



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

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**Flat-Shaped Mail Costs**

**Audit Report**

January 4, 2013

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**Report Number MS-AR-13-003**



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# HIGHLIGHTS

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## **BACKGROUND:**

Flat-shaped mail includes large envelopes, newspapers, catalogs, magazines, and other publications that meet certain size and flexibility standards. In fiscal year 2011, United States Postal Service revenue from regular Standard Mail<sup>®</sup> and Periodicals flats was \$4.3 billion — \$1.2 billion less than the \$5.5 billion in transportation, processing, delivery, and other costs attributed to those products.

Our objective was to determine whether the Postal Service's network and operational decisions limit efficient processing of flats.

## **WHAT THE OIG FOUND:**

Management's decisions to manually process potentially machinable mail and the lack of flats mail processing equipment at certain processing facilities have limited Postal Service efforts to reduce costs associated with manually processing flats. Despite investments in flat mail processing equipment, about 30 percent of flat mail continues to be manually processed. In addition, some flat mail that cannot be delivered for various reasons is manually processed due to software issues of automation machinery and/or incorrect application of processing procedures by field personnel.

While the Postal Service's planned goal in fiscal year 2011 was to process

29.9 percent of flat mail manually, we estimate it could save about \$129.6 million annually if it met its stretch goal of 20 percent. As part of this \$129.6 million, we estimate the Postal Service could save about \$3.6 million per year if it moved 10 percent of flat mail processed at non-automated facilities to automated facilities and about \$21.6 million annually if it moved manually sorted retail mail to automated processing operations.

## **WHAT THE OIG RECOMMENDED:**

We recommended the Postal Service establish goals more consistent with the current stretch goal of 20 percent, to lower the percentage of manually processed flat mail. We also recommended the Postal Service evaluate opportunities to reduce the number of plants and other mail processing facilities and develop a processing strategy to automate the processing of single-piece First-Class Mail<sup>®</sup> flats. We further recommended the Postal Service ensure that procedures for placing and processing forwarding labels comply with Computerized Forwarding System requirements.

[Link to review the entire report](#)



January 4, 2013

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

A rectangular box containing a handwritten signature in black ink that reads "Darrell E. Benjamin, Jr." with a black dot at the end of the signature.

**FROM:** Darrell E. Benjamin, Jr.  
Deputy Assistant Inspector General  
for Revenue and Performance

**SUBJECT:** Audit Report – Flat-Shaped Mail Costs  
(Report Number MS-AR-13-003)

This report presents the results of our audit of Flat-Shaped Mail Costs (Project Number 12RG013CRR000).

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Janet Sorensen, director, Sales and Marketing, or me at 703-248-2100.

Attachments

cc: Megan J. Brennan  
James J. Boldt  
Corporate Audit and Response Management

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## Introduction

This report presents the results of our audit of Flat-Shaped Mail Costs (Project Number 12RG013CRR000). Our audit objective was to determine whether the U.S. Postal Service's network and operational decisions limit the efficient processing of flat-shaped mail. This self-initiated audit addresses financial risk. See [Appendix A](#) for additional information about this audit.

Flat-shaped mail, or flats, includes large envelopes, newspapers, catalogs, magazines, and other publications that meet certain size and flexibility standards.<sup>1</sup> In fiscal year (FY) 2009, market-dominant<sup>2</sup> flat mail volume was 41.1 billion pieces. Since then, flats volume declined to 37.9 billion and 37 billion mailpieces in FYs 2010 and 2011, respectively. As shown in Table 1, Standard Mail<sup>®</sup> and Periodicals flats total more than 93 percent of flat-mail volume in FY 2011.

**Table 1. FY 2011 Flat Mail Volume**

Mail Class	Total Pieces (in millions)	Percentage
Standard Mail	27,451	74.2
Periodicals	7,077	19.1
First-Class Mail	2,232	6.0
*Package Services (Bound Printed Matter Flats)	251	0.7
<b>Totals</b>	<b>37,011</b>	<b>100.0</b>

\*Package Services also includes immaterial volumes of Media and Library Mail flats.  
Source: FY 2011 Market-Dominant Billing Determinants.

In FY 2011, almost 31 percent of flat mail was manually processed. The Postal Service uses the Management Operating Data System (MODS)<sup>3</sup> to report first handling pieces<sup>4</sup> (FHP) and total pieces handled<sup>5</sup> (TPH) mail volume and workhours in manual and automated flat mail operations at large mail processing facilities. For facilities not connected to MODS (generally the smaller post offices, stations, and branches), the eFLASH system<sup>6</sup> is used to report FHP flat mail volume. Overall, the Postal Service processed about 25.8 billion FHP flats at MODS and non-MODS facilities in FY 2011, including 17.8 billion flats via automation and 7.9 billion flats manually. At MODS

<sup>1</sup> *Domestic Mail Manual*, Sections 1.1 through 1.3, 2.1, 2.3 through 2.6, Postal Service, November 2011.

