least three persons to man two ladders and the permission of a neighbor to climb all over their back deck and roof-top to set the trap for the cat, each time).

(c) *Comparison of Ten Hills Colony with Langston-Hughes Colony.*

The cats in the Ten Hills colony were/are primarily feral while the cats in the Langston-Hughes colony are a mix (half and half) of feral and friendly stray/abandoned. Both colonies needed intensive rescue efforts relative to pulling kittens from the colonies, before spaying of the females was completed. The cats in the Ten Hills colony face more danger from natural predators, than do the cats in Langston-Hughes. However, the cats and kittens in Langston-Hughes face more danger and suffering due to disease because of the unhealthy, dirty, and unsanitary environment of Langston-Hughes. The cats in both Ten Hills and Langston-Hughes face danger/suffering from human abuse – however, I have assisted only one cat relative to purposeful human abuse directed at the cat, and that was in the Ten Hills colony. (See, footnote no. 2 above, relative to the cat shot by a person with a bb gun). The Langston-Hughes cats, though, suffer from human neglect and uncaring – in abandonment (pets), in the trashing of the neighborhood and the City's allowing (by non-

action – *i.e.,* failing to install video cameras or "no dumping" signs) continuing illegal dumping in our alleyway, and also from the abandoned, dilapidated, moldy, condemned, and falling-down houses. The kittens born and rescued in the Ten Hills colony were all healthy. Every single kitten that I have ever rescued in Langston-Hughes has been distressed with true suffering diseases that would otherwise have lead to death (or loss of an eye) – herpes virus, calici virus, other upper respiratory, severe flea infestations, dirt and grime (from living in the sewers? Moldy abandoned houses?). The cats in both colonies absolutely needed the intervention of TNR care – to stop continuing pregnancies, for vaccinations against rabies (especially the cats in Ten Hills who face more wildlife contact), and to prevent suffering and continuing suffering and awful death from disease. Both colonies reduced in size/numbers as a direct result of TNR care-taking. The Ten Hills colony definitely stabilized in the reduction of its numbers. The Langston-Hughes colony has stabilized somewhat but will forever be susceptible to growth, given the pet abandonment problem in Baltimore City.

B. THE EFFECTS OF THE CITY'S TNR POLICY/REGULATION ON THE COMMUNITIES.

1. **The Community of Ten Hills-21229 [*i.e.,* Ten Hills at Kensington Rd/Drury Ln, Brook Green, Woodside Rd, and N. Chapel Gate Ln]. *(Circa 2002-2011).***

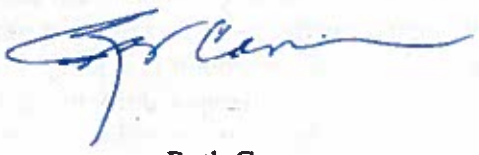
In general, TNR practice in Ten Hills has benefited the community by the reduction of the feral cat population there in a wholly humane manner that allowed for the cats to keep their lives – and also, the residents to fall in love with the cats. I cannot express how wonderful it was to bond with other residents there over the care of the cats. There were residents who did not like the cats, and in instances where the residents complained to me (I made myself available and accessible) I assisted in any way that I could to help deter unwanted ferals in their yards. For example, I bought one neighbor cat deterrent product and assisted them. If certain neighbors continued to dislike the cats, they did not push their complaints to any extent, observing themselves how much it meant to me and to other neighbors to actually care for the cats. TNR practice is labor intensive, but it is also a joy and a fulfillment for those who love animals to actually have an opportunity in their daily lives to extend themselves, directly, to the care of animals. I cannot impart how much this ability to directly care for animals in need – rather than just donating this money and that money to animal welfare organizations – helps individuals and a community, such as in Ten Hills, to put forth a positive energy, including bonding with each other and getting to know each other as a direct result of caring for the cats.

2. **<u>The Community of Langston-Hughes-21215</u> [i.e., the small, immediate surrounds of my home on Beaufort Avenue and the alleyway behind my home – which is a square surrounded by the backs of houses facing front out towards Garrison, Beaufort, Spaulding, and Litchfield].**

My small area of Langston-Hughes has, similar to Ten Hills, benefited from TNR practice by the natural reduction of the cat population here – though many people here do not have many complaints (that I know about) about the cat population here, in general, and I couldn't be sure at all that they are aware that the cat population has been reduced a little bit here or that many friendly adult cats, and many kittens have been rescued and taken off the streets here. I have observed my neighbors "like" the cats and take an interest in the cats – but in general, they are absorbed by other matters and do not involve themselves over-much in cat-matters. I have assisted some of my neighbors with their pet cats, which has been a help to them, I think. And, I am known in my neighborhood as "the Cat lady," though one child just last night asked me what my real name was – I told her, "Ruth," and she smiled a big smile telling me she liked my name.

I hope this letter has been helpful, and not too redundant of similar information that you are going to receive on this matter from many, many other people. Providing you this information seemed an overwhelming task, given the amount of information and stories that I have from my more than 14 years of work as a feral cat caretaker. I have tried to provide you with the most pertinent of information, and in summary form. If you think that I can provide you with any more detailed information that you may need, please let me know by contacting me at the above address, phone, or e-mail.

Sincerely,



Ruth Canan

Nibber, Dpaul

From: EMILY CHALMERS <emily.chalmers@comcast.net>
Sent: Sunday, September 17, 2017 1:55 PM
To: Nibber, Dpaul; City Council President; Clarke, Mary Pat; Henry, Bill (email); erci.costello@baltimorecity.gov; Reisinger, Edward; sharon.sneed@baltimorecity.gov; Dorsey, Ryan
Subject: Do not weaken laws protecting feral cat colonies in Baltimore City

I am writing to oppose any weakening of the protections offered feral cat colonies and their caretakers in Baltimore City. Without these unpaid stewards of Baltimore City's huge feral cat population, the situation would be much worse. Colonies that provide cats with food and shelter reduce the population of free-roving felines, and trap-neuter-return (TNR) programs help prevent unwanted pregnancies among female cats that significantly increase the number of unwanted, unhoused cats. The benefits of TNR have long been acknowledged.

Rather than questioning the presence of feral cat colonies and their caretakers, Baltimore City must do more to support them while changing those city policies that add to the number of cats on the streets of residential neighborhoods.

First, colony caretakers need an integrated network that allows them to interface with each other and the city. Such a network is particularly important when colonies lose their caretakers, as sometimes happens. In these cases, the city needs to be able to identify people who can take over the colonies so that the cats do not disperse. Further, if caretakers can communicate with each other, they can share concerns and best practices and help each other when needed. Part of this network should be a robust educational program with materials that can be distributed to communities with colonies stressing the effectiveness of the colony and TNR models.

Second, the city needs to provide oversight of the Baltimore City Community Cats program, which provides TNR services to city residents at the Baltimore City Animal Rescue and Care Shelter (BARCS), to ensure than the program is returning cats to colonies where they are found and not simply releasing unwanted cats, domestic and non-colony ferals, on city streets. My experience with this program showed me that the program is in fact releasing such cats on residential streets in neighborhoods where they are unknown and unwanted. This activity, begun at the behest of a national nonprofit known as Best Friends, endangers the cats' lives and aggravates residents.

My evidence for this activity is my experience with a cat who was dumped in the 2200 block of Pelham Avenue in Mayfield in northeast Baltimore in early September 2016. Neighbors who saw her being released chased down the woman who released her and learned that the cat had come from BARCS's Community Cats program. Over a period of months--and I still have the e-mails from this time--BARCS officials told me varying stories about this cat, including that a neighbor had asked to

have the cat released at her home. BARCS backed down from this argument only when the neighbor wrote to Jennifer Brause stating that she had never seen the cat and certainly did not want it.

I never learned exactly why the cat was released here, but I know that she was never feral, although I was told she was unmanageable. This "unmangeable" cat walked into a carrier I put down for her, lived with me as a perfect house guest for several months, and was treated by two separate vet clinics I learned that she had been declawed and was thus defenseless on the city streets and had a traumatic back injury that must have caused her unimaginable pain.

I tried in every way I knew to find someone who would take responsibility for her, writing to the mayor, Health Department, city council representatives, Jennifer Brause and Grace Felner at BARCS, and members of the BARCS Board of Directors. No one would take responsibility for what had happened to this cat.

However, during this time I heard from cat caretakers and community members in areas as diverse as Parkville and Ednor Gardens-Lakefield, as well as from a group that feeds alley cats, about the number of "ear-tipped" cats appearing on city streets. (Cats' left ears are slightly trimmed when they are released from a TNR clinic.) It soon became clear that our Mayfield cat was not the only ear-tipped cat released under dubious circumstances in residential neighborhoods around the city.

This practice is reprehensible and needs to stop. The "R" in TNR stands for "return," not "release." I believe that allowing the practice to continue will cause more problems for feral cat caretakers and further aggravate people already angry about feral cats. BARCS's Community Cats program should be investigated and permanent oversight established. At the same time, BARCS needs more money and resources in order to properly house and assess the enormous number of cats it takes in.

One final note: the cat who was dumped in Mayfield, literally left out with the trash to die, was an elegant and intelligent Maine Coon mix. She ultimately found a loving home in the heart of Homeland, where she presides over a large house and an extended family.

Thank you.

Emily Chalmers

3603 Crossland Avenue

Baltimore MD 21213

410-366-4094

Dana Ruth Coyle
7702 Victory Ave
Baltimore, MD, 21234
410-877-4218
drcoyle@comcast.net

September 21, 2017

Dear Councilmember's Henry, Reisinger, Clarke, Middleton:

I am writing to support Ordinance 07-583; Council Bill 07-0753 – Feral Cats.

The act of Animal Control trapping and euthanizing these colonies is a strain on our resources, stressful on our Animal Control representatives and bad for cats. I have been a lifelong cat owner and believe that Trap-Neuter-Return-Vaccinate is not only beneficial to the cat but the community.

Research has shown that Feral Cat Colonies with a Trap-Neuter-Return-Vaccinate program, not only improves the cats' lives but they can be beneficial to the community.

- Stabilizes the colonies – without a fertile female no new males will enter the colony; without fertile males and females there will be no more kittens. Kittens and sociable cats are placed in a foster program to find forever homes. There is also a decrease in spraying, fighting and/or yowling. Spaying and Neutering reduces the urge to roam.

- The health of the cats' will improve not only will they gain weight, their coat condition will improve. They are less likely to have cancer. They will get at least one round of vaccinations.

- With a stable Feeder the colony is under daily monitoring to check the general health and welfare of the cats. The Feeder also can determine if a new cat has been "dumped" at the colony and take action.

- Any new "dumped" cats will be trapped and assessed to see if they are sociable and placed into a foster program until a forever home can be found. If it is determined that these cats are indeed feral they will be returned to the colony after the TNRV process.

Removing these colonies is not only harmful to the cat but it will cause new cats to come into the area, known as a "Vacuum Effect". It is unfortunate that cities around the world will continue to have the problem of "dumped" cats that need to fend for themselves. I believe that education in the program and how to humanly deter cats from your yard will help people understand its importance.

The benefit of a healthy diminishing cat colony is not only a win for the community but for the city.

Sincerely,

Dana Ruth Coyle

Nibber, Dpaul

From: Moira Goldie Horowitz <maursipan@gmail.com>
Sent: Thursday, September 14, 2017 4:53 PM
To: Nibber, Dpaul
Subject: TNR

Greetings,

As a resident of the 4th district, I want to officially give my support to ongoing TNR efforts in Baltimore City. TNR is the only humane way to deal with street cat populations. I practice TNR in my own neighborhood (winston-govans) and would continue to do so even if fines were put into effect. Those cats who become friendly go to homes and those who do not enjoy their happy, healthy lives with shelter and food provided and no offspring. There is really no other option than TNR. Killing feral cats in unacceptable.

Thank you,
Moira Horowitz
525 Rossiter Ave.

From: Alley Cat Allies [mailto:info@alleycat.org]
Sent: Tuesday, September 19, 2017 4:29 PM
To: Costello, Eric
Subject: Protect Baltimore, Maryland's, Trap-Neuter-Return Program

Sep 19, 2017

Council Member Eric T. Costello
Baltimore, MD

Dear Council Member Costello,

My name is Gretchen, and I am submitting written testimony for City Council Resolution 17-0042R: Informational Hearing Feral Cats.

I currently work with a small group of dedicated individuals to TNR a colony in my neighboorhood. I have seen the benefits of such a program first hand, especially at controlling the population and lessening destructive behaviors.

Please continue to support Baltimore's landmark TNR program.

Sincerely,

Ms. Gretchen Knell
205 Curry Ford Lane
Gaithersburg, MD 20878
(240) 447-5014
gigiknell@gmail.com

received
9-20-17

From: Cherron K
To: Nibber, Dpaul
Subject: Support for TNR
Date: Wednesday, September 20, 2017 10:22:46 PM

To whom it may concern,

I wanted to express my support for TNR to remain the method by which Baltimore City chooses to address the feral/stray cat population.

It believe it is a far more human and effective method for helping curtail the population, while also helping to provide rodent problem abatement in the areas these cats frequent.

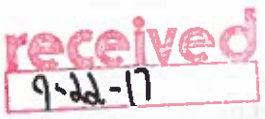
While "extermination" may seem to some a more immediate and therefore more effective solution, I believe wholeheartedly that you will find only a fraction of people who are willing to trap innocent animals to murder them. At least I hope for our society's sake that is the case. As Ghandi said, "the greatness if a nation can be judged by the way it's animals are treated."

Some of these animals are friendly former pets, who through no fault if their own find themselves cast out. Others are ferals who want only to live and not interact with people. Both need and deserve our help and our compassion. I don't want to live in a city whose officials will hand down a death sentence to any animal unfortunate enough to find itself without a home--they deserve more.

Please count me as 100% opposed to ANY plan that calls for the extermination of a cat, unless a licensed and trained vet thinks that to be the most humane option left for that animal due to injury or illness.

Thank you for your time, and I hope to see the right and decent decision made.
Cherron Kofford
Resident of Canton/Highlandtown area, Zip code 21224

From: Alley Cat Allies [mailto:info@alleycat.org]
Sent: Friday, September 22, 2017 7:12 AM
To: Henry, Bill (email)
Subject: I support Baltimore's Trap-Neuter-Return Program



Sep 22, 2017

Council Member Bill Henry
Baltimore, MD

Dear Council Member Henry,

Hello. I am strongly in favor of our current TNR program for "stray" cats and vehemently oppose killing these innocent animals. Some years ago I personally trapped 12 cats that lived in my alley and had them all spayed and neutered. This stabilized the cat population and still helps to reduce the rat problem in my area.

Let those of us who care about these innocent creatures continue to care for them. Again, I very strongly oppose the murder of these cats.

Thank you.

Sincerely,

Ms. Sonya Kunkle
1515 Patapsco St
Baltimore, MD 21230-4507
(410) 227-0206
kunkles22@comcast.net

received
9-14-17

Nibber, Dpaul

From: Susanne MacKenzie <sumac_77@hotmail.com>
Sent: Thursday, September 14, 2017 5:32 PM
To: Nibber, Dpaul
Cc: Henry, Bill (email); Ed.Reisinger@baltimorecity.gov; Clarke, Mary Pat; SharonMiddleton@baltimorecity.gov; Costello, Eric; Bullock, John; Pinkett, Leon; Scott, Brandon; Stokes, Robert
Subject: Baltimore City TNR

Good day Mr. Nibber,

As a current Baltimore City resident I write to you in regards of the September 26th hearing about the Baltimore City TNR programs, information and laws.

A program like TNR is important for all communities, feral and stray cats are abandoned by careless pet owners, left to fend for themselves and multiply because they were not altered. TNR communities have FREE caretakers that feed them and get them medical attention at no cost to other people in the community. The funds are personal, fund-raised or donated.

It has ALWAYS been my experience having cats in the community cut down on the rodent problems through out the city.

Truth is there are not enough homes or shelters to take in cats or any animal for that matter. At least with TNR they are cared for and altered. If the TNR program laws were to change to not protect these cats, you will most certainly see a rise in rodents in the city. I would prefer a cat over a rat any day.

I wish there were more programs available to offer stray and feral cats "jobs" in local businesses to assist them in any rodent issues on their premises.

Sincerely,
Susanne MacKenzie
21230
TNR Advocate

Nibber, Dpaul

From: Morrow, Sam <SAMORROW@mtb.com>
Sent: Friday, September 15, 2017 1:51 PM
To: Nibber, Dpaul
Subject: I support Bmore's TNR program

Hi D'Paul,

I am writing in response to the Baltimore City Council Public Hearing on the city's Trap, Neuter and Release program for Feral Cats.

