



OFFICE OF  
**INSPECTOR  
GENERAL**  
UNITED STATES POSTAL SERVICE

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# **First-Class Mail on Air Transportation — Assignment by Weight**

## **Audit Report**

September 28, 2012

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Report Number NL-AR-12-010



# HIGHLIGHTS

September 28, 2012

## First-Class Mail on Air Transportation — Assignment by Weight

Report Number NL-AR-12-010

### **BACKGROUND:**

The U.S. Postal Service contracts with select air carriers to transport First-Class Mail (FCM) in order to meet established service standards. The carriers include FedEx®, United Parcel Service® (UPS), and selected commercial passenger airlines. [REDACTED]

The Postal Service assigns mail to carriers in the following order: [REDACTED]

[REDACTED] The process considers contract minimums and the per pound costs of commercial air as a priority when determining the order in which mail is assigned, but does not consider the overall weight or density of the mail. The Postal Service spent \$488 million in fiscal year 2011 to ship FCM by air. Our objective was to assess FCM assignments to air transportation by container weight.

### **WHAT THE OIG FOUND:**

The Postal Service can assign some FCM to air transportation in a more cost-effective manner. If weight was considered, [REDACTED]

[REDACTED] Our analysis also showed that the Postal Service could maintain contract commitments and

service if this mail was reallocated, resulting [REDACTED] overall reduced air transportation costs. We determined this occurred because Postal Service did not consider weight of the mail as a priority in the assignment process. We determined the Postal Service has an opportunity to save about \$10 million in transportation costs over the next year by assigning FCM to air transportation considering weight.

### **WHAT THE OIG RECOMMENDED:**

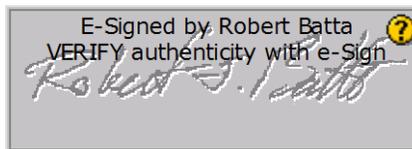
We recommended the vice president, Network Operations, modify the process to assign FCM to air transportation considering weight where feasible, [REDACTED]

[Link to review the entire report](#)



September 28, 2012

**MEMORANDUM FOR:** DAVID E. WILLIAMS, JR.  
VICE PRESIDENT, NETWORK OPERATIONS



**FROM:** Robert J. Batta  
Deputy Assistant Inspector General  
for Mission Operations

**SUBJECT:** Audit Report – First-Class Mail on Air Transportation —  
Assignment by Weight  
(Report Number NL-AR-12-010)

This report presents the results of our audit of First-Class Mail on Air Transportation — Assignment by Weight (Project Number 12XG012NL000).

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Jody J. Troxclair, director, Transportation, or me at 703-248-2100.

Attachments

cc: Patrick R. Donahoe  
Megan J. Brennan  
Cynthia F. Mallonee  
Corporate Audit and Response Management

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## Introduction

This report presents the results of our audit of First-Class Mail (FCM) on air transportation — assignment by weight (Project Number 12XG012NL000). Our objective was to assess FCM assignments to air transportation by container (individual handling unit) weight. The U.S. Postal Service Office of Inspector General (OIG) initiated this audit, which addresses operational risk. See [Appendix A](#) for additional information about this audit.

The Postal Service contracts with select air carriers to transport some FCM in order to meet service standards. The carriers include FedEx<sup>®</sup>, United Parcel Service<sup>®</sup> (UPS), and selected commercial passenger airlines (CAIR). [REDACTED]

[REDACTED] The Postal Service does not currently consider the weight or density<sup>1</sup> of each individual handling unit (letter trays and flat tubs) when assigning FCM to air transportation. Instead, FCM is generally assigned to [REDACTED]

## Conclusion

The Postal Service can assign some FCM to air transportation in a more cost-effective manner. If weight was considered, [REDACTED]

[REDACTED] Our analysis also showed that the Postal Service could still maintain contract commitments and service if reallocated [REDACTED]

[REDACTED] We determined that the Postal Service did not use this allocation method because it did not consider the weight of the mail to be a priority in the assignment process.

Further, we determined the Postal Service has an opportunity to save about \$10 million in transportation costs over the next year by assigning FCM to air transportation considering weight.

