



3 Year Trend Analysis of Intake and Euthanasia in Maryland Animal Shelters

Identifying Trends from Initial Quarter in 2013 through the
Fourth Quarter of 2016

FINAL

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Maryland Department of Agriculture

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MARYLAND DEPARTMENT OF AGRICULTURE
SPAY AND NEUTER GRANTS PROGRAM

3 YEAR TREND ANALYSIS OF INTAKE AND EUTHANASIA IN MARYLAND ANIMAL SHELTERS
Identifying Trends from Initial Quarter in 2013 through the Fourth Quarter of 2016

The purpose of this report is to determine if there have been any changes in the intake and euthanasia of dogs and cats in shelters state wide in the first three years since the inception of the Maryland Spay and Neuter Grants Program in late 2013.

Maryland Spay and Neuter Grants Program in Brief

The Maryland Spay and Neuter Grants Program is the result of the passage of Maryland Senate Bill 820 in 2013. The goal of the program is to reduce intake and euthanasia of cats and dogs in county shelters by providing grants to local government agencies and non-profit animal welfare organizations, who in turn provide free spay and neuter services and outreach to pets of low income Marylanders and to populations of feral cats. In order to increase spay and neuter capacity in general, the program also funds equipment costs for establishing new low cost spay/neuter clinics or to expand existing clinics. Finally, funds may also be used for specialized training in High Volume/High Quality Spay Neuter techniques for veterinarians and technicians.

The program is managed by the Maryland Department of Agriculture (MDA) and is funded solely from a special spay/neuter program fee charged to pet food manufacturers who have their products registered with the Maryland State Chemist Office.

In addition to awarding grants, the program collects intake and euthanasia data for the state. As required by Agriculture Article §§ 2-1602 and 2-1605, Annotated Code of Maryland, and starting in the last quarter of 2013, county animal shelters and shelters run by private organizations but contracted by counties to provide sheltering services must provide MDA with quarterly statistics on intake and disposition, including euthanasia (see Attachment 1 for sample survey data sheet). In addition to these facilities some private facilities voluntarily provide data or are required to provide data by the terms of a grant agreement with the program. Please see Attachment 2 for the list of shelters providing data. Each quarter the data provided by the shelters is combined and presented in state-wide quarterly report. Each report is posted on the program webpage and is available to the public. This data is intended to help



determine the impact that the program is having on intake and euthanasia state wide over time.

Summary of Program Grant Cycles to Date

The program began awarding grants in June of 2014. A total of 14 grants were awarded during this initial grant cycle (FY15 cycle), each grant representing a project with a specific target area that focused on pets of low income state residents. These projects either started in late December of 2014 or in January of 2015. For this cycle, only pets were targeted, and with a cumulative target goal of 5,340 spay/neuter procedures.

In 2015 (FY16 cycle) more 19 projects were funded to fix both pets and feral cats, with a cumulative target goal of 8,231 procedures and in 2016 (FY17 cycle) 26 projects were funded for both pets and feral cats with a cumulative target goal of 13,038 procedures.

In addition, 29 more projects were approved for funding for the FY18 cycle but as of this date were not yet active.

To date, of the FY15, FY16, and FY17 cycle projects, 20,688 (or 78%) of the funded spay/neuter procedures have been completed.

Data Examined

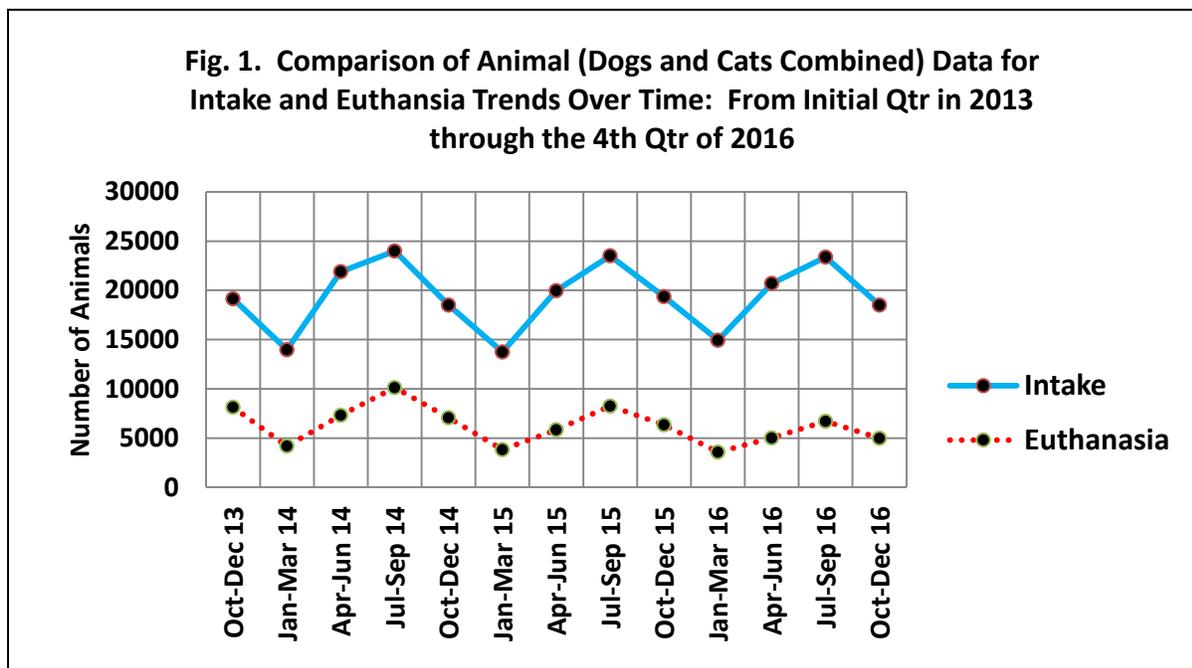
In late 2013, MDA requested intake and euthanasia data from all county animal shelters in the state. The shelters queried included government run shelters, shelters run by private organizations but contacted to the county to provide shelter services, and private shelters in hopes that they would choose to volunteer information. The 30 respondents included 26 county shelters and 4 private shelters. The data covered the period from October 1, 2013 through December 31, 2013 and is referred to as the Initial Quarter. This data set is considered the baseline by which future quarterly data would be compared. Subsequent to the Initial Quarter, shelters have supplied data every quarter thereafter (January-March, April –June, July –September, and October-December). All survey datasheets are retained by MDA and made available to the public upon request.

The information presented below represents the findings from the initial quarter through the final quarter of 2016, first presenting the findings pertaining to dogs and cats combined, then presenting cat and dog data separately.

Findings-Dogs and Cats (I.E. All Animals) Combined

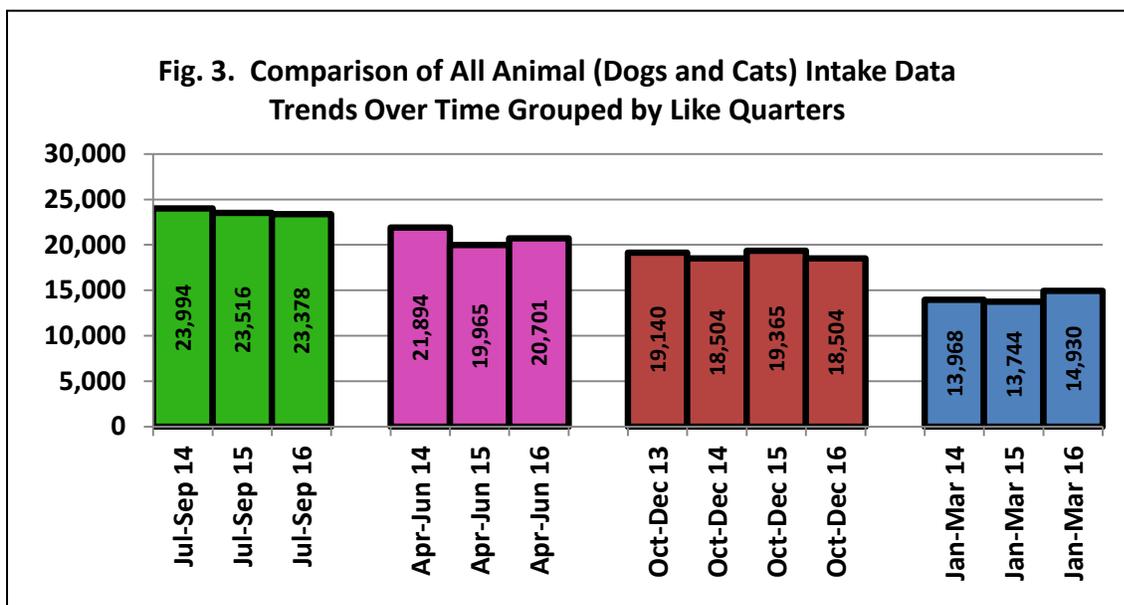
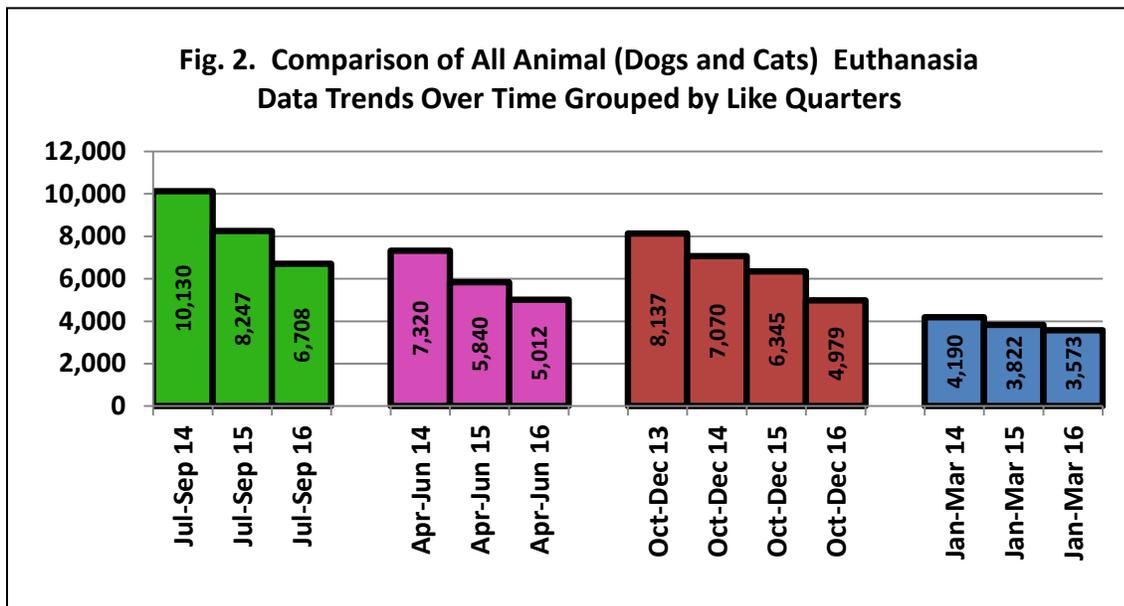
The graph below (Fig. 1) depicts the total number of cats and dogs combined that entered the shelters (i.e. intake) and were euthanized since the initial quarterly survey (October-December 2013) through the last quarter of 2016. The following can be seen from this data:

- There are distinct and parallel periods of peaks and valleys in intake and euthanasia that are consistent from year to year;
- Both intake and euthanasia peak during the summer quarter (July-September);
- The lowest period for both intake and euthanasia occurs during the winter quarter (January-March);
- Intake is at its second highest period during the spring quarter (April-June) and nearing the low period during the fall quarter (October-December);
- Conversely, euthanasia is at its second highest period during the fall quarter and nearing the low period during the spring quarter, though not to a great degree; and
- There is a gradual reduction of both intake and euthanasia, with both peaks and valleys trending lower over time.

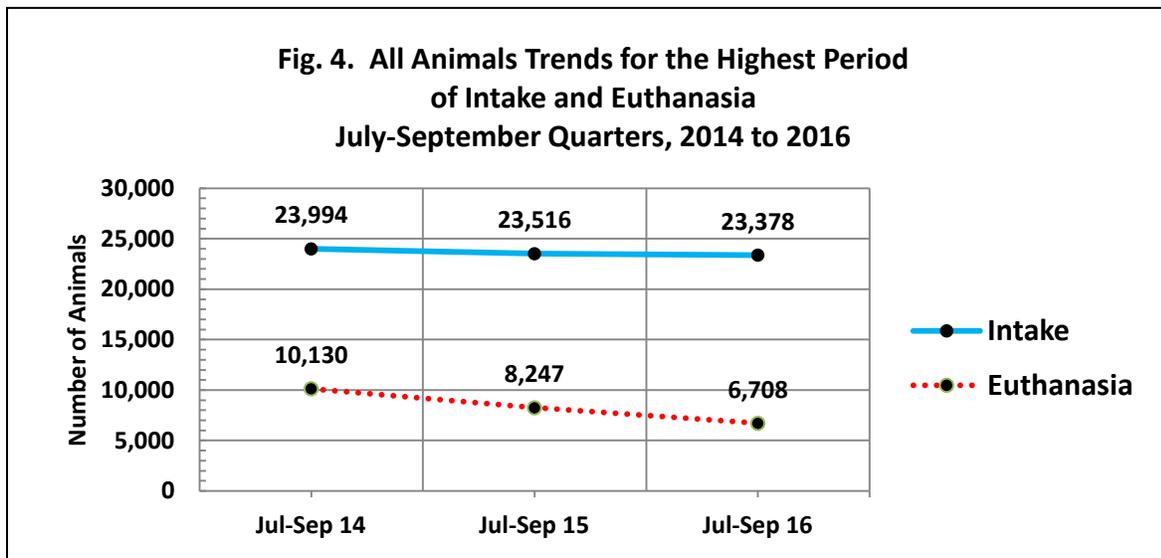


A comparison of euthanasia in the initial quarter in fall 2013 (8,137) to that of the last quarter in 2016 (4,979) -three years later- reveals a reduction of euthanasia by 3,158 animals or by 39%. To a much lesser extent, intake dropped from 19,140 in the fall of 2013 to 18,504 in fall of 2016; a reduction of 636 animals or by 3%.

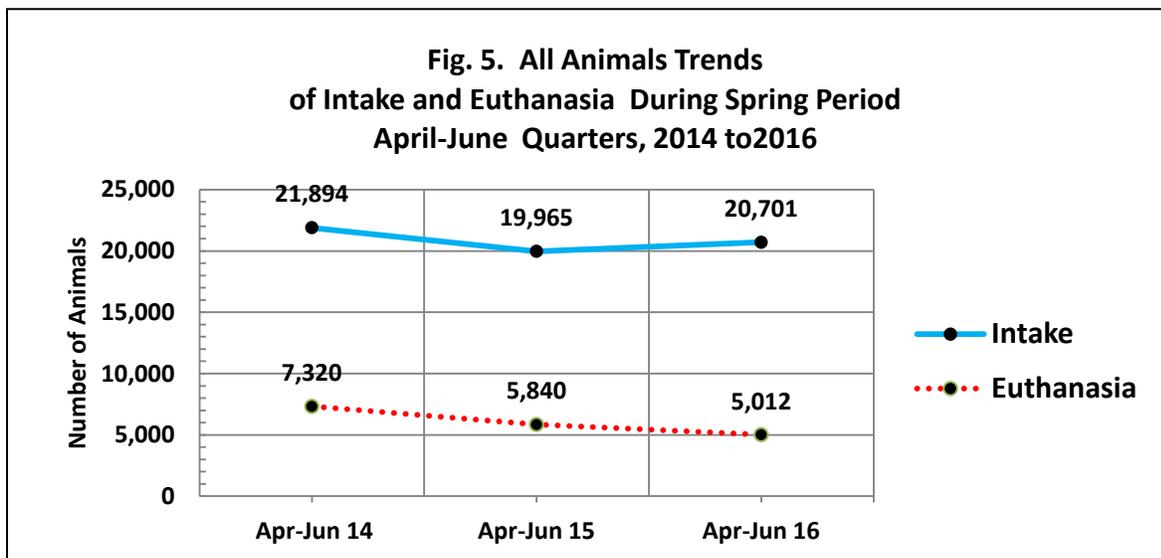
By comparing quarters covering the same time period (i.e. like quarters) consistent downward trends are easier to see (Fig. 2 and 3 below).



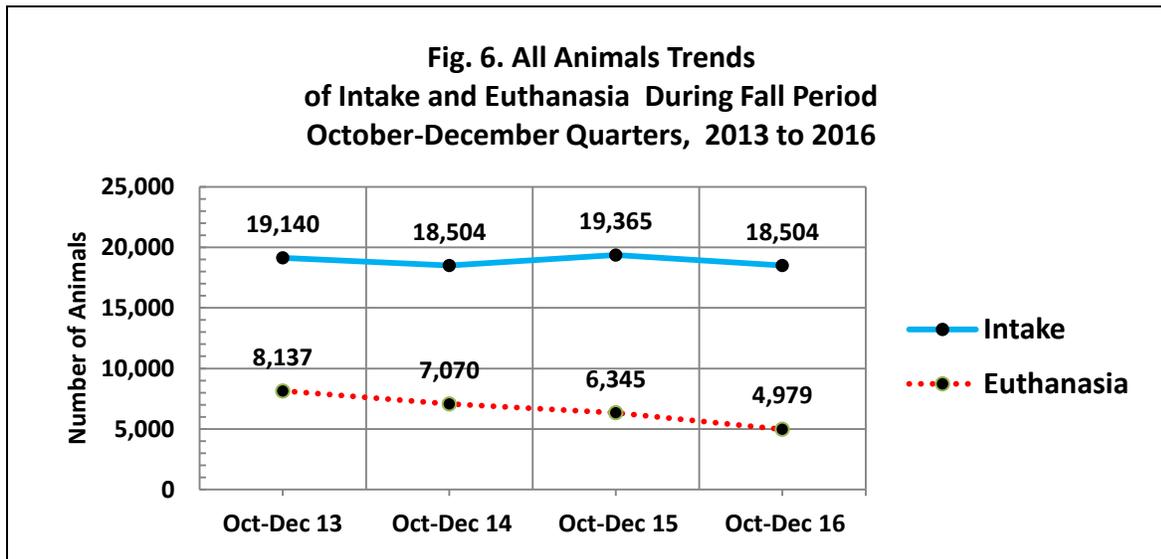
The following graphs show the changes in euthanasia and intake numbers between like quarters.



