

Flats Cost Coverage

AUDIT REPORT

Report Number 22-166-R23 | June 29, 2023



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Highlights

Background

Flat-shaped mail, or “Flats”, refers to large envelopes, magazines, and other flexible, rectangular mail that meet certain criteria. The Postal Service processes Flats using automated mail processing equipment and manually, as necessary.

Each class of U.S. mail is legally required to cover its costs. The Postal Service has been challenged with processing Flats in a cost-effective manner despite it developing and implementing several initiatives related to Flats. The Postal Regulatory Commission (PRC) has identified several causes of inefficiencies in the Postal Service’s Flats operations over the years in its *Annual Compliance Determination Reports* (ACD) and most recently in its *Flats Operations Study Report* as required by the Postal Service Reform Act of 2022. In fiscal year (FY) 2022, four of eight Flats products did not cover their costs and Flats collectively had a cumulative negative contribution of approximately \$630 million.

Starting in FY 2010, the PRC required the Postal Service to describe operational changes intended to lower Flats cost in its *Annual Compliance Reports* (ACR). In FY 2019, the PRC required additional information be provided in the ACRs on Flats cost and Postal Service initiatives related to Flats. The Postal Service also established a joint task force responsible for collaborating with the mailing industry on Flats cost saving measures.

What We Did

Our objective was to assess Postal Service initiatives to increase cost coverage of Flats products.

What We Found

We found most Postal Service initiatives are not designed with specific, measurable objectives to directly reduce Flats cost and do not address the causes of inefficiencies in Flats operations identified by the PRC. In addition, we identified opportunities for the Postal Service to further collaborate with its stakeholders on current and new initiatives related to Flats.

Recommendations

We recommended management further collaborate with stakeholders from the mailing industry to develop and implement initiatives with specific, measurable objectives to directly reduce Flats costs and address the causes of inefficiencies in Flats operations identified by the PRC.

Transmittal Letter



OFFICE OF INSPECTOR GENERAL
UNITED STATES POSTAL SERVICE

June 29, 2023

MEMORANDUM FOR: MIKE L. BARBER
VICE PRESIDENT, PROCESSING AND MAINTENANCE OPERATIONS

THOMAS FOTI
VICE PRESIDENT, PRODUCT SOLUTIONS

SHARON D. OWENS
VICE PRESIDENT, PRICING AND COSTING

A handwritten signature in black ink, reading "Alan S. MacMullin", is positioned above the "FROM:" field.

FROM: Alan S. MacMullin
Deputy Assistant Inspector General
for Finance, Pricing, and Human Capital

SUBJECT: Audit Report – Flats Cost Coverage (Report Number 22-166-R23)

This report presents the results of our audit of Flats cost coverage.

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Laura Lozon, Director, Cost and Pricing, or me at 703-248-2100.

Attachment

cc: Postmaster General
Corporate Audit Response Management

Results

Introduction/Objective

This report presents the results of our self-initiated audit of flat-shaped mail's (Flats)¹ cost coverage² (Project Number 22-166). Our objective was to assess Postal Service initiatives to increase cost coverage of Flats products. See [Appendix A](#) for additional information about this audit.

Background

Flat-shaped mail, or "Flats", refers to large envelopes, magazines, and other flexible, rectangular mail that meet certain criteria.³ The Postal Service processes Flats using automated mail processing equipment and manually, as necessary.

Each class of U.S. mail is legally required⁴ to cover its costs.⁵ The Postal Service has been challenged with processing Flats in a cost-effective manner despite it developing and implementing several initiatives related to Flats. The Postal Regulatory Commission (PRC)⁶ has identified several causes of inefficiencies in the Postal Service's Flats operations over the years in its *Annual Compliance Determination Reports* (ACD)⁷ and most recently in its *Flats Operations Study*

Report as required by the Postal Service Reform Act of 2022 (PSRA).⁸ The causes are summarized below and described further in [Appendix B](#).

- **Bundle⁹ Processing:** Bundle breakage during bundle processing
- **Automated Processing:** Productivity of automated Flats sorting equipment
- **Manual Sorting:** Manual sorting at mail processing facilities and destination delivery units (DDUs)
- **Allied Operations:**¹⁰ Productivity and service issues in allied operations
- **Transportation:** Transportation issues at mail processing facilities and hubs
- **Last Mile / Delivery:** Inefficiencies at DDUs

In fiscal year (FY) 2022,¹¹ four of eight Flats products did not cover their costs and Flats collectively had a cumulative negative contribution¹² of approximately \$630 million as shown in [Figure 1](#).

1 Flats products include (i) First-Class Mail Flats; (ii) Marketing Mail Carrier Route, (iii) Marketing Mail Flats, (iv) Marketing Mail Every Door Direct Mail-Retail, (v) Marketing Mail High Density and Saturation Flats and Parcels; (vi) Package Services Bound Printed Matter Flats; (vii) In-County Periodicals; and (viii) Outside County Periodicals.

2 Cost coverage is revenue as a percentage of attributable cost (i.e., revenue divided by attributable cost). Flats with a cost coverage of 100 percent or more are considered to have covered their attributable costs.

3 U.S. Postal Service, Publication 32, *Glossary of Postal Terms*, July 1, 2016, notes that Flats must have one dimension that is greater than 6-1/8 inches high or 11-1/2 inches long or 1/2 inch thick and cannot be more than 12 inches high x 15 inches long x 3/4 inch thick.

