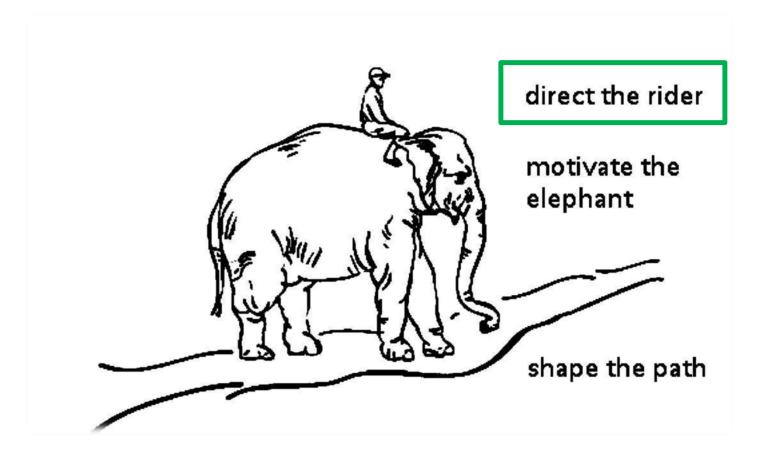
# Return to Field: expanding our tools for free roaming cat management



## This webinar



# Limitations of directing the rider

- Relevant facts do not influence identity beliefs
- Contradictory information tends to strengthen identity beliefs
- However, when beliefs become widely accepted, individuals tend to become more accepting of "corrective information"



THINK TANK

The Backfire Effect: Why Facts Don't Win Arguments

## Where I came from



# How I got here

2004 Barrows Welfare Symposium.pdf 2004 Nutter Feral Cat Inf Dz.pdf 2004 Nutter Feral Cat Repro.pdf 2004 Nutter Feral Cat Trapping.pdf 2004 Slater Welfare Symposium.pdf 2004 Stoskopf Welfare Symposium.pdf 2004 Winter Welfare Symposium.pdf 2005 Fan Feral Cats and Birds.pdf 2005 Foley Cat Control.pdf 2006 Lord Ohio AC.pdf 2006 Natoli Italy feral cats.pdf 2006 Reece Canine TNR and Rabies Control.pdf 2006 Zhang Rabbits vs. Birds.pdf 2011 Finkler Feral TNR Behavior.pdf 2011 Gunther TNR Colonies Israel.pdf 2012\_Hadidian\_etal\_cats eradication by human... 2012\_Hadidian\_etal\_cats.pdf 2013 Wald FRC Survey attitudes towards cats.p... 2014 BodenchukWS predator control.pdf 2014 Hanson San Nicolas Cat Eradication.pdf 2014 Morris Denver intake.pdf 2017 Spehar MA TNR.pdf ABC\_ReportToPompanoBeach hostile report.pdf andersen matrix model for control.pdf Anderson models for Control.pdf animal sheltering article hurley.pdf attitudes caretakers vs conservationist.pdf berger covote control analysis.pdf berastrom license to kill.pdf Bergstrom wildlife services Reform2013.pdf bergstrom wildlife services reform final article.... best friends letter with sanctuary costs.pdf bird predation in canada.pdf birds and rats on little barrier island.pdf ampbell et all eradication requires high volu... ☐ care or control.pdf tat predation shearwaters.pdf ats protecting birds revisited.pdf centonze 2002 caretaker paper.pdf CFHS\_CatReport\_canada.pdf Chico Cat Flowchart.pdf and johnson RTF paper.pdf community cat notes for expo.pdf community cat notes hurley.pdf acommunity cats 2013 daylong.pdf accommunity cats for Michigan final.pdf community cats for Michigan.pdf Crooks&Soule\_Mesopredator\_release harm in ... erie county feral cat summit.pdf Estimation of effectiveness of three methods ... actinction due to rabbit release.pdf Feline Intake Policy Sutter Example.pdf feral cat home range article.pdf feral cat levy tnr.pdf aferal cat management preferences loyd and h... feral cats in the clinic pdf feral welfare blood biochemistry pdf FeralFreedomGuide highres.pdf Followingtheferals\_GRETCHSFSPCA2013.pdf Food availability\_litter size\_RTF (3).pdf Fri5APaigeHillthesis\_1032806.pdf 🕏 gallapagos feral cat range.pdf Gehrt\_etal\_2013 feral chicago survival home ra... Gorman & Levy Feral Cats and the Law.pdf hanna mesopredator.pdf harmful predator control bergstrom.pdf hawaii euthanize versus tnr lohr.pdf Hughes 2002 TEXAS A&M.pdf impact of predation.pdf invasive spp removal.pdf Jacksonville feral freedom case study.pdf Jayma%2E237%2E4%2E387.pdf 🕏 jessup wildlife adverse impact.pdf 👼 jfms unowned cat management guidelines.pdf Kim's MS thesis FINAL.pdf Knowlton coyote control 1999.pdf lee 2002 prevalence paper.pdf Elevy 2003 Alachua ferals paper.pdf Levy 2003 UCF paper.pdf levy 2004 population estimates.pdf levy zip code study prepublication.pdf Iongcore critical eval of TNR.pdf Lord and levy collar retention.pdf lord lost dogs.pdf lord search methods 2007.pdf Luria 2004 JFMAS.pdf Loss\_etal\_2013.pdf lost cats slater and weiss.pdf mccarthy population control model.pdf

amarion island success evaluation.pdf

amarion island eradication history.pdf



#### The Cliff Notes Version

- There are a LOT of cats in the United States
- Most owned cats are sterilized, vaccinated, and many are kept indoors
- Most concerns and harm arise from unowned and semi-owned cats (community cats)
- Shelters are the primary agency tasked with managing community cats in the U.S.
- Historically, shelters have had one active tool (intake/removal) to manage community cats
- The main legal alternative to removal has been non-intervention
- Removal to a shelter is not an effective tool for community cat management in all circumstances
- Return to Field (RTF) has emerged as a second active tool for community cat management
- In some circumstances, RTF is more effective than removal to serve the goals of a community cat management program
- Shelters should be able to thoughtfully choose which tool is appropriate for management depending on the specific circumstances

### Cat numbers in the U.S.



Colony cats: Traditional TNR, shelter intake

75-95 million pet cats (85% sterilized)
30-80 million community cats (~ 2% sterilized)
< 5% are in colonies

Semi-owned and unowned: Most cats, most concerns, most shelter intake

# Management tools should be thoughtfully chosen

The impact of free-ranging domestic cats on wildlife of the United States

Scott R. Loss, Tom Will & Peter P. Marra

Affiliations | Contributions | Corresponding author

Nature Communications 4, Article number: 1396 | doi:10.1038/ Received 06 September 2012 | Accepted 12 December 2012 | Updated online 12 December 2013

Corrigendum (December, 2013)

Structured decisions about actions to reduce wildlife mortality require a quantitative evidence base...Future specific management decisions, both in the United States and globally, must be further informed by fine scale research that allows analysis of population responses to cats and assessment of the success of particular management actions.

# Not a unique struggle

J. Range Manage. 52:398–412 September 1999

Invited Synthesis Paper:

# Coyote depredation control: An interface between biology and management

We believe there is a need to address the controversy surrounding coyote depredation management, to enlighten resource managers and the general public, and to stimulate discussion and research regarding new avenues of approaching the persistent problem of coyote depredation management.

The resilience of coyote populations dictates that the size of the area involved, the intensity and persistence of effort, timing of removal with respect to vulnerability of prey, as well as normal demographic processes of coyotes, must be considered. Effecting removals as close as practical to the anticipated risks, both in time and proximity, is important.

# Ineffective management can cause harm

#### Nonlethal Techniques for Managing Predation: Primary and Secondary Repellents

John A. Shivik

Wildlife Services, National Wildlife Research Center and Utal University, Logan UT

Adrian Treves

Center for Applied Biodiversity Science, Conservation Interna

Peggy Callahan

Wildlife Science Center, 5463 West Broadway, Forest Lake, N

"As long as private livestock producers can externalize the costs of predator losses via government-subsidized predator control, they will have little incentive for responsible animal husbandry techniques, i.e., reduce stocking levels, clear carcasses and after-births quickly, confine herds at night or during calving/lambing, install fencing...or adopt numerous other non-lethal preventive methods to avoid depredation (Shivik et al. 2003)."