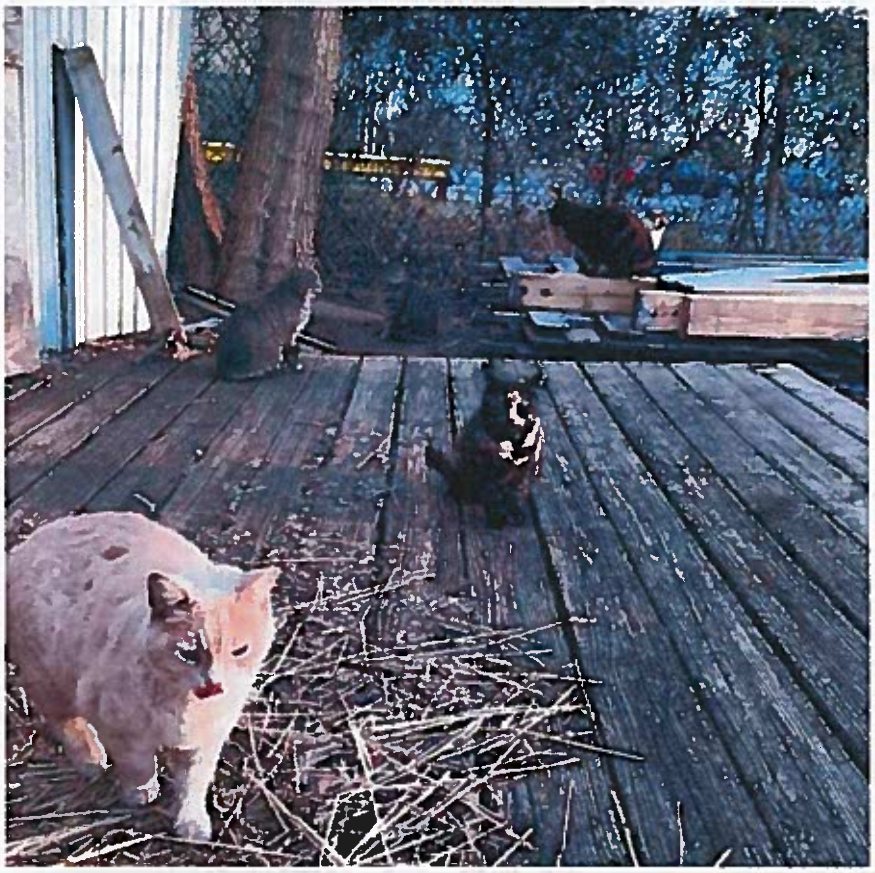
I strongly support the TNR program. As a city resident and homeowner (1732 Clarkson) this is one of the issues I feel passionate about. I am one of the volunteers who, at our own expense, feed and care for the large Feral Cat Colonies at Nick's Fish House in Port Covington (a few of which are pictured below). I also donate monthly to the Community Cats of Maryland non-profit that works with BARCS to fund this program.

I strongly believe that neutering and spaying feral cats is the best and most humane way to control and diminish the stray/ feral cat population in the city. The city is filled with volunteers like myself who are willing to help feed and capture cats to be sterilized. I don't think you'll find the same number of people willing to participate in trapping cats to be terminated. Relying on just animal control to capture the animals will not result in many cats being brought in. With no means of humane population control available, the feral cat population will explode and grow to a larger issue. I understand they are a burden to some people, but mass extinction simply isn't conceivable or effective.

I plan to attend the hearing on the 26th, but if there is anything I can do further please let me know.

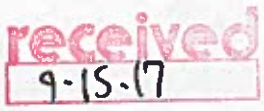
Thank you,
Sam

Samantha Morrow
M&T Realty Capital Corporation
FHA Underwriting | Vice President
25 South Charles Street, 22nd Floor, Baltimore, MD 21201
(P) 410-545-2511 | (F) 410-545-2469
samorrow@mtb.com | www.mandtrealtycapital.com



Nibber, Dpaul

From: Daniel Reiner <danielscottreiner@gmail.com>
Sent: Friday, September 15, 2017 8:59 AM
To: Nibber, Dpaul
Subject: Feral Cat Hearing



Good Morning Mr. Nibber

I hope this email finds you well. I am writing you today to voice my opposition to any changes away from the TNR program that is currently employed by the City of Baltimore.

I am a Baltimore City Resident and also employed by the City of Baltimore.

The TNR program provides a critical service to the citizens of the city, as TNR has been seen time and time again as the most effective way to control the feral cat population.

The ASPCA states that TNR is the "only proven humane and effective method" as to the management of cat colonies. The ASPCA has an official stance that the systematic destruction of feral cats actually leads to an INCREASE in the cat population as it creates a "vacuum effect" where a new colony will move on or merge with the survivors. It is a temporary fix that does not address the problem as a whole.

As I mentioned earlier, I am employed by the City of Baltimore. I am an Investigator who spends the majority of his time on the streets of the city. With this, I have many many hours spent in trash filled alleyways across the city. In my experience, the feral cat population has been extremely beneficial in controlling the rat population. I think it would be beneficial to look at the number of rat rubout requests/ rat 311 complaints from both before and after the TNR program.

My work puts me in contact with a wide range of persons in this city and very often the elderly and vulnerable. I cannot tell you how many times I have met a resident who can no longer care for a pet but actively cares for their alley cats. For some of our citizens, this is the only companionship they may have on a daily basis. I know this is purely anecdotal but I ask that you please consider it.

I know many people who would be devastated if their alley cats were destroyed. In fact, in locust point there is a cat colony that has been thriving for well over twenty years. The residents on the block feed and care for them, have named them and love them the same. Plus, those same residents will tell you that they have not seen a rat there in ages.

Finally I would like to close with a personal story. I've never been a "cat person", grew up with dogs my entire life. However, when my fiancée and I moved in together, she was insistent on getting us a kitten. We ended up adopting a formerly feral cat who was found living on the streets. Since then he has become part of our family and it breaks my heart to think he could have been destroyed just for being on the streets. These animals should not be sentenced to death simply for being born.

I do also understand that feral cats pose issues to the city and the citizens. These issues need to be addressed but in a humane and levelheaded way.

Thank you for your time.

Daniel Reiner

Sent from my iPhone

9/20/17

Dear Baltimore City Council Members,

I am submitting this letter in regards to Resolution 17-0042R, Informational Hearing - Feral Cats. I apologize for being unable to attend but I am in school full-time and will be in class during the hearing. I have been involved as a trap-neuter-return volunteer in Baltimore since 2008 and firmly believe in the mission and effectiveness of the program. I started volunteering while living in Beechfield, in West Baltimore. There were many cats outside, some friendly, some feral and I progressed from feeding them to engaging in TNR to ensure that they were taken care of and to humanely control their population. Through communicating with my neighbors, I was able to arrange feeding and trapping locations that were unobtrusive and with which people generally seemed pleased.

I have since expanded my TNR work into other areas of West Baltimore, mostly in the Edmondson Village area. In the vast majority of cases, I have been alerted to cats in need of TNR by community residents, many of whom feed the cats and care deeply about them. Though people may at first be curious of my role and intention in their neighborhood and with the cats, almost without exception, I have been met with excitement and gratitude once people learn about the Community Cats program through BARCS and what it will mean for the cats. I so frequently hear from people that they enjoy and want to feed and take care of the cats and that being able to do that knowing that the cats have been altered and had their shots is something that they very much appreciate. I think that the long waiting list for trapping that BARCS Community Cats' program maintains is a testament to this as well. People are clearly interested in humanely managing the population of outdoor cats in the city. In fact, one of the concerns that comes up most frequently is from residents who are worried about me trapping and taking the cats to BARCS, as they are afraid that I will not bring them back. Once I explain how the program works though, they are relieved. They are also often pleased to hear that if a cat is very friendly and "adoptable", I will try to find it a permanent home. It is clear that people want what is best for the cats.

I often hear from residents who are elated that the cats are helping to deter rats from populating the area. While I have not read the research to know whether this is actually occurring, the perception that cats are positively contributing to the neighborhood in this way is important. People are identifying this as a benefit even in neighborhoods where the cats are being fed regularly. Additionally, I have found that in many neighborhoods, people from all walks of life help to feed and care for the cats and that this has in some cases, created opportunities for bonding among neighbors, as there is a shared goal. People are often fascinated by TNRing and are eager to learn about the program and get involved. They are particularly interested to hear that it is a program administered through the city via BARCS. I have had people express that their neighborhoods feel neglected by local government in many ways and though the TNR program has a very specific purpose, it does create a visible presence in the community that many people seem to appreciate. It has also provided me the opportunity to have broader conversations with people about their lives and their neighborhoods and I have been able to provide resources to address basic needs issues including concerns about accessing health care, addressing food and housing insecurity, etc. I know that the Community Cats program through BARCS is also looking to address these types of issues and concerns as well as provide helpful resources to the community. In this way, trapping and taking care of cats is helping to open the door to providing outreach and

community resources by facilitating connections that would otherwise not exist. The employees at BARCS as well as TNR volunteers are committed not just to the cats of Baltimore City, but also the neighborhoods in which they trap and the city as a whole.

I do not know exactly what concerns have been presented regarding the Community Cats program but I feel confident they are not ones that would be addressed satisfactorily by a return to large-scale killing of outdoor cats. In that case, a vacuum is created that allows for new cats to enter the area and without altering cats, remaining ones will procreate. TNR volunteers and Community Cats' staff want to work with the community to trap and feed in areas that work for the residents. If there are concerns about locations of things, there would be ways to address that, by possibly moving feeding and trapping sites, etc. When I lived in Beechfield, there were some concerns when cats were being fed by my apartment building but when I moved food away from the building, towards the woods, other residents were content and there was no longer an issue. Additionally, I would like to think that at a time when many cities and localities are introducing innovative and humane ways to manage outdoor cat populations and foster humane treatment of animals in general, Baltimore City would choose to be a leader rather than revert to cruel, inhumane and ineffective strategies. And, I believe that with the existing Community Cats program and the ever-growing work that they are doing, we are well poised to be a leader. For the sake of brevity, I will not elaborate on what some other locations are doing but please feel free to contact me for additional information.

There is a particular neighborhood within Edmondson Village where I began to do TNR work this past summer. Because it was summer, the children in the neighborhood were not in school and many of them quickly developed an interest in what I was doing with the cats. They began to help me trap them and several times, they have alerted me to cats who are injured or sick. About a month ago, I pulled onto the street and several of the kids ran over to me. They range in age from about 5-15 years old. They were so excited to tell me that one of them had received money for their birthday and has chosen to buy cat food so that they could help feed the cats. It was so clear how much they cared about the cats. That was a very poignant moment for me. What a selfless and caring thing to do. I think that is what Baltimore City is all about and what we should want for current and future generations. Respect and love for all life will not only lead us to provide better lives and care for outdoor cats, but will make us better as people and as a city.

Thank you so much for your consideration of this letter. I apologize for not being able to be in attendance but please do not hesitate to contact me for additional information or comments.

Most Sincerely,

Kate Schulz

410-726-0908

DATE: September 18, 2017

RE: Resolution 17-0042R Informational Hearing - Feral Cats - 9/26/2017

FROM: Ms. Page S. Williams, 2234 Ashford Hollow Ln. Houston TX 77077, page.williams@gmail.com

TO: Council President Bernard C. "Jack" Young, ex officio ✓
Councilman Brandon M. Scott, Judiciary & Legislative Committee
Councilman Bill Henry, Resolution Sponsor
Councilwoman Sharon Green Middleton, Resolution Sponsor
Councilman Leon F. Pinkett III, J&L Committee
Councilman John T. Bullock, J&L Committee
Councilman Edward Reisinger, Resolution Sponsor, J&L Committee
Councilman Eric Costello, J&L Committee Chair
Councilman Robert Stokes, J&L Committee
Councilwoman Mary Pat Clarke, Resolution Sponsor, J&L Committee

Ladies and Gentlemen, I was born in Johns Hopkins hospital in 1938 and attended the Baltimore Friends School for 13 years. My father Joseph T. Singewald Jr. chaired the Maryland Department of Geology, Mines and Water Resources for several decades and was eulogized by the Baltimore Sun as "Maryland's peppery voice of conservation and common sense." I hope that will give me some standing to comment for the record on your practice of TNR (trap/neuter/re-abandonment) of feral cats, and to share some information with you. When I grew up in Baltimore, we rarely saw a stray cat, and we had an active animal control system to protect us from rabies by removing strays from our neighborhoods, as the Centers for Disease Control still recommends. We certainly had no "managed colonies" of dogs or cats; Public Health for the citizens was the priority.

Common sense says that it is cheaper to permanently sedate an unloved unwanted animal than it is to test it for disease, temporarily sedate it, neuter it, tip its ear, inoculate it (and one rabies shot without a booster is useless), and return it to the street (with unhealed sutures) to mingle with wildlife, transmit zoonotic diseases to people and pets, continue to maim and kill wildlife, and to excrete feces laden with *toxoplasma gondii* oocysts. There can be some horrific Public Health bills for PEP (post exposure prophylactic) rabies series and for treating the results of toxoplasmosis, the brain-invading parasite that only sexually reproduces in the intestines of felids, and which can cause miscarriage, fetal deformity, blindness, deafness, dementia, schizophrenia, suicide and death for immunocompromised (AIDS, organ transplant or chemotherapy) patients.

"Euthanasia" is from Greek for "easy death", and humane euthanasia is kinder to a cat than the cruel lives and deaths of feral cats. It is even kinder than a lifetime in a "no-kill" shelter's tiny cage, held like a calf being raised for veal - even prisons are phasing out solitary confinement. The TNR supporters who claim that euthanasia is cruel, and devote their lives to feeding dozens, sometimes hundreds, of feral cats, are often referred to as "hoarders without borders" who inflict their hobby on the neighbors with no acknowledgement of the true cost to the community, to the wildlife, and to the cats themselves. They are perfectly defined in the psychiatric DSM-5. They are well funded by Petsmart and Petco, the companies that want to sell more cat food.

My suggestion to you for managing feral cats and protecting public health would be to change "TNR" to "TNE *or* TE". Allow the people with a deep psychological need to "rescue" cats from humane euthanasia to continue trapping and neutering them, *but* require them to build Enclosures and keep the cats on their own property, safe from predation, trauma and human cruelty. Require microchips and annual reports on vet care and inoculation boosters. *Then* allow people who do *not* wish to have toxoplasmosis oocysts in their children's sandboxes, cat footprints on their cars, or cat kills under their bird feeders to humanely trap nuisance cats trespassing on their property and bring them to Animal Control for humane Euthanasia. Your problems will soon resolve!

I am not just giving you my opinion - I list my enclosures on the back of this statement.

ENCLOSURES

CDC's The Burden of Rabies: shows that cats are far likelier than dogs to be rabid, and recommends that they be kept inside.

JAVMA's 2015 Rabies Surveillance Map: Journal of American Veterinary Medical Association shows Maryland as 4th highest state in reported rabid cats.

Feral Cats or Public Health 2016: Columbus GA Councilman Pope Barnes (RN) exposes duplicity of TNR supporters and proves that one rabies shot is not enough.

CDC's Biology of Toxoplasmosis: shows the pathways of *toxoplasma gondii* oocysts from cats to humans.

Toxoplasma oocysts as a public health problem, 2013: Johns Hopkins Stanley Research Institutes MDs' synopsis of the dangers resulting from cat feces in the environment.

Featured Article by Judith Milcarsky DVM, 2015: from the Volusia County FL Medical Society quarterly, showing toxoplasmosis links to schizophrenia, homelessness and suicide.

Toxoplasmosis brochure, 2007: Texas Department of State Health Services - the dangers have been long known, but are sadly long ignored by legislators.

PETA's The Great Outdoors? Not for Cats!: one of PETA's monthly reports of human cruelty to cats.

Quick release after surgery results in gruesome feral cat deaths, 2016: worst photos of infections and maggots omitted, of dead cats "rescued" by TNR.

MUCH MORE PEER-REVIEWED & SCIENTIFIC INFORMATION AVAILABLE UPON REQUEST!