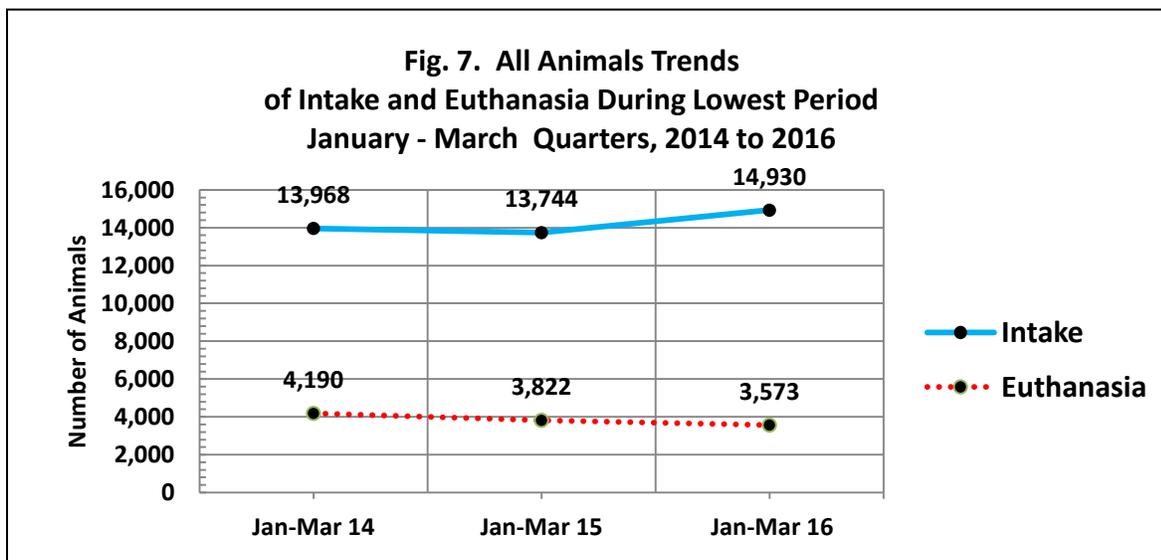
During the July-September timeframe (the period of highest intake and euthanasia during each year) from 2014 to 2016 (Fig. 4), euthanasia decreased by 3,422 animals or a decrease of 33%. Intake changes were much less with a decrease of 616 animals from 2014 to 2016 or less than 3%.



During the June-April timeframe (the next highest period for intake during each year) from 2014 to 2016 (Fig. 5), euthanasia decreased by 2,308 animals or a decrease of 31%. Intake decreased by 5%.



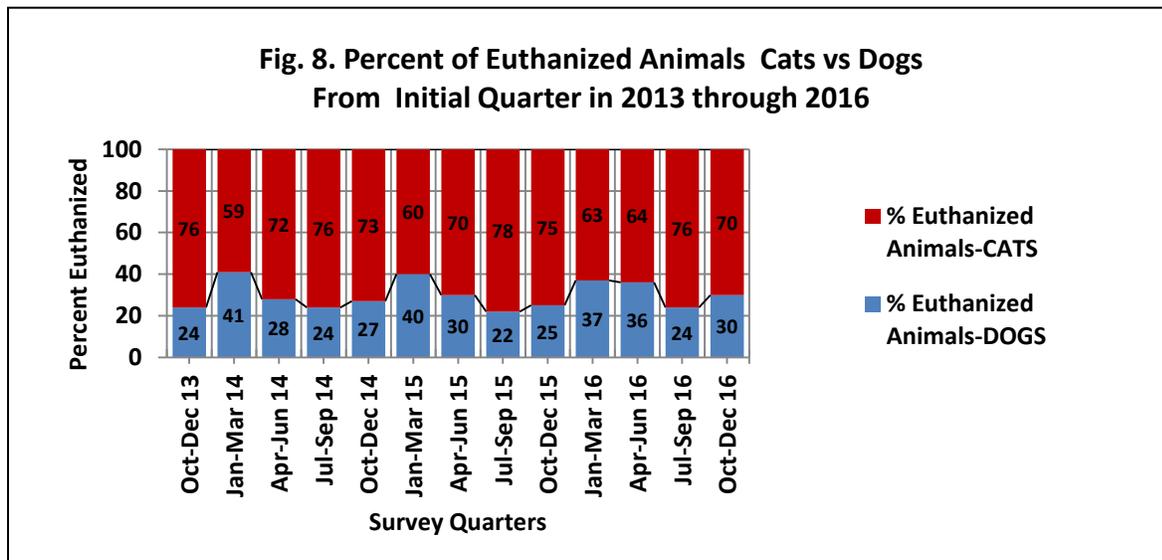
During the October-December timeframe (approaching the lowest period of intake but the second highest period for euthanasia during each year) from 2013 to 2016 (Fig. 6), euthanasia decreased by 3,158 animals or a decrease of 39%. Intake changes were much less with a decrease of 636 animals from 2013 to 2016 or 3%.



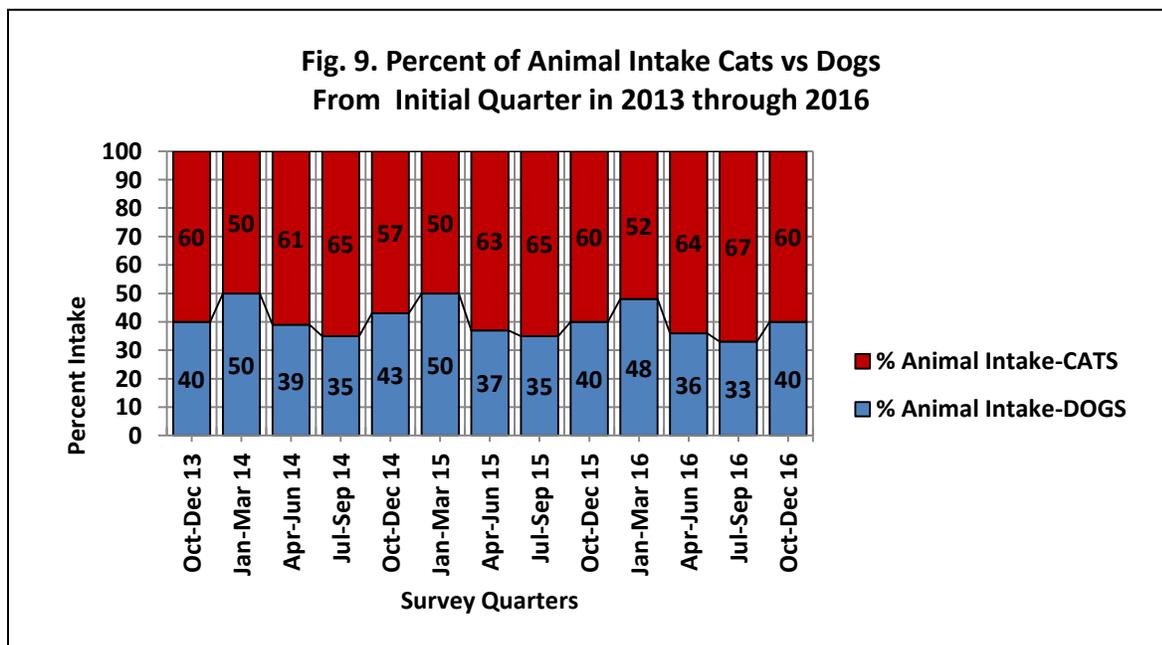
During the January-March timeframe (the lowest period of intake and euthanasia during each year) from 2014 to 2016 (Fig. 7), euthanasia decreased by 617 animals or a decrease of 15%. This was the only quarter where combined animal intake increased. Animal intake increased from 2014 to 2016 by 962 animals or 6%.

Findings-Cats vs. Dogs

In all 13 quarters considered in this report, cats make up the majority of the total animals euthanized, ranging from 59% to 78%, with an average percent of 70%. The percent of the euthanasia attributed to dogs ranges from 22 to 41%, with an overall average of 30% (Fig. 8).



Similarly, cats make up the majority of the intake (Fig. 9) with a percent ranging from 50 to 67% (with an average of 60%) and dogs ranging from 33 to 50% (averaging 40%).





Figures 10 and 11 show the euthanasia and intake of cats versus dogs from fall 2013, through fall 2016. Cat euthanasia dropped from 6,144 in the initial quarter to 3,503 (a difference of 2,641 cats or a decrease of 43%) and dog euthanasia dropped from 1,993 dogs to 1,476 (a difference of 517 dogs or a decrease of 26%). Throughout each year, peaks and valleys occur for both cats and dogs, with variability much more dramatic for cats. However, even with the variability, there is a decrease between like quarters with the exception of intake of cats in 2016, which increased (Fig. 14).