# Goals of cat management

- Resolve complaints
- Return lost cats to their owners
- Find new homes for cats that need them
- Protect the welfare of cats
- Reduce harm caused by cats
  - To wildlife
  - To public health
- Reduce the number of free roaming cats overall

# Historical U.S. cat management model

 Ad hoc admission based on community member perception and preference

 Outcomes are adoption (or transfer/rescue for adoption), return to owner, relocation, euthanasia

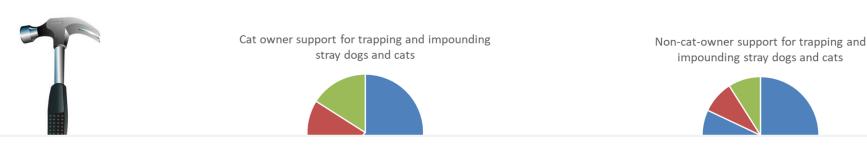
"the size of the area involved, the intensity and persistence of effort, timing of removal with respect to vulnerability of prey, as well as normal demographic processes"

#### Return to field/TNR diversion

- Healthy, free-roaming, unidentified cats
  - Adults and older kittens
  - Regardless of finder's intent
  - Known feeder not required
- Sterilize, vaccinate, ear tip, return to location found
- Operated through shelter (RTF) or diversion to dedicated program (TNR)



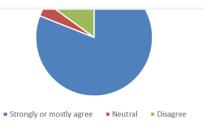
# Public preference

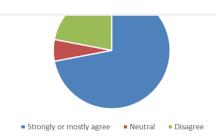


For all respondents, 73% strongly or mostly supported trapping and impounding stray pets and 76% strongly or mostly supported TNR programs for stray animals.

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(1): 74-81.







# Ineffective management can cause harm

Please re-think this whole approach. Stop normalizing it. It is in many instances not humane and an excuse for devoting the actual resources needed to stop the population of friendly cats on the streets in the first place.

# Equally applicable standard





Please re-think this whole approach. Stop normalizing it. It is in many instances not humane and an excuse for devoting the actual resources needed to stop the population of friendly cats on the streets in the first place.

### Harm reduction

- Recognizes that imperfect but effective strategies can have greater benefit than hypothetically preferred but realistically unattainable outcomes
- E.g. clean needle exchange for IV drug users, access to birth control for teens

#### Harm reduction principles for healthcare settings

Mary Hawk ™, Robert W. S. Coulter, James E. Egan, Stuart Fisk, M. Reuel Friedman, Monique Tula & Suzanne Kinsky,

Harm Reduction Journal 14, Article number: 70 (2017) | Cite this article 9604 Accesses | 12 Citations | 23 Altmetric | Metrics

#### **Abstract**

#### Background

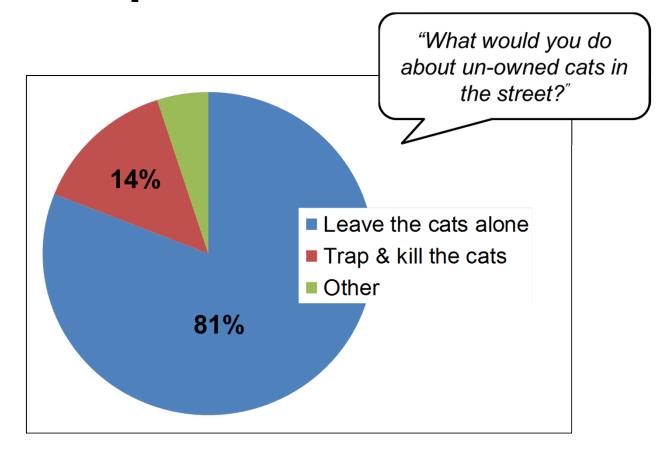
Harm reduction refers to interventions aimed at reducing the negative effects of health behaviors without necessarily extinguishing the problematic health behaviors completely. The vast majority of the harm reduction literature focuses on the harms of drug use and on specific harm reduction strategies, such as syringe exchange, rather than on the harm reduction philosophy as a whole. Given that a harm reduction approach can address other risk behaviors that often occur alongside drug use and that harm reduction principles have been applied to harms such as sex work, eating disorders, and tobacco use, a natural evolution of the harm reduction philosophy is to extend it to other health risk behaviors and to a broader healthcare audience.

# **Resolve complaints**





# Resolve complaints?

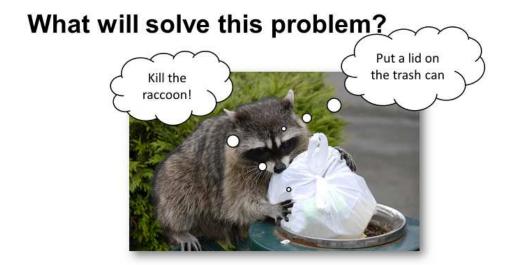


### Harm reduction

- Recognize that caring for cats is a common behavior
- Prevent a few cats from turning into a nuisance/colony by RTF and making TNR easy and accessible
- Use non-lethal programs to open doors to conversation with caretakers about nuisance reduction
- Educate on responsible feeding and management practices



# Effective nuisance mitigation





# Incentive for effective mitigation

"People no longer could use the shelter as the "Easy Button" — a place to drop off cats without trying to find their own solutions to the problem, sometimes of their own making...The old answer would have been: set traps and animal control will go out and pick up the cats. This option has been eliminated. Now we have a conversation...our job is to help facilitate the public to engage in the desired behavior which could be TNR or helping a neighbor with TNR, not feeding their pets outside which could be attracting cats, making their yard unattractive to cats in various ways, having a stray cat scanned for a microchip, advertising a found cat on Craigslist, etc."

- Tracy Mohr, Chico City Animal Services

# **Tools for mitigation**

- Provide complainants with resources to reduce nuisance impact
- Follow up on RTF with focused TNR to reduce remaining issues in the environment
- Address serious nuisance concerns/cat hoarding with a multi-faceted approach that includes removal as well as RTF/TNR

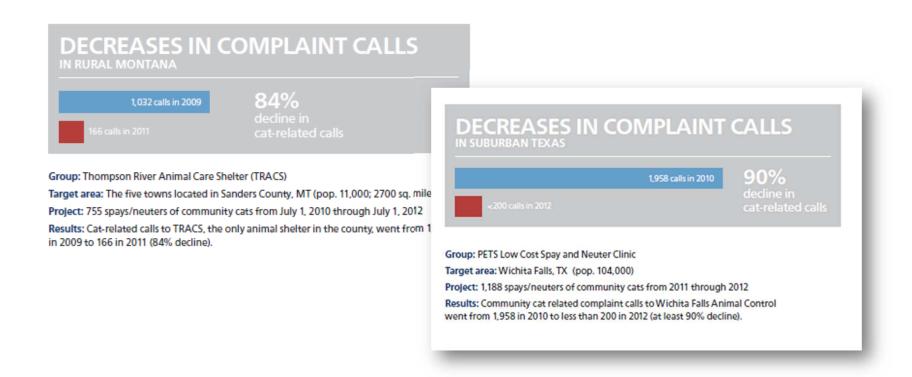


# Linking RTF to TNR and follow-up

- Often cat brought to shelter is one of several (or many)
- Feeder is not the same as trapper
- Flyers in area of return will alert feeders to TNR options
- Active follow-up on RTF hotspots by partner TNR groups magnifies benefit
- Public, private or partnership to resolve ongoing issues related to either nuisance or welfare



# TNR impact on complaint calls



## Re-unite lost cats with owners





### Reunite cats with owners?

#### Search and identification methods that owners use to find a lost cat

Linda K. Lord, dvm, phd; Thomas E. Wittum, phd; Amy K. Ferketich, phd; Julie A. Funk, dvm, phd; Päivi J. Rajala-Schultz, dvm, phd

Objective—To characterize the process by which owners search for lost cats and identify factors associated with time to recovery.

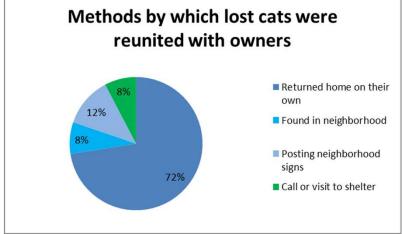
Design—Cross-sectional study.

Sample Population—Owners of 138 cats lost in Montgomery County, Ohio, between June 1 and September 30, 2005.

Procedures—A telephone survey was conducted.

