



Performance Audit of Orange County Animal Care

Final Report (#141505)

March 24, 2015

Office of the Performance Audit Director

County of Orange, California

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Office of the Performance Audit Director

333 W. Santa Ana Blvd., Santa Ana, CA 92701

March 24, 2015

Honorable Board of Supervisors:

Transmitted herewith is the performance audit report of Orange County Animal Care (OCAC). The main objective of this audit was to evaluate the operational performance of OCAC to determine whether management and staff are effective and efficient in accomplishing their business objectives.

Brian Rayburn, the lead auditor of this project, has spent several months reviewing policies and procedures, interviewing staff, analyzing data, and benchmarking and researching best practices to identify improvement opportunities for OCAC.

This audit report contains 34 audit recommendations that will enable OCAC to increase its operational efficiency and effectiveness by improving operating practices, restructuring its organization, and improving utilization of technology.

We would like to acknowledge and thank OCAC management and staff for their cooperation and assistance during this audit.

Respectfully submitted,

Philip Cheng
Performance Audit Director

cc: Michael B. Giancola, County Executive Officer
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I. Executive Summary

The Office of the Performance Audit Director has completed an audit of Orange County Animal Care (OCAC). The Board of Supervisors directed the Office of the Performance Audit Director to conduct this audit at its Board Meeting on June 10, 2014. The main objective of this audit was to evaluate the operational performance of OCAC to determine whether management and staff are effective and efficient in accomplishing their business objectives.

For years, OC Animal Care has been impacted by increasing demand for animal control and shelter services with limited resources, caused mainly by population growth within the County, an aging shelter, and vacant positions due to financial constraints of the County as well as Contract Cities. With dedicated employees and volunteers, OCAC has done a reasonable job coping with these financial and operational constraints, but more can be done.

The audit team conducted a detailed review and analysis of OCAC's operations, including the following audit procedures:

- Reviewed OCAC policies, procedures, and plans;
- Interviewed OCAC staff, supervisors, and managers;
- Conducted a survey of OCAC staff;
- Participated in Field Staff Ride-alongs; and
- Collected and analyzed financial and performance data.

This audit report contains 34 recommendations that will enhance OCAC's operational effectiveness and efficiency by improving operating practices, restructuring OCAC's organization, and improving utilization of technology. These recommendations include:

- Establishing scheduled visiting hours at the Shelter;
- Improving efficiency of the Canvassing Group;
- Developing new revenue opportunities;
- Enhancing the Volunteer Program; and
- Increasing training and development opportunities for staff.

The complete list of audit recommendations, as well as management responses thereto, can be found in Appendix A of this report.

The audit team would like to thank OCAC management and staff for their cooperation throughout this process.

II. Introduction

A. Audit Objectives

The main objective of this audit was to evaluate the operational performance of Orange County Animal Care (OCAC) to determine whether management and staff are effective and efficient in accomplishing their business objectives.

B. Scope of Work

The scope of this audit included the key activities of OCAC. OCAC is a division within Orange County Community Resources (OCCR) that provides services to 18 contract cities (“Contract Cities”), as well as the unincorporated areas of Orange County. Specific attention was given to OCAC’s finances including the collection, accounting, and use of revenue.

Our overall focus was to determine whether existing policies and practices allow OCAC to effectively and efficiently meet its stated mission:

Protect the public against health threats, provide refuge, medical care, and a second chance to homeless, unwanted, and abused pets, and protect animal rights of humane treatment.

C. Audit Methodology

This performance audit was conducted in accordance with generally accepted government auditing standards. Those standards require that auditors plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for findings and conclusions based on audit objectives. The audit team believes the evidence obtained in this audit provides a reasonable basis for its findings and conclusions.

To achieve the audit objectives, the audit team performed the following audit procedures:

- Reviewed OCAC policies, procedures, and plans;
- Interviewed OCAC staff, supervisors, and managers;
- Conducted a survey of OCAC staff;
- Participated in Field Staff Ride-alongs; and
- Collected and analyzed financial and performance data.

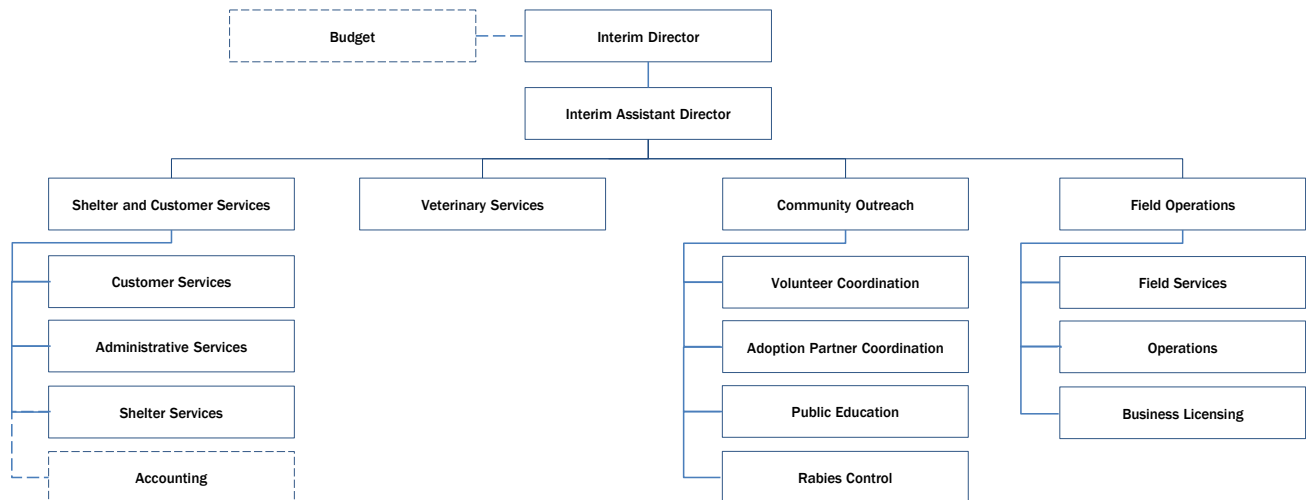
III. Background

OCAC is a division within OC Community Resources (OCCR) that provides services for 18 contract cities (“Contract Cities”), as well as the unincorporated areas of Orange County.¹ These services are funded through two primary sources: (1) user fees related to licenses, adoptions, and other services; and (2) direct “general fund” contributions from Contract Cities and the County.

For FY 2014, OCAC had 139 positions and total expenses of \$17.1 million. OCAC’s staff is organized into four main groups: (1) Shelter & Customer Services, (2) Community Outreach, (3) Field Operations, and (4) Veterinary Services.

A. Overview of Operations

Below is a high-level organizational chart for OCAC as of December 2014.



1. OCAC Management

OCAC Administration is currently made up of the following positions:

- Director (Interim)
- Assistant Director (Interim)

¹ A complete list of all animal shelters within Orange County and the communities that they serve can be found in Appendix B.

This group is responsible for general oversight of all OCAC operations. The Director serves as OCAC's primary liaison with each of the Contract Cities as well as the public. Subsequent to the start of this audit, the Director took another job outside the County. In November 2014, an Interim Director and an Interim Assistant Director were appointed by the Director of OCCR to provide leadership to OCAC.

2. Shelter and Customer Services

Shelter and Customer Services consists of the following units: Customer Services, Administrative Services, and Shelter Services.

Customer Services. This unit includes the Call Center and Licensing groups. For further discussion of OCAC's licensing activities, please see Section IV.D. Licensing.

Administrative Services. This unit includes the Canvassing program, which is discussed in detail in Section IV.C. Canvassing

Shelter Services. This unit coordinates all activities within the Shelter, including the care and feeding of animals that are housed at the Shelter. With respect to sheltering of animals the primary law governing OCAC is called the Hayden Act, which was passed by the California State Legislature and sets the baseline for how animals are to be treated in the State.² The Shelter and related operations are discussed in Section IV.A Shelter.

Accounting. This is an Auditor-Controller Satellite Team that reports directly to OCCR, but is out-stationed at OCAC.

3. Community Outreach

Community Outreach Team consists of the Volunteer Coordinator, Adoption Partner Coordinator, Public Education Officer, and the Rabies Control group.

Volunteer Coordinator. This position is responsible for coordinating OCAC's Volunteer Program, which is discussed in detail in Section IV.H. Volunteer Services.

Adoption Partner Coordinator. This position is responsible for working with 150-200 non-profit Adoption Partners (Rescue Groups).

² The Hayden Act states, "it is the policy of the state that no adoptable animal should be euthanized if it can be adopted into a suitable home" and "it is the policy of the state that no treatable animal should be euthanized." OCAC maintains detailed policies and procedures that govern all aspects of OCAC operations, including euthanasia.

Public Education Officer. This position is responsible for coordinating OCAC's education programs.

Rabies Control. This unit coordinates State required rabies control on behalf of all County residents.

4. Field Operations

Field Operations consists of the Field Services & Operations unit and the Business Licensing unit.

Field Services & Operations. This unit is responsible for all field activities and is discussed in significant detail in Section IV.B. Field Services. In addition to handling daily field operations, this group manages various programs on behalf of OCAC including Vicious Dog, Fleet Management, and the Call Center.

Business Licensing. The Business Licensing unit is responsible for annually inspecting all animal related businesses (pet shops, rescues, etc.) that operate within the County.

5. Veterinary Services

Subsequent to the start of this Audit, OCAC created the Chief of Veterinary Services position. This position reports to the Director of OCAC and is responsible for all aspects of day-to-day veterinary services operations, including the management of Veterinary Services staff. The reporting relationship of this newly created position is discussed in Section IV.A.4 Medical Oversight. In addition to county staff, OCAC utilizes contract veterinarians to help meet clinical demand.

6. Mandated and Non-Mandated Services

Most activities performed by OCAC in the areas of animal control and animal care are mandated by law. Those activities that are not explicitly mandated by law include Dead Animal Pick-up, Wildlife Response, Feral Cat Intake, Canvassing, Volunteer Coordination, Adoption Partners Coordination, and Public Education.

OC Animal Care is obligated to perform most of these "non-mandated" services per the Agreement for the Provision of OC Animal Care Services ("Agreement") that it has entered into with its contract cities. These duties include "impounding of deceased animals for disposal", "injured wildlife pick-up", "animal field canvassing to locate and license unlicensed animals", "public education", "volunteer services", and "rescue group coordination." The only non-mandated service that is not contractually obligated is Feral Cat Intake, as shown in the following table:

Mandated Services	Non-Mandated, Contract Services	Non-Mandated, Non-Contract Services
<ul style="list-style-type: none"> • Rabies Control • Emergency Response • Investigations • Shelter Services • Animal Licensing • Impounding and Retention of Stray Animals • Prompt Veterinary Care • Evaluation, Redemption, and Adoption of Animals • Euthanasia and Proper Disposal 	<ul style="list-style-type: none"> • Dead Animal Pick-up • Wildlife Response • Volunteer Coordination • Rescue Group Coordination • Public Education • Canvassing 	<ul style="list-style-type: none"> • Feral Cat Intake

While the contract requires the above-listed services (with the exception of Feral Cat Intake), it does not stipulate the level of services or the number of hours that must be dedicated to each. For example, below is the relevant contract language pertaining to the Canvassing Program:

The number of hours of canvassing provided to CITY by COUNTY will be prorated based on available canvassing hours and CITY percentage of costs of Animal Care Services received by CITY during the previous Fiscal Year. At sole discretion of COUNTY, COUNTY may provide canvassing services to cities that did not receive canvassing services in the previous Fiscal Year. COUNTY may change its methodology for allocating canvassing hours upon six (6) months prior notification to cities.

While the allocation methodology is specified (i.e., hours based on city’s percentage of costs), the total number of required hours is not established. It appears that OCAC could elect to scale back its Canvassing Program without needing to seek authorization from contract cities. The Canvassing Program is discussed in greater detail in Section IV.C.

7. Animal Rescue Groups

Rescue Groups receive frequent emails from OCAC regarding animals in need of rescue. They are able to adopt animals that have been designated as part of the shelter’s LIFE Program free of charge.³ Also, adoption fees are waived for dogs after 30 days and for cats after 3 days. By law, these organizations can take animals that OCAC cannot allow to be adopted by a private citizen.

Over the last three years, Rescue Groups adopted 6,552 animals from the Shelter. The total number of animals adopted by Rescue Groups increased significantly from 1,681 in FY 2012 to 2,451 in FY

³ Animals are selected for inclusion in the LIFE Program based on the following criteria: significant physical and/or medical conditions, significant behavioral issues, length of stay, and amount of medical treatment and services provided by OCAC.

2013. Between FY 2013 and FY 2014, the number of dogs adopted by Rescue Groups fell from 2,217 to 2,017, while the number of cats adopted increased from 189 to 258, as shown in the below chart.

Animals Adopted by Rescue Groups by FY

Animal Type	FY 2012	FY 2013	FY 2014	Total
Dogs	1,499	2,217	2,017	5,733
Cats	153	189	258	600
Others ⁴	29	45	145	219
Total	1,681	2,451	2,420	6,552

As shown in the table below, Rescue Groups adopted 32% (5,733) of all dogs adopted from OCAC over a 3-year period, including 29% of adopted dogs between the ages of 0 and 6 years and 64% of adopted dogs 7 years and older.

Dogs Adopted by Rescue Groups by Age

Age of Dog (Years)	Adopted	Adopted by Rescues	% Adopted by Rescues
0	3,582	568	16%
1	5,184	1,211	23%
2	3,322	1,218	37%
3	1,729	713	41%
4	965	414	43%
5	831	392	47%
6	549	251	46%
7	396	206	52%
8	468	275	59%
9	115	76	66%
10	297	222	75%
11	45	35	78%
12	94	73	78%
13	36	28	78%
14	15	12	80%
15	42	35	83%
16	3	3	100%
18	1	1	100%
Total (0-6)	16,162	4,767	29%
Total (7-18)	1,512	966	64%
Grand Total	17,674	5,733	32%

⁴ Includes lizards, birds, rabbits, and other types of animals.

The following table summarizes the top twenty breeds that were adopted by Rescue Groups between FY 2012 and FY 2014. By volume of adoptions, the top five breeds were: (1) Chihuahua, (2) Miniature Poodle, (3) Cairn Terrier, (4) Pit Bull, and (5) German Shepherd.

Animals Adopted by Rescue Groups by Breed

Breed	Adopted	Adopted by Rescues	% Adopted by Rescues
CHIHUAHUA SH	4,193	1,841	44%
POODLE MIN	1,401	489	35%
CAIRN TERRIER	1,251	364	29%
PIT BULL	1,302	283	22%
GERM SHEPHERD	752	200	27%
POMERANIAN	415	187	45%
SHIH TZU	368	146	40%
MIN PINSCHER	364	138	38%
DACHSHUND	614	137	22%
PARSON RUSS TER	429	134	31%
COCKER SPAN	460	133	29%
LHASA APSO	367	129	35%
LABRADOR RETR	700	126	18%
MALTESE	374	122	33%
YORKSHIRE TERR	296	100	34%
CHIHUAHUA LH	218	87	40%
SCHNAUZER MIN	269	86	32%
BEAGLE	206	57	28%
BOXER	255	50	20%
PEKINGESE	119	49	41%

8. Advisory Committees

There are two advisory committees that provide input/advice on various aspects of OCAC's operations: the Animal Care Community Outreach Committee (ACCOC) and the Finance/Operations Advisory Board (FOAB).

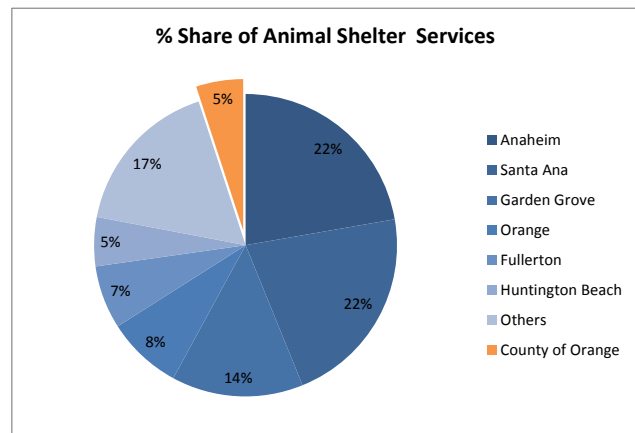
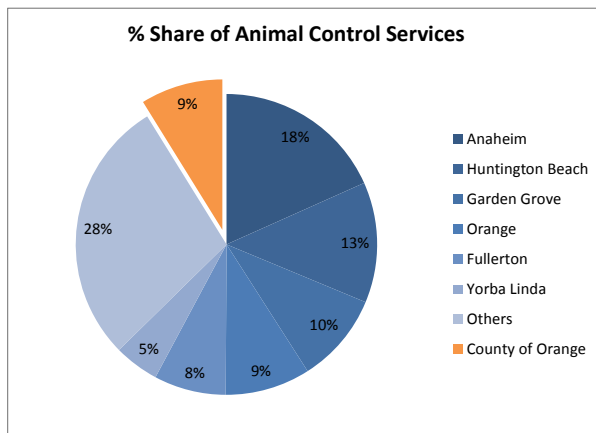
- **Animal Care Community Outreach Committee (ACCOC).** The ACCOC meets quarterly and is made up of five appointed members from each of the five supervisorial districts. The Board of Supervisors established the ACCOC in 1981 to facilitate citizen involvement in animal care and community outreach programs. The ACCOC is not required by any statute or regulation.
- **Finance/Operations Advisory Board (FOAB).** The FOAB meets monthly and is made up of seven representatives (six members appointed by the Orange County City Managers Association and one member appointed by County). The Agreements with contract cities

stipulate that the FOAB will advise the Director of OCAC on financial and operational matters and communicate with the Orange County City Managers Association. The FOAB serves in an informational/advisory capacity and does not formally approve actions.

B. Overview of Financials

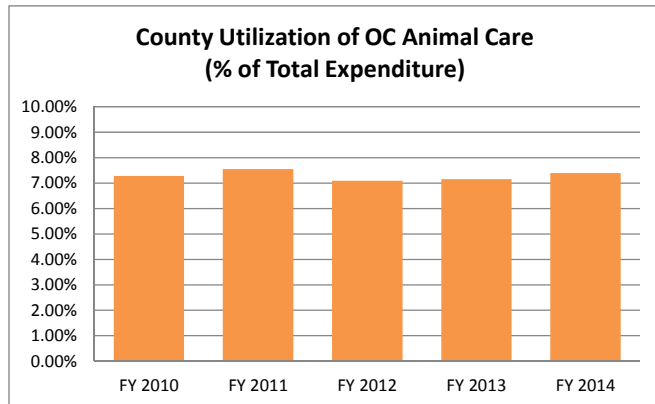
1. Utilization/Costs of OCAC Services

Below are summaries of utilization/costs before revenue offsets in FY 2014 for the County and the Contract Cities. OCAC service costs are split into two categories: Animal Control, which consists of primarily field and licensing activities; and Animal Care (or Animal Shelter), which consists of primarily shelter activities. As shown, the most significant users of Animal Control services are the cities of Anaheim, Huntington Beach, and Garden Grove; and the most significant users of Animal Shelter services are Anaheim, Santa Ana, and Garden Grove. The County's shares are 9% and 5%, respectively.



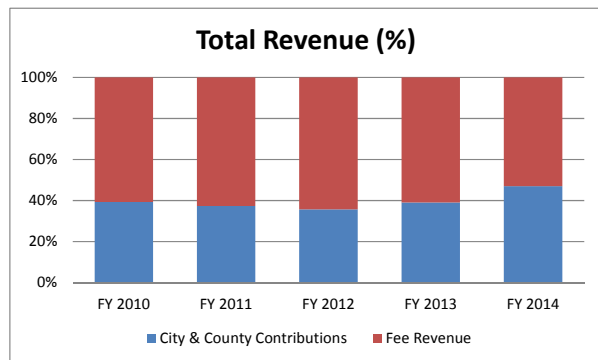
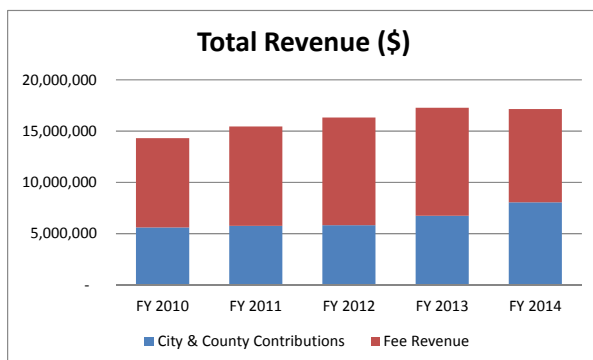
In overall utilization, the County ranked 6th, behind the cities of Anaheim, Garden Grove, Huntington Beach, Orange, and Santa Ana in FY 2014.⁵ Over the past five years, the County's relative shares of OCAC costs have stayed steady at approximately 7%.