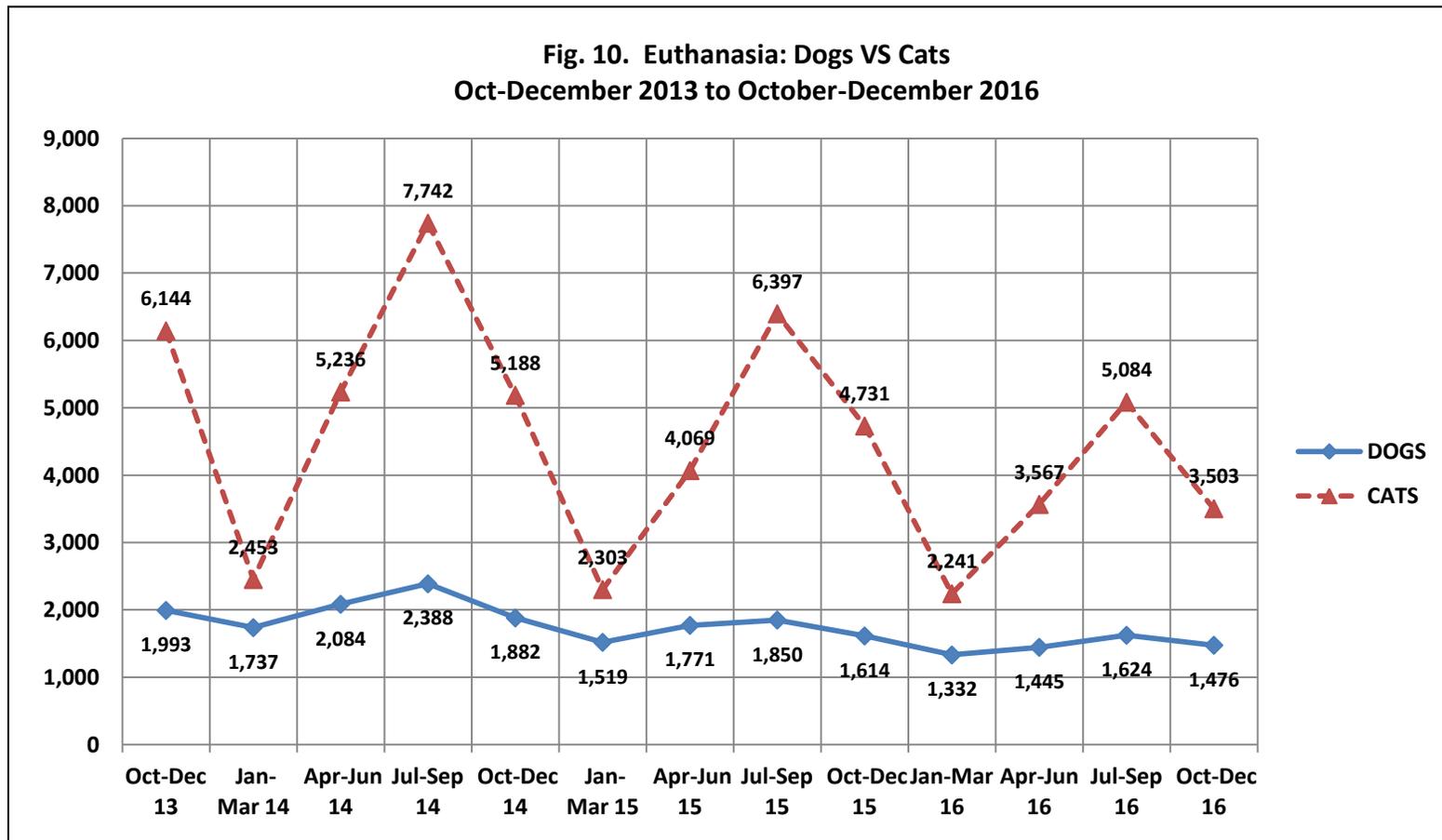
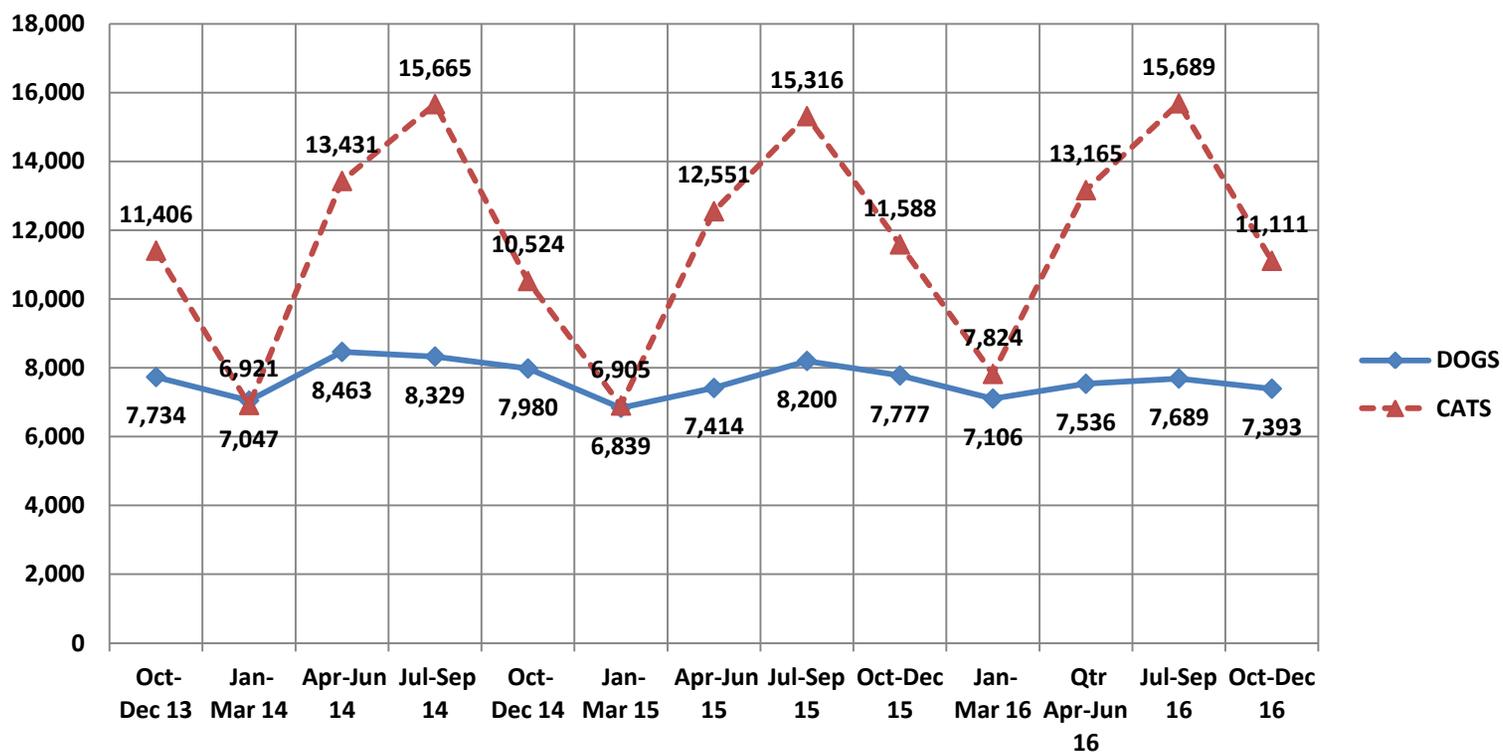




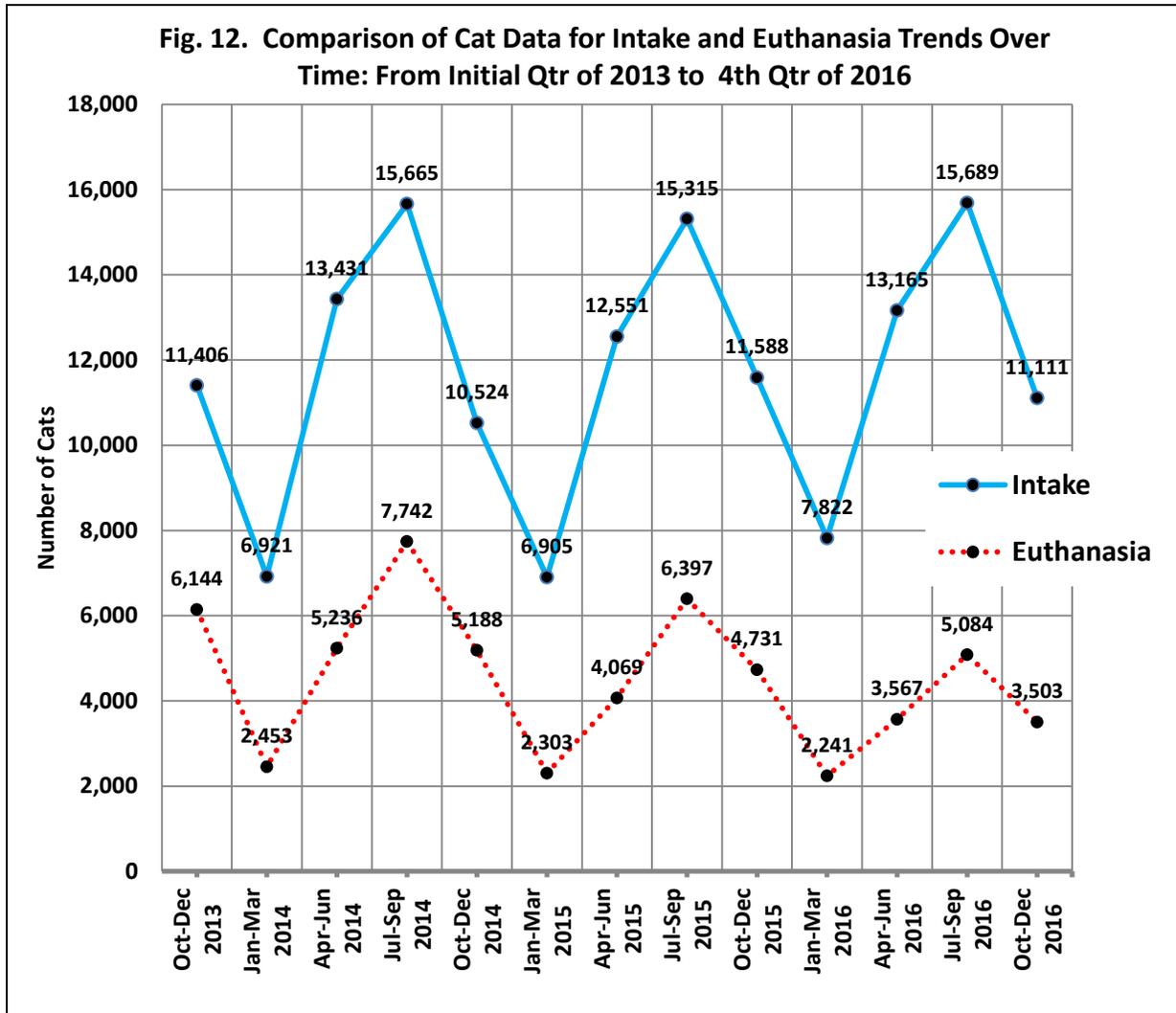
Fig. 11. Intake: Dogs VS Cats
Oct-December 2013 to October-December 2016





Cat Data: Comparing Like Quarters

By comparing the euthanasia and intake numbers between the initial quarter in 2013 to the final quarter in 2016, there has been a decrease in cat euthanasia of 43% and a decrease in cat intake by 2.6%.