## First-Class Mail Assignment

The Postal Service can assign some FCM to air transportation in a more cost-effective manner. Specifically:

- Using their existing priority scheme resulted in the Postal Service paying higher prices to move some FCM, [REDACTED]

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<sup>1</sup> Pounds per cubic foot.

[REDACTED]

- If the Postal Service considered weight as a priority in their assignment process it could realize cost savings, [REDACTED]  
[REDACTED]  
[REDACTED] Our analysis also showed that overall cost savings would far outweigh any additional costs and the Postal Service would still be able to maintain contractual commitments and service.

We analyzed how the Postal Service assigns mail to carriers in terms of cubic feet and pounds for the period April 1, 2010 through March 31, 2012. Figure 1 compares assignment of this mail in cubic feet under the existing process to assignment of this mail when considering weight in the second year of the 2-year period analyzed. It shows that [REDACTED] which protects its mandated contract minimums.

**Figure 1. Existing Method of Assignment vs. Assignment by Weight  
(by Cubic Foot)<sup>2</sup>  
April 1, 2011–March 31, 2012**

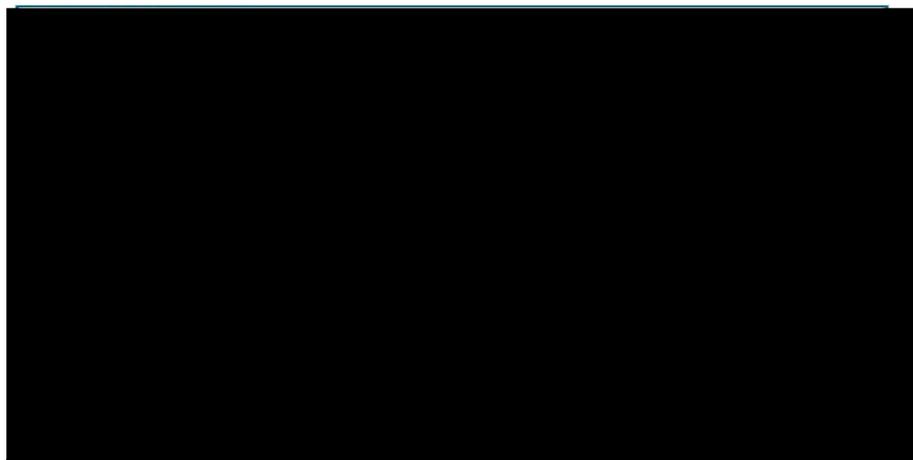
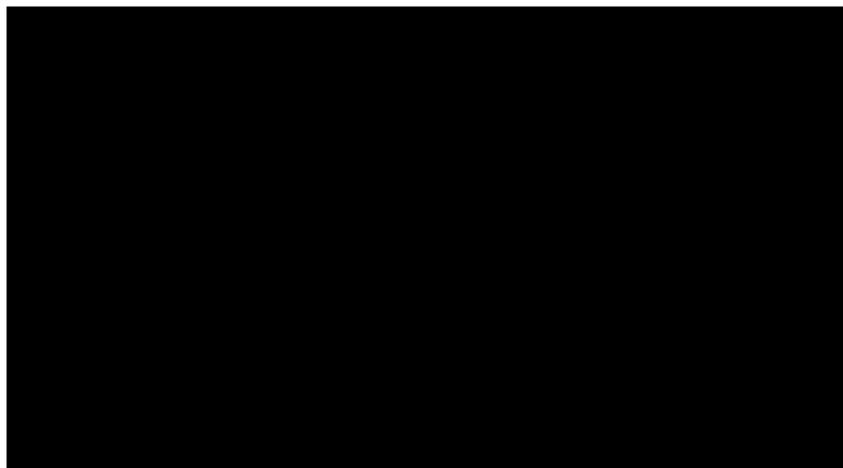


Figure 2 shows the Postal Service can assign FCM to [REDACTED], with the weight changing very little [REDACTED] in order to protect its mandated contract minimums.

<sup>2</sup> The blue bars indicate the mail as currently assigned and the red bars indicate the mail if the assignment method is modified to consider weight.