CDC 24/7
Saving Lives. Protecting People.™
LEARN MORE ABOUT HOW CDC WORKS FOR YOU

The Burden of Rabies (2014)

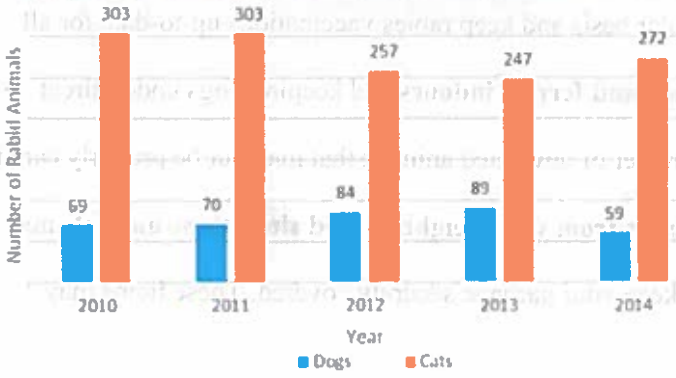
Learn how to help prevent rabies, a deadly virus that threatens the health of people and animals.

Rabies is a dangerous virus that is spread through the saliva of animals sick with rabies. Anyone can get it if they handle or get bitten by an animal that has the disease.

Rabies in the U.S.

Rabies continues to be a serious threat to the health of people and animals. Every year, about 40,000 people receive a rabies prevention treatment called **post-exposure prophylaxis (PEP)** because they had contact with potentially rabid animal.

More than 90% of all rabid animals reported to CDC each year occur in wildlife. The animals that get rabies the most are raccoons, skunks, foxes, and bats. However, most people in the U.S. get PEP due to close contact with domestic animals such as cats or dogs.



Rabies cases among dogs and cats reported in the U.S. from 2010 to 2014 gradually decreased.

Rabies in Cats

While dogs have historically been associated with spreading rabies to people, more cats than dogs are reported rabid in the U.S. each year. Cats are often in close contact with both people and wild animals, including those that primarily spread rabies, like raccoons and bats. Thus rabies may be more easily spread to people from cats.

Over the past few years, public health officials saw a small decrease in the number of reported cases of rabid cats. **However, in 2014, over four times more rabid cats were reported than rabid dogs**. Importantly, cat owners are less likely to visit a veterinarian's office, where they can get their cat shots that can keep it safe from rabies. According to the American Veterinary Medical Association (AVMA), only 55 percent of U.S. cat owners visited a veterinarian in 2011, a significant decrease compared with 64 percent in 2006. This is much less compared to dog owners (81 percent in 2011 and 83 percent in 2006).

Protecting You and Your Family

The best ways to protect yourself and your family from rabies is to:

- **Vaccinate your pets and other domestic animals** (like cows, goats, sheep, and horses)
- **Avoid contact with wild animals** – do not feed or handle them, even if they seem friendly. If you see a wild animal acting strangely, report it to animal control.

If you or someone in your family is exposed to a rabid animal, rabies can be prevented through a series of shots called **rabies post-exposure prophylaxis (PEP)**.

If you are bitten by any animal (domestic or wild):

- Immediately wash the wound well with soap and water and see a healthcare provider
- Contact animal control to assist in capturing the animal for observation or rabies testing

Family pets can get rabies if they are bitten by rabid wild animals.

Cats, dogs, and ferrets that have not gotten their rabies shots and are bitten by an animal may have to be quarantined for six months or euthanized. In general, pets have a higher risk of coming into contact with wild animals that may have rabies than people do. This increases the risk of rabies to us because of our close contact with our pets.

To help reduce this risk:

- Visit your veterinarian with your pet on a regular basis and keep rabies vaccinations up-to-date for all cats, ferrets, and dogs.
- **Maintain control of your pets by keeping cats and ferrets indoors** and keeping dogs under direct supervision when outdoors.
- Spay or neuter your pets to help reduce the number of unwanted animals that may not be properly cared for or vaccinated regularly.
- **Call animal control to remove all stray animals from your neighborhood since these animals may be unvaccinated.**
- **Do not feed or water your pets outside** and keep your garbage securely covered. These items may attract wild or stray animals.

Journal of the American Veterinary Medical Association
May 15, 2017, Vol. 250, No. 10, Pages 1117-1130
https://doi.org/10.2460/javma.250.10.1117

Rabies surveillance in the United States during 2015

Meseret G. Birhane MPH Julie M. Cleaton BS Ben P. Monroe MPH Ashutosh Wadhwa PhD Lillian A. Orciari MS Pamela Yager BS Jesse Blanton MPH Andres Velasco-Villa PhD Brett W. Petersen MD Ryan M. Wallace DVM

Cats

A total of 23,101 cats were tested for rabies in 2015, of which 244 (1.1%) were confirmed rabid (Figure 9). This represented a 10.3% decrease in the number of rabid cats, compared with the 272 reported in 2014 (Table 1). The percentage of cats submitted for testing that were found to be rabid (1.1%) was not significantly different from the mean percentage for the previous 5 years (1.1% [95%, CI, 1.1% to 1.2%]; Table 2). Rabies vaccination status was reported for 42 of the 244 (17.2%) rabid cats. Forty (95%) had no history of vaccination, 1 was reported to have been up-to-date for rabies vaccination, and 1 had an expired status. Most of the rabid cats were reported from states where the raccoon rabies virus variant was considered enzootic: Pennsylvania (n = 50), Virginia (37), New York (23), and Maryland (19). Rabies virus variant typing was performed on 62 (25.4%) rabid cats (Table 3). Most (n = 43) were infected with the raccoon rabies virus variant, with the remainder infected with the south central skunk (15), north central skunk (1), or bat (3) rabies virus variant.

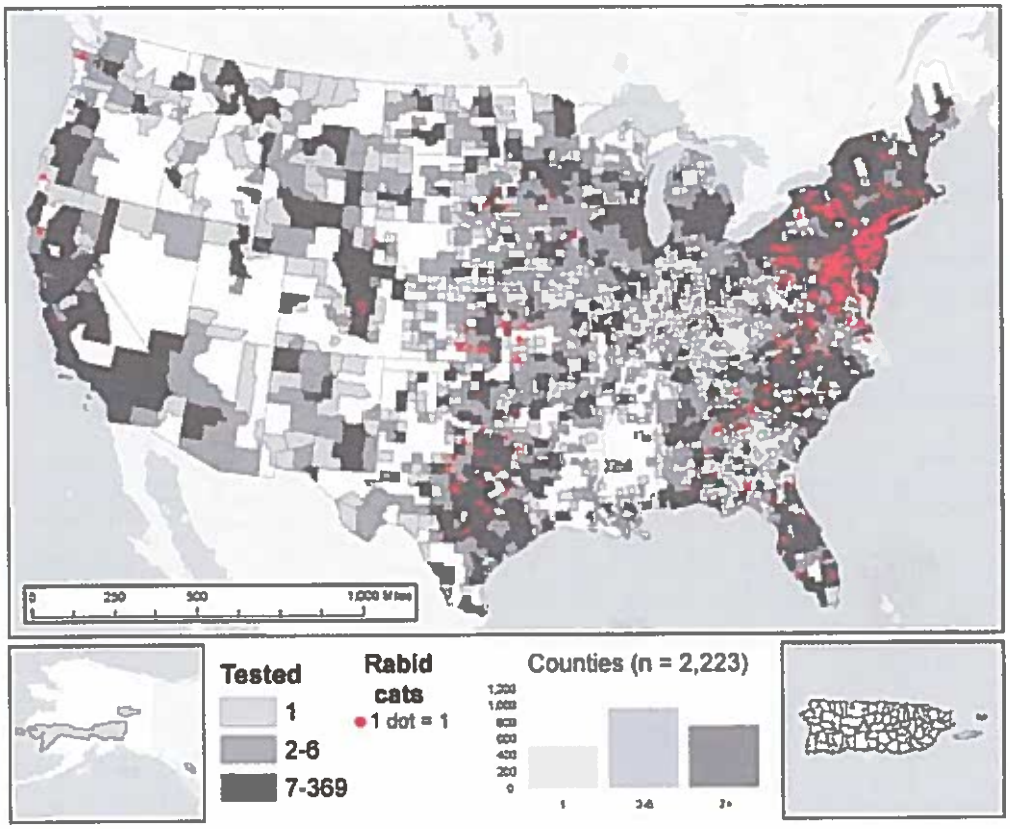


Figure 9— Reported cases of rabies involving cats, by county, during 2015. Histogram represents number of counties in each category for total number of cats submitted for rabies testing. Point locations for rabid cats were randomly selected within each reporting jurisdiction.

Jerry "Pops" Barnes http://popsbarnes.com/feral-cats-or-public-health

(706) 442-0249

District Headquarters
3640 Buena Vista Road
Columbus, Georgia 31906

Columbus, GA City Councilmember District 1, **August 30, 2016**

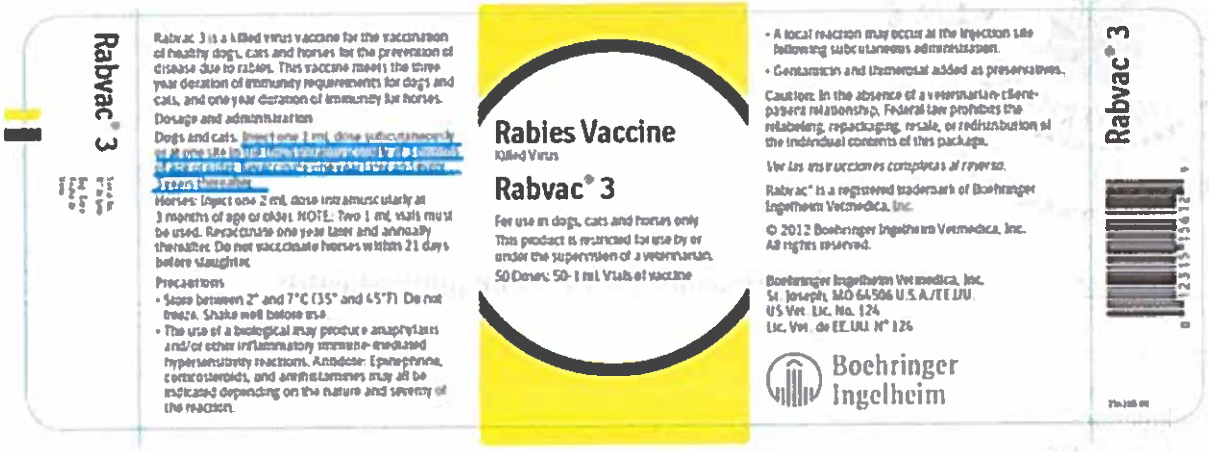
Feral Cats or Public Health?

Everyone knows I am a Registered Nurse and for years have been involved in the health and welfare of this community. Since 2003 I have been providing free health education, free health screening and free case management, both singularly and in partnership with other health organizations through periodic Health Fairs in Columbus and also in the counties. In addition to all of that, I have been writing a health column in the Columbus Times Newspaper called "Healthy Wealthy and Wise" and have a television program on the Consolidated Government Television Station called "Focus on Health". My goal is for everyone to live a long life of quality and health with their loved ones.

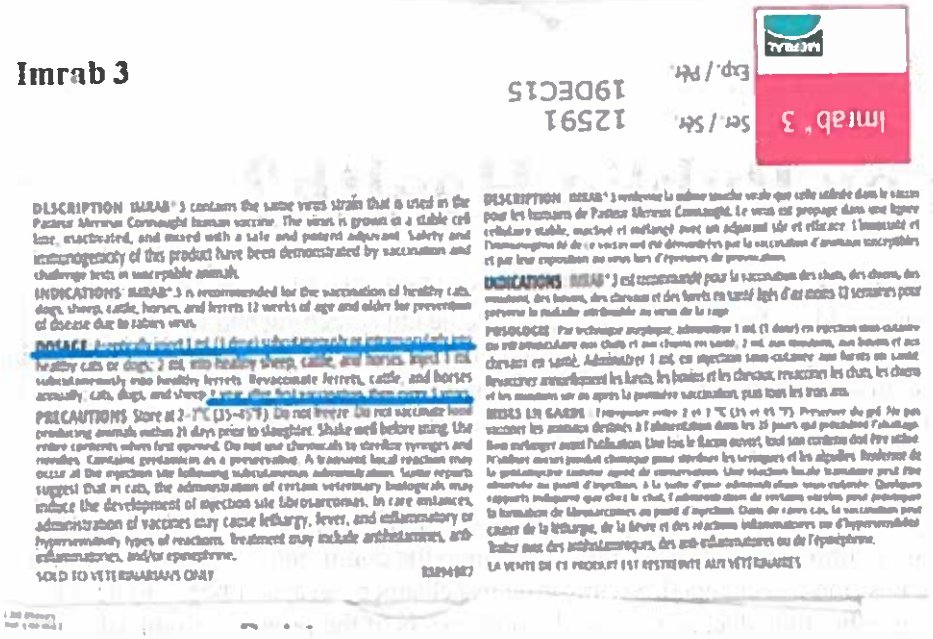
In 2013 the city approved a program to trap, neuter cats, and return them to the community. Initially, I thought this was a good idea, however, my position has changed. My position has changed because I began to hear the roaming cat population is increasing rather than decreasing like the proponents of the program promised, and the cats are creating a nuisance for residents by raiding trash cans, defecating in yards, and the smell of cat urine. After hearing these complaints, I researched the program and what I learned made me, a health care professional, very concerned about the potential of the program to adversely affect the health of the community. Two of the diseases I discovered that cats can spread to people are Rabies, which can be transferred from wildlife to cats to people, and Toxoplasmosis, a cat borne, parasitic disease that people, especially children, can contract through contact with cat feces. The proponents of this program never revealed to us councilors any of the public health risks this program poses.

During my research on rabies in cats, in the Center for Disease Control's (CDC) 2016 Compendium for Prevention and Control of Rabies, I read that "more Rabies cases are reported annually involving cats than dogs" (**Compendium, page 506**). The Compendium states that in order for cats to be fully protected against rabies they must receive an initial rabies vaccination followed a year later by a booster vaccination

(**Compendium pg 508**). Also on page 508 is a statement saying "titers do not directly correlate with protection because other immunologic factors also play a role in preventing rabies," a position repeated by other authorities. My concern is that ACC is not following these guidelines. This passage also instructs people to follow the manufacturers' vaccination recommendations and the vaccination schedule contained in the (**Compendium, pg 516**).



Imrab 3



http://www.drugs.com/vet/purevax-feline-rabies-3-yr.html

Package Insert

PUREVAX Feline Rabies 3 YR

This treatment applies to the following species:
Cats
Manufacturer: Merial
Rabies Vaccine
Live Canarypox Vector
Rabies 3 Year
SWD
PFR 3 YR III

DOSAGE: Reconstitute the lyophilized vaccine with accompanying liquid diluent and aseptically inject 1 mL (1 dose) subcutaneously into healthy cats. Revaccinate 1 year after first vaccination, then every 3 years.

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Every effort has been made to ensure the accuracy of the PUREVAX Feline Rabies 3 YR information published above.

DIRECTIONS

DEFENSOR 3

DEFENSOR has an inactivated rabies virus from an established cell line to effectively help protect dogs and cats from rabies

Dogs and Cats:

General Directions: Shake well. Aseptically administer 1 mL subcutaneously. Dogs may be vaccinated intramuscularly or subcutaneously.

Primary Vaccination: Administer a single 1-mL dose at 3 months of age or older to healthy dogs and cats. A repeat dose should be administered 1 year later.

Revaccination: Subsequent revaccination every 3 years with a single dose is recommended.

As you can see, the manufacturers' labels and the CDC vaccination schedule say to follow the initial shot with a booster. Furthermore, the section on rabies prevention and control methods in the 2016 CDC Compendium specifically addresses cat colonies: "Stray cats serve as a significant source of rabies exposure risk. If communities allow maintenance of feral cat colonies despite this risk, they should safeguard the health of the cats and the communities in which they reside by requiring that cats receive initial rabies vaccinations and appropriately scheduled booster vaccinations" (**Compendium, pg 509**).

To confirm that I was not misinterpreting the statements in the Compendium that there must be an initial vaccination and a booster shot one year later to fully immunize the cats against rabies, I wrote letters to the Center for Disease Control, the US Department of Health and Human Services, the National Association of State Public Health Veterinarians (NASPHV), which publishes the Compendium, and the Georgia Department of Public Health. Each wrote back confirming a booster one year after the initial vaccination Is required to fully immunize the cats. (**Read their letters here**).

