

City of Memphis
Internal Audit Service Center

**Parks & Neighborhoods
MAS Examination Report
August 26, 2015**



**MEMPHIS
ANIMAL
SERVICES**

CITY AUDITOR

Leon Pattman, CIA, CISA, CRMA, CMFO



A C WHARTON, JR. - Mayor
JACK SAMMONS - Chief Administrative Officer
EXECUTIVE DIVISION
Internal Audit Service Center
LEON PATTMAN, CIA, CISA, CRMA, CMFO
City Auditor

August 26, 2015

Ms. Janet Hooks, Director
Parks and Neighborhoods
City of Memphis
2599 Avery Avenue
Memphis, TN 38112

Dear Director Hooks:

We have completed our attestation engagement of the performance statistics reported by the Memphis Animal Services (MAS). The objective of this examination was to evaluate the accuracy and reliability of the reports prepared by management and presented on the MAS website. To accomplish our objective, we interviewed management and staff to gain an understanding of the reporting process, evaluated internal controls over the shelter operations support system (Chameleon). We used our data analytic software to recalculate and compile the results of operations directly from data extracted from the system rather than system-generated reports. The scope of the audit was limited to management reports from calendar years 2011 to 2014 and January 1, 2015 to June 30, 2015.

Conclusion

Overall, management reports presented fair and materially accurate results of MAS operations for the period which included calendar years 2011 to 2014 and January 1, 2015 to June 30, 2015. Thus, the figures presented on the MAS website reflected reliable information for management decision-making purposes and public information. Auditors did not identify any material misstatements in any of the reporting categories such as animal intake, euthanasia, live release, adoptions, transfers, and return-to-owners. We did note some immaterial (plus or minus two percentage points) variances that required explanation. Additionally, internal controls over the operations support system were satisfactory in providing reasonable assurance of data reliability.

Background

MAS personnel enters their daily activities into the Chameleon software system that supports shelter operations. The system captures and stores all transactions for day-to-day operations. MAS management prepares periodic performance reports that summarize the results of daily activities for the shelter for specific time periods. Management runs the “Kennel Statistics Report” for each month and uses the data to populate an Excel spreadsheet for month-to-month tracking and trend analysis. MAS publishes performance information on its website.

Audit Summary

Conditions

Auditors contacted HLP Inc. which is the Chameleon software developer to gain an understanding of the database structure and reporting criteria. HLP representatives assisted auditors with understanding database tables for tracking the history of an animal throughout the intake process until the final outcome. Thereby, we learned that the system design permitted open date fields in records and in some cases required an open date field so that records could be properly updated with other operational information. Additionally, in some cases a single record could have a report value greater than just one animal. Consequently, HLP representatives advised us that there would be minor (immaterial) variances in reports for a specific date range when the reports are ran on different days due to the system design and record updating.

Reports Accuracy

MAS figures for intake, euthanasia, live release rate, which includes adoptions, transfers and return to owners were materially accurate with variances less than two percentage points (+/-) for each category reported for the calendar years in the audit period.

Auditors used Audit Command Language (ACL) software (data analytics) to summarize operational activities captured in the Chameleon system for the major categories of information presented as the monthly statistics. We used the same criteria to summarize the figures for intake, euthanasia, live release rate, and adoptions as MAS. For the purposes of presenting our comparison, auditors used the figures generated by ACL as the base for determining any variance. See the tables in the appendix for the comparisons.

Internal Controls for Data Reliability

There were adequate application controls in place to provide reasonable assurance of data integrity and reliability. However, the system design has an inherent control deficiency

with respect to the date fields in records. Auditors noted internal controls such as the following over the application:

- unique user identification and passwords to gain access to the application for individual accountability,
- password masked upon entry to prevent compromise,
- automatic user logoff for inactivity to prevent unauthorized access when unattended,
- validity checks for data fields to help ensure accuracy during data entry,
- segregation of duties between users, programmers, and administrators to reduce the likelihood of one person committing errors or irregularities and concealing them, and
- adequate physical security and system backup to ensure protection and recovery in case of system malfunction or disaster.

