

# **Audit of the Mosquito Control Division**

**Report by the  
Office of County Comptroller**

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**Report No. 306  
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November 21, 2001

Richard Crotty, County Chairman  
And  
Board of County Commissioners

We have conducted an audit of the Mosquito Control Division. The audit was limited to an evaluation of the internal controls, a review of the administrative functions, verification of compliance with local, state, and federal regulations, and an evaluation of the efficiency and effectiveness of operations. The period audited was October 1, 1999 through March 31, 2001. Our audit was conducted in accordance with generally accepted government auditing standards and included such tests as we considered necessary in the circumstances.

Responses to our Recommendations for Improvement were received from the Mosquito Control Division and are incorporated herein.

We appreciate the cooperation of the personnel of the Mosquito Control Division during the course of the audit.

Martha O. Haynie, CPA  
County Comptroller

c: Ajit M. Lalchandani, County Administrator  
Thomas P. Breaud, Ph.D. Manager, Mosquito Control Division

# EXECUTIVE SUMMARY

## EXECUTIVE SUMMARY

We have conducted an audit of the Mosquito Control Division. The Division's mission is to protect public health by controlling disease-transmitting and pest mosquitoes. The Division is authorized 24 positions and has a budget for fiscal year 2001 of approximately \$1.6 million. The audit period was October 1, 1999 through March 31, 2001. The scope was an evaluation of internal controls, compliance with local, state, and federal regulations, and an evaluation of the efficiency and effectiveness of operations.

Based on the results of our testing, the Division is materially in compliance with local, state and federal regulations. In addition, nothing came to our attention that led us to believe the Division's administrative functions and operations are not carried out efficiently and effectively. In our opinion, the Division's internal controls are adequate except for control improvements needed over payroll and chemical inventories as summarized below:

The time sheet system does not provide the level of control that the previously used time cards provided to ensure that employees are only paid for time worked. Also, the Division Manager and the Operations Supervisor do not submit time sheets to their immediate supervisor to document the hours worked and neither the time cards nor payroll registers were signed by employees.

The Division's operations are more intensive during the warmer months of the year. However, the size of the staff does not fluctuate with the seasons and the Division does not have contingent funds in its budget to hire additional help during peak periods.

There was no perpetual system in place for controlling inventories of chemicals. Also, two assets with a total value of \$8,121 had not been used for several years and should be declared surplus and turned over to Property Accounting.

The Division has not taken full advantage of the funds made available by a Florida state grant for collection and disposal of waste tires.

The Division may not be in compliance with certain requirements of the Florida Administrative Code (FAC), Chapter 5E-13 concerning the submission of various reports.

The Mosquito Control Division concurred with all the audit recommendations for improvements and corrective actions are either completed or underway.

# ACTION PLAN

**AUDIT OF MOSQUITO CONTROL DIVISION  
ACTION PLAN**

NO.	MANAGEMENT RESPONSE			IMPLEMENTATION STATUS		RECOMMENDATIONS
	CONCUR	PARTIALLY CONCUR	DO NOT CONCUR	UNDERWAY	PLANNED	
1.	X			Completed		We recommend the Mosquito Control Division reinstates the time card system for determining the amount of time for which hourly employees should be paid.
2.	X			Completed		We recommend the Mosquito Control Division ensures that the Manager and the Operations Supervisor submit a signed time sheet documenting the hours worked and leave taken to their immediate supervisor at the end of each pay period.
3.	X			Completed		We recommend the Mosquito Control Division ensures that all employees sign either a time card, a time sheet, or the payroll transmittal register to indicate their agreement with the number of hours worked that is reported to the Payroll Department.
4.	X			Completed		We Recommend the Mosquito Control Division requests that funding be included in the annual budget to hire additional personnel during peak seasons, as needed.
5.	X			X		We recommend the Mosquito Control Division ensures that idle assets are turned over to Property Accounting for redistribution or sale as soon as it becomes apparent that the assets have no further use in operations.