The proponents of the cat program claim that a single injection enables three years of immunity. In a letter the Mayor gave me on Jan. 2, 2016 (**Mayor's Letter**), she confirms that the cats trapped under this program are only given a single injection before they are released, and insists that one injection conveys three years of immunity, even though the Compendium, the vaccination schedule, and the vaccine manufacturers say otherwise. Her letter also says that following the CDC recommendations would jeopardize the program since it

is nearly impossible to re-trap the cats a second or more times, and too costly. It appears to me that the Mayor's concern is more towards continuing the program, whereas my concern is the potential risk to public health that releasing these partially vaccinated cats represents. We follow CDC guidelines and recommendations in all other public health matters, and our state law requires us to do so (**Georgia Law**).

In direct contrast with what Mayor Tomlinson stated in her letter, that a single vaccination administered to cats in the TNR program protects public health, a longitudinal study conducted by the Florida Dept of Health proved just the opposite. Two of the counties in the study had been conducting TNR since 1998 and one county has never had a TNR program. Rabies cases in the TNR counties rose significantly whereas rabies cases in the non-TNR county fell significantly over the same time period: **Rabies in Three Florida Counties**.

My question is why are we not complying with CDC guidelines for protecting the health of the community, and secondly, why are we in violation of the law?

On June 23, 2015, after learning about the health risks these cats pose, I asked that a work session be held at Council to discuss the issues surrounding the program and the community health concerns I had. The work session was held on September 29, 2015. At my invitation, three scientists attended the work session to tell the public about the human health risks associated with these cats. The scientists were Dr. Judith Milcarsky, DVM, a national speaker on public health issues from Daytona Beach, Dr. Chris Lepczyk, an Auburn University Biology Professor, and Dr. Joel McNeal, Biology Professor at Kennesaw State University; additionally, Ms. Christy Reeves, blinded by Toxoplasmosis as a child when she touched cat feces deposited in her sand box, described how it has affected her life (Toxoplasmosis is one of the cat borne diseases about which I have big concerns.).

During the work session, I asked the TNR participating veterinarians if it is necessary for cats to receive a booster vaccination a year after the initial vaccination in order to be fully immunized against rabies. The Mayor asked one of the vets to answer and his answer was "Yes". Later in the discussion he admitted that, "We recommend boostering on all vaccines *like that and again it's the best we can do right now; there's no one shot lasts forever"* (**Vet answers booster question**). I was dismayed by the veterinarian's dismissal of the recommendations set by an organization whose sole purpose is to safeguard the health of every community in the entire nation.

After the work session ended, I asked the Mayor for a referral from ACC to explain why Animal Care and Control (ACC), is not following the Centers for Disease Control guidelines to properly immunize the cats released back into the community. They did not directly answer the question I asked, so a month later, I asked again; again they did not directly answer my question. It was at this point that I came to feel I would not get a direct answer from them.

I have no problem with the people who think they are doing the right thing by taking care of these cats; however, I am concerned that the Mayor continues to promote a program when she has admitted the participants cannot properly vaccinate the cats against rabies. I am concerned that Animal Care and Control is operating a program that to me appears to violate Georgia law. I am concerned that the public health risks associated with this cat program were not disclosed to us councilors so we could make a fully informed decision before we voted the ordinance into law. And, most of all, I have grave concerns when a government agency refuses to follow the guidelines of a recognized organization whose sole existence is to protect public health.

As I said in my introduction, my primary goal with this newsletter is to inform the public about the health risks posed by these stray and feral cats, but during my research, which included reading many documents, watching video clips, asking questions, and talking with experts, I realized there is a plan afoot to radically change the mission, purpose, and activities of ACC, and to eliminate or limit services ACC currently provides to citizens. The cat program is part of this plan. The plan is to turn Animal Care and Control into a No kill animal shelter;

in fact, ACC is already operating as a limited access No Kill shelter, as the Chief of ACC, Drale Short, describes in this video clip dated December 2015: (Short describes ACC as a limited admissions shelter).

The original mission of Animal Care and Control was "to protect public health by controlling animal populations" as Pat Biegler stated in May 2012 during a television interview. In fact, she says the primary mission of ACC is not to be an animal shelter; the primary mission of animal control is to protect the public (WRBL interview with Pat Biegler),

- **When did ACC's mission change and who made the decision?**
- **What part of the original ACC mission to protect public health remains and how is it demonstrated?**

ACC is citizen funded. Animal sheltering was a secondary focus; now it is primary. By operating with a No Kill agenda, Acc is operating as do private animal shelters.

No Kill can only be achieved by refusing, restricting, and eliminating citizen services. A No Kill shelter's primary objective is to lower euthanasia statistics as close to zero as possible; the consequences to human and animals are not considered. Statistics seem to be the point, not humanity. At first glance, it seems to be admirable, but closer examination reveals no kill is cruel to humans and animals, and it radically changes the mission and activities of a municipal animal control agency. What happens to all of these saved animals? Since there just aren't enough homes to accommodate them, only the most adoptable make it into wonderful homes. The rest end up living out their lives in filthy cages, hoarding situations, dumped on the streets, transported to locations all over the US, used as bait or fighting dogs, in research facilities, and chained in backyards. In the rush to empty shelters, dogs with biting histories are adopted out to unsuspecting citizens who eventually pay the price. Here are the no kill standards downloaded from the No Kill Advocacy website; the red lettering shows the standards Animal Control has already implemented: No Kill Standards.

The Mayor was initially against No Kill. In a WRBLTV interview dated May 2, 2012, the Mayor describes No Kill as a failure and its supporters as fanatics: (WRBL interview with the Mayor). She refers to a letter in the interview from People for the Ethical Treatment of Animals (PETA) that advised her about the negative effects of No Kill, which you can read here: PETA letter. However, Drale Short, ACC chief, in a memo dated June 11, 2014, described how the Mayor instructed her to adapt portions of the No Kill equation and implement programs that would meet the goal of becoming a no kill shelter: Short's memo.

The objectives of No Kill objectives are accomplished by restricting or eliminating the rights of citizens who are actually funding the program. As an example, one of the objectives is stated as follows: " Abolishment of trapping, lending traps to the public to capture animals, and support of trapping by shelters, governments, and pest control companies…" (please refer to Standards above).

Another problem with this program is that no one can access any records related to the program. How can a citizen funded governmental agency not be subject to the open records act? An elected official, Councilor Glenn Davis, asked for information referencing cat colony locations and was told they are not available to him. He even made an open records request and was denied.

Finally, again I will say that my only concern in all of this is that as an elected official and health care professional I want to eliminate a potential risk to the health of the community. Animal Control must abide by the *EVIDENCE BASED* regulations of the CDC.

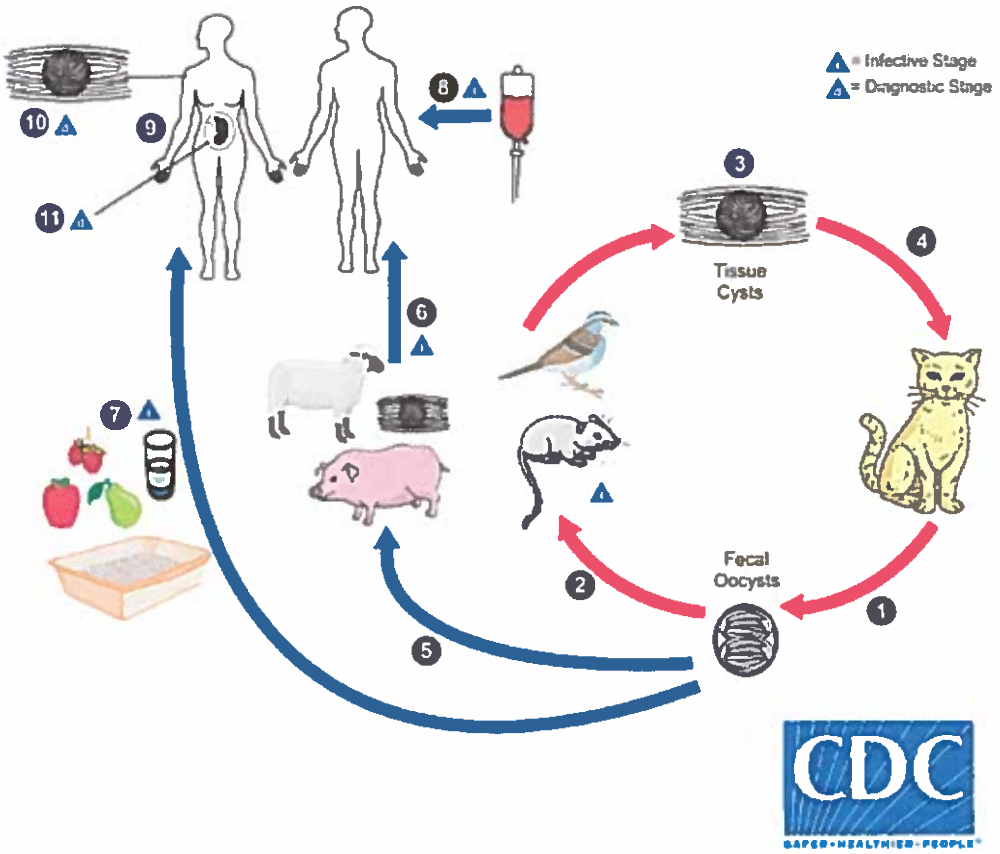
If you feel uncomfortable with these activities Animal Control is conducting, contact your district councilor and both Judy Thomas and Skip Henderson, who are your at-large councilors.

https://www.cdc.gov/parasites/toxoplasmosis/biology. html

Causal Agent:

Toxoplasma gondii is a protozoan parasite that infects most species of warm blooded animals, including humans, and can cause the disease toxoplasmosis.

Life Cycle:



The only known definitive hosts for *Toxoplasma gondii* are members of family Felidae (domestic cats and their relatives). Unsporulated oocysts are shed in the cat's feces ❶. Although oocysts are usually only shed for 1-2 weeks, large numbers may be shed. Oocysts take 1-5 days to sporulate in the environment and become infective. Intermediate hosts in nature (including birds and rodents) become infected after ingesting soil, water or plant material contaminated with oocysts ❷. Oocysts transform into tachyzoites shortly after ingestion. These tachyzoites localize in neural and muscle tissue and develop into tissue cyst bradyzoites ❸. Cats become infected after consuming intermediate hosts harboring tissue cysts ❹. Cats may also become infected directly by ingestion of sporulated oocysts. Animals bred for human consumption and wild game may also become infected with tissue cysts after ingestion of sporulated oocysts in the environment ❺. Humans can become infected by any of several routes:

- eating undercooked meat of animals harboring tissue cysts ❻.
- consuming food or water contaminated with cat feces or by contaminated environmental samples (such as fecal-contaminated soil or changing the litter box of a pet cat) ❼.
- blood transfusion or organ transplantation ❽.
- transplacentally from mother to fetus ❾.

In the human host, the parasites form tissue cysts, most commonly in skeletal muscle, myocardium, brain, and eyes; these cysts may remain throughout the life of the host. Diagnosis is usually achieved by serology, although tissue cysts may be observed in stained biopsy specimens ❿. Diagnosis of congenital infections can be achieved by detecting *T. gondii* DNA in amniotic fluid using molecular methods such as PCR ⓫.

Review

Cell PRESS

Toxoplasma oocysts as a public health problem

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Waterborne outbreaks of *Toxoplasma gondii* have focused attention on the importance of oocysts shed in the feces of infected cats. Cat feces deposited annually into the environment in the United States total approximately 1.2 million metric tons. The annual oocyst burden measured in community surveys is 3 to 434 oocysts per square foot and is greater in areas where cats selectively defecate. Because a single oocyst can possibly cause infection, this oocyst burden represents a major potential public health problem. The proper disposal of cat litter, keeping cats indoors, reducing the feral cat population, and protecting the play areas of children might potentially reduce the oocyst burden.

Why cats and *Toxoplasma* oocysts are important

Cats enrich the lives of many and have become increasingly popular as pets in many parts of the world. In the United States, between 1989 and 2006, cat ownership increased approximately 50% (from 54.6 to 81.7 million pet cats), whereas dog ownership increased by 38% (from 52.4 to 72.1 million dogs); yet, the human population increased by only 23% [1]. In addition to owned cats, the number of feral cats in the United States has been estimated to be between 25 and 60 million [2]. In the UK, the cat population was estimated to be 8.0 million in 2009, having increased from 4.5 million in 1990 [3,4]. Cat ownership has also increased in other parts of the world, especially Latin America and China. Cats have close contact with their owners in many families; one American study reported that 62% of cats slept with their adult owners and another 13% slept with children [5].

Cat feces are known to carry a variety of infectious agents, including the oocysts of *Toxoplasma gondii*, a coccidian protozoan of Phylum Apicomplexa. When *T. gondii* infects previously seronegative pregnant women it may cause a congenital syndrome that includes deafness, seizures, retinal damage, and mental retardation in the fetus or neonate. In immunocompromised individuals, such as those with HIV infection or undergoing immunosuppressive chemotherapy, it may produce severe central nervous system damage, seen less often since the introduction of effective antiretroviral treatment. Until recently, *T. gondii* infection was assumed to be largely asymptomatic in immunocompetent individuals. This notion is now under reconsideration following the outbreak of toxoplasmosis epidemics, including ocular toxoplasmosis, which are associated with *T. gondii* oocyst contamination of water [6–12]. Additional concerns have been raised by recent studies of schizophrenia [13], depression [14], suicidal behavior [15], obsessive–compulsive disorder [16], rheumatoid arthritis [17], brain cancer [18], and scholastic underachievement in children [19], which have reported correlations between such conditions and elevated *T. gondii* seropositivity rates as compared with those in control populations.

How infection occurs

Felines, including domestic cats, are the definitive hosts of *T. gondii*, and the organism can only complete its sexual cycle within feline hosts. Cats usually become infected with *T. gondii* when they initially begin to hunt and ingest an infected bird or small mammal [20]. When infected, the cats deposit fecal oocysts in the soil, grass, animal feed, water, or elsewhere. There they may be ingested by another animal and, as bradyzoites (see Glossary), become tissue cysts in that animal, especially in muscle tissue. If the infected tissue is eaten without being properly cooked, it may infect humans or other animals. Thus, *T. gondii* is a common infection of not only farm animals but also many wild animals such as raccoons, bears, and deer [21].

In addition to humans becoming infected by ingesting tissue cysts, they may also become infected by ingesting or inhaling the *T. gondii* oocysts directly. This may occur when they are changing the litter box of a cat, gardening, playing in a sandbox, eating unwashed fruits or vegetables, or drinking water containing oocysts. Studies have shown that cockroaches and flies may carry oocysts from cat feces to unprotected food [22,23]. *T. gondii* oocysts may even infect humans who pet dogs that have rolled in cat feces

Glossary

Bradyzoites: the slowly dividing form of *Toxoplasma gondii* which becomes encysted in the tissues of the host.
Sporozoite: the form of *T. gondii* in which it is excreted by felids as oocysts. The sporozoites may then become tachyzoites or bradyzoites.
Tachyzoite: the rapidly dividing form of *T. gondii*, which is crescent-shaped and approximately 2 × 6 μm in size.
Tissue cyst: the vehicle which holds the bradyzoites, usually found in brain, muscle, or eye tissue. Tissue cysts vary in size depending on the number of bradyzoites they hold.

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[24]. Thus, there are many ways to become infected which do not involve a person having had any direct cat contact.

The number and viability of *T. gondii* oocysts are impressive. Studies have reported that approximately 1% of cats are shedding oocysts at any given time [3,25] and that they excrete oocysts for a median of 8 days with a total of up to 55 million oocysts per day [3,25]. The total number of oocysts shed by a single cat varies widely from 3 to 810 million [3]. The oocysts are remarkably stable, especially if they are deposited in shady, moist, and temperate conditions. In Texas, under outdoor shaded conditions with a mean air temperature of 19.5°C, oocysts remained viable during a 13-month experiment [26]. In Kansas, oocysts were buried in loose soil and remained viable for 18 months [27]. Oocysts maintained experimentally at 4°C in seawater or freshwater remained viable for 24 and 54 months, respectively [28,29]. Oocysts also survived for over a year in vials of 2% sulfuric acid at 4°C [30]. Because almost all of these studies were terminated while at least some of the oocysts were still viable, we do not yet know the outer limit of viability for *T. gondii* oocysts deposited in various environmental conditions (Box 1).

The percentage of human *T. gondii* infections acquired by tissue cysts versus oocysts is not known and probably varies depending on environmental conditions (Box 1). In a country such as Ethiopia, which has a very high rate of seropositivity and a custom of eating raw beef, it is assumed that tissue cysts are the main source of infection [31]. However, recent studies have reported that the majority of congenital infections [32] and postnatal acute infections [33] in the United States are from oocysts. Experimental observations raised an additional concern: non-dose-dependent ingestion of oocytes results in a more severe infection than those induced by tissue cysts and bradyzoites [25]. It is thus apparent that *T. gondii* oocysts are worthy of additional study.