City/County	Animal Control (\$)	Animal Shelter (\$)	Total	% of Total
Anaheim	\$1,969,252	\$1,420,657	\$3,389,909	19.8%
Garden Grove	\$1,040,664	\$897,727	\$1,938,391	11.3%
Huntington Beach	\$1,393,800	\$335,850	\$1,729,650	10.1%
Orange	\$982,240	\$515,906	\$1,498,146	8.7%
Santa Ana	-	\$1,379,154	\$1,379,154	8.0%
Orange County	\$948,785	\$320,526	\$1,269,311	7.4%
Fullerton	\$830,433	\$431,624	\$1,262,057	7.4%
Lake Forest	\$516,281	\$110,460	\$626,741	3.7%
Yorba Linda	\$518,923	\$99,606	\$618,529	3.6%
Tustin	\$375,373	\$164,732	\$540,105	3.2%
Fountain Valley	\$366,912	\$137,277	\$504,189	2.9%
Placentia	\$303,807	\$121,953	\$425,760	2.5%
Cypress	\$290,042	\$121,953	\$411,995	2.4%
Brea	\$271,891	\$67,681	\$339,572	2.0%
Rancho Santa Margarita	\$268,931	\$42,779	\$311,710	1.8%
San Juan Capistrano	\$245,588	\$51,080	\$296,668	1.7%
Stanton	\$154,090	\$117,484	\$271,574	1.6%
Laguna Hills	\$226,527	\$40,225	\$266,752	1.6%
Villa Park	\$51,244	\$8,300	\$59,544	0.3%
Total	\$10,754,783	\$6,384,974	\$17,139,757	100.0%



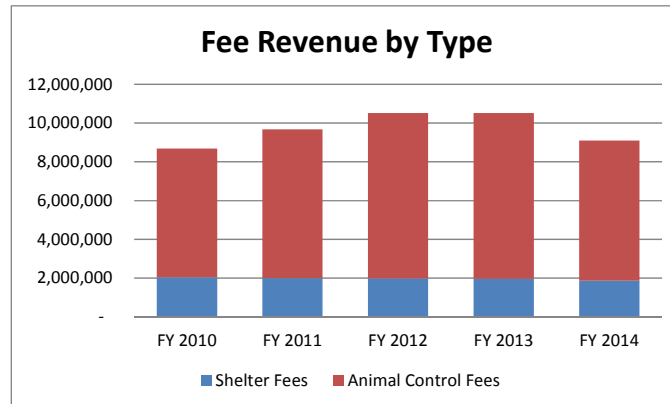
2. Revenues

OCAC's fee revenue represents approximately 60% of total expenditures, with the balance coming from general fund contributions from Contract Cities and the County.

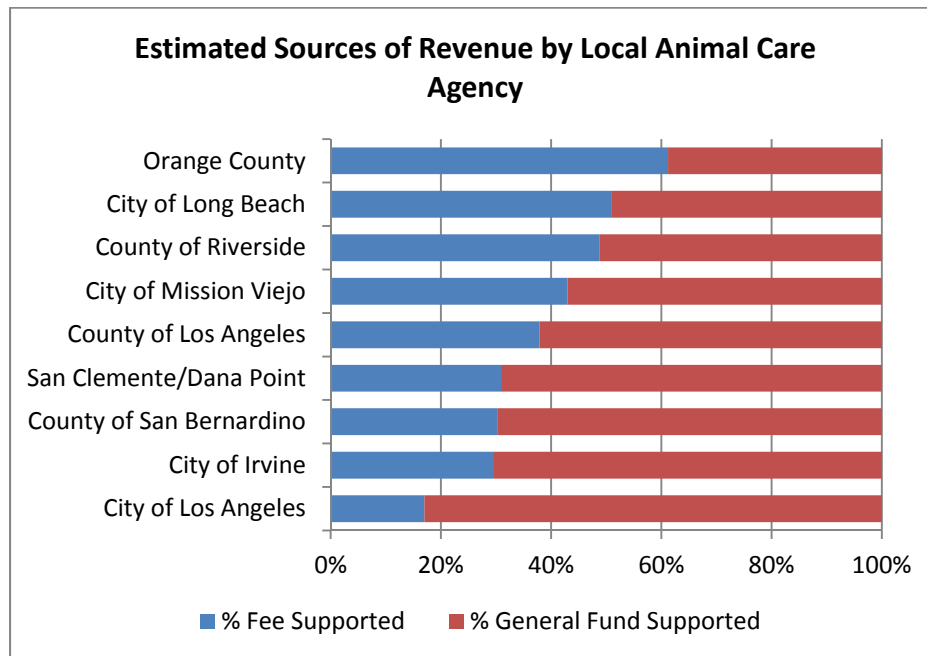


Between FY 2013 and FY 2014, there was a significant decrease in fee revenue, which required increased city and County contributions. While fees related to Shelter activities have been steady at approximately \$2 million per year, fees related to Animal Control activities have fluctuated over the past several years.

⁵ The City of Santa does not contract with OCAC for Animal Control Services.



In June 2014, the Board of Supervisors approved changes to OCAC’s fee schedule. The changes were projected to increase annual fee revenue by \$804,000. As part of that process, OCAC compiled data from local animal care agencies regarding what percentage of revenue came from fees and what percentage came from general fund contributions. At approximately 60% of cost recovery, OCAC received a larger portion of its revenue from fees than all the agencies that were surveyed by OCAC.⁶



⁶ Data were compiled by OC Animal Care as part of the FY 2013 Animal Care Services Fee Study. OCAC figures are estimated for FY 2015 and include the proposed fee increase, which was ultimately approved. Additionally, data for San Clemente/Dana Point are for calendar year 2013, while data for all other agencies are for FY 2013.

3. Expenditures

Below are estimates of the total costs for each of OCAC's programs. These figures were compiled by the Auditor-Controller as part of its FY 2013 Animal Care Services Fee Study. They include direct and indirect administrative and other expenses. As shown in the left table, Field & Special Services account for more than 50% of the Animal Control Expenses. On the Animal Shelter side, Clinic Services, Daily Feed and Care, and Placement Services make up the bulk of expenses.

Estimated Operating Expenditures by Program - FY 2013

Animal Control		Animal Shelter	
Field & Special Services	\$6,112,336	Clinic Services	\$1,735,805
Animal Licensing	\$1,346,826	Daily Feed and Care	\$1,504,806
Animal Pickup	\$976,091	Placement Services	\$1,318,712
Field Canvassing	\$938,339	Canine Sterilization Program	\$713,358
Rabies Control	\$530,601	Feline Sterilization Program	\$530,026
Facility Licensing	\$468,424	Euthanasia	\$338,524
Barking Dog Program	\$435,740	Public Education	\$326,897
Public Education	\$212,792	Total	\$6,468,128
Total	\$11,021,151		

IV. Audit Results

A. Animal Shelter

OCAC maintains the Orange County Animal Shelter in the City of Orange. This facility was built in 1941 and can house over 380 dogs, 300 cats, 50 rabbits, and many other types of animals. In 2013, over 35,000 animals came through the shelter, of which 8,653 were adopted (24%), 3,470 were returned to their owners (10%), 9,822 were euthanized (28%), and 7,022 were already deceased (20%). Approximately 6,000 animals (18%) were included in other categories, such as: Transfer to Rescue, Return to Wild, and Foster. Additionally, on-site veterinarians handle over 5,000 spay/neuter surgeries per year.

1. Financing for New Shelter

Relocation of the Animal Shelter has been discussed at the County for at least the last twenty years. In 1995, the Board of Supervisors set aside \$5 million⁷ for the relocation of the Animal Shelter and

⁷ \$5 million was set aside in Agency Fund 15S and could be used "to front the funds for design" and pay the County's share of debt service and move-in costs.

the County requested land from the MCAS Tustin Local Reuse Authority for a new animal shelter. The County was approved to receive four acres from the Department of the Navy once the Marine Base was formally closed.

During the FY 1999 Strategic Financial Plan process, two factors were given for why the County may need to relocate the shelter: (1) “The Animal Shelter is located adjacent to the Theo Lacy Branch Jail...[and c]ompletion of the fourth phase requires the Animal Shelter to be relocated in order to provide space for parking”, and (2) “the City of Orange has plans to extend Metropolitan Drive to improve access to the City Shopping Center which is currently being renovated...[and t]he Animal Shelter is located in the right-of-way that is required to extend the road.” At that time, there was no discussion of the condition of shelter as a reason to relocate it. The Strategic Financial Plan documentation can be found in Appendix C.

In 2007, the County’s Resources and Development Management Department (RDMD), which later became OC Public Works, compiled an estimate of \$23 million for the relocation and construction of a new animal shelter.

Currently, the County continues to work closely with the Department of the Navy to formally take ownership of the land once appropriate environmental due diligence is complete. At this time, there is no definitive date upon which the County will receive the land.

The current working assumption is that the County will negotiate an agreement with Contract Cities whereby the County will contribute the land and the balance of the original \$5 million⁸ and the Contract Cities make up the difference of the total cost of the relocation. Existing operating agreements with Contract Cities include the ability of either party to terminate the agreement with a six-month notice. To ensure that participants pay their fair share for the new facility, any long-term agreements related to the financing and construction of a new facility between contract cities and the County should be separate and distinct from the existing agreements. While the County has approached Contract Cities regarding such long-term agreements, Contract Cities have expressed reluctance to proceed with negotiations until the County officially receives the designated land.

Recommendation 1: OC Animal Care management should develop long-term financing agreements, separate from its existing operating agreements, with Contract Cities for the construction of any new animal shelter.

⁸ It is estimated that approximately \$600,000 of the original \$5 million has been spent on various planning and environmental activities.

2. Existing Shelter

Staffing and Capacity at the Shelter. A Consultation Report commissioned by OCAC that was completed in June 2014 found that based on the number of animals on-site at the time of its review (596), as well as industry standards for the minimum time needed to care for an animal⁹, “it would take 18 staff members cleaning/feeding for 8 hours daily to ensure basic care for each animal is provided,” or 144 hours daily. As of September 2014, OCAC scheduled Kennel Attendants and Supervising Kennel Attendants to work between 80 and 110 hours daily, which is 24%-44% below industry minimum standards.¹⁰

Recommendation 2: OC Animal Care management should periodically review kennel staffing levels and schedules to ensure that it meets industry standards.

Due to shelter capacity and staffing constraints, animals brought to the shelter to be surrendered by their owners may have to be turned away. Currently, OCAC tracks neither the number of days that owner surrenders are turned away due to shelter capacity issues nor the total number of animals that are turned away. However, there were 97 out of 353 non-holiday days in FY 2013 (27%) when no animals were surrendered to the Animal Shelter. Furthermore, over 70% of those days were in the months of July through November, which are some of the busiest months of the year. During the audit, the auditor observed OCAC staff turning away someone who came to the Shelter to surrender a dog.

Recommendation 3: OC Animal Care management should develop policies and procedures to allow for scheduled owner surrenders to better manage shelter capacity.

Disease at the Shelter. Between 2011 and 2013, the total number of dogs and cats that were euthanized declined significantly from 13,169 to 8,319 (37%). However, over this period, the relative number of animals that were euthanized for medical reasons increased from 29% to 33%. As shown in the following table, in 2013, only 48 animals (2 cats and 46 dogs) were euthanized for space or time, but 2,774 animals (2,329 cats and 445 dogs) were euthanized for medical reasons. Poor and crowded shelter conditions can contribute to the spread of disease and subsequent need to euthanize an animal.

⁹ As outlined by the Humane Society of the United States and the National Animal Care & Control Association, approximately 15 minutes per day are required to properly care for an animal housed at a shelter.

¹⁰ Percentages below minimum standards would be even higher if staff hours were adjusted for annual leave usage.

Euthanasia of Dogs and Cats by Reason

Euthanasia by Reason	2011	2012	2013
Space	155 (1%)	105 (1%)	1 (0%)
Time	2 (0%)	67 (1%)	47 (1%)
Medical	3,792 (29%)	3,170 (27%)	2,774 (33%)
Behavior	5,444 (41%)	4,699 (40%)	1,796 (22%)
Other*	3,776 (29%)	3,598 (31%)	3,701 (44%)
Total	13,169 (100%)	11,639 (100%)	8,319 (100%)

*Includes animals that were "Too Young" or not eligible for the Trap-Neuter-Return Program, but excludes owner-requested euthanasia.

Similarly, in FY 2014, 1,605 dogs and cats that were “normal” when they came into the shelter healthy were euthanized because of medical conditions or contagious diseases.¹¹

Recommendation 4: OC Animal Care management should track and report statistics related to capacity constraints and the spread of disease within the shelter on a routine basis.

Condition of the Shelter. The existing shelter facilities may be insufficient to meet existing demand for animal care services.

As discussed in the Background section, the cost and time required to build a new shelter and relocate operations to the new facility will be significant. Discussions regarding the construction of a new shelter have been ongoing for at least twenty years. The Board of Supervisors set aside \$5 million for the relocation of the shelter in 1995. Since that time, the Shelter Facility has not undergone any significant modifications.

There have been several consultation reports regarding the Shelter Facility. In 2008, a report was prepared by the UC Davis Koret Shelter Medicine Program that contained the following recommendation:

It is recommended that the shelter repair, replace, and/or renovate dog runs so that all runs are double-sided with fully functional dividing doors, and all dogs can be placed on one side of their runs while the other side is cleaned.

A follow-up review consultation report was prepared jointly by JVR Shelter Strategies and the UC Davis Koret Shelter Medicine Program in June 2014 (June 2014 Consultation Report). Select observations and recommendations regarding the housing of animals are listed below:

¹¹ Some animals could be mislabeled as “Normal” in OCAC’s Chameleon System for various reasons including data entry errors, delayed symptoms, and inaccurate initial evaluations by staff.

Dog Housings

- *Observations*
 - *Dog Kennels are not truly double-sided compartments as guillotine doors are mostly non-functional.*
 - *The back panel of dog kennels is made of wood.*
- *Recommendations*
 - *Replace/repair guillotine doors.*
 - *Ensure that all kennel materials are completely disinfectable - Replace back wooden panels of kennels with non-porous materials.*
 - *Eventually, a new facility should be built to accommodate the animal population. Current housing does not meet the guidelines for other aspects that were not within the scope of this consultation. Appropriate housing units with proper drainage and safe materials are a necessary aspect of maintaining the health of the population.*

Individual Cat Housings

- *Observations*
 - *Cat housing dimensions are currently too small to allow cats to express normal behaviors.*
 - *Cat housing areas are poorly ventilated.*
- *Recommendations*
 - *Ensure there is adequate airflow through cat housing areas.*
 - *Create portholes between cages to provide more space for each cat.*

The entire report can be viewed in Appendix D.

In addition to reviewing the consultation reports, the audit team observed the current condition of the shelter in order to validate the findings and recommendations of those reports. Below is photographic documentation of certain observable issues with the condition of the kennels.

Example of non-functioning kennel due to broken door.



Examples of substantial rust and other damage on front kennel doors.

As detailed in the Background section, Contract Cities and the County share the cost of facility maintenance in amounts proportional to their utilization of the shelter. The County's direct cost for any shelter improvements is approximately 5% of the aggregate cost. For example, \$200,000 of site improvements would cost the County approximately \$10,000.

As summarized above, based on the recommendations of trained experts and qualified medical personnel, OCAC should consider certain immediate steps to improve the shelter facility. Because there is no concrete timeframe for the development of a new shelter, and because construction of a new shelter could take up to 24 months once construction begins, OCAC should proceed with deferred maintenance projects that are deemed essential (e.g., repair/replace all non-functional or dangerous kennel doors and improve ventilation of cat housing by retrofitting or replacing the existing modular structure).

Recommendation 5: OC Animal Care management should develop a short-term plan in collaboration with Contract Cities to complete critical maintenance projects, including repairs/replacement of the dog kennel doors and retrofit/replacement of the existing cat housing.

3. Operating Hours

The OC Animal Shelter is open seven days a week from 10:00 AM to 5:00 PM, with extended hours on Wednesday from 10:00 AM to 7:00 PM (51 hours per week). The nearby county-operated animal shelters are open for fewer hours per week than the OC Animal Shelter:

- San Diego County's three shelters are open Tuesday through Saturday from 9:30 AM to 5:30 PM (40 hours per week; 22% less than the OC Animal Shelter).
- Riverside County's West Riverside Animal Shelter is open Monday through Friday from 11:00 AM to 6:00 PM and Saturday from 11:00 AM to 5:00 PM (41 hours per week, 20% less than the OC Animal Shelter).
- Los Angeles County's shelters are open Monday through Thursday from 12:00 PM to 7:00 PM and Friday through Sunday from 10:00 AM to 5:00 PM (49 hours per week; 4% less than the OC Animal Shelter).

During visiting hours at the OC Animal Shelter, the public is able to visit with animals and potentially initiate the adoption process. Currently, there are no established visiting hours at the OC Animal Shelter. Instead, visiting hours occur only when staff can make time. Frequently, the public is unable to visit with animals for all or portions of the day. Some other shelters within Orange County post when the public can visit with animals and initiate an adoption. For example, the City of Irvine Shelter's policy is that people should "arrive at least two hours before closing in order to visit with adoptable animals" and that "adoptions stop one hour prior to closing."

Recommendation 6: OC Animal Care management should establish daily visiting hours for a single, continuous period of time, and post those hours at the entrance to the Shelter and on its website.

If necessary, OCAC should (1) cross train certain staff and/or volunteers to assist with visits, and/or (2) modify the hours that the shelter is open in order to allow for more dedicated time to care for the animals and ensure that visiting hours are more constant.

4. Medical Oversight

According to the "Guidelines for Standards of Care in Animal Shelters" authored by the Association of Shelter Veterinarians: "in cases where animal welfare could be compromised, a veterinarian's decision should not be overridden. Supervision and accountability for all staff and volunteers are essential to ensure that policies and protocols guide daily activity."

OCAC recently recruited a Chief of Veterinary Services. The position is one of four direct reports to the Director of OCAC. As a result of this reporting structure¹², the Chief of Veterinary Services does not have the explicit authority to direct staff in other units, such as Kennel Attendants or Animal Control Officers to do what is in the best interest of the animals. Without cooperation from the Administrative Managers in charge of these divisions, a directive given by the Chief of Veterinary Services would not necessarily have to be followed.

¹² In November 2014, the Director of Veterinary Services was appointed Interim Director of OC Animal Care.

Recommendation 7: OC Animal Care management should expand the authority of the Chief of Veterinary Services to include oversight of all medical aspects of OCAC operations by combining the position with either the Director of OC Animal Care position or the recently created Assistant Director of OC Animal Care position.

5. Availability of Animals

Currently, only animals that have been spayed/neutered are available to the public for visits and potential adoption. As a result, people may be unable to adopt the animals that they are interested in, which may result in them going elsewhere or not adopting at all. There have been cases where members of the public visit the OC Animal Shelter over a period of several days in an attempt to adopt a particular animal without ever receiving definitive information regarding when that particular animal might become adoptable.

Adoptable animals that have met the retention requirement should be made available to the public immediately, regardless of whether they have been spayed or neutered.

As an example, the County of Los Angeles' Department of Animal Care and Control has the following policy:

Available animals that are already spayed or neutered may be adopted that day. If an available animal has not yet been spayed or neutered, the animal care center is required to perform the surgery before the animal goes home. In these cases, you will be required to complete your adoption paperwork and pay all fees, and then return after the surgery is completed. In most cases the surgery is performed the next day but sometimes it may take a day or two longer, particularly if there are weekends or holidays involved.

Recommendation 8: OC Animal Care management should establish a policy to allow the public to begin the process of adopting an animal prior to that animal being spayed or neutered.

Recommendation 9: OC Animal Care management should establish a policy that prioritizes which animals get spayed/neutered and makes adopted animals a high priority.

B. Field Services

Field Services provides 24-hour animal control services for all Contract Cities except Santa Ana, as well as the unincorporated areas of Orange County. The services provided by this group include:

- Providing public health protection against communicable animal diseases, including rabies control;
- Ensuring the safety and well-being of animals;
- Enforcing local, State, and Federal laws, including leash and nuisance laws;
- Transporting injured animals for emergency treatment when an owner is unavailable;
- Providing humane euthanasia of seriously injured animals when an owner is unavailable;
- Educating the public on responsible pet ownership;
- Protecting the public from aggressive and suspected rabid animals;
- Working collaboratively with other shelters, agencies, and local law enforcement;
- Impounding stray or injured animals when an owner cannot be located;
- Conducting investigations of animal cruelty and neglect;
- Quarantining animals involved in bite incidents; and
- Issuing dog licenses and voluntary cat licensing.

In 2013, Field Services performed 59,873 “field actions” including 5,346 bite investigations, 4,732 wild animal calls, 8,012 dead animal pick-ups, and 18,858 stray animal calls.

Field Services is overseen by an Administrative Manager I and consists of one Chief of Field Services, five Supervising Animal Control Officers, ten Senior Animal Control Officers, thirty-one Animal Control Officers (ACOs), seven Dispatch Services Operators, and one Staff Specialist. Officers are assigned to one or more of six geographic zones within the County and respond to calls within those zones based on established priorities. For example, lower priority calls (e.g., dead animal pick-up) may not be handled for several days. The response priority levels for specific calls are set by the Field Services Dispatch Unit using the schedule below and utilized by Animal Control Officers in the field to prioritize their responses.

Priority 1	<ul style="list-style-type: none"> • Rabid Animals • Biting Animals that are Stray at Large • Stray Aggressive animals • Confined animals that have become aggressive • Mountain Lion (4-1-94), affecting public safety • Dogs on school property • Vicious or Dangerous Animals, affecting public safety • Snakes inside residence/building, on school grounds at any time, at a public playground area at any time, or when posing a threat to public safety
Priority 2	<ul style="list-style-type: none"> • Stray Roam Animals causing a traffic hazard • Sick or Injured Animals • 597s (Animal Cruelty/Neglect)
Priority 3	<ul style="list-style-type: none"> • Animals in the custody of an outside agency • Agency Assists
Priority 4	<ul style="list-style-type: none"> • Confined/Trapped/Tied Animals (non-aggressive) • Bite Reports • 597 Follow-up

Priority 5	<ul style="list-style-type: none"> • Routine Stray Roam animals • Owner Surrenders (higher priority if a biting animal) • Citizen Assists • Routine DVD (the attacking animal is no longer stray) • Investigate License
Priority 6	<ul style="list-style-type: none"> • All Others (i.e., kennel violations, follow-ups, etc.) • Dead Animals

As of November 2014, 9 of 56 positions (16%) within Field Services were vacant, including 8 of 31 Animal Control Officers (26%). This high vacancy rate can be attributed to several factors: (1) positions were kept vacant over the last couple fiscal years in order to keep expenditures down, and (2) the hiring/training process is extremely long.

With such understaffing, Animal Control Officers must patrol more than one service area during their shift. In the past, there were eight officers and two supervisors in the field; currently, there might be four officers in the field, including one supervisor. As shown in the table below, estimated Field Services hours have declined over the last several years by approximately 15%.

