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**Follow-up of the Audit of  
Orange County Fire Rescue  
Department's  
Fuel Usage**

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**Phil Diamond, CPA  
County Comptroller  
Orange County, Florida**

[www.occompt.com](http://www.occompt.com)



**Report No. 476  
May 2019**

## County Audit Division

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### Orange County Comptroller's Office

#### Mission

The mission of the Orange County Comptroller's Office is to serve the citizens of Orange County and our customers by providing responsive, ethical, effective, and efficient protection and management of public funds, assets, and documents, as specified in the Florida Constitution and Florida Statutes.

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The vision of the Orange County Comptroller's Office is to be recognized as a highly competent, cohesive team leading the quest for continuing excellence in the effective safeguarding and ethical management of public funds, assets, and documents.



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May 29, 2019

Jerry L. Demings, County Mayor  
And  
Board of County Commissioners

We have performed a follow-up of the Audit of Orange County Fire Rescue Department's Fuel Usage (Report No. 445). The original audit, issued January 2015, included the period October 2012 through December 2013. Testing of the status of the previous Recommendations for Improvement was performed for the period from January 2018 through March 2018.

We conducted this audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The accompanying Follow-up to Previous Recommendations for Improvement summarizes the previous Audit's findings and recommendations. Following each recommendation is a summary of the current status as determined in this review. Responses to our Recommendations for Improvement were received from the Fire Rescue Division Chief and are incorporated herein.

We appreciate the cooperation of Orange County Fire Rescue Department personnel during the course of the audit.

Phil Diamond, CPA  
County Comptroller

c: Byron Brooks, County Administrator  
Daniel Banks, Deputy County Administrator  
James Fitzgerald, Fire Chief, Fire Rescue Department

## INTRODUCTION

## Background

The Orange County Fire Rescue Department (Department) serves more than one million residents and visitors and responded to over 126,000 calls<sup>1</sup> for service during the 2018 fiscal year. The Department protects residents, visitors, and businesses by providing fire prevention and control, emergency medical services, fire code enforcement, and public safety outreach and education.

### OCFRD FRONT RUN UNITS



36 FIRE ENGINES



48 RESCUE UNITS



8 AERIALS



12 BRUSH/WOODS TRUCKS



3 SQUADS



7 TANKERS



10 MARINE RESCUE UNITS

- ADDITIONAL FRONT RUN UNITS:
- 14 COMMAND VEHICLES
  - 1 REHAB UNIT
  - 1 AIR LIGHT UNIT
  - 1 TECHNICAL RESCUE UNIT
  - 1 BARIATRIC UNIT
  - 2 MOBILE COMMAND UNITS

The Department has 42 fire stations located throughout unincorporated Orange County. Of the 42 stations, 35 are equipped with fuel dispensing pumps. However, only 28<sup>2</sup> fueling sites are currently being utilized. All 28 stations provide diesel fuel and five also supply unleaded gasoline.

The Department maintains over 300 vehicles and spends over \$900,000 annually for fuel.

The Department tracks fuel usage on Weekly Fuel Dispensing Reports. The information entered on the reports is reconciled with information obtained from fuel pump meter readings and tank dip stick readings.

## Audit Scope, Objective, and Methodology

We have conducted a follow-up of the January 2015 Audit of the Orange County Fire Rescue Department's Fuel Usage (Report No. 445). The prior audit report can be viewed at [www.occompt.com/county-audit/audit-reports/](http://www.occompt.com/county-audit/audit-reports/). The audit scope and objective were to determine whether the recommendation issued in the prior audit report had been implemented. The audit period for the follow-up audit was January 2018 through March 2018.

<sup>1</sup> Requiring over 260,000 vehicle responses

<sup>2</sup> After the 2015 audit, fuel pumps at seven stations were decommissioned by the Department in an effort to minimize the number of manual reconciliations. The Department plans to utilize these fueling locations again once the automated fueling system is implemented.



## INTRODUCTION

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During the audit, we performed tests necessary to verify the implementation status. We have described the specific methodologies utilized in the following section of this report.

### **Summary of Current Recommendation Status**

As of January 2019, the original audit recommendation has been Partially Implemented. The Department has implemented control measures for fuel deliveries. However, it is in the process of implementing an automated fueling and recordkeeping system to address the concerns identified in the original audit that still remain.