<sup>2</sup> Products and services over which the Postal Service exercises sufficient market power that it can effectively set the price with limited competition. This category of products includes First-Class Mail, Standard Mail, Periodicals, Package Services, and most Special Services.

<sup>3</sup> A system that reports workhours and mail volume using operation numbers that identify activities in all functions including mail processing at large processing facilities (Function 1).

<sup>4</sup> The mail volume recorded in the operation where a mailpiece receives its first handling at a postal facility.

<sup>5</sup> Mail volume measurement that includes FHPs mail volume plus additional mail volume counts in subsequent manual or machine operations.

<sup>6</sup> An operating reporting management system at post offices that include FHP mail volume for mail processing functions (Function 4).

facilities, 2.2 billion of the 20 billion FHP pieces (or about 11.2 percent) were manually processed. At non-MODS facilities, 5.7 billion of the 5.8 billion flat mailpieces (or about 98 percent) were manually processed, as shown in Table 2.

**Table 2. FY 2011 Flats Processing**

	Number of FHP Mailpieces (in millions)			Percentage Manually Processed
	Total	Automation	Manual	
MODS facilities	19,951	17,718	2,233	11.19%
Non-MODS facilities	5,804	127	5,677	97.81%
<b>Totals</b>	<b>25,755</b>	<b>17,845</b>	<b>7,910</b>	<b>30.71%</b>

Sources: FY 2011 MODS and eFLASH.

Revenue from Standard Mail regular flats and Periodicals did not cover attributable costs in FY 2011.<sup>7</sup> Combined revenue from these two products was about \$1.25 billion below attributable costs. Losses from these two products totaled about \$3.7 billion during the past 3 fiscal years, or about \$0.08 cents per mailpiece. Table 3 shows Standard Mail regular flats and Periodicals mail volume, revenue, attributable costs, and cost coverage for FYs 2009-2011.

**Table 3. Standard Mail Flats and Periodicals Cost Coverage FYs 2009–2011**

Standard Mail Flats	FY 2009	FY 2010	FY 2011
Volume (millions)	7,814	7,068	6,792
Revenue (millions)	\$2,882	\$2,592	\$2,500
Attributable Costs (millions)	\$3,497	\$3,169	\$3,143
Contribution to Fixed Costs (millions)	(\$615)	(\$577)	(\$643)
Revenue per Piece (cents)	\$0.369	\$0.367	\$0.368
Cost per Piece (cents)	\$0.448	\$0.448	\$0.463
Cost Coverage Percentage	82.4%	81.8%	79.5%
Periodicals			
Volume (millions)	7,594	7,269	7,077
Revenue (millions)	\$2,038	\$1,879	\$1,821
Attributable Costs (millions)	\$2,680	\$2,490	\$2,430
Contribution to Fixed Costs (millions)	(\$642)	(\$611)	(\$609)
Revenue per Piece (cents)	\$0.256	\$0.258	\$0.260
Cost per Piece (cents)	\$0.337	\$0.343	\$0.340
Cost Coverage Percentage	76.1%	75.5%	74.9%

Source: Annual Compliance Determination Reports, Postal Regulatory Commission (PRC), FYs 2009-2011.

<sup>7</sup> Direct and indirect costs that can be clearly associated with a particular mail product.

## Conclusion

Management's decision to manually process potentially machinable mail and the lack of flats mail processing equipment at certain processing facilities limit the Postal Service's efforts to reduce costs associated with manually processing flat mail. In FY 2003, the Postal Service reported that it manually processed 33.3 percent of all flat mail. Eight years later, the percentage of manually processed flat mail has decreased by about 3.3 percent to about 30 percent. While declining flat mail volume and Postal Service initiatives to reduce manual flat mail processing have slightly reduced the percentage of flat mail manually processed and overall flat mail processing costs, further reductions are achievable.

Network optimization initiatives and revised service standards offer the Postal Service opportunities to further reduce manual flat mail processing. While the Postal Service's goal in FY 2011 was to process 29.9 percent of flat mail manually, we estimate it could save about \$129.6 million annually if it met its stretch goal of 20 percent. As part of this effort, we estimate the Postal Service could reduce 88,655 workhours, with a savings of \$3.6 million, by moving a portion of the mailpieces processed manually at non-automated Sectional Center Facilities (SCFs)<sup>8</sup> upstream to automated processing facilities. We also estimate the Postal Service could reduce 537,704 workhours, with savings of \$21.6 million, by moving retail mail currently sorted in outgoing primary manual operations to automated processing operations. Finally, the Postal Service could realize additional savings by ensuring procedures for placement and processing of forwarding labels comply with Computerized Forwarding System (CFS) requirements, thus reducing the amount of manually processed Undeliverable As Addressed (UAA) flats mail. See [Appendix B](#) for details regarding the monetary impact.