Field Service Labor Hours¹³

FY	Labor Hours	Annual Change
2010	91,748	-
2011	82,206	-10.4%
2012	81,464	-0.9%
2013	82,616	1.4%
2014	77,897	-5.7%

Given limited hours, management and staff should focus on effectively and efficiently responding to calls. Management and staff do not maintain and track performance targets for response times; therefore, it is difficult to monitor overall performance and take steps to improve performance.

Recommendation 10: OC Animal Care management should establish response time goals for all call priorities.

As shown in the following table, over 65% of field actions were for low priority calls.

¹³ Includes Labor Hours for Budget Control 012-3201 for the following job numbers: CZ3208A0 (Animal Control Public Education), CZ325800 (Rabies Control), CZ327800 (Field Services – Animal Pick-up), and CZ328800 (Animal Control – Field & Special Services). A small number of these hours may be attributable to non-Field Services staff.

Completed Field Actions by Priority (excluded "Unable to Make")

Priority	FY 2012	FY 2013	FY 2014	Total	% of Total
1	1,741	1,883	1,653	5,277	3%
2	17,079	18,136	16,074	51,289	29%
3	1,282	1,497	1,384	4,163	2%
4	148	259	892	1,299	1%
5	36,523	38,516	32,113	107,152	60%
6	2,829	2,729	2,991	8,549	5%
Total	59,602	63,020	55,107	177,729	100%

ACOs spend a significant amount of time on calls that could be handled by other staff. As a result, operational response times suffer.

Another way to evaluate responsiveness is to look at the number of calls that could not be completed in a given shift. These calls were labeled "UTM" or "Unable to Make." Between FY 2012 and FY 2014, the total number of UTMs increased from 25% to 39% of all actions.

Action Result	FY 2012	FY 2013	FY 2014	Total
Unable to Make	19,753 (25%)	28,624 (31%)	35,625 (39%)	84,002 (32%)
Other Action Result	59,602 (75%)	63,020 (69%)	55,107 (61%)	177,729 (68%)
Total Actions	79,355 (100%)	91,644 (100%)	90,732 (100%)	261,731 (100%)

The following are two case studies that evaluate two types of low priority calls: License investigations (Priority 5) and Dead Animal Pick Up (Priority 6). As shown in the table, 18% of the 177,729 field actions completed over the last three fiscal years were for either (1) Dead Animal Pick Up or (2) License Investigation.

Activity Description	FY 2012	FY 2013	FY 2014	Total
DEAD ANIMAL PICK UP	8,138 (14%)	8,279 (13%)	7,522 (14%)	23,939 (13%)
INVESTIGATE LICENSE	2,969 (5%)	3,511 (6%)	2,086 (4%)	8,566 (5%)
ALL OTHER	48,495 (81%)	51,230 (81%)	45,499 (83%)	145,224 (82%)
TOTAL	59,602 (100%)	63,020 (100%)	55,107 (100%)	177,729 (100%)

CASE STUDY: LICENSE INVESTIGATION (PRIORITY 5)

For 70% of the 8,566 Investigate License actions, the assigned ACO left a door tag that states the following: "Animal Control Officer from Orange County called at your residence today in regards to: Failure to Obtain a Dog License. OCCO 4-1-70." In less than 8% of cases was an ACO actually able to issue a new license. In one particular case, 86 door tags were left at a residence over an eight-month period, or 2.6 door tags per week.

Activity Description	FY 2012	FY 2013	FY 2014	Total
Door Tag	1,923 (65%)	2,609 (74%)	1,481 (71%)	6,013 (70%)
License Issued or Renewed	315 (11%)	224 (6%)	130 (6%)	669 (8%)
All Other	731 (25%)	678 (19%)	475 (23%)	1,884 (22%)
TOTAL	2,969 (100%)	3,511 (100%)	2,086 (100%)	8,566 (100%)

Animal Control Services Representatives in the Canvassing Unit are trained and qualified to respond to calls for license investigations. More information on the Canvassing Unit can be found in Section IV.C Canvassing.

CASE STUDY: DEAD ANIMAL PICK UP (PRIORITY 6)

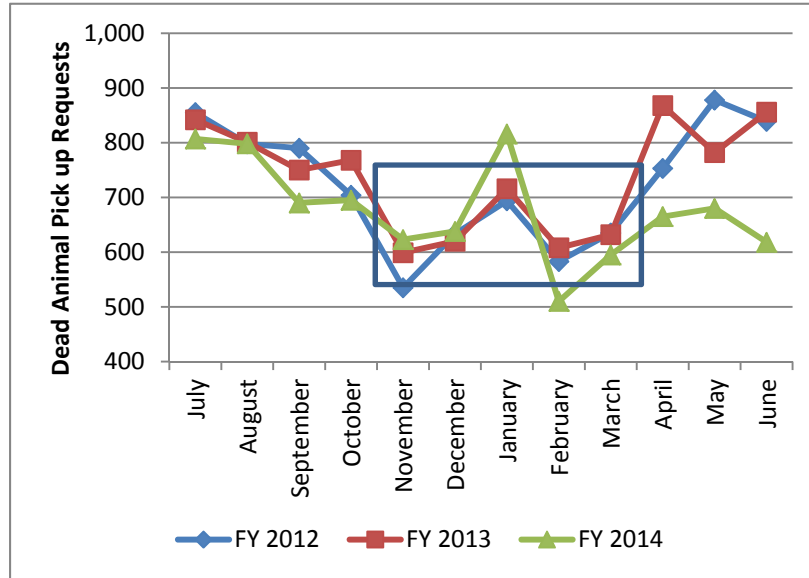
OCAC has poor response times when it comes to Dead Animal Pick Up. Staffing and resource issues have significantly impacted the ability of Field Services to address low priority calls such as Dead Animal Pick Ups.

In the past three years, the total number of “Unable to Make” actions for Deal Animal Pick Up calls increased by over 100% from 5,544 to 11,217 per year.

Action Result	FY 2012	FY 2013	FY 2014	Total
Unable to Make	5,544 (41%)	8,250 (50%)	11,217 (60%)	25,011 (51%)
Other Action Result	8,138 (59%)	8,279 (50%)	7,522 (40%)	23,939 (49%)
Total Actions	13,682 (100%)	16,529 (100%)	18,739 (100%)	48,950 (100%)

Additionally, there appear to be significant fluctuations in the number of new Dead Animal Pick Up requests. As shown in the chart and table below, there are significantly fewer requests for Dead Animal Pick Ups from November to March (“low season”) than from April to October (“high season”). Over the last three fiscal years, there were 23% more new requests for dead animal pick-up each month during the “high season” than there were during the “low season,” which equates to 144 more requests each month.

Chart: Dead Animal Pick-up Requests by Month



	New Dead Animal Pickup Requests (monthly average)
Low Season (Nov. - March)	629
High Season (Apr. - Oct.)	773

Given that staffing levels at OCAC are generally flat throughout the year, seasonal increases in the number of new calls can negatively impact response times. Subsequent to the start of this audit, the Director of OCAC authorized the use of extra help staff to assist in reducing the backlog of uncollected dead animals and improving response times during some of the “high season” months.

Recommendation 11: OC Animal Care management should direct the Canvassing Unit to handle licensing checks on behalf of the Field Services group, when appropriate.

Recommendation 12: OC Animal Care management should formalize the use of seasonal staff or other staff resources to handle the increased volume of new dead animal pick up requests during specific high-volume months of the year.

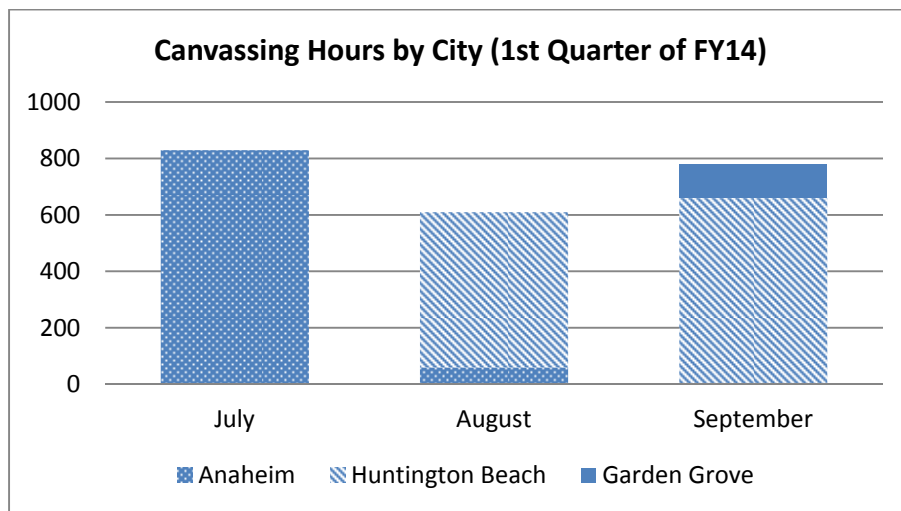
Recommendation 13: OC Animal Care management should evaluate whether any other field activities could be completed by other staff or by other means (e.g., over the phone) and, if appropriate, modify the relevant policies and procedures.

C. Canvassing

The Canvassing Unit, which is part of Administrative Services, consists of 12 Animal Control Services Representative (ACSR) positions including two part-time positions. Hours spent annually in each city are based on usage/fees paid. OCAC budgets approximately 15,000 hours per year for canvassing, but this number can fluctuate based on staffing; cities are guaranteed a percentage of available hours but not guaranteed an actual number of hours.

Total Canvassing Hours	
FY 2010	11,826
FY 2011	9,463
FY 2012	13,102
FY 2013	12,820
FY 2014	12,648

The ACSR’s canvass all residents rather than only residents with pets or those with delinquent animal licenses. OCAC does not utilize any information available through the Chameleon system when determining how to allocate Canvassing resources. Based on the FY 2013 Fee Study, the Canvassing Program cost \$938,339, or \$65.98 per labor hour.¹⁴ The entire Canvassing Unit can spend several months of the year in a few cities rather than target areas with delinquent licenses. For example, during the first quarter of FY 2014, canvassers only visited three cities.



¹⁴ This total is based on labor hours and S&EB costs from FY2011. Between FY 2011 and FY 2013, labor hours for Field Canvassing (job number: CZ322800) increased by 33% from 14,186 to 18,880. As such, the annual cost of this program is likely well in excess of \$1 million. Total labor hours for the Canvassing Unit include hours spent canvassing as well as hours spent on non-canvassing and administrative activities.

According to OCAC, canvassers' goals are to visit 100 houses per day and issue five licenses. Canvassers only work Monday through Thursday from 7:00 AM to 5:30 PM. Since these are typical work hours, it is likely the case that people are not home.

Using productivity data provided by OCAC, it appears that the Canvassing Program does not fully recover its cost. In FY 2012, the Canvassing Program recovered an estimated 73% of its total cost.

Canvassing Productivity - FY 2012

Total Revenue	\$665,612
Total Direct Expenditure (CZ322800)	\$689,620
Estimated Indirect Expenditure	33%
Estimated total annual cost of canvassing program	\$915,871
Estimated Direct Cost Recovery of Canvassing Program	97%
Estimated Total Cost Recovery of Canvassing Program	73%

While this analysis may be an oversimplification¹⁵, available data was insufficient to conclude that the program is highly effective. Subsequent to the start of this audit, OCAC initiated steps to have the Canvassing Group begin utilizing Chameleon for certain aspects of its operation, including gathering productivity data. The following case study looks at program activities in greater detail.

Case Study: Canvassing in June 2014

In June 2014, the Canvassing Unit visited a total of 7,774 residences. There was no one home at 80% of the households. The Canvassing Program encountered 3,610 dogs, of which 69% had valid licenses, 16% had delinquent licenses, and 15% had no license or a license that was due for renewal but not yet delinquent. A subset of this latter group would represent potential "new dog" licenses. However, the actual number of "new dog" licenses that could be issued is not currently tracked, but would likely be significantly lower than 533, as listed below.

¹⁵ This analysis does not account for certain factors including (1) that some revenue generated by the Canvassing Unit would likely be gathered by other means such as direct mail, and (2) that one interaction could result in revenue collection for multiple years over the course of a particular cycle.

# of Residences with No One Home	6,218	80.0%
Total # of Residences Visited	7,774	100.0%

# of Licensed Dogs (or Dogs with Licenses)	2,500	69%
# of Dogs with Delinquent Licenses (<i>Notice to Obtain</i> ¹⁶)	577	16%
# of New Dogs without Licenses or Dogs with licenses that are due but not yet delinquent (<i>Notice to Comply</i> ¹⁷)	533	15%
Total # of Dogs	3,610	100%

Recommendation 14: OC Animal Care management should develop approaches to enhance the cost effectiveness of the canvassing program by utilizing Chameleon.

Recommendation 15: OC Animal Care management should make the following modifications to the Canvassing Unit: (1) Move the Canvassing Unit from Administrative Services to Field Services, (2) Direct canvassing staff to handle all license checks, when appropriate, and (3) Schedule canvassers seven days a week.

D. Licensing

1. Multi-year Animal Licenses

OCAC only offers one-year animal licenses. Some neighboring agencies including the County of San Diego, which provides services to six contract cities, and the City of Irvine allow for the purchase of multi-year licenses.

Based on Orange County Ordinance Section 4-1-70, “an owner may purchase a license for six (6) or twelve (12) months, depending upon the date and kind of [rabies] vaccine used, upon payment of the fee established by resolution of the Board of Supervisors.” The above language was adopted in 1975 and has not been modified since then.

Based on California State Code, local governments have the authority to issue licenses for up to three years for dogs that are 12 months or older and have appropriate vaccinations.

(g) In addition to the authority provided in subdivision (a), the ordinance of the responsible city, city and county, or county may provide for the issuance of a license for

¹⁶ Notice to Obtain –notice to complete licensing for dogs with Chameleon records that are delinquent.

¹⁷ Notice to Comply –notice to complete licensing for (1) new dogs with no previous Chameleon records or (2) dogs with Chameleon records that are due for renewal and not yet delinquent.

a period not to exceed three years for dogs that have attained the age of 12 months or older and have been vaccinated against rabies or one year for dogs exempted from the vaccination requirement pursuant to subdivision (b). The person to whom the license is issued pursuant to this subdivision may choose a license period as established by the governing body of up to one, two, or three years. However, when issuing a license pursuant to this subdivision, the license period shall not extend beyond the remaining period of validity for the current rabies vaccination and, if a dog is exempted from the vaccination requirement pursuant to subdivision (b), the license period shall not extend beyond one year. A dog owner who complies with this subdivision shall be deemed to have complied with the requirements of subdivision (a).¹⁸

As of December 31, 2013, there were a total of 161,140 dog and cat licenses. OCAC would likely save money by offering pet owners the ability to purchase multi-year licenses.

Based on its currently policy of issuing 12-month licenses, OCAC would have to process 483,420 licenses over three years assuming annual licenses remain constant (Scenario 1). If 20% of owners purchased 3-year licenses rather than 1-year licenses, OCAC would process 64,456 fewer licenses over this period, which would be a reduction of 13.3% (Scenario 2). The Licensing Group estimates that it sends out approximately 35,000 pieces of mail monthly, or 1.26 million pieces of mail over three years. For illustrative purposes, a 13.3% reduction in the number of licenses to be processed would eliminate the need to send 168,000 pieces of mail every three years.

	1-year / 3-year	Year 1	Year 2	Year 3	3-year total
Scenario 1	100% / 0%	161,140	161,140	161,140	483,420
Scenario 2	80% / 20%	161,140	128,912	128,912	418,964
Savings (#)		-	32,228	32,228	64,456
Savings (%)		0.0%	20.0%	20.0%	13.3%

To put this potential savings in perspective, over the last three fiscal years, the OCAC Licensing group spent an average of \$160,000 annually on postage alone plus an additional \$94,000 annually on related printing and processing services (not including staff costs).

¹⁸ California Health and Safety Code §121690

Recommendation 16: OC Animal Care management should investigate the impact of issuing multi-year licenses for up to three years and, if appropriate, work with County Counsel to develop revised language to Orange County Ordinance Section 4-1-70 and present those revisions to the Board of Supervisors for its consideration.

In order to properly account for this revenue, OCAC could make accounting adjustments so that revenue from future year license payments is not immediately recognized. Additionally, OCAC could craft its refund policy so that future license payments are non-refundable, since this option would be voluntary and could be seen as a logistical benefit to the customer.

2. Cat Licenses

Unlike licensing of dogs, licensing of cats is not required by State law or County ordinance. Sec. 4-1-85 of the Orange County Ordinance summarizes the requirements and process for obtaining a cat license:

*The owner of any cat may, upon submission of proof of rabies vaccination, certified to by a licensed veterinarian, and upon payment of the fee established by resolution of the Board of Supervisors, be issued a license certificate and tag. No person shall remove a registration tag from a cat without the consent of the owner thereof. Licensing shall be valid for the period of the rabies vaccination. **The obtaining of such a license shall be optional on the part of the owner, except as provided in section 4-1-76.***

OCAC estimates that as of December 31, 2013, there were 371,095 cats living in households within its service area. Of this number, only 439 were licensed, which represents a license rate of 0.12%.

There are several examples of California counties with significant populations of licensed cats. In 2012, four California counties had significant numbers of cat licenses: Alameda (10,533), Los Angeles (27,553), Sacramento (8,596), and Santa Clara (19,192).

In 2013, cats represented 11,351 of 26,444 live animals¹⁹ (42.9%) that were impounded at OCAC's shelter. Additionally, cats represented 6,886 of 9,822 (70%) animals that were euthanized by OCAC in 2013. **Only 202 (1.8%) impounded cats were returned to their owner.** Currently, voluntary cat licenses can be obtained at a cost of \$6.00 annually.

Since most cats in the County are neither microchipped nor licensed, it is extremely difficult to reunite lost cats with their owners. Since many cats are considered "outside pets," it may take many days for an owner to realize that his or her cat is missing. Given this delay, there is the potential that a cat could be impounded and euthanized before the owner realizes that it is missing.

¹⁹ Excludes OWNER REQUESTED EUTHANASIA and DECEASED ANIMAL IMPOUND.

Of the 11,351 live cats that were impounded, 17.1% (1,941) were adopted and 1.8% (202) were returned to their owners. The expenses related to the impoundment of the remaining 80% of cats have no corresponding fee revenue from cat owners. The vast majority of this cost is funded through (1) general fund contributions from Contract Cities and the County, and (2) fee revenue paid by dog owners.

The approximate annual revenue collected from cat licensing fees totaled \$2,634 (439 x \$6.00) in 2013, based on a “compliance rate” of 0.12%. By comparison, the overall “compliance rate” for dogs is 45.4%. If OCAC was able to increase compliance from 0.12% (439) to 15% (55,664), it could generate approximately \$334,000. If the annual license fee was increased to a rate equal to that of dog licenses (\$27), the additional revenue would equal \$1.5 million.

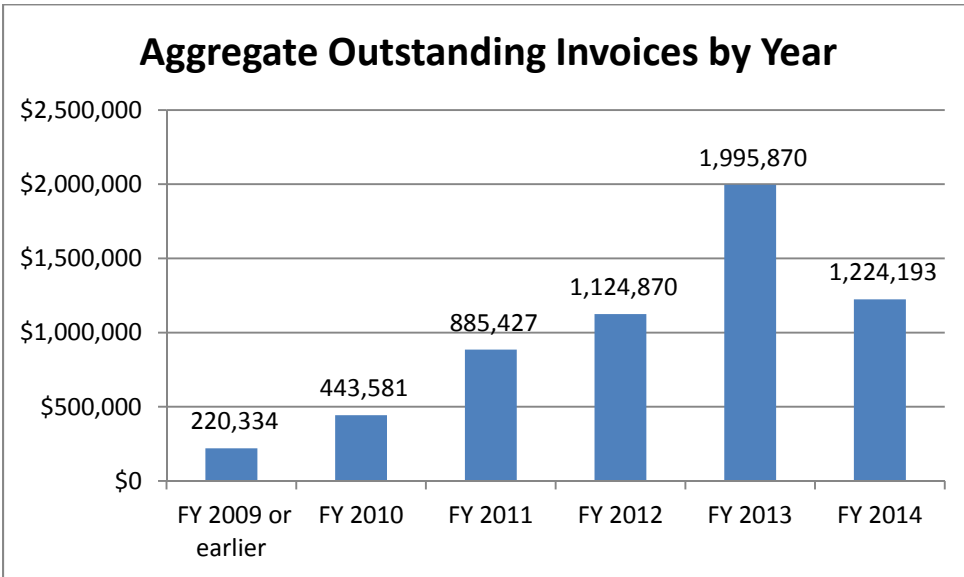
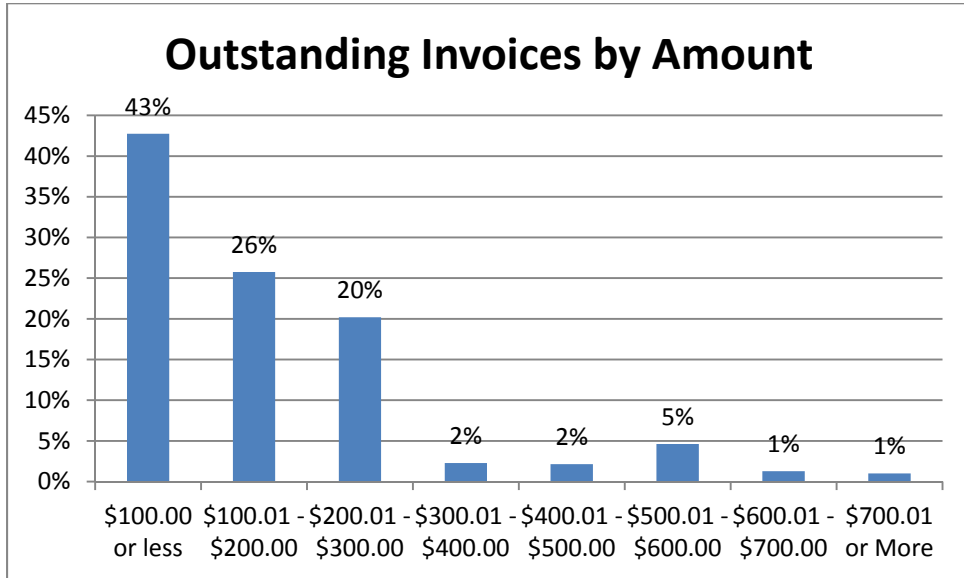
Recommendation 17: OC Animal Care management should work with County Counsel to develop revisions to Orange County Ordinance Section 4-1-85 to require that all domestic cats within the County of Orange be licensed and present those revisions to the Board of Supervisors for its consideration.

