

death or with life threatening illnesses. Cats with clinical signs suggestive of a Streptococcus infection that previously caused fatal outbreaks have recently been identified in the ward again.

Problems identified:

- Housing for feral cats in their holding period is grossly inadequate, inhumane, and creates substantial danger to animal health.
- Equipment provided to staff for handling un-socialized or feral cats is inappropriate and inhumane.
- Staff are inappropriately trained to handle the animals arriving to or housed in this area resulting in substantial animal suffering and disease.
- This situation was first brought to the attention of shelter administrators by shelter staff in November of 2005. UC Davis as well as an outside veterinary consultant made recommendations to alleviate the problem in 2006. The problems have continued, with little or no intervention for improvement, despite numerous verbal and written reports by both the shelter veterinarian and UC Davis consultants that the conditions and handling practices for feral cats are inhumane and create serious risks of infectious disease.
- Recent increases in feral intake have multiplied the welfare and health dangers for animals in this area.
- Although a plan has been developed, in partnership and consultation with UC Davis, to remedy this situation, it has not been implemented.

Recommendations:

- Discontinue the use of the slatted floor cages in the feral cat ward of the shelter.
- Immediately discontinue the use of rabies lock poles for feral cat handling.
- Train staff to use nets, humane traps and other equipment to handle cats in transport and in the feral cat areas.
- Implement the plan that has been developed by the KCAS veterinarian, in collaboration with the UC Davis Koret Shelter Medicine Program, to more humanely house feral cats in the KCAS facility.
- Develop a plan to evaluate feral cats in order to decrease the amount of time they must be housed in the shelter.
- Investigate possibilities for feral cat diversion programs in the community.

SEC. III Part 4: Length of shelter stay, animal care days, and daily in-shelter animal population

Animal care days

Animal care days describe length of stay, or turn around time, for animals in the shelter. One animal care day is equivalent to one animal, housed in the shelter for one day. Animal care days or length of stay can have a significant impact on daily population numbers and crowding in the shelter.

Animal care days are a means of evaluating the burden placed on both the animals and the shelter facility. One animal care day is equivalent to one animal in the shelter system for one day. Clearly, 1000 animals housed for 20 days each places a greater burden on a given staff and facility than 1000 animals housed for 10 days. The risk for each individual animal also increases with longer stays. When working with a shelter caring for thousands of animals per year, even minor delays at flow-through points such as movement to adoption or spay/neuter delivery can add up to very substantial numbers of additional days spent by animals in the shelter, not actively moving towards a positive outcome. In order to realistically track staffing, facility, and resource needs, animal care days are as important as monthly or annual intake.

Reducing the length of stay, or number of animal care days per animal, can dramatically reduce crowding and improve the level of care available for each animal without increasing euthanasia or reducing live release. In fact, reduced crowding and illness due to improved efficiency of flow-through can lead to increased live release.

Animal care days should be considered a precious resource, and expended carefully to best fulfill the shelter's mission. Each animal's length of stay in the shelter should be as short as possible to minimize stress and the risks of infectious disease. This requires constant monitoring of animal care day numbers as described below. In particular, every effort should be made to minimize "wasted animal care days" for each individual animal and the population as a whole; that is, days animals spend unnecessarily waiting or a day spent caring for an animal that did not bring the animal any closer to a positive outcome. There are two main reasons for "wasted" care days.

One type of "wasted" care day is a day spent with an animal not actively available (viewable by the public) for adoption, nor actively being prepared or rehabilitated for the purpose of being placed for adoption, transfer, or rescue. The most obvious example is adoptable animals housed in areas of the shelter where they cannot be, or are unlikely to be, viewed by the public. More subtle examples come from delays in decision making or in carrying out necessary procedures (basically any time an animal spends "in limbo"). For example, if an animal comes in with a medical problem requiring evaluation by a veterinarian and that evaluation is delayed by a few days, those days are wasted care days. The same applies to animals with behavior issues; any delay in carrying out necessary evaluations, seeking out expert advice, initiating rehabilitation programs, etc. counts towards care days spent with no return for shelter or animal.