Results—73 of the 138 (53%) cats were recovered; median time to recovery was 5 days (range, 0.5 to 81 days). Most cats (48 [66%)) that were recovered returned home on their own or were found in the neighborhood (5 [7%)); most other cats were recovered through posting of neighborhood signs (8 [11 %]) or calling or visiting an animal agency (5 [7%)). The highest success rate for any of the search methods that were used was only 12% (post-





·

#### Not a fluke

- Random digit dialed national survey of > 1,000 households
- 15% of households had lost a cat
- Of those, 75% were found
  - 1/54 by visit to shelter
  - 48/54 by returning on their own or searching neighborhood

Animals 2012, 2, 301-315; doi:10.3390/ani2020301



Article

#### Frequency of Lost Dogs and Cats in the United States and the Methods Used to Locate Them

Emily Weiss 1, Margaret Slater 2.4 and Linda Lord 3

- Shelter Research and Development, Community Outreach, American Society for the Prevention of Cruelty to Animals (ASPCA®), 6260 N. Hillside, Wichita, KS 67219, USA; E-Mail: emily.weiss@aspca.org
- Shelter Research and Development, Community Outreach, American Society for the Prevention of Cruelty to Animals (ASPCA®), 50 Stone Ridge Drive, Northampton, MA 01602, USA
- <sup>3</sup> Department of Veterinary Preventive Medicine, College of Veterinary Medicine, The Ohio State University, Columbus, OH 43210, USA; E-Mail: linda.lord@cvm.osu.edu
- \* Author to whom correspondence should be addressed; E-Mail: margaret.slater@aspca.org; Tel.: +1-217-855-8394.

Received: 25 April 2012; in revised form: 8 June 2012 / Accepted: 11 June 2012 / Published: 13 June 2012

### **Consistent results**

## Search Methods Used to Locate Missing Cats and Locations Where Missing Cats Are Found

Liyan Huang <sup>1</sup>, Marcia Coradini <sup>1,\*</sup>, Jacquie Rand <sup>1,2</sup>, John Morton <sup>3</sup>, Kat Albrecht <sup>4</sup>, Brigid Wasson <sup>4</sup> and Danielle Robertson <sup>4</sup>

- Gatton Campus, The University of Queensland, Queensland 4343, Australia; rien@livej.rand@uq.edu.au (J.R.)
- Australian Pet Welfare Foundation, Kenmore, Queensland 4069, Australia; jacquie@pe
- Jemora Pty Ltd., Geelong, Victoria 3220, Australia, john.morton@optusnet.com.au
- Missing Pet Partnership, Cloverdale, CA 6105, USA; info@katalbrecht.com (K.A.); bwasson@missingpetpartnership.org (B.W.); danielle@lostpetresearch.com (D.R.)
- \* Correspondence: m.coradini@uq.edu.au; Tel: +61-7-5460-1788

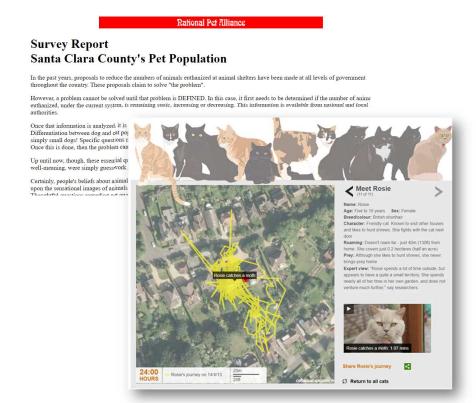
Received: 19 November 2017; Accepted: 20 December 2017; Published: 2 January 2018

"Of the cats that were found alive, the vast majority were found outside (83%). This was followed by the option offered as 'cat being found inside someone else's house' (11%), inside the house where they lived (4%), and inside a public building (2%), therefore less than 2% of found cats were in a shelter or municipal animal facility."

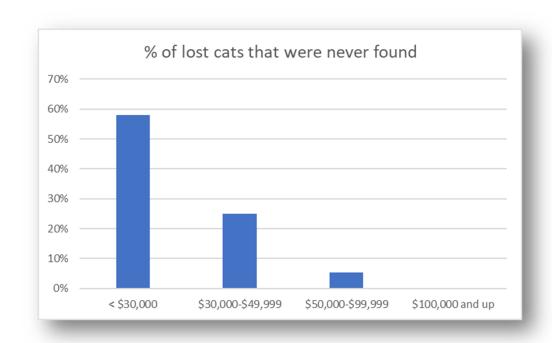
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# Lost versus free roaming cats

- Most feral cats brought to shelters aren't pets
  - Unowned or semi-owned free roaming cats
- Many friendly cats brought to shelters weren't lost
  - Indoor/outdoor pet cats going on their neighborhood rounds
- Most lost pet cats will not be found at a shelter



### Most at risk



Weiss, E., et al. (2012). "Frequency of Lost Dogs and Cats in the United States and the Methods Used to Locate Them." <u>Animals(2): 301-315.</u>

### A better tool

Search Methods Used to Locate Missing Cats and Locations Where Missing Cats Are Found

Liyan Huang <sup>1</sup>, Marcia Coradini <sup>1,\*</sup> <sup>⊠</sup>, Jacquie Rand <sup>1,2</sup>, John Morton <sup>3</sup> <sup>□</sup>, Kat All Brigid Wasson <sup>4</sup> and Danielle Robertson <sup>4</sup>

- <sup>1</sup> Gatton Campus, The University of Queensland, Queensland 4343, Australia
- <sup>2</sup> Australian Pet Welfare Foundation, Kenmore, Queensland 4069, Australia
- <sup>3</sup> Jemora Pty Ltd., Geelong, Victoria 3220, Australia
- <sup>4</sup> Missing Pet Partnership, Cloverdale, CA 6105, USA
- \* Author to whom correspondence should be addressed.

Animals 2018, 8(1), 5; https://doi.org/10.3390/ani8010005

Received: 19 November 2017 / Revised: 10 December 2017 / Accepted: 20 December 2017 / Published: 2 January 2018

The finding that owned cats are often found not far from where they go missing provides evidence to support shelterneuter and return (SNR) strategies, also known as return to field and cat diversion."

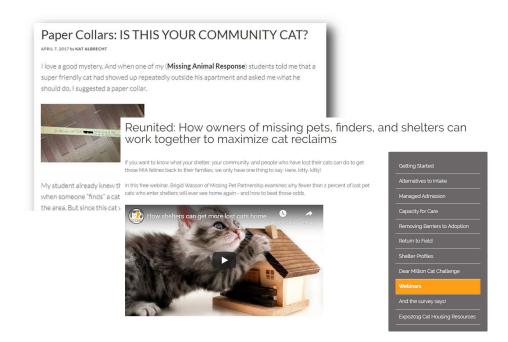
#### Return to field home

- Friendly free roaming cats in good condition are likely to have someone who cares
- RTF bypasses language, transportation and cost barriers
- Resolves mismatch of timing in when cats are lost and when people look for them
- Educates community members directly about spay/neuter



# When is the shelter the right tool for RTO?

- Efforts already made to reunite the cat in the neighborhood of origin
  - Post, scan, social media, talk to neighbors
- Evidence that the cat is lost or abandoned versus indoor/outdoor pet
  - Length of time/consistency of sighting
  - Body condition and health
- In conjunction with robust, catspecific RTO shelter programs



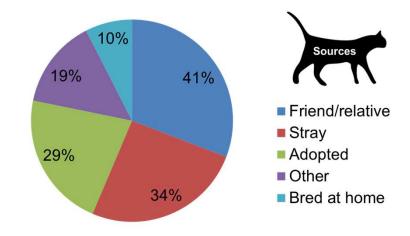
### Find new homes for cats that need them





## Find new homes for cats?

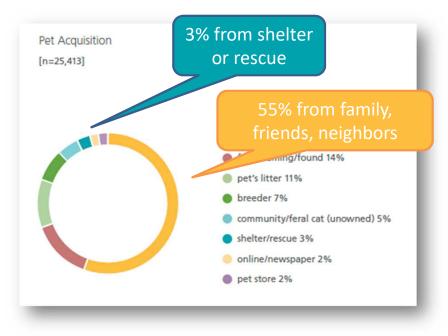
- Prioritize adoption pathway for kittens, owner surrendered cats, cruelty/hoarding cases, and targeted intervention
  - Serious nuisance/public health issues
  - Environmentally sensitive areas
- Prioritize working homes for above categories of adult cats that aren't appropriate for adoption



Sources of Pet Acquisition (APPA)