4 U.S. Code 109-435, *Postal Accountability and Enhancement Act* (PAEA), December 20, 2006.

5 Costs include the direct and indirect attributable postal costs (i.e., costs that can be reliably attributed through identified causal relationships) plus that portion of all other costs of the Postal Service reasonably assignable to such class. Attributable costs for a product are the sum of its volume-variable costs, product-specific costs, and the portion of inframarginal costs that have a causal relationship with the provision of the product, which are calculated as part of its incremental costs.

6 The PRC is an independent agency that has exercised regulatory oversight over the Postal Service since its creation by the Postal Reorganization Act of 1970, with expanded responsibilities under PAEA.

7 The ACD is issued by the PRC within 90 days after the Postal Service files its ACR each fiscal year, which fulfills the PRC's responsibility to produce an annual assessment of Postal Service rates and service mandated by 39 U.S.C. §§ 3653 and 3705.

8 The PSRA required that the PRC, in consultation with the U.S. Postal Service OIG, conduct a study to (i) comprehensively identify the causes of inefficiencies in the collection, sorting, transportation, and delivery of Flats; and (ii) quantify the effects of the volume trends, investments decisions, excess capacity, and operational inefficiencies of the Postal Service on the direct and indirect costs of the Postal Service that are attributable to Flats. The PSRA also required that the PRC submit a report to Congress and the Postmaster General on its Flats operations study by no later than one year after the enactment of the PSRA (i.e., April 6, 2023).

9 A group of addressed mailpieces assembled, faced in the same direction, and secured together to make up a basic unit of bulk or presorted mail for processing. All pieces in the bundle are destined for the same 5-digit Zone Improvement Plan (ZIP) Code or same 3-digit ZIP Code prefix.

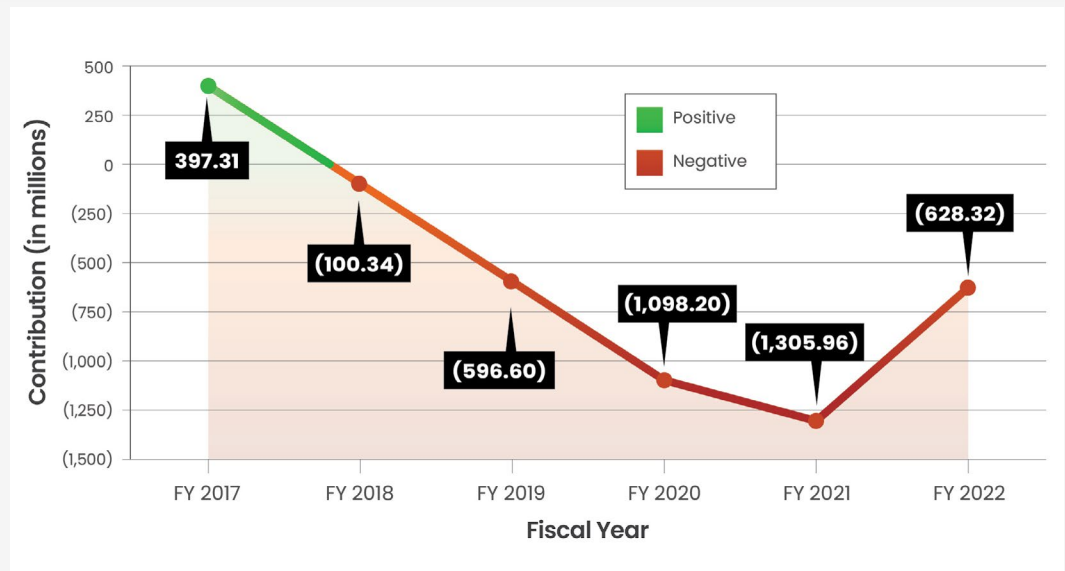
10 Allied operations are mail processing activities that involve preparing the mail for pallet, bundle, or piece processing and include platform operations, such as unloading trucks and moving pallets to mail processing equipment.

11 The enactment of the PSRA had a one-time externally driven effect of dampening increases in unit attributable costs in FY 2022 because of the repeal of the requirement that Postal Service annually prepay future retirement health benefits.

12 Contribution, revenue minus attributable cost, is the amount contributed by Flats to Postal Service's operating costs.

Figure 1. Cumulative Contribution of All Flats

Source: Cumulative contribution of all Flats calculated by the OIG based on the Postal Service's *Annual Compliance Reports (ACR)*¹³ from FY 2017 through FY 2022.



Starting in FY 2010, the PRC required the Postal Service to describe operational changes intended to lower Flats cost in its ACRs. In FY 2019, the PRC required additional information be provided in the ACRs on Flats cost and Postal Service initiatives related to Flats. The Postal Service also established a joint task force responsible for collaborating with the mailing industry on Flats cost saving measures.

Finding #1: Flats Initiatives

We found most Postal Service initiatives are not designed with specific, measurable objectives to directly reduce Flats costs and do not address the causes of inefficiencies in Flats operations identified by the PRC. In addition, we identified opportunities for the Postal Service to further collaborate with its stakeholders on current and new initiatives related to Flats.

Design of Flats Initiatives

Although the Postal Service publicly reports its initiatives related to Flats in its ACR, we found most Postal Service initiatives are not designed with specific, measurable objectives to directly reduce Flats costs. Additionally, the Postal Service's initiatives do not address most of the causes of inefficiencies in Flats operations as identified by the PRC.

The Postal Service has been implementing the following significant initiatives related to Flats, noted in its FY 2022 *Operational Initiatives Report*.¹⁴

¹³ The ACR is issued by the Postal Service pursuant to 39 U.S.C. § 3652, which requires it to file with the PRC, within 90 days after the end of each fiscal year, a variety of data on costs, revenues, rates, and quality of service, in order to demonstrate that all products during such year complied with all applicable requirements of title 39.