Another type of "wasted" care days are those days (beyond any required holding period) spent on caring for an animal whose final outcome is euthanasia. In these cases, shelter resources are expended, crowding and the associated risks are incurred, and the animal suffers with no benefit in lives saved. A particularly sad example is that of animals admitted to a shelter in good health and later euthanized for shelter acquired disease, spread as a result of overcrowding. Certainly, it is humane and appropriate to take some risks on animals that have barriers to adoption that they may or may not be able to overcome, and therefore, invest in an animal that ends up being euthanized. Those care days may not be wasted, especially if they lead to a life saved. However, it does not serve any good purpose to systematically admit and hold animals, without having enough resources and programs to keep them healthy, release, or adopt them, then euthanize them after prolonged investment when the animal has succumbed to disease or a stress related behavioral disorder.

*Table 2 and Examples 2 and 3 below are examples of how animal care days affect crowding, if one dog is in the shelter 10 days, that would be equal to 10 animal care days (1*10 =10). If 10 dogs each stay 10 days, that would equal 100 animal care days(10 * 10 =100). If we look at a 10 day period, using 10 kennels, there are 100 potential care days to spend. The 10 kennels would be filled by 10 dogs each staying 10 days. If we could reduce the average length of stay from 10 animal care days to 5 animal care days, the total animal care days would be reduced to 50 (5 *10 =50) and the kennels would be half empty during the 10 day period even though we still served 10 dogs.*

	Number of Dogs Served	Average Care Days	Total Care days
Example # 1	1	10	10
Example # 2	10	10	100
Example # 3	10	5	50

Table 2

Example #2

Dog #1 (10 days)	Dog #2 (10 days)	Dog #3 (10 days)	Dog #4 (10 days)	Dog #5 (10 days)
Dog #6 (10 days)	Dog #7 (10 days)	Dog #8 (10 days)	Dog #9 (10 days)	Dog #10 (10 days)

Example #3

Dog #1 and #6 (5 days/ 5 days)		Dog #3 and #8 (5 days/ 5 days)		Dog #5 and #10 (5 days/ 5 days)
	Dog #2 and #7 (5 days/ 5 days)		Dog #4 and #9 (5 days/ 5 days)	

Care Days to Outcomes

Overall animal care days for Kern County do not appear extravagant when simply evaluating daily average time to outcome. (Figures 23)