**Figure 2. Assigned Pounds vs. Assigning Mail by Weight  
(in Pounds)<sup>3</sup>  
April 1, 2011–March 31, 2012**



This condition occurred because the existing assignment process does not consider overall handling unit weight. The Postal Service employs a logic for assigning FCM to air transportation for each operating day during which the mail is assigned (based on the time of day) in a 'one-two-three' order that generally [REDACTED]

[REDACTED] The process considers contract minimums and the overall price of commercial carriers. In addition, under the existing process, [REDACTED]

[REDACTED]

We determined the Postal Service could have saved an average of about \$11 million annually in transportation costs over the 2-year period ending March 31, 2010, had it assigned FCM considering weight and invested about \$500,000 in mail assignment system programming changes<sup>4</sup> that would allow assignment in this manner without negatively impacting service. Further, if weight is considered when assigning FCM to air transportation in the future, the Postal Service could avoid costs of about \$10 million over the next year. See [Appendix B](#) for details of our analyses and a categorization of monetary impact, including adjustments due to prior OIG audit findings and discussion of associated service impact concerns.

<sup>3</sup> The blue bars indicate the mail as currently assigned and the red bars indicate the mail if the assignment method is modified to consider weight.

<sup>4</sup> The amount the Postal Service would have to spend in order to include weight as a factor in the assignment process. Postal Service data system experts specializing in programming solutions in the area of mail assignment have estimated the cost of additional programming and logic/software modifications to be as much as \$500,000 to accomplish assignment by weight, as recommended in this report. We did not validate the estimates.

## Recommendation

We recommend the vice president, Network Operations:

1. Modify the assignment process to assign First-Class Mail to air transportation considering weight where feasible, [REDACTED] while considering contractor service performance and future air transportation contract requirements.

## Management's Comments

Management agreed with our finding and recommendation. Management stated that weight should be a criterion in the air mail assignment system in order to assign [REDACTED]

[REDACTED] Network Operations is in the process of streamlining the end-to-end air planning and mail assignment process through extensive system changes and system centralization. Management said that they will evaluate this recommendation after Network Operations completes the activities associated with streamlining the end-to-end air planning and assignment process. See [Appendix C](#) for management's comments in their entirety.

In subsequent correspondence, management stated they disagreed with the monetary impact because of the limited information in the report.

## Evaluation of Management's Comments

The OIG considers management's comments responsive to the recommendation and the corrective actions taken should address the issue identified in this report. The OIG also understands that the completion of streamlining the end-to-end air planning and mail assignment process through extensive system changes and system centralization is necessary before the implementation of our recommendation.

Regarding our monetary impact, we believe the calculated projections are appropriate and reasonable based on the information available. We acknowledge that costs to implement the recommended change may impact the final amount because of ongoing system changes as stated by management. We will provide our detailed monetary impact analysis and continue to work with management in reaching agreement on the projected savings as part of the process for closing the recommendation.

The OIG considers the recommendation significant and, therefore, requires OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective action is completed. This recommendation should not be closed in the Postal Service's follow-up tracking system until the OIG provides written confirmation that the recommendation can be closed.

## Appendix A: Additional Information

### Background

Postal Service policy requires managers to balance service and cost in transporting mail, including mail transported by air. The Postal Service uses criteria other than weight to assign mail to air transportation that considers contract minimums and overall price of carriers. The Postal Service contracts with several air carriers to transport mail across the country to meet service standards. The carriers include FedEx; UPS; and selected commercial passenger airlines such as Delta, United, and Continental Airlines. The Postal Service spent \$488 million in FY 2011 shipping FCM by air.

**Figure 3. Delta Airlines is one of the CAIR Providers the Postal Service Contracts with to Transport Mail**



U.S. mail waiting to be loaded onto a Delta Airlines jet for transport at the Hartsfield-Jackson International Airport. Source: OIG

[REDACTED]

The Postal Service assigns carriers based on availability, [REDACTED],<sup>5</sup> without regard to mail density or weight.<sup>6</sup> [REDACTED]

[REDACTED]

[REDACTED]. There are 78 origin air stops in the United States where the Postal Service

<sup>5</sup> UPS and CAIR are not available modes of transportation at all origin air stops – some have only FedEx, some have FedEx and UPS, some have FedEx and CAIR, and some have all three.