# Close the loop on homes that cats already have

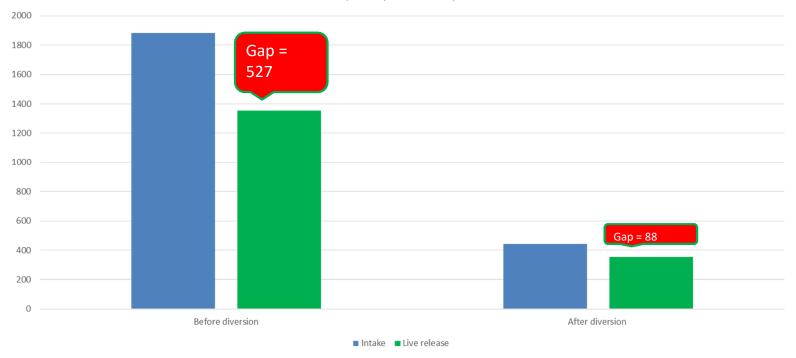
- Most pets in disadvantaged communities adopted from a source other than a shelter
- Return to field for friendly, healthy cats can close the loop on sterilization and vaccination for cats already "adopted" from another source
- Open doors for further education and risk mitigation



HSUS Pets for Life Report 2014

#### Reserve homes for the cats that need them





https://www.animalsheltering.org/magazine/articles/change-better-chico

#### Reserve homes for the cats that need them



#### Protect the welfare of cats



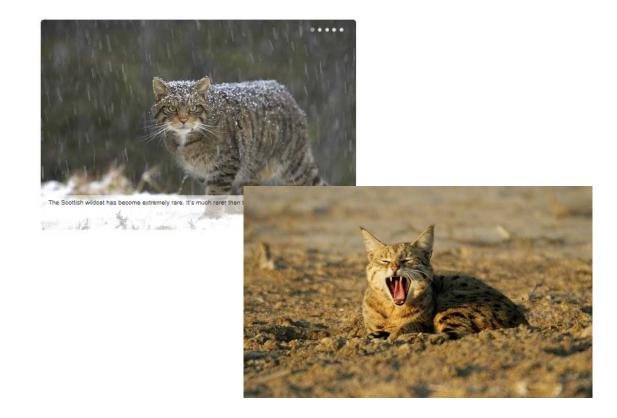


# Highly adaptable

Less than 1% of >100,000 cats at TNR clinics euthanized for humane reasons

Median survival in a managed colony 6.8 years

Annual survival of semiowned cats up to 90% (un-owned ~50%)



#### Increase fitness through RTF

#### **Body Condition of Feral Cats** and the Effect of Neutering

Karen C. Scott, Julie K. Levy, and Shawn P. Gorman

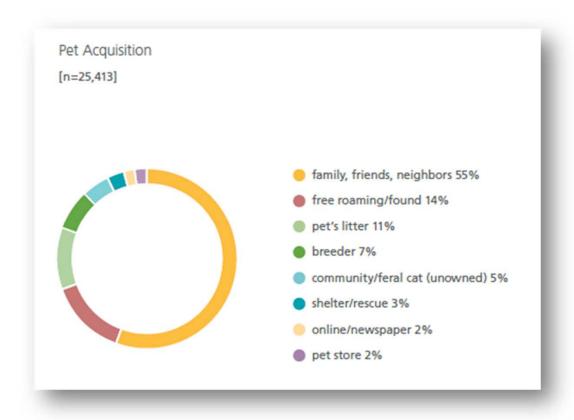
College of Veterinary Medicine University of Florida, Gainesvil

Susan M. Newell

East Greenwich, Rhode Island

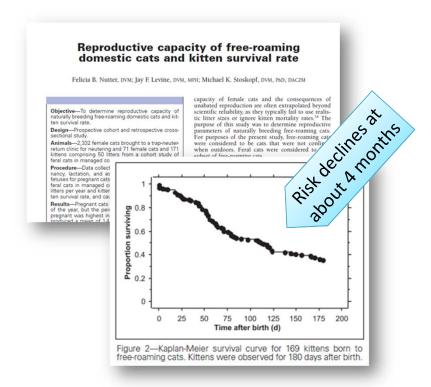
Fourteen cats, reevaluated 1 year after neutering, increased 260% + 90% in falciform Ocean State Veterinary Speciali fat pad depth, 420% ± 390% in fat pad area, 40% ± 4% in BW, and 1 level in BCS ranking (1 to 9 scale; all differences p < .001). Similar to confined socialized cats, feral cats gained significant weight and body fat after neutering.

# Increase fitness through RTF



# **Highest risk**





#### Impact of removal on age structure

J. Range Manage. 52:398–412 September 1999

#### Invited Synthesis Paper:

# Coyote depredation control: An interface between biology and management

FREDERICK F. KNOWLTON, ERIC M. GESE

Authors are research wildlife biologists, USDA, National wildlife biologist, USDA, National Wildlife Research Center,

"Unexploited coyote populations typically have older age structures, high adult survival rates, low reproductive rates (especially among yearlings), and low recruitment into the adult population."

# Choose your tools

- RTF or TNR instead of removal to reduce kitten births and stabilize age structure
- Return to field with education and mitigation for cats in good body condition at the time of presentation
- Adoption for cats not doing well in the outdoors and for social kittens



# Reduce cat numbers to reduce risk to wildlife, public health and cats





#### Requirement for population management

- At least 50% removal required for eradication
- ~ 30-80 million un-owned cats in the U.S.
- 1 for every 3-12 people in a community – you can do the math
- Removal short of eradication has no benefit

#### Estimation of effectiveness of three methods of feral cat population control by use of a simulation model

Robert J. McCar

Unless > 57% of cats were captured and neutered annually by TNR or removed by lethal control, there was minimal effect on population size.

Use of matrix population models to estimate the efficacy of euthanasia versus trap-neuter-return for management of free-roaming cats

Mark C. Ande

The model predicted effective cat population control by use of **annual euthanasia of > 50% of the population** or by annual neutering of > 75 of the fertile population.

#### Removal short of eradication

Wildlife Damage Management Conferences -- Proceedings

Wildlife Damage Management, Internet Center for

1-1-2005

Demographic and Spatial Responses of Coyotes to Changes in Food and Exploitation

Eric Gese

USDA, APHIS, Wildlife Services, National Wildlife Research Center, Logan, UT, USA

Removals brought about a drastic reduction in pack size and a corresponding decrease in density. However, both pack size and density rebounded to pre-removal levels within 8 months post-removal. ..Accounting for both changes in prey abundance and coyote density, litter size was significantly related to total prey abundance/coyote. With increasing prey and reduced coyote density, mean litter size doubled in the removal area compared to pre-removal levels.

# **Reality Check**

A SUCCESS STORY: BREEDING OF BURROWING PETRELS (PROCELLARIIDAE) BEFORE

AND AFTER THE ERADICATION OF FERAL CATS FELIS CATUS AT SUBANTARCTIC

MARION ISLAND

11 by 7 miles; ~3400 cats

"The eradication campaign on Marion Island has been the largest and only successful one of its kind."

raps

#### Removal short of eradication

Effects of low-level culling of feral cats in open populations: a case study from the forests of southern Tasmania

Billie T. Lazenby A,B,D, Nicholas J. Mooney and Christopher R. Dickman A

ASchool of Biological Sciences, A08, Un BDepartment of Primary Industries, Parks Tas. 7000, Australia.

<sup>C</sup>PO Box 120, Richmond, Tas. 7025, Au

<sup>D</sup>Corresponding author. Email: Billie.Laz

"Contrary to expectation, the relative abundance and activity of feral cats increased in the cull-sites, even though the numbers of cats captured per unit effort during the culling period declined. Increases in minimum numbers of cats known to be alive ranged from 75% to 211% during the culling period, compared with pre- and post-cull estimates."

#### **WORSE THAN NOTHING**

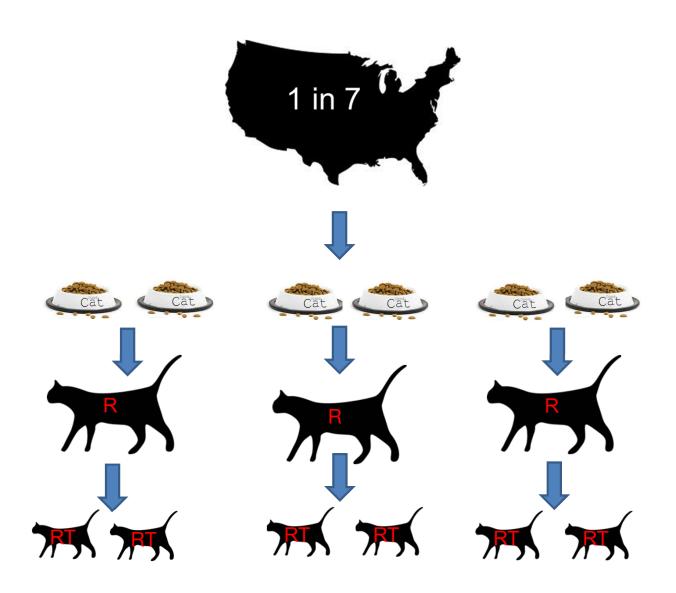
"This study provides evidence that ad hoc culling of feral cats may be not only ineffective, but has the potential to increase the impact of feral cats in open populations."