E. Collections

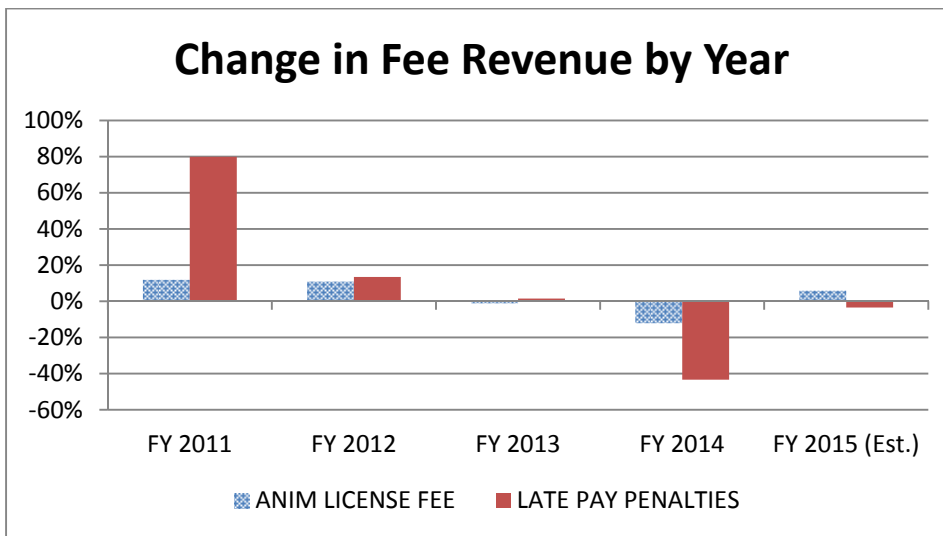
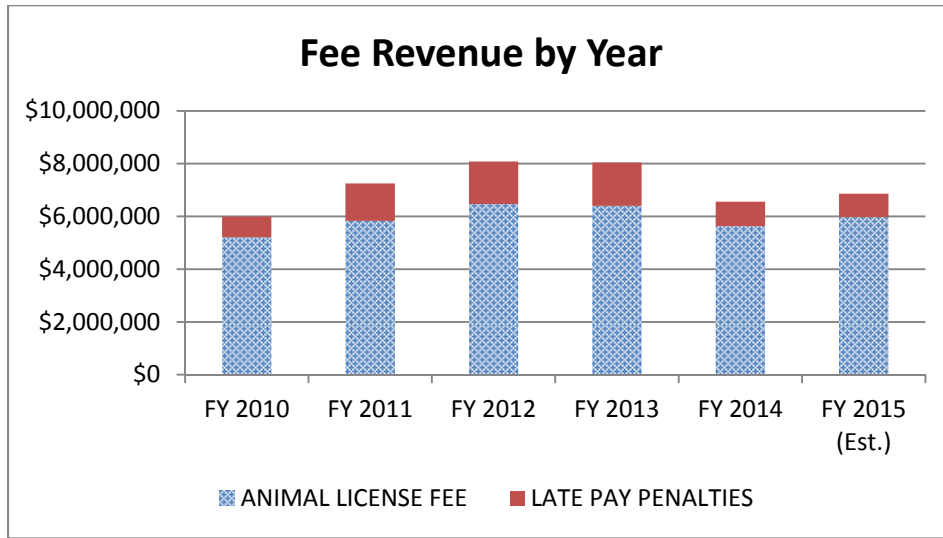
OCAC relies on the Treasurer-Tax Collector (TTC) for collections services and spends a significant amount of money trying to collect delinquent accounts. All overdue invoices are sent to TTC for follow-up (approximately 600 per month). However, OCAC does not evaluate the effectiveness of collections nor does it have formal policies/guidelines regarding the extent to which TTC should attempt to collect. OCAC’s TTC charges have increased by more than 300% between FY 2012 and FY 2014 to \$483,887.

TTC provides monthly updates on the aggregate amount collected but does not directly report the corresponding costs. For example, OCAC does not know how much it costs to collect on a particular outstanding invoice. Additionally, OCAC does not have a formal policy for what levels of collections services are appropriate given specific types/amounts of debt. TTC makes all reasonable efforts to collect. Given that this information is not reported or evaluated by OCAC staff, it is possible that certain collections activities (small claims court, etc.) are not cost effective.

As of September 2014, there was a total of \$5.9 million in uncollected revenue. As shown in the following graph, 43% of the 31,237 unpaid invoices are for \$100 or less and only 1% are greater than \$700. And, \$2.7 million of outstanding invoices has been delinquent since 2012 or earlier.



OCAC began utilizing TTC to collect delinquent payments in FY 2010. As a result, there was a corresponding increase in animal licenses and licensing revenue through FY 2013. By FY 2014, fee revenue, particularly from late payment penalties has dropped considerably. Over this same period, OCAC's collection costs have continued to increase.



Recommendation 18: OC Animal Care management should work with the Treasurer-Tax Collector to evaluate the effectiveness of its various collection activities and, if appropriate, implement new ones to reduce costs.

Recommendation 19: OC Animal Care management should develop a formal policy for how it utilizes the Treasurer-Tax Collector in its collections effort.

F. Contract City Billing

Agreements

Contract Cities have entered into contracts that are automatically renewed annually and contain mutual 6-month termination clauses, with the County for animal care services. These services are funded through two primary sources: (1) user fees related to licenses, adoptions, and other services; and (2) direct “general fund” contributions from Contact Cities and the County. For FY2014, user fees covered approximately 53% of total OCAC expenses. Cities are required to pay actual costs on a quarterly basis.

Accrual Accounting

Accrued revenue is immediately credited to Contract Cities to offset their required contributions regardless of whether that revenue is collected. However, if bad debt is written off, it will not necessarily become the responsibility of the city that originally received credit. As of September 2014, there was approximate \$5.9 million of uncollected receivables, almost half of which have been on the County’s books for over two years.

It is unclear what would happen to these liabilities if a city terminated its contract with OCAC. Additionally, if accrued revenue exceeds annual expenses in any year, cities are provided a rollover "credit."

The auditor was told that due to limitations with OCAC’s IT systems (Chameleon and CAPS+) a more accurate accounting of revenue is currently not feasible. However, OCCR is currently evaluating a switch from accrual basis to cash basis, which could eliminate this issue.

Case Study: Radical Reptiles in Stanton

Following the closure of Radical Reptiles, a pet store in the City of Stanton, OCAC housed 442 animals for a 3-month period at a cost of over \$100,000. The County initiated a lawsuit against the storeowner in order to collect payment for the related shelter expenses. According to OCAC’s billing summaries for FY 2010 through FY 2014, the City of Stanton’s total annual expenses and total annual revenues were approximately \$80,000 higher in FY 2010 than they were in each of the next four fiscal years.

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Expenditure	\$357,248	\$274,420	\$277,126	\$260,196	\$271,353
Revenue	235,301	149,054	164,970	148,109	111,113
<i>Billed to City of Stanton</i>	<i>\$121,947</i>	<i>\$125,366</i>	<i>\$112,156</i>	<i>\$112,087</i>	<i>\$160,240</i>

It appears that (1) these increased expenses are attributable to the cost to care for the animals from

Radical Reptiles, and (2) the increased accrued revenues are attributable to the owner of Radical Reptiles' unpaid invoice. Under its current funding methodology, OCAC gives Contract Cities credit for accrued revenue, whether or not it is collected.

In March 2013, the County settled a countersuit with the owner of Radical Reptiles that included "the waiver of an assessment by the County against [the storeowner] for the caring for the animals, in the amount of \$158,436 (the assessment plus accrued interest)." At that time, the uncollected balance of \$106,349 should have been written off because it was uncollectable. However, as of September 2014, the outstanding invoice referenced above remained on a list of unpaid invoices that the Treasurer Tax-Collector is attempting to collect on behalf of OCAC. It appears that in this case OCAC has provided the City of Stanton a subsidy of over \$100,000 since FY 2010.

Recommendation 20: OC Animal Care management should track the corresponding jurisdiction of all accrued but uncollected revenue, periodically (e.g., quarterly) provide that information to the Contract Cities, and, if appropriate, adjust billings accordingly.

Recommendation 21: OC Animal Care management should work with the Auditor-Controller to develop a plan to move from an accrual accounting basis to a cash accounting basis.

G. Donations & Sponsorships

1. Donations

OCAC solicits and receives donations from private donors and various non-profit organizations. Individuals can make donations on OCAC's website, as well as via the license renewal form. Over the last three years, OCAC was able to utilize donation proceeds of between \$50,000 and \$69,000 annually. The majority of those proceeds were used for veterinary services, spay/neuter operations, and general shelter services, as shown in the following table.

Use of Donation Proceeds	2012	2013	2014	Total
CANINE SPAY/NEUTER	\$13,712	\$13,247	\$20,890	\$47,849
SHELTER SERVICES	\$17,401	\$12,938	\$16,085	\$46,424
VETERINARY SERVICES	\$8,034	\$7,624	\$11,486	\$27,143
FELINE SPAY/NEUTER FEE	\$4,866	\$6,695	\$9,045	\$20,606
VACCINATIONS-OTHER	\$3,227	\$3,545	\$3,685	\$10,457
VACCINATIONS-RABIES	\$2,388	\$1,684	\$2,267	\$6,339
ACS MICROCHIP	\$1,189	\$1,373	\$2,596	\$5,158
DAILY FEED AND CARE	\$502	\$1,315	\$2,444	\$4,261
IMPOUND FEES	\$270	\$936	\$540	\$1,746
IMPOUND FINES	\$0	\$225	\$160	\$385
RELINQUISHMENT FEES	\$162	\$35	\$180	\$377
Total	\$51,749	\$49,616	\$69,378	\$170,743

As a General Fund department, OCAC has to spend or encumber any donation revenue in the fiscal year that it is received. Currently, it does not have the ability to accumulate reserves and spend them in future fiscal years.²⁰ Any unused donation revenue has to be returned to the General Fund at the end of each fiscal year. As a result, OCAC may not be maximizing its benefit from public donations because (1) donations might be “lost” to the general fund, (2) donations that must be spent quickly might not be utilized for the most critical purposes, and (3) potential donors might be dissuaded from donating, because there is no assurance that their donation will go towards its intended purpose.

As one workaround, OCAC has worked with Auditor-Controller to make a technical adjustment during the Quarterly Budget Report process in order to “save” donation revenue that could not be spent in the prior fiscal year, a bad long-term solution.

Alternatively, OCAC explored the idea of establishing a dedicated trust fund, similar to what was done to secure the \$5 million that was set aside by the Board of Supervisors for a new facility in 1995. The Auditor-Controller Department rejected this proposal citing the requirement that revenue must be recognized in the year that it is received. Our review indicates that there are several examples of such trust funds at other animal control agencies around the State.

- The County of San Diego’s Animal Services has established several donation trust funds including separate donation funds for its three shelters and its Spirit Fund, which is used for medical care only.
- The City of Los Angeles maintains the Animal Welfare Trust Fund 859 and the Animal Sterilization Fund 842.

²⁰ For example, if OCAC receives a \$5,000 donation on June 29th, it would have one day to spend or encumber all \$5,000. Any amount that was unspent or unencumbered at the end of the fiscal year would be returned to the General Fund.

- The County of Mendocino has established a trust fund for its Mobile Spay/Neuter Program in order to ensure that “all funds stay within the program and that they are NOT considered part of the County's General Fund.”

Recommendation 22: OC Animal Care management should formally request that the Auditor-Controller establish a dedicated donation fund for OCAC.

2. Sponsorships

Currently, OCAC is unable to participate in certain types of partnerships with private companies and non-profits. Because OCAC does not have an established Marketing Policy that permits such activities, it could be forgoing potential significant revenue from sponsorships.

In November 2014, OCCR was working on an Agenda Staff Report (ASR) for consideration by the Board of Supervisors. The recommended actions include “adopt[ing] Marketing Plans for OC Animal Care, OC Community Services, and OC Public Libraries to pursue sponsorships with non-profit organizations, private sector organizations, and businesses in support of programs and events.” For example, OCAC’s marketable assets that could be utilized for sponsorship opportunities include signage on buildings, animal housing units, cages and kennels, walkways, and informational kiosks. According to the “OC Animal Care Marketing Plan” that was included as an attachment to the draft ASR, “OC Animal Care estimates its short-term (12-24 months) revenue goal at \$100,000,” and “OC Animal Care projects its long-term revenue goal at \$1,000,000 from this type of market program.” The Plan also notes that other jurisdictions and public agencies take advantage of such marketing opportunities.

Subsequent to the start of this audit, OCCR stopped pursuing its department-specific marketing plan because CEO/Real Estate was working to develop a countywide “marketing” strategy that would include these types of activities.

Recommendation 23: OC Animal Care management should continue to work with OCCR and CEO/Real Estate to establish a marketing plan that would allow OC Animal Care to pursue private sponsorships.

H. Volunteer Services

Volunteers play an important role in the operations of OCAC and, in particular, the care and nurturing of its animals. OCAC has approximately 400 volunteers who support OCAC in a variety of capacities, including 160 volunteers who foster young or injured animals.

Over the past three years, OCAC volunteers have completed more than 100,000 hours of service annually. The bulk of these hours (89%) were completed by volunteers fostering animals at their own homes. Total foster volunteer hours for 2013 were equivalent to 66.5 full-time equivalent individuals (FTEs), and total volunteer hours at the shelter were equivalent to 7.1 FTEs. Between 2012 and 2013, total volunteer hours declined by 8% following an increase of 57% from the prior year.

Volunteer Hours/FTEs by Activity

	2011	2012	2013
Foster	93,472 hrs. 44.9 FTE	150,650 hrs. 72.4 FTE	138,340 hrs. 66.5 FTE
Shelter	12,696 hrs. 6.1 FTE	15,665 hrs. 7.5 FTE	14,708 hrs. 7.1 FTE
Off-site/Special Event	450 hrs. 0.2 FTE	1,203 hrs. 0.6 FTE	1,503 hrs. 0.7 FTE
Total	106,618 hrs. 51.3 FTE	167,518 hrs. 80.5 FTE	154,551 hrs. 74.3 FTE

1. Volunteer Training

OCAC conducts orientation and training sessions for prospective volunteers four times per year (January, April, July, and October). Below is an overview of the steps required to become a volunteer for OCAC.

1. **Submit RSVP.** RSVPs are accepted approximately one month prior to the four scheduled orientation dates, which means there is no way to register to volunteer at OCAC during eight months of the year. Because of these reservation procedures, a prospective volunteer may have to wait more than three months to submit an RSVP.
2. **Get selected to attend Orientation.** Once prospective volunteers have RSVP'd, they are not necessarily guaranteed a spot in the upcoming orientation session. According to OCAC, they receive between 150-200 RSVPs to attend volunteer training, but can accept only 50 per session due on space constraints. By limiting the number of volunteers based on the capacity of the conference room at OCAC headquarters, the County turns away approximately 100-150 potential volunteers every quarter. As such, a prospective volunteer might have to wait almost one year to attend an orientation session.
3. **Attend Orientation.** During the orientation session, prospective volunteers are provided with an overview of OCAC, including volunteer program requirements, shelter statistics related to intake and euthanasia, and an overview of the following volunteer positions:
 - a. Dog Walker/Socializer
 - b. Cat Socializer/Enrichment
 - c. Rabbit Socializer/Enrichment
 - d. Kitten Nursery Attendant
 - e. Bather/Groomer

- f. Greeters/Pet Detectives
 - g. Special Events
 - h. Foster Caretaker
4. **Submit Application.** At the end of the orientation session, prospective volunteers are presented with an overview of the “Volunteer Selection Process,” which included consenting to a background check and completing a cover letter detailing interest in volunteering and feelings/opinions about euthanasia. According to OCAC, of the fifty people who attend orientation, two to three may self-select out of the program and, depending on the content of their cover letters or results of the background check, some may be excluded from the program.

Due to the current practices, OCAC can onboard fewer than two hundred volunteers annually. According to OCAC, volunteers have complained that there are not enough other volunteers on staff at a particular time to assist with required tasks. For example, there may only be one “Dog Walker/Socializer” volunteer available to walk all adoptable dogs on a particular day.

Recommendation 24: OC Animal Care management should modify the volunteer onboarding process to (1) require all potential volunteers to complete the volunteer application, including a consent to the requisite background check, as part of the initial RSVP process; (2) allow prospective volunteers to RSVP at any time; and (3) include those potential volunteers in the earliest possible orientation session.

If necessary to accommodate larger groups, OCAC should split up sessions or conduct them at larger facilities (e.g., HOA Board Hearing Room, Soda Fountain Pavilion at Irvine Regional Park).

2. Volunteer Job Duties

After receiving proper training, volunteers at the shelter are able to work on the following activities.

Dog Walker	Dog walkers exercise and socialize dogs that are currently available for adoption. Through this interaction, volunteers provide the dogs with mental stimulation creating a healthier, happier, more adoptable dog. Some volunteers work with dogs to develop good manners, such as walking well on a leash, that will help them be more successful in their new homes. Dog walkers may also bathe adoptable dogs as needed.
Cat Socializer	Cat socializers work with cats that are currently available for adoption, providing them with mental stimulation and practice being handled in various manners.
Rabbit Socializer	Rabbit socializers handle rabbits that are currently available for adoption at the shelter. Some rabbits are not used to being handled and these volunteers help to create more social, and thus more adoptable, bunnies.

Greeter/Customer Service	These volunteers greet and offer assistance to the public at OC Animal Care's front gate. Greeters are a visitor's first contact with OC Animal Care and, through their warm greeting and courtesy, may influence a person's decision to adopt an animal from the shelter.
Community Events/Special Shelter Events	Volunteers act as shelter ambassadors and help to spread the mission of OC Animal Care throughout the community. Volunteers participating in special events, both on-site and off-site, help to promote the adoption of shelter animals. Through education and a positive attitude, these volunteers help build lasting relationships with the community OC Animal Care serves.
Clerical Support	Volunteers assist shelter staff with various office projects, helping to improve the efficiency of work completed at OC Animal Care. Projects are intermittent and are assigned to clerical volunteers as the need arises.
Groomer	Volunteers groom shelter dogs to create quality bonding time between themselves and the dogs, thus increase a dog's adoptability. These dogs often come to us matted and dirty. This special attention from a grooming volunteer enables the dog's true personality to shine through and increased his chance of being adopted. At this time OC Animal Care is unable to offer thorough grooming training, but we welcome those who possess grooming skills.
Kitten Nursery Attendant	Kitten nursery attendants help to feed, clean, and care for small kittens that are housed in OC Animal Care's kitten nursery. These kittens are currently awaiting placement with a rescue organization or a foster home. With the help from these volunteers, OC Animal Care and its extensive network of foster caretakers and rescue organizations have saved thousands of underage kittens.

The June 2014 Consultation Report recommended “increasing the volunteer program to provide additional support to staff” since OCAC was not currently meeting standards regarding minimum staffing levels needed to properly care for the animals on site and because significant staffing increases were unlikely to occur in the short-term.

Shelter duties that volunteers could do but are currently not permitted to perform include:

- Cleaning and sanitizing kennels of adoptable dogs and cats;
- Helping the public visit with adoptable animals;
- Maintaining shelter flowerbeds;
- Sweeping and hosing the shelter;
- Working on shelter beautification projects; and
- Helping with certain facility projects.

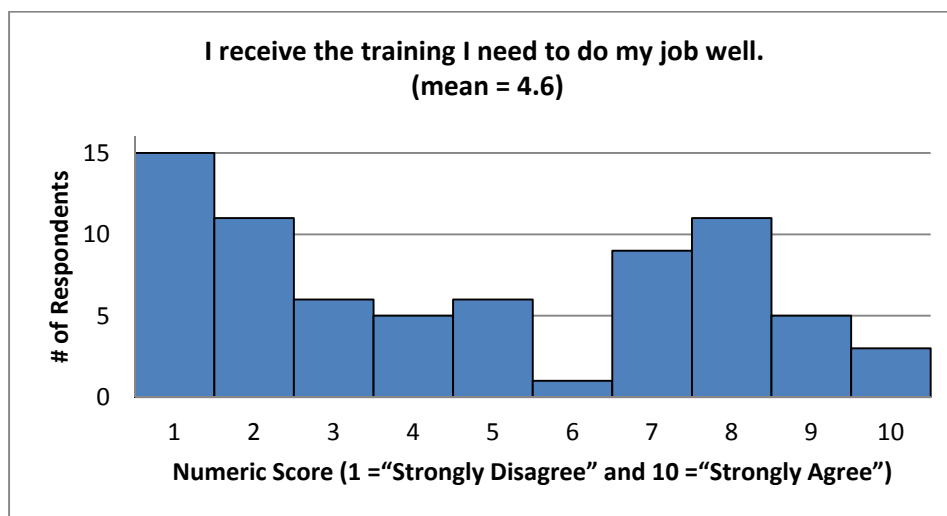
Recommendation 25: OC Animal Care management should expand the list of volunteer activities to include additional duties at the Animal Shelter, such as assisting with public visits and shelter beautification projects.

I. Professional Development

At OCAC, certain job functions receive extensive training, while others receive only limited, on-the-job training. Due to a lack of training opportunities, staff may not be fulfilling their job duties as

efficiently as possible. As discussed in greater detail in Section B. Field Services, Animal Control Officer Trainees receive several months of comprehensive classroom and field training before working in the field.