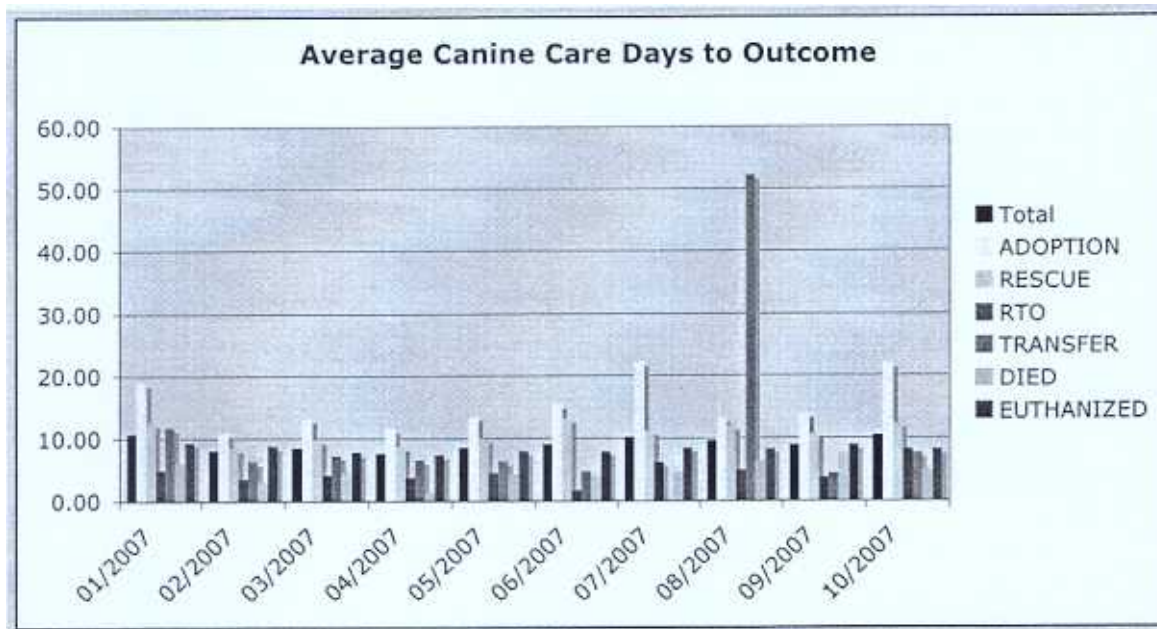


Figure 23

And yet, it is clear that prolonged stays in the shelter do contribute further to crowding and resource expenditure in a facility that is already stretched beyond capacity from minimum stray holding requirements. (Please see section on required holding capacity.) Prolonged stays affect the group as a whole by increasing crowding which has a negative impact on almost all parameters affecting animal health and welfare. Just as importantly, prolonged stays also contribute negatively to the health of each individual animal and so may reduce the likelihood of placement.

Length of stay has been shown to be a significant factor for development of respiratory disease. As length of stay increases, in a short stay / high turnover environment such as KCAS, potential for exposure and duration of exposure both increase making it more and more likely an animal will become sick with each additional day spent in shelter housing. Ongoing stress also plays a role. Although stress responses may decrease with time spent in the shelter, the effects of ongoing or chronic stress have serious implications for animal health and well-being.

Procedures and practices that emphasize prompt, efficient movement through the shelter will help to reduce crowding, while reducing the risk of infectious disease and animal stress, required staff hours, and unproductive drains on limited resources. Efficient movement through the shelter does not imply or require increases in euthanasia or decreases in live release. Instead, efficient movement demands daily evaluation of all animals, prompt movement out of holding, realistic evaluation of potential for adoption or rescue, immediate availability for adoption after release, robust adoption programs and

constant and timely communication and pick-up from rescue groups. (Please see Appendix C Instructions for daily rounds.)

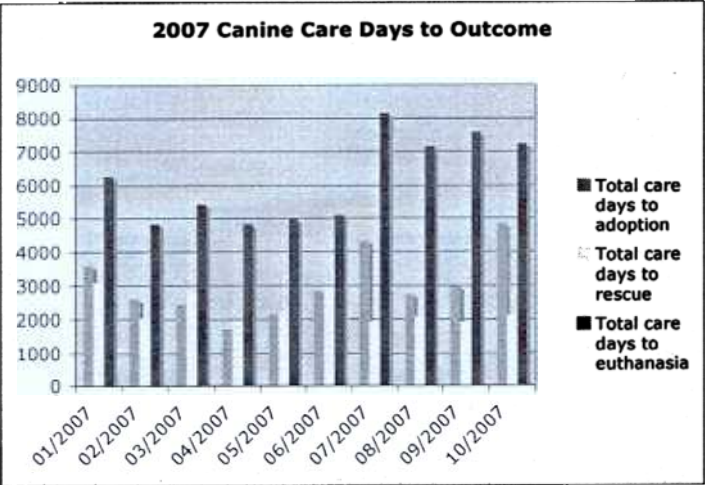
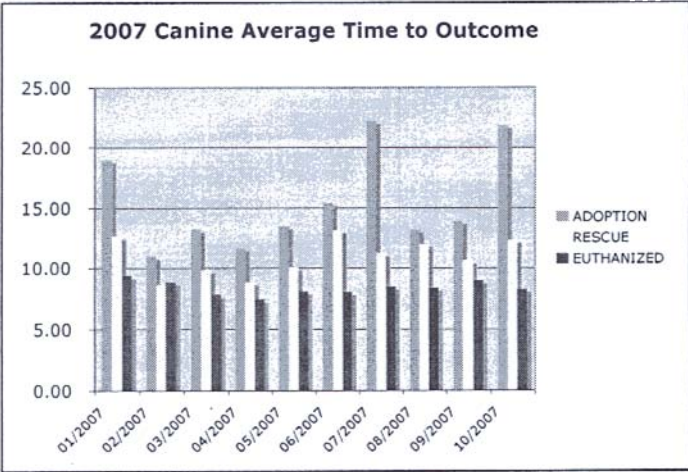