Opportunities to Enhance Internal Controls/Control Deficiencies

Auditors observed some control deficiencies that are not likely to cause a material misstatement of the result of MAS operations. Generally, internal control deficiencies are due to lack of adequate design or full implementation of the controls. Normally, a deficiency will not allow management and employees to prevent, detect, and correct impairments to operational efficiency, effectiveness, reporting or compliance to established governance (laws, regulations, grants, contracts, policies, etc.). During the course of our examination, auditors evaluated the adequacy and effectiveness of application controls related to the Chameleon software. We noted the following deficiencies:

- The design feature that allows the date field in records to be left blank or edited is not restricted to designated personnel based on duties and responsibilities. Additionally, there is no mitigating control such as monitoring by management to ensure that employees do not misuse the system privilege.
- There was no process to ensure user accounts for former employees were deactivated in a timely manner. Auditors identified 16 user accounts for former employees that were still active. We determined that this finding was not likely to impact our analysis. Therefore, we did not perform any additional procedures.
- Password policy for system access did not require a complex password. The policy only required at least one character and the system does not force periodic password changes.

Observation

Auditors noted that the “Kennel Statistics Report” was not reader friendly. It required some explanations to fully understand the statistics provided and specific numbers that were included in the charts and diagrams posted on the website, which could cause some confusion. Therefore, management should consider revising the report layout or providing written explanations and definitions for the information contained in the “Kennel Statistics Report” and ultimately presented in the monthly statistics.

Recommendations

- Management should review all user accounts and limit the system privilege to edit records to only the employees who need it. Additionally, management should formally monitor the system activity to ensure employees use the privilege appropriately.
- Management should develop a process to deactivate unneeded user accounts in a timely manner. The process should include periodic reviews of all user accounts to ensure the process is working as designed. The 16 former employee user accounts should be deactivated immediately.
- Management should strengthen the system password policy to require passwords with a minimum of eight characters in length and a combination of alpha, numeric, upper case, lower case and special symbols used for the characters. The system password policy should be set to require all user accounts to change their password every 90 days.

We conducted this attestation engagement in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the engagement to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective and our assessment of all evidence. Our engagement may not necessarily disclose all weaknesses related to the MAS operations.

Our audit process encourages management to provide a written response to the draft report for inclusion in the final report. We presented you with the draft report dated August 21, 2015. If received, management’s written response to the draft will appear as an attachment to this report. We will evaluate the response and the adequacy of corrective action during subsequent follow-up activity.

We appreciate the cooperation of MAS management and staff, City IS Division, and HLP, Inc. representatives during our examination. Please feel free to give us a call if you have any questions or need additional assistance.

Sincerely,



Debbie Banks, CFE, CICA, CMFO
Project Manager



Brian K. Ford, CIA, CISA, CRMA
IT Auditor

APPROVED:



Leon Pattman, CIA, CISA, CRMA, CMFO
City Auditor

Atch: Response from Director of Parks and Neighborhoods

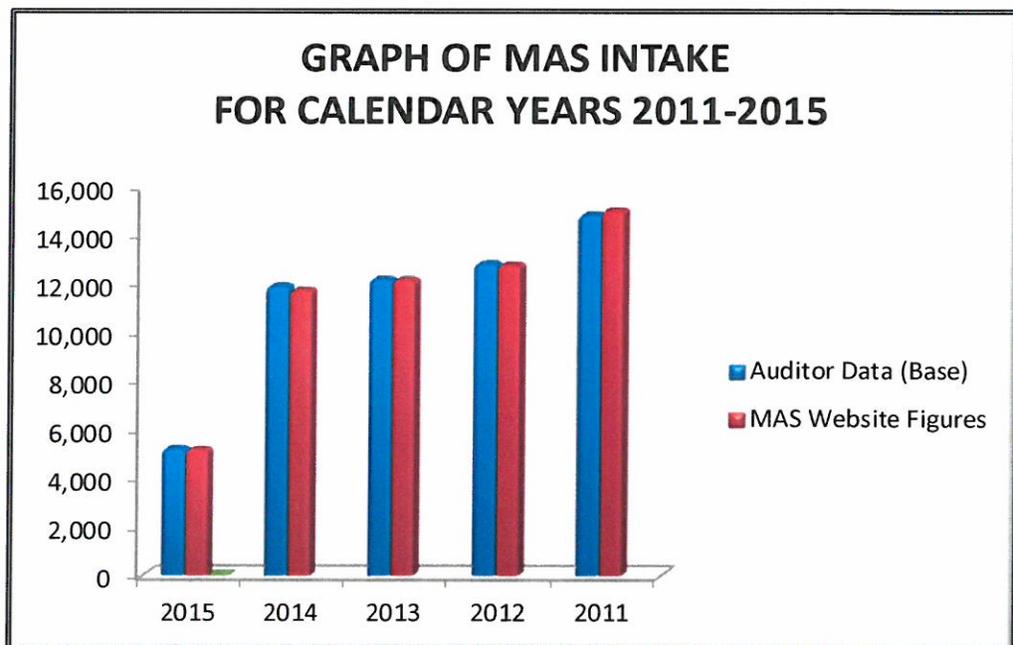
c: AC Wharton, Jr., Mayor
Jack Sammons, Chief Administrative Officer
Dr. LaSonya Harris-Hall, Deputy Director, Division of Parks and Neighborhoods
James Rogers, Administrator, Memphis Animal Services
Brent Nair, Director/CIO, Information Services Division

APPENDIX - Tables & Diagrams

MAS INTAKE FOR CALENDAR YEARS 2011-2015

Year	Auditor Data (Base)	MAS Website Figures	Variance by Number	% Variance
2015	5,229	5,187	(42)	-0.80%
2014	11,926	11,754	(172)	-1.44%
2013	12,208	12,181	(27)	-0.22%
2012	12,846	12,808	(38)	-0.30%
2011	14,871	15,042	171	1.15%

Note: Data analytics for calendar year 2015 covers the period January 1 to June 30.



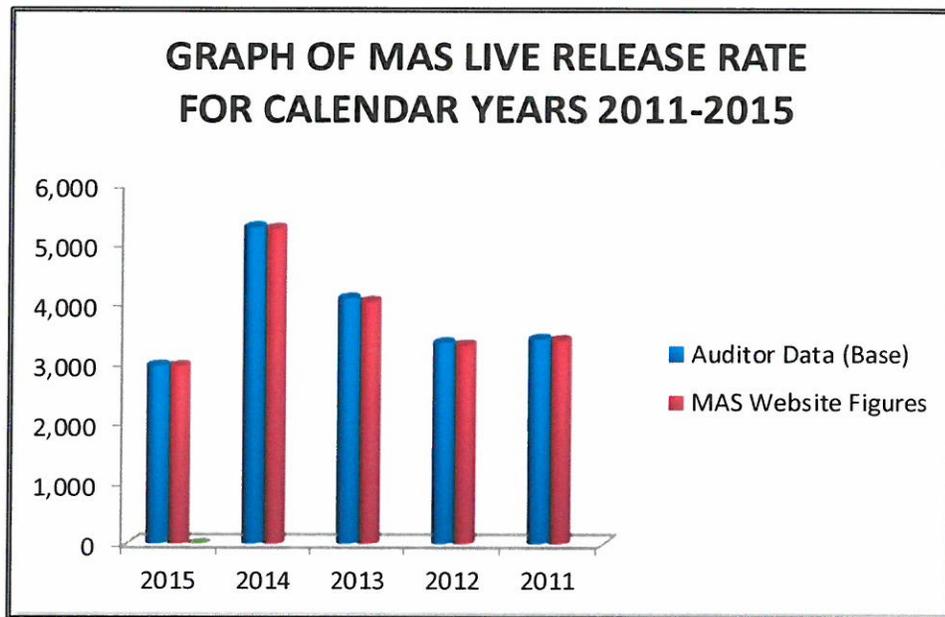
LEGEND

Auditor Data : Performance statistics compiled by auditor using analytics
 MAS Website Figures: Reported by MAS (included on website)

