



Office of Inspector General | United States Postal Service

Audit Report

U.S. Postal Service Transportation Network Operations and Cost Optimization Practices

Report Number 19XG002NL000-R20 | November 7, 2019



Table of Contents

| | |
|---|----|
| Cover | |
| Highlights..... | 1 |
| Objective | 1 |
| What the OIG Found..... | 1 |
| Surface Transportation Costs | 1 |
| Surface Transportation Performance | 1 |
| Air Transportation Spend | 2 |
| Air Transportation Performance | 2 |
| Cost Reduction and Technology Initiatives..... | 3 |
| What the OIG Recommended..... | 3 |
| Transmittal Letter | 4 |
| Results..... | 5 |
| Introduction/Objective | 5 |
| Background..... | 6 |
| Finding #1: Surface Transportation Costs and Performance..... | 7 |
| Surface Transportation Costs | 7 |
| Surface Transportation Performance | 11 |
| Recommendation #1..... | 15 |
| Recommendation #2..... | 15 |
| Recommendation #3..... | 15 |
| Recommendation #4..... | 15 |
| Finding #2: Air Transportation Spend and Performance | 15 |
| Air Management Structure..... | 15 |
| Air Transportation Spend | 15 |
| Air Transportation Performance..... | 18 |
| Recommendation #5..... | 23 |
| Cost Reduction and Technology Initiatives..... | 23 |
| Management's Comments..... | 23 |
| Evaluation of Management's Comments | 24 |
| Appendices | 25 |
| Appendix A: Additional Information..... | 26 |
| Scope and Methodology..... | 26 |
| Prior Coverage..... | 27 |
| Appendix B: Key Performance Indicator Information..... | 28 |
| Appendix C: Management's Comments..... | 32 |
| Contact Information | 35 |

Highlights

Objective

U.S. Postal Service transportation costs have increased \$1.7 billion (or about 25 percent) since fiscal year (FY) 2014 despite an overall decline in mail volume of 8.8 billion pieces (or about 6 percent), as well as several initiatives to reduce transportation costs.

Our objective was to analyze practices and cost trends and identify risk areas within the Postal Service's transportation network.

Transportation is a core part of Postal Service operations and the Postal Service has one of the largest transportation and logistics networks in the world, reaching every community in the U.S. Its facilities are linked by a complex transportation system that depends on the nation's highway, air, rail, and maritime infrastructures.

The Postal Service's transportation network consists of surface and air transportation to transport mail and equipment among 285 processing facilities and about 35,000 post offices, stations, and branches. In FY 2018, the Postal Service transported 146.4 billion mailpieces throughout the country at a cost of \$8.5 billion, which includes in-house and contract transportation.

The surface transportation network costs about \$5.6 billion and is decentralized and managed locally by district and area personnel. The network includes about 11,800 Postal Vehicle Service (PVS) routes for fleet operations and about 12,500 Highway Contract Routes (HCR). The air transportation network cost about \$2.9 billion in FY 2018 and is centralized at Postal Service Headquarters (HQ) Logistics, but area-level staff are involved in executing planned air operations.

“U.S. Postal Service transportation costs have increased \$1.7 billion or about 25 percent since FY 2014.”

What the OIG Found

Increased transportation costs were driven by several factors, including the Operational Window Change (OWC) which reduced the transportation window. Other factors affecting costs include a 35 percent growth in package services (a 2.2 billion piece increase) from FY 2014 to FY 2018, fluctuating fuel costs, a lack of competitive choices in air suppliers, national long-haul and local driver shortages, and regulatory requirements.

The OWC was implemented in 2015 to revise First-Class Mail service standards, eliminating single-piece overnight First-Class Mail service and shifting mail from a 2-day to a 3-day service standard. These revisions enabled the Postal Service to expand the mail processing operational window; however, this change reduced transit time (the transportation window) by 12 hours. As a result of the reduction in the transportation window, the Postal Service diverted a larger portion of this mail from surface to air transportation to meet service standards.