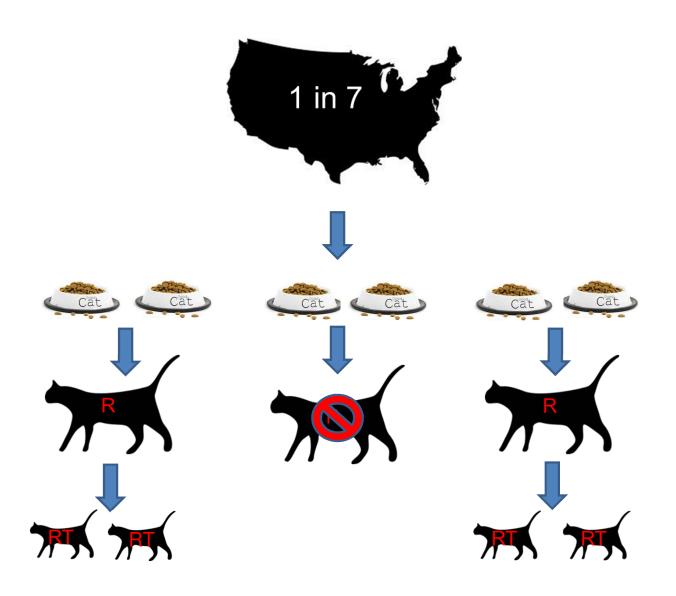


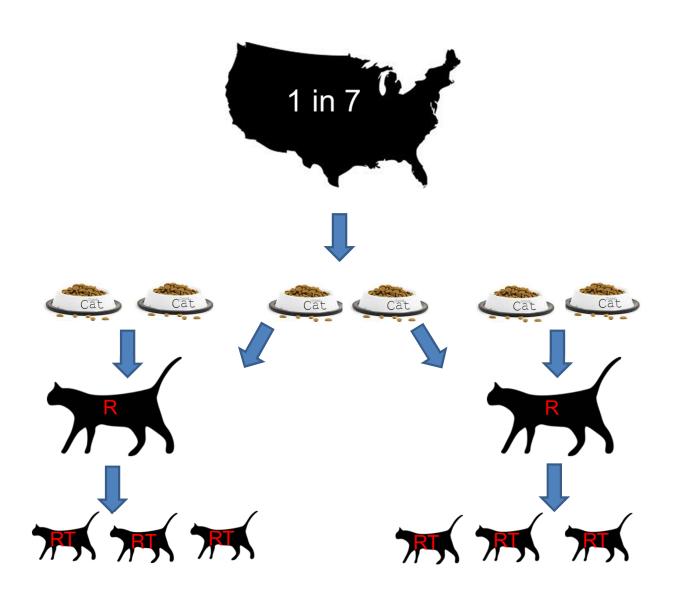
#### So what can we do instead?

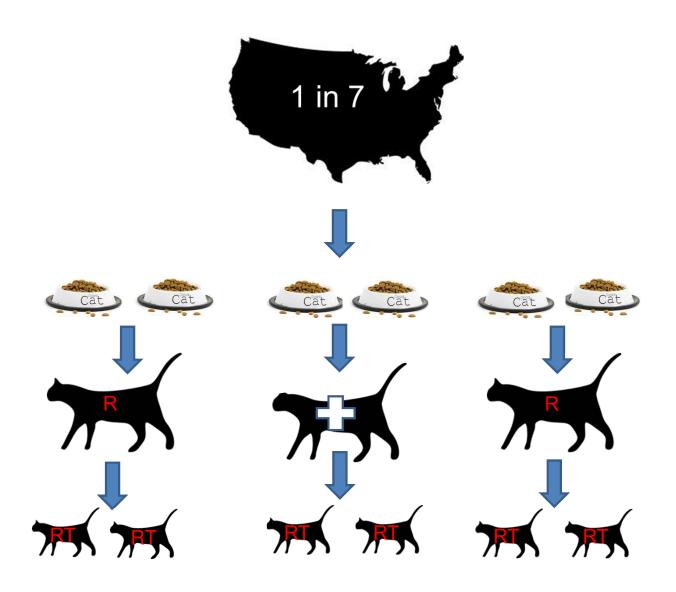












Study of the effect on shelter cat intakes and euthanasia from a shelter neuter return project of 10,080 cats from March 2010 to June 2014

Karen L. Johnson<sup>1</sup> and Jon Cicirelli<sup>2</sup>

- <sup>2</sup> San Jose Animal Care and Services, San Jose, CA, United States
- Euthanasia down 75%
- Euthanasia due to URI down 99%
- Cats picked up dead down 20%
- Intake (cat and kitten) down 29%

<sup>1</sup> National Pet Alliance, San Jose, CA, United States



Animals (Basel). 2018 Apr; 8(4): 55.

Published online 2018 Apr 13. doi: 10.3390/ani8040055

PMCID: PMC5946139 PMID: 29652808

The Impact of an Integrated Program of Return-to-Field and Targeted Trap-Neuter-Return on Feline Intake and Euthanasia at a Municipal Animal Shelter

Daniel D. Spehar 1 and Peter J. Wolf2,\*

· Author information · Article notes · Copyright and License information Disclaimer

- 11,749 cats sterilized and returned over 3-year period
- Euthanasia down 84%
- Calls for dead cat pickup down 24%
- Intake down 38%

# Managed is better than unmanaged

# EcoHealth — September 2013, Volume 10, Issue 3, pp 277-289 | Cite as Toxoplasma gondii, Source to Sea: Higher Contribution of Domestic Felids to Terrestrial Parasite Loading Despite Lower Infection Prevalence

Authors Authors

Elizabeth VanWormer ☑, Patricia A. 0

Infection prevalence differed among sympatric felids, with a significantly lower prevalence for managed feral cats (17%) than mountain lions, bobcats, or unmanaged feral cats subsisting on wild prey (73–81%).

#### Lowering risk for the most vulnerable

Front Vet Sci. 2019; 6: 238

00220

PMCID: PMC6676151

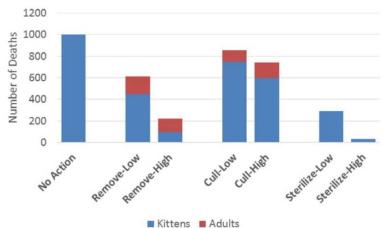
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A Long-Term Lens: Cumulative Impacts of Free-Roaming Cat Management Strategy and Intensity on Preventable Cat Mortalities

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Cumulative number of preventable deaths (kittens that do not survive beyond 6 months of age plus all adults euthanized in "cull" and "remove" scenarios) over a 10-year period for all management scenarios. Parameters of each management scenario are defined in the Methods section.

#### The right tool for the job

- RTF for most healthy unowned cats brought to the shelter
  - Healthy feral cats to stabilize populations in the community and limit euthanasia at the shelter
  - Healthy friendly stray/free roaming cats to maximize return to owner and spayed/neutered/vaccinated cats in homes
  - As an avenue to open doors with the majority of community members who support non-lethal control for education and harm reduction

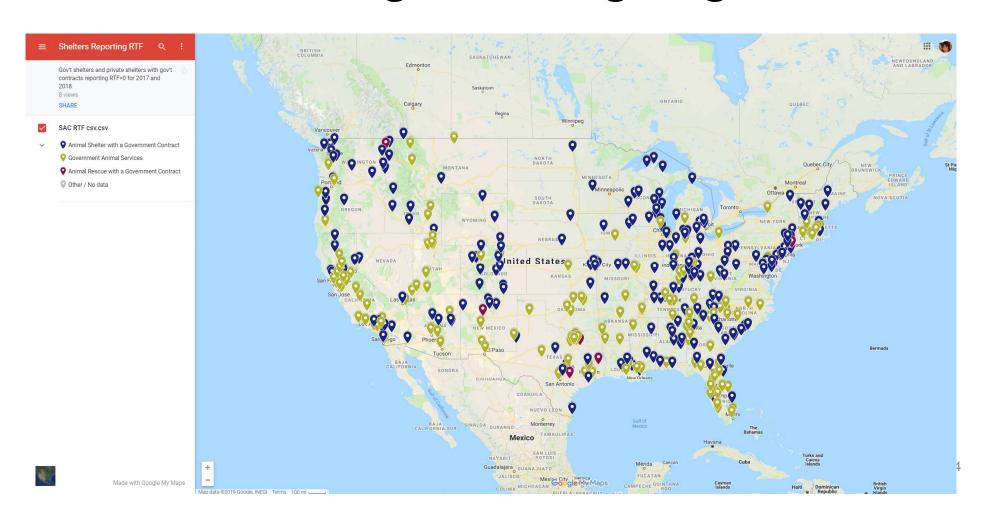
- Traditional shelter pathway for owned cats<sup>1</sup> and:
  - Unhealthy stray/free roaming cats (sick/injured/poor body condition)
  - Cruelty, abuse and neglect cases
  - Interventions for significant nuisance situations/public health or wildlife risk
  - Social kittens on a pathway to adoption
  - As an avenue to open doors with the majority of community members who look to the shelter for stray dog and cat solutions

<sup>&</sup>lt;sup>1</sup>When pet safety net/home to home options are not appropriate

#### The bottom line

Providing public and private partners with the full range of options for response to unowned cats allows for more effective interventions – whether that is sterilization and return of healthy free roaming cats, responsible feeding and colony management, or removal for adoption, relocation or as a last resort, euthanasia. No intervention realistically available is sufficient to completely eliminate cats from U.S. communities, but a thoughtful approach tailored to the needs of the situation will permit solutions that balance the needs of wildlife, public health, pets and community members to the greatest possible extent.