Because of the variability from one quarter to the next (Fig. 12 above), it is helpful to compare like quarters to see the overall trend. When comparing each quarter to that of the same time period in each year, a downward trend is evident in euthanasia (Fig. 13 below). This was also the case with intake up until a spike in the fall of 2015 and an increase in all quarters of 2016 from that of the previous year. (Fig. 14 below).

Fig. 13. Comparison of Cat Euthanasia Data Trends Over Time Grouped by Like Quarters

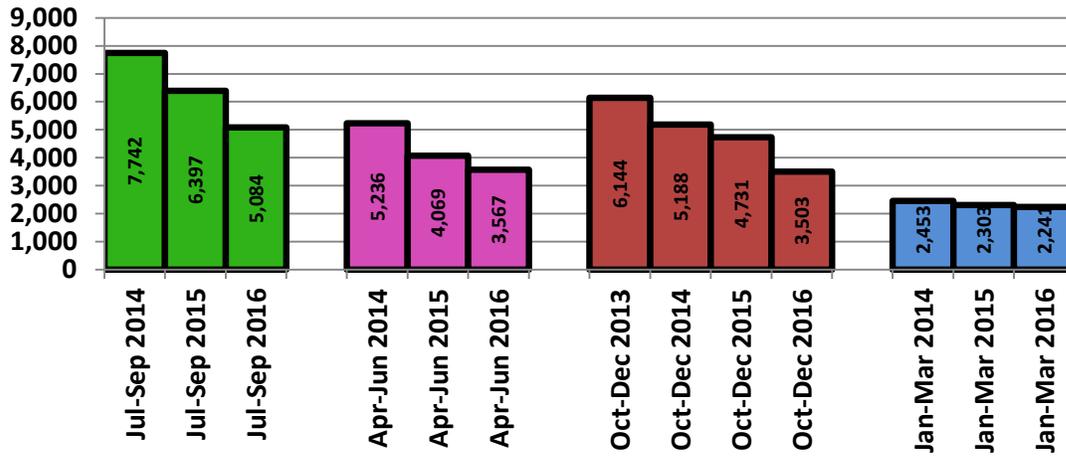
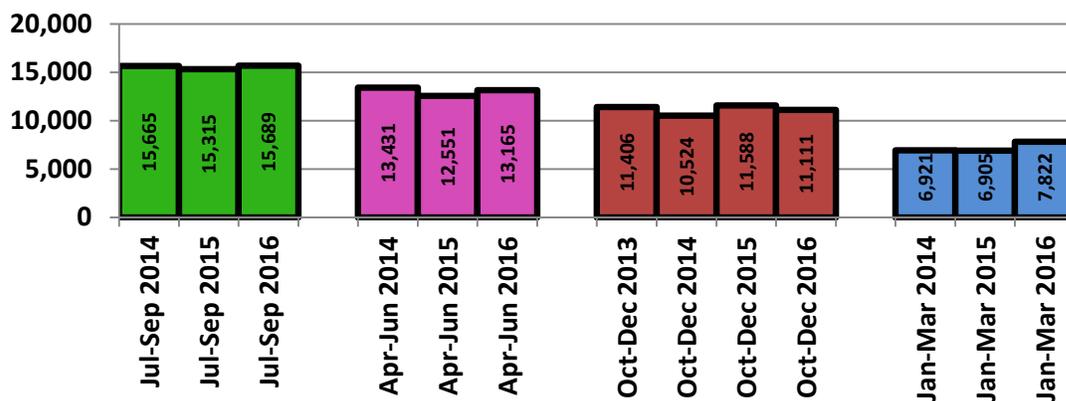
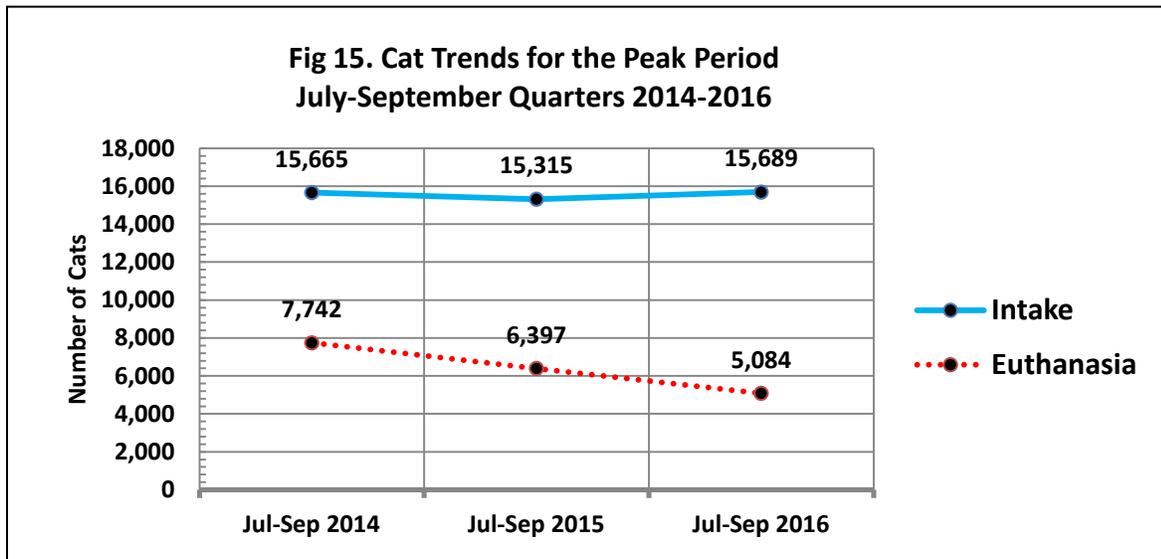


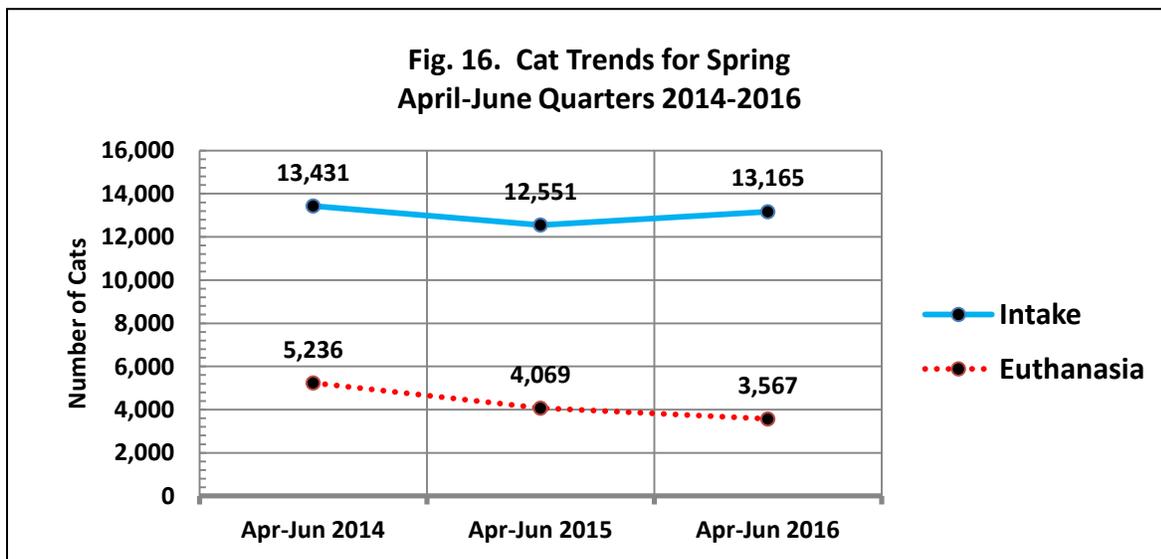
Fig. 14. Comparison of Cat Intake Data Trends Over Time Grouped by Like Quarters