¹⁴ The Postal Service's *Operational Initiatives Report* is filed as part of its ACR in attachment USPS-FYXX-45.

¹⁵ Labeling lists provide updated zip-code, and associated destination locations, to mailers' to improve the accuracy of presorting mail.

1. **Labeling List Updates:** Reviewing and updating labeling lists,¹⁵ as necessary, to ensure they align with the new processing, transportation, and delivery network.
2. **Development of Standard Work Instructions:** Developing and implementing standardized instructions to optimize Flats mail processing operations and improve productivity and service performance.
3. **Site-specific Flats Operating Plans:** Developing and implementing operating plans intended to streamline Flats mail processing and set predictable, service-responsive, and achievable goals for clearance times in each operation.
4. **Combined Efforts with Engineering on Experimental/Pilot Opportunities:** Adding sortation bins to Automated Parcel and Bundle Sorter machines to finalize more mail on a primary automated operation, reducing the amount of mail that must be reworked on a secondary automated operation or manually. In addition, installing additional machines (e.g., Automated Delivery Unit Sorter, High Output Package Sorter, Single Induction Package Sorter) and retrofitting all Single Induction Package Sorter machines to increase bundle processing capacity.

5. **Equipment Right-sizing for Stabilization and/or Optimization:** Strategically determining the most effective location for current and new automated Flats sorting equipment to increase Flats mail processing efficiency including extending the life and/or modifying current equipment, as necessary.
6. **Flats Sequencing System (FSS) Machine Discontinuance:** Removing FSS machines from mail processing operations. In FY 2007, the Postal Service invested almost \$1.5 billion to develop, purchase, and deploy 100 FSS machines at 33 locations. The Postal Service started deploying the machines in FY 2009, but decided to remove the machines from its mail processing operations beginning in FY 2021 because it no longer considered FSS processing cost-effective. The OIG observed a decommissioned FSS machine that was removed from the Postal Service’s mail processing operations during one of its site visits although it remained idle in the facility as shown in Figure 2.

Figure 2. Idle FSS Machine



Source: OIG photograph taken at the Incoming Mail Processing and Distribution Center (P&DC) facility in Linthicum, Heights, MD, on September 20, 2022.

We analyzed these initiatives and compared them to the causes of inefficiencies in Flats operations identified by the PRC, as shown in Appendix B and summarized in Table 1.

Table 1. Impact of Flats Initiatives Summary

Flats Initiative		Impact on Flats Costs	Related Cause of Inefficiency as Identified by the PRC
1	Labeling List Updates	Unknown ¹⁶	None
2	Development of Standard Work Instructions	Unknown	None
3	Site-specific Flats Operating Plans	Unknown	Transportation
4	Combined Efforts with Engineering on Experimental/Pilot Opportunities	Unknown	None
5	Equipment Right-sizing for Stabilization and/or Optimization	Unknown	Automated Processing
6	FSS Machine Discontinuance	\$19.57 million in FY 2022 ¹⁷	Automated Processing

Source: OIG analysis based on the Postal Service’s initiatives related to Flats and the findings noted in the PRC’s Flats Operations Study Report, April 6, 2023.

¹⁶ Management concluded that while deliberate operational initiatives will likely have some effect on data related to cost, service, and the causes of inefficiencies in Flats operations, it is neither possible to identify with certainty which of its initiatives contributed to a particular result nor to isolate the effects of each initiative.
¹⁷ In FY 2022, the Postal Service planned for a cumulative cost savings of \$12.4 million, which it exceeded by \$717 million.

Based on our review, the Postal Service’s six initiatives related to Flats achieved at least \$19.5 million in cumulative cost savings as of FY 2022. Individually, except for the FSS Machine Discontinuance initiative, the Postal Service’s initiatives are not designed with specific, measurable objectives to reduce Flats costs. As a result, their impact on Flats costs is unknown. Collectively, the Postal Service’s initiatives do not fully address the causes of inefficiencies in Flats operations identified by the PRC.

Although the cost coverage improved for each Flats product in FY 2022, unit attributable costs have also increased for five of the eight Flats products. We also found that the three largest unit attributable costs of all Flats products (i.e., mail processing, delivery, and purchased transportation) trended upward, on average, over the years as shown in Figure 3.

The USPS Strategic Initiative Governance Controls guide notes that the Postal Service’s initiatives should include targeted business outcomes and key performance indicators (KPI) that align with the Delivering for America (DFA) Plan’s goals, including financial sustainability and best-in-class mail processing. The Postal Service typically defines targeted business outcomes and KPIs for its initiatives at the organization-wide level. These include both financial (e.g., net revenue and/or cost savings) and non-financial (e.g., productivity) outcomes, which are validated internally prior to implementation and