While achieving \$129.6 million in workhour savings only represents about 10 percent of the \$1.2 billion in cost reductions needed to increase Periodicals and Standard Mail cost coverage to 100 percent, we believe that these cost reductions are critical. Along with the mail processing issues discussed as follows and other cost reductions in transportation, post office, and delivery, these improvements are important because they help establish a clearer picture of the pricing changes needed to ensure flat mail products cover their attributable costs.

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<sup>8</sup> Postal facilities that serve as processing and distribution centers (P&DC) for post offices in a designated geographic area as defined by the first 3 digits of the ZIP Codes of those offices. Some SCFs serve more than one 3-digit ZIP Code™ range. SCFs receive flat mail from other Postal Service processing facilities or direct drop shipments from mailers. SCFs process and distribute mail to their associated post offices, stations, and branches.

## Manual Processing of Flat Mail

Prior U.S. Postal Service Office of Inspector General reports<sup>9</sup> and a joint Postal Service and PRC study<sup>10</sup> have documented multiple reasons for the significant amount of manual sorting of flat mail at mail processing centers and delivery units. Mail characteristics (for example, shape, size, weight, thickness) are a key factor in determining how mail is processed. Flat mail has a wide variety of shapes, sizes, weights, and thicknesses, which makes it more difficult to process than letters. Therefore, a higher percentage of flat mail is non-machinable and processed in manual operations at mail processing facilities or sent to “downstream” offices for manual processing. For example, at the three P&DCs we visited, newspaper and newspaper-like flats are considered non-machinable and processed manually.

The volume of flat mail, or densities, can also lead to manual processing. In general, the Postal Service does not process flats on automated equipment when:

- Mailings sorted to 5-digit ZIP Codes with fewer than 10 carrier routes are received. In these situations the standard operating procedure in the field is to send 5-digit bundles directly to delivery units for manual processing.
- Thresholds for automated processing cannot be met. For example, the mail submission has too few mailpieces to process on automated equipment or the submission has insufficient mail processing densities<sup>11</sup> to meet automation processing thresholds.
- Other classes of mail may have a higher processing priority in order to meet delivery schedule windows and automation machinery assets are limited. For example, a manager may direct First-Class Mail with overnight service requirements to receive a higher automated processing priority than machinable flats. Thus, automation equipment is not available to process certain types of flat mail and the mail is processed manually to meet delivery standards.

Management has made efforts to reduce the amount of flat mail that they manually process and reduce overall mail processing costs. In FY 2011, total flat mail volume dropped about 876.9 million pieces while flat mail volume processed on automation equipment increased more than 380 million pieces. Management stated the increase in automation processing was primarily due to deployment of the Flats Sequencing System (FSS). However, despite declining flat mail volume and incremental improvements in the percentage of flat mail manually processed, the percentage of flat

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<sup>9</sup> *The Effects of the Flats Sequencing System on Delivery Operations - Arizona District* (Report Number DR-MA-11-001, dated March 14, 2011); *Periodicals Mail Costs* (Report Number CRR-AR-11-001, dated December 7, 2010); *Flat Sequencing System - Columbus District* (Report Number DR-MA-10-002, September 17, 2010); and *Flats Sequencing System Operational Issues* (Report Number DR-AR-10-005, dated July 1, 2010).

<sup>10</sup> *Periodicals Mail Study, Joint Report of the U.S. Postal Service and Postal Regulatory Commission*, September 2011.

<sup>11</sup> The number of mailpieces, as a percentage of total mailpieces, sorted to a destination.

mail manually processed has remained about 30 percent and further reductions are achievable.

### Flats Processing Goals

Developing stringent planned goals for reducing manual mail processing would assist the Postal Service in improving flat mail cost coverage. In FYs 2010-2012 the Postal Service's planned goal for the percentage of flats manually processed was 29.9 percent, with a stretch goal of 20 percent. The Postal Service could save 3.2 million workhours a year, representing \$129.6 million in labor costs, if it achieved its stretch goal of 20 percent manually processed FHP flat mail.

The Postal Service manually processed 7.9 billion of the 25.75 billion flats (or 30.71 percent) in FY 2011. To have achieved the goal of 20 percent manually processed in FY 2011, about 2.76 billion flat mailpieces would need to have been moved from manual to automated processing. The continued implementation of the FSS deployment, combined with the movement of flat mail from non-automated to automated facilities, and the movement of outgoing primary flat mail to automated operations provides movement of more than 1 billion mailpieces from manual to automated processing. Over time, these and other initiatives make the 20-percent goal achievable.