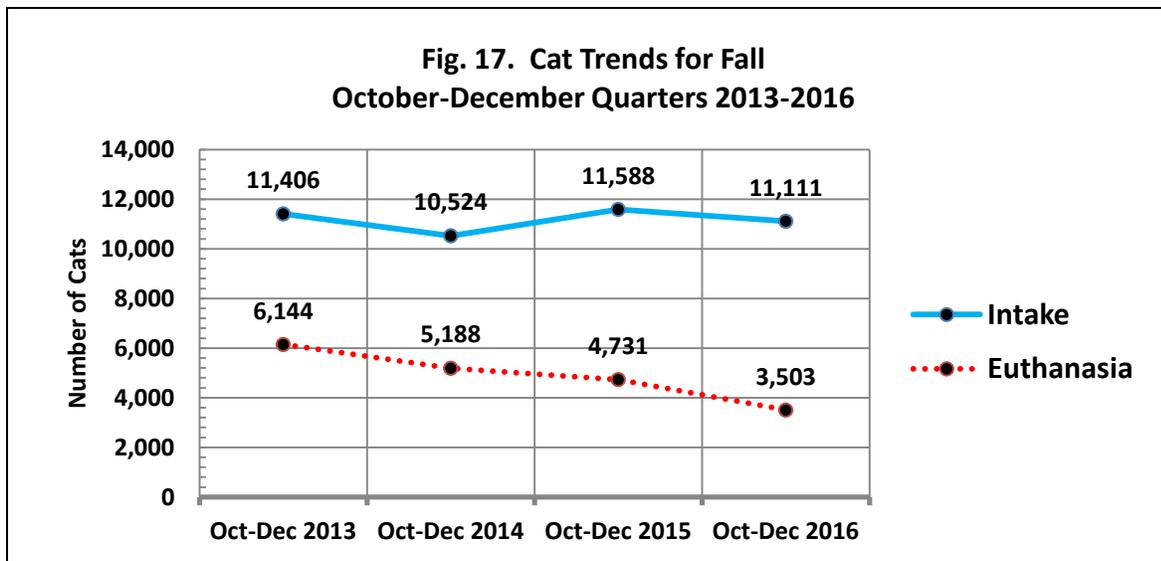
A comparison of the summer quarters (peak period, Fig. 15) shows a 34% decrease in euthanasia from 2014 to 2016. Euthanasia decreased from 2014 to 2015 by 17% and from 2015 to 2016 by 20%. Intake decreased from 2014 to 2015 by 2% but increased from 2015 to 2016 by 2%, resulting in very little difference overall.

For the spring quarters (Fig. 16), euthanasia decreased 32% from 2014 to 2016, at a rate of 22% from 2014 to 2015 and by 12% from 2015 to 2016. Intake decreased by 2% from 2014 to 2015 but increased by 5% from 2015 to 2016, resulting in a small decrease overall of 2%.

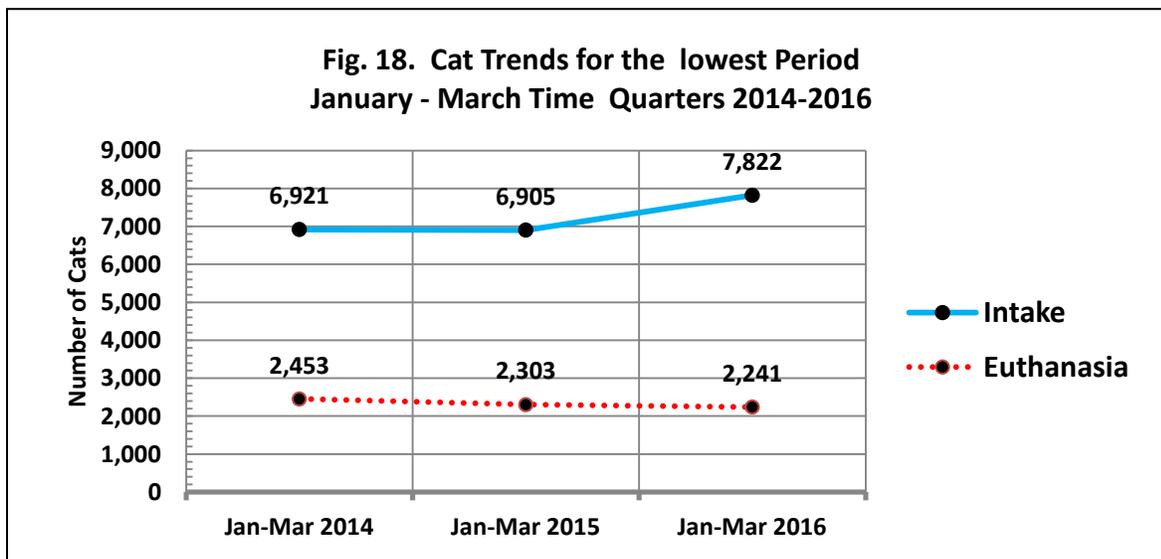




For the fall quarters (Fig. 17), which include the initial quarter in 2013, euthanasia decreased from 2013 to 2016 by 43%, at a rate of 15% from 2013 to 2014, by 9% from 2014 to 2015, and by 26% from 2015 to 2016. Intake decreased by 8% from 2013 to 2014, but increased by 9% from 2014 to 2015. Intake then decreased by 4% from 2015 to 2016, resulting in an overall decrease of 2%.



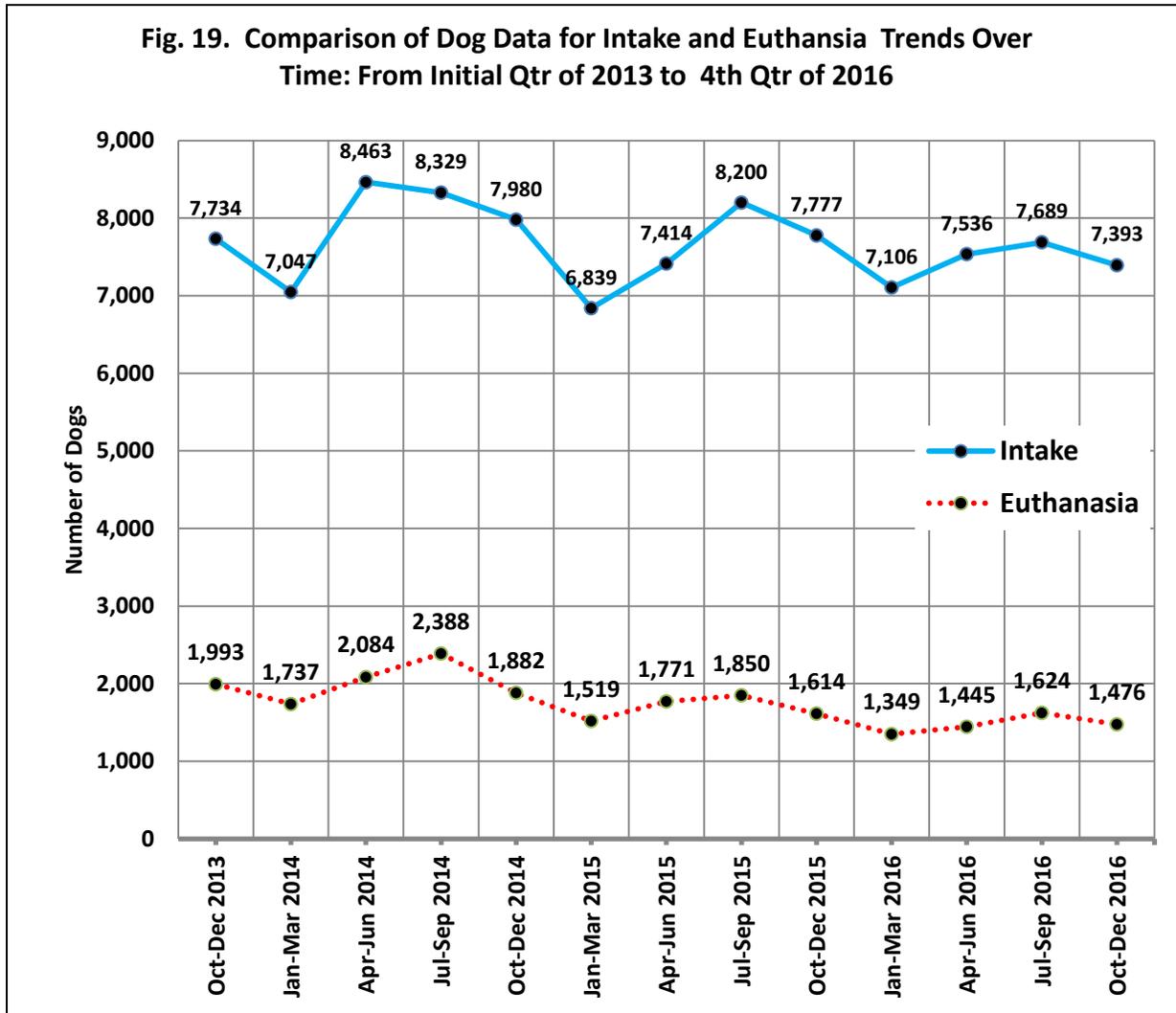
For the winter quarters (Fig. 18), the lowest period of the year, the overall decrease of euthanasia was 9%. Euthanasia decreased by 6% from 2014 to 2015 and by 3% from 2015 to 2016. Intake decreased by 0.2% from 2014 to 2015, but increased by 12% from 2015 to 2016.





Dog Data: Comparing Like Quarters

By comparing the euthanasia and intake numbers between the initial quarter in 2013 to the final quarter in 2016, there has been a decrease in dog euthanasia by 26% and a decrease in dog intake by 4%.