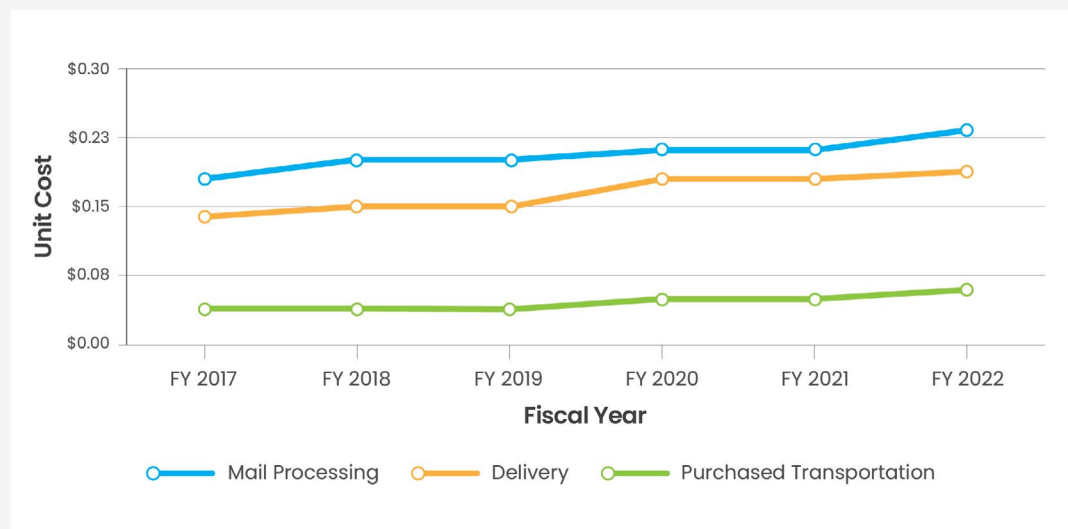
again when actual results are recorded. According to U.S. 39 Code of Federal Regulations 3050.50,¹⁸ the Postal Service is required to file an annual report that identifies data that will be impacted by each initiative related to Flats and provide an estimate of the impact of each initiative on such data. Management explained it is unable to comply with these requirements because:

- the Postal Service is a multiproduct firm with an integrated processing, transportation, and delivery network that handles multiple products and shapes simultaneously,
- the diverse and large size of the Postal Service’s network makes isolating and estimating cost impacts related to specific initiatives impracticable and unworkable, and
- attempts to aggregate these cost impacts across the network are unfeasible and unattainable.

Although the Postal Service’s strategic initiative process requires targeted business outcomes and KPIs to be defined for each initiative prior to implementation, most Postal Service initiatives related to Flats do not have outcomes and KPIs directly related to either reducing Flats costs or addressing the causes of inefficiencies in Flats operations identified by the PRC.

Figure 3. Three Largest Unit Attributable Costs of All Flats Products by Functional Cost Category

Source: Average unit attributable costs of all Flats products for mail processing, delivery and purchased transportation calculated by the OIG based on the Postal Service’s ACRs from FY 2017 through FY 2022.



¹⁸ Information pertaining to cost and service for flat-shaped mail, May 13, 2019.

As a result, it is reasonable to expect that the cost of Flats will continue to increase if Postal Service does not know if its initiatives are effective at reducing Flats costs and addressing the causes of inefficiencies in its Flats operations. In addition, the Postal Service may be unable to determine the impact of its initiatives on the cost coverage for any of its mail products (i.e., letters, Flats, or parcels).

Stakeholder Collaboration

In FY 2019, the Postal Service established a joint task force responsible for collaborating with the mailing industry to identify potential initiatives that may reduce Flats costs. The joint task force, in collaboration with the mailing industry, identified several different potential initiatives, some of which were subsequently implemented by the Postal Service. For example, the joint task force collaborated with the mailing industry to develop the FSS machine discontinuance initiative.

In FY 2022, the Postal Service decided to put the joint task force on hiatus to prioritize determining the future state of its processing, transportation, and delivery network. The Postal Service also does not use its Mailers Technical Advisory Committee's (MTAC)¹⁹ user groups, work groups, or task teams to collaborate directly with the mailing industry to identify potential initiatives that may reduce Flats costs.

The Committee of Sponsoring Organizations of the Treadway Commission's (COSO) *Enterprise Risk Management – Integrating with Strategy and Performance* (ERM framework)²⁰ notes that an organization that identifies its external stakeholders and the extent of their influence on the business may be in a better position to anticipate and adapt to change.

Management stated that it collaborates with the mailing industry on an ad hoc basis, as necessary. As a result, the Postal Service risks not leveraging the mailing industry's expertise to develop and implement initiatives that may increase the cost coverage of Flats.

Recommendation #1

We recommend the **Vice President for Processing and Maintenance Operations**, in coordination with the **Vice President for Pricing and Costing** and the **Vice President for Product Solutions**, further collaborate with stakeholders from the mailing industry to develop and implement initiatives with specific, measurable objectives to directly reduce Flats costs and address the causes of inefficiencies in Flats operations identified by the Postal Regulatory Commission.

Management's Comments

While management generally agreed with the finding and recommendation, it expressed concerns with some of the OIG's conclusions. Specifically, management noted that all Postal Service initiatives have specific, measurable objectives where practical. Management explained that the Postal Service is pursuing numerous initiatives as part of its DFA plan to improve the efficiency and operational precision of its network generally, which will improve how it processes, transports, and delivers all shapes and types of mail including Flats. Management also noted that the Postal Service has demonstrated savings from initiatives where cost reductions can be effectively attributed to Flats without incurring unnecessary costs to collect data. Furthermore, management noted that the Postal Service collaborates with the mailing industry on a frequent basis in various ways. See [Appendix C](#) for management's comments in their entirety.

Regarding recommendation 1, management noted it collaborates with the mailing industry, and agrees to continue to do so as a source of suggestions for improvement and ensure that all initiatives created to address Flats operations have measurable objectives where practical. The target implementation date is January 31, 2024.

Evaluation of Management's Comments

We consider management's comments responsive to the recommendation and corrective actions should resolve the issues identified in the report.

¹⁹ MTAC is a venue for the Postal Service to share technical information with mailers, and to receive their advice and recommendations on matters concerning mail-related products and services, in order to enhance customer value and expand the use of these products and services for the mutual benefit of mailing industry stakeholders and the Postal Service.

²⁰ The ERM framework was commissioned by COSO and provides thought leadership through the development of comprehensive frameworks and guidance on internal control, enterprise risk management, and fraud deterrence designed to improve organizational performance and oversight and to reduce the extent of fraud in organizations.