# No longer cutting edge



Sounds great but we don't have the funds - what can we do?

Yes, but...

We can't help but worry. Are you sure they'll be ok?

Won't it be too cold here in the winter for the cats?

How can we best control feline retroviruses (FeLV, FIV) through TNR?

How long should we hold cats before return to field?

Do we really have to have people bring them in to the shelter?
What about just sending cats to TNR?

What about rabies or other public health concerns?

What about cat abandonment, licensing or leash laws?

What if people really don't want the cats back?

Should we still RTF friendlies when we know we could find them a home?

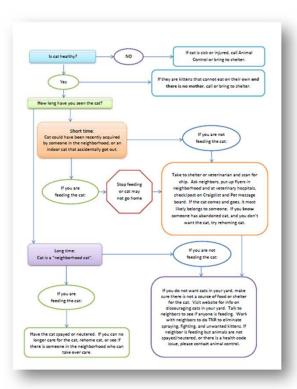


What about a friendly, healthy, altered cat without identification that is brought in by a person who saw it in their neighborhood, put it in a crate and brought it to a shelter? No "trap" involved, and no risk of euthanasia — we have plenty of adopters these days.



# What to do about friendly cats?

- Develop pre-intake screening and intake process that helps identify truly abandoned from indoor/outdoor pet or community cats
- Social behavior increases probability that cat is owned/semiowned
- Kittens: err on side of adoption if adoption is not a limiting factor at shelter
- Adult cats: err on side of return if no exigent risk



#### **Direct education**





# Free roaming ≠ un-loved



**Arthur Burrell** 

"Burrell had eight cats at home. And he would wander the streets and alleyways, sometimes after midnight, looking for others to help. He gave them names like Smoke-a-Dope, Ooka Nooka, Sparkle Treadwell, Bubbles, False Face, Short Body, Squirrel and Weasel. In a spiral-bound notebook, he meticulously documented each cat's history and medical issues."

Local TNR and rescue allies are afraid that it is too cold for the cats around here. Any advice?



#### **Survivors**

Table 2. Feral cat estimates in Canada from media reports, in relation to 2006 human population, latitude, and January temperature.

Location	Feral Cat Estimates (# of estimates) †	Midpoint (approx.)	Human Pop'n (1000s) 2006 Census <sup>‡</sup>	Feral Cats / 1000 Persons	Latitude (N) §	January Avg Temp (C) §
Vancouver	Tens of thousands (1)	25,000	2117	12	49.2	3.3
Toronto	20,000 to 500,000 (4)	200,000	2503	80	43.7	-5.3
Windsor	25,000 to 50,000 (2)	35,000	383	91	42.3	-4.5
Regina	25,000 (1)	25,000	221	113	50.4	-16.2
Montreal	100s of thousands (1)	250,000	1854	135	45.5	-10.3
Winnipeg	50,000 to 200,000 (4)	100,000	636	157	49.9	-17.8
Province of Quebec	1.6 Million (1)	1,600,000	7544	212		
Halifax	110,000 (1)	110,000	373	295	49.8	-5.2

Sources: Stray Cats a Big Problem 2008, Horan 2009, Lakey 2009, Lowe 2009, Pearson 2009, Winnipeg's Stray-Cat Population... 2009, Tindal 2010, Botelho 2011, Cat Populations Increase... 2011, Ormsby and Wilkes 2011, Skerritt 2011, Sullivan 2011, THS Feral Cat Clinics Coming in May 2011.

Winnipeg's Feral Cat Population Grows 2011; P. Curry, S. Eberl, and P. Vogt, ur

<sup>2</sup>Source: Statistics Canada 2007

<sup>5</sup>Source: Environment Canada 2011; averages used if more than one weather state

"there is no apparent relationship between estimates of feral cats and latitude or January temperature in southern Canada (Table 2), and feral cat numbers may be significant in parts of Alaska"

Blancher, P. (2013). "Estimated Number of Birds Killed by House Cats (Felis catus) in Canada." <u>Avian Conservation and Ecology 8(2).</u>

### How can we protect cats from the cold?

- Open lines of communication to advise on food and shelter
- Access to sterilization most of the year
- Cats that are trapped and not freezing have something worked out
- Special precautions when unusually cold for your area



### **Cold weather RTF**

- Discourage trapping when weather is unusually cold for your region
- Keep surgical shave small
- Recover cats in climate-controlled environment immediately post surgery
- Return promptly unless unusually severe weather (24-48 hours male, 24-72 hours female)
- Ok to keep up to 2-6 weeks if you absolutely must

#### The Million Cat Challenge Cold Weather Cat Survey

#### Introduction and summary

in 2017, two <u>surveys</u> were sent to ~ 10 shelfters self-identified as practicing return to field (RTF) in cold dimates, with most participants from the Northeast and Upper Midwest of the United States and southern Canadian provinces. The shelters represented a diverse group of public and private organizations that included some large and <u>well astablished</u> RTF programs as well as some small/fairly new ones. The combined experience of the group included RTF of over 25,000 cats at the time of the survey.

#### RTF logistics survey

The first survey covered the logistical aspects of RTF in a cold climate, such as minimum temperature at which cats would be released, minimum and maximum length of time cats would be held prior to release, age for return during normal and cold weather, and any aspectal precautions at the time of surgery or at the site of return.

Interestingly, there was considerable variation in some key factors, such as the lowest temperature during which RTF would be considered or the length of time after surgery cats were kept confined. Sometimes such differences can identify areas where it might be safe to push the envelope should that be considered desirable—for instance, shelters that now reluctantly shut down their RTF programs during cold weather may find reassurance that it has been continued safely in a similar climate based on the experience reported here. Other times we can learn by looking at the areas where there is a lot of agreement as that can indicate, if not a standard of care, at least the beginning basis for one.

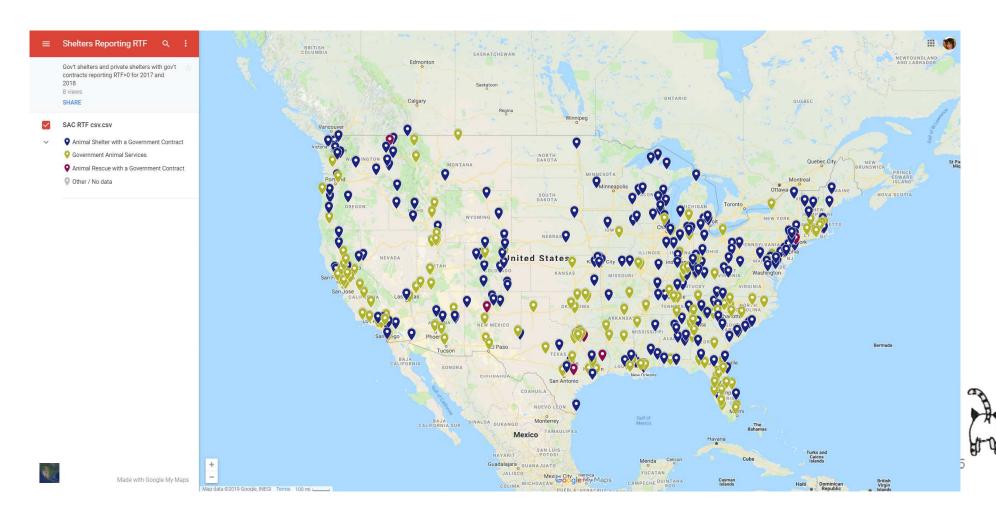
#### Some of the variations includes

- Definition of "Very cold weather": this was most commonly defined as freezing (0C/32F), but some didn't trigger special precautions until -20C/-4F, and others suspended all TNR/RTF for the winter.
  - Comment from one participant: "One thing that may impact whether it's safe to release at la
    given temperature) is probably...is that pretty normal for your area/cats. If that's what your
    winter looks like, and what your area's cats are accustomed to, that is probably very different
    than if it's a rare and uncommon thing that your area's cats might struggle with even without
    surgery being added in."
- How soon after surgery cats were released: range from 24 to 48 hours for males; same day (with admitted)/24 hours to 72 hours females under normal circumstances with extra consideration for cold weather.
- How long cats will be held prior to return: 2-6 weeks maximum (with general agreement that time held should be minimized as long as weather/cat health permit release)
- Minimum age for return to field/TNR: 2-6 months

