TNR in a Nutshell

Trap-Neuter-Return (TNR) is the most effective and humane way to treat feral cats and manage their colonies. Cats are trapped and taken to a veterinarian to be sterilized and given any medical attention necessary. Then, friendly cats are moved to an adoption program. This immediately (and most importantly) reduces colony size. Those cats not suitable for indoor life are returned to the place of trapping. All cats are scanned for a microchip and returned to their guardian if one is found.

Anyone can learn to safely practice TNR, and will witness first-hand the benefits of a humane approach to outdoor cats.

When combined with diligent population management such as targeted adoption programs, early-age sterilization of pet cats, and minimization of abandonment, spaying and neutering colonies of cats:

- helps stabilize and reduce cat populations (Spehar & Wolf, 2020; Gunther et al., 2022)
- eliminates behaviors associated with mating (fighting, yowling, and spraying)
- may increase the adoptability of adult feral cats (Levy & Wilford, 2017)
- improves the overall health of outdoor cats
- is more effective and less costly than repeated attempts at eradication
- is humane to the animals and fosters compassion in the community

Key stakeholders (cat caretakers, citizens of the local community, volunteers, and any property owners where the cats reside) should work together to implement a management plan. Financial support may be available from an already-established organization; if not, money may have to be raised by voluntary contributions. Local governments should be approached and asked to contribute funds, as TNR will save them money over time. In the end, a proper TNR program will cost much less than repeated eradication attempts. TNR does require a significant investment, especially when managing large colonies, so be sure to have a long-term budget laid out ahead of time. Major expenses include equipment, veterinary services, and cat food.

Assessment

It is important when implementing a new TNR program to get an idea of how your community is currently managing feral cats. Identify all individuals who feed community cats and all locations of feeding sites. Create a spreadsheet to track pertinent information regarding the cats (i.e., number of cats, sex of each cat if possible, state of cats' health, whether females are pregnant, if there are kittens). Also, identify the cats who are only occasional visitors or who are very friendly, as these may be companion animals.

Planning

Before trapping, make arrangements for kittens and cats who can be socialized after veterinary treatment so that they can be placed into an adoption program or foster home. All cats and kittens should be sterilized prior to adoption, and caretakers can charge an adoption fee to help recover part of the cost.

Obtain humane traps and transfer cages and learn how to properly use them. Refer to "Steps for Successful and Safe Trapping" for information on equipment.

Make arrangements for transport, over-

night stay for the cats prior to being released, and delivery to and from the veterinary clinic. If you're not working with a cat rescue organization, then you will need to

reach out to local veterinary clinics to find one willing to help. ACR's website lists spay/neuter clinics in the U.S. Confirm with the clinic beforehand that the veterinarian is prepared to treat feral cats, as some are not. Once you find a veterinarian who works with feral cats and is willing to help, you may want to inquire about a possible fee reduction, since you will be bringing several cats to be sterilized.

Talk to Your Neighbors

Depending on the size of the colony, you may need to address some concerns from neighbors. You may be able to defuse conflicts.

- The most common complaints about cats include the soiling of gardens, late-night yowling, leftover food scraps attracting wildlife, the sight of sickly animals, and sometimes just the fact that freeroaming cats are around. A feral cat caretaker can alleviate many of these problems and concerns.
- Be reasonable and professional, even if your neighbors are not. This will give them confidence that you know what you are doing and that you care about their concerns.
- Let them know that you did not create this situation. The cats are there because someone else failed to sterilize their cat and abandoned the them, or the cat became lost.
- Explain the benefits of TNR and the ineffectiveness of eradication. Tell them that withholding food is not only cruel but also pointless, as the cats will

continue to breed. Explain how many fewer cats there will be due to your efforts, and that you are caring for the cats and preventing the birth of more.



Mama "Squirrel" and kittens, Bronx, New York City,

You may also want to call a community meeting to discuss the situation and possible solutions. People may be more comfortable when they learn that groups across the country and around the world are implementing TNR programs for feral cats.

Main Steps for Implementation

Once the planning stages are done, you're ready to start work in the field.

Spots near vacant buildings and other uninhabited areas can be good locations for colonies. Be careful of buildings scheduled for demolition or areas too close to major highways.

The area where the cats are currently living is generally the best place to keep them. If relocation is necessary, start searching for a suitable new location (i.e., farms, neighbors with land). (Refer to "Guidelines for Safely Relocating Feral Cats" for more information.) Euthanasia, the final option, is recommended only for very sick cats who cannot be treated and released.