MAS LIVE RELEASE RATE FOR CALENDAR YEARS 2011-2015

Year	Auditor Data (Base)	MAS Website Figures	Variance by number	% Variance
2015	2,980	2,975	(5)	-0.17%
2014	5,291	5,264	(27)	-0.51%
2013	4,104	4,047	(57)	-1.39%
2012	3,362	3,328	(34)	-1.01%
2011	3,425	3,404	(21)	-0.61%

Note: Data analytics for calendar year 2015 covers the period January 1 to June 30.



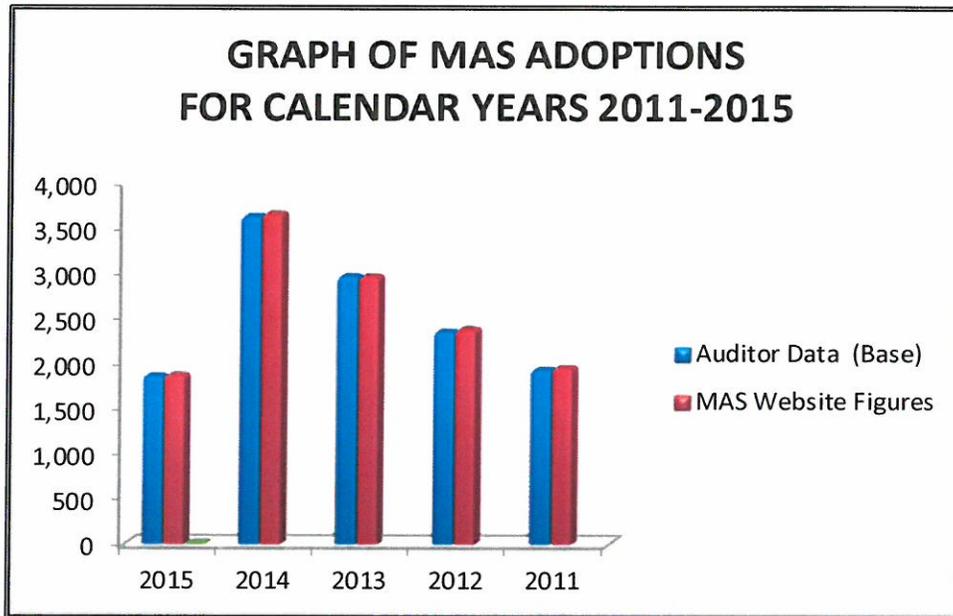
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Auditor Data: Performance statistics compiled by auditor using analytics
 MAS Website Figures: Reported by MAS (included on website)

MAS ADOPTIONS FOR CALENDAR YEARS 2011-2015

Year	Auditor Data (Base)	MAS Website Figures	Variance by Number	% Variance
2015	1,868	1,873	5	0.27%
2014	3,635	3,661	26	0.72%
2013	2,972	2,968	(4)	-0.13%
2012	2,360	2,383	23	0.97%
2011	1,938	1,958	20	1.03%

Note: Data analytics for calendar year 2015 covers the period January 1 to June 30.