**1. Weekly Fuel Dispensing Reports Should be Complete, Accurate, and Reconciled**

**Prior Audit Findings:**

In the prior audit, we reviewed the weekly Fuel Dispensing Reports (Report) for accuracy and completeness. The Reports were reviewed for a three-month period. Our prior review identified the following concerns:

- A) Eighteen fuel deliveries were incorrectly or not recorded on the Reports for several stations.
- B) Monthly fuel tank dipstick readings were not recorded on 49% of the Reports.
- C) The Department did not review or reconcile differences between the entries recorded on the Report, meter readings, and dipstick readings. Most of the differences showed a shortage of fuel when compared to the Report.
- D) Numerous additional inconsistencies and errors were noted in the data reported on the Reports.
- E) Two Reports could not be located for our review.

**Prior Recommendation:**

The Department should review each Fuel Report to ensure fuel reported as pumped equals the calculated fuel pumped and all fuel deliveries and usages are recorded. Differences between any of these numbers should be investigated and reconciled. In addition, the computed ending balances should be compared to dipstick readings and significant variances should be investigated.

**Current Status:**

***Partially Implemented.*** Most of the fuel pumps were installed before 2000, with some as old as 1986. The entire fueling system is old and outdated, making it difficult to track the fuel dispensed. It also requires several manual processes to reconcile fuel dispensed. The fuel pumps do not have electronic access controls

to restrict access to authorized personnel. Fuel entries must be manually logged on Fuel Dispensing Record Management Forms (FDRM Form) and then manually entered and reconciled on an excel spreadsheet. The manual processes have a significant amount of inherent risk of fuel being misappropriated or not recorded.



**Fuel Pumps Installed in 1986  
(33 years ago)**



**Fuel Pumps Installed in 1991  
(28 years ago)**

After the original audit, the Department implemented a new procedure that required an employee to observe all fuel deliveries. That employee then confirms that the number of gallons delivered equals the gallons billed to the Department and recorded on the Reports. We verified that all 136 fuel deliveries invoiced during the month of March 2018 were accurately recorded.





**FDRM Form**

The Department has also implemented the use of a FDRM Form. Drivers use this to record their vehicle information, odometer/ hours readings, pump meter readings and gallons dispensed. The information from each FDRM Form is subsequently manually recorded on a Report by a staff member.

The Department has made significant improvements in accurately recording fuel deliveries. However, we found a significant number of errors with fuel usage and inventory tracking. Specifically:

- The same fuel dispensing transactions were listed multiple times on the Reports;
- Over 200 Report entries—totaling almost 4,000 gallons—listing dispensed fuel amounts were not supported by an FDRM Form. In addition, many FDRM Forms were incomplete;
- FDRM form information was entered inaccurately on Reports. In addition, fuel entries from some FDRM forms were completely omitted from Reports;
- Dipstick readings and end of month fuel pump meter readings should be recorded to reconcile fuel usage. However, pump meter readings were not recorded on 48% of sampled Reports. Additionally, numerous dipstick readings were not recorded on Reports;
- According to dipstick readings, there were several discrepancies of 100+ gallons between computed ending Report balances and actual gallons measured in the tanks; and,

**FOLLOW-UP TO  
RECOMMENDATION  
FOR IMPROVEMENT**



Follow-up of the Audit of Orange County Fire Rescue Department's Fuel Usage

- Several reported beginning fuel balances did not match the corresponding ending balances on prior weekly Reports. For example:

**Orange County Fire/Rescue Division Weekly Fuel Dispensing Report**

FROM: 2/25/2018 BATTALION 2 TO: 2/28/2018

STATION 33 FUEL TYPE: DIESEL

CLICK HERE to Email Fuel Log

Please Review the Weekly Report Tab button below for any discrepancies that may occur that can be corrected before submitting!