Regarding the concerns raised about some of our conclusions, we appreciate management sharing its perspective and stand by our conclusions based on sufficient, appropriate evidence we obtained and analyzed during the audit. We will continue to solicit management's input, as well as the input of other impacted stakeholders, as we plan and execute our oversight of the Postal Service's DFA plan including its initiatives to achieve best-in-class mail and package processing and ensure financial stability.

All recommendations require OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective actions are completed. The recommendation should not be closed in the Postal Service's follow-up tracking system until we provide written confirmation that the recommendation can be closed.

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Appendix A: Additional Information

Scope and Methodology

The scope of our audit included Postal Service initiatives related to Flats from FY 2017 through FY 2022.

To accomplish our objective, we:

- Visited six mail processing facilities²¹ to observe their Flats operations and interview local management about the Postal Service's initiatives related to Flats.
- Interviewed management at Postal Service's headquarters to gain a better understanding of the Postal Service's strategic initiative process, strategic initiative performance tracking system,²² and initiatives related to Flats.
- As required by the PSRA, periodically met with the PRC's Office of Accountability & Compliance in a consultative capacity as it conducted the Flats operations study mandated by the law.
- Interviewed representatives from nine separate mailing industry organizations to gain a better understanding of their Flats mail processing operations and collaboration with the Postal Service on its initiatives related to Flats.
- Reviewed both quantitative and qualitative information about the development and implementation of six initiatives related to Flats.
- Analyzed data in the Postal Service's strategic initiative performance tracking system.

- Reviewed internal policies, procedures, and guidance applicable to the Postal Service's strategic initiative process and Flats mail processing operations.
- Reviewed publicly available reports (e.g., Postal Service, PRC) that describe Postal Service's initiatives related to Flats.

We conducted this performance audit from August 15, 2022, through June 2023, 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 June 5, 2023, and included their comments where appropriate.

We assessed the reliability of the Technology Management Office System's data by performing logical tests of completeness, accuracy, and reasonableness on key fields. We determined that the data were sufficiently reliable for the purposes of this report.

²¹ The audit team visited the following Flats mail processing facilities: (1) Linthicum Incoming Mail P&DC, Linthicum Heights, Maryland; (2) Nancy B. Jefferson Post Office, Chicago, Illinois; (3) Chicago P&DC, Chicago, Illinois; (4) Northern Virginia P&DC, Merrifield, Virginia; (5) Los Angeles P&DC, Los Angeles, California; and (6) Inglewood Carrier Annex, Inglewood, California.

²² The Technology Management Office System was used by the Postal Service as the official strategic initiative performance tracking system during our audit period. In FY 2023, the Postal Service implemented the Management Planning and Analysis Tool, which is its new strategic initiative performance tracking system.

Prior Audit Coverage

Report Title	Objective	Report Number	Final Report Date	Monetary Impact
<i>Assumptions and Metrics Underlying the Delivering for America 10-Year Plan</i>	To evaluate the Plan to determine if the underlying assumptions and projections were supported and whether metrics were established and reasonable.	21-224-R22	July 6, 2022	\$0
<i>Cost Reduction Initiatives for Mail Products</i>	To evaluate opportunities to reduce mail product costs.	20-088-R20	August 3, 2020	\$0

Appendix B: Analysis of Flats Initiatives and Causes of Inefficiencies

The following table describes our comparison of the Postal Service’s Flats initiatives to the most significant causes of inefficiencies in Flats operations identified by the PRC. In addition, the table notes similar causes of inefficiencies in Flats operations observed by the audit team during its site visits.

Table 2. Postal Service’s Flats Initiatives Compared to the Causes of Inefficiencies in its Flats Operations

Causes of Inefficiencies in Flats Operations	Related Flats Initiative(s)
Bundle Breakage During Bundle Processing	
<p>A bundle of Flats can experience breakage during bundle processing. How Flats bundles are prepared and presented to the Postal Service significantly impacts bundle breakage rates. Better coordination between the Postal Service and mailers is necessary to improve Flats bundle integrity.²³</p>	None
<p>Flats bundle breakage often results in inefficient manual processing of individual Flats. For example, mixed Flats from broken or loose Flats bundles require additional sorting, some of which is done manually.</p>	None
<p>Flats bundle breakage during bundle processing is affected by the type of automated bundle sorting equipment used. For example, the height that bundles must fall to be unloaded onto automated sorting equipment range from six inches using the Automated Parcel and Bundle Sorter machine to three feet using the Small Package Sorting System machine.</p>	None
<p>The true prevalence of Flats bundle breakage is unknown. Reported Flats bundle breakage rates likely underestimate true bundle breakage because the Postal Service only reports Flats bundles that break on automated bundle sorting equipment (i.e., the Postal Service does not track Flats bundles that do not receive scans on bundle sorters); however, Flats bundles break, or are treated as if they will break, during other mail processing stages (e.g., prior to automated processing, if rejected by automated processing equipment, if the automated processing equipment was bypassed). That means that the reported Flats bundle breakage reflects only the percentage of Flats bundles that were inducted onto bundle sorters and were not finalized on the equipment because they broke during sortation.</p>	None
<p>Numerous concerns were identified with the quality of Flats data provided by the Postal Service to the PRC. These issues include, but are not limited to, missing data for a notable number of processed Flats bundles and lack of the unique identifiers for the facilities in which the Flats bundle breakage occurred. Insufficient data, coupled with data quality issues, makes it difficult to assess the Postal Service’s ability to identify and correct inefficiencies in Flats processing.</p>	None
Productivity of Automated Flats Sorting Equipment	
<p>The Postal Service can use its Automated Flats Sorting Machines (AFSM) to sort Flats to the 3-digit ZIP Code, 5-digit ZIP Code, or carrier route levels. AFSMs are run continuously except for daily maintenance; however, they are not always needed.</p>	Equipment Right-sizing for Stabilization and/or Optimization
<p>Flats bundle breakage increases loose Flats volumes that are merged with the Postal Service’s Managed Mail Program²⁴ that is typically processed on AFSMs. As a result, Flats from broken or loose Flats bundles are upgraded to the First-Class mail processing network and receive higher priority service than they would have received bundled as Marketing Mail Flats or Periodicals.</p>	None