As part of the audit process, the auditor invited all OCAC employees to participate in an anonymous online survey. As part of the survey, employees were asked to what extent they agreed with the statement: *I receive the training I need to do my job well.* On a scale of 1 to 10, with 1 being “Strongly Disagree” and 10 being “Strongly Agree”, the average score was 4.6, with 26 of 72 respondents (36%) providing scores of 1 or 2, indicating strong disagreement.



With the exception of field operations staff, OCAC employees receive limited formal training opportunities. OCAC does not have a formal internal training program. Veterinary staff could provide training tutorials to field and kennel staff regarding the latest best practices in the industry, and staff could routinely be updated on new information and best practices developed by experts in the field, such as the UC Davis Koret Shelter Medicine Program, which routinely publishes reports and information sheets that may be relevant to OCAC staff. Similarly, volunteers who do not receive ongoing training could benefit from such training sessions led by OCAC staff. A lack of resources was one reason cited for the lack of training opportunities. Additionally, there is at least one OCAC Policy and Procedures (P&Ps) related to staff training with which OCAC is not in compliance.

Recommendation 26: OC Animal Care management should ensure that all training sessions required by law or OCAC policy are completed by staff.

Recommendation 27: OC Animal Care management should develop formal training opportunities for staff on relevant topics including both technical skills and soft skills.

J. Enterprise Application Software System

OCAC uses Chameleon/CMS© (“Chameleon”), an enterprise application software system, to assist with most aspects of its operations, including animal records, kennel operations, field operations, clinic activities, and licensing activities. The Chameleon software is based on SQL database language and can collect information on all aspects of OCAC’s operations. Data collected by the system is then used to populate hundreds of reports using a reporting program called Crystal Reports.

Chameleon is one of the more popular off-the-shelf systems in the industry. However, there are certain functional limitations of the system, including that it is not linked to the County’s accounting system, CAPS+. OCAC has evaluated alternatives to Chameleon, including developing a new system in-house, but has no current plans to pursue an alternative.

OCAC staff is generally trained to use certain aspects of Chameleon to fulfill their day-to-day job duties, including running standardized reports that have been developed with the assistance of OC Community Resources/Information Technology, the Chameleon vendor, and OCAC staff. In the past, OCAC staff received formalized training that including training on how to develop reports using Crystal Reports, but presently only a few people at OCAC have the technical training to effectively utilize the full functionality of these systems.

OCAC staff may not have the technical training to understand how to assess and validate data and summary reports. Below is a brief case study to illustrate this issue.

Case Study: Chameleon Report & Data Integrity Issues.

OCAC staff can run standardized reports using Chameleon and Crystal Reports that provide Average Field Activity Response Times by Call Priority over a designated timeframe. The former Director of OCAC acknowledged using these reports to monitor the performance of the Field Operations Division. Over the course of the audit, it was determined that some of the formulas within these reports were inaccurate. For example, a report of Response Times for Priority 6 Field Activities indicated average response times by month of three to four hours and no response times that exceed 48 hours. Based on this information, one might conclude that low priority response times were actually quite good. However, response times for Priority 6 calls frequently and consistently

exceed several days. If management used these reports to assess OCAC's operational efficiency, it would have based decisions on bad information.

Additionally, the quality of some of the data contained in Chameleon is in question. For example, a review of intake data from FY 2012 to FY 2014 found that of animals that were dead at the time of impound, one was adopted, one escaped, and twenty were returned to the wild. Additionally, in various instances, completed events have time stamps of dates in the future.

Recommendation 28: OC Animal Care management should identify dedicated data analytics resources/personnel within OC Animal Care to coordinate all operational aspects of the OC Animal Care's enterprise software systems (i.e., Chameleon and Crystal Reports).

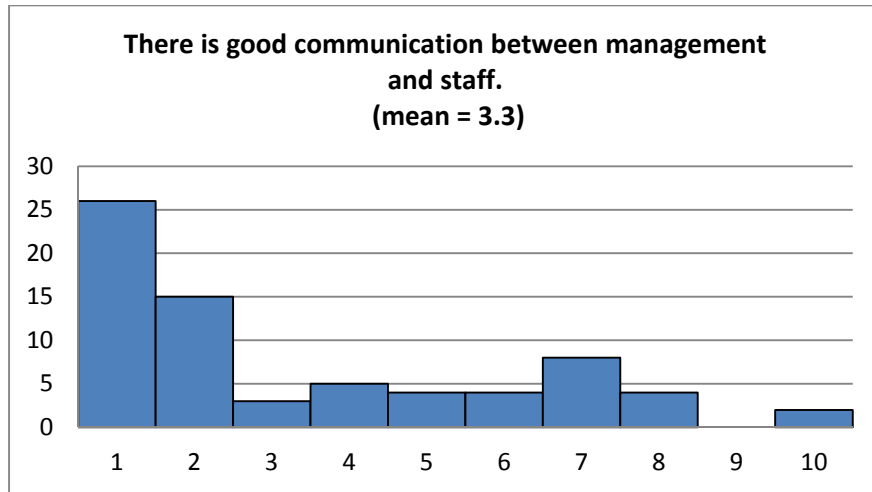
Recommendation 29: OC Animal Care management should establish regular training sessions on its enterprise software systems for all relevant employees, including all management and administrative staff.

Recommendation 30: OC Animal Care management should conduct a review of existing system controls and take appropriate measures to ensure data integrity (e.g., enhance logic/limits of certain fields to ensure proper data entry).

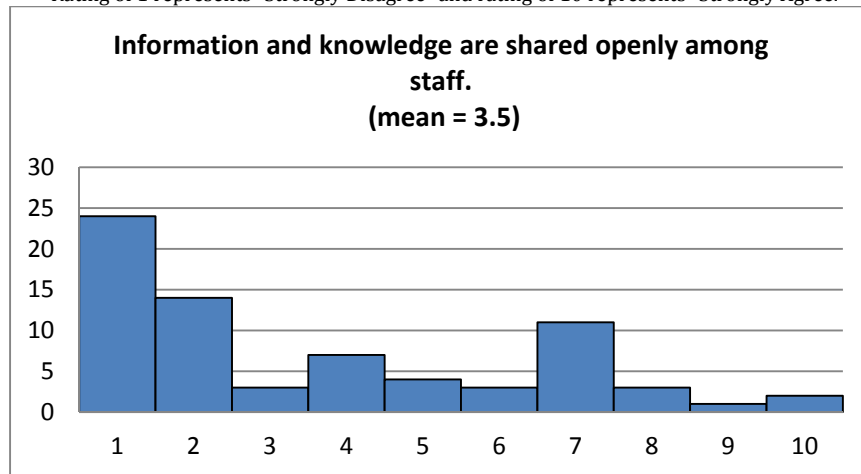
K. Internal Communications

Based on staff interviews and the survey conducted as part of this audit, many OCAC employees do not believe that information and knowledge are shared effectively and believe that the department lacks a sense of teamwork.

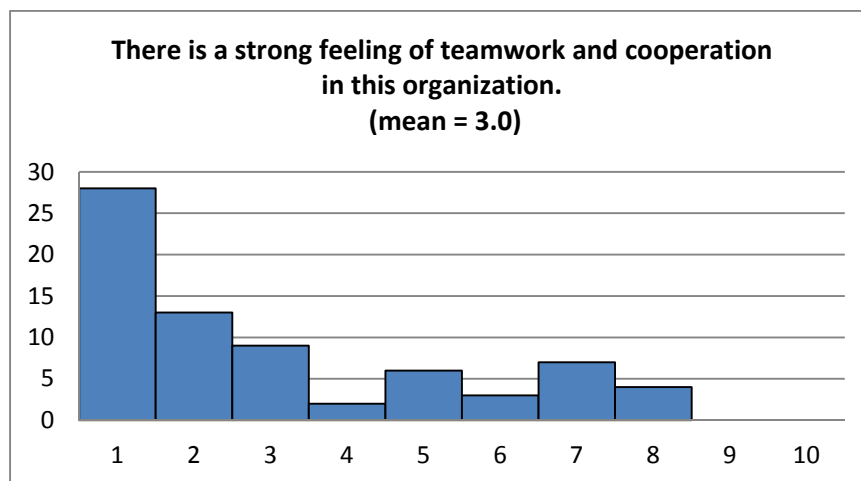
The following are survey results related to communications and staff morale:



*Rating of 1 represents "Strongly Disagree" and rating of 10 represents "Strongly Agree."



*Rating of 1 represents "Strongly Disagree" and rating of 10 represents "Strongly Agree."



*Rating of 1 represents "Strongly Disagree" and rating of 10 represents "Strongly Agree."

Regarding all three statements, more than 50% of respondents provided scores of 1 or 2, indicating strong disagreement.

Historically, the Director of OCAC held all-hands staff meetings, but at some point prior to the start of this audit, those meetings were discontinued.

Surveys similar to the one used during this audit can highlight issues within an organization that might not otherwise be readily apparent. While OCAC currently does not survey its employees, during the audit OCAC management expressed support for developing a similar tool to routinely monitor staff morale and how employees feel OCAC is doing operationally.

Recommendation 31: OC Animal Care management should hold all-hands staff meetings at least every quarter.

Recommendation 32: OC Animal Care management should provide an anonymous survey to staff annually in order to monitor staff morale and identify opportunities for improvement and report and track the results.

L. Key Performance Indicators

OCAC tracks and reports certain Key Performance Indicators (KPIs), as shown in the following graphic. However, based on discussions with OCAC management, staff does not regularly track other types of data that could be used for decision-making. Management has not prioritized the use of data for decision-making. OCAC does not evaluate trends in its operation, such as field service response times and may be unable to quickly identify operational issues.

Based on the Balanced Scorecard results, it appears that OCAC either met or exceeded its targets in 12 of 17 categories. However, it may be appropriate for management to reevaluate the existing performance targets. For example, the target for Owner Redemption Rate for cats is 2%. For FY 2012, OCAC met this apparently low target.

Also, though several years of OCAC's statistics can be found on its website at <http://ocpetinfo.com/about/stats>, there appear to be some inconsistencies in the data. For example, euthanasia numbers on the OCAC Impound Summary vary between data tables. The discrepancies may be attributable to issues related to OCAC's database, which is discussed in greater detail in Section IV.J Enterprise Application Software System. Inconsistencies in the reported data may cause people to question the overall integrity of the information.

**OC Community Resources 2013 Business Plan Update
Balanced Scorecard Summary**

	Trend (FY 10-11 vs. FY 11-12)	Performance Results for FY 2011-12		
		Exceeds Target	Meets Target	Below Target
OC Animal Care				
Service Area: Public Safety				
Total percentage of licensed dogs spayed and neutered	↓		▲	
Total number of dog licenses issued	↑	●		
% of total potentially adoptable impounded Cats spayed or neutered at the shelter	↔	●		
% of total potentially adoptable impounded Dogs spayed or neutered at the shelter	↔	●		
% of total potentially adoptable impounded Rabbits spayed or neutered at the shelter	↔	●		
Response time for priority calls 1 & 2 (humans and animals at risk)	↔		▲	
Service Area: Humane Treatment of Animals				
Adoption rate (Cats)	↔		▲	
Adoption rate (Dogs)	↔			◆
Adoption rate (Rabbits)	↔			◆
Owner redemption rate (Cats)	↔		▲	
Owner redemption rate (Dogs)	↔			◆
Owner redemption rate (Rabbits)	↓			◆
Customer satisfaction	↔			◆
Service Area: Community Outreach & Education				
Total number of volunteer hours	↔	●		
Total classes/programs/events	↔	●		
Total attendees to classes/programs/events	↔	●		
% of total adoptions via rescue groups	↔	●		

1

Recommendation 33: OC Animal Care management should periodically evaluate performance targets, and track and report Key Performance Indicators relevant to OCAC's mission and primary operating objectives.

Recommendation 34: OC Animal Care management should establish quality assurance procedures to ensure that information reported on OCAC's website is accurate and consistent.

V. Conclusion

For years, OC Animal Care has been impacted by increasing demand for animal control and shelter services with limited resources, caused mainly by population growth within the County, an aging shelter, and vacant positions due to financial constraints of the County as well as Contract Cities. With dedicated employees and volunteers, OCAC has done a reasonable job coping with these financial and operational constraints, but more can be done.

This audit report contains 34 recommendations that will enhance OCAC's operational effectiveness and efficiency by improving operating practices, restructuring OCAC's organization, and improving utilization of technology. These recommendations include:

- Establishing scheduled visiting hours at the Shelter;
- Improving efficiency of the Canvassing Group;
- Developing new revenue opportunities;
- Enhancing the Volunteer Program; and
- Increasing training and development opportunities for staff.

The complete list of audit recommendations, as well as management responses thereto, can be found in Appendix A of this report.

As a result of discussions with the audit team during the course of the audit, OCAC management has already taken steps to begin implementing a number of the audit recommendations.

VI. Appendices

A. Recommendations & Management Response

March 2, 2015

STEVE FRANKS
DIRECTOR
OC COMMUNITY RESOURCES

JENNIFER HAWKINS, DVM
INTERIM DIRECTOR
OC ANIMAL CARE

KAREN ROPER
DIRECTOR
OC COMMUNITY SERVICES

STACY BLACKWOOD
DIRECTOR
OC PARKS

HELEN FRIED
COUNTY LIBRARIAN
OC PUBLIC LIBRARIES

Phillip Cheng, Director
Office of Performance Audit

Dear Mr. Cheng:

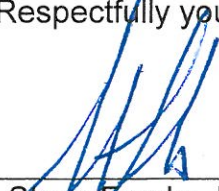
RE: PERFORMANCE AUDIT REPORT OF OC ANIMAL CARE

We are pleased to provide responses to the recommendations contained in the performance audit report of Orange County Animal Care. We appreciated the significant time and effort devoted to this project to determine the accuracy of data, evaluate current practices, and research industry standards in order to provide timely and relevant recommendations by the lead auditor, Brian Rayburn.

We appreciate the support for the attention to challenges that have been previously identified and continue to be addressed, and we welcome recommendations to increase efficiency and effect positive change within Orange County Animal Care. While we concur with the majority of the recommendations, many items will require financial analysis and consultation with the County Executive Office and our contract cities which may affect target completion dates and implementation of recommendations.

We would like to thank the Office of the Performance Auditor for their time and dedication to the integrity of this project, for the courtesies extended to the Orange County Animal Care department managers and staff throughout the audit process, and for validating much of which we are already doing. We are available to meet with your office to discuss any and all responses provided herein. Please feel free to contact me at 714-480-2788 or Dr. Jennifer Hawkins at 714-796-6417.

Respectfully yours,



Steve Franks, Director
OC Community Resources

3/2/15
Date



OFFICE OF THE DIRECTOR
1770 NORTH BROADWAY
SANTA ANA, CA 92706-2642
PHONE: 714.480.2788
FAX: 714.480.2899

c: Dr. Jennifer Hawkins, Interim Director, OC Animal Care

JH:SF:ye

Recommendation	Management Response (Concur/Partially Concur/Do Not Concur)	Management Action Plan	Target Completion Date
<p>Recommendation 1: OC Animal Care management should develop long-term financing agreements, separate from its existing operating agreements, with Contract Cities for the construction of any new animal shelter.</p>	<p>Concur</p>	<p>In process - The plan is to develop long-term financing agreements, separate from existing operating agreements, with Contract Cities for the construction of the new animal shelter. Such discussions with the Contract Cities have been in process since 2013.</p>	<p>Simultaneous with land acquisition.</p>
<p>Recommendation 2: OC Animal Care management should periodically review kennel staffing levels and schedules to ensure that it meets industry standards.</p>	<p>Concur</p>	<p>In process - Recruitment and fiscal challenges have prevented OCAC from keeping Kennel Attendant positions filled. Due to recruitment constraints, we have had to utilize Extra Help to cover shortages. We will continue to justify and request additional positions and will continue to work with the Contract Cities on staffing requirements and the related costs.</p>	<p>January 2016</p>
<p>Recommendation 3: OC Animal Care management should develop policies and procedures to allow for scheduled owner surrenders to better manage shelter capacity.</p>	<p>Concur</p>	<p>OCAC recognizes the industry trend towards appointment systems for owner surrenders. Currently restrictions on owner surrenders are a seasonal issue only occurring during the busy summer months. Restrictions on owner surrenders are used to manage shelter capacity. OCAC must have kennels available for stray animals that we are legally required to impound. OCAC will evaluate processes to balance these competing demands on shelter capacity</p>	<p>August 2015</p>

Recommendation	Management Response (Concur/Partially Concur/Do Not Concur)	Management Action Plan	Target Completion Date
<p>Recommendation 4: OC Animal Care management should track and report statistics related to capacity constraints and the spread of disease within the shelter on a routine basis.</p>	<p>Concur</p>	<p>In process - The default status of all animals in the Chameleon database is "normal" until evaluated by veterinary staff. Medical status entered in a medical screen isn't accessed by statistical reports. OCAC is updating the process to enter medical condition in the screen currently used to record "intake condition" to track animals that have medical conditions upon impound.</p>	<p>February 2016</p>
<p>Recommendation 5: OC Animal Care management should develop a short-term plan in collaboration with Contract Cities to complete critical maintenance projects, including repairs/replacement of the dog kennel doors and retrofit/replacement of the existing cat housing.</p>	<p>Concur</p>	<p>In process - OCAC has developed a list of critical maintenance projects and has started working on completing these projects. These projects will be completed as funding permits. All of these critical maintenance projects, as well as other new ones that will arise in a facility of this age, will be communicated to the Contract Cities.</p>	<p>On-going</p>
<p>Recommendation 6: OC Animal Care management should establish daily visiting hours for a single, continuous period of time, and post those hours at the entrance to the Shelter and on its website.</p>	<p>Concur</p>	<p>In process - OCAC currently has established visiting hours. OCAC's goal is to maintain adequate staffing and to communicate visiting hours to the public, however, due to unexpected constraints there will occasionally be days when the visiting hours are changed. Visiting hours are posted daily in the Customer Service office and will also be posted visiting hours on the website.</p>	<p>June 2015</p>

Recommendation	Management Response (Concur/Partially Concur/Do Not Concur)	Management Action Plan	Target Completion Date
<p>Recommendation 7: OC Animal Care management should expand the authority of the Chief of Veterinary Services to include oversight of all medical aspects of OCAC operations by combining the position with either the Director of OC Animal Care position or the recently created Assistant Director of OC Animal Care position.</p>	<p>Concur</p>	<p>Implemented - A Chief of Veterinary Services was hired in November of 2014 and now serves as Interim Director. The Chief Veterinarian will continue to have authority over all medical aspects of OCAC operations even after the selection of the permanent OCAC Director.</p>	<p>June 2015</p>
<p>Recommendation 8: OC Animal Care management should establish a policy to allow the public to begin the process of adopting an animal prior to that animal being spayed or neutered.</p>	<p>Partially Concur</p>	<p>In process - It is the policy of OC Animal Care to alter every dog prior to being made available for adoption; exceptions are made for various reasons. Those exceptions create a back log for preemptive surgeries as well as unaltered dogs that have already been adopted awaiting surgery. OCAC will continue to prioritize a procedure that will allow the identification of the dogs that people have shown the most interest in and use this information to help prioritize surgical candidates to promote adoptions.</p>	<p>October 2015</p>
<p>Recommendation 9: OC Animal Care management should establish a policy that prioritizes which animals get spayed/neutered and makes adopted animals a high priority.</p>	<p>Concur</p>	<p>In process - This practice is ongoing at OC Animal Care. Staff monitors the animal population daily to determine whether animals will receive pre-empted spay/neuter surgery, as is common practice among shelters, or be first placed for adoption. A formal policy will be written to document current practice and ensure continuity moving forward.</p>	<p>October 2015</p>

Recommendation	Management Response (Concur/Partially Concur/Do Not Concur)	Management Action Plan	Target Completion Date
<p>Recommendation 10: OC Animal Care management should establish response time goals for all call priorities.</p>	<p>Partially Concur</p>	<p>OCAC is not a primary or first responder to emergencies. Response times vary depending upon workload, staffing, and seasonal fluctuations. Although useful in measuring performance, response time goals are not indicative of humane treatment of animals or best practices. Goals/targets will be developed to assist in determining staffing levels.</p>	<p>March 2016</p>
<p>Recommendation 11: OC Animal Care management should direct the Canvassing Unit to handle licensing checks on behalf of the Field Services group, when appropriate.</p>	<p>Concur</p>	<p>The Canvassing/Customer Services department currently follows up on delinquent licensing for Field Services utilizing an In-House collection system that doesn't involve any staff members attempting to collect monies at the door. In order for the Canvassing Unit to resume licensing enforcement duties, which includes issuing citations, OCAC will work with Risk Management and Human Resources to evaluate significant safety concerns.</p>	<p>February 2016</p>
<p>Recommendation 12: OC Animal Care management should formalize the use of seasonal staff or other staff resources to handle the increased volume of new dead animal pick up requests during specific high-volume months of the year.</p>	<p>Partially Concur</p>	<p>The call volume was higher than normal in 2014 due to significant staffing shortages as a result of critical position vacancies going unfilled for an inordinately lengthy period. Evaluating the feasibility of hiring a seasonal ACO will require data study to justify cost vs. long-term need.</p>	<p>March 2016</p>

Recommendation	Management Response (Concur/Partially Concur/Do Not Concur)	Management Action Plan	Target Completion Date
<p>Recommendation 13: OC Animal Care management should evaluate whether any other field activities could be completed by other staff or by other means (e.g., over the phone) and, if appropriate, modify the relevant policies and procedures.</p>	<p>Concur</p>	<p>In process - We currently utilize phones to complete certain types of calls (home quarantine releases, licensing, etc.). We also have letter templates in use that were developed to mail out in response to certain activities (stray habitual, dog curbing). We will reevaluate the use of other staff as a possible solution to assist with call volume.</p>	<p>December 2015</p>
<p>Recommendation 14: OC Animal Care management should develop approaches to enhance the cost effectiveness of the canvassing program by utilizing Chameleon.</p>	<p>Concur</p>	<p>In process - In January 2015, Canvassing staff began entering all activities into Chameleon. This allows for faster follow-up and billing on licenses. We are currently entering all data for the 2014/15 fiscal year in order to have complete statistical information for our Contract Cities. OCAC will be able to measure how many licenses were sold as a result of dogs that were identified via canvassing their residence versus those that were left a delinquent notice by staff. Additionally, we will also be able to track how responsive customers are to the notices left at the door as compared to the follow-up letter which contains stronger language. Procedures will be adjusted as needed based upon the findings of this data analysis.</p>	<p>December 2015</p>