<sup>6</sup> The Postal Service conducted a pilot during 2008-2009 in Dulles, VA which espoused a concept of assigning FCM based on the density of the letter tray or flat tub, using a combination hardware/software solution which proved possible potential savings. The program was not adopted after the close of the pilot.

tenders FCM for air transportation.<sup>7</sup> Of these, 58 tender to multiple modes<sup>8</sup> of air transportation, 47 are UPS origin airstops, and 20 origins tender only to [REDACTED].<sup>9</sup>

## Objective, Scope, and Methodology

Our objective was to assess FCM assignments to air transportation by container weight. To accomplish our objective, we interviewed officials from Postal Service Network Operations at headquarters and computer specialists, as well as programmers who maintain the mail assignment system for the Postal Service. We also evaluated the types and characteristics of FCM transported on air networks, considered on-time service standards, analyzed systemic causes for FCM not assigned to the least costly mode of air transportation, and analyzed alternative solutions for making the best use of the Postal Service's mail assignment system.

We also examined and analyzed relevant documents, including:

- Postal Service contracts with FedEx, UPS, and CAIR.
- Postal Service policies governing processing and dispatch operations.
- Postal Service policies governing assignment of FCM to air transportation.

We analyzed FCM flown for the period April 1, 2010 through March 31, 2012 and identified cost-saving opportunities if weight was considered when assigning FCM to air transportation. We considered only routes with two or more modes of air transportation, guaranteed contract minimums, and established cut-offs (weight limits) for FCM to be assigned to the different air carriers. While developing the cut-offs, we ensured the Postal Service would maintain [REDACTED]

We examined computer-generated data for a 2-year period from April 1, 2010 through March 31, 2012 to analyze mail volume, operational efficiency, and costs. We did not audit or comprehensively validate the data; however, the large amount of data, its untimely accessibility, and lengthy analytical processes significantly constrained our work.

To address these data limitations, we applied alternative procedures. We used the Audit Command Language<sup>10</sup> program to analyze millions of data records for FCM assigned to air transportation for the aforementioned 2-year period. We discussed the data with Postal Service senior officials, managers, and employees; and validated the data from

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<sup>7</sup> According to the Postal Service's National Traffic Management System (NTMS) database (on the Postal Service's web site) for Quarter 1, FY 2012.

<sup>8</sup> The three modes of air transportation analyzed and discussed in this report are FedEx, UPS, and commercial passenger airlines.

<sup>9</sup> FCM is tendered to [REDACTED] at all 78 origin air stops.

<sup>10</sup> Audit Command Language, also known as ACL®, is audit analytic software used by a wide range of industry and government sector audit organizations to analyze 100 percent of large data populations.

our observations and physical inspections conducted during our previous audits concerning Postal Service operations [REDACTED] and the density of FCM transported by air. We also discussed our initial findings and recommendations with senior Postal Service management, considered their perspective, and included their comments where appropriate.

We conducted this performance audit from February through September 2012, in accordance with generally accepted government auditing standards and included such tests of internal controls as we considered necessary under the circumstances. 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 objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. We discussed our observations and conclusions with management on August 28, 2012, and included their comments where appropriate.

### [Prior Audit Coverage](#)

Our previous audit, *Density of First-Class Mail on Air Transportation* (Report Number [NL-AR-12-003](#), dated March 12, 2012), identified efficiency opportunities related to the processing of FCM and reducing the number of letter trays and tubs being transported by air. The Postal Service generally agreed to our audit findings and recommendations with a monetary impact of \$267 million.

**Appendix B: Monetary Impacts**

Recommendation	Impact Category	Amount
1	Questioned Costs <sup>11</sup>	\$22,200,308
1	Fund Put to Better Use <sup>12</sup>	9,968,164
<b>Total</b>		<b>\$32,168,472</b>

Table 1 shows our analysis of the current assignment process versus assignment by container weight for the period April 1, 2010 through March 31, 2012. We determined that the Postal Service could have saved more than \$22 million in transportation costs over this 2-year period had it assigned FCM considering weight.