As with cats, there is variability in dog euthanasia and intake from one quarter to the next (Fig. 19 above), so it is helpful to compare like quarters to see the overall trend. When comparing each quarter to that of the same time period in each year, a downward trend is evident in euthanasia (Fig 20 below). This was also the case with intake during the peak quarter, but with more variability in the other 4 quarters (Fig. 21 below).

Fig. 20. Comparison of Dog Euthanasia Data Trends Over Time Grouped by Like Quarters

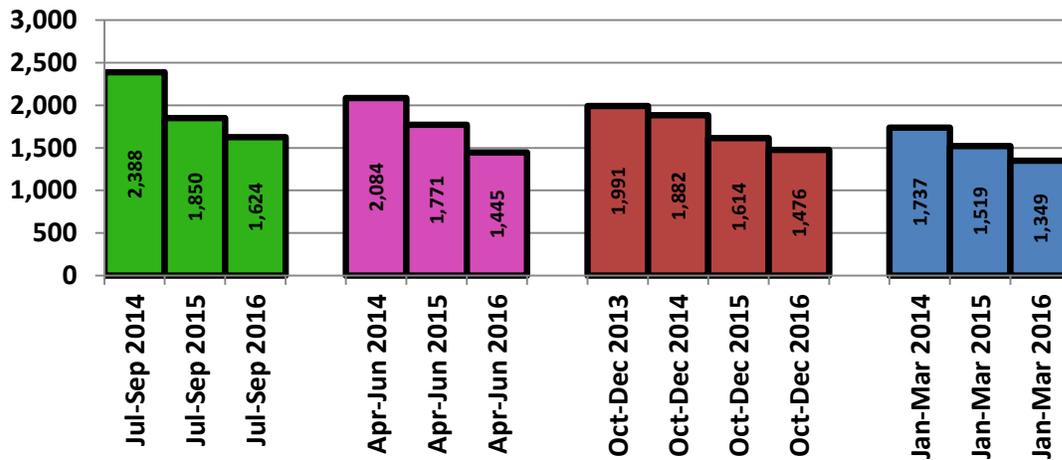
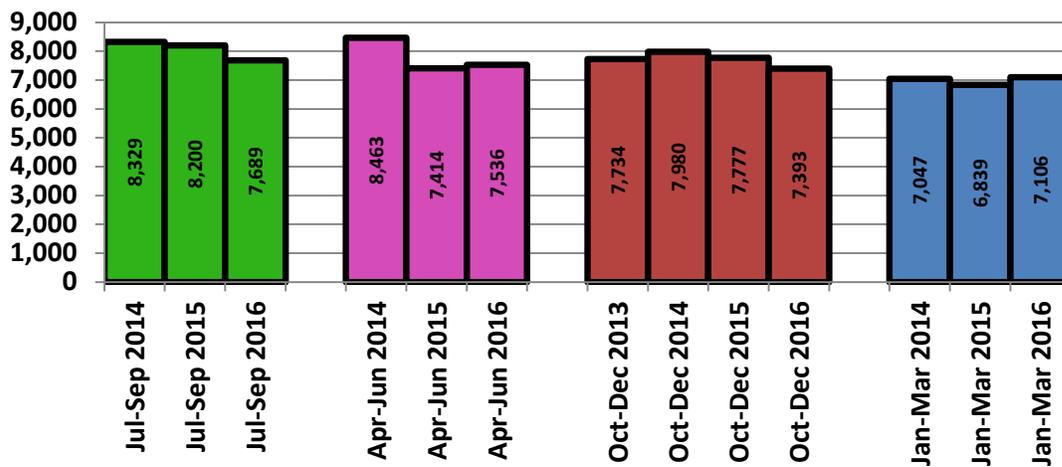
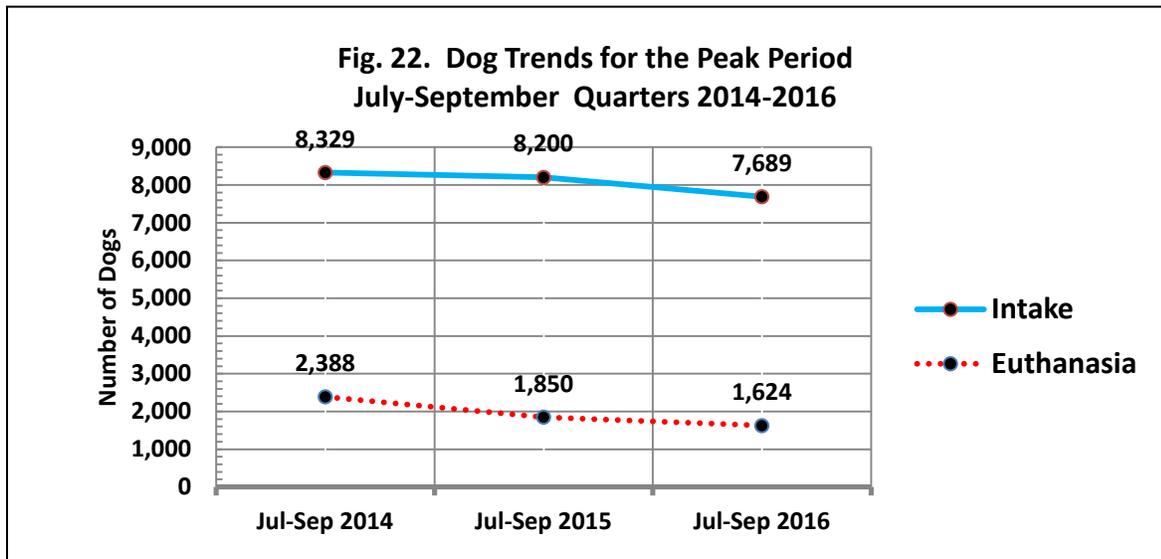


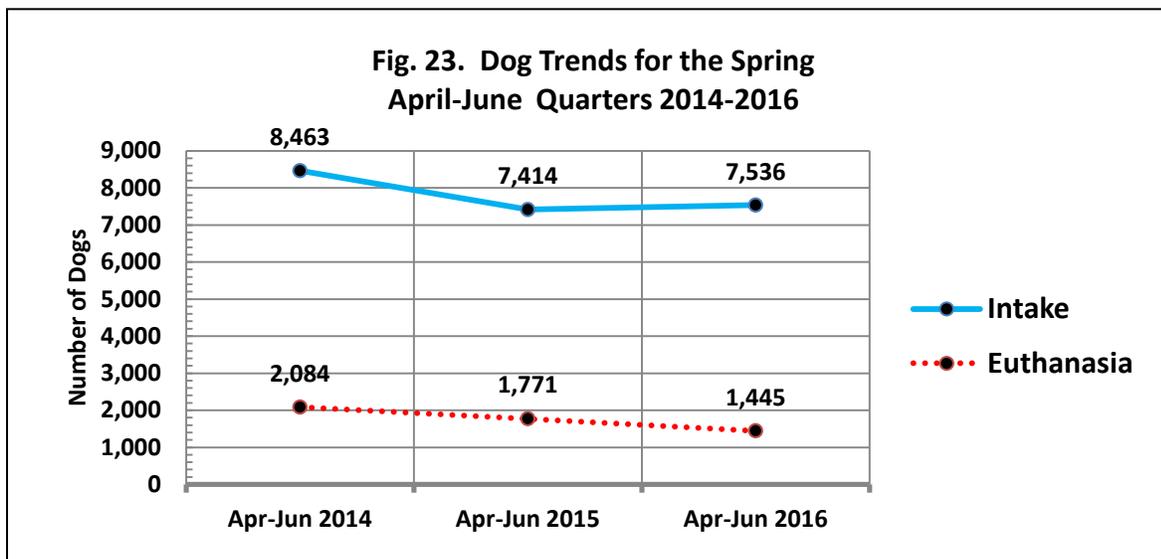
Fig. 21. Comparison of Dog Intake Data Trends Over Time Grouped by Like Quarters





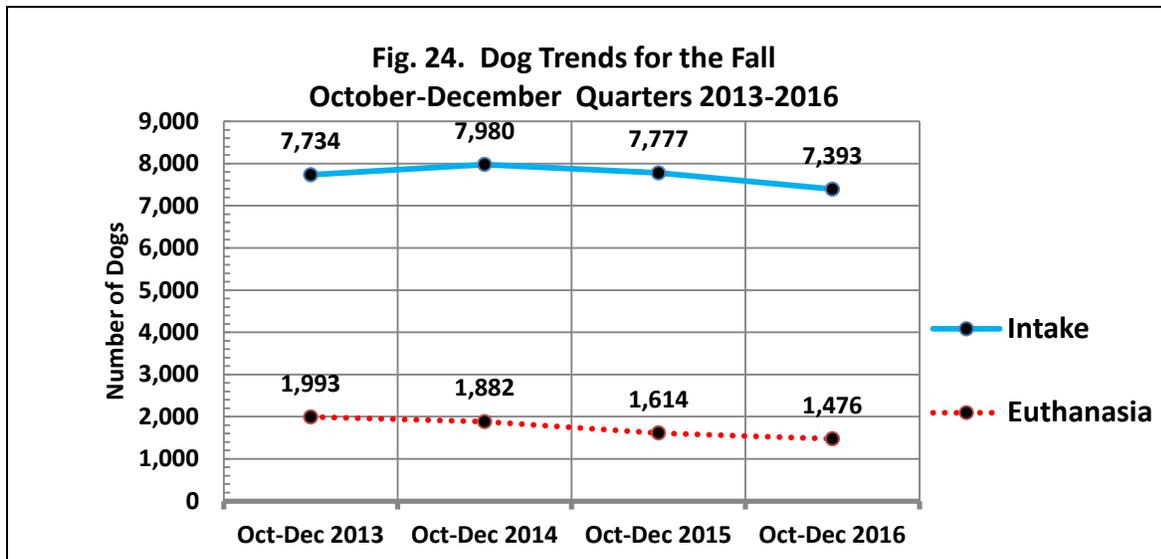
A comparison of the summer quarters (peak period, Fig. 22) euthanasia decreased overall by 32% from 2014 to 2016, at a rate of 22% from 2014 to 2015 and by 12% from 2015 to 2016. There is an overall decrease of 8%, with intake decreasing from 2014 to 2015 by 1.5%, and by 6% from 2015 to 2016.

