High-Volume Trap-Neuter-Return Clinics for Humane Community Cat Management

Dr. Julie Levy, Maddie’s Shelter Medicine Program, University of Florida
Felis catus

- Cats may be the only species to domesticate themselves
- Have been living successfully outdoors alongside human society for 10,000 years
Domestic cats

- World-wide distribution and extremely adaptable
- Can live as pets or completely independent
- Management programs must be intense, high-volume, ongoing
- Fertility control is humane, safe, effective

Parque Kennedy, Lima
US: Pet cats

74-86 million pet cats

80-85% are sterilized

30-60% are allowed outdoors
US: “Community” cats

30-80 million unowned cats

2% are sterilized
US: shelter cats

Millions of cats in the US

- Pet cats: 90
- Community cats: 60
Florida: live outcome for shelter pets

- 52,046 dogs euthanized
- 129,613 cats euthanized
  (cats 2.4x higher)
Total intake of cats and dogs to shelters.
Percentage of stray cats and dogs returned to guardian.

- **Cats reclaimed/stray (%)**
- **Dogs reclaimed/stray (%)**

![Graph showing the percentage of stray cats and dogs returned to guardians from 2012 to 2015. The graph indicates an increase in the percentage of cats reclaimed from 2012 to 2015, while the percentage of dogs reclaimed shows a slight increase as well.](image-url)
Percentage of cats and dogs euthanized relative to total intake.
### Where do cats come from?

<table>
<thead>
<tr>
<th></th>
<th>Pet Cats</th>
<th>Community cats</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>80 million</td>
<td>60 million</td>
</tr>
<tr>
<td>Female</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Sterilization rate</td>
<td>85%</td>
<td>2%</td>
</tr>
<tr>
<td>Litters/year</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Live births/litter</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Kittens born/year</td>
<td>25 million</td>
<td>123 million</td>
</tr>
<tr>
<td>Kitten survival</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Live at 3 months</td>
<td>19 million</td>
<td>31 million</td>
</tr>
</tbody>
</table>

Community cats = most important source of cat overpopulation
Notice: NO KENNELS OPEN

EUTHANASIA RISK: Moderate/High

Kittens under 2 pounds without a mother will likely be euthanized because we do not have resources to care for them (under 1 pound will be euthanized immediately).
“The sign was a progression from other open notices about the possible fate of animals. After returning from a major adoption event where over 1000 animals were adopted, we saw the 3 highest days of over-the-counter intake all year. We decided that something with major impact needed to be crafted. It began with the notice that we were again full (only 3 days after the event), and then it hit me that there was a good model to follow in the ‘Fire Danger’ signs at forests that people would be familiar with – so we used that terminology. It was immediately responded to as we put it up. It has sparked more conversations about what other options there are to dropping off at the shelter.”

Scott Trebatoski, MBA
Division Chief, Animal Care & Protective Services
Stages of Kitten Development

- **Week 1 (1-7 days):**
  - Kittens are born blind and deaf. Their eyes are closed and their ears flop down. They are pinkish and smaller than your hand.
  - The umbilical cord remains attached for the first three days.
  - Weight: At birth, they usually weigh between 2 and 4 ounces.

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How to Live With Cats in Your Neighborhood

Pre-Wean Kitten Pack
- Raising Orphan Kittens DVD
- KMR Emergency Feeding Pack
- Four Paws Pet Nurse
- Feeding Syringe and Flex Comb
- Nature's Variety Instinct Sardines
- Stages of Kitten Development Information Sheet
- Is This An Orphan Kitten? Information Sheet
- Raising Orphan Kittens Care Instructions
- Finding a Good Home Information Sheet
- List of Bay Area Low Cost Spay/Neuter Programs
- Alley Cat Allies Brochure
- VIP PetCare Services Coupons
- Pet Food Express 20% Off Coupon
- Recommended Shopping List
Change our fate... wait ‘til we’re 8!

It’s kitten season, and all shelters are FULL. Please leave stray kittens alone with their mom, or foster them at home until they are 8 weeks old. Younger kittens are at high risk of euthanasia at Animal Services.
The Million Cat Challenge!