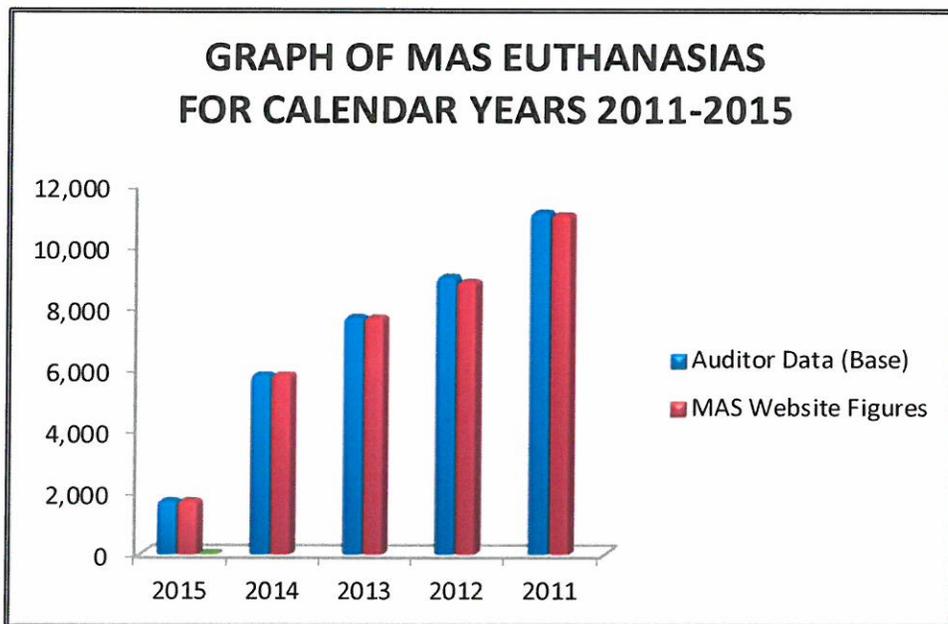
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Auditor Data: Performance statistics compiled by auditor using analytics
 MAS Website Figures: Reported by MAS (included on website)

MAS EUTHANASIAS FOR CALENDAR YEARS 2011-2015

Year	Auditor Data (Base)	MAS Website Figures	Variance by Number	% Variance
2015	1,744	1,743	(1)	-0.06%
2014	5,850	5,853	3	0.05%
2013	7,710	7,692	(18)	-0.23%
2012	9,015	8,859	(156)	-1.73%
2011	11,104	11,030	(74)	-0.67%

Note: Data analytics for calendar year 2015 covers the period January 1 to June 30.



LEGEND

Auditor Data: Performance statistics compiled by auditor using analytics
 MAS Website Figures: Reported by MAS (included on website)

APPENDIX – Response from Director of Parks and Neighborhoods

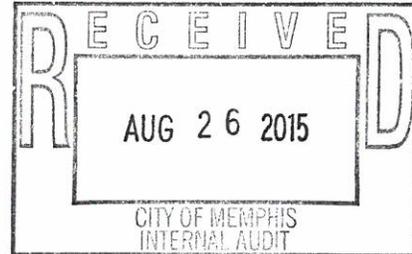
City of Memphis

TENNESSEE

A C WHARTON, JR. - Mayor
JACK SAMMONS - Chief Administrative Officer
DIVISION OF PARKS & NEIGHBORHOODS
JANET P. HOOKS - Director

August 25, 2015

Mr. Leon Pattman
City Auditor
125 N. Main Street, Suite 546
Memphis, TN 38103



RE: MAS Audit

Dear Mr. Pattman,

The Division of Parks and Neighborhoods is in receipt of the recent audit report performed by your team of the performance statistics reported by Memphis Animal Services.

We strive to provide accurate information and your conclusion that the "management reports are presented fairly and are materially accurate reflecting reliable information" confirms that we are meeting that goal.

The audit recommendation to deactivate unneeded user accounts is underway and a process is in place to deactivate user accounts immediately upon an employee terminating their position with MAS.

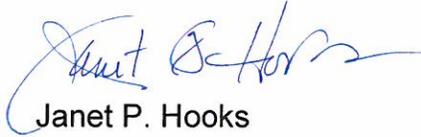
We acknowledge the recommendation to strengthen the system password complexity and will work expeditiously to implement this change.

Further, we will work with the vendor to determine how we can refine the challenges with the data storage component of their system.

Once we receive your corrected action template we will complete it and forward it back to your office.

We appreciate the efforts of your team to partner with us in order to assure we are providing quality and efficient services to our citizens.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Janet P. Hooks", with a stylized flourish extending to the right.

Janet P. Hooks
Director