23 Bundle integrity is the ability of the bundle to remain intact during mail processing, transportation, or other handling. It is affected by the quantity and dimensions of Flats included in bundles, material used to strap bundles, the number of straps used, quality of wrapping material, size and weight of bundles, tension of the straps from handling, and amount of handling prior to processing.

24 The PRC noted in its Flats operations study that the Postal Service describes Managed Mail Program as a distribution system, which includes First-Class Mail. Furthermore, locations the PRC’s staff visited and that processed originating First-Class Mail Flats described merging manually sorted outgoing loose flats with First-Class Mail Flats flows.

Causes of Inefficiencies in Flats Operations

Related Flats Initiative(s)

While processing of loose Flats on the AFSM increases volumes processed on the machine, the impact on AFSM productivity is not clear in part because of the lack of data that would permit the Postal Service to distinguish processed Flats volumes by mail class.	None
Mailpiece irregularities impact AFSM productivity and efficient Flats processing. Adequate mailpiece quality is necessary to prevent inefficient use of resources and prevent manual sorting and casing of mail that qualifies for discounted prices based on supposedly avoided costs.	None
Management at mail processing facilities and DDU's do not always record Flats mailpiece and bundle irregularities consistently or sometimes at all. For example, the PRC observed the Mailer Irregularity Application includes an insignificant number of records on mailpiece and bundle irregularities, suggesting that the inconsistent irregularity recording applies to the entire Postal network.	None
The Postal Service does conduct revenue deficiency assessments, suggesting it does not charge mailers additional postage to recuperate costs associated with inefficient processing of inadequately prepared Flats bundles or for manually processing automation Flats.	None
Prior to its decision to remove FSS machines from mail processing operations, the Postal Service used its FSS machines to sort Flats to the carrier route or delivery point sequence levels. Proper Flats mail preparation, correct feeding of Flats volume into the machine, and regular maintenance were particularly important because of a shortage of staff trained to fix FSS machine breakdowns. Machine breakdowns halted FSS operations and impacted all interdependent operations.	FSS Machine Discontinuance
The level of automation plays a role in AFSM productivity. An AFSM can be enhanced with (i) the Automated Induction system, which automates the process of feeding Flats mailpieces into the machine (e.g., an AFSM without Automated Induction might need two or three mail clerks to manually feed the machine, while only one clerk is needed to monitor the automated feeding process); (ii) the Automatic Tray Handling System (ATHS), which reduces the number of employees, and workhours needed to operate the machine during sorting (e.g., as trays are filled with Flats, the ATHS clears the trays from the machine and replaces full trays with empty trays while AFSMs not equipped with an ATHS require staff to clear trays and replace them manually), or (iii) both. As a result, the automated systems make AFSMs capable of processing volumes per machine hour at a rate comparable to FSS machines.	None
The deployment of FSS machines negatively affected AFSM productivity, which stemmed from the increased number of AFSM Flats sort plans that were needed to process FSS machine reject Flats volumes.	FSS Machine Discontinuance
The OIG observed an insignificant number of records in the Mail Arrival Quality / Plant Arrival Quality system, suggesting that the inconsistent quality issue recording applies to the entire postal network.	None
Running FSS machines and AFSMs concurrently may have strained mail processing facilities to properly staff Flats operations.	FSS Machine Discontinuance
The Postal Service can scale its AFSM operations in response to Flats volume declines. For example, Marketing Mail Flats not committed for the day are combined with First-Class Mail Flats and Periodicals to increase volumes sorted on the AFSM and its overall productivity.	Equipment Right-sizing for Stabilization and/or Optimization
Some mail processing facilities adjusted to declines in Flats volume by running their FSS machines fewer days each week. As Flats volumes declined, existing Flats sort plans were revised. Flats sort plan revisions involved eliminating delivery points with low Flats volumes. Creating optimal Flats sort plans, which would ensure optimal FSS operation, was important to maximize the number of Flats finalized on FSS machines to the delivery point sequence level and to ensure efficient processing of Flats that qualified for the deepest discounts on the premise that they did not need manual casing.	FSS Machine Discontinuance
As described above, the Postal Service decided to discontinue FSS machines, which likely impacts Flats costs. For example, a negative impact of the discontinuance of FSS machines is the additional work required by DDU staff as more Flats received by DDUs will require manual casing because AFSMs deepest sort is only to the carrier route level.	FSS Machine Discontinuance
It is unclear how the Postal Service projected Flats volume increases for each location impacted by the discontinuance of FSS machines.	FSS Machine Discontinuance

Causes of Inefficiencies in Flats Operations

Related Flats Initiative(s)

Manual Sorting at Mail Processing Facilities and DDUs

Non-machinable Flats, rejects from automated Flats sorting equipment, and Managed Mail Program Flats should be manually sorted by mail processing facility staff to the 5-digit ZIP code level before being dispatched to DDUs. Once at DDUs, mail clerks may then be required to manually sort the Flats to the carrier route level (e.g., AFSM non-read rejects that cannot be re-run on the AFSM) and then mail carriers manually case the Flats in delivery point sequence, if necessary.