Oocyst burden on the environment

Given the large number of oocysts excreted by infected cats, attempts have been made to calculate the oocyst burden in the environment. In California, a study of 12 244 households in three communities assessed the disposition of cat feces [34]. The study identified 7284 pet and 2046 feral cats. Among the owned cats, 48% used a litter box at least 75% of the time, 44% defecated outside at least 75% of the time, and 8% both used a litter box and defecated outdoors between 25% and 75% of the time. The litter boxes were disposed of as follows: (i) 4% of cat owners dumped the contents of the litter box on or near their property; (ii) 9% flushed litter down the toilet; and (iii) the remainder put the litter in the garbage. It was assumed that feral cats defecated outside all of the time. The final destination of cat feces was of particular interest in this study because it was attempting to determine the origin of cat fecal contamination thought to be responsible for the deaths of sea otters in the Morro Bay region of California [35].

Based on where the cat owners disposed of feces, the total fecal and oocyst burden on the environment was determined for the three communities [34,36]. In a related study, it was shown that the mean daily defecation per cat totaled 40.2 g for adult cats and 31.7 g for kittens [34]. The environmental accumulation from pet cats was calculated to be 76.4 tons of feces each year in three communities, while feral cats deposited an additional 29.5 tons [34]. Insofar as these communities are representative of the United States population, the 81.7 million owned cats would produce 856 930 tons of outdoor cat feces each year. Assuming there are only 25 million feral cats, these would produce another 360 459 tons of cat feces, resulting in a total accumulation of 1 217 389 tons deposited annually in the environment of the United States.

The *T. gondii* annual oocyst burden in the three California communities was calculated by dividing the cat feces by the land area of residential housing. The communities differed by size and number of cats [34]. Depending on estimations of oocyst production by the cats, the number of *T. gondii* oocysts ranged from 9 to 434 per square foot [36]. A similar study was carried out in three communities in rural France, using comparable assumptions, and reported that the annual environmental oocyst burden varied from 3 to 335 oocysts per square foot [37]. In another French study, *T. gondii* oocysts were identified in 8 of 62 soil samples collected from cat defecation sites on the grounds of an urban hospital [38]. In Brazil, *T. gondii* oocysts were isolated from ten soil samples taken from the playgrounds of 31 elementary schools; the authors suggested that these results indicated a wide distribution of *T. gondii* oocysts around elementary schools in the region [39]. In a village in Panama, it was estimated that the oocyst burden in soil near houses where cats are fed varied from 18 to 72 per square foot [40]. In Poland, *T. gondii* oocysts were isolated from 18 of 101 soil samples taken from places thought to be favored by cats for defecation: sandboxes, playgrounds, parks, gardens, and areas around rubbish pits [41].

A study of *T. gondii* oocysts in public parks was also recently carried out in Wuhan, China [42]; under the regime of Mao Zedong, the keeping of pets was considered bourgeois and discouraged. Pet keeping only started to become prevalent after the death of Mao in 1976 and did not become common until recent years [43,44]. Yet, when 252 soil samples were taken from six public parks in Wuhan in 2009 and 2010, 58 samples (23%) contained *T. gondii* oocysts. The soil samples were taken from areas frequented by cats. The wider prevalence of *T. gondii* in modern China is also reflected in surveys of *T. gondii* seropositivity in pregnant women. In seven studies between 1996 and 2004, the average seropositivity rate was found to be 4.5%, but in six studies completed since 2004 the average rate was 10.2% [45].

Because cats do not defecate randomly but rather select places with loose soil so that they can cover their feces, gardens, children's play areas with loose soil, and especially sandboxes (also called sandpits and sand piles) are favored sites. A study in Japan quantified the frequency of cat defecations in three uncovered urban sandboxes by monitoring them for almost 5 months with night lights and camcorders [46]. The study measured *Toxocara* eggs, not *Toxoplasma* oocysts, as a measure of cat fecal contamination of public sandboxes, but it is useful in providing an accurate count of cat defecations. During this period, there were a total of 961 cat and 11 dog defecations, mostly

Table 1. Estimated accumulation of *Toxoplasma gondii* oocysts in sandboxes[a]

Sandbox[b]	Dimensions (square feet)[b]	Cat defecations observed in 20 weeks[b]	Infected cat defecations estimated after 18 months[a]	Number of oocysts in sandbox[a]	Oocysts per square foot[a]
A	344	96	3.8	19 million	55 184
B	247	201	7.8	39 million	157 575
C	194	664	26.0	325 million	1 677 852

[a]The authors provide a hypothetical calculation of *Toxoplasma* oocysts deposited by cats into sandboxes of children, extrapolated from a study of *Toxocara* cysts quantitated from urban sandboxes in Japan [46].

[b]Data from [46].

occurring at night, in the three sandboxes, which varied in size: 344, 247, and 194 square feet. If we use this number of cat defecations, assume that 1% of the cats were shedding *T. gondii* oocysts, assume that each of these cats shed a total of 5 million oocysts during the time they were shedding, and assume that the oocysts remained viable for 18 months (although specific sand survival studies have not been done), we estimated the hypothetical accumulation of oocysts per square foot in each sandbox. This estimate is 55 184, 157 575, and 1 677 852 oocysts per square foot in the three sandboxes (Table 1). The variation presumably was due to the residential density of that neighborhood and number of cats living nearby.

What are the chances of a child playing in such a sandbox becoming infected with *T. gondii*? One study of young children reported that children who are under 3 years of age put their hands or other objects in their mouths every 2–3 min [47]. Another study, which included 64 children between 1 and 4 years old, carried out in a Massachusetts daycare center, reported that the children ingested a median of 40 mg of soil per day; furthermore, one child consumed 5–8 g of soil per day on average [48]. Although there are no measurements of how many *T. gondii* oocysts are required to infect a child, for obvious reasons, a study that was conducted with pigs found that a single oocyst was sufficient to cause infection in 13 of 14 experimentally infected pigs [49]. Because *T. gondii* oocysts are known to become aerosolized when they dry out, it is also possible that a child playing in such a sandbox could become infected simply by breathing in oocysts [50].

A historical perspective

The relationship between *T. gondii* and the presence of cats has been clearly established for almost half a century. On an isolated Pacific island where cats were just being introduced, the *T. gondii* infection rate among inhabitants was zero except among inhabitants who had lived elsewhere. By contrast, on two neighboring islands where cats were present, the infection rates were 49% and 56% [51,52]. A similar situation was observed in parts of Papua New Guinea in that evidence of human infection was rare when there was a complete lack of felids or where domestic cats had been introduced recently; conversely, areas where cats were more numerous and had been present longer were associated with a higher rate of human infection [53].

The widespread keeping of cats as pets is a relatively recent historical development, starting in the late eighteenth century but becoming more prevalent in the late nineteenth century. Historians of pet keeping date 'the beginning of the cat fever in America' to the first cat show in the United States, held in New York's Madison Square Garden on May 8, 1895 [54]. At that time, there was said to have been 'a rapid and promising growth of what disaffected and alliterative critics call the "cat cult," and poets and printers vie with one another in celebrating the charms of this long-neglected pet' [55].

The affluence that followed World War II in the United States resulted in another rise in pet keeping, mostly of dogs and cats. By the early 1970s, cats were being kept as pets even in Eskimo villages north of the Arctic Circle, purportedly arriving with school teachers from other areas of the United States [56]. Cats subsequently became common in Inuit villages in the Arctic and also became widespread on Maquarie Island in the Antarctic [57]. Recent studies have documented *T. gondii* infection among seals in both the Arctic and Antarctic, but whether the infection occurs there or elsewhere is unknown [57,58].

The most recent increase in pet keeping, including the 50% increase in owned cats, was reported between 1989 and 2006 in the United States [1]. There is no historical precedent for such numbers of cats. This should raise public health concerns about the number of *T. gondii* oocysts being distributed in the environment, especially as we do not yet know the limits of oocyst viability or the true relationship between these oocysts and the human diseases with which they have been recently associated.

Unanswered questions

A steady decrease in the incidence of human toxoplasmosis, as assessed by antibody levels, has been reported among adults over the past two decades in the United States and Northern Europe [59]. Given the increasingly extensive distribution of *T. gondii* oocysts, how can these two facts be reconciled (Box 1)? One possibility is that the decrease is being driven by improved methods of meat keeping, especially given the prevalence of freezers, which kill most of the *T. gondii* tissue cysts [60]. Another possibility is that the increased distribution of *T. gondii* oocysts in the environment is too recent to have been observed in epidemiological surveys. Many such surveys only included adults, whereas more recent investigations into contamination of sandboxes, play areas, and school grounds with *T. gondii* oocysts, which could be a source of infection for children, could perhaps indicate a wave of infections yet to be diagnosed. Still another possibility is that our present methods for detecting antibodies to *T. gondii* do not detect unusual strains or recent antigenic modifications of existing strains and thus are not an entirely accurate measure of *Toxoplasma* exposure. Clearly, these are questions needing additional research (Box 1).

Another interesting question involves studies that have reported a weak relationship and sometimes no

Box 1. Outstanding questions

- Why is the incidence of *Toxoplasma gondii* infection decreasing despite the increasing incidence of cat ownership?
- How accurate are our present methods for detecting antibodies to unusual strains of *T. gondii*?
- What are the limits for the viability of *T. gondii* oocysts under different climactic conditions?
- Are the consequences of being infected with *T. gondii* oocysts in humans different from being infected with tissue cysts?

relationship at all between cat ownership and *T. gondii* seropositivity [61–65]. Such studies should distinguish between exposure to indoor cats, which pose minimal risk, and outdoor cats. Such studies should also try and differentiate exposure risks for children, such as playing in a contaminated sandbox, from exposure risks for adults, such as eating raw meat (Box 1). It would also be very useful if we had an ability to distinguish whether the original infection was by tissue cyst or oocyst and to ascertain whether the outcomes are different. Because cats are now so ubiquitous in the environment, one may become infected by neighboring cats which defecate in one's garden or play area, or by playing in public areas such as parks or school grounds. Indeed, as cats increasingly contaminate public areas with *T. gondii* oocysts it will become progressively more difficult to avoid exposure.

Implications for public practice

Given the number of both feral and pet cats, the number of *T. gondii* oocysts they excrete while infectious and the longevity of the oocysts, there are several implications for public practice. First, it should be assumed that the play areas of children, especially sandboxes, are highly infectious unless they have been covered at all times when not in use or are located in a protected area not accessible to cats. If in doubt, sand in sandboxes should be replaced and protective barriers put in place. Covered and protected sandboxes have been demonstrated to remain uninfected [66]. Second, it should also be assumed that gardens to which cats have access are infectious, and gardeners should wear gloves and wash their hands after completing gardening. One research group reported that 7–13 mg of soil can be removed from under the fingernails after digging in the dirt; this quantity of soil could harbor up to 100 *Toxoplasma* oocysts [27]. Because of possible contamination, fruits and vegetables should be thoroughly washed.

If the oocyst stage of the disease can be modulated, then the disease cycle will be better controlled, especially if tissue cyst transmission can also be minimized by adequate cooking of meat and the control of infections among food animals in the farm environment [67]. Prevention can also be accomplished, in addition to the above suggestions, by educating the public regarding the proper disposal of cat litter, by keeping cats indoors to minimize their acquisition of infection from prey or the environment, and by reducing the feral cat population. Research directed at the prevention of *Toxoplasma* infection in cats by the use of immunization and other interventions should also be strongly encouraged.

Concluding remarks

There is evidence that accumulating *T. gondii* oocysts in the environment pose a significant public health hazard, especially in the sandboxes of children, gardens, and other places favored by cats for defecation. The increasing number of cats in the United States, enormous number of oocysts shed by each cat which becomes infected, unknown parameters for the viability of the oocysts, and the fact that mammals may become infected by a single oocyst should give us cause for concern. The potential magnitude of contamination of the environment by *T. gondii* oocysts is thus impressive. What is not known are the possible effects such oocysts may have on humans [13–19]. We should therefore implement practices to minimize *T. gondii* oocyst transmission to humans even as we simultaneously undertake more research to answer the outstanding questions.

Acknowledgments

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References

1 US Census Bureau (2010) Surveys by the American Veterinary Medical Association, 1987 and 2006. In *Statistical Abstract of the United States*. US Government Printing Office (http://www.census.gov/compendia/statnh/)
2 Rochlitz, I. (ed.) (2007) *The Welfare of Cats*, Springer
3 Dabritz, H.A. and Conrad, P.A. (2010) Cats and *Toxoplasma*: implications for public health. *Zoonoses Public Health* 57, 34–52
4 Will, G. (1997) *Millions and millions of cats*. The Washington Post July 13
5 Chomel, B.B. and Sun, B. (2011) Zoonoses in the bedroom. *Emerg. Infect. Dis.* 17, 167–172
6 Bowie, W.R. *et al.* (1997) Outbreak of toxoplasmosis associated with municipal drinking water. The BC *Toxoplasma* Investigation Team. *Lancet* 350, 173–177
7 Dubey, J.P. *et al.* (2012) Toxoplasmosis in humans and animals in Brazil: high prevalence, high burden of disease, and epidemiology. *Parasitology* 10, 1–50
8 Palanisamy, M. *et al.* (2006) Outbreak of ocular toxoplasmosis in Coimbatore, India. *Indian J. Ophthalmol.* 54, 129–131
9 de Moura, L. *et al.* (2006) Waterborne toxoplasmosis, Brazil, from field to gene. *Emerg. Infect. Dis.* 12, 326–329
10 Benenson, M.W. *et al.* (1982) Oocyst-transmitted toxoplasmosis associated with ingestion of contaminated water. *N. Engl. J. Med.* 307, 666–669
11 Baldursson, S. and Karanis, P. (2011) Waterborne transmission of protozoan parasites: review of worldwide outbreaks – an update 2004–2010. *Water Res.* 45, 6603–6614
12 Dubey, J.P. (2004) Toxoplasmosis – a waterborne zoonosis. *Vet. Parasitol.* 126, 57–72
13 Torrey, E.F. *et al.* (2012) *Toxoplasma gondii* and other risk factors for schizophrenia: an update. *Schizophr. Bull.* 38, 642–647
14 Groër, M.W. *et al.* (2011) Prenatal depression and anxiety in *Toxoplasma gondii*-positive women. *Am. J. Obstet. Gynecol.* 204, 433
15 Pedersen, M.G. *et al.* (2012) *Toxoplasma gondii* infection and self-directed violence in mothers. *Arch. Gen. Psychiatry* 2, 1–8
16 Miman, O. *et al.* (2010) Is there any role of *Toxoplasma gondii* in the etiology of obsessive-compulsive disorder? *Psychiatry Res.* 177, 263–265
17 Fischer, S. *et al.* (2013) *Toxoplasma gondii*: bystander or cofactor in rheumatoid arthritis. *Immunol. Res.* 56, 287–292
18 Vittecoq, M. *et al.* (2012) Brain cancer mortality rates increase with *Toxoplasma gondii* seroprevalence in France. *Infect. Genet. Evol.* 12, 496–498
19 Ferreira, E.C. *et al.* (2013) Association between seropositivity for *Toxoplasma gondii*, scholastic development of children and risk factors for *T. gondii* infection. *Trans. R. Soc. Trop. Med. Hyg.* 107, 390–396