**AUDIT OF MOSQUITO CONTROL DIVISION  
ACTION PLAN**

NO.	MANAGEMENT RESPONSE			IMPLEMENTATION STATUS		RECOMMENDATIONS
	CONCUR	PARTIALLY CONCUR	DO NOT CONCUR	UNDERWAY	PLANNED	
6.	X			Completed		We recommend the Mosquito Control Division continues to use the perpetual inventory system and periodically test the accuracy of the system by taking unannounced counts of selected items and a complete physical inventory at least annually.
7.	X			X		We recommend the Mosquito Control Division makes every effort to fully utilize the funds granted by the State of Florida for the collection and disposal of waste tires.
8.	X			X		We recommend the Mosquito Control Division requests the Department of Agriculture and Consumer Services provide written clarification of Chapter 5E-13 of the Florida Administrative Code.



# INTRODUCTION

**Background**

The Mosquito Control Division's mission is to protect public health and enhance the quality of life of Orange County Citizens by controlling disease-transmitting and pest mosquitoes. The Division provides mosquito control services over the 1,000 square mile area that comprises Orange County. The Division, which reports to the Health and Family Services Department, had 24 authorized positions and a budget for fiscal year 2001 of approximately \$1.6 million.

There are over 3,500 different species of mosquitoes in the world, of which 150 are found in the United States, and 76 reside in Florida. Some mosquitoes are capable of transmitting diseases to animals and humans.

To carry out its mission the Division has implemented procedures to provide for:

- Surveillance of mosquito activity;
- The control of larvae and adult mosquitoes;
- Mosquito borne disease surveillance;
- Handling citizens' requests for services;
- Collecting and disposing of waste tires; and
- Educating the general public regarding mosquito control.

**Scope, Objectives,  
and Methodology**

The audit period was October 1, 1999 through March 31, 2001. The audit scope was limited to an evaluation of the internal controls related to payroll, purchasing, inventories, fixed assets, and fleet management. In addition, we verified compliance with local, state, and federal regulations, and conducted an evaluation of the efficiency and effectiveness of operations.

To ensure controls over expenditures were adequate, we compared expenditures for fiscal year 2000 to the budgeted amounts and the previous fiscal year and analyzed variances for reasonableness and propriety. We also reviewed the Division's purchasing and contracting procedures to ensure that they complied with Orange County Procurement Regulations. In addition we reviewed selected invoices for duplicate or overpayments.

To ensure controls over personnel and payroll were adequate, we reviewed the payroll system and determined that: individuals paid were bona fide employees; the staff did not exceed authorized full time equivalent (FTE) employees; and rates of pay were reasonable for their assigned duties. We also evaluated the controls in place with emphasis on the method of documenting hours worked. For personnel management, we reviewed job descriptions to determine if they accurately reflected the employees' responsibilities, and, on a sample basis, reviewed personnel files to determine if employees received performance appraisals as required.

To ensure controls over expenditures were adequate, we reviewed the system for maintaining inventories of chemicals and fixed assets and tested the accuracy of the inventory records. We also evaluated the controls in place to safeguard these items.

To ensure controls over fleet management were adequate, we reviewed and evaluated the procedures used for managing the fleet of vehicles used in operations.

To ensure the Division's procedures for monitoring and controlling mosquitoes, educating the public regarding mosquito control, and handling citizens' requests for services were adequate, we reviewed and observed the procedures for the following:

- Inspecting breeding locations, trapping mosquitoes and analyzing data collected;
- Controlling larvae and adult mosquitoes;
- Collecting and analyzing blood from sentinel birds to detect the presence of mosquito borne diseases;
- Collecting waste tires;

- 
- Handling citizens' requests for services and educating the public regarding the County's efforts to control mosquitoes; and
  - Overall employee training and safety programs.

In addition, we obtained statistics as to the cost per capita of mosquito control at other districts throughout Florida for comparison to the County's costs and attended a public education event.

To ensure the Division was complying with applicable local, state, and federal regulations, as well as with its own standard operating procedures, we reviewed and tested for compliance with the following:

- The provisions of Mosquito Control, Chapter 388, Florida Statutes;
- The provisions of the Mosquito Control Program Administration, Chapter 5E-13, Florida Administrative Code, promulgated by the Department of Agriculture and Consumer Services (DACS);
- The provisions of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), of the United States Environmental Protection Administration (EPA). Emphasis was placed on determining whether the chemicals used, and the establishments where they were purchased, were registered as required by the act;
- The provisions of the State of Florida Grant, Warrant No. 1035980 "Mosquito Control/Waste Tire Abatement Grant" for the period October 1, 1999 through June 30, 2001; and
- The Orange County Administrative Regulations that were most related to the Division's activities, particularly those involving the management of motor vehicles, and control of property.