#### Some of the consistencies were:

- There is strong preference for return over relocation unless there are serious risks at the site of origin
  prohibiting this; and this preference is consistent even when the weather is cold
- It is common to do a smaller surgical shave during cold weather, but no other special surgical or preparation precautions were reported
- Cats are kept in a <u>climate-controlled</u> environment immediately post-surgery

# Plenty of precedent



We do return to field and have saved close to 1,000 cat lives over the past three years. The shelter we work with requires that the cats are combo tested. Would you recommend continuing this practice?



	Model 1 No sterilization No testing	Model 2 Sterilize 1,000 Remove FeLV+	Model 3 Sterilize 2,000 No testing
Percent FeLV+	4%	4%	4%
Adults sterilized	0	1000	2000
Adults left intact	2000	1000	0
FeLV+ euthanized	0	40	0
Adults left FeLV+	80	40	80
Kittens born	6000	2880	0
FeLV+ kittens (75%)	180	86	0
Total FeLV+ cats	260	126	80

Mass sterilization controls both kitten births and spread of FeLV/FIV



If rabies vaccines are only licensed for one year, how can we allay our Health Department's concern about return to field?



### Rabies protection

Cornell Vet. 1981 Jul;71(3):311-25.

#### **Experimental rabies in cats: immune response and persistence of immunity.**

Soulebot JP, Brun A, Chappuis G, Guillemin F, Petermann HG, Precausta P, Terre J.

#### Abstract

Experimental rabies was studied in cats under defined conditions. A correlation between the virus dosage and the incubation period was established and results were compared with those published previously by others, the susceptibility of cats to rabies virus appears to be paradoxical. The persistence of the immunity induced by an inactivated rabies vaccine prepared form cell culture-propagated virus used in

combination with feline panleukopenia vaccine, with or without adjuvant, was studied through severe virgorotection was observed after more than 3 years following a single vaccination. A proposed vaccine

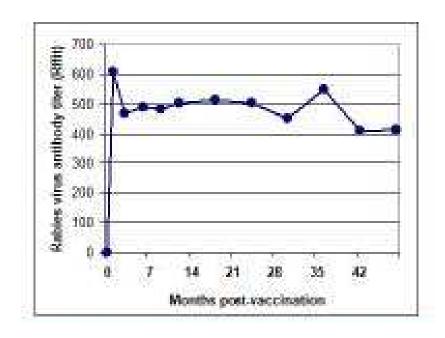
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"Complete protection was observed after more than 3 years following a single vaccination."

### Rabies protection

- Intervet rabies USDA licensing trial
- 25 12-week-old kittens received single vaccine
- Titers maintained and resisted challenge after 4 years
- 14/15 control kittens developed rabies after challenge

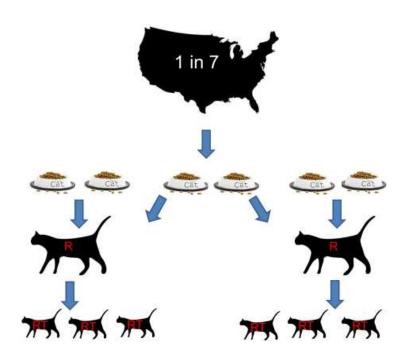


### Rabies protection

- Use 3 year labeled vaccine for all cats
- Offer free boosters
- Invest in community immunity



# (Also remember removal does not eliminate risk)





How long can and should cats be held prior to return to field?



## **Holding time for RTF**

- Ideally, admit day 1, surgery day
  2, release day 3
- Longer holds if extra recovery time required, inclement weather
- Balance recovery time with stress of confinement
- If you must, release after 2-6 weeks confinement has been documented

#### Community cat program amendment gets Fort Wayne council approval

By Ellie Bogue of The News-Sentinel Wednesday, June 18, 2014 - 8:28 am

Tuesday night the Fort Wayne City Council passed the proposed amendments in the Animal Care and Control Ordinance, which means should the changes be approved by Mayor Tom Henry, Fort Wayne Animal Care and Control, HOPE for Animals and the Allen County SPCA will work in a coalition to sterilize feral cats and return them to the streets in

Processing as a community cat shall be exempt from the 3 business day impoundment period.



or captured by Animal Care and Control officers the cats the animal. After that they are generally euthanized, or adoption.



### California law currently in force

• Food and Agricultural Code section 31752 -- which set for the holding period for <u>cats</u> prior to the "Hayden bill" -- reads: *No stray cat which has been impounded by a public pound, society for the prevention of cruelty to animals shelter, or humane shelter shall be killed before 72 hours have elapsed from the time of the capture of the stray cat. (Enacted 1980.)* 



Sure, return to field is better than euthanasia, but even a short stay in the shelter is stressful and the cats take up space we could really use for the ones that need to be here. Is there any way to bypass the shelter entirely?



### **Diversion to TNR**

- Encourage diversion to TNR program for healthy free roaming cats
- Minimizes time cats spend in confinement
- Finder typically returns to collect cat
- Bypasses legal/policy constraints and holding periods
- Reserves shelter space for sick, injured, neglected and owner surrendered cats

# What is a Community Cat Diversion Program?

Community Cat Diver promote public health, make sense for shelters not be returned are unsuperficient home.

Owners being a goes for cats who are unsocialized to humans as well as for cats who seem social and/or friendly shelter but rather taken to a spay/neuter program and returned to their home location where they were found. This goes for cats who are unsocialized to humans as well as for cats who seem social and/or friendly shelters.

Challenge, among others.

https://www.young-williams.org/spay-neuter-solutions/community-cat-program/community-cat-diversion-faq/#question-community-cat-program



### Double check messaging

- Consider what's on your website, front door, front desk
- Train frontline staff to deliver message with conviction
- Make TNR at least as easy and cheap as shelter admission
- Always allow exceptions for high risk/high nuisance situations

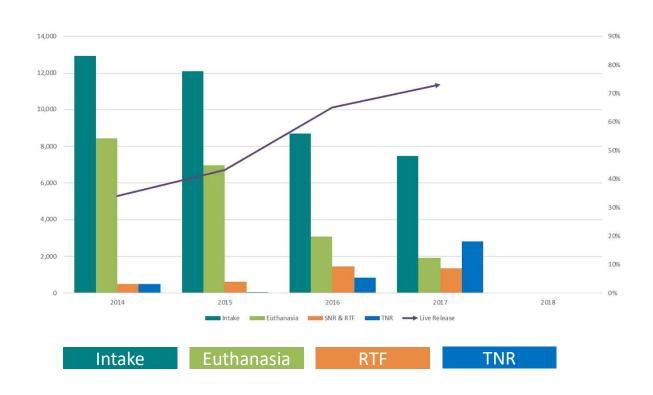


### Shaping the path...

"Local governments...changed their local ordinances to eliminate leash and confinement laws for cats and to update language to support community cat programs. This change caused a major shift in how animal control responds to calls for cat situation. They will no longer pick up healthy stray cats and patrons are instructed to put them back or bring them to the shelter themselves (they are also told about the community cat program and that the cat will likely be returned). This has caused a huge reduction in cat intakes at our shelter which has helped contribute to our substantial reduction in cat euthanasia." (Carly Scholten, The Animal Foundation, Las Vegas)



# ...with huge results



How do you handle the situations when people bring cats to the shelter and are emphatic that they don't want the cats back?



#### Remember the racoon

- Identify and solve the actual problem
  - Educate about deterrents
  - Offer help with solutions
  - Give it time
- Not appropriate for every situation
  - Save barn and working cat homes for those that really need it



In Edmonton, all domestic cats are required to hold a valid City of Edmon property (Animal Licensing & Control Bylaw, Bylaw 13145). However, cat public property ends and private property begins. The City wants to ensur community and help Edmontonians deter nuisance cats from their private program. This program will allow Edmontonians the opportunity to borrow understand the boundaries of their territory. By creating an environment t avoid those areas in favour of more desirable terrain.