Surface Transportation Costs

From FY 2014 to FY 2018, surface transportation costs for the two largest components — HCRs and PVS routes — increased by about \$878 million (from \$4.5 billion to \$5.3 billion, or about 20 percent). HCRs increased by about \$753 million, or 22 percent, and PVS by about \$125 million, or 13 percent. Further, the Postal Service incurred costs for exceptional services, such as extra detours and late trips totaling \$729 million for FY 2014 through FY 2018. The Postal Service attributed these increases to the nationwide shortage of long-haul truck drivers, highway contract rate increases, and rising fuel costs in FY 2018.

Surface Transportation Performance

Surface Transportation is responsible for servicing a fixed network and requiring daily transportation to and from about 35,000 postal facilities, regardless of mail volume. Local management of the surface network is critical to controlling surface transportation costs.

Surface Transportation management uses six key performance indicators (KPI) in the surface transportation dashboard to monitor and manage the surface network. Our analysis of the six indicators for the period FY 2014 through FY 2018 determined:

- Extra trips (trips not planned which are in addition to regularly scheduled trips) for existing routes increased from about 776,000 to 1.5 million trips, or 90 percent.
- Late trips arriving or departing after the scheduled time increased from 7.1 million to 11.3 million trips, or 60 percent.
- Canceled trips (trips that were scheduled but canceled) for scheduled transportation increased from 2 million to 3.8 million trips, or 93 percent.
- Unrecorded or Incomplete trips (trips that occurred but were not recorded or did not show both an outbound and inbound arrival in the transportation system) increased from about 684,000 to 1 million trips, or 50 percent.
- Trips Departed Not Arrived due to incomplete trip scans (the trip showed a depart but no arrival scan in the transportation system) decreased from 90,000 in FY 2017 to 67,000 in FY 2018, or 25 percent.
- Trailer usage increased slightly from about 21 percent in FY 2014 to about 24 percent in FY 2018. While there was improvement in trailer usage, there is still significant excess capacity which could provide an opportunity to shift mail volume from air to surface, thereby reducing transportation costs.

Further, our analysis of FY 2018 HCR exceptional service (e.g., extra, late, and detour trips) payment data revealed these costs were often not allocated to the proper accounts and are, therefore, understated. Specifically, we compared the exceptional service cost of \$139.5 million reported in the general ledger against actual payments in the Service Change Request system and determined actual payments were \$239.3 million. We were unable to reconcile the difference of \$99.8 million, or 42 percent.

We also identified that data in the Surface Visibility (SV) dashboard is incomplete and inaccurate for extra and canceled trips. In addition, we found 344 expired

HCRs (802,538 trips) that were inactive in the Transportation Contracting Support System; however, they were still shown as scheduled trips in SV. Further, because required SV transportation data is not available to validate payments, the Postal Service incurred over \$28.8 million in unsupported questioned costs in FY 2018.

We also found canceled trips were not always omitted from HCR supplier payments as required by the HCR statement of work. Specifically, we reviewed about 38,000 canceled trips costing about \$2.9 million and identified \$2 million that should have been omitted from supplier payments in FY 2018. Furthermore, we noted that highway contracts did not always include language, or consistent language, to omit payments when a trip is canceled by the Postal Service which could result in overpayments to suppliers.

Air Transportation Spend

Total air transportation costs were \$2.9 billion in FY 2018. Currently ██████████ of mail transported by air is transported on cargo carriers, primarily ██████████ because the air transportation industry has limited options for meeting Postal Service requirements. From FY 2014 to FY 2018 air transportation costs for the three largest components — FedEx, UPS, and commercial air (CAIR) — increased from \$1.8 billion to \$2.6 billion, or about 42 percent. An increase in fuel costs, increased package volume, and additional contract air charter use contributed to these cost increases.

Management of the air transportation network is centralized at Postal Service HQ. The Postal Service is also constrained by internal and external requirements including service standards, limited ability to procure other commercial air carriers to participate in the program and federal restrictions that limit the size and weight of mail carried by commercial air carriers.

Air Transportation Performance

The Postal Service HQ Air Logistics Team is responsible for managing an air network comprised of about 80 air stops throughout the country. It also manages 69 terminal handling service (THS) sites which are used to prepare and dispatch mail for ██████████.