In FY 2009, The Postal Service's planned percentage goal for TPH flat mail manually processed was 37.9 percent. This planned goal decreased to 29.9 percent in FY 2010 with the deployment of the FSS. The Postal Service uses a stretch goal of 20 percent to calculate opportunity hours<sup>12</sup> and cost. The Postal Service reported the percentage of TPH flat mail manually processed decreased from 34.8 percent in FY 2009 to a projected 29.4 percent in FY 2012. Table 4 shows the target and actual percentages from FYs 2009-2012.

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<sup>12</sup> Opportunity hours are the difference between the 20-percent target and the actual percentage that exceeds the 20 percent. The opportunity costs are the opportunity hours multiplied by the respective labor rate.

**Table 4. Percentage of TPH Flat Mail Manually Processed**

Fiscal Year	Percentage		
	Planned Goal	Actual	Stretch Goal
2009	37.9%	34.8%	20%
2010	29.9%	34.3%	20%
2011	29.9%	31.7%	20%
2012	29.9%	29.3%	20%

Sources: MODS and eFLASH.

In its FY 2009 *Annual Compliance Determination*<sup>13</sup> (ACD), the PRC directed the Postal Service to develop a plan addressing operational and pricing strategies needed to increase the cost coverage for a number of flat mail products, including Standard Mail and Periodicals flats. The resultant strategic plan<sup>14</sup> identified 30 ongoing or planned future initiatives in transportation, mail processing, and Post Office™ operations/delivery, as opportunities to reduce flat mail costs. The initiatives included a mix of programs including:

- Initiatives that require a capital investment and have associated decision analysis reports<sup>15</sup> (DARs) that detail implementation plans and dates and expected savings.
- Initiatives that do not require capital funding or a DAR, but follow defined business management strategies to improve operations and business practices, and are often implemented and measured through the Breakthrough Productivity Initiative<sup>16</sup> program.
- Initiatives that are part of ongoing day-to-day management activities, not limited specifically to flats opportunities.

Two major initiatives in the Flats Strategy included the FSS program and Facility Optimization initiatives that include consolidating mail processing operations and consolidating the network of 461 mail processing facilities.

<sup>13</sup> An annual report published by the PRC as required by the Postal Accountability and Enhancement Act. The review focuses on the Postal Service's financial transparency and compliance with pricing and service performance standards.

<sup>14</sup> *Postal Service Flats Strategy*, June 30, 2010. [See full plan here](#)

<sup>15</sup> A written report used to justify a project investment and to assist approving authorities in making decisions concerning the use of Postal Service funds.

<sup>16</sup> A nationwide program that identifies, documents, and replicates operational process improvements to standardize operations, increase efficiency, and reduce costs. The savings are used as a component of the field budget allocation.

## Network Limitations

The Postal Service network also limits the effectiveness of automated flat processing initiatives. The Postal Service has 170 SCFs, serving 190 3-digit ZIP Codes and 1,400 5-digit ZIP Codes that do not have flat mail processing equipment.<sup>17</sup> Bundles of flats sent to these facilities, either drop shipped by mailers or sent by upstream mail processing facilities, are manually sorted. In FY 2011, we estimate that about 759 million flats were manually processed at these facilities.

The Postal Service is implementing plans to consolidate its mail processing network. The first phase has up to 140 consolidations planned through February 2013, including 15 of the 170 non-automated SCFs. The second and final phase has another 89 consolidations scheduled to begin in February 2014. These consolidations provide an opportunity for the Postal Service to move flats from non-automated facilities upstream to automated processing facilities. If the Postal Service moved 10 percent of the 759 million flats processed at non-automated SCFs to automation, we estimate mail processing workhour savings would be \$3.6 million. See [Appendix B](#) for additional details.

## Opportunities to Move Single-Piece Flat Mail to Automation

Our observations of mail processing operations at three P&DCs in two districts indicate there are additional opportunities to reduce manual flat mail processing. One district manually processed First-Class Mail single-piece flats picked up from over-the-counter retail sales or collection box deposits. The rationale for manual processing was to meet First-Class Mail overnight service standards. The second district processed this flat mail on the automated flat sorter machine (AFSM) 100 and also met service standards.

Overall, in FY 2011, MODS mail processing facilities reported that 542.1 million flat mailpieces were sorted in these manual operations.<sup>18</sup> Total First-Class Mail single-piece flat mail volume was more than 1.5 billion pieces in FY 2011. This indicates that about one-third of mail processing facilities manually sort single-piece First-Class Mail flats.