None

The PRC and OIG separately observed mail processing facility staff manually sorting Flats that were rejected by automated processing equipment.

The Postal Service has no data on Flats bundles and individual Flats mailpieces that cause inefficient operations or a clear method to estimate manually processed Flats volumes. For example, labor productivity is calculated by dividing workhours by volume. The PRC found both the numerator and the denominator of the ratio was unreliable. Consequently, the calculated productivity of manually sorted Flats is likewise unreliable. In addition, mail processing facility staff are responsible for recording manually processed Flats volumes on sheets of papers. The information is provided to management, which is then entered into the Management Operating Data System based on manual productivity conversion rates. Due to the lack of machine counts and clocking errors, measurement of both workhours and volumes in manual Flats sorting are unreliable.

None

As a result, The Postal Service does not always understand the sources of Flats processing inefficiencies or track volumes that cause inefficient operations. The lack of reliable volume or workhour data represents a tremendous loss of opportunity to track or use this data in any meaningful way.

Productivity and Service Issues in Allied Operations

Several issues have been identified related to the preparation for bundle processing including the Postal Service having difficulty accurately projecting workload and impact on timely operations due to the uncertainty associated with Flats volumes included in scheduled drop shipments.

None

Co-mail²⁵ bundles may need to be re-straped at the Postal Service's expense if the existing strapping is considered insufficient based on size and/or contents.

None

"Super bundles"²⁶, which are not permitted by the Postal Service's Domestic Mail Manual²⁷, may cause one or more of the grouped bundles to be misrouted to the wrong destination thereby resulting in unnecessary additional cost to remedy the situation.

None

Flats bundles transported in sacks were more likely to have bundle integrity issues than Flats bundles transported in containers or on pallets. For example, Flats bundles with compromised integrity may have broken during sack handling and further compromised during the sack shake out process.

None

Mixed, loose Flats from bundles pre-sorted to the 3-digit ZIP Code level have to be first manually sorted to the 3-digit ZIP Code level, and then sorted to the 5-digit ZIP Code level on AFSMs, if possible. However, in many cases once a Flats bundle breaks, the individual Flats will be sorted by the Postal Service to their final destination manually rather than using automated sorting equipment.

None

The Postal Service is in the process of redesigning its mail processing network, which it describes as a shift toward a shaped-based processing network. However, the PRC observed shifts in the Postal Service's mail processing operations that were not related to mail shapes. For example, the PRC visited locations for which operations were closely tied to operations at several other locations within a geographic area. Each facility was responsible for performing specific operations. This collaboration and division of processing jobs between locations made projecting daily volumes and operations planning difficult. It also required frequent Postal transportation between facilities likely being underutilized. For example, some locations informed the PRC that they shuttle transportation running between their interconnected operations. The complex operations between locations likely resulted in frequent processing delays, at least for some of the mail.

None

Transportation Issues at Mail Processing Facilities and Hubs

Any deviations from the Postal Service's planned Flats operations – whether deviations from projected volumes or delayed arrival of scheduled shipments – can result in increased trip frequency between mail processing facilities.

Site-specific Flats Operating Plans

²⁵ Co-mail bundles combine mailpieces of different types or titles from different mail classes to create a larger bundle. Only Marketing Mail, Periodicals and Bound Printed Matter Flats can be combined in co-mail bundles.

²⁶ Multiple smaller bundles tied into one individual bundle.

²⁷ U.S. Postal Service, *Domestic Mail Manual*, January 22, 2023.

Causes of Inefficiencies in Flats Operations	Related Flats Initiative(s)
Trucks are at a lower capacity, which also increases transportation cost per transported mailpiece and may be substantially higher for ad-hoc transportation.	None
Surface Transfer Centers sometimes transport Flats on expensive, long-distance transportation, which can be very costly and inefficient.	None
Surface Transfer Centers cannot use cardboard containers to transport low Flats volumes, which can be stacked and make better use of truck space, because the bottom container will not support the weight of the top container and collapse.	None
Surface Transfer Centers are required to only combine Flats mail of the same mail class and with the same destination in containers, which unnecessarily constrains the mail container space that can be filled on surface trucks and is more difficult to comply with as Flats volumes decline.	None
Last Mile Delivery - Inefficiencies at DDUs	
Mail clerks at DDUs may be required to manually sort machine-incompatible Flats to the carrier route level including those rejected by automated Flats processing equipment. For example, the PRC and OIG separately observed Flats too thick for automated processing equipment.	None
Mail carriers manually case Flats sorted to the carrier route level in delivery point sequence, if necessary.	None
The start of mail carriers' deliveries may be delayed by having to manually separate Flats from letters and/or parcels in mixed mail shape containers prior to their departure.	None

Source: OIG analysis based on the findings noted in the PRC's Flats Operations Study Report, April 6, 2023; and the Postal Service's initiatives related to Flats.

Appendix C: Management's Comments



June 21, 2023

JOHN CIHOTA
DIRECTOR, AUDIT SERVICES

SUBJECT: Flats Cost Coverage (22-166)

Thank you for providing the Postal Service with an opportunity to review and comment on the findings and recommendations contained in the draft audit report *Flats Cost Coverage*.

Finding 1: Flats Initiatives

While the Postal Service generally agrees with the report's description of the challenges to processing Flats in a cost-effective manner, Management has concerns with the Office of Inspector General's (OIG's) conclusions in Finding 1. All Postal Service initiatives have specific, measurable objectives where practical. Initiatives are not always limited to a specific shape or type of mail. The Postal Service must balance the cost of creating data with the benefit.