- *Shelter-based initiative*
- Share challenges, solutions and success
- 5 key initiatives that offer every shelter, in every community, practical choices to reduce euthanasia and increase live outcomes for shelter cats
- Campaign to save the lives of 1 million *more* cats in North American shelters over the course of five years
1. Alternatives to Intake

“Positive alternatives to keep cats in the home or community when admission to the shelter is not the best choice.”
“Scheduling intake of cats to match the shelter’s ability to ensure humane care and safe movement to the appropriate outcome for every cat.”
3. Capacity for Care

“Match the number of cats cared for at any one time with the capacity required to assure the Five Freedoms of Animal Welfare for every cat.”
4. Removing Adoption Barriers

“Expand the pool of adopters by removing barriers to adoption such as price, process or location.”
5. Return-to-Field

“Sterilize, vaccinate, and return healthy un-owned shelter cats to the location of origin as an alternative to euthanasia.”
Reaching the tipping point

While we were contemplating, agonizing, arguing about whether it was better to euthanize an unadoptable cat or alter it and put it back where it came from, I was walking through our feral cat room and saw a cat that had come in with a tipped ear with a post-it saying it would be re-released where it came from. It struck me that I had the ability to alter a cat and tip its ear, and if that's all it took to save its life, why shouldn't I?
Neuter-return programs

Trap-Neuter-Return

Return-to-Field

Back to neighborhoods

AKA Feral Freedom, SNR
Operation Catnip Clinic Virtual Tour

Dr. Julie Levy, Maddie’s Shelter Medicine Program, University of Florida
We’re saving cats -- find out how you can help!

Donate Now!

Our Gainesville Clinics

About Our Program

Click here to learn more about Operation Catnip and our monthly spay/neuter clinics for community cats in Gainesville and Alachua County.

Operation Catnip

Virtually everyone working in the field of feline welfare agrees that the number of cats born each year exceeds the number of homes available, and that targeted trap-neuter-return programs are vital to reduce the number of homeless cats.

Directed by veterinarians and carried out by volunteers and veterinary students, Operation Catnip saves and improves the lives of free-ranging community cats, and lessens their impact on our community.

Clinic Model

Operations

Stations
University of Florida - Operation Catnip

- Free clinic for community cats
- Funded by nonprofit partner
- Facility provided by UFCVM
- Residents borrow traps
- Injectable anesthesia
- Spay/castration
- FVRCP/rabies vaccines
- Topical parasite control
- Monthly clinics
  - 150-300 cats on one day
  - 5-10 veterinarians
  - 20-30 veterinary students
  - 20+ other volunteers
“Efficient surgical initiatives that meet or exceed veterinary medical standards of care in providing accessible, targeted sterilization of large numbers of cats and dogs to reduce their overpopulation and subsequent euthanasia.”

--Veterinary Task Force to Advance High-Quality, High-Volume Spay/Neuter, 2016
High-volume clinic

- Organized for maximum efficiency
  - High cat numbers
  - Minimize stress for cats
  - Minimize cost
- Fixed stations
  - Volunteers perform specific tasks
  - Cats rotate through stations for complete care
Safety first

- **Safety for volunteers**
  - Cats never handled awake
  - Inject in trap so no escapes
  - Wear gloves at all times
  - Human rabies vaccination required

- **Safety for cats**
  - Minimize stress
  - Constant monitoring
  - High medical standards
  - Only handle when asleep
Monitoring

Always assess each cat . . .
- Upon arrival at your station
- Before transporting to next station

Who are you . . .
- ID matches record

How are you . . .
- HR, RR, mm color, condition

What do you need from me . . .
- Routine care
- Special alert tags
Emergencies

- Fully stocked “crash cart”
Pre-surgical procedures

- Intake and identification
- Anesthesia
- Eye lubricant
- Physical examination
- Microchip scanning
- Ear tipping
- Penicillin injection
- Bladder expression
- Spay boards
- Surgical preparation
Cat check-in

- Morning of clinic
- Verify registration information
- Verify cat has not been fed
- Correct container: covered wire traps provided by program for deposit
- Label traps with cat ID number
- Encourage donations
- Arrange pick up time
Anesthesia

- “TKX”
  - Telazol-ketamine-xylazine
  - Small volume
  - Rapid onset
  - Partially reversible
- Injected through side of trap
- Buprenorphine at recovery
- Isoflurane machines available if need for supplemental anesthesia
Cat identification

- Twin tag system assigns each cat its own number
- Assures cat to return to correct trap and caregiver
- Permits tracking cats and records over time
- Place tag on paw when removed from trap
- Match tag to trap in recovery
- Remove tag just before replacing in trap
Veterinary examination

- ~2 minutes
  - Is there a reason you should not have surgery today?
  - Is there something special you need today?
- Microchip scan
- Convenia or Baytril if needed
- Special discharge orders
Penicillin injection
Ear tipping

- Place a straight hemostat straight across the tip of the left ear 3/8” from the tip
- Cut with cautery
- If left ear injured, then tip the right ear
- Green abdominal midline tattoo if won’t be eartipped
Bladder expression

- All non-pregnant female cats
- All cryptorchid male cats
- NOT pregnant and pyometra cats
- Stop if difficult or bloody
Spay boards