20 Hall, S. *et al.* (2001) The epidemiology of *Toxoplasma* infection. In *Toxoplasmosis: A Comprehensive Clinical Guide* (Joynson, D.H.M. and Wreghitt, T.G., eds), p. 74, Cambridge University Press
21 Hill, D. and Dubey, J.P. (2002) *Toxoplasma gondii:* transmission, diagnosis and prevention. *Clin. Microbiol. Infect.* 8, 634–640
22 Wallace, G.D. (1972) Experimental transmission of *Toxoplasma gondii* by cockroaches. *J. Infect. Dis.* 126, 545–547
23 Wallace, G.D. (1971) Experimental transmission of *Toxoplasma gondii* by filth-flies. *Am. J. Trop. Med. Hyg.* 20, 411–413
24 Frenkel, J.K. and Parker, B.B. (1996) An apparent role of dogs in the transmission of *Toxoplasma gondii*. The probable importance of xenosmophilia. *Ann. N. Y. Acad. Sci.* 23, 402–407
25 Dubey, J.P. (ed.) (2010)In *Toxoplasmosis of Animals and Humans, CRC Press*
26 Yilmaz, S.M. and Hopkins, S.H. (1972) Effects of different conditions on duration of infectivity of *Toxoplasma gondii* oocysts. *J. Parasitol.* 58, 938–939
27 Frenkel, J.K. *et al.* (1975) Soil survival of *Toxoplasma* oocysts in Kansas and Costa Rica. *Am. J. Trop. Med. Hyg.* 24, 439–443
28 Dubey, J.P. (1998) *Toxoplasma gondii* oocyst survival under defined temperatures. *J. Parasitol.* 84, 862–865
29 Lindsay, D.S. and Dubey, J.P. (2009) Long-term survival of *Toxoplasma gondii* sporulated oocysts in seawater. *J. Parasitol.* 95, 1019–1020
30 Frenkel, J.K. and Dubey, J.P. (1972) Toxoplasmosis and its prevention in cats and man. *J. Infect. Dis.* 126, 664–673
31 Gebremedhin, E.Z. *et al.* (2013) Seroepidemiology of *Toxoplasma gondii* infection in women of child-bearing age in central Ethiopia. *BMC Infect. Dis.* 13, 101
32 Boyer, K. *et al.* (2011) Unrecognized ingestion of *Toxoplasma gondii* oocysts leads to congenital toxoplasmosis and causes epidemics in North America. *Clin. Infect. Dis.* 53, 1081–1089
33 Hill, D. *et al.* (2011) Identification of a sporozoite-specific antigen from *Toxoplasma gondii*. *J. Parasitol.* 97, 328–337
34 Dabritz, H.A. *et al.* (2006) Outdoor fecal deposition by free-roaming cats and attitudes of cat owners and nonowners toward stray pets, wildlife, and water pollution. *J. Am. Vet. Med. Assoc.* 229, 74–81
35 Jessup, D.A. *et al.* (2007) Sea otters in a dirty ocean. *J. Am. Vet. Med. Assoc.* 231, 1648–1652
36 Dabritz, H.A. *et al.* (2007) Detection of *Toxoplasma gondii*-like oocysts in cat feces and estimates of the environmental oocyst burden. *J. Am. Vet. Med. Assoc.* 231, 1676–1684
37 Afonso, E. *et al.* (2010) Local meteorological conditions, dynamics of seroconversion to *Toxoplasma gondii* in cats (*Felis catus*) and oocyst burden in a rural environment. *Epidemiol. Infect.* 138, 1105–1113
38 Afonso, E. *et al.* (2008) Spatial distribution of soil contamination by *Toxoplasma gondii* in relation to cat defecation behaviour in an urban area. *Int. J. Parasitol.* 38, 1017–1023
39 dos Santos, T.R. *et al.* (2010) Detection of *Toxoplasma gondii* oocysts in environmental samples from public schools. *Vet. Parasitol.* 171, 53–57
40 Sousa, O.E. *et al.* (1988) Toxoplasmosis in Panama: a 10-year study. *Am. J. Trop. Med. Hyg.* 38, 315–322
41 Lass, A. *et al.* (2009) Detection of *Toxoplasma gondii* oocysts in environmental soil samples using molecular methods. *Eur. J. Clin. Microbiol. Infect. Dis.* 28, 599–605
42 Du, F. *et al.* (2012) Survey on the contamination of *Toxoplasma gondii* oocysts in the soil of public parks of Wuhan, China. *Vet. Parasitol.* 184, 141–146
43 Eckholm, E. (2001) *Dog's life in China: hiding from police dragnets.* New York Times (http://www.nytimes.com/2001/03/19/world/beijing-journal-dog-s-life-in-china-hiding-from-police-dragnets.html?src=pm)
44 Zhu, S. (2009) Psychosis may be associated with toxoplasmosis. *Med. Hypotheses* 73, 799–801
45 Zhou, P. *et al.* (2011) *Toxoplasma gondii* infection in humans in China. *Parasit. Vectors* 4, 165
46 Uga, S. *et al.* (1996) Defecation habits of cats and dogs and contamination by *Toxocara* eggs in public park sandpits. *Am. J. Trop. Med. Hyg.* 54, 122–126
47 Black, R.E. *et al.* (1981) Incidence and severity of rotavirus and *Escherichia coli* diarrhoea in rural Bangladesh. Implications for vaccine development. *Lancet* 1, 141–143
48 Calabrese, E.J. *et al.* (1989) How much soil do young children ingest: an epidemiologic study. *Regul. Toxicol. Pharmacol.* 10, 123–137
49 Dubey, J.P. *et al.* (1996) Infectivity of low numbers of *Toxoplasma gondii* oocysts to pigs. *J. Parasitol.* 82, 438–443
50 Teutsch, S.M. *et al.* (1979) Epidemic toxoplasmosis associated with infected cats. *N. Engl. J. Med.* 300, 695–699
51 Wallace, G.D. (1969) Serologic and epidemiologic observations on toxoplasmosis on three Pacific atolls. *Am. J. Epidemiol.* 90, 103–111
52 Wallace, G.D. *et al.* (1972) Cats, rats, and toxoplasmosis on a small Pacific island. *Am. J. Epidemiol.* 95, 475–482
53 Wallace, G.D. *et al.* (1974) Toxoplasmosis and cats in New Guinea. *Am. J. Trop. Med. Hyg.* 23, 8–14
54 Simpson, F. (1903) *Cats in America. In The Book of the Cat.* Cassell & Co. Ltd., p. 303
55 Repplier, A. (1892) Agrippina. *Atlantic Mon.* 69, 753–763
56 Peterson, D.R. *et al.* (1974) Prevalence of antibody to *Toxoplasma* among Alaskan natives: relation to exposure to the felidae. *J. Infect. Dis.* 130, 557–563
57 Jensen, S.K. *et al.* (2012) Prevalence of *Toxoplasma gondii* antibodies in pinnipeds from Antarctica. *Vet. Rec.* 171, 249
58 Simon, A. *et al.* (2013) Fate and transport of *Toxoplasma gondii* oocysts in seasonally snow covered watersheds: a conceptual framework from a melting snowpack to the Canadian arctic coasts. *Int. J. Environ. Res. Public Health* 10, 994–1005
59 Jones, J.L. *et al.* (2007) *Toxoplasma gondii* infection in the United States, 1999–2004, decline from the prior decade. *Am. J. Trop. Med. Hyg.* 77, 405–410
60 Frenkel, J.K. and Dubey, J.P. (1973) Effects of freezing on the viability of toxoplasma oocysts. *J. Parasitol.* 59, 587–588
61 Kapperud, G. *et al.* (1996) Risk factors for *Toxoplasma gondii* infection in pregnancy. Results of a prospective case-control study in Norway. *Am. J. Epidemiol.* 144, 405–412
62 Taylor, M.R. *et al.* (1997) Community study of toxoplasma antibodies in urban and rural schoolchildren aged 4 to 18 years. *Arch. Dis. Child.* 77, 406–409
63 Cook, A.J. *et al.* (2000) Sources of *Toxoplasma* infection in pregnant women: European multicentre case-control study. European Research Network on Congenital Toxoplasmosis. *BMJ* 321, 142–147
64 Jones, J.L. *et al.* (2009) Risk factors for *Toxoplasma gondii* infection in the United States. *Clin. Infect. Dis.* 49, 878–884
65 Hofhuis, A. *et al.* (2011) Decreased prevalence and age-specific risk factors for *Toxoplasma gondii* IgG antibodies in The Netherlands between 1995/1996 and 2006/2007. *Epidemiol. Infect.* 139, 530–538
66 Winkel, K.D. *et al.* (1990) Risk of parasitic infections from sandpits. *Med. J. Aust.* 153, 503
67 Jones, J.L. and Dubey, J.P. (2012) Foodborne toxoplasmosis. *Clin. Infect. Dis.* 55, 845–851

Featured Article

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By Judith A. Milcarsky, DVM

Acknowledging the associations between Toxoplasma gondii infections - and Miscarriage and Blindness and Suicide and Schizophrenia - in a society where feral cats are being fed by school teachers and eaten by the homeless

REALITY

In Volusia County, Florida where I live, the homeless people are eating the feral cats. I know this because someone who had been homeless and who had been eating the feral cats told me so. And he told me at the same time that he told a group of students at Mainland High School, for whose science class I was the Business Partner in the spring of 2013. He told the students that the cats were a recognizable form on a grill. And as we were walking out of the auditorium, he turned to me and said, "I know that sounded horrible, but I want to assure you that the days when we could find hamburgers in the dumpsters, we didn't eat the cats on those days."

REACTION

There are over twenty-five different agencies in Volusia County that provide services for the homeless. A few of them gave me a "Gung ho!" response and the rest were extremely wary; none were in-between. I've learned that a segment of society regards the homeless people as "icky" (I'm paraphrasing here – nobody actually used that term) and the eating of feral cats is an "icky thing." Icky people doing an icky thing is "icky squared". And things that are icky squared risk getting your funding cut.

This was sobering. Here I thought I'd stumbled on an issue so significant that society could not possibly turn its back. But the reality was that the plight of the homeless was so dire that the mere contemplation of it could result in withdrawal of the very financial support that might help to alleviate it.

In the presence of law enforcement, I have seen nine homeless camps, eight of which were associated with feral cats. I know of eight additional camps, of which six reportedly have feral cats (we do not know about the other two).

Next, one of four recently-evacuated campsites at the homeless camp in the woods across from Halifax Medical Center in Daytona Beach (behind K-Mart).

Below, the two feral cat feeding stations, approximately ten yards from the (above) human encampment; 80 cats reportedly remained on this property at the time these photographs were taken in March 2013.

Are the chronically homeless descending into madness because they're getting infected with a parasite?

CONCERN

There is an epidemiological link between the parasite Toxoplasma gondii and the serious mental illness that is schizophrenia. This may well be the most significant One Health concern of our lifetime. Having toxoplasmosis increases the chance of developing schizophrenia 2.73 times. Researchers worldwide have been addressing this association for over a decade. Johns Hopkins physicians, E. Fuller Torrey, MD and Robert Yolken, MD, have an entire website dedicated to it. *www.stanleyresearch.org/dnn/LaboratoryofDevelopmentalNeurovirology/ToxoplasmosisSchizophreniaResearch*.

SCHIZOPHRENIA

Statistically, if you know 110 people, then you know someone who has schizophrenia. Some people who have a parent, sibling, or child with this serious mental illness have told me that in many cases, it is a fate worse than death - for the mentally ill are punished twice: first with their disease and then again because of it.

Consider that the word "insane" carries two meanings: 1. "Out of one's mind" and 2. "Absurd." If the second definition for "insane" instead was "cancer," society would find its use (to describe everything from car sales to lasagna) unpalatable. Unless and until society regards diseases of the brain with same respect and concern as diseases of the body, we're not going to be able to diagnose and treat serious mental illness. While malignancies involving the brain can manifest with symptoms similar to those of schizophrenia, a diagnosis of cancer is met with empathy while a diagnosis of schizophrenia is met with shame. How many people would seek treatment for cancer if stigma accompanied the diagnosis?

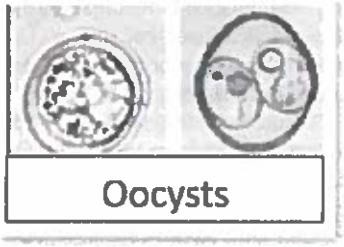
TRUST

My clients share their lives, including their medical problems, with me. Cancer and heart disease – I know about those when they call for their pets' medication refills. I know who has diabetes and who has hypoglycemia; I know who is hypothyroid and who is hyperthyroid; I know which fathers have prostate disease, which mothers are going through menopause, and which teenage daughters are 'PMSing'; and I am informed of these maladies as soon after the diagnosis is made as I have an appointment with the animals. I am told this because when

I work, I am kneeling on their kitchen floor; I am told this because I am 'sort of medical;' and I am told this because I am trusted. But mental illness – I'm not told about that until I've been in and out of their house for at least six years - and not until I'm treating the second set of animals, the first set having died of old age.

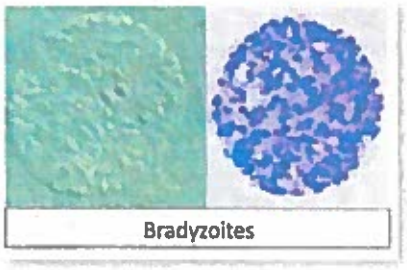
PARASITE

Toxoplasma gondii is a microscopic, single-celled organism that can infect the tissues of any warm-blooded animal - and people. One way to get infected is to eat something that has been contaminated with cat feces containing T. gondii oocysts. The sexual phase of this parasite reproduces in cat intestines. All felids, from bobcats to house cats, can serve as the definitive host. Most people know this parasite as the reason that pregnant women shouldn't clean litter boxes. The infectious dose is a single oocyst.



Stages of T. gondii found in cat feces
Left as it appears immediately after being defecated into the environment.
Right as it appears three-five days after sporulating. This stage remains infectious in the environment for at least eighteen months.
From: Companion Animal Parasite Council

Eating rare meat that is infected with bradyzoite cysts is another way to get toxoplasmosis. Depending on the region, 7-20% of people in the United States have antibodies to T. gondii. Positive serology indicates that a person has been infected and has bradyzoites in their tissues. It was previously thought that these cysts were inert and did not create a problem for the host; it is now recognized that these cysts are biologically active.



Previous photo: Cyst stage of T. gondii found in the tissues of animals and humans (unstained on left, stained on right)
From: Companion Animal Parasite Council

CATS

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hoofcare.blogspot

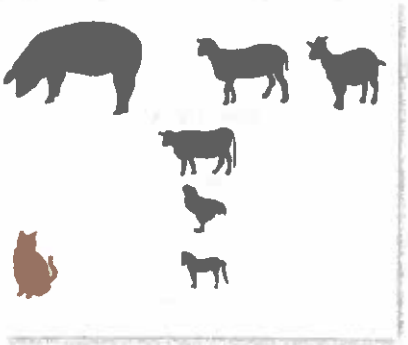
Cats get infected with Toxoplasma when they prey on intermediate hosts: birds and small mammals.

Substrate preferences for feline elimination
Most people know Toxoplasma as the reason that pregnant women should not clean cat boxes. The amount of dirt retained under a single fingernail from gardening without gloves in areas contaminated with infected feline feces can contain 100 oocysts.
To a feral cat, a golf-course sand trap is the world's greatest litter box.

HUMAN INFECTION

Half of the people who get infected with T. gondii do not have symptoms when they initially encounter the parasite. 25% may have a low-grade fever, with joint aches or muscle pains for several days, symptoms that might suggest flu. Only 25% of humans get sick enough after initial infection to seek medical services.

While both oocysts (sporozoites) and tissue cysts (bradyzoites) can cause infection, it is generally understood that in the USA, more than half of infections are from oocysts (feline fecal contamination) and those infections tend to be more severe than those acquired from eating undercooked meat.



This is a graphic representation of the likelihood of getting infected with T. gondii in the United States from eating undercooked meat containing bradyzoites. (Please note the "poop brown" kitty in the lower left corner. While cats do catch and eat barn rodents, they also defecate in the hay; humans eat the animals that eat the cat-poop contaminated hay.)

If a pregnant woman gets infected with T. gondii – either from eating undercooked meat, or by eating something contaminated with fecal oocysts - she can pass the infection on to her unborn child. While the chance of infection increases with the duration of pregnancy, the earlier the infection, the more likely that she will suffer a miscarriage or that the child will die shortly after birth. A cardiologist recently commented to me that when a mamma loses her baby through miscarriage, we pat her on the shoulder and tell her that we hope things go better in the future; we don't know how many babies are lost through miscarriage from T. gondii because we don't test for it.

A baby infected with T. gondii during the last trimester will likely survive, but with serious sequela: varying levels of mental retardation and/or deafness and/or blindness – and the deafness and blindness may not manifest until 24 years of age [from an in-utero infection]. It is estimated that between 400 and 4,000 babies are born every year in the USA with toxoplasmosis.

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It is estimated that each year in the United States, 21,000 people develop retinochoroiditis from T. gondii infections – and 4,800 of those cases result in blindness. Visual loss results in a 35.6% decrease in quality of life among children aged 3 to 16. And the blindness is permanent; 60% of blind people age 18-69 are unemployed.