On December 5, 2011, the Postal Service adopted new rules for market-dominant mail service standards that will be implemented in two phases. The first phase began July 1, 2012, and includes eliminating the overnight service standard for First-Class Mail sent by retail customers. This will provide mail processing facilities with additional time to move this single-piece mail into automated operations. Based on manual and AFSM 100 processing throughputs, we estimate the Postal Service could reduce 537,704 workhours moving outgoing primary flat mail from manual to automated operations in facilities that have flats automation equipment. The cost savings would be about \$21.6 million.

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<sup>17</sup> Commercial mailers may receive price discounts for certain types of mail presorted and drop shipped to an SCF, even if the mail is manually sorted.

<sup>18</sup> MODS Operation Number 060, Manual Flat, Primary Distribution — Outgoing.

## Undeliverable As Addressed Flats

Certain UAA flats are also processed manually. UAA mail consists of mail with an incomplete or incorrect address; an addressee not at that address because he or she has moved, are unknown, or deceased; address and route adjustments. This UAA flat mail cannot be delivered as addressed and is either forwarded to the addressee if an address change service is on file, returned to the sender, or treated as waste. A Flats Forwarding Terminal is used to process flat mail in the CFS for UAA mail that is forwarded or returned to sender. After operators process a flat mailpiece, a labeling port applies a second mailing label with a new mailing address and a Postal Alpha Numeric Encoding Technique (PLANET) Code<sup>®</sup> label. After the PLANET Code label is applied, the flats are moved to automated operations for additional sorting. Figure 1 depicts UAA flat mailpieces with original and PLANET Code mailing labels.

**Figure 1. UAA Flat Mail**



Source: Jackson P&DC operations; Jackson, MS; April 2012.

In May 2011, management updated AFSM 100 and Upgraded Flats Sorting Machine 100 (UFSM100) optical character recognition software to give priority to PLANET codes when processing flat mail. Under this change a PLANET Code take precedence over any other barcode on the mailpiece and the AFSM 100 Co-Barcode Reader (CoBCR) will sort to the PLANET Code address. This change eliminated the need to cover the original mailing label to avoid having the mailpiece scanned and sorted based on the original UAA mailing label. Several “Respect The Clear Zone” communications were sent to field operations directing them to not mark or cover the original address or barcode on UAA mailpieces. Not covering the original address and barcode allows end-to-end mailpiece visibility, allows mailers to update their mailing lists, and preserves any ancillary services<sup>19</sup> included in the original barcode.

<sup>19</sup> Optional services purchased for mailpieces including Address Correction Service, Business Reply Mail service, Certified Mail, and Delivery Confirmation.

However, CFS operations in the districts we visited did not process UAA return to sender and forwarded flats in that manner. The first district reported that the AFSM 100 sort program would frequently sort flat mailpieces based on the original mailing label; therefore they sent all return to sender and forwarded flats to manual operations for additional sorting. The second district also reported problems with the AFSM 100 sort program; they applied the PLANET Code label directly over the original mailing label and attempted additional sorting in automated operations. Management in both districts stated the AFSM 100 would not sort properly if there were two mailing labels visible on the mailpiece. We estimated that about 133 million return to sender and forwarded flats are processed each year. Ensuring the AFSM 100 sort programs are working correctly, and ensuring that procedures for placing and processing forwarding labels comply with CFS requirements, could significantly reduce manual processing of UAA flats.

## Recommendations

We recommend the vice president, Network Operations, ensure that:

1. Established goals are more consistent with the current stretch goal of 20 percent to lower the percentage of manually processed flat mail.
2. Opportunities for reducing the number of non-automated plants and other mail processing facilities are evaluated during facility optimization initiatives.
3. A processing strategy is developed to move single-piece First-Class Mail flats from manual to automated operations in facilities that have flat automation equipment.
4. Procedures for placing and processing forwarding labels comply with Computerized Forwarding System requirements.

## Management's Comments

Management agreed with the findings and recommendations but stated the monetary benefit is based on their stretch goal and not an addition of flat sorting machines, software enhancements, or operating practices. Management agreed with recommendations 1 through 4 and agreed to take corrective actions by August 31, 2013.<sup>20</sup>

Regarding recommendation 1, management will evaluate flat mail strategies and manually processed flat mail goals. Regarding recommendation 2, management will evaluate opportunities to move flats from manually processing sites to another location with under-utilized automation capacity and still make service standards. Regarding recommendation 3, management will reissue previous mandates to the plants instructing them to fully utilize their mail processing equipment set and keep flat mail in automation. Finally, regarding recommendation 4, management will develop a test to

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<sup>20</sup> The milestone date for recommendation 4 was provided in a communication subsequent to the management response dated December 26, 2012.

determine the root causes of why forwarded flats are not being run properly on ASFM 100 equipment. See [Appendix C](#) for management's comments, in their entirety.