- Allows transportation of cats prepped for abdominal surgery
- Midline approach
  - Dorsal recumbency
  - Tie snug and straight
- Flank approach
  - Lactating cats
  - Right side down
Surgical clipping: Females

1” above navel

1/2” to 1” along side edges of nipples

Along contour of fat pad

© Copyright 2008 FERAL CAT PROJECT
Flank approach prep

Lateral recumbency:
Flank spay prep should include the area from the last rib cranially to the hip caudally and from the ventral spine dorsally to the mid lateral abdomen ventrally.
Surgical clipping: Males

- **Routine**
  - Clip scrotum and prepuce + 1-inch border around all sides

- **Cryptorchid**
  - Prep for laparotomy including scrotum
Surgical preparation

- Males and females
- Time x friction
- 3 cycles alternating with warm chlorhexidine scrub (soap) followed by chlorhexidine solution
- 3 minutes total
- Start at site of incision and circle out
Transporters

- Move the cats from station to station
- Allows station volunteers to maximize efficiency
Spay - HQHVSN

- Efficiency, asepsis, minimally invasive
Castration: HQHVSN
Post-surgical procedures

- Vaccination
- Fluid administration
- Anesthetic reversal
- Analgesia
- Parasite control
- Recovery
- Discharge
Vaccination & parasite control

- Keep vaccines cold during the clinic
- Rabies, FVRCP
- Advantage Multi or Revolution
  - Administer at base of skull
  - Effective against
    - Heartworms, hookworms, roundworms, ear mites, fleas
- Cautions
  - Must not be ingested – moxidectin is toxic
  - Do not use in sick, debilitated, underweight cats
Analgesia

- Buprenorphine
- Controlled drug recordkeeping
- Also have local and NSAIDs available
Anesthetic reversal

- Prolonged recoveries are a negative effect of TKX
- Hypothermia is common and further prolongs recovery
- Yohimbine antagonizes xylazine but not ketamine and Telazol
  - Same volume as TKX IV
  - Can repeat if slow recovery
Instruments

- One pack used for each spay ($30 each purchase price)
- Instruments scrubbed and autoclaved between each use
- Packs reassembled with instruments, gauze, drape
- Autoclave prior to next clinic
Recovery procedures

- Clean trap while cat is in surgery, line with newspaper
- Cats returned to traps before awakening
  - Match cat ID tag to tag on trap
  - Constant monitoring of respiration and recovery
Discharge

- Recovery instructions reviewed with caretakers
  - Emergency contact information provided
  - Climate controlled transportation and housing
  - Cats remain in traps overnight
  - Returned to colony the next morning if fully recovered
### Surgery Recovery Instructions

Thank you for bringing your community cat for sterilization today. Your cat is currently under the care and supervision of trained veterinary staff. Please follow these instructions carefully to ensure your cat’s safe recovery.

**PLEASE READ THE FOLLOWING CAREFULLY**

- Please keep all cats in their crate until the day after surgery. They may appear to be friendly and alert. This provides protection and security for both the cats and the people that work with them.
- The cats will be under anesthesia and need to sleep overnight. Please do not disturb them by touching or shouting to the cats. This can cause stress.
- Some cats will wake-up sensitive to touch and may attempt to bite or scratch. Anyone who is bitten or scratched by a cat should immediately seek medical attention.
- Do not give food or water to adult cats on the day of surgery. They may vomit the next day and possibly swallow the vomited food or water. Cats crave water and need to drink the day after surgery.
- Kittens should be offered a small amount of canned food the night of surgery as soon as they are fully recovered from anesthesia. Feeding helps prevent low blood sugar.
- Keep the cats in their crate in a warm, dark, and quiet area such as a bedroom or private overnight. Some cats outside the crate are more likely to be temperamental when recovering from anesthesia or fear exposure.
- Normal behavior that occurs during recovery includes head bobbing, rolling over, meowing, and hyperactivity. Light and sound may activate these behaviors. Noise and light should be reduced immediately after the cat wakes up. Contact us if you observe these behaviors.
- If the cat is not fully awake the next day, they may be a good candidate for an overnight stay at the facility. If the cat is not fully awake the next day, please call Operation Catnip to schedule an overnight stay.
- Your local vet can refer to Operation Catnip to ensure your cat is receiving adequate treatment during the recovery period. If you have any questions about the recovery of your cat, please call Operation Catnip on weekdays.
- After hours, emergency services (954) 380-0046 for Operation Catnip staff.
- If your cat has a situation that required an after-hours visit, please contact your local emergency clinic. Payment by cash or credit card is required. If it is a neonatal kitten and needs monitoring, contact the kitten’s mother for assistance. If the kitten is too young to receive any medication or assistance, please contact Operation Catnip.