In FY 2017, the Postal Service re-negotiated all air contracts; therefore, our analysis for the air network was conducted on performance indicators for FY 2018 through FY 2019, Quarter 2. An analysis of the six KPIs the Postal Service uses to monitor and manage the air network revealed that:

- Postal Service contracts with FedEx, UPS, and CAIR to transport mail and during the 18-month period reviewed generally did not meet service performance standards.
- Delayed mail occurs when contracted air lift is impacted by events within or not within Postal Service control. Over 1 percent (48 million pounds) of total mail volume was delayed in FYs 2018 and 2019, Quarter 2.
- THS are separate operations that prepare both originating and destinating mail for transport. Bypass containers contain mail for one destination and require minimum handling by THS operations, but in FY 2018, the Postal Service did not use 59.72 percent of its planned Bypass containers.
- Network utilization determines if forecasting plans are met and the network is used at capacity. The air network utilization forecast vs. actual mail volume for January 2018 through March 2019 showed a national average difference of 1.15 percent; however, we found forecast variations among the seven Postal Service areas.

Cost Reduction and Technology Initiatives

The Postal Service's various cost reduction and technology-based initiatives to optimize its transportation network have had limited success. In surface transportation, neither the HCR Optimization Initiative or the Dynamic Route Optimization program have met planned cost savings.

For the air network, there are currently three cost savings initiatives — using the lowest cost air carrier, maximizing the density of air containers, and a new initiative started in FY 2019 to optimize the use of Bypass containers. In FY 2019 through Quarter 2, the lowest cost carrier and Bypass container initiatives exceeded planned savings, but the density of air containers initiative has not realized savings.

What the OIG Recommended

We recommended management ensure extra trips are reconciled against Surface Visibility data and only authorized account numbers are used for exceptional service in the Service Change Request system; evaluate Highway Contract Route contracts to include consistent language to omit payment when trips are canceled and ensure they are omitted from supplier payments; perform data validation for the information in the Surface Visibility system to ensure extra and canceled trips key performance indicators are accurate and complete; and explore opportunities to increase the use of commercial air carriers.

Transmittal Letter



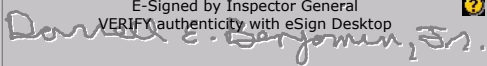
OFFICE OF INSPECTOR GENERAL
UNITED STATES POSTAL SERVICE

November 7, 2019

MEMORANDUM FOR: ROBERT CINTRON, VICE PRESIDENT, LOGISTICS

MARK A. GUILFOIL
VICE PRESIDENT, SUPPLY MANAGEMENT

CARA M. GREENE
VICE PRESIDENT, CONTROLLER

E-Signed by Inspector General
VERIFY authenticity with eSign Desktop


FROM: Darrell E. Benjamin, Jr.
Deputy Assistant Inspector General
for Mission Operations

SUBJECT: Audit Report – U.S. Postal Service Transportation
Network Operations and Cost Optimization Practices
(Report Number 19XG002NL000-R20)

This report presents the results of our audit of U.S. Postal Service Transportation Network Operations and Cost Optimization Practices (Project Number 19XG002NL000).

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Carmen Cook, Director, Transportation, 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 U.S. Postal Service Transportation Network Operations and Cost Optimization Practices (Project Number 19XG002NL000). We set out to determine why transportation costs have increased while mail volume has decreased. Our objective was to analyze practices and cost trends and identify risk areas within the Postal Service's transportation network.

Postal Service transportation costs have increased \$1.7 billion (or about 25 percent) since fiscal year (FY) 2014 despite an overall decline in mail volume of 8.8 billion pieces, or about 6 percent (see Table 1).