Notify your neighbors of your plan before trapping begins to allow them to keep their cats indoors so they are not trapped.

Don't leave a cat in an unprotected trap and never leave the cat where she might be threatened by other animals, people, or weather. Immediately cover the trap with a towel or blanket when the cat is caught in order to calm her down. When one cat has been trapped, move her to the transfer cage so you can use the trap for a second cat.

Do not trap in inclement weather, especially during heat waves; traumatized cats are very susceptible to heat stroke. The use of rabies poles and tranquilizers are discouraged. Tranquilized cats may leave the area before the tranquilizer takes effect and can get into situations that could endanger their lives, such as wandering onto busy streets.

Do not trap lactating mothers, if possible. If, however, a lactating mother is trapped, decide whether to have her spayed as she could be hard to retrap. If you do decide to have her spayed, find her kittens as soon as possible.

You may keep the cat in a trap or you may carefully transition them to a larger cage if fostering for more than two days. Place newspaper under the trap to absorb urine, and provide food and water. Keep the trap or transition cage in a basement, shed, covered porch, or other area that is out of extreme weather conditions. Keep the trap

covered with a towel or blanket to keep the cat calm.

Veterinary Care

All cats to be returned must be identified by clipping one quarter inch off the top of the left ear. Ear-tipping is the universal marking to identify a cat who is part of a managed TNR program. Ear-tipping can be a life saver for feral cats — if trapped by animal control, they can be returned to their colony. This procedure is performed while the cat is under anesthesia, and the ear is properly cauterized to stop bleeding.

All cats should be treated for internal and external parasites, inoculated for rabies and distemper, and given a long-term antibiotic injection. Microchipping is also recommended, in case the cat is ever trapped and taken to animal control. She could then be identified and returned to the colony.

After surgery, male cats should be fostered overnight and if possible females should be kept for two nights prior to being released. Never release a cat immediately after surgery. Most veterinary clinics do not hold feral cats after surgery, so you will have to make other arrangements ahead of time.

Refer to the chapters "Health Care for Feral Cats: Guidelines for Colony Caretakers" and "Guidelines for Veterinarians" for more information.

Domestication

Although some older cats can be domesticated or socialized, the best time to tame feral cats is when they are kittens, ideally before they are eight weeks old. While it is possible to domesticate older kittens (12 weeks old), if no homes are available and your local shelter is killing unwanted domestic kittens, a more humane and practical solution for all is to sterilize, vaccinate,

and return the kittens to the colony.

Refer to "Feral Kittens and Pregnant Cats" for more information.

Relocation

When returning a cat to the original site is not possible, relocate the cat to a different site, such as a farm, a riding stable, or even a backyard, as long as new caretakers are willing to take responsibility for the cat's consistent care. Relocation may take several weeks or months and must be undertaken with the utmost care. "Dumping" feral cats in rural areas, forests, or farmland is inhumane, as well as illegal.



Cat shelter, Adams Morgan, Washington, D.C.

When relocating a feral cat, you must confine the cat for three to four weeks to allow her to get familiar with the new sights, sounds, and smells. This period allows a new bond of trust to be established. If this confined transition period is not adhered to, the cat may not remain on the property, which can lead to a traumatic situation for the cat. Try locating two cats who know each other together. This will help their transition to the new site easier.

Refer to "Guidelines for Safely Relocating Feral Cats" for more information.

Long-term Maintenance

The long-term management of a colony should include arrangements for daily feeding, fresh water, provision of insulated shelters, and providing and cleaning litter boxes. (Refer to "Winterizing Feral Cat Colonies" for more information.) Dust the shelter bedding with flea powder to prevent infestations, and keep feeding areas clean and tidy. It may take several months to bring a large colony under control and achieve stable groups of content and healthy cats. Any new cats attaching themselves to you and the colony should be trapped and sterilized. Many of these new cats may be domestic strays, able to be resocialized and placed into homes.

Feral cats can be retrapped a few years later for booster rabies vaccinations, health check-ups, teeth cleaning, etc. At this time, they will be more trusting of their caretaker and can be tricked into cages and traps. A plan should be worked out with the veterinarian where mild illnesses can be treated with antibiotics placed in moist food.

The Community Benefits of Feral Cats

Having a managed feral cat colony in your neighborhood can benefit the entire community. The colony can demonstrate to all that compassion for cats teaches nonviolence and tolerance towards others.