Figure 24

Figure 24 above shows total 2007 year-to-date care days to outcome (January-October) for dogs who were adopted, sent to rescue organizations, or euthanised. Time to outcome includes every day the animal spent in the shelter’s care prior to outcome. These three outcomes represent the most significant numbers of care days for the KCAS. As a single category, the greatest number of care days are spent on animals who are ultimately euthanised. However, a closely equivalent number of care days are spent on the live release outcomes of adoption and rescue placement combined.

Average time to adoption in 2007 ranged from 11 days in February and April to 22 days in July and October. Average time to rescue placement ranged from 9 days in February and April to 13 days in June. Average time to euthanasia ranged narrowly from 8-9 days throughout the time period. (Figure 25)



(Figure 25)

Reducing the average length of stay for outcomes of adoption, rescue and euthanasia would have a significant impact on daily crowding in holding and adoption areas.

As an example, figure 26 shows potential reductions in daily canine shelter population if the average length of stay for outcomes of adoption, rescue and euthanasia were reduced to averages of 10 days for the live release outcomes (adoption and rescue placement) while a consistent average of 8 days for euthanasia was maintained. Averages suggest that some animals will leave in less time while some may stay longer. The reductions used in this example are only provided as an example of the positive impact efficiency may have on reducing shelter crowding.