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## INTRODUCTION



Audit of Mosquito Control Division

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Our review was performed without the use of “technical experts” in the area of entomology. Had these experts been utilized, additional concerns could have been noted and reported in this report.

## Overall Evaluation

In our opinion, the Division’s internal controls are adequate except for control improvements needed over payroll and chemical inventories, as noted herein. In addition, nothing came to our attention that led us to believe the Division’s administrative functions and operations are not carried out efficiently and effectively. Based on the results of our testing, the Division is materially in compliance with the aforementioned local, state, and federal regulations.

# RECOMMENDATIONS FOR IMPROVEMENT



**1. The Time Card Punch Clock System Should Be Reinstated**

Our review indicates that the current time sheet system does not provide the level of control that the previously used time cards provided to ensure that employees are only paid for time worked.

Time cards should be used instead of time sheets

The Division, until the pay period ending February 17, 2001, used a system of time cards to verify the amount of time that hourly employees worked. Beginning with this pay period, the Division (on a trial basis) discontinued the use of time cards and began using time sheets for this purpose. Instead of punching a clock at the start and end of their shifts, employees now write the number of hours they worked onto an individual time sheet that is kept on hand. At the end of the pay period, the employee signs the time sheet certifying the hours worked.

A review of all the time cards for hourly employees for four pay periods between December 9, 2000 and February 3, 2001, showed the following:

- For three of the pay periods, nearly 50% of the employees worked less than an eight hour day (or four hours for part timers) and less than an 80 (or 40) hour pay period.
- For one pay period (ending January 6, 2001) the above condition was noted for 30% of the employees.

Conversely, a review of the time sheets for two pay periods, from February 18, 2001 through March 17, 2001, showed that no employees worked less than their scheduled hours. Therefore, it appears that the time card procedure provides a more accurate record of actual time worked than does the time sheet method. With the time sheet procedure some employees may be reporting more hours than actually worked. If this is the case, detection controls are not adequate.

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## RECOMMENDATIONS FOR IMPROVEMENT



The Fair Labor Standards Act does not require employers to use time clocks and time cards, however, it does require that accurate records be maintained. Orange County Administrative Regulation No. 6.03.02 states "Division Managers are responsible for maintaining and submitting complete and accurate payroll information in a timely manner."

**We Recommend** the Mosquito Control Division reinstates the time card system for determining the amount of time for which hourly employees should be paid.

**Management's Response:**

Concur. The use of the time dock-card system has been reinstated.

**2. The Division Manager and the Operations Supervisor Should Submit Time Sheets**

The Manager and Operations Supervisor should submit time sheets

The Division Manager and the Operations Supervisor do not submit time sheets to their immediate supervisor to document the hours worked for each pay period. Instead, when applicable they submit leave slips to the timekeeper (the Administrative Assistant) to document leave taken. Adequate internal control through a system of accountability prescribes that individuals document the hours worked and submit the documentation to their immediate supervisor for review and approval.

**We Recommend** the Mosquito Control Division ensures that the Manager and the Operations Supervisor submit a signed time sheet documenting the hours worked and leave taken to their immediate supervisor at the end of each pay period.

**Management's Response:**

Concur. The Manager and the Operations Supervisor are submitting signed time sheets.





Employees  
should sign time  
cards or  
transmittal  
registers

**3. Employees Should Sign a Record of Time Worked**

As stated above, beginning with the pay period ending February 17, 2001, the Division discontinued the use of time cards and began using time sheets.

A review of the time cards and transmittal registers for several pay periods prior to the implementation of the time sheets showed that neither the time cards nor the registers were signed by the employees. The administrative assistant stated that the practice in effect when time cards were used was that employees did not sign either the cards or the registers.