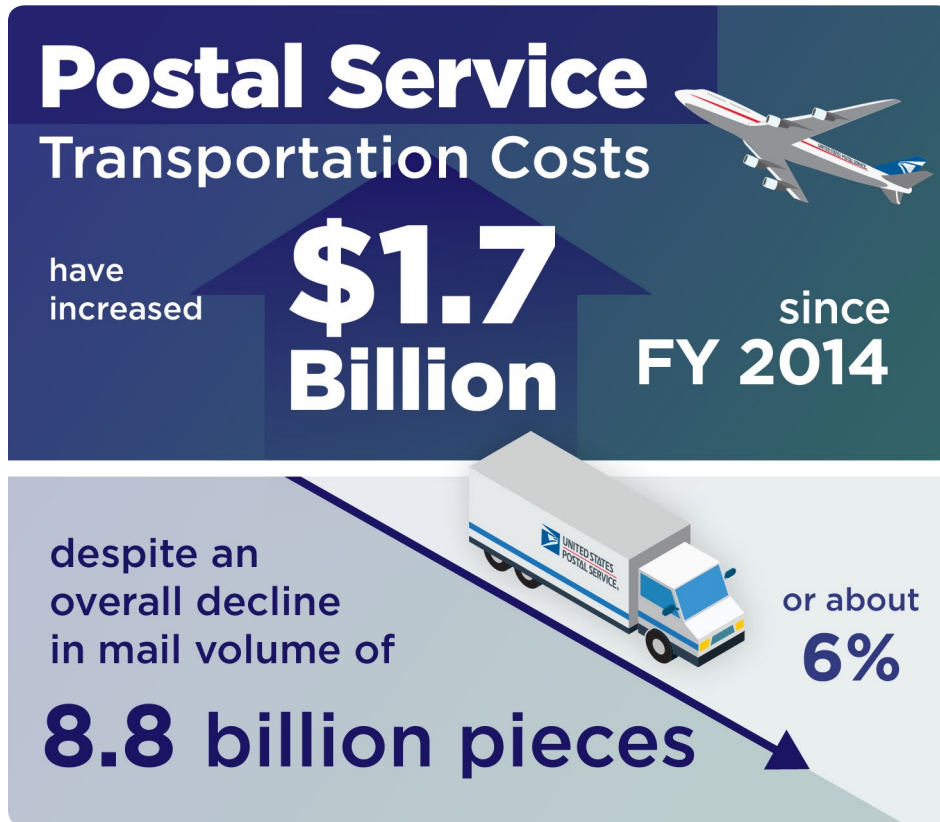


Table 1. Transportation Costs, FYs 2014-2018 (in billions)

| Category | 2014 | 2015 | 2016 | 2017 | 2018 | Total Cost Increase |
|--------------|--------------|--------------|--------------|--------------|--------------|---------------------|
| Surface | \$4.5 | \$4.6 | \$4.8 | \$5.1 | \$5.4 | \$0.9 |
| Air | 2.1 | 2.2 | 2.5 | 2.5 | 2.9 | 0.8 |
| Logistics | .2 | .2 | .2 | .2 | .2 | 0.0 |
| Total | \$6.8 | \$7.0 | \$7.5 | \$7.8 | \$8.5 | \$1.7 |

Source: Postal Service Form 10-K and Office of Inspector General (OIG) analysis of Electronic Data Warehouse (EDW) data.

Our white paper titled *What's Driving Postal Transportation Costs?* (Report Number [RARC-WP-19-002](#), dated March 18, 2019) noted that the increase in transportation costs over the past 10 years was due to changing mail volume and mix and an increase in transportation-related input costs, including fuel prices and driver wages. However, 39 percent of cost increases over the last 10 years could not be explained by these factors alone and needed further analysis.

Similarly, in this project, we determined that increases in transportation costs were driven by efforts to meet service standards with a changing mail mix. Costs have grown, in part, due to a 35 percent growth in package services (a 2.2 billion mailpiece increase) from FY 2014 to FY 2018 fluctuating fuel costs, lack of competitive

“Increased transportation costs were driven by the Operational Window Change, growth in package services, fluctuating fuel costs, lack of competitive air supplier choices, driver shortages, and regulatory requirements.”

choices in air suppliers, national long-haul and local driver shortages, and regulatory requirements.

Service standards and Operational Window Change (OWC) service standards, which require the use of air transportation to meet processing times (including the impact of the OWC on narrowing the transit window times and forcing the movement of certain mail from surface to air) have impacted air transportation spend.