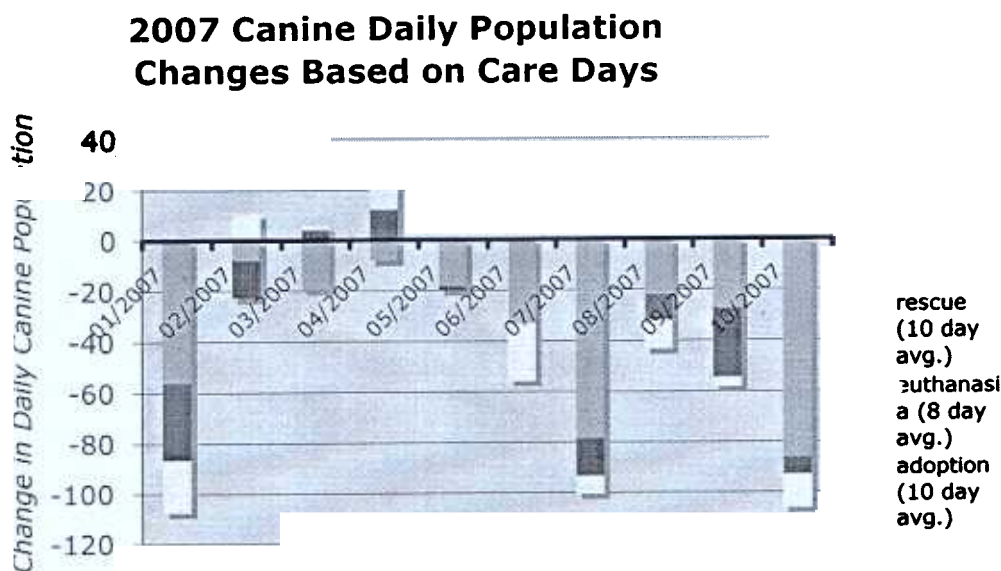


Figure 26

As an example, if KCAS set a goal to focus solely on reductions in turn around time for animals being adopted from the shelter, so that on average dogs left for their new homes in ten days as a consistent average, then daily population, based on 2007 care days would be reduced by approximately 80 dogs each day in July and October and by more than 50 dogs each day in January. In other months, daily canine population could be reduced by approximately 20 dogs each day. In some cases these reductions could be the difference between singly housing dogs and being forced to co-mingle unrelated dogs in the same kennel.

For rescue groups transferring healthy animals, who can move swiftly through their systems, also helps to avoid prolonged care days, increased risk of disease, and increased drains on their resources which may allow them to take more animals from the shelter. Encouraging rescue groups to pick animals up promptly from the shelter will help reduce daily in-shelter population to help all the animals stay healthier while allowing prolonged delays will have a negative impact both on the individual animal waiting to leave and the population as a whole.

These examples assume that there is no change in the distribution of outcomes. It is likely that reducing the time to adoption would actually shift the outcomes more favorably toward live release. Avoiding prolonged stays for shelter animals may mean more animals will stay healthy enough to be placed through adoption or rescue, which would ultimately increase live release.

It is reportedly common that adoptable dogs, like the dog pictured in Figure 27, develop clinical signs of disease, especially respiratory disease, while in the adoptable area or waiting, past release, in the holding areas. Those animals are often euthanised. Because practices and programs are not in place to effectively prevent disease, this practice is often the only viable option currently available. Adequate isolation and separation facilities or capacity do not exist at KCAS. This practices helps prevent spread of respiratory disease pathogens to other adoptable dogs. Animals with clinical signs of disease may be euthanised due to lack of resources, rescue opportunities, treatment space or staffing. It is possible that by cutting down on waiting time for dogs awaiting adoption, more dogs may actually be adopted and fewer euthanised because fewer will become sick while waiting.



(Figure 27)

This dog was being removed from the adoption floor in November due to clinical signs of respiratory disease.

While the absolute numbers for live release have increased in the past year, a substantial number of care days in the shelter in 2007 were spent on animals who were ultimately euthanized. Average care days to outcome for euthanised animals could be reduced by ensuring adequate staffing and prioritizing prompt evaluation, decision making, with close supervision and accountability for flow through and action once decisions to euthanize have been made. Total care days to an outcome of euthanasia could be reduced both through increased efficiency and through increased live release.

Please note that these reductions, although in some cases substantial, would not be significant enough to solve the problems of crowding in the Kern County shelter since the reductions described here refer to animals past their release dates and do not affect required holding periods. These reductions would however help to relieve the additional degree of shelter crowding that was not represented in the required capacity calculations in the holding areas and in the adoption sections as well. That additional degree of shelter crowding was not represented in the minimum required capacity calculations or graphs.

The reductions used in this example are only provided as an example of the positive impact efficiency may have on reducing shelter crowding.

Recommendations:

- Implement systems to facilitate reduction in daily in-shelter animal population and maintenance of daily animal inventory in alignment with actual capacity, staffing and resources for animals in need of care. Do not increase inventory without a commensurate increase in capacity and animal care resources.
- Establish preventive proactive measures to move animals through the system more efficiently in order to prevent a vicious cycle of illness, prolonged shelter stay, and crowding caused by delays. **Institute daily rounds as described in Appendix C: Instructions for daily rounds.**
- Ensure prompt evaluation of each animal on arrival.
 - Evaluate surrendered animals on arrival
 - Evaluate stray animals within 24 hours of the release date
 - Make decisions and take action promptly after evaluation
 - Re-evaluate needs for animals who must wait for outcomes
- Clearly define expectations and time frame for re-evaluation when animals are waiting.
- Monitor length of time to all outcomes by species to watch for potential pitfalls.
 - Outcomes of particular importance to monitor include:
 - Return to Owner
 - Adoption
 - Foster
 - Transfer
 - Rescue
 - Euthanasia
 - Died in kennel