The cat deterrent kits will include one of the motion-activated deterrents a In making use of these products, please ensure that the directions on the

#### Motion-Activated Deterrents:

Bird-X Yard Gard: Ultrasonic motion activated device that, when activated

Aspectek Yard Sentinel: Sonic and ultrasonic motion activated device that natural-scent recipes included in the kit. alarm that is annoving to cats: or sonic predator sounds which are audible entry points to the property or near problem areas.

Cat Scat Mat: Cats will not usually enter an area where they cannot walk

Plastic Chicken Wire: This product can be placed on top of the soil or unc gardens, or pots to deter cats from digging. Cats do not like the feeling of in areas where it is concealed, they may become irritated and move on to

Get Off My Garden!: This product is made up of suspended water crystals that slowly release a strong perfumed odour hich is intended to confuse a cat's sense of smell. Use this product sparingly and apply to the edges of the area where the cats are known to frequent.

**Cat Deterrents** 

imperceptible to people but annoying to cats. Place this device near entry Natural Scent Deterrents: Cats have a very strong sense of smell and can be sensitive to many strongly scented citrus-based or spicy smells that are pleasant to humans including citronella, lavender, or cinnamon. There are sever

#### Other Alternatives

Contech ScareCrow: Motion activated sprinkler that instantly releases a s. Although the City can only offer a few items in each kit, there are many alternatives on the market that may help to dete cats and other nuisance pests from entering onto private property. The City encourages citizens to take the time to research the methods that may work for them.

<u>Diaging Deterrent Alternatives:</u> Using large or rough surfaced rocks to cover exposed ground or placing rocks into plan pots may prevent cats from digging. Prior to planting in the garden or flowerbed, lay a lattice on the ground and plant spikes to discourage cats from digging. They can be placed in garden are such as flower pots, at the base of trees or shrubs, along a fence line to built in your garden or flowerbed. Cats tend not to like rough textures on their paws, so making the area uncomfortable for them will help to keep them away.

Scent Deterrent Alternatives: There are plants that are natural deterrents for cats as they can emit odours that car

- Coleus Canina, also known as the Scaredy-Cat plant
- Helichrysum Italicum, also known as the Curry herb plant Lemon Balm plant

Planting these plants along the borders of a garden or flowerbed may stop cats from entering the area and causing damage. Property owners may also choose to plant prickly bushes to keep cats out of flowerbeds and gardens.

Property owners may need to use multiple items and strategies in various areas to determine what will be most effective

The City of Edmonton does not warrant the fitness or effectiveness of any of these products or strategies for the purpose of deterring cats. If you have any questions about any of the products found in the Cat Deterrent Kits, please visit edmonton.ca/pets or call 311.

> https://www.edmonton.ca/residential neighb ourhoods/PDF/Cat Deterrents.pdf

#### Communicate with confidence and calm

During the first several months of the program, animal control officers and intake desk staff told people dropping off nuisance cats that the cats would be sterilized and returned. This resulted in many heated discussions and complaints from citizens. So, JACPS decided to take cats in and gather the needed information without getting into the specifics about what would happen next. This policy has resulted in far fewer complaints and less stress for the staff involved.





I know you say Return to Field actually reduces the number that are roaming around and at risk, but I can't get past the worry that we're just putting them back out to be hit by cars or eaten by coyotes. Do you have any data on what actually happens to the cats once they are returned?



### Will they be ok?

Study of the effect on shelter cat intakes and euthanasia from a shelter neuter return project of 10,080 cats from March 2010 to June 2014

Karen L. Johnson<sup>1</sup> and Jon Cic •

- The shelter received again 185 (1.8%) dead on arrival, of the 10,080 SNR cats, identified by microchip, who had previously been through the SNR program.
- The number of dead cats picked up on the street declined 20% from 1,629 in CY 2009 to 1,308 in FY 2014

<sup>&</sup>lt;sup>1</sup> National Pet Alliance, San Jose, CA, Unit

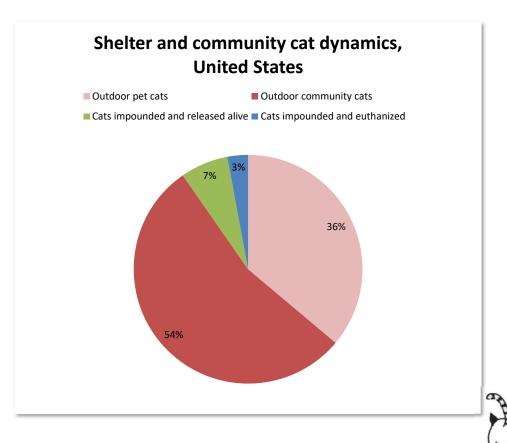
<sup>&</sup>lt;sup>2</sup> San Jose Animal Care and Services, San 1

# Open doors for conversations about risk mitigation



## Putting things into perspective

- Total cats out and about = 50-100 million
- Cats admitted to shelters = ~ 3 million
- ~ 9,000/day = < .02% or < 1 in 5000
- Reduce risk by focusing on cats in the community

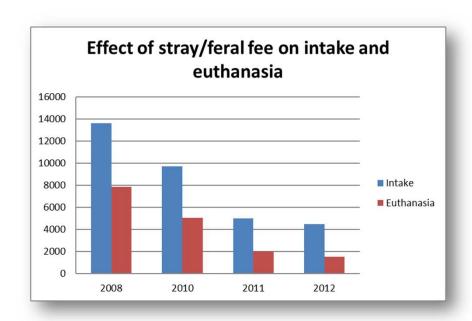


Ok, we're sold. But we don't have the funds for this and we've struck out on grant opportunities. Do you have other ideas for how we can fund this sustainably?



### Paying for return to field

- Evaluate your contracts should cover cost of live outcome
- Consider what services are currently free that could have fee added or be dis-continued to reallocate resources/reduce intake
- Be efficient short LOS and focus on key services only
- Work into surgery schedule before kitten season hits



### Payoff over time

Our cost to care for a cat is about \$200, and our cost to s/n is \$67. We also take in 3,000 fewer cats per year since the program began. We never added extra money for this, we just shifted costs by moving the qualifying cats through the shelter and back out as fast as possible. One of the more compelling arguments I've seen for governments is future cost control. If you don't invest now, costs will continue to rise at a greater rate in the future. If you do invest now, you can reduce cat intake and costs over time...and the bonus is, they won't have to do it using lethal control. win win!

- Jon Cicirelli, San Jose City Animal Services

## Is RTF against the law?

We'd love to do return to field, but our local ordinance prohibits abandonment. Have you heard of any ways to work around that?



### RTF and the law

- Legal definition of ownership can't apply to community cats
- Leash and license laws intend to reduce nuisance, harm and costs
- Abandonment laws intend to protect welfare and prevent suffering
- Both intents better served by RTF than relocation or euthanasia
- Extensive precedent for RTF in presence of leash, license, abandonment laws



Key Legal Issues to Consider

SEE ALSO: Community Cat Programs Handbook: Stray and Feral Cats Resource

#### Introduction

Before a community cat program (CCP) can be launched, it's important to understand how the various aspects of the program relate to all relevant state and local laws and regulations. Given the number and complexity of provisions and jurisdictions that can come into play, ensuring such compliance can be challenging, but not impossible.

Although this guide cannot address all possible legal and policy concerns, it does provide an overview of the key issues that must be considered by any organization interested in operating a CCP. When it comes to the laws governing CCPs, there is simply no such thing as one-size-fits-all. The overview of key provisions included in this section are therefore merely intended as guideposts along the legal landscape — to initiate discussion and prompt further research among enforcement personnel, advocates, shelter staff, elected officials and others interested in the topic. The appendix provides several examples of actual code along with a brief description of its implications for CCPs.

### Ideal legislation

- Community Cat means any freeroaming cat that may be cared for by one or more residents of the immediate area who is/are known or unknown; a community cat may or may not be feral.
- Community cats shall be distinguished from other cats by being sterilized and ear tipped; qualified community cats are exempt from licensing, stray and at-large provisions of this ordinance and may be exempt from other provisions directed toward owned animals.

- Feeding not required but may be regulated:
  - On private property or with consent of owner
  - In appropriate amounts for daily consumption in appropriate feeding containers
  - Dumping of excess food or placing excess quantities on the ground is prohibited
- If shelter is provided, it shall be unobtrusive, safe and of proper size
- Efforts should be made to sterilize, vaccinate and ear-tip cats that are fed