• Feral cats can minimize rodent problems. While cats do not hunt rats and mice into extinction, they do keep their populations in check and discourage new rodents from moving into the area. Feral cats fill in a gap in the current ecosystem. For example, bobcats (*Lynx rufus*) *used* to live up and down the East Coast, but were hunted ruthlessly and driven away by development. Feral cats exhibit similar behaviors to these native feline predators, and they help to control the same species of small prey animals.

- An established, stable, sterilized, and vaccinated colony of feral cats will deter other stray and feral cats from moving into the area. This actually decreases the risk that residents will encounter an unvaccinated cat, and will virtually eliminate problem behaviors like fighting and spraying.
- Many people enjoy watching feral cats, and observing animals has been shown to lower blood pressure in medical studies (Sakagami and Ohta, 2010).
- People who help to care for feral cats by feeding them and taking them to the vet enjoy many benefits. Often cat caretakers are elderly and live alone, a population at risk for depression, loneliness, and isolation. Cats relieve these conditions and often bring a sense of happiness and purpose to people who help them. Just as companion animals have been shown to extend life expectancies, lower blood pressure, and relieve stress

(Qureshi et al., 2009; Levine et al., 2013), caring for feral cats can improve the health and happiness of the caretaker.

• Individuals who cannot take on the full -time commitment of adopting a companion animal can participate in programs to help feral cats. This provides a viable alternative to irresponsibly purchasing an animal one is not prepared to care for.

Steps to Prevent Problems with Neighbors

- All cats should be spayed or neutered to prevent the noisy and objectionable breeding behavior that neighbors dislike: yowling, spraying, fighting, and excessive roaming.
- Make sure cats are vaccinated against rabies to alleviate health concerns. Immediately retrap and vet any cats who become ill or injured. Maintain good vet records, including a rabies tag num-

ber for each vaccinated cat, to provide evidence that the feral cats are healthy.

- Be sure your cats are eartipped so neighbors can easily identify cats who are sterilized, vaccinated, and cared for.
- Clean areas where urine has been sprayed. White vinegar or Nature's Miracle can eliminate any odors or staining. Cats will continue to spray in an area that smells of urine, so maintain the site as needed. Avoid using ammonia products; they smell so similar to cat urine that they may encourage more spraying.



The author, feeding a colony in Adams Morgan, Washington, D.C.

- To prevent cats from soiling neighbors' yards and gardens, dump sand in an out-of-the-way area, or in covered wooden litter boxes that can be built outdoors at the colony site. Cats much prefer to use the clean sand and will do most of their eliminations there. Scoop daily to keep sand boxes clean and to prevent odor, or more often in hot weather. Pouring a layer of baking soda beneath the clean sand or litter can be helpful in preventing odors. Cats will stop using the litter or sand if the odor becomes too strong. Odor is another reason neighbors might complain.
- Keep food areas clean. Pick up any and all trash regularly, even if it's not your trash. Remove empty food bowls, old dried-up food, dirty bedding materials, etc.
- If the area where the cats are fed is particularly objectionable for neighbors, gradually move the feeding station to a less objectionable area. This can be done in increments and completed in one to two weeks. Create a small, partially enclosed feeding site to make bowls and cats less visible.
- Try to make the shelters you have erected look clean and unobtrusive. Shelters and feeding stations can be painted in natural colors, like dark green and brown, to blend in with surrounding foliage.
- To keep from attracting wildlife, feed only in the morning or daylight hours when raccoons and other wild animals are not active. Again, be sure to remove leftover food after feeding.
- Treat feral cats with a flea product when trapping them. Advantage Multi for Cats is a broad-spectrum parasite preventive in a monthly topical application. It prevents heartworm

- disease, kills adult fleas, and will treat flea infestations. Only a few drops need to be applied to the back of the cat's neck; your veterinarian can do this for you. This medication is for use on cats and kittens at least nine weeks of age and weighing at least two pounds.
- Advantage Multi treats roundworm infections caused by *Toxocara cati*, hookworm infections caused by *Ancy-lostoma tubaeforme*, and ear mite infestations caused by *Otodectes cy*notis.
- Some herbal products will deter fleas. Try sprinkling mint, dried pyrethrum flowers, or a non-toxic herbal flea powder, like Diatomaceous Earth, beneath the bedding. Be sure to change the bedding material or hay in shelters regularly.



Feral colony in Key Largo, FL. Feeding stations are tucked out of sight amongst lush vegetation.