There are three strains of T. gondii in the United States, and retinal lesions occur in 2-3% of Toxoplasma infections. By contrast, in South America there are over twenty strains of the parasite which coexist in multiple localities, and blindness results in 20-30% of infections. There is concern that due to Florida's geographic proximity, if Toxoplasma-related blindness becomes more prevalent in the United States, Florida may be the first state for this to occur.

***Left** Acquired disease (probably) with active retinochoroiditis without adjacent pigmented scar and minimal vitreous inflammation.*
***Right** Reactivation of toxoplasmic retinochoroiditis adjacent to an old scar.*

SOCIETAL ASSESSMENT

After learning that the homeless people in Volusia County were eating the feral cats, I sought direction from the people in my world, most of them my clients; their responses spanned the breadth of human experience. After learning that the homeless people in Volusia County were eating the feral cats, a government analyst remarked, "In this country?"

A very intelligent client from England told me that, "Sometimes it's not very nice to know things."

The owner of ten pit-bull mixes looked at me and said, "So the homeless people are eating the homeless cats - Hey – solves two problems!"

Two unrelated clients, who admit to feeding the feral cats, (and admit to feeding the raccoons while they're feeding the feral cats) said, "It would be better to humanely euthanize a feral cat than to allow a homeless person to eat him."

A cardiology nurse pointed out that, "This isn't a matter of depravity, but rather one of desperation."

A fire chief looked at me and said, "Well of course the homeless people are eating the feral cats. Why does that surprise you?"

A stay-at-home mom asked, "Which problem do you fix first, the cats who may be carrying a serious parasite, or the homeless people who have nothing else to eat?"

An attorney who has worked as a public defender, said that for him, this was "an a-ha moment."

Ten years earlier, he noticed that homeless people, who he'd initially assisted with minor issues (such as trespass), within three to four years had to be Baker Acted. He acknowledged that, "While mental illness may have been what got them on the street in the first place; there was obvious decline over time." So he invested himself in psychiatric literature, interviewed a number of the area's psychiatrists, and there still remained a big question mark – until he learned about the feral cats. "This," he said, "Connects the dots."

A UPS driver could not even articulate a response in words - could only moan, "Ohhh."

An OB-GYN gave me a two-word response, "Oh Lord!"

A restaurant owner offered a three-word response, "Shut the door!"

A Family Practice physician (from Arkansas) asked, "What temperature do you have to cook – meat – in order to kill Toxoplasma?" [It's 160F or about 70C.]

A client who has worked in the prison ministry asked, "What's the awareness color for schizophrenia? You know, like breast cancer is pink?"

Silver is the awareness color for schizophrenia. Silver is a precious metal, something that most people want, and I've never known anyone who wanted to have a mental illness. The thinking behind silver was that therapy and medication provide a "silver lining," a chance for a normal life. [Now I wear a silver pin.]

A minister, whose church is on the circuit when the homeless people make their rounds asking for hand-outs, reminded me that, "Homelessness is a choice."

A priest whose church runs a food pantry said that, "We need to get to the root-cause of homelessness and we need to get to the root-cause of mental illness." He asked me if I realized that, "If we could study this, and if the study yielded results, the ramifications would extend beyond the United States."

A psychiatric nurse who works with our county's adolescents, pointed a finger at me and said, "You – and I mean you veterinarians – need to prove that there is no association between toxoplasmosis and schizophrenia before one more feral cat gets put on one more elementary school campus."

The homeless people are not the only vulnerable segment of society when it comes to feral cats; so too are the school children. The "First Official Feral Cat Colony of the City of Port Orange" is at Horizon Elementary School; that colony has been there for well over a decade.

A police officer informed me that, "Some members of law enforcement have known that the homeless people were eating the feral cats since fiscal year 2009-2010."

The officer and I discussed that most people with a serious mental illness have a much greater chance being a crime victim than they do being a crime perpetrator. That said, if we consider the Gabrielle Gifford's incident, the Batman movie incident, and the Navy Shipyard incident, which were all committed by young men who had been diagnosed with schizophrenia, while they may be outliers, when an incident happens, innocent people are affected.

I said to the officer, "If Dr. Torrey and Dr. Yolken from Johns Hopkins are right, and if there really is an association between toxoplasmosis and schizophrenia, then by placing feral cats on elementary school campuses . . ." The officer cut me off and finished the sentence, "This won't be a matter of gun control: This will be a matter of animal control."

SCHOOL CHILDREN

The City of Port Orange has provided tens of thousands of dollars of taxpayer money to fund the feral cat initiative. The initial feeder of the colony at Horizon Elementary was a teacher. While this is an "official" colony, many other schools - elementary, middle, and high schools - throughout Volusia County have unofficial colonies where teachers are typically the feeders.

An argument has been made that since a child can get infected with Toxoplasma from eating undercooked meat in his own home (and possibly get Toxoplasma-associated schizophrenia from that route), that the feral cats should not have to be removed from school properties. Another Public Health example applies: Teachers are not permitted to smoke in the classroom, even though a student might be exposed to cigarette smoke from the time he enters his parent's car at the end of the school day until he returns to

school the following morning.

School attendance is mandated by the State and designated by the district; parents have no control over their children attending a school where feral cats are harbored. Volusia County has had numerous custodial concerns over the last two years: While the School Board has addressed sanitation in the classrooms, the children are literally playing in and on feline fecal-contaminated playgrounds.

School is supposed to be where children go to prepare for life. If the children are getting infected with a parasite that causes them to develop schizophrenia, then is the life that school is preparing them for life on the street?

A feral cat next to the driveway of Horizon Elementary School, May 2015

Horizon Elementary School's sandy playground as seen, from the contiguous City park where 9 out of 11 feline fecal piles tested positive for zoonotic parasites in December 2011.

T. GONDII AND RODENTS AND CAT PEE – AND CAT LADIES

When a normal rodent smells cat urine, it flees in fear. This is mediated through neurons originating in the accessory olfactory bulb. Cat urine should increase neuronal activity to "defensive" mode, as mediated by the hypothalamus. This tract runs parallel to the neurons coursing between the olfactory bulb and the amygdyla. The presence of Toxoplasma bradyzoite cysts perturbs the system, so the signal intended for the hypothalamus is redirected to the amygdyla, which the rodent interprets as a "reproductive" response.

What if the whole point of Toxoplasma was for the cat to get a meal? If Toxoplasma-infected rodents are drawn to cat urine, might the same be occurring with people who feed feral cats?

Let us use the term ailurophilia [From the Greek ailouros "cat" + philien to love] -a morbid or inordinate fondness for cats – to describe feral cat feeders, and let us forgo use of the derogatory term, "Crazy." Ailurophilia is accurate, scientific, and descriptive, and its use returns the possibility of mental issues back to the mental health professionals, whose job is difficult enough without the influence of maligning language; there is no simple blood test for schizophrenia.

The act of feeding of the feral cats gives the feeders an intensely positive emotional response that nothing else in their life provides.

The influence of T. gondii on a rodent's response to cat urine is exclusive to felids. The fear response to the urine of other carnivores remains intact. A rodent brain infected with T. gondii contains 15% more dopamine than that of a normal rodent. When treated with anti-dopaminergic compounds, a T.gondii-infected rodent regains its fear of cats.

There are an estimated 9.6 million owned cats in Florida – and an equal number of feral cats in the state. Each feral cat will contaminate the environment with 32 pounds [dry weight] of feces each year. Statistically, 1% of feral cats are shedding T. gondii oocysts at any point in time. Each infected cat sheds an average of 20 million oocysts over approximately two weeks; oocysts remain infectious in the environment for at least eighteen months. Re-shedding is possible five years after initial infection; re-shedding is unlikely in feral cats since their life expectancy is only three years.

IS TOXOPLASMA GONDII IN VOLUSIA COUNTY?

The Volusia County Health Department informed us veterinarians that we had to prove that T. gondii was in the animals before they would start testing people. And if we found it in the animals, the Health Department would address the homeless people with the same level of concern as the school children: A citizen is a citizen regardless if they are on a playground or on the street.

FELINE STUDY

In July 2013, a study was proposed to determine if feral cats in Volusia County, which were impounded and euthanized through traditional means, could have necropsy samples sent to the USDA to be tested for Toxoplasma. Note that these cats would not have been euthanized for the purpose of testing; the study would have been incidental to these animals. The study was denied by the county's largest impoundment facility.

Consider these two cost concerns:

1. Volusia County Animal Services is worried about a $200 thousand annual impoundment budget.
2. The total lifetime cost for a single diagnosis of Schizophrenia in Volusia County exceeds $900 thousand *[taking into account age at diagnosis, life expectancy, unemployment and medical costs].*

What if Dr. Torrey and Dr. Yolken from Johns Hopkins are wrong? (That is a very uncomfortable thought for a house-call veterinarian to have.) What if there really is no association between Toxoplasma and Schizophrenia? What if the association ends up being something else related to the cats? Or something else in the soil? Or another parasite which is yet undiscovered?

What if they're wrong and we pursue this? And what if they're right and we don't?

CANINE STUDY

At the November 2013 meeting of the National Animal Interest Alliance (NAIA), the question was posed: "Can dogs get toxoplasmosis?" The question was intriguing, since no self-respecting dog turns down cat poop.

Any warm-blooded animal can get toxoplasmosis. At this time, we do not usually recognize toxoplasmosis in dogs, unless the dog is also immune-suppressed, as from canine distemper virus, and the animal succumbs to a combined infection. Since veterinarians typically deal with owned dogs that have been vaccinated against canine distemper, we're not diagnosing toxoplasmosis.

Testing dogs for T.gondii is different than testing cats; since the parasite doesn't replicate in dog intestines, we can only look for antibodies in the blood. But nobody had looked for antibodies to T. gondii in owned dogs in the United States before.

Expert Jitender Dubey, MVSC, PhD, is the world's leading expert on toxoplasmosis. It was his research - published in 1970 - that completed the understanding of the sexual phase of T.gondii in cat intestines. He is the world's leading authority on toxoplasmosis and is the most cited veterinary scientist with over 1,200 publications to his name. And he thought that the NAIA query merited pursuit.

We tested fifty-one dogs from five Florida counties [Osceola, Marion, Sumter, Citrus, and Hillsborough], where the only criteria was that the owners knew that the dogs were eating (outside) cat feces. 37% of these dogs had antibodies to Toxoplasma.

Yet somebody could reasonably argue that

we didn't know that those dogs weren't also stealing raw meat from off of their owners' counter-tops.

In July 2014, a study was launched to determine if owned dogs could be a sentinel for environmental contamination with T. gondii. We dubbed this the Silver Leash Project acknowledging silver as the awareness color for Schizophrenia, and recognizing that dogs are contributing to science, as man's best friend.

This is a controlled study: Every dog that the owners know is eating (outside) cat feces will be matched with a dog of the same breed, age, gender, and geographic proximity that has not been known to "snack."

THE SILVER Leash PROJECT

This is a blinded study: Dr. Dubey will only know a dog by its number; he won't know the "cases" from the "controls;" the only thing he'll know about the samples is that they came from dogs.

If owned dogs can be a sentinel for environmental contamination with T. gondii, then we won't have to get permission from the impoundment facilities to test deceased, unowned cats.

Our study won't give us direct information about schizophrenia – it will be up to physicians in human medicine to make that correlation

VETERINARIANS – AND SUICIDE

A web-based survey, a collaborative effort between the National Association of State Public Health Veterinarians, Auburn University, and the CDC, addressed the statistic that veterinarians have a suicide rate that is four times that of the general population, and twice that of the other health professions.

Results reported in February 2015 MMWR indicated that 10% of the nation's veterinarians suffer from psychological distress and as many as 1 in 6 have had suicidal ideation since graduation.

And there are research publications linking Toxoplasma gondii to suicide.

And veterinarians handle cat poop as part of their job description.

HUMAN STUDY

Announced in the May 1, 2015 issue of the Journal of the American Veterinary Association, "The research study known as the Silver Band Project, intends to add data to the growing body of evidence on the public health implications of T gondii infection. Specifically, the purpose is to determine the prevalence of T gondii IgG antibodies in veterinarians and their staff, both those assisting with laboratory fecal analyses and those with receptionist duties only. The prevalence in that population will be compared with the prevalence in physicians and their respective staff members, both those with hands-on patient contact and those with strictly clerical duties, as well as with the prevalence in members of the general public.

No grant money was required to launch the study. Collaborating veterinarians will donate their time, and the USDA will test the samples at no charge. The only potential cost to participants is a physician visit for the blood draw.

Participants will be matched on the basis of gender, age, race, and geography. Physicians and their staff members, and members of the general public who would be interested in participating in this study as controls can contact Dr. Milcarsky who is coordinating samples originating east of the Mississippi River and can be reached at jamvet@cfl.rr.com." A specific protocol was developed for this study to assure the anonymity of control volunteers.

Participant names and contact information will be known only to the collaborating veterinarians, who will provide the participants with their test results.

A QUESTION OF PUBLIC HEALTH

Public conversations regarding feral cats tend to be prickly. The impossible question posed to elected officials is, "Do you want to kill the feral cats?" This veterinarian doesn't ever want any animal to die – I spend my entire existence trying to keep animals alive. But the real question facing society is not do we want the feral cats to die, but rather: Is it better that the feral cats die by humane injection of barbiturate overdose, or that the school children become infected with a parasite that may cause them to develop the most devestating – incurable - mental illness?

Toxoplasma-positive reaction, stained by immunofluorescence (IFA). (CDC Photo)

I'll end with a quote from a client who was trained as a concert pianist: "Mental illness is still a dark box and we need to let in a little bit of light. If nothing comes of these 'Silver projects,' there will have been nothing wrong with a veterinary attempt to strike a match."

ABOUT THE AUTHOR

Judith Milcarsky was raised in Orlando, FL, earned a Bachelor of Science degree in Laboratory Technology from Auburn University in 1982, and a Doctor of Veterinary Medicine degree from the University of Florida in 1986. She is married to Edward Milcarsky, MD, who completed his Family Practice residency at Halifax Medical Center in 1992. She has had a small animal, house-call practice in Daytona Beach since 1994. For over a decade, she has addressed the association between feral cats and the fatal disease that is rabies. The information in this report came from presentations Judith has made to the National Animal Interest Alliance, the Family Practice Residency Program at Halifax Medical Center, the Daytona State College [STEMinar series] https://youtu.be/f0RwYykLR2k and the Florida Public Health Association Continuing Education Conference. It is rare for a practicing veterinarian to be given the opportunity to share public health information with physicians. The author is grateful for this honor.

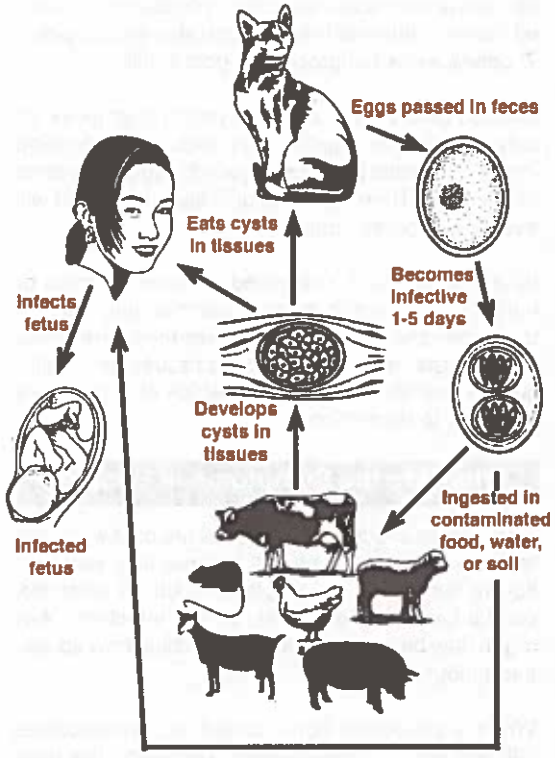
How to Avoid Infection with *T. gondii*

To prevent infection of cats:

- Keep cats indoors to prevent them from hunting and eating wild rodents and birds.
- Feed cats only commercially prepared food or well-cooked meat, never raw meat or raw meat products.