### **Evaluation of Management's Comments**

The U.S. Postal Service Office of Inspector General considers management's comments responsive to the recommendations in the report. Regarding management's disagreement with the monetary impact, the continued implementation of the FSS deployment, combined with the movement of flat mail from non-automated to automated facilities, and the movement of outgoing primary flat mail to automated operations provides more than one-third of the savings we estimated could be made in moving more than 1 billion mailpieces from manual to automated processing. We believe these actions along with network consolidations, relaxation of delivery standards, and other initiatives make the 20-percent goal achievable.

## Appendix A: Additional Information

### Background

Flats are generally newspapers, catalogs magazines, or mailpieces that exceed dimensions for letters. Flat mail entered at facilities for processing is distributed in accordance with two basic mail flows:

- Outgoing/originating mail is received and sorted at a mail processing facility then dispatched to another facility for additional processing and delivery.
- Incoming/destinating mail is mail arriving at a processing facility (incoming) for final processing and delivery (destination) within that facility's delivery area.

More than 90 percent of flat mail arrives at a processing facility on pallets or in sacks and requires an initial bundle separation (also referred to as distribution). The Postal Service processes bundles using the Automated Package Processing System, the mechanized Small Parcel Bundle Sorter, or a manual sort process.

Over the past 30 years, the Postal Service has purchased equipment and developed strategies to automate the processing of flat mail. In 1982, the Postal Service deployed the first in a series of flat sorting machines<sup>21</sup> designed to automate flat mail processing – before 1982 all flat mail was manually processed. In 1999, the Postal Service deployed the first fully automated flat sorting machine, the AFSM 100. By 2002, 534 AFSM 100s were installed at 240 mail processing facilities.

After completing deployment of the AFSM 100s, the *Postal Service Flats Strategy*, published in June 2003,<sup>22</sup> recommended moving all AFSM 100s and flat sorting machine (FSM) 1000 compatible (machinable) flat mail away from manual and mechanical operations to more efficient automated operations. While manual sorting operations process about 3,000 flats per hour, the AFSM 100 can process more than 16,000 flats per hour. The strategy noted the greatest opportunity for reducing costs involved moving the manual distribution of machinable flats from associate offices, stations, and branches into 'upstream'<sup>23</sup> mail processing locations that had either AFSM 100s or FSM 1000s.

The FSS — introduced in 2008 — is the latest generation flat mail processing system deployed by the Postal Service. Before FSS, the AFSM 100 and UFSM 1000 sorted flat mail to carrier routes. The flats were then distributed to carriers who manually cased the mail in delivery sequence order. The FSS is designed to automate the sorting of flat mail into delivery sequence order, thereby reducing the number of workhours that

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<sup>21</sup> FSM 775 (1982), FSM 881 (1992), FSM 1000 (1996), and current upgraded FSM 1000.

<sup>22</sup> *USPS Corporate Flats Strategy*, June 2003.

<sup>23</sup> A general term describing mail flow from acceptance to processing to delivery. An upstream operation is the prior operation that processed mail. Conversely, a downstream operation is the next (subsequent) operation that will process mail.

carriers spend manually sequencing flats.<sup>24</sup> There are two ways the FSS can reduce mail processing workhours. First, management could reduce distribution workhours at delivery units because sequenced flats arrive in street-ready containers that can be loaded directly into delivery vehicles, therefore, distribution clerks do not need to distribute bundles and containers of flat mail. Second, deployment of the FSS will free up AFSM 100 capacity when flat mail moves from AFSM 100 to FSS processing. Freeing up AFSM 100 capacity would allow the Postal Service to shift flat mail currently processed manually at delivery units due to capacity constraints to automated AFSM 100 processing. About 9 percent of flat mail was processed on the 100 FSS machines deployed at 46 sites in FY 2011.

Today, the majority of automated flats sorting is performed on three machines: the AFSM 100 and, to a significantly lesser extent, the UFSM 1000 and FSS. The AFSM 100 has three automatic feed stations, 120 stackers, and the ability to process up to 17,000 mailpieces per hour in carrier route sequence. In FY 2011, more than 90 percent of flat mail was processed on the AFSM 100. Flats are sorted manually when they cannot be finalized on either automation or mechanization, when machine assets are limited, or when operational managers make decisions to work the mail manually. In delivery operations, manual sortation by clerks must take place for any flat mail that is not already sorted to carrier route by the mailer, or carrier-routed or delivery point sequenced by machines at the upstream processing centers. Carriers must manually sequence all flats for delivery unless they are one of the designated FSS offices receiving sequenced flats.