If you have additional questions or concerns, please call Operation Catnip at 954-380-0046.

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### Table: Rabies Certificate

<table>
<thead>
<tr>
<th>Species: Cat</th>
<th>Weight: Under 20 lbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age:</td>
<td>6-12 months old</td>
</tr>
<tr>
<td>Breast:</td>
<td>Sierra</td>
</tr>
<tr>
<td>Vaccine:</td>
<td>Boehringer Ingelheim RabVac 3</td>
</tr>
<tr>
<td>Other vaccines:</td>
<td>Bi Fel-O-Vax Lv-K III + CalicoVax (FelV, FPL, FeLV)</td>
</tr>
<tr>
<td>Veterinarian signature:</td>
<td>[Signature]</td>
</tr>
</tbody>
</table>

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### Table: Anesthesia

<table>
<thead>
<tr>
<th>Type</th>
<th>TKA 1st</th>
<th>2nd</th>
<th>3rd</th>
</tr>
</thead>
<tbody>
<tr>
<td>TKX</td>
<td>1st</td>
<td>2nd</td>
<td>3rd</td>
</tr>
<tr>
<td>TKX 2nd</td>
<td>3rd</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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### Table: Antibiotic

<table>
<thead>
<tr>
<th>Name</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>{Antibiotic}</td>
<td>{Dosage}</td>
</tr>
</tbody>
</table>

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### Table: Other Treatments

- Subcutaneous fluids
- Additional antibiotics
- Additional surgery
- To-Go-Home instructions
- Condition

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### Table: Notes to Caregiver

- [Important notes for caregivers]
Release
1998: 5800 cat intakes, 4800 euthanasias
> 45,000 cats spayed & neutered since 1998
SUMMER LOVIN’
PET ADOPT-A-THON
Alachua County Animal Services
July 14th 10AM-4PM

ALL PET ADOPTIONS ONLY $5.00!

Contact Stephanie for more information:
239 321 9132
hons@ufl.edu

Partnered with
UFCVM Shelter Medicine Club
and
Helping Hands Rescue

Visit the Summer Lovin’ Adopt-a-thon facebook page for more information on how you can volunteer, donate, or adopt! Go to www.facebook.com/SummerLovinAdoptathon
Have you ever wondered what an empty cat room looks like? Thanks to our 92 adoptions today two of our four cat areas are completely empty!!! And the other two areas are looking pretty sparse!
Alachua County

[Graph showing intake and euthanasia trends from 1994 to 2012]
Who’s still at risk?

Total Euthanasia 2010

- Adult cats: 928
- Non bullies: 928
- Adult dogs: 928
- Bully breeds: 928
- Feral cats: 928
- Underage cats: 928
- Juvenile cats: 928
- Fearful cats: 928
- Aggressive dogs: 928
- Juvenile dogs: 928
- Territorial dogs: 928
- Heartworm dogs: 928
- Aggressive cats: 928
- Underage dogs: 928
Pilot project: Return-to-Field

- For the shelter’s unadaptable community cats that are:
  - Adults
  - Already thriving in their environments
  - Under no imminent threat
Return-to-Field

- Sterilize/vaccinate/return to location found
- Targets healthy unowned cats brought to shelter
- **Direct impact** on shelter population and euthanasia
- Addresses impracticality of sheltering all cats
‘Return to Field’ started with just a few cats from the euthanasia list . . .

911 cats saved
Is everyone getting ready for #CatnipSunday? Alachua County Animal Services is helping the Catnip staff trap and transport a colony of over 20 cats for an overwhelmed caregiver. So far we’ve caught 18 for tomorrow. We are proud to partner with ACAS to save community cats!
Sweeping change

I am waiting for my SNR surgery
Once we fully implemented our program, the only real regret we had was that we didn't start it sooner.
Three paths

- **Adopt** cats that can be placed into a home
- **Neuter and return** cats that are healthy and can’t be placed into a home
- **Euthanize** only those cats that can’t be placed into a home and can’t thrive in the community
5 years. 1 million lives. Infinite possibilities.

BECAUSE EVERY CAT COUNTS.

MILLION CAT CHALLENGE IS A PARTNERSHIP OF MADDIE’S FUND®, UC DAVIS KORET SHELTER MEDICINE PROGRAM, MADDIE'S SHELTER MEDICINE PROGRAM at the UNIVERSITY of FLORIDA, and the ASPCA®

Lives Saved*
0,774,931

JOIN
Register your shelter today and help save 1 million cats.

LEARN
Discover programs, strategies and tools to help your shelter achieve more live outcomes.

DONATE
We appreciate your support and welcome individual and organizational donors.