To prevent infection of humans:

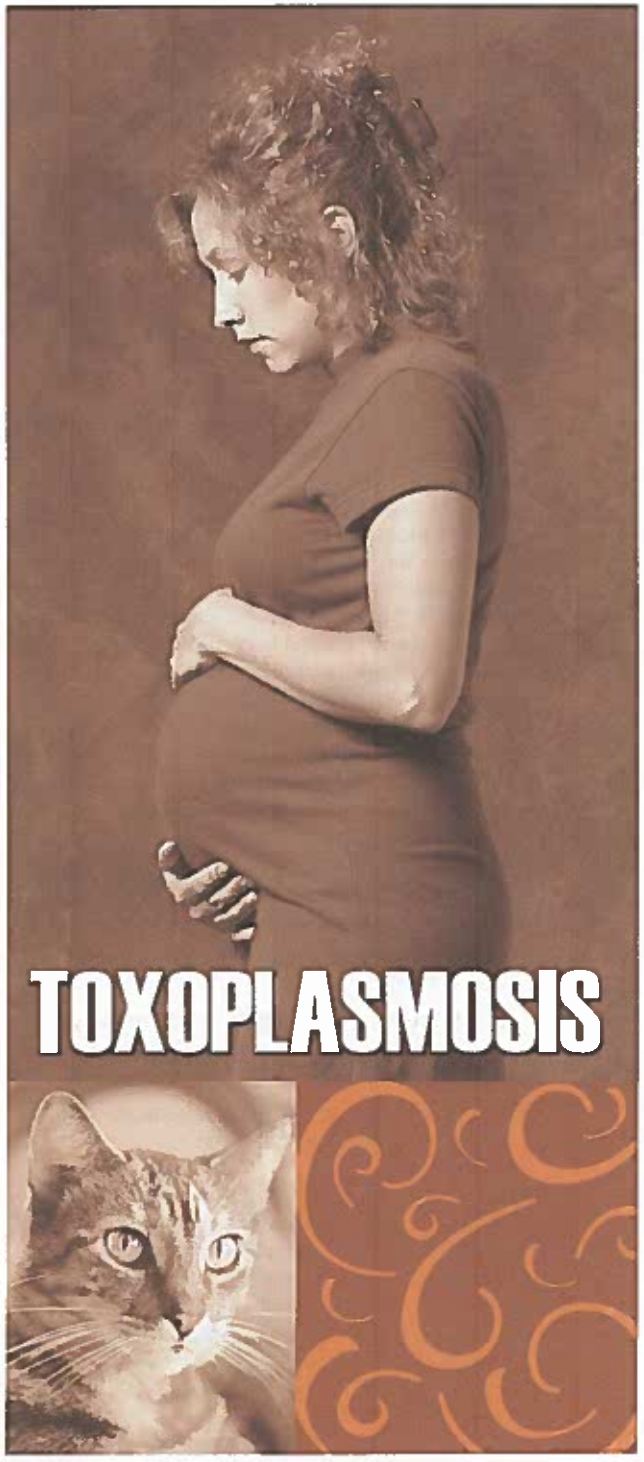
- Wash hands thoroughly with soap and water after handling uncooked meat and before eating.
- Wash all cutting boards, sink tops, knives, and other utensils that come in contact with uncooked meat with soap and water.
- Cook meat thoroughly to an internal temperature of 160° F to destroy any parasites that might be present. Avoid tasting while cooking.
- Wash vegetables thoroughly before eating to remove soil that may be contaminated with cat feces.
- Dispose of cat litter every day before any eggs have time to become infective. Cat boxes and litter should be handled by someone other than a pregnant woman or those who are immunocompromised.
- Wear gloves while gardening, especially where cats may have defecated.
- Cover children's sandboxes when not in use to prevent cats from defecating in them.



Life cycle of *Toxoplasma gondii*

TEXAS Department of State Health Services

Texas Department of State Health Services
Zoonosis Control
Stock No. 7-34 6/07



TOXOPLASMOSIS

What Is Toxoplasmosis?

Toxoplasmosis is a disease caused by the protozoan parasite, *Toxoplasma gondii*. This disease is widespread in humans and many other warm-blooded animals. It is estimated that 20-30% of all Americans have been infected with the parasite. Cats, including wild species, are the **only** animals that harbor the adult parasite in their intestinal tract. These adult parasites produce oocysts (eggs) that are passed in the cat's feces. The oocysts must develop for 1 to 5 days in the environment before they become infective, and they can remain infective for up to 18 months in the soil and in the cat's feces. When other animals and humans become infected with this parasite, cysts are formed in their tissues (muscle, brain, etc.), but no adult parasites develop in their intestinal tract. Although animals other than cats do not shed oocysts in their feces, the infection may be transmitted when the tissues of an infected animal are eaten by another susceptible animal or person.

How Is Toxoplasmosis Transmitted to People?

The 3 main ways of spreading the parasite are:

- transplacental (from mother to unborn baby);
- ingestion (swallowing) of infective cysts in tissues; and
- ingestion of food or water contaminated with infective oocysts from cat feces.

The two major sources for the transmission of toxoplasmosis are meat and cat feces. By **handling raw meat** and then touching your mouth or **eating raw or undercooked meat**, a person may ingest parasites and develop the disease. Although any meat source may contain *T. gondii* tissue cysts, pork, veal, and venison are common sources of infection in the United States. Other wild animals can also be sources of *T. gondii*, as can unprocessed goat's milk.

Infected cats usually shed oocysts in their feces for only 1 to 2 weeks during their lives. Cats develop immunity against the parasite, which usually prevents reinfection. Therefore, it is unlikely that the cat will ever shed oocysts again.

When oocysts are swallowed by other animals or humans, they hatch in the intestines and migrate to muscle and other tissues where they form cysts. These cysts remain in the host's tissues for the lifetime of that animal or person, which also produces immunity to reinfection.

What Are the Symptoms in People?

Most people infected with *T. gondii* are not aware of it. In those who do become ill, the illness may vary from flu-like symptoms to symptoms such as enlarged, painful lymph nodes, fever, or eye infection. Any organ may be involved and the condition may spread throughout the body.

When a previously non-infected woman becomes infected with *T. gondii* during pregnancy, the fetus (unborn baby) may become infected as well. Infection during the first half of pregnancy poses the greatest risk to the fetus. The unborn child may develop physical malformations, mental retardation, impaired vision, and deafness. Fetal infections may result in death.

Toxoplasmosis infections in most people typically resolve without treatment. For pregnant women or people with weakened immune systems, medications are available to treat toxoplasmosis.

Should I Get Rid of my Cat?

No, people should not be afraid to own a cat. Current data suggest that ownership of pet cats does not increase the risk of toxoplasmosis. However, cats that are allowed to hunt wild rodents and birds are much more likely to become infected with *T. gondii* than cats that are kept indoors. Infected cats rarely shed oocysts in their feces more than once in a lifetime, after which transmission to humans is unlikely. Cats can be tested by a veterinarian for evidence of exposure to the toxoplasma organism. Cats may not develop antibodies to *T. gondii* during the oocyst-shedding period; therefore, a negative serologic response does not provide useful information regarding the ability of a particular cat to transmit toxoplasmosis. A cat with a positive blood test probably has already completed its episode of oocyst shedding. If a woman is pregnant or considering pregnancy, she can also be tested by her physician. By checking both the woman and the cat, proper recommendations can be made.

Toxoplasmosis and Pregnancy

Approximately 30% of the women of childbearing age in the U.S. have been exposed to *T. gondii* and are immune to toxoplasmosis. The remaining 70% are at risk of being infected with *T. gondii* during pregnancy. When a woman becomes infected with *T. gondii* during pregnancy, there is a 20 to 50% chance that her unborn child will be infected. It is estimated that one in every 3,000 pregnancies is complicated by toxoplasmosis. The unborn baby is very vulnerable to this disease, so pregnant women should take every precaution to prevent infection with the *T. gondii* parasite.

Toxoplasmosis and the Immunocompromised

People who are immunocompromised (have a reduced function of the immune system) are at greater risk for serious disease, including encephalitis (brain inflammation), resulting from infection with *T. gondii*. In most cases, disease results from reactivation of previous toxoplasmosis infections. Cats only shed this organism for a brief period once in their lifetime; therefore, the risk of becoming infected from your pet cat even if you are immunocompromised is very low.

From PETA (People for the Ethical Treatment of Animals) website, 2016

The Great Outdoors? Not for Cats!

Some animal shelters manipulate their euthanasia statistics by instituting policies that leave animals to struggle for survival and die painfully on the streets. So-called "trap-neuter-release" (TNR) programs—or, more accurately, "trap-neuter-reabandon" programs—may allow limited-admission shelters to spin their intake and euthanasia numbers, but they do nothing to protect cats from the horrors that befall them when left outdoors to battle harsh surroundings, sickness, and sadistic people.

Countless cats who are left outdoors without protection die from infected wounds and injuries, as even small abscesses and common urinary tract infections can become raging and deadly for unsocialized cats who cannot be handled and treated. Cats outdoors are vulnerable to contagious diseases, parasite infestations, starvation, dehydration, freezing, heatstroke, attacks by dogs and other predators, and being hit by vehicles. Cruel people often poison, shoot, burn, drown, or otherwise torture and kill cats.

Right or wrong, many property and business owners do not want cats on their property. Not everyone loves cats or wants them climbing on their cars, maiming or killing birds, or digging in their gardens. When animal shelters refuse to accept cats (as more and more so-called "no kill" facilities are doing), property owners often take matters into their own hands and resort to cruelty, both intentional and unintentional.

So many people become upset by roaming cats that legislation was introduced in Wisconsin and Utah to make it legal to stalk, hunt, and kill domestic cats! The bills failed, thanks to an outcry from animal activists and compassionate citizens, but that these bills were introduced at all should serve as a wake-up call for those who claim to care about cats—they are not safe outdoors.

Because of the many deadly hazards that cats face outdoors, responsible guardians allow their feline companions outdoors only when on a leash, in an enclosed area (such as a screened porch), or closely supervised.

Below is just a sampling of some of the horrible fates that have recently befallen stray, feral, and free-roaming cats. Countless others have died frightened and alone under porches or behind dumpsters, without anyone ever noticing what became of them.

February 2016/Geneva, Illinois: Patch.com reported that a cat who had been allowed to roam outdoors without supervision died from his or her injuries after being attacked by dogs who had also been roaming without supervision. Responding police officers located the owner and took the cat to a veterinary hospital, where the animal died. They were unable to locate the dogs' owner.

January 2016/Doylestown, Pennsylvania: Patch.com reported that an apparently homeless cat had been shot repeatedly with a nail gun. He was found badly injured and hiding on someone's porch with framing nails in the top of his head, over an eye, in one of his cheeks, and over a hip. Authorities were called and took the cat to a veterinarian, where he had to be euthanized because of the extent of his injuries. Anyone with information was asked to call authorities, but no suspects had been identified.

January 2016/Barre, Vermont: TimesArgus.com reported that police were notified that two cats who had been allowed to roam outdoors without supervision were trapped and shot by a neighbor. No additional details were given.

January 2016/Boise, Idaho: KBOI2.com reported that a cat who had been allowed to roam outdoors without supervision was found by his owner covered with spray paint. The cat was taken to a veterinarian for treatment. His owner said that another one of her cats had been shot with a BB gun and that "a few" of her neighbors' cats were missing. It was not reported if authorities had been alerted, and no suspects had been identified.

January 2016/Mashpee, Massachusetts: CapeCodTimes.com reported that a good Samaritan found an apparently homeless cat crying with a "gaping hole in his leg." He was taken to a shelter that then transported him to a veterinary clinic, where it was determined that the animal had been hit twice by birdshot pellets, once in the back and once in the knee. He also had traumatic injuries consistent with being hit by a car, a serious upper respiratory infection, and a severely injured eye that may need to be removed. His ears were also "tattered" from living outdoors "for some time." He was receiving treatment. Authorities were alerted, but no suspects had been identified.

January 2016/Highland Township, Michigan: HometownLife.com reported that a cat who had been allowed to roam outdoors without supervision had returned home limping and with a 13.5-centimeter-long blowgun arrow lodged in his or her abdomen. The cat was taken to a veterinarian, where the arrow was removed, and the animal was expected to recover. Authorities were alerted, and no suspects had been identified.

January 2016/Fairfax County, Virginia: WashingtonPost.com reported that a cat who had been allowed to roam outdoors without supervision was found with a dart protruding from his or her eye. The animal was taken to a veterinarian for treatment. Authorities were seeking information in the case, but no suspects had been identified.

January 2016/Bronx, New York: NYDailyNews.com reported that a man had been sentenced to one year in jail for killing a homeless cat by throwing the animal against a wall and running him or her over with a shopping cart. He had then wrapped the cat in a blanket, doused him or her in lighter fluid, and set him or her on fire. The incident was captured by a video surveillance camera. The perpetrator pleaded guilty to one count of aggravated cruelty to animals.

January 2016/Amarillo, Texas: ABC7Amarillo.com reported that a cat who was either homeless or allowed to roam outdoors without supervision had been found with a blow dart lodged about 2 inches into his or her eye. The dart was apparently homemade out of a sharpened wire, hot glue, and a sponge-like cork. The people who found the cat told authorities that they had removed a dart from the leg of the same cat two weeks before. The animal was taken to a veterinarian for surgery and lost an eye. Anyone with information was asked to contact authorities, but no suspects had been identified.

January 2016/Avon, North Carolina: IslandFreePress.org reported that three cats who were described as "part of a well-established colony" that was fed and "maintained" at a business had been found in a dumpster at the property, apparently shot to death. Seven other cats who were regularly fed at the property have not been seen since the night before the incident. Another was missing for some time and returned with gunshot injuries. The injured animal was taken to a veterinarian for treatment. Authorities were investigating, and a suspect had been identified.

January 2016/Dunbar Township, Pennsylvania: Pittsburgh.CBSLocal.com reported that an apparently homeless cat had been shot with a "mini-arrow." It was not reported if the cat survived. Police were investigating, but no suspects had been identified.

http://wfla.com/2016/06/24/quick-release-after-surgery-results-in-gruesome-feral-cat-deaths
(website includes more photos than shown below)

Quick release after surgery results in gruesome feral cat deaths

By Steve Andrews, June 24, 2016, NEWS CHANNEL 8, on your side

HILLSBOROUGH COUNTY, Fla. (WFLA) — Hillsborough County has joined up with the Humane Society of Tampa Bay neutering tens of thousands of wild or feral cats, then putting them back on the street the next day.

It is part of the Trap, Neuter, Vaccinate and Release (TNVR) program to help control and reduce the feral cat population, which is estimated at 200,000 in Hillsborough County. Since 2007, the Humane Society of Tampa Bay says it has neutered or spayed 47,000 feral cats.

But, how are they adjusting after surgery? No one knows for sure.

"It's helping to reduce the killing at our local shelter and that's what's important to the Humane Society of Tampa Bay," said H.S.T.B. executive director Sherry Silk. Silk admits the Humane Society isn't keeping track of what happens to the feral cats. After a 2-year pilot program, the Hillsborough County Pet Resources Center doesn't have any data either.

8 On Your Side has seen pictures of what's happened to some. The pictures are so disturbing, News Channel 8 managers won't allow them on television.

Every Monday, feral cats trapped by the Humane Society of Tampa Bay and the Pet Resources Center, are spayed or neutered and vaccinated. Usually, cats undergoing this sort of procedure spend 7 to 10 days in a cone, to prevent them from getting at their incision.

WARNING: Graphic feral cat photos from Hillsborough Animal Health Foundation

"We don't have a place to put them for a couple of days," explained Sherry Silk. So, they are kept overnight. The next day, they are released back on the street in the neighborhood where they were trapped. While neither the county nor the Humane Society has any information or data about what happens to the cats once they've been released, evidence indicates it can be horrific.

One disturbing photograph shows a bloody trap cage that once held a cat. The cat's incision opened and it bled out.

"That's the worse case scenario is that the wound gets pulled back open. At that point you again, without proper care, I've got to believe that an animal that's dripping blood all over the street isn't going to last very long," stated executive director of the Hillsborough Animal Health Foundation, Don Thompson.

Other photos showed the animal bled to death, as well as other incisions on other cats that became infected and were then infested with maggots.

"So we have no follow up care, no pain meds, we have nothing. We say that these cats do okay with that, but again I've not seen any data to support that one way or the other," added Thompson.

Sherry Silk admits complications can occur, but they hope for the best.

"You know, you're doing the best you can with the tools that we have, it is not perfect, it's definitely not perfect," she said. Sherry Silk and the county point to the dramatically declining number of cats being euthanized at the shelter and believe TNVR plays a role in that.

Don Thompson is hoping the county's pilot feral cat program would produce data that would shed light on something more than how many cats were trapped and released. He questions how humane it is to release a cat into the wild with a fresh incision that could open at any time.

"For me personally, I would way rather lie in a bed and have somebody provide something that would let me go to sleep peacefully than I would to say, that you're going to cut my guts out, drop me out onto the street, and let me bleed out," he said. #