DATE	UNIT #	FUEL DROP	METER READING Enter the current Meter Reader	ODOMETER READING	GALLON PUMPED	TANK BALANCE Enter the current Tank Balance	ENGINE HOURS	DEF GALLON
02/25/18			28249.40			367.80		
02/25/18	6437		28260.40	79589.0	11.0	356.80		
02/26/18		205.5	28260.40			562.30		
02/27/18	6437		28270.00	79715.3	9.6	552.70		
02/28/18	6563		28278.00	40883.4	8.0	544.70		
02/28/18	7501		28303.00	155629.0	25.0	519.70	14461.5	
02/28/18	6563		28318.00	41027.1	15.0	504.70	1520.0	5.00
			28318.00			504.70		

FUEL DROP: 205.50

GALLONS PUMPED: 68.60 TANK BALANCE: 504.70 DEF PUMPED: 5.00

WEEKLY DIP STICK READING

BEGINNING INCHES	17	Gallons	367.8	---Don't Leave Blank
PLUS				
MINUS				
ENDING	0		504.7	

TANK CHECK FOR WATER YES DO NOT LEAVE BLANK

BEGINNING GALLON 367.80  
RECEIVED 205.50  
PUMPED 68.60  
ENDING GALLON 504.70

Ending Tank Balance 02/28/18 504.70 gallons

Beginning Tank Balance 03/01/18 366 gallons

**Orange County Fire/Rescue Division Weekly Fuel Dispensing Report**

FROM: 3/1/2018 BATTALION 2 TO: 3/3/2018

STATION 33 FUEL TYPE: DIESEL

Please Review the Weekly Report Tab button below for any discrepancies that may occur that can be corrected before submitting!

DATE	UNIT #	FUEL DROP	METER READING Can't change once Entered!	ODOMETER READING-	GALLON PUMPED	TANK BALANCE Enter the current Tank Balance	ENGINE HOURS
03/02/18			28318.00			366.00	
03/02/18	6563		28331.10	41142.0	13.1	352.90	1524.0
03/03/18	7530		28349.20	90555.0	18.1	334.80	7710.2
03/03/18	6563		28363.70	41232.5	14.5	320.30	
			28363.70			320.30	
			28363.70			320.30	



Department personnel informed us they are in the process of updating and automating the fuel dispensing sites and system. This will include new pumps equipped with card readers, additional security features, and automatic logging of all fuel dispensed and delivered. This will enable the Department to electronically track all fuel dispensed on a vehicle by vehicle basis. After implementation, many of the problems identified during the audit could be resolved.

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**Recommendation:**

The Department should continue its efforts to implement an automated fuel dispensing system with adequate controls to ensure accuracy and completeness of fuel dispensing records.

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***Management's Response:***

Concur. See Appendix for full response.



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## Status of Previous Recommendation for Improvement

NO.	RECOMMENDATIONS	IMPLEMENTATION STATUS		
		IMPLEMENTED	PARTIALLY IMPLEMENTED	NOT IMPLEMENTED
1.	The Department should review each Fuel Report to ensure fuel reported as pumped equals the calculated fuel pumped and all fuel deliveries and usages are recorded. Differences between any of these numbers should be investigated and reconciled. In addition, the computed ending balances should be compared to dipstick readings and significant variances should be investigated.		✓	



**FIRE RESCUE DEPARTMENT**  
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May 1, 2019

TO: Phil Diamond, CPA  
Orange County Comptroller

THRU: Danny Banks, Deputy County Administrator *DB*  
Orange County Public Safety Director  
-AND-  
James M. Fitzgerald, Deputy Fire Chief  
Orange County Fire Rescue

FROM: Anthony Rios, Division Chief *AR*  
Infrastructure and Asset Management  
Orange County Fire Rescue

SUBJECT: 2018 Follow-Up Fuel Audit Management Response

The Orange County Fire Rescue Department has completed its review of the 2018 Fuel Usage Follow-Up Report from the Orange County's Comptroller Audit Division.

The scope of the audit included a follow-up of the January 2015 Fire Rescue Audit, its recommendations, and current fire rescue practices in reconciling fuel usage and deliveries. Orange County Fire Rescue Management concurs with the audit determinations and continues its efforts to transition from a manual to an automatic fuel dispensing system.

Since the 2015 Audit, Fire Rescue has advanced controlled measures to ensure all fuel drop-offs are accurately recorded; this action resulted in 100% accuracy. Furthermore, Fire Rescue has collaborated with the Orange County Capital Projects Division to design an automated dispensing system. This project is scheduled to have a contract awarded by the summer of 2019.

Thank you for your consideration of this matter. If you have additional questions please contact Anthony Rios, Division Chief at (407) 836-9837.