APPENDIX A: Staffing requirements based on average intake and daily population
Average daily population defines many needs and requirements for animal care. This number can be calculated by averaging the daily population in monthly increments. Monthly increments are used in order to evaluate seasonal variations. For this report, daily population was estimated by spot-checking the daily population of animals in the shelter at intervals (every second Tuesday of each month). The term “inventory” is used in this report to describe daily population, as this is the term used to obtain the Chameleon report calculating this number.

Average daily population is an important component of calculating the housing and staffing needs for animal care. Average daily inventory data was not available to the UC Davis team at the time of our visit. Calculations can be estimated by monthly spot checks. The National Animal Care Association has estimated staffing requirements for basic animal care (feeding and cleaning) at 10 min per animal. (Please see Table below.)

Formula for Determining Kennel Staffing Needs				
Indicator	Value	Formula	Value	Indicator
Incoming Animals per Year	A	+ by 365 days =	AA	Incoming Animals per Day
Incoming Animals per Day	AA	x B Day Average Hold Period =	BB	Animals in Shelter per Day
Animals in Shelter Per Day	BB	x 10 Minutes per Animal =	CC	Number of Minutes Needed
Minutes Needed	CC	+ 60 minutes =	DD	Number of Hours Needed
Number of Hours Needed	DD	+ 3 hours =	EE	Staff Needed per Day

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Staffing requirements for basic animal care at KCAS can be calculated by multiplying the daily average inventory each month by 10 minutes per animal (Monthly Daily Average Inventory * 10 min./animal). This could be done by ward, by species, or by area. The staffing level for dogs is likely to be relatively consistent since daily average canine intake has been relatively steady throughout the year. Feline intake, however, has historically doubled in the warmer months. This is a trend that is expected because most cats tend to breed seasonally. Staffing should be planned accordingly unless some control is to be put on intake and the resulting daily inventory. If 10 minutes per animal does not seem to be an accurate time estimate for cleaning and feeding at KCAS, then an average staff member should be timed while following safe, adequate cleaning and feeding protocols and the time should be adjusted to fit. Additional time should be allocated for caring for sick animals.

As an example, using the NACA time estimates:
 If 83 dogs were housed in the B ward*
 83 dogs * 10 min/ dog = 830 minutes

830 minutes / (60 minutes/hour) = 13.8 care hours for just cleaning and feeding dogs in the B ward of the shelter according to NACA guidelines
If staff are to finish the tasks in a three hour period 13.8 staff hours / 3 hours = 4.6 staff members need to be assigned to clean and feed dogs each day

If 161 cats were housed in the shelter *
161 * 10 minutes / cat = 1,610 minutes
1,610 minutes / (60 min. / hour) = 26.8 care hours for just cleaning and feeding of cats
If staff are to finish the tasks in a three hour period 26.8 staff hours / 3 hours = 8.9 staff members need to be assigned to clean and feed cats each day

**These population numbers are used here only as examples to show the calculations.*

If the shelter does not need to be open to the public it may be that more than three hours can be allowed for cleaning and feeding, allowing fewer staff members to accomplish this over a longer time span. Recognize, however, that length of time that passes equates to animals who are waiting for food, water, care and attention until limited staff has time to get to them. The absolute number of hours required will remain the same.

Staffing for Animal Flow-Through

Animal flow-through describes the time and processes designed to ensure a safe and optimally efficient passage through the shelter system. Common flow-through points for most shelters include intake, release to owner, behavioral evaluation, initiation/completion of treatment with associated moves in and out of isolation, release to and return from foster care, move from holding to adoption, spay / neuter pre- or post-adoption, adoption, transfer to rescue, and euthanasia. Flow-through points are junctions where an animal needs something from us or decisions need to be made for what to do next. Each flow-through point requires an investment of staff time in addition to that required for basic care and feeding.