Orange County Administrative Regulation No. 6.03.02 II. B, requires the employee to sign the payroll Transmittal Time Register to indicate that the reported hours are correct. The regulation further states that employees unable to sign the transmittal due to location, work schedule, etc., must sign documents such as timesheets, time cards, logs, etc., to indicate their understanding that the hours to be recorded on the payroll transmittal form are correct. Without employees' signatures on time cards, time sheets, or payroll transmittal registers, it is difficult to avoid or settle potential disputes over the number of hours worked.

**We recommend** the Mosquito Control Division ensures that all employees sign either a time card, a time sheet, or the payroll transmittal register to indicate their agreement with the number of hours worked that is reported to the Payroll Department.

**Management's Response:**

Concur. Employees now sign time cards.

**4. The Mosquito Control Division Should Request That Contingent Funds Be Included in the Budget to Allow the Hiring of Additional Personnel During Peak Season**

The budget should include contingency funds for seasonal help

Because of the cyclical nature of mosquito infestations, the Mosquito Control Division's operations are more intensive and more in demand during the warmer months than other times of the year. However, the size of the staff at the Division does not fluctuate with the seasons and the Division does not have contingent funds in its budget to hire additional help during peak periods. The Division should consider requesting additional funds for "seasonal" employees, or reallocate existing monies.

Three of the most obvious examples of how much busier the Division was during peak months in the year 2000 are summarized as follows:

- 81 percent of citizens' requests for services were received in May through October.
- 90 percent of the acreage treated with pesticides to control adult mosquitoes was done in May through October.
- 75 percent of the acreage covered to control mosquito larvae was done in May through October.

Other operations, such as bleeding sentinel birds for mosquito borne disease surveillance and inspecting potential breeding areas, also were carried out more frequently during the months of May through October than during the months of November through April. Also, with the growth of Orange County and the additional number of retention ponds being constructed with new housing developments, it appears likely that the Division's work force will be severely strained during peak periods, especially in the event of a wet season.



**We Recommend** the Mosquito Control Division requests that funding be included in the annual budget to hire additional personnel during peak seasons, as needed.

**Management's Response:**

Concur. This request will be included in the next budget cycle.

**5. Idle and Surplus Fixed Assets Should Be Disposed of on a Timely Basis**

During our review, we noted that a "Cycler, DNA Thermal" with a purchase price of \$6,196 purchased in 1994 was only used once in 1997 and a "Tissue Culture Enclosure" with a purchase price of \$1,925 purchased in 1995, was never used. According to the Division Manager, they had no future use for the Division.

Orange County Administrative Regulation 6.05.01 "Control of County Property" requires that these items be declared surplus and turned over to the Property Accounting Department for redistribution or placed in storage for future disposition."

Although Mosquito Control Management was aware that the assets were of no use to the Division, no steps were taken to transfer them to Property Accounting for disposition. As a result, during the time that these assets were idle the County did not have the benefit of their use, or the funds that could be generated from their sale.

**We Recommend** the Mosquito Control Division ensures that idle assets are turned over to Property Accounting for redistribution or sale as soon as it becomes apparent that the assets have no further use in operations.



**Management's Response:**

Concur. The two assets cited in the audit have been turned in to surplus property. The DNA thermal cycler was used in a collaborative project with the Florida Medical Entomology Laboratory, University of Florida at Vero Beach, Florida. The use of this new technology was being evaluated to determine if it could be effective at an operational level.

**6. The Chemical Inventory System Needs Improvement**

A perpetual inventory system is needed

At the start of the audit there was no perpetual inventory system in place. To ensure that enough materials to carry on operations were on hand, the Division physically counted the materials on hand every week. The physical count was done by either the Operations Supervisor or one of the technicians. During peak periods the amount on hand can be substantial and difficult to count. A typical inventory during peak periods could be valued in excess of \$30,000.

A report of the items on hand was given to the Division Manager each week. This information, together with the amounts planned for usage during the coming weeks, the log recording materials received, and the activity report showing items used since the previous count, were used to determine the quantities to order.

Given the frequency of ordering, a perpetual inventory system would provide a more efficient system of tracking inventories on an on-going basis. Such a system can avoid time consuming and inefficient continuous counts of the materials. Test counts of selected items could be done periodically and verified to the inventory records. These tests together with a complete annual inventory would ensure the accuracy of the inventory records.