Regarding the statement that "the Postal Service's initiatives do not address the causes of inefficiencies in Flats Operation as identified by the Postal Regulatory Commission (PRC)," the Postal Service is pursuing numerous initiatives as part of the Delivering for America Plan to improve the efficiency and operational precision of our network generally, which will improve how we process, transport, and deliver all shapes and types of mail (including flats). These include redesigning the processing, transportation, and delivery networks. These initiatives are being tracked through the Get It Right (GIR) process.

The OIG determined that there are no related flats initiatives for a number of the "inefficiencies" identified in Appendix B, Table 2. The chart below provides examples of initiatives associated with minimizing the impact of specified root causes.

Causes of Inefficiencies in Flats Operations	Related Flats Initiatives(s)
<p>Flats bundle breakage during bundle processing is affected by the type of automated bundle sorting equipment used. For example, the height that bundles must fall to be unloaded onto automated sorting equipment range from six inches using the Automated Parcel and Bundle Sorter machine to three feet using the Small Package Sorting System machine.</p>	<p>Equipment Right-sizing for Stabilization and/or Optimization</p>
<p>Flats bundle breakage increases loose Flats volumes that are merged with the Postal Service's Managed Mail Program that is typically processed on AFSMs. As a result, Flats from broken or loose Flats bundles are upgraded to the First-Class mail processing network and receive higher priority service than they would have received bundled as Marketing Mail Flats or Periodicals.</p>	<p>Conversion to Shape Based Processing</p>
<p>The level of automation plays a role in AFSM productivity. An AFSM can be enhanced with (i) the Automated Induction system, which automates the process of feeding Flats mailpieces into the machine (e.g., an AFSM without Automated Induction might need two or three mail clerks to manually feed the machine, while only one clerk is needed to monitor the automated feeding process); (ii) the Automatic Tray Handling System (ATHS), which reduces the number of employees, and workhours needed to operate the machine during sorting (e.g., as trays are filled with Flats, the ATHS clears the trays from the machine and replaces full trays with empty trays while AFSMs not equipped with an ATHS require staff to clear trays and replace them manually), or (iii) both. As a result, the automated systems make AFSMs capable of processing volumes per machine hour at a rate comparable to FSS machines.</p>	<p>Equipment Right-sizing for Stabilization and/or Optimization</p>
<p>Flats bundles transported in sacks were more likely to have bundle integrity issues than Flats bundles transported in containers or on pallets. For example, Flats bundles with compromised integrity may have broken during sack handling and further compromised during the sack shake out process.</p>	<p>Sack Minimization Initiative</p>
<p>The Postal Service is in the process of redesigning its mail processing network, which it describes as a shift toward a shaped-based processing network. However, the PRC observed shifts in the Postal Service's mail processing operations that were not related to mail shapes. For example, the PRC visited locations for which operations were closely tied to operations at several other locations within a geographic area. Each facility was responsible for performing specific operations. This collaboration and division of processing jobs between locations made projecting daily</p>	<p>Equipment Right-sizing for Stabilization and/or Optimization Conversion to Shape Based Processing</p>

Causes of Inefficiencies in Flats Operations	Related Flats Initiatives(s)
volumes and operations planning difficult. It also required frequent Postal transportation between facilities likely being underutilized. For example, some locations informed the PRC that they shuttle transportation running between their interconnected operations. The complex operations between locations likely resulted in frequent processing delays, at least for some of the mail.	

Management also takes issue with the statement that "it is reasonable to expect that the cost of Flats will continue to increase if Postal Service does not know if its initiatives are effective at reducing Flats costs and addressing the causes of inefficiencies in its Flats operations." The Postal Service has demonstrated savings from initiatives where cost reductions can be effectively attributed to Flats without incurring unnecessary costs to collect data.

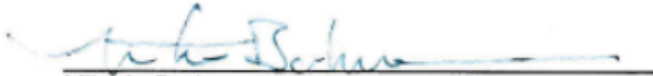
Finally, contrary to the report's assertion that the Postal Service "does not use its Mailing Technical Advisory Committee's user groups, work groups, or task teams to collaborate directly with the mailing industry to identify potential initiatives that may reduce Flats costs," the Postal Service collaborates with the mailing industry on a frequent basis in various ways. There is no evidence that Postal Service "risks not leveraging the mailing industry's expertise to develop and implement initiatives that may increase the cost coverage of flats" as represented in the report.

Recommendation #1: We recommend the **Vice President for Processing and Maintenance Operations**, in coordination with the **Vice President for Pricing and Costing** and the **Vice President for Product Solutions**, further collaborate with stakeholders from the mailing industry to develop and implement initiatives with specific, measurable objectives to directly reduce Flats costs and address the causes of inefficiencies in Flats operations identified by the Postal Regulatory Commission.

Management Response/Action Plan: Management collaborates with the mailing industry and agrees to continue to do so as a source of suggestions for improvements. Management also agrees to continue to ensure that all initiatives created to address Flats operations have measurable objectives where practical.

Target Implementation Date: 01/31/24

Responsible Official: VP, Processing and Maintenance Operations and VP, Product Solutions.



Mike L. Barber
Vice President, Processing & Maintenance Operations

E-SIGNED by Randy.L Workman
on 2023-06-21 13:26:07 CDT on behalf of

Thomas Foti
Vice President, Product Solutions

E-SIGNED by Sharon.D Owens
on 2023-06-21 14:20:48 CDT

Sharon D. Owens
Vice President, Pricing & Costing

cc: Manager, Corporate Audit Response Management

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