In its FY 2010 ACD, the PRC determined that revenue from Standard Mail<sup>®</sup> flats was continually below the costs attributed to that product and, therefore, the Postal Service did not comply with the postal law requirement that postal rates are established to apportion the costs of all postal operations to all users of the mail on a fair and equitable basis.<sup>25</sup> The Postal Service appealed that determination arguing, among other issues, that the law requires the Standard Mail class to cover costs — not the Standard Mail Flats product within that class — and that the finding of non-compliance exceeded the PRC's authority. On April 17, 2012, the U.S. Court of Appeals ruled that the PRC had the authority to require the Postal Service to increase rates for its Standard Mail Flats service to cover its costs so that other mailers do not effectively subsidize the customers with flats products that are not covering costs. The court ordered the PRC to clarify its policy on products covering their costs and determine the threshold whereby a cost-coverage deficiency would trigger a finding of non-compliance with Postal Accountability and Enhancement Act<sup>26</sup> cost requirements.

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<sup>24</sup> Customer Service (Function 2) workhours.

<sup>25</sup> 39 U.S.C. § 101 (d) – Postal Service policy.

<sup>26</sup> Public Law 109-435, Section 3622(c) (2), 39 U.S.C., December 20, 2006.

## Objective, Scope, and Methodology

Our audit objective was to determine whether the Postal Service's network and operational decisions limit efficient processing of flat mail.

To determine mail volume by class and subclass, we reviewed the Postal Service's FY 2011 Billing Determinants.<sup>27</sup>

To determine the percentage of flat mail volume processed in manual and automated operations, we examined FY 2011 MODS data for all Function 1<sup>28</sup> facilities and FY 2011 eFLASH data for Function 4<sup>29</sup> offices. We used the Postal Service's *Incoming Secondary Manual Distribution Report*<sup>30</sup> to map associate offices (non-MODS facilities) to their host plants.

To identify non-automated SCFs, we obtained a list from the Postal Service's Confirm website. To verify that facilities had no flat sorting equipment, we compared the flat sorting equipment inventory lists to the non-automated SCF list. To verify the accuracy of the associate office mapping, we reconciled the associate office mapping to Function 4 facilities listed in the Enterprise Data Warehouse. We discussed the accuracy of flat mail volume data with selected plant managers and observed the procedures used to develop eFLASH reports. We determined that the data were sufficiently reliable for the purposes of this report.

To obtain a better understanding of the Postal Service's network and operations, we interviewed Postal Service personnel from the Processing Operations and Service and Field Operations Performance Measurement groups. We also visited select facilities in the Sierra Coastal<sup>31</sup> and Mississippi<sup>32</sup> districts. We observed flat mail processing operations and interviewed district and plant personnel.

We conducted this performance audit from November 2011 through January 2013 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

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<sup>27</sup> A quarterly Postal Service report presenting the volume and rate categories for each product and service used to calculate total revenue.

<sup>28</sup> Function 1 facilities are P&DCs and other large mail processing facilities that report workhours and mail volume through MODS.

<sup>29</sup> Function 4 offices are smaller mail processing facilities and post offices, stations, and branches that are non-MODS facilities.

<sup>30</sup> A MODS- and eFLASH-based report prepared by the Service and Field Operations Performance Measurement office within Network Operations that analyzes letter and flat mail automated and manual handling at MODS and non-MODS facilities.

<sup>31</sup> Santa Clarita P&DC, Santa Barbara P&DC, and the Nuys FSS Annex.

<sup>32</sup> Jackson P&DC.

observations and conclusions with management on September 5, 2012, and included their comments where appropriate.

### Prior Audit Coverage

Report Title	Report Number	Final Report Date	Monetary Impact
<i>The Effects of the Flats Sequencing System on Delivery Operations - Arizona District</i>	DR-MA-11-001	3/14/2011	\$522,450
<b>Report Results</b>	About 14 million flat mailpieces could not be processed on FSS machines; 7 million of these pieces required manual sorting and casing. This occurred because these mailpieces did not meet flat mail automation requirements. Management agreed with the finding, recommendation, and monetary impact; however, did not specifically address how they were going to reduce the amount of unworked flat mail to delivery units.		
<i>Periodicals Mail Costs</i>	CRR-AR-11-001	12/7/2010	None
<b>Report Results</b>	Manual costs attributed to Periodicals continued to rise because of procedures under the Hot 2C program; missed Critical Entry Times; bundle breakage and preparation problems; mailpiece characteristics that made them non-machinable; and inconsistent reporting in the electronic Mail Improvement Reporting (eMIR) system. Management agreed with the recommendations and stated there were ongoing efforts to analyze operational conditions and their impact on cost attribution. Management also stated they would develop eMIR system training guidance with a system redesign by May 2011.		