Recommendation	Management Response (Concur/Partially Concur/Do Not Concur)	Management Action Plan	Target Completion Date
<p>Recommendation 15: OC Animal Care management should make the following modifications to the Canvassing Unit: (1) Move the Canvassing Unit from Administrative Services to Field Services, (2) Direct canvassing staff to handle all license checks, when appropriate, and (3) Schedule canvassers seven days a week.</p>	<p>Partially Concur</p>	<p>Previously the Canvassing Unit was part of Field Services; however, it was moved to the Licensing/Customer Service Unit in 2012 in an effort to improve employee safety in the field. Canvassers do much more than licensing enforcement. They also deliver vital public education information. If Canvassing were put back under Field Services in an enforcement capacity, it would require a re-evaluation of their safety concerns, assessment of classification, training, span of control, equipment needs, and labor discussions. We will evaluate all the factors involved in such a re-organization and determine its feasibility. OCAC plans to implement a Monday through Saturday work schedule for canvassers, and will evaluate Sunday canvassing.</p>	<p>March 2016</p>
<p>Recommendation 16: OC Animal Care management should investigate the impact of issuing multi-year licenses for up to three years and, if appropriate, work with County Counsel to develop revised language to Orange County Ordinance Section 4-1-70 and present those revisions to the Board of Supervisors for its consideration.</p>	<p>Partially Concur</p>	<p>Multi-year dog licenses could be a good product to offer customers. A process must be developed where multi-year revenue can be retained, and applied to expenses incurred during each year of the multi-year dog license. Furthermore, there would have to a process in place so that revenue for future years could be tracked by jurisdiction, in order to utilize the reserved revenue to offset the appropriate city's costs in future years. We will re-evaluate this issue and assess its feasibility.</p>	<p>July 2016</p>

Recommendation	Management Response (Concur/Partially Concur/Do Not Concur)	Management Action Plan	Target Completion Date
<p>Recommendation 17: OC Animal Care management should work with County Counsel to develop revisions to Orange County Ordinance Section 4-1-85 to require that all domestic cats within the County of Orange be licensed and present those revisions to the Board of Supervisors for its consideration.</p>	<p>Partially Concur</p>	<p>While the concept of licensing cats is a way to help ensure cats have an increased chance of being redeemed by an owner, there are other variables that require consideration. Among those is the enforcement of licensure in cats and the resources (staffing) required to administratively support such licensure, as well as challenges of owner accountability for community cats. It is unclear what response cat owners may have to a mandate for cat licensure as veterinary statistics report over twice as many cats than dogs are never even brought to a veterinarian, which suggests some people may value cats less than dogs. We will survey other jurisdictions with mandatory cat licensing and evaluate its service and cost implications.</p>	<p>September 2016</p>
<p>Recommendation 18: OC Animal Care management should work with the Treasurer-Tax Collector to evaluate the effectiveness of its various collection activities and, if appropriate, implement new ones to reduce costs.</p>	<p>Concur</p>	<p>In process - Discussions with the TTC about their collection activities are on-going. Discussions are continuing regarding collection processes relative to identifying ways to reduce costs and increase effectiveness.</p>	<p>October 2015</p>
<p>Recommendation 19: OC Animal Care management should develop a formal policy for how it utilizes the Treasurer-Tax Collector in its collections effort.</p>	<p>Concur</p>	<p>A formal MOU will be developed upon completion of actions noted Recommendation 18.</p>	<p>November 2015</p>

Recommendation	Management Response (Concur/Partially Concur/Do Not Concur)	Management Action Plan	Target Completion Date
<p>Recommendation 20: OC Animal Care management should track the corresponding jurisdiction of all accrued but uncollected revenue, periodically (e.g., quarterly) provide that information to the Contract Cities, and, if appropriate, adjust billings accordingly.</p>	<p>Concur</p>	<p>In process - With the switch to a cash basis accounting system (See Recommendation 21), OCAC revenue will be recorded when received and not when billed. As such, there will no longer be new, uncollected revenue after the effective date of the switch to cash basis. The accumulated, uncollected revenue prior to 7/1/2015 is being reversed and charges to the cities adjusted accordingly over the next four to five years.</p>	<p>Reverse accumulated uncollected revenue- four to five years.</p>
<p>Recommendation 21: OC Animal Care management should work with the Auditor-Controller to develop a plan to move from an accrual accounting basis to a cash accounting basis.</p>	<p>Concur</p>	<p>In process - The Auditor-Controller gave tentative approval for OCAC to move fee based revenue from an accrual basis to a cash basis in May 2014. The target implementation date is 7/1/2015.</p>	<p>July 2015</p>
<p>Recommendation 22: OC Animal Care management should formally request that the Auditor-Controller establish a dedicated donation fund for OCAC.</p>	<p>Concur</p>	<p>In process - OCAC previous requests for a dedicated donation fund were not approved by the Auditor-Controller. With the change in the elected Auditor-Controller we will re-submit this request and work with the Auditor-Controller to meet our needs for a dedicated donation fund as well as Auditor-Controller requirements.</p>	<p>September 2015</p>
<p>Recommendation 23: OC Animal Care management should continue to work with OCCR and CEO/Real Estate to establish a marketing plan that would allow OC Animal Care to pursue private sponsorships.</p>	<p>Concur</p>	<p>In process - A marketing plan was developed by OCCR in January 2014 but was put on hold per the CEO. Subsequently, CEO approval to agendize the proposed plan for Board consideration was approved. This item is set for a March 2015 Board agenda.</p>	<p>February 2016</p>

Recommendation	Management Response (Concur/Partially Concur/Do Not Concur)	Management Action Plan	Target Completion Date
<p>Recommendation 24: OC Animal Care management should modify the volunteer onboarding process to (1) require all potential volunteers to complete the volunteer application, including a consent to the requisite background check, as part of the initial RSVP process; (2) allow prospective volunteers to RSVP at any time; and (3) include those potential volunteers in the earliest possible orientation session.</p>	<p>Concur</p>	<p>OCAC will implement this recommendation.</p>	<p>September 2015</p>
<p>Recommendation 25: OC Animal Care management should expand the list of volunteer activities to include additional duties at the Animal Shelter, such as assisting with public visits and shelter beautification projects.</p>	<p>Concur</p>	<p>OCAC currently hosts several volunteer beautification days at the shelter each year. Volunteers paint, garden and spruce up areas around the shelter. OCAC will determine if there are additional duties that can be assigned to the volunteers, and potential labor relations and liability issues. OCAC will consider the type of training required for the volunteers, who would supervise them in their new duties and how they would be scheduled. OCAC to determine the level of volunteer interest and if they would be willing to perform these additional duties.</p>	<p>December 2015</p>
<p>Recommendation 26: OC Animal Care management should ensure that all training sessions required by law or OCAC policy are completed by staff.</p>	<p>Concur</p>	<p>In process - At this time, OC Animal Care policies are currently being audited for relevance and consistency with industry and legal standards. When completed, training sessions will be amended as needed.</p>	<p>January 2016</p>

Recommendation	Management Response (Concur/Partially Concur/Do Not Concur)	Management Action Plan	Target Completion Date
Recommendation 27: OC Animal Care management should develop formal training opportunities for staff on relevant topics including both technical skills and soft skills.	Concur	In process - Training programs are being reviewed and updated to provide additional training to staff beyond their basic duties.	January 2016
Recommendation 28: OC Animal Care management should identify dedicated data analytics resources/personnel within OC Animal Care to coordinate all operational aspects of the OC Animal Care's enterprise software systems (i.e., Chameleon and Crystal Reports).	Partially Concur	As OC Animal Care's programs have grown in scope and complexity, so has our need for a dedicated data analytics position. OCAC will work with CEO Human Resources and Budget to determine the viability of adding an additional position to our department.	January 2016
Recommendation 29: OC Animal Care management should establish regular training sessions on its enterprise software systems for all relevant employees, including all management and administrative staff.	Concur	In process - Each unit at OC Animal Care currently trains personnel on proper Chameleon data entry and Chameleon related policies and procedures. New employees receive Chameleon training and all employees receive additional training when procedures or policies are updated or changed. Employees also receive refresher training when error reports show recurring data entry errors. OCAC will establish regularly scheduled refresher training for all staff.	December 2015

Recommendation	Management Response (Concur/Partially Concur/Do Not Concur)	Management Action Plan	Target Completion Date
<p>Recommendation 30: OC Animal Care management should conduct a review of existing system controls and take appropriate measures to ensure data integrity (e.g., enhance logic/limits of certain fields to ensure proper data entry).</p>	<p>Concur</p>	<p>In process - OCAC management staff will evaluate current reports to ensure their data integrity. Additionally, we will review fields in Chameleon to see which ones could be changed to Validated Lists to control the text choices staff has for data entry. We will also work with IT to assess the list of automated Postmaster Error Reports that we currently have pending to ensure it is still relevant and to add additional criteria. This is an ongoing project that we have been working on with IT and Chameleon since 2011.</p>	<p>November 2015</p>
<p>Recommendation 31: OC Animal Care management should hold all-hands staff meetings at least every quarter.</p>	<p>Concur</p>	<p>Quarterly all-hands meetings will be held.</p>	<p>June 2015</p>
<p>Recommendation 32: OC Animal Care management should provide an anonymous survey to staff annually in order to monitor staff morale and identify opportunities for improvement and report and track the results.</p>	<p>Concur</p>	<p>A survey will be provided to all staff on an annual basis.</p>	<p>January 2016</p>
<p>Recommendation 33: OC Animal Care management should periodically evaluate performance targets, and track and report Key Performance Indicators relevant to OCAC's mission and primary operating objectives.</p>	<p>Concur</p>	<p>In process - Key Performance Indicators were established in 2008. As our programs evolve and as targets are met, new indicators are established. These indicators will be reviewed annually to evaluate performance targets.</p>	<p>December 2015</p>

Recommendation	Management Response (Concur/Partially Concur/Do Not Concur)	Management Action Plan	Target Completion Date
<p>Recommendation 34: OC Animal Care management should establish quality assurance procedures to ensure that information reported on OCAC's website is accurate and consistent.</p>	<p>Concur</p>	<p>We will meet with shelter management and supervisors to review the contents of the shelter website to ensure that the information posted is accurate. In addition, we will develop a procedure to regularly review the website to ensure continued accuracy.</p>	<p>September 2015</p>

B. List of Local Shelters

Coastal Animal Services Authority
Dana Point
San Clemente
Inland Valley Humane Society
La Habra
Irvine Animal Care Center
Irvine
Laguna Beach Animal Services
Laguna Beach
Laguna Woods
Long Beach Animal Care Services
Los Alamitos
Mission Viejo Animal Services
Aliso Viejo
Laguna Niguel
Mission Viejo
OC Animal Care
Anaheim
Brea
Cypress
Fountain Valley
Fullerton
Garden Grove
Huntington Beach
Laguna Hills
Lake Forest
Orange
Placentia
Rancho Santa Margarita
San Juan Capistrano
Santa Ana
Stanton
Tustin
Villa Park
Yorba Linda
Unincorporated
Orange County Humane Society
Costa Mesa
Newport Beach
Seal Beach Animal Care Center
Seal Beach
Southeast Area Animal Control Authority (SEAACA)
Buena Park
La Palma
Westminster Veterinary Group
Westminster

C. FY 1998-99 Strategic Financial Plan Document

ATTACHMENT 5

REVISED STRATEGIC PRIORITIES ANALYSES

FY 1998-99 Strategic Financial Plan Update
Continuing Strategic Priority #1

I • ANIMAL SHELTER RELOCATION

I. DESCRIPTION OF ISSUE:

The Animal Shelter is the base of County operations for providing animal control and shelter services to the unincorporated areas of Orange County and 20 contract cities. This facility is located in the County's Manchester Complex in the City of Orange.

Two factors may cause the County to relocate the Animal Shelter:

1. The Animal Shelter is located adjacent to the Theo Lacy Branch Jail. The final build-out plans for expanding Theo Lacy have been structured in four phases which can be implemented as funding becomes available. Completion of the fourth phase requires the Animal Shelter to be relocated in order to provide space for parking. Unless a new funding source for jail construction and operations is developed, it is anticipated that the earliest phase four will begin in the year 2004.
2. The City of Orange has plans to extend Metropolitan Drive to improve access to the City Shopping Center which is currently being redeveloped. The Animal Shelter is located in the right-of-way that is required to extend the road. The County has agreed that the Animal Shelter can be relocated when the City needs the right-of-way for construction of the road extension. Officials from the City of Orange have indicated that the City is not likely to have funding for the extension of Metropolitan Drive within the next 10 years so it appears that the Theo Lacy expansion project will initiate the relocation of the Animal Shelter.

II. PLAN TO ADDRESS ISSUE:

The County is currently examining relocation and service delivery options with the contract cities. The plan for relocating the Animal Shelter is to construct a new facility at the MCAS Tustin. In 1995, the County submitted a request to the MCAS Tustin Local Reuse Authority (LRA) for a conveyance of land for the relocation of the Animal Shelter. The LRA approved 4 acres of land for the Animal Shelter within the proposed boundaries of an urban regional park. This land will be available to the County when the Marines close the base which is expected to be in 1999.

Health Care Agency (HCA) is currently working with the contract cities to develop long-term contracts for the County to provide animal control and shelter services to those cities. These long-term contracts will include sharing the cost of design and construction of the new Animal Shelter. The city representatives have indicated that they are willing to reach a long-term agreement for the new Animal Shelter by the end of FY 1998-99. At that time, the number of cities agreeing to long-term service contracts will be known and the size of the new facility can be designed based on the number of cities that will be served by the facility.

*FY 1998-99 Strategic Financial Plan Update
Continuing Strategic Priority #1*

Design of the new facility is anticipated to take about 14 months and construction is estimated to take about 20 months (including 4 months to advertise, bid, and award the contract). If design starts in the beginning of FY 1999-00, the facility would be completed by the end of FY 2001-02 which should not impact the expansion of Theo Lacy.

III. COST ESTIMATES:

1. **One-Time Costs:** One-time costs for this project include design (including CEQA costs), construction, and move-in costs (including communications lines, furnishings, and moving costs). Design is estimated to cost \$700,000, construction is estimated to cost \$5,900,000, and move-in costs are estimated to cost \$490,000.
2. **Ongoing Costs:** This project will relocate existing staff and operations to a new facility. There are no increased ongoing operating costs anticipated.

IV. FUNDING SOURCES:

If the relocation option is selected, the contracts with the cities will include provisions for sharing the cost of design and construction of the new Animal Shelter. The exact terms of the contracts are not known at this time. For the purpose of developing cost estimates for the long-range strategic plan, it is assumed:

1. Since the unincorporated areas of the County use about 10% of the services provided at the Animal Shelter, the County will continue to pay an estimated 10% of the annual costs and the cities will pay an estimated 90% of the annual costs.
2. The County will front the cost for design in FY 1999-00.
3. Cities fund about 90% of the existing Animal Shelter's cost. This includes depreciation on the existing facilities. Therefore, it is estimated that the cities have a 90% equity share in the existing facilities. Since the County is relocating the Animal Shelter to accommodate jail expansion, it is assumed that the cities' share of the construction cost of the new facility would be partially offset by their equity share in the existing facilities.
4. The County will finance the cost for construction over a 10 to 15 year period and be reimbursed by the cities over a 10 to 15 year period. Annual debt service, based on a 10-year period is estimated to be \$975,000. Cities' share is currently under negotiation.
5. Move-in costs will be incurred in FY 2001-02. Costs will also be shared by the cities and the County.

The County has \$5 million budgeted in Agency 158 which was set aside in 1995 for the Animal Shelter relocation in case the County could not access the financial markets to

FY 1998-99 Strategic Financial Plan Update
Continuing Strategic Priority #1

borrow funding when the jail project was ready to proceed. This \$5 million can be used to front the funds for design in FY 1999-00. The remainder of the \$5 million can be used to pay the County's share of debt service beginning in FY 2001-02 and to pay for the County's share of move-in costs in FY 2001-02. Therefore, for strategic planning purposes, no additional funding will be necessary based on the assumptions listed above. If the assumptions change as a result of negotiations with the cities, the CEO will revisit the funding plan.

V. STAFFING IMPACT:

No additional staffing is required to relocate the Animal Shelter.

I - Animal Shelter Relocation											
	FY 99-00 Budget	FY 99-00	FY 00-01	FY 01-02	FY 02-03	FY 03-04	FY 04-05	FY 05-06	FY 06-07	FY 07-08	Total
I. Costs											
One-Time Costs											
Design											0
Direct Services	700,000			977,375	979,865	975,410	979,170	975,645	974,995	977,330	7,000,000
Move-in Costs				490,000							7,182,185
Subtotal One-Time Costs	700,000	0	322,375	1,467,375	979,865	975,410	979,170	975,645	974,995	977,330	8,352,185
Operating Costs											
Salaries & Employee Benefits											0
Services and Supplies											0
Other Charges											0
Fixed Assets											0
All Others											0
Subtotal Operating Costs	0	0	0	0	0	0	0	0	0	0	0
Total FY Cost	700,000	0	322,375	1,467,375	979,865	975,410	979,170	975,645	974,995	977,330	8,352,185
II. Non-General Fund Revenue											
Taxes											0
Licenses, Permits, Franchises											0
Fines, Forfeitures, Penalties											0
Use of Money and Property											0
Intergovernmental Revenues											0
Charges for Services											0
Miscellaneous Revenue** & ***		630,000	322,375	1,467,375	979,865	975,410	979,170	975,645	974,995	977,330	8,282,185
Other Financing Sources (155)											7,000,000
Total Non-General Fund Revenue	700,000	630,000	322,375	1,467,375	979,865	975,410	979,170	975,645	974,995	977,330	8,962,185
III. General Fund Requirement*	0	(630,000)	0	0	0	0	0	0	0	0	(630,000)
IV. Staffing											
New Regular Positions											0
New Limited Term Positions											0
Total New Positions	0	0	0	0	0	0	0	0	0	0	0
*Interest payment only in FY 2000-01											
**Reimbursement for design is made to the General Fund											
*** Actual City/County salaries currently under negotiation.											
RD											
BR-12/0/00											

D. 2014 Shelter Consultation Summary Report



Orange County Animal Care

Shelter Consultation Summary

June 16, 2014

JVR Shelter Strategies, LLC

www.shelterstrategies.com

Dr. Jyothi V. Robertson
Dr. Chumkee Aziz
Virginia Butler

2014 Consultation for Orange County Animal Care

Thank you for inviting JVR Shelter Strategies and the Koret Shelter Medicine Program at UC-Davis to Orange County Animal Care on June 16, 2014. UC-Davis provided recommendations for improvement during a previous shelter consultation in late 2007. Our recent consultation noted areas of improvement, recommended during the 2007 consult, including the implementation of a trap-neuter-release (TNR) program for feral cats and increased surgery hours to reduce the length of stay for animals. Orange County AC has additional strengths to draw and build upon, including a diverse population of highly adoptable animals, as well as a proficient veterinary staff.

This consultation was limited in scope to medical services and those areas we were able to observe during a one day-site visit. The recommendations made here are based on current best practices and available research. As such, it is important for management to recognize that shelter medicine is a constantly growing field that is developing new research daily. Policies and procedures should be continuously evaluated in the context of OCAC's population data to assure that practices adopted are creating a positive impact and increasing the number of lives saved while working within the "care-ing capacity" of the organization. As new research occurs, some of the recommendations in this document may need to be modified to better serve the animals in the organization.

Outlined below is a list of observations noted during our recent visit along with correlating immediate, short-term, and long-term recommendations/goals. Overarching areas requiring improvement include population management/flow, infectious disease prevention, dog and cat housing, and medical care strategies. Recommendations have been provided to help achieve immediate goals. Please use the additional resources listed below and/or contact us for assistance in achieving longer-term goals.

Contact information

- Jyothi Robertson, DVM jvr@shelterstrategies.com
- Chumkee Aziz, DVM mcaziz@ucdavis.edu

Primary Reference Material

1. Association of Shelter Veterinarian's (ASV) Guidelines for Standard of Care in Animal Shelters, 2010, <http://www.sheltervet.org/about/shelter-standards/>
2. Previous UC-Davis Consult for Orange County Animal Care, 2007

Additional Resources

1. UC-Davis Koret Shelter Medicine Program – sheltermedicine.com
2. University of Florida Maddie's Shelter Medicine Program
<http://sheltermedicine.vetmed.ufl.edu/>
3. ASPCAPro – <http://aspcapro.org/>
4. Association of Shelter Veterinarians – www.sheltervet.org

Summary of Key Recommendations

1. A concerted effort must be taken to manage the population by using statistical analysis to determine optimal flow of animals. By analyzing capacity and outcome data, OCAC can allocate appropriate staffing, housing units, and outcome pathways to maximize their resources. The ultimate goal is to increase lives saved while working within the shelter's capacity to care for those animals in its facility. Capacity for care is determined in a multi-factorial fashion and requires understanding the population of animals within the shelter, the resources available, as well as how outcome and intake decisions are currently made. Operating within an organization's capacity for care leads to reduced incidence of disease and improves the overall welfare of all animals.
2. Track the rate of infectious disease in the shelter; use these calculations to quantify the impact of policy changes.
3. Implement daily rounds to monitor each animal's medical and behavioral well-being; this ensures that each animal is moved through the shelter as quickly and efficiently as possible.
4. Consider implementing open selection to allow all animals in the shelter, even those in their stray hold period, to be seen by the public and pet placement partners. This will decrease the length of stay for many animals by prioritizing animals needing surgery or behavioral evaluations or other processes that can otherwise slow down population flow in the shelter.
5. Implement a system of managed, or appointment-based, intake for owner-surrendered animals. Managed intake is based on the shelter's capacity to care for each animal and allows the shelter to gather more detailed and reliable information about the relinquished animal, which can then be used to determine the most appropriate outcome for the animal. Consider stopping the intake of healthy cats beyond the number that can be released alive. Continue to use TNR for feral cats and build relationships with third-party TNR groups to more efficiently coordinate live releases for ferals. Move towards shelter-neuter-release (SNR) for community cats that are brought in as strays if they are unlikely to have other live release outcomes.
6. Separation of species in housing areas is required; this reduces stress for all animals and lowers the chance of infectious disease transmission between species.
7. Ensure that the animals most vulnerable to acquiring infectious disease in the shelter (puppies and kittens) are moved into foster care as soon as possible. Never house a puppy or kitten within the general population.
8. Improve cat housing, cleaning/disinfecting protocols of cat housing, and medical strategies for treating feline upper respiratory infection (URI) to increase cat welfare, reduce stress and associated infectious diseases, and make daily cleaning more efficient.