Insufficient time to carry out procedures for any of these essential flow through points will have a detrimental effect on animal health by increasing time animals spend waiting in the shelter which, in turn, contributes to further crowding, risk of exposure to infectious disease, stress for animals and animal caretakers, and reduced welfare. It seems likely these delays also contribute to a decreased live release rate; specific examples were observed during the time of the site visit where this appeared to be the case. For example, lack of time to accomplish spay/neuter led to a reduced number of cats available for transfer to off-site adoption facilities, in spite of presence of a volunteer willing to transport any available cats. This resulted in offsite adoption kennels sitting empty while severe crowding persisted at the Kent shelter.

Similar estimated staffing requirement calculations can be made for animal flow through procedures for each point described above (and any additional flow through points identified by shelter staff) by using the daily averages from the prior year.

For example:

If on average, in 2007 canine intake was relatively consistent throughout the year at about 35-54 dogs per day. If performing a quick intake exam, administering intake treatments and vaccines, finding appropriate housing and documenting animal information in the computer is a 10 minute* process then intake numbers must be multiplied by that time required. To ensure efficiency and safety for humans and animals, it is recommended that admitting / intake procedures be carried out by a team of two, so hours should be multiplied by two. It is likely a team of two people will be able to accomplish each intake more efficiently than a single person working alone.

10 minutes * 40 dogs / day = 400 minutes or 6.7 hours of staff time per day must be available to provide essential intake procedures for dogs.

In addition, depending on the time of year, between 18 and 50 cats per day are admitted to the shelter system.

In summer: 10 minutes * 50 cats = 500 minutes or 8.3 hours for feline intake

In winter: 10 minutes * 18 cats = 180 minutes or 3 hours of feline intake

Estimated total hours for cat and dog intake ranges from 9.7 hours per day to 15 hours per day for two staff members or 20-30 total staff hours per day depending on the season.

Daily average intake numbers can also be used to estimate time needed for other essential flow through procedures.

Move to adoption checks used as an example:

If 40 dogs per day consistently arrive at the shelter, then approximately 36 dogs per day will also need some sort of pre-outcome processing such as behavior evaluation or health check.

40 admitted as strays less the approximately 10% canine average for reclaim = 36 dogs remaining at the end of the holding period

5 surrendered dogs + 36 stray dogs out of holding = 41 dogs for flow through procedures each day.

Outcome processing needs can be calculated using daily averages for adoptions, returns to owner, transfers and euthanasia. Average daily adoptions impact not only adoption processing but also spay neuter needs.

If specialized staff are required for certain flow-through points, ensure sufficient hours specific to these categories. For example, only selected trained or certified staff may be permitted to perform behavioral evaluations, assess whether animals under treatment are sufficiently recovered to move back into the general population, perform euthanasia or other specialized procedures. Spay/neuter services are one critical component of moving animals successfully through the shelter to adoption, and will be described separately.

APPENDIX B: Spay / neuter capacity requirements

Spay/ Neuter capacity describes the ability to accomplish a number of surgeries given the staffing, facility, and time allotted. Requirements for this capacity for KCAS are based on animal flow-through numbers with an estimate of how many animals would require surgery prior to release.

As an example, average daily adoptions can be used to roughly estimate the need for spay/neuter surgery. To get the most accurate picture, an estimate of what percentage of both dogs and cats arrive at the shelter intact versus previously altered is required. For this example, we will assume that all adopted pets need surgery prior to adoption, which is most likely an overestimate.

Spay / Neuter Surgery Number Requirements

The expected number of required procedures for a shelter that performs surgery post-adoption can be calculated by estimating the number of expected adoptions by the fraction of animals that are intact at the time they are selected for adoption. Any additional procedures – such as spay/neuter prior to rescue, reclaim by owners, or release to feral cat colonies – will also have to be included in the estimate. The following calculations provide an estimate of expected adoption numbers only.