During the audit, at the suggestion of the auditors, a perpetual inventory system was implemented and audit tests indicated that it was working well.

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**RECOMMENDATIONS  
FOR IMPROVEMENT**



**We Recommend** the Mosquito Control Division continues to use the perpetual inventory system and periodically test the accuracy of the system by taking unannounced counts of selected items and a complete physical inventory at least annually.

**Management's Response:**

Concur. At the suggestion of the in-charge auditor the perpetual inventory system was instituted during the audit.

**7. The Mosquito Control Division Should Make Optimum Use of State Tire Grant Funds**

State grant funds  
should be fully  
utilized

The Mosquito Control Division has not taken full advantage of the funds made available by a Florida State Grant for collection and disposal of waste tires. The grant is approximately \$60,000 each year and unused funds are allowed to roll over the following year. The budget for this function for fiscal year 2001 is approximately \$214,000. For the third quarter of fiscal year 2001, only \$47,236 has been spent on this program (22 percent of the amount budgeted).

One employee on the Division staff is working on this program and one truck is dedicated to him for this purpose. Management has not placed sufficient emphasis on this program. For example, during a period of 8 months during fiscal year 2000 the position designated to carrying out the waste tire program remained vacant. By not making optimum use of available state funds an undetermined number of tires that are potentially breeding places for mosquitoes are not being disposed of in a timely manner.

**We Recommend** the Mosquito Control Division makes every effort to fully utilize the funds granted by the State of Florida for the collection and disposal of waste tires.

**Management's Response:**

Concur.

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**RECOMMENDATIONS  
FOR IMPROVEMENT**



**8. The Mosquito Control Division Should Seek Written Clarification of Chapter 5E-13 of the Florida Administrative Code**

Clarification  
from DACS  
is needed

The Mosquito Control Division may not be in compliance with the Florida Administrative Code (FAC), Chapter 5E-13 as follows:

- A) FAC 5E-13.027 (3) requires the Division to submit Monthly Financial Reports to the Department of Agriculture and Consumer services (DACs) by the thirtieth of each month following the month being reported. Throughout the audit period this report has consistently been several months late. Delays as long as four months were noted.
- B) FAC 5E-13.027 (5) requires that a Monthly Report of Accomplishments and an Inventory of Chemicals report be submitted each month. This report was not submitted during the audit period.
- C) FAC 5E-13.031 (1) requires that the County submit complete specifications to the Department of Agriculture and Consumer Services for all equipment to be purchased when the costs will exceed \$6,000 per unit, and shall receive an approved copy of said specifications before advertising for bids. The code is not clear regarding whether the requirement is for equipment purchased with state grant funds or if purchased from the County's general fund. Mosquito Control has not been sending specifications for equipment although they have purchased equipment costing in excess of \$6,000 with County funds.

Mosquito Control has relied on verbal discussions with an Environmental Specialist with the DACs. During our audit, we contacted the DACs Representative and he verbally advised us as follows:

- A) The DACs understanding was that the financial reports being late could not be helped because the

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## RECOMMENDATIONS FOR IMPROVEMENT



Audit of Mosquito Control Division

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data needed came from another organization outside the control of the Mosquito Control Division. Because the grant to Orange County only represented a small amount of Orange County's budget for Mosquito Control, DACS was not concerned if the reports were late.

- B) DACS did not need the Inventory of Chemicals Report of Accomplishments as long as they receive the monthly Activity Reports, which show the amount of chemicals that have been used during the month.
- C) DACS is only interested in equipment purchases that cost more than \$6,000 per unit purchased with state grant funds, not if its purchased with the Division's general fund.

The Division should not rely on verbal discussions with a specialist at DACS as to what is required by DACS. Written clarification of changes to the requirements of Chapter 15E of the Florida Administrative Code detailing the above changes in the requirements should be provided to the Mosquito Control Division until such time as the code is formally changed.

**We Recommend** the Mosquito Control Division requests the Department of Agriculture and Consumer Services provide written clarification of Chapter 5E-13 of the Florida Administrative Code.

**Management's Response:**

Concur.