9. Improve dog housing, cleaning/disinfecting protocols of dog housing, and medical strategies for treating canine infectious respiratory disease complex (CIRDC) to reduce the rate of infectious diseases and make daily cleaning safer and more efficient.
10. Discontinue spraying of animals in runs.
11. Determine staffing hours for cleaning, feeding, intake, and surgery using inventory and intake data. At the time of the consultation, there were 596 animals on site. Standards outlined by the Humane Society of the United States (HSUS) and the National Animal Care & Control Association (NACCA) state that each sheltered animal should have a minimum of 15 minutes daily for basic cleaning and feeding. Based on this estimate and the shelter's daily population on the date observed, it would take 18 staff members cleaning/feeding for 8 hours daily to ensure basic care for each animal is provided. Since this increase in staffing is unlikely to occur at this time, optimize current procedures to maximize staff's ability to provide high quality care to the animals. Consider increasing the volunteer program to provide additional support to staff.

Recommendations

Sections include:

- **Pathway Planning**
- **Veterinary Services**
 - **Disease Recognition and Diagnosis**
 - **Medical Recordkeeping**
 - **Treatment for Common Diseases**
 - **General Review of SOP's**
- **Intake Procedures**
- **Animal Care and Flow Through**
 - **Sanitation/Disinfection**
 - **Canine Housing**
 - **Feline Housing**

Pathway Planning

1. Pathway planning requires an understanding of the population and the potential outcomes for all animals. Planning for an animal's shelter stay so that they are moved efficiently through the shelter is a key component of a shelter health evaluation plan. By decreasing the length-of-stay for each animal in a shelter, more animals can be served by the organization while also decreasing the risk of disease for each individual animal.
2. The Orange County Animal Care medical team is currently not involved in population management or population flow decisions. As a new Chief Veterinarian will be hired, this person should be trained in understanding population dynamics and evaluating OCAC statistics to determine how to optimize animal flow. Key data points to track include:
 - a. Average Length-of-Stay to all Outcomes
 - i. Group by Species and Age
 - ii. Group by Intake status
 - iii. Roadblocks that increase length-of-stay include delays in moving animals to surgery, delays in behavior evaluations, and delays in moving animals to adoption areas. By optimizing procedures, OCAC will be able to decrease LOS. This decrease in LOS for each animal translates to fewer animals in the shelter at any given time, while still impacting the same number of overall animals. Decreasing the daily inventory by decreasing LOS leads to the shelter staying within its capacity for care.
 - iv. OCAC should track LOS on all animals and determine optimal pathways. A Fast Track / Slow Track system may be one way to move highly adoptable animals quickly through the shelter system. Those animals on the Slow Track should have additional enrichment opportunities since their LOS will

be longer to outcome. More on Fast Track/Slow Track can be found at:
<http://www.sheltermedicine.com/node/37>

- b. Live Release Rates
 - i. Compare with inventory
 - ii. Compare with intake
 - iii. Group by Species and Age
 - iv. Use these grouping to review patterns based on seasonality and evaluate the effectiveness of intake changes and population flow changes.
- c. General Intake/Outcome Data
 - i. Group by Species, Age, Breed
- d. Required Holding Capacity
 - i. Use this graph to determine the number of housing units to allocate to those animals in their hold periods as determined seasonally.
- e. Adoption and Transfer Driven Capacity
 - i. These numbers can assist with planning housing units for animals on the track to adoption or transfer.
 - ii. For OCAC, it may be beneficial to allow for open selection of all animals by potential adopters and transfer agencies, even during hold periods. In this situation, the ADC and TDC would not be utilized to determine housing areas since all animals would be open for viewing. Instead, these calculations can assist with projections for resources to be allocated to these populations.
 - iii. Resource: <http://www.sheltermedicine.com/shelter-health-portal/information-sheets/developing-intake-and-adoption-decision-making-criteria>
- f. Staffing capacity calculations
 - i. Staffing capacity for animal care
 - ii. Staffing capacity for surgery
 - iii. Staffing capacity for intake
 - iv. These values are based on historical inventory and intake data and the average time for each of these procedures. Reviewing these numbers allows management to determine if the optimal number of staff is available for each task.

Veterinary Services

1. Disease Recognition and Monitoring

a. Observations:

- i. There is both a lack of training regarding what signs constitute disease and a lack of clear instructions for staff regarding expectations when confronted with disease.
 1. Kennel staff is reluctant to report clinical signs to the medical staff.
 2. Kennel staff and medical staff are not consistently recognizing disease in the population.

b. Recommendations:

- i. Implement daily medical rounds at least once every 24 hours by a veterinarian or veterinary technician to visually observe and monitor the health and wellbeing of every animal; it is unacceptable not to do so (ref: ASV Guidelines, pg 21).
 1. Daily rounds allows for prompt recognition of problems or needs of animals; it thereby ensures animal health and welfare, and moves each animal through the shelter efficiently.
 2. Use Chameleon to create medical to-do lists accordingly.
 3. Reference on daily rounds: <http://sheltermedicine.com/node/47>
- ii. Train staff in disease recognition
 1. Create a written protocol and provide a formal training session for kennel staff regarding what clinical signs of disease to recognize during daily cleaning (recognizing pain, stress, and behavioral concerns are important, as well).
 - a. Resource on developing infectious disease protocols - <http://www.sheltermedicine.com/node/349>
 2. Develop one consistent system for kennel staff to communicate health concerns to the medical staff, such as only using the white, dry-erase board in the medical room, or using a clipboard with a medical log.
 - a. If using the whiteboard, ensure that all notes recorded for an individual animal are also recorded in a permanent record, such as Chameleon. A permanent log allows staff to review previous entries in the event of an outbreak to determine the first incident case of disease. It also provides additional information on each animal and points to potential chronic health concerns.
 3. Implement cage-side monitoring sheets to record clinical signs of individual animals.
 - a. Individual animal monitoring sheets allow staff and volunteers to make notations about behavior, food intake, health status, and preferences, among other things.

- b. Cage-side monitoring sheets are likely a long-term solution that should be implemented after training and daily rounds are implemented successfully.
 - c. Resource for cage-side monitoring sheets - <http://www.sheltermedicine.com/documents/daily-monitoring-sheet-with-behavior-check>
 - d. Resource for daily observation sheets - <http://sheltermedicine.vetmed.ufl.edu/files/2012/07/Daily-Observation-Sheet.pdf>
 - iii. Develop a system to track disease rates.
 - 1. Track the number of sick versus healthy animals per day (i.e., the number of sick cats with upper respiratory infection versus healthy cats). Determine rates by examining the number of healthy animal care days versus the number of sick animal care days.
 - 2. Use Chameleon to track disease.
 - 3. Determine on a monthly, seasonal, and annual basis which pathogens are primarily effecting the population and what percentage of the population is affected.
 - 4. Monitor the change in disease rates as other policy changes are implemented.
 - 5. Determine the daily cost of housing a sick animal, versus housing a healthy animal. Compute the overall cost of caring for sick animals at the shelter based on sick animal care days. Use these calculations to demonstrate the value of expending some resources to make improvements to the shelter that decreases disease in the population.
 - 6. Resource - <http://www.sheltermedicine.com/node/384>
- c. Medical Recordkeeping
 - i. Medical staff records all veterinary exams in Chameleon animal records.
 - ii. A log of medical observations for all animals should be maintained to track disease and identify early clinical signs of disease. A long-term goal should be to have both cage-side observation sheets and complete Chameleon animal records that include behavior evaluations, medical exams, and any medical concerns observed.
 - iii. Other recommendations regarding recordkeeping and disease tracking will be made in specific areas of this document.

2. Medical Treatments and Administration

a. Observations:

- i. Medications are laid out on dry erase board that may lead to the potential for medications to fall (as occurred during the site visit) and be given to the wrong animal.
- ii. Medications are thrown into dog kennels inside meatballs without consistent verification that the medication has been taken.
- iii. Medications are not labeled consistently.
- iv. Gloves are not used consistently in between sick animals during administration of medications.
- v. Medical treatment sheets do not denote the reason for treatment (ie. infectious agent or not) leading to technicians not accounting for risk of disease transmission when determining the order in which to administer medications.

b. Recommendations:

- i. Use a push-cart with medications on it to prepare medications during the walk-thru of the dog kennels and cat wards; this ensures that the correct medications are being administered to each animal.
- ii. Offer the medication meatball in a small paper tray labeled with animal I.D.; after completing administration of medications to all animals, check trays to ensure that meatballs are gone. Institute a policy that cleaning staff must report any uneaten medications that they find, to the medical staff.
- iii. Prioritize treatments based on infectious potential (ie. handle respiratory cases last) by adding the clinical diagnosis onto the medical treatment sheet.
- iv. Specific references on drug choices and doses will be given directly to the veterinary staff.

c. Treatment of Canine and Feline Upper Respiratory Infection (URI) - Observations:

- i. Currently staff is using clavamox or minocycline for canine URI and azithromycin or clavamox for feline URI.
- ii. Currently chlorpheniramine is used as a decongestant for feline URI.
- iii. Topical BNP or erythromycin are used as ophthalmic ointments for conjunctivitis associated with feline URI.

d. Treatment of Canine and Feline Upper Respiratory Disease (URD) - Recommendations

- i. Switch to doxycycline as first line of defense against URI for dogs and cats.
- ii. Doxycycline is proven to be effective against Bordetella, Chlamydoghila, and Mycoplasma – three bacteria often implicated in URI.
- iii. Doxycycline only needs to be administered once daily and is more cost-effective than other medications currently used to treat URI.
- iv. Doxycycline tablets can be made into a liquid compound for cats.
- v. Minocycline can be substituted for doxycycline if doxycycline is unavailable.

- vi. Discontinue use of chlorpheniramine as it has not been proven effective for treating decongestion associated with feline URI and may induce additional stress when medication is administered.
 - vii. Discontinue use of topical BNP for conjunctivitis in feline URI as it has been reported to cause anaphylactic reactions in some cats; oral doxycycline penetrates ocular tissue and can treat conjunctivitis associated with URI.
 - viii. Continue to develop written protocols for infectious disease management including clinical sign recognition, when to change treatment course, and definitions of treatment failure.
 - ix. Rewrite take-home instructions regarding feline URI to correlate with current thinking on feline URI. Include aspects of stress-reduction in the write-up. See www.sheltermedicine.com for examples of at-home instructions.
- e. Other SOP's related to medical disease
- i. Additional recommendations were made verbally regarding protocols. Additional protocols can be reviewed as they are written by medical staff.

Intake Procedures

1. Intake of Owner Surrendered Animals - Observations
 - a. Intake staff member did not utilize a consistent set of questions to obtain information from owners relinquishing animals.
 - b. Intake is done on a first-come, first-serve basis and intake hours are 7am-10pm daily.
2. Intake of Owner Surrendered Animals - Immediate Recommendations
 - a. Ensure that owners complete an intake form with standardized questions regarding the medical and behavioral history for each animal surrendered (ref: ASV Guidelines, pg 19).
 - i. This allows for the shelter to gain useful information for each animal that can then be used to determine the most appropriate outcome for the animal.
 - ii. It can also provide insight regarding reasons for relinquishment, thereby allowing the shelter to provide intake diversion information (ie. alternatives for relinquishment or ways to support the owner so the animal can remain in its home, such as pet food, spay/neuter services, fencing, or temporary boarding).
3. Intake of Owner Surrendered Animals - Intermediate Recommendations
 - a. Implement managed, or appointment-based intake, for owner surrendered animals. Owners should call to make an appointment to surrender their pet. During this initial call, the shelter can provide intake diversion information if appropriate.
 - i. Scheduled intake promotes a surrender process that nurtures open discussion and makes the process more thoughtful for the owner and the shelter.
 - ii. It allows for more detailed and reliable information about the animal to be obtained.
 - iii. It allows the shelter to intake animals based on its capacity to provide an optimal outcome for each animal, thereby reducing each animal's length of stay and increasing the life-saving capacity of the shelter.
 - iv. References on managed intake:
 1. <http://www.sheltermedicine.com/shelter-health-portal/information-sheets/length-of-stay#los>
 2. http://www.maddiesfund.org/Maddies_Institute/Articles/Cats_by_Appointment_Only.html
4. Intake Procedures and Processing – Observations
 - a. Newly admitted animals are temporarily held in the intake office on a tether or in a cage, and appropriate biosecurity measures to limit infectious disease transmission were not taken between handling each animal.

- b. The medical room is used to process intake animals and is also used to examine sick/injured animals, allowing for potential disease transmission between sick and healthy animals.
 - c. Appropriate biosecurity measures were not taken between processing each new animal.
 - ii. Gloves and/or hand-washing between animals is inconsistent during processing.
 - iii. Cleaning of the processing table and the baby scale is inconsistently done with a quaternary ammonium cleaner between animals.
 - f. The veterinarian processes many animals for intake by administering vaccinations and flea control.
 - d. Individual identification, such as a collar, is not provided to each animal on intake.
 - g. All animals (over 4 weeks of age) are not vaccinated on intake.
 - e. All animals (over 2 weeks of age) are not consistently dewormed on intake. Drontal is used as the primary dewormer.
 - f. Reconstituted vaccines are stored in the refrigerator for later use.
5. Intake Procedures and Processing – Immediate Recommendations
- a. Ensure that the area in the intake office is cleaned/disinfected with accelerated hydrogen peroxide (Accel) each time a new animal is handled. Wear gloves or wash hands in between handling animals (use hand sanitizer at a minimum).
 - b. Dedicate one of the tables in the medical room for processing intake animals and the other table for handling medical cases such as sick/injured animals.
 - c. Ensure that appropriate biosecurity measures are taken between processing each new animal.
 - i. Use a separate set of gloves or sanitize hands between handling each animal.
 - ii. Use Accel to clean/disinfect the processing table and the baby scale each time a new animal is handled.
 - d. Ensure that trained staff members are processing animals for intake. Re-focus the veterinarian's time on tasks that cannot be completed by other staff, such as working on medical cases.
 - e. Affix an identification collar to each animal or ensure that each animal has a blue, 4 digit identification tag with it everywhere it moves (ref: ASV Guidelines, pg 6).
 - f. All kittens and puppies, whether housed in the shelter or in a foster home, should be vaccinated on intake with a modified live FVRCP and DHPP, respectively, starting at 4 weeks of age; repeat vaccinations should be done every 2 weeks until they are 18-20 weeks of age (ref: ASV Guidelines, pg 20).
 - g. All animals, including feral cats, should be vaccinated on intake; feral cats can be vaccinated in their trap by using a trap comb and confining them to one end.
 - h. All handleable animals, regardless of age, should be dewormed on intake. This was previously recommended (ref: 2007 UC-Davis Consult, pg 23).

- i. Switch to pyrantel pamoate (Strongid) as the intake dewormer if cost is a factor limiting the ability to deworm all animals on intake.
 - i. Strongid is less costly than Drontal and is effective against the zoonotic endoparasites of concern (round and hookworms). This was previously recommended (ref: 2007 UC-Davis Consult, pg 23).
- j. Use Chameleon to automatically create reminders for when re-vaccination, repeat deworming, and repeat parasite control is required for each animal.
 - i. Establish routine recheck appointments for all animals in foster care based on these reminders.
- k. Modified live vaccines (FVRCP & DHPP) should not be reconstituted until they ready for use.
 - i. Vaccine efficacy may be compromised after 1 hour of reconstitution and manufacturer guarantee is void when this is done. This was previously recommended (ref: 2007 UC-Davis Consult, pg 23).
- l. Intake Procedures and Processing - Longer Term Recommendations:
 - i. Create an area for intake that is separate from your medical room; ideally create two separate intake areas, one for cats and another for dogs.
 - ii. Reference for Intake Procedures: <http://sheltermedicine.com/node/48>
 - iii. Reference for consistent Intake Forms: <http://sheltermedicine.vetmed.ufl.edu/files/2012/07/Cat-Intake-and-Examination-Form.pdf>

Animal Care: Sanitation/Disinfection

1. Cat Areas - Observations:
 - a. Staff is gentle when handling cats.
 - b. There is consistent use of new gloves between handling each cat.
 - c. Spot cleaning is performed for cages not heavily soiled.
 - d. Although spot cleaning is practiced, every cat is completely removed from its cage at least once daily for cleaning.
 - e. Cleaning/disinfecting products, including Accel, Dawn dish detergent, and Super Kleenz cleaner are used sporadically, without clear guidelines regarding when to use.
 - f. Cats are placed in a temporary holding cage during cleaning which is not cleaned in between animals.
 - g. Cages suspected of housing panleukopenia positive cats are disinfected and kept empty for 3 days.
2. Cat Areas - Immediate Recommendations:
 - a. Make cleaning/disinfecting of cat cages as low stress as possible while still maintaining infectious disease prevention tactics.
 - b. Ensure that the daily cleaning order starts with healthy kittens, then healthy adults, then sick cats – this way the most vulnerable (younger, most at risk for acquiring infectious disease) are handled first before moving onto less vulnerable and then unhealthy animals (ref: ASV Guidelines, pg 15).
 - c. Switch to Accel for cleaning/disinfecting of vacated cages.
 - d. Use dawn and water for spot cleaning of occupied cages; spot cleaning allows for minimal handling, which results in lower stress levels and less chance of infectious disease transmission via fomites.
 - e. Thoroughly disinfect the temporary holding cage with Accel in between each cat, if the holding cage is absolutely necessary. It is better to have a cardboard carrier for each individual cat, if spot cleaning cannot be accomplished in a particular situation.
 - f. Cages properly disinfected for panleukopenia do not need to be kept empty for 3 days after disinfection; if used properly, Accel is effective against panleukopenia.
 - g. Create written protocols for cleaning/disinfecting that includes the order of cleaning, how to spot clean occupied cages, how to thoroughly clean/disinfect vacated cages, and the appropriate cleaner/disinfectant to use.
3. Cat Areas - Longer Term Recommendations:
 - a. Create portholes between cages so that each cat has more space.
 - i. This not only allows cats to eliminate away from food/water/bedding but also allows for expression of normal behavior.
 - ii. It allows for easier spot cleaning to be accomplished.
 - iii. It allows for less handling of the cats and therefore less stress and less chance of infectious disease transmission via fomites.

- iv. It makes daily care more efficient.
 - v. This was previously recommended (ref: 2007 UC-Davis Consult, pg 29).
4. Dog Kennels – Observations
- i. Kennels are hosed down with dogs still present in them.
 - ii. Guillotine doors are not utilized during cleaning.
 - iii. Newly vacated kennels are disinfected with BruClean.
 - iv. Kennels suspected of housing parvovirus positive dogs are disinfected and kept empty for 3 days.
- b. Dog Kennels - Immediate Recommendations:
- i. Discontinue hosing kennels down with dogs inside; this is unacceptable for the welfare of the animals (ref: ASV Guidelines, pg 15). The ASV guidelines also state that animals must allow the animal to remain dry and clean.
 - 1. Certain infectious diseases, including parvovirus, persist in moist environments, such as a wet kennel.
 - 2. Animals are more prone to developing skin infections when lying in wet kennels.
 - 3. This was previously recommended (ref: 2007 UC-Davis Consult)
 - ii. Switch to Accel for cleaning/disinfecting.
 - 1. Unlike BruClean, Accel remains effective in the face of organic debris.
 - 2. Use Accel everyday with the cleaning method described below.
 - iii. Switch to the “move one down” method described here for cleaning kennels to avoid spraying animals. This is a temporary solution. Using the kennels as double-sided runs is the ideal way to clean dog areas. The current design of the back of the run and the inability to use the guillotine doors limits the ability to clean using the ideal process.
 - 1. Leave one end run open (“Empty, Clean Run”)
 - 2. Move the dog from adjacent run (“Dirty Run”) down one kennel into the “Empty, Clean Run”
 - 3. Clean & disinfect the “Dirty Run” with Accel so it is now the new “Empty, Clean Run;” squeegee kennel down so it is dry
 - 4. Move next adjacent dog into the new “Empty, Clean Run”
 - 5. Repeat this process for entire section of kennels.
 - 6. Ensure that all identification materials (tags, kennel cards) are moved with each dog.
 - 7. Note: This process will take longer than current cleaning so it is important to make this a team effort similar to the feeding procedures currently used at the shelter. Recruiting volunteers to assist may be of benefit. If this process is not a feasible option at this time (due to costs or staffing), consider tethering the dog while the run is cleaned as a short-term option. A third option is to have volunteers take dogs to play yards or on walks during the cleaning process. The current process of spraying runs with animals in them

is not acceptable so action must be taken to find a solution that is feasible with the current staffing and housing situation.