For surgeries in partnership with private clinics, estimating average expected daily surgery needs will help to develop a smoothly running system that would prevent delays in adoption, minimize animal care days, and reduce overall crowding.

For in house surgeries, in order to calculate spay/neuter surgery staffing needs, it is necessary to multiply the veterinary and technician time required per surgery by the expected number of animals requiring this procedure on a per-surgery-day basis. Time calculations should include the veterinary and technician time required to accomplish every aspect of the procedure, including identification of surgical candidates, pre-surgical exams, preparation and recovery, the surgery itself, paperwork/documentation associated with surgery and logging of controlled substances, communication/release to new adopters, and any follow up care required after release.

Dog adoptions were relatively consistent throughout the seasons of the year. Cat adoptions rose somewhat steadily during 2007. Normally at least some seasonal variation is seen in both intake and adoptions for cats because of kitten season. Daily surgery numbers and types required can be estimated by the monthly adoption number expectations (based on the previous year) for cats, kittens puppies and dogs divided by the number of surgery days in the month.

As an example:

A 2007 year-to-date average of 65 cats per month were adopted from KCAS. If 65 cats and 188 dogs would require surgery each month a total of 253 surgeries would be required. If surgery is done five days a week and there are 4 weeks in the month (20 surgery days), then 13 surgeries must be performed each surgery day.

253 feline surgeries / (20 surgery days) = 13 total surgeries (75% canine) are required each surgery day

Timing for all aspects of the spay / neuter process should be timed or estimated and added to the surgery time in order to estimate overall staffing and facilities needs.

APPENDIX C: Instructions for daily rounds

Assess each animal daily and ensure that all needed steps have been taken for that animal that day, including:

- ✓ Transfer of strays to appropriate holding facility
- ✓ Behavioral and/or medical assessment to determine adoptability
- ✓ Spay/neuter surgery or other medical procedures required before adoption
- ✓ Movement from areas such as isolation or quarantine to adoptable areas as soon as the animal is recovered
- ✓ Rescue group contact and pick-up
- ✓ Behavioral and/or medical care to alleviate suffering and improve adoptability
- ✓ Euthanasia – decision and performance

The daily assessment should include the shelter manager, veterinarian and director working together at least once a week. The assessment should include a look at the overall condition of each ward (smell, cleanliness, noise, overall presentation to adopters) and attention to each animal's paperwork, cage/kennel, and an assessment of the animal's physical and mental condition:

Paperwork: is there any indication on the paperwork that the animal has a behavioral or physical condition that will present special challenges for adoption (e.g. a description that the animal was surrendered for a serious behavior problem)? If so, is there information for adopters describing what steps have been taken to mitigate the problem, or other information that might encourage the animal to be considered for adoption?

Cage/kennel: what is the condition of the animal's environment? Is there evidence of illness, such as diarrhea or sneeze marks on the walls? Is it humane for the amount of time the animal has been held? If the animal has been in that kennel for more than one month, does it have enrichment equivalent to that expected in an adoptive home (e.g. room to stretch to full length, choice of hard and soft surfaces for resting, toys and access to human contact and exercise)?

Animal: Is there any evidence of illness or kennel stress? Is there anything about the animal's behavior or appearance that might deter adopters, such as a very dirty or matted hair coat or aggressive barking at by-passers? If so, what measures are being taken to alleviate or further evaluate these problems? A more extensive evaluation of each animal's physical and mental condition and adoptability should be made every two weeks. This should include taking the animal out of the kennel, running hands over the body to look for weight loss, sores or other physical problems, and reassessment of the animal's overall well being. Ideally animals should also be weighed every two weeks while in the shelter, as weight loss or gain is a common problem in long-term housed animals.