Report Title	Report Number	Final Report Date	Monetary Impact
<i>The Effects of the Flats Sequencing System on Delivery Operations - Columbus District</i>	DR-MA-10-002	9/17/2010	\$155,157
<b>Report Results</b>	Delivery units received more than 8.5 million flat mailpieces that were not processed on FSS. Over 2 million of these mailpieces required manual sorting and casing. This occurred because this mail did not meet flat mail automation requirements. Management agreed with the finding and recommendation, and stated they will continue notifying mailers of irregularities in mail preparation and implement strategies to close the gap between the district's performance and the FSS baseline projections.		
<i>Flats Sequencing System Operational Issues</i>	DR-AR-10-005	7/1/2010	\$852,336
<b>Report Results</b>	The report identified several FSS machines that were unavailable for several months and processing issues that negatively impacted delivery operations. Management agreed with finding 1 and all the recommendations, but disagreed with the methodology in finding 2 and the calculation of monetary impact. As a result of additional information, changes were made to the methodology and estimated monetary impact for finding 2.		

### Appendix B: Monetary Impacts

Recommendation	Impact Category	Amount
1	Funds Put to Better Use <sup>33</sup>	\$259,154,687

In FYs 2010-2012 the Postal Service's planned goal for the percentage of flats manually processed was 29.9 percent, with a stretch goal of 20 percent. The Postal Service could save 3,221,373 workhours a year, representing \$129,577,343 in labor costs, if it achieved its stretch goal of 20 percent manually processed FHP flat mail. That would be \$259,154,687 over 2 years.

Within these cost reduction efforts, we specifically estimate that the Postal Service used 1.1 million workhours costing \$44.3 million in FY 2011 to manually process 759 million flat mailpieces at non-automated SCFs. As part of the manual processing reduction effort, we estimate that if the Postal Service moves 10 percent of this manually processed mail (75.9 million mailpieces) into AFSM 100 automation, based on manual and AFSM 100 throughputs, it could reduce 88,655 workhours and achieve cost savings of \$3,566,097.

In December 2011, the Postal Service adopted new rules for market-dominant mail service standards that will be implemented in two phases. The first phase includes eliminating the overnight service standard for First-Class Mail sent by retail customers. As a result of implementing the first phase, the Postal Service can move retail mail that is currently sorted in outgoing primary manual operations to automated processing. Based on manual and AFSM 100 throughputs, we estimate that the Postal Service could reduce workhours by 537,704 with a cost savings of \$21,628,740 annually.

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<sup>33</sup>Funds Put to Better Use are funds that could be used more efficiently by implementing recommended actions.

## Appendix C: Management's Comments

DAVID E. WILLIAMS  
VICE PRESIDENT, NETWORK OPERATIONS



December 26, 2012

JUDITH LEONHARDT  
DIRECTOR, AUDIT OPERATIONS

SUBJECT: Flat-Shaped Mail Costs Draft Audit Report (Report Number CRR-AR-13-Draft)

We reviewed the audit performed by the Office of Inspector General on the Flat-Shaped Mail Costs and we appreciate the opportunity to provide feedback to your findings. Management generally agrees with the premise outlined in the audit, but the monetary impact is based on a Postal Service admitted "stretch goal" and not an addition of flat sorting machines, software enhancements or operating practices.

Recommendation 1:

Established goals are more consistent with the current stretch goal of 20 percent to lower the percentage of manually processed flat mail.

Management Response/Action Plan:

Management agrees with this recommendation. Management will evaluate flat mail strategies and manually processed flat mail goals.

Target Implementation Date:

August 2013

Responsible Official:

Manager, Processing Operations

Recommendation 2:

Opportunities for reducing the number of non-automated plants and other mail processing facilities are evaluated during the facility optimization initiatives.

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Management Response/Action Plan:

Management agrees with this recommendation. Management will re-evaluate those sites processed manually to determine if there is opportunity to move these flats to another location that has under-utilized automation capacity and still make service.

Target Implementation Date:

August 2013

Responsible Official:

Manager, Processing Operations

Recommendation 3:

A process strategy is developed to move single- piece First-Class Mail flats from manual to automated operations in facilities that have flat automation equipment.

Management Response/Action Plan:

Management agrees with this recommendation. Management will re-issue previous mandates to the plants instructing them to fully utilize their mail processing equipment set and keep flat mail in automation.

Target Implementation Date:

August 2013

Responsible Official:

Manager, Processing Operations

Recommendation 4:

Procedures for placing and processing forwarding labels comply with Computerized Forwarding System requirements.

Management Response/Action Plan:

Management agrees with this recommendation. Network Operations will coordinate with both Engineering Systems and Delivery and Post Office Operations to develop a test that will determine the root causes as to why forwarded flats are not being run on AFSM 100 equipment as reported by this audit.

Target Implementation Date:

After August 2013

Responsible Official:

Manager, Processing Operations

This report and management's response do not contain information that may be exempt from disclosure under the FOIA.



David E. Williams

cc: Mr. Graves  
Mr. Amato  
Ms. Taylor  
Ms. Malone  
Ms. Haring  
CARM