- iv. Ensure that cleaning order starts with healthy puppies, then healthy adults, then sick dogs – this way the most vulnerable (younger, most at risk for acquiring infectious disease) are handled first before moving onto less vulnerable and then unhealthy animals (ref: ASV Guidelines, pg 15).
 - v. Kennels properly disinfected for parvovirus do not need to be kept empty for 3 days after disinfection; Accel is effective against parvovirus.
 - vi. Create written protocols for cleaning/disinfecting that includes the order of cleaning, how to spot clean occupied kennels, how to thoroughly clean/disinfect vacated kennels, and the appropriate cleaner/disinfectant to use.
- c. Dog Kennels - Longer Term Recommendations:
- i. Fix guillotine doors so that dogs can be segregated to one side of their kennel while the other side is being cleaned.
 - 1. This not only allows dogs to eliminate away from food/water/bedding, but it also reduces dog handling during cleaning, mitigates stress, minimizes disease transmission, and makes daily care more efficient and safe for staff.
 - 2. This was previously recommended (ref: 2007 UC-Davis Consult, pg 4)
 - ii. Consider building a new facility that will better accommodate the current feline and canine population. Even with the guillotine doors fixed, the current dog housing does not meet all guidelines and does not allow for easy disinfection of the indoor component.
- d. Medical Room – Observations:
- i. This room is currently used to examine intake animals as well as sick/injured animals.
 - ii. There is inconsistent use of gloves and/or hand-washing between animals.
 - iii. There is inconsistent cleaning of table and the baby scale with a quaternary ammonium cleaner between animals.
- e. Medical Room - Immediate Recommendations:
- i. Dedicate one table in medical room for examining intake animals and the other table for medical cases such as sick/injured animals.
 - ii. Use a separate set of gloves for each animal.
 - iii. Install hand sanitizers and use in between animals.
 - iv. Switch to Accel for cleaning/disinfecting.
 - v. Create a written protocol for cleaning/disinfection in this room.
- f. Medical Room - Longer Term Recommendations:
- i. Create an area for intake that is separate from your medical room; ideally create two separate intake areas, one for cats and another for dogs.
- g. References for Sanitation
- i. <http://sheltermedicine.com/shelter-health-portal/information-sheets/sanitation-in-animal-shelters>

Recommendations for Improving Cat and Dog Housing as it Pertains to Shelter Health

Sections include:

Dog Housing

Individual Cat Housing

Feral Cat Housing

1. Dog Housing – Observations:
 - a. Kennels are not truly double-sided compartments as guillotine doors are mostly non-functional.
 - b. Aggressive/quarantine and infectious dogs are not housed in doubled-sided compartments.
 - c. The back panel of kennels is made of wood.
 - d. Temporary dog housing units do not have guillotine doors and are difficult to disinfect.
2. Dog Housing – Longer Term Recommendations:
 - a. Replace/repair guillotine doors.
 - i. This allows dogs to eliminate away from where they eat/drink/sleep and allows for expression of normal behavior.
 - ii. It allows for kennels to be cleaned without dogs in them.
 - iii. It allows for safer handling of aggressive/quarantine dogs.
 - iv. It reduces infectious disease transmission and increases animal welfare.
 - v. This was previously recommended (ref: 2007 UC-Davis Consult, pg 4.)
 - b. Ensure that all kennel materials are completely disinfectable – replace back wooden panels of kennels with non-porous material.
 - c. Ensure that adjacent dogs do not have nose-to-nose contact by replacing side cement walls in the back of kennels with taller panels.
 - d. Eventually, a new facility should be built to accommodate the animal population. Current housing does not meet the guidelines for other aspects that were not within the scope of this consultation. Appropriate housing units with proper drainage and safe materials are a necessary aspect of maintaining the health of the population.
3. Areas of Individual Cat Housing – Observations:
 - a. Overall, cat housing is stressful for the reasons detailed below; stress induces herpesvirus-associated feline upper respiratory infection (URI).
 - b. Cats have limited places to hide or perch.
 - c. Although spot cleaning is practiced, every cat is completely removed from its cage at least once daily for cleaning.
 - d. Cat housing dimensions are currently too small to allow cats to express normal behaviors.

- h. Puppies are housed in same area as cats awaiting surgery, cats awaiting foster pick up, and queens with litters; significant barking is present in these areas.
 - i. Cat housing areas are poorly ventilated.
4. Areas of Individual Cat Housing - Short Term Recommendations:
- a. Provide each cat with a hiding box or perch; this will help decrease stress levels and associated infectious disease rates by allowing cats to hide when they need to.
 - b. Continue spot cleaning cat cages that are not heavily soiled; this allows for minimal handling, which results in lower stress levels and less chance of infectious disease transmission via fomites.
 - c. Rearrange housing within the “Cat Isolation” building such that animals are separated by species and age.
 - i. Separating species is strongly recommended due to increased stress levels when different species are housed together, as well as the potential for infectious disease transmission between species (parvovirus, Bordetella) (ref: ASV Guidelines, pg 28).
 - ii. This was previously recommended (ref: 2007 UC-Davis Consult, pg 29).
 - iii. Remove puppies from the “Cat Isolation” building and either move puppies out to foster ASAP or for the few that remain in the shelter, house these puppies within x-pens inside administrative offices.
 - iv. Do not move cats awaiting surgery into the “Cat Isolation” building; they can remain in their cages within “Cat Pavilion A or C” with appropriate cage-side signs stating they have been adopted and are unavailable.
 - v. Only use the “Cat Isolation” building to house cats that are most vulnerable to disease such as queens with litters or cats awaiting foster care.
 - d. Ensure there is adequate air flow through cat housing areas. In cat isolation areas, retrofit the existing windows to place screens, allowing air flow as a short-term solution.
 - e. As a long-term solution, design distinct isolation areas for cats with appropriately sized housing units in a new facility to prevent infectious disease transmission. .
5. Areas of Individual Cat Housing - Intermediate Recommendations:
- a. Create portholes between cages to provide more space for each cat.
 - i. This provides sufficient space for a cat to sleep and eat away from where it eliminates.
 - ii. It allows for spot cleaning to be conducted more easily.
 - iii. It allows for less handling of the cats and therefore less stress and less chance of infectious disease transmission via fomites.
 - iv. See additional recommendations with photos at the end of this document.
 - b. Improve ventilation and odor of cat housing areas by installing windows. A range of 10 to 20 fresh air exchanges are recommended per hour in animal care facilities. If proper air flow is not occurring, consider installing air filters and

temporary units to improve flow. Ideally, a facility will be designed in the future to account for proper ventilation but in the meantime, steps should be taken to improve the current situation (Reference – ASV Guidelines for Standards of Care pg. 10).

6. Feral Cat Housing - Observations:
 - a. Feral cats are housed together in cohorts based on the date of intake; they are kept overnight in a receiving cage.
 - b. Feral cats are housed near dogs and high human traffic areas.
 - c. There is a lack of vertical space in communal feral housing areas.
7. Feral Cat Housing - Short Term Recommendations:
 - a. Add shelving to provide vertical space for cats to occupy in feral housing areas.
8. Feral Cat Housing - Intermediate Recommendations:
 - a. Use a third party to conduct feral cat trap-neuter-release (TNR) so that feral cats do not have to be held for the legal stray hold.
 - b. Place partial visual barriers, such as vinyl covering or sheets, so cats can hide if they choose.

Note: Euthanasia procedures were briefly observed so the following statements relate to the few procedures observed by the consultation team.

1. Euthanasia – Observations:
 - a. Identification of animals was not done immediately prior to euthanasia
 - b. Animals were not weighed before euthanasia
 - c. Verification of death after euthanasia was not performed
 - d. A bird was present in euthanasia room while a dog was euthanized
2. Euthanasia - Immediate Recommendations:
 - a. Ensure that the identification of animals is checked before euthanasia (check Chameleon I.D. number and use a universal microchip scanner to ensure that a microchip was not missed).
 - b. Weigh animals and use a dosing chart to obtain correct dosage of euthanasia solution based on body weight.
 - c. Confirm death by using a stethoscope and/or look for cardiac standstill by placing a syringe & needle into the heart after euthanasia.
 - d. Do not allow animals to witness the euthanasia of other animals.
 - e. Ref: ASV Guidelines, pg 34-36

ADDITIONAL FELINE HOUSING RECOMMENDATIONS

Cat housing size and quality is closely linked to stress, risk for upper respiratory infection, and even chances for adoption versus euthanasia (Gourkow 2001; McCobb, Patronek et al. 2005). In addition to improving health and welfare, housing of adequate size and quality is easier and less time consuming to clean, and permits a greater degree of enrichment (such as provision of hiding boxes, beds and toys). The recommendations below are based on these recommendations.

CAGE SIZE

- Minimum recommendations for cage size have been developed, including at least 10.8 square feet of floor space per individual cat housing unit and at least 18.3 square feet of floor space per cat in group housing (Kessler and Turner 1999).
- Additional guidelines include sufficient size for the cat to stand and stretch to full body length, and at least 3 feet of separation between litter and food (National Research Council 1996).

SHORT TERM SOLUTIONS

Initially while developing a population plan that addresses capacity, the following steps may be taken to improve feline housing.

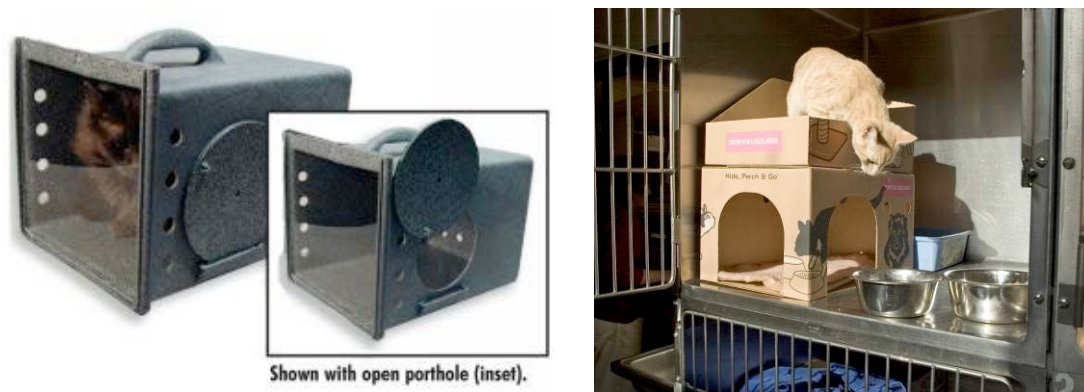
- When using shoreline cages or plexiglass/plastic cages in adoption areas, house cats in every other cage, giving two cages to each cat. Cats may then be moved to the adjacent cage during cleaning.
- Limit kitten co-housing to no more than two to three kittens in a cage when using cages. Housing two kittens is ideal unless dividing an odd numbered litter would result in one kitten being housed alone.
- Limit adult cat caged housing to no more than two cats.
- When cages are low to the ground, discontinue the use of the bottom row of cages. Smaller banks of cages can be elevated.
- Add shelves to larger cages (those of sufficient size to fit both a shelf and a hiding box), especially those on floor level. An alternative to a built in shelf is an after-market

perching shelf or a Kuranda cat bed,



www.kuranda.com).

- Obtain hiding boxes or carriers for every cat. Keep the box/carrier with the cat from the time of intake through to adoption. Below are examples of hiding box options. Sources of “feral” boxes are available from ACES: http://www.animal-care.com/cat_handling.aspx. Hide Perch n’ Go box is available from: <http://www.sPCA.bc.ca/hideperchgo/HidePerchGo.asp>



Shown with open porthole (inset).

- Plastic airline carriers can also be used, with a towel folded on top to serve as an additional option for the cat to sleep on. Even bags or cardboard boxes are preferable to not providing any hiding space.



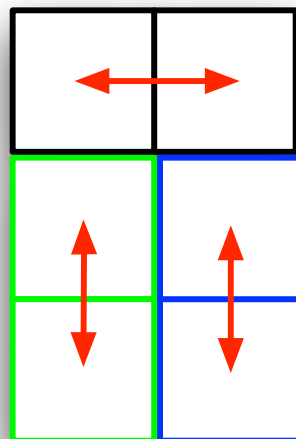
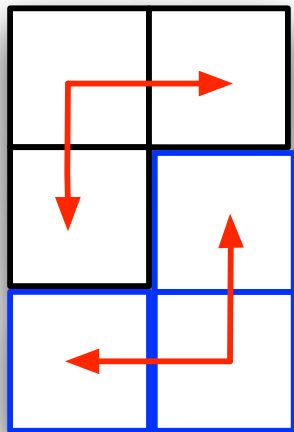
INTERMEDIATE SOLUTION

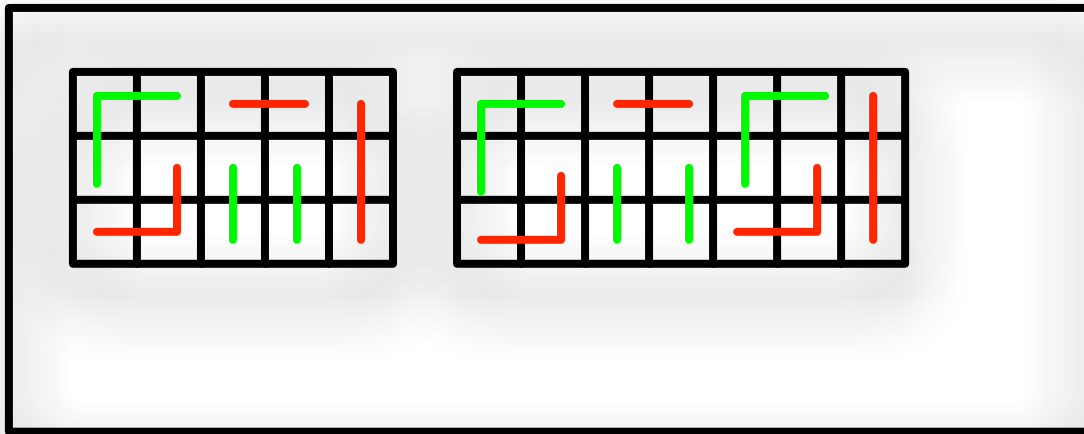
If overcrowding is not present and population pathway planning is occurring, the following recommendations may be adopted to improve feline housing units.

- Drill holes in cages to make larger housing units for individual cats. Holes may be drilled in many different combinations to create two room compartments, three units, or even larger for moms with litters. Two examples of holes are presented below. More information on how to drill holes in stainless steel cages is provided at the end of this document.



- Two examples of housing units with holes drilled between them. Six individual cages are divided into two condos with holes cut between cages. Six individual cages are divided into three condos with holes cut between cages.
- An example of a two shoreline banks is also provided below.





- When group housing cats, ensure that there is sufficient space per cat available. To decrease the risk of disease transmission, minimize the number of cats present. House cats in an all-in, all-out fashion to create stable groups.

Porthole Process

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Stainless Steel cat housing unit with 8 3/16" rough hole cut.



8" (Diameter) PVC Pipe cut into 3 3/16" Segments



8" (Diameter) PVC Coupler cut into .5" Segments. One Edge Beveled.



8" (Diameter) PVC pipe with 2 - 8" (Diameter) PVC coupler. Fully assembled Porthole.



8" (Diameter) PVC pipe with 2 - 8" (Diameter) PVC coupler. Fully assembled Porthole.



2 small housing units converted into 1 large housing until using an assembled porthole.



2 small housing units converted into 1 large housing until using an assembled porthole.

References for Medical Services

- Steneroden, K.K., A.E. Hill, and M.D. Salman, [A needs-assessment and demographic survey of infection-control and disease awareness in western US animal shelters](#). *Prev Vet Med*, 2011. 98(1): p. 52-7.
- Lord, L.K., et al., [Health and behavior problems in dogs and cats one week and one month after adoption from animal shelters](#). *J Am Vet Med Assoc*, 2008. 233(11): p. 1715-22.
- Dinnage, J.D., J.M. Scarlett, and J.R. Richards, [Descriptive epidemiology of feline upper respiratory tract disease in an animal shelter](#). *J Feline Med Surg*, 2009.
- Edwards, D.S., et al., [Risk factors for time to diagnosis of feline upper respiratory tract disease in UK animal adoption shelters](#). *Prev Vet Med*, 2008. 87(3-4): p. 327-39.
- Veir, J., et al. Prevalence of FHV-1, [Mycoplasma Spp.](#), and [Aerobic Bacteria in Shelter Cats with Acute Upper Respiratory Tract Disease](#). in ACVIM Forum. 2004. Minneapolis, MN.
- Bannasch, M.J. and J.E. Foley, [Epidemiologic evaluation of multiple respiratory pathogens in cats in animal shelters](#). *J Feline Med Surg*, 2005. 7(2): p. 109-19.
- Pedersen, N.C., et al., [Common virus infections in cats, before and after being placed in shelters, with emphasis on feline enteric coronavirus](#). *J Feline Med Surg*, 2004. 6(2): p. 83-8.
- Gaskell, R.M. and R.C. Povey, Transmission of feline viral rhinotracheitis. *Vet Rec*, 1982. 111(16): p. 359-62.
- Wardley, R.C. and R.C. Povey, Aerosol transmission of feline caliciviruses. An assessment of its epidemiological importance. *Br Vet J*, 1977. 133(5): p. 504-8.
- Schulz, B.S., G. Wolf, and K. Hartmann, [Bacteriological and antibiotic sensitivity test results in 271 cats with respiratory tract infections](#). *Vet Rec*, 2006. 158(8): p. 269-70.
- Veir, J.K., et al., [Prevalence of selected infectious organisms and comparison of two anatomic sampling sites in shelter cats with upper respiratory tract disease](#). *J Feline Med Surg*, 2008. 10(6): p. 551-7.
- Sykes, J.E., et al., [Differential sensitivity of culture and the polymerase chain reaction for detection of feline herpesvirus 1 in vaccinated and unvaccinated cats](#). *Archives of Virology*, 1997. 142(1): p. 65-74.
- Sykes, J.E., et al., [Detection of feline calicivirus, feline herpesvirus 1 and Chlamydia psittaci mucosal swabs by multiplex RT-PCR/PCR](#). *Vet Microbiol*, 2001. 81(2): p. 95-108.
- Gourkow, N., [Factors affecting the welfare and adoption rate of cats in an animal shelter](#). 2001, University of British Columbia.
- Klahn, S., et al. Factors Related to Feline Respiratory Disease Complex In An Open Admission Shelter. in Merck/Merial National Veterinary Scholar Symposium. 2005. Baton Rouge, Louisiana

Edinboro, C.H., et al., A clinical trial of intranasal and subcutaneous vaccines to prevent upper respiratory infection in cats at an animal shelter. *Feline Practice*, 1999. 27(6): p. 7-13.

Gaskell, R.M. and R.C. Povey, Experimental induction of feline viral rhinotracheitis virus re-excretion in FVR-recovered cats. *Vet Rec*, 1977. 100(7): p. 128-33.

Maggs, D.J., M.P. Nasisse, and P.H. Kass, [Efficacy of oral supplementation with L-lysine in cats latently infected with feline herpesvirus](#). *Am J Vet Res*, 2003. 64(1): p. 37-42.

Hickman, M.A., et al., [An epizootic of feline herpesvirus, type 1 in a large specific pathogen-free cat colony and attempts to eradicate the infection by identification and culling of carriers](#). *Lab Anim*, 1994. 28(4): p. 320-9.

Dvorak, G. and C. Petersen, Sanitation and Disinfection, in *Infectious Disease Management in Animal Shelters*, L. Miller and K.F. Hurley, Editors. 2009, Wiley-Blackwell: Ames, Iowa. p. 49-60.

Lauritzen, A., O. Jarrett, and M. Sabara, [Serological analysis of feline calicivirus isolates from the United States and United Kingdom](#). *Veterinary Microbiology*, 1997. 56(1-2): p. 55-63.

Newbury, S.P., et al. A placebo controlled field trial of an intranasal vaccine for feline calici virus and feine herpes virus to prevent clinical signs of feline infectious respiratory disease complex in an animal shelter. in *Conference of Research Workers in Animal Diseases, Proceedings of the 88th Annual Meeting*, . 2007. Chicago.

Hurley, K.F., et al., [An outbreak of virulent systemic feline calicivirus disease](#). *J Am Vet Med Assoc*, 2004. 224(2): p. 241-9.

Huang, C., et al., [A dual-strain feline calicivirus vaccine stimulates broader cross-neutralization antibodies than a single-strain vaccine and lessens clinical signs in vaccinated cats when challenged with a homologous feline calicivirus strain associated with virulent systemic disease](#). *Journal of Feline Medicine & Surgery*, 2010. 12(2): p. 129-137.

Poulet, H., et al., [Efficacy of a bivalent inactivated non-adjuvanted feline calicivirus vaccine: Relation between in vitro cross-neutralization and heterologous protection in vivo](#). *Vaccine*, 2008.

Ichinohe, T., et al., [Microbiota regulates immune defense against respiratory tract influenza A virus infection](#). *Proc Natl Acad Sci U S A*, 2011. 108(13): p. 5354-9.

Dossin, O., P. Gruet, and E. Thomas, [Comparative field evaluation of marbofloxacin tablets in the treatment of feline upper respiratory infections](#). *J Small Anim Pract*, 1998. 39(6): p. 286-9.

Ruch-Gallie, R.A., et al., [Efficacy of amoxicillin and azithromycin for the empirical treatment of shelter cats with suspected bacterial upper respiratory infections](#). *J Feline Med Surg*, 2008. 10(6): p. 542-50.

Speakman, A.J., et al., [Antimicrobial susceptibility of Bordetella bronchiseptica isolates from cats and a comparison of the agar dilution and E-test methods](#). *Vet Microbiol*, 1997. 54(1): p. 63-72.

Hartmann, A.D., et al., [Efficacy of Pradofloxacin in Cats with Feline Upper Respiratory Tract Disease due to Chlamydophila felis or Mycoplasma Infections](#). J Vet Intern Med, 2008. 22(1): p. 44-52.

Sturgess, C.P., et al., [Controlled study of the efficacy of clavulanic acid-potentiated amoxicillin in the treatment of Chlamydia psittaci in cats](#). Vet Rec, 2001. 149(3): p. 73-6.

Donati, M., et al., Feline ocular chlamydiosis: clinical and microbiological effects of topical and systemic therapy. New Microbiol, 2005. 28(4): p. 369-72.

Owen, W.M.A., et al., [Efficacy of azithromycin for the treatment of feline chlamydophilosis](#). Journal of Feline Medicine & Surgery, 2003. 5(6): p. 305-314.