**Table 1. Past Costs and Savings Analysis of Assigning Mail by Weight**

Carrier (Year 1)	Original Costs <sup>13</sup>	Costs if Assigned by Weight	Estimated Gross (Costs) and Savings	Adjustment to Cost Savings <sup>14</sup>	Net Total (Costs) and Savings
██████	██████	██████	██████	\$(8,263,427)	██████
██████	██████	██████	██████	1,296,606	██████
██████	██████	██████	██████	(528,078)	██████
Carrier (Year 2)	Original Costs	Costs if Assigned by Weight	Estimated Gross (Costs) and Savings	Adjustment to Cost Savings	Net Total (Costs) and Savings
██████	██████	██████	██████	\$(8,433,646)	██████
██████	██████	██████	██████	3,060,685	██████
██████	██████	██████	██████	(258,803)	██████
<b>Implementation Costs</b>					<b>\$(500,000)<sup>15</sup></b>
<b>Total</b>	<b>\$247,459,335</b>	<b>\$211,632,364</b>	<b>\$35,826,971</b>	<b>\$(13,126,663)</b>	<b>\$22,200,308</b>

<sup>11</sup> Unnecessary, unreasonable, unsupported, or an alleged violation of law, regulation, or contract. May be recoverable or unrecoverable. Usually a result of historical events.

<sup>12</sup> Funds that could be used more efficiently by implementing recommended actions. To be conservative, we limited this calculation to 1 future year.

<sup>13</sup> This represents a subset of the overall FCM transported by air, the handling units of which apply directly to the subject and criteria of this audit.

<sup>14</sup> Adjustments were made to estimated cost savings in Table 1 because the same data was used in our prior audit, *Density of First-Class Mail on Air Transportation* (Report Number NL-AR-12-003, dated March 12, 2012).

<sup>15</sup> The amount the Postal Service would have to spend in order to include weight as a factor in the assignment process. Postal Service data system experts specializing in programming solutions in the area of mail assignment have estimated the cost of additional programming and logic/software modifications to be as much as \$500,000 to accomplish assignment by weight, as recommended in this report. We did not validate the estimates.



**Table 2. Future Annual Costs and Savings Analysis of Assigning Mail by Weight**

Carrier	Original Costs	Cost if Assigned by Weight	Cost Savings	Adjustment to Cost Savings <sup>19</sup>	Net Total (Costs) and Savings
				\$(8,433,646)	
				3,060,685	
				(258,803)	
<b>Total</b>					<b>\$9,968,164</b>

<sup>19</sup> Adjustments were made to estimated cost savings in Table 2 because the same data was used in our prior audit, *Density of First-Class Mail on Air Transportation*, (Report Number NL-AR-12-003, dated March 12, 2012).

## Appendix C: Management's Comments

DAVID E. WILLIAMS  
VICE PRESIDENT, NETWORK OPERATIONS



September 26, 2012

LUCINE WILLIS  
DIRECTOR, AUDIT OPERATIONS

SUBJECT: Draft Audit Response - First Class Mail on Air Transportation - Assignment by Weight (Report Number NL-AR-12-Draft)

Thank you for the opportunity to respond to the recommendations contained in the Discussion Draft Audit Report - First Class Mail on Air Transportation –Assignment by Weight – Draft Report Number NL-AR-12. Management will address the recommendation below.

Recommendation:

Modify the assignment process to assign First-Class Mail to air transportation considering weight where feasible, [REDACTED] while considering contractor service performance and future air transportation contract requirements.

Management Response/Action Plan:

Management agrees that weight should be a criterion in the air mail assignment system in order to [REDACTED]

Network Operations is currently in the process of streamlining the end to end air planning and mail assignment process through extensive system changes and system centralization. This recommendation will be evaluated after Network Operations completes the activities associated with streamlining the end to end air planning and assignment process.

Target Date:

March, 2013

Responsible Officials:

Manager, Air Transportation Operations  
Manager, Network Integration Support

A handwritten signature in black ink, appearing to be "D. Williams", written over a horizontal line.

David E. Williams

This report has not yet been reviewed for release under FOIA or the Privacy Act. Distribution should be limited to those within the Postal Service with a need to know

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