There are also some oral flea treatments available. Capstar (nitenpyram) is an oral medication designed to kill adult fleas. The pills can be crushed into wet food and used daily. Use caution to ensure that

a cat eats only one dose, and does not go around eating any other cats' medicated food. Capstar is intended for cats who are at least four weeks of age and weigh more than two pounds. It begins to kill adult fleas within 30 minutes of ingestion.

Cats and Gardens

Here are some helpful and humane suggestions for neighbors who wish to keep community cats out of their yards and gardens. For more information on the products mentioned in this section and where to purchase them, please see the Helpful Resources section in the back of the handbook.

- Push wooden chopsticks or plant stakes eight inches deep into flower beds to discourage digging and scratching.
- Push Cat Scat Mats into flower beds and gardens to prevent digging. These plastic mats can be cut to fit any size area and consist of flexible plastic spikes that are unpleasant for cats to walk on.
- Cover exposed ground in flower beds with large attractive river rocks to prevent cats from digging. Rocks have the added benefit of deterring weeds and beautifying the landscape.
- Cats dislike citrus smells. Scatter orange and lemon peels or spray a citrus-scented solution on areas you don't want cats. You can also scatter citrus-scented pet bedding such as Citrafresh. Cayenne pepper, coffee grounds, and pipe tobacco work to repel cats as well. Some suggest lavender oil, lemongrass oil, citronella oil, eucalyptus oil, and mustard oil.
- Cat Repellent Clips are biodegradable

clips filled with a blend of natural, organic garlic, citronella, lemongrass, and cinnamon oils. These clips can be placed anywhere you don't want cats, like in gardens or flower beds. Clip onto plants and shrubs that cats tend to nibble the leaves of. These clips safely and effectively repel cats for six to eight months.

- Spray a cat repellent (available at pet supply stores) around the edges of the yard, the top of fences, and on any favorite digging areas or plants.
- Plant the herb rue to repel cats or sprinkle the dried herb over the garden.
- Try an ultrasonic animal repellent, which emits high frequency noise inaudible to humans. Cats find the noise extremely loud and annoying, repelling them from the area. These devices are available at lawn and garden stores.
- Use a motion-activated sprinkler, such as the Scarecrow sprinkler. Any cat coming into the yard will be sprayed but unharmed, and it is good for the lawn. These are also available at lawn and garden stores.
- Reppers Outdoor Sticks contain methyl nonyl ketone, which is a cat (and dog) training aid and repellent, that can be used both inside and outside. These repellent sticks are nontoxic to plants, mammals, and humans and can safely keep animals out of your garden, flower bed or potted plants for up to 60 days. These repellent sticks have been tested and proven to work by Alley Cat Rescue staff and neighbors!

You may want to offer to help your neighbors with any of the above, whether purchasing supplies for them or setting up the deterrents.

Addressing Other Problems

If neighbors express concern about the effects of feral cats on local wildlife, provide them with copies of ACR materials on feral cats and predation (see the chapter "Cats and Predation"). Explain that cats are rodent specialists and keep rodent populations in check, and if rodents are left unchecked, they could potentially spread deadly diseases.

Also, some neighbors may fear feral cats will pose a threat to their children. Explain to them that feral cats are naturally wary of people and will not approach humans they do not know. A feral cat will not attack a person unless the cat is cornered or feels threatened. Advise neighbors to teach their children not to approach or touch unknown animals. Children should ask an adult for help if they think an animal may be trapped, sick, or injured, or if they find a baby animal.

Feral cats do not pose a health or disease risk to humans, but some neighbors may need to be reassured. Give them copies of ACR's factsheet on "Zoonotic Diseases." Also advise them that they can avoid any risk by not touching community cats and by washing their hands after gardening.

Sometimes, even after having expended your best efforts, neighbors may continue to complain, or even be hostile towards you and the cats. If any complaints are made to you or to animal control, it is important to act quickly and demonstrate that you are willing to cooperate with neighbors. It may also be beneficial to bring in a professional

mediator to help solve the problem in a way that is satisfactory to all concerned. Even if there have been no complaints, minimizing the impact of the outdoor cat colony on the neighborhood can help to deter conflicts.

Conclusion

If any of the above seems overly complicated or time-consuming at first glance, remember that you are fighting for the lives of feral cats and building good public relations for the future. In addition, you might be strengthening your community by getting more people involved! All feral cat problems that are solved positively and amicably help leave a better overall impression regarding feral cats and caretakers, and will serve to make it easier for all of us to continue to care for our outdoor cats.