For the spring quarters (Fig. 23), there was an overall decrease of 31%, at a rate of 25% from 2014 to 2015 and by 18% from 2015 to 2016. Intake decreased by 12% from 2014 to 2015 but increased slightly by 1.6% from 2015 to 2016. Even with the increase between 2015 and 2016, there was an overall decrease of intake by 11%.

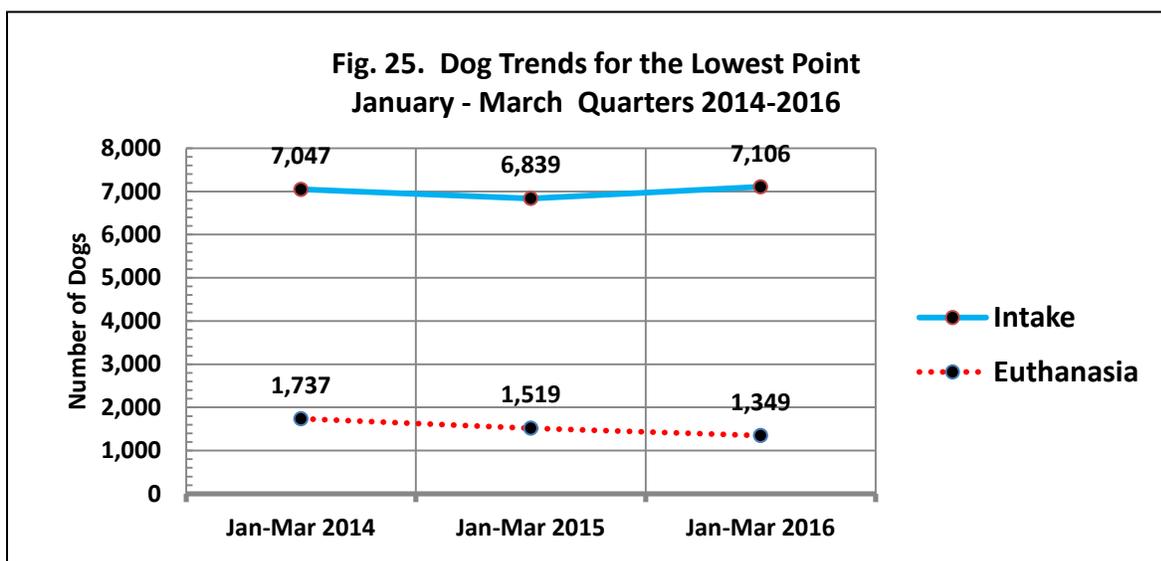




For the fall quarters (Fig. 24), which include the initial quarter in 2013, there was a total decrease of 32% in euthanasia from 2014 to 2016, with a rate of 6% from 2013 to 2014, by 14% from 2014 to 2015, and by 9% from 2015 to 2016. Intake increased by 3% from 2013 to 2014, but decreased there on, by 2.5% from 2014 to 2015, and by 5% from 2015 to 2016. In spite of the increase in 2014, intake decreased overall by 4%.



For the winter quarters (Fig. 25), the lowest period of the year, euthanasia decreased by 12% from 2014 to 2015 and by 11% from 2015 to 2016. Intake decreased by 3% from 2014 to 2015, but increased by 4% from 2015 to 2016. Overall, intake increased over the 3 year period by 0.8%.





Conclusion

Because there are only 3 full years of intake and euthanasia data to examine at this point, this report and its findings should be considered preliminary. However the data is sufficient enough to show distinct and consistent patterns with regards to both euthanasia and intake. Throughout any given year so far, there are high points and low points for both euthanasia and intake and they are consistent, distinct and concurrent. Both euthanasia and intake spike during the summer months then begin to decline during the fall months, and reach their lowest point during the winter. Numbers begin to rise again in the spring. For this reason it is most important to compare like quarters over a span of time to determine if there are consistent downward trends. Given this is the case in 2014, 2015, and 2016, we expect this pattern to carry through in future quarters.

The data also indicates that overall, euthanasia and intake of cats and dogs have declined since the first quarter of state-wide shelter data collection in the fall of 2013. From the October-December quarter of 2013 (the initial quarter that serves as the baseline) to the fall quarter of 2016, 3 years later, there has been a reduction of 39% in euthanasia of animals in the shelters and a 3% reduction in intake.

Of cats euthanized, there has been a 43% reduction from 2013 to 2016, and a reduction of intake of 2.5%. Of dogs euthanized, there has been a 25% from 2013 to 2016, and a 4% reduction of intake.

The impact from the increase in spays and neuters (along with the public outreach and education, which is a part of every project funded by the program) throughout the state is cumulative, with each year's completed projects, along with active efforts having an impact on future quarterly data. Even after only 3 years, with the full impact of the work done so far yet to be reflected, declines in numbers are already being seen. As more time passes, and more quarterly data is available to add to this comparison, and based on what this data shows so far, we expect to see a continuing decline in the overall euthanasia and intake numbers.





ATTACHMENT 1. SURVEY FORM
MARYLAND ANIMAL CONTROL SHELTER SURVEY /¹
 (Boxes will expand as you enter text)

Name of Shelter/Facility:

Address:

Name of Shelter Manager:

EMAIL:

Phone:

Name of Person completing this survey:

Activity for Reporting Quarter: October-December, 2016

	DOGS	CATS
A. Live Animal Count at Beginning of Qtr		
LIVE INTAKE DURING QTR:		
B. Stray/At Large		
C. Relinquished by Owner		
D. Owner Requested Euthanasia		
E. Transferred in from another Agency		
F. Other Live Intakes (impounds, births, animals placed in foster care, brought in for TNR, etc)		
G. TOTAL LIVE INTAKE DURING QTR (B+C+D+E+F)		

DISPOSITION DURING QTR:

H. Adoption		
I. Returned to Owner		
J. Transferred to another Agency		
K. Other Live Outcome (includes TNRs released)		
L. Died/Lost in Care		
M. Euthanasia- at Owner's Request		
N. Euthanasia-All other than owner request		
O. TOTAL DISPOSITION DURING QTR		
P. Live Animal Count at End of QTR (includes Fosters). (A+G - O)		

In order to better understand to what degree unowned cats are a source of intake and euthanasia, we need your help. To the best of your abilities, please indicate what percent and/or how much of CAT intake would you consider unowned (i.e. feral, or community cats) animals:
 How many of the euthanized cats would you guess are unowned:

¹Pursuant to section 2-1602(H) of the Agriculture Article which states: "Beginning January 14,2014, each county and municipal animal control shelter and each organization that contracts with a county or municipality for animal control shall report quarterly to the Department on a form prescribed by the Department describing for the previous 3 months: (1) The number of cats and dogs taken in; (2) The number of cats and dogs disposed of, broken down by method of disposal, including euthanasia; and (3) Any other relevant data the Department requires."Please return completed survey by email attachment to mda.spayandneuter@maryland.gov or by mail to Maryland Department of Agriculture, Marketing Department (Spay and Neuter Program), 50 Harry S Truman Parkway, Annapolis, MD 21401. Questions call Jane Mallory 410-481-5766 email: Jane.Mallory@maryland.gov .



ATTACHMENT 2. LIST OF FACILITIES SENT SURVEY REQUEST AND RESPONDING WITH INFORMATION

Facilities in italics are private and either voluntarily contribute data or do so as terms of grant agreement with MDA

Shelter	Notes:
Allegany County Animal Shelter	
Animal Welfare League of Queen Anne’s County	
Anne Arundel County Animal Control	
Baltimore Animal Rescue and Care Shelter BARCS	
Baltimore County Animal Services	
<i>Baltimore Humane Society</i>	
<i>Baywater Animal Rescue-Dorchester Co</i>	
Cecil County Animal Services	
Caroline County Humane Society, Inc.	
City of College Park Animal Shelter	
City of Greenbelt Animal Shelter	
Dorchester County Animal Control	Does not collect cats.
Frederick County Animal Control	
Garrett County Animal Shelter	
Howard County Animal Control	
Humane Society of Carroll County, Inc.	
Humane Society of Harford County	All animals obtained by Harford Co. Animal Control are transferred here.
Humane Society of Kent County	
<i>Humane Society of Somerset County Inc</i>	Handle cats for Somerset Co but not under contract to do so.
Humane Society of Washington County	
Humane Society of Wicomico County	
<i>Maryland SPCA</i>	
Montgomery County Animal Services and Adoption Center	
Prince Georges County Animal Services	
Somerset County Animal Control	
<i>SPCA of Anne Arundel County</i>	
Talbot Humane	
Tri-County Animal Shelter	Serves Charles, St. Mary's and Calvert Cos.
Worcester County Animal Control	
<i>Worcester County Humane Society</i>	