The OWC was implemented in 2015 to revise First-Class Mail (FCM) service standards, eliminating single-piece overnight FCM service and shifting mail from a 2-day to a 3-day service standard. These revisions enabled the Postal Service to expand the mail processing operational window. Management required Processing & Distribution Centers (P&DC) nationwide to adjust their mail processing and transportation operations to meet the critical entry times (CET), clearance times, and dispatches of value associated with the new, expanded operational window. Management estimated that as a result of OWC, the Postal Service would save \$268 million for transportation. However, the OIG's analysis of OWC savings reported that total transportation costs have risen 15.4 percent since OWC (from FY 2014 to 2017). The change in mail CETs resulted in a reduction in transit time (the transportation window) of 12 hours, impacting the mode of transportation used to meet the revised CETs and service. For example, 3- to 5-day category mail must now arrive at the destinating facility by 8:00 a.m. on day 2, as opposed to 8:00 p.m. under the previous CET. As a result of the reduction in the transportation window, the Postal Service diverted a larger portion of this mail from surface to air transportation to meet service standards.

In its FY 2018 annual report, the Postal Service asserted that transportation is a controllable expense and an indicator of the financial health of the organization. Further, the Postal Service implemented strategic initiatives to optimize the transportation network. Specifically, the goal of the Ready Now → Future Ready Optimize Network Platform initiative is to track and identify agency initiatives meant to reduce costs.

The Universal Service Obligation (USO) requires the Postal Service to provide services throughout the U.S. and to military members abroad. To meet its USO, the Postal Service transports mail by various modes, such as planes, trucks, and boats. The USO impacts the Postal Service's transportation network operations and efficiency. For example, the Postal Service has seen a big increase in package volume to off-shore locations, such as Hawaii and Guam. The Postal Service must contract for airlift to reach these off-shore locations, which impacts costs. In FY 2020, the Postal Service expects transportation costs to these locations to increase between 30 and 50 percent.

Background

Transportation is a core part of Postal Service operations and the Postal Service has one of the largest transportation and logistics networks in the world, reaching every community in the U.S. Its facilities are linked by a complex transportation system that depends on the nation's highway, air, rail, and maritime infrastructures.

The transportation network is dynamic and requirements constantly change, especially with mail volume or mail mix. Management must continually balance service performance goals while controlling costs. In addition, the transportation network is impacted by laws, regulations, and policies associated with other government agencies including the U.S. Departments of Transportation, Homeland Security, Energy, Commerce, and Labor.

The Postal Service's transportation network consists of surface and air transportation to transport mail and equipment among 285 processing facilities and about 35,000 post offices, stations, and branches. In FY 2018, the Postal Service transported 146.4 billion mailpieces throughout the country at a cost of \$8.5 billion, which includes both in-house and contract transportation, vehicle operations, and logistical support.

The surface transportation network is decentralized and managed locally costing about \$5.6 billion in FY 2018. The contracting officers are responsible for monitoring Highway Contract Route (HCR) supplier performance and ensuring services and equipment are provided under the terms of the agreement. Contracting officers appoint administrative officials (AO) at the HCRs originating

location to record contract performance on a day-to-day basis. HCR and Postal Vehicle Service (PVS) networks include about 12,500 HCR service contracts and 8,693 PVS drivers.

The air transportation network, costing about \$2.9 billion in FY 2018, is centralized at Postal Service Headquarters (HQ) Logistics, but area-level staff are involved in executing planned air operations. The network includes contracts with FedEx, UPS, and Commercial Airlines (CAIR).

Finding #1: Surface Transportation Costs and Performance

Surface Transportation Costs

Surface transportation costs from FY 2014 to FY 2018 for the two largest operational segments, HCR and PVS, increased by about \$878 million from \$4.5 billion to \$5.3 billion, or about 20 percent. HCR increased by about \$753 million, or 22 percent, and PVS by about \$125 million, or 13 percent (see Table 2).

Table 2. HCR and PVS Costs Including Fuel, FYs 2014-2018

| Category | 2014 | 2018 | Total Increase | Percentage Increase |
|--------------|------------------------|------------------------|----------------------|---------------------|
| HCR | \$3,494,247,355 | \$4,247,016,685 | \$752,769,330 | 22% |
| PVS | 962,228,229 | 1,087,391,198 | 125,162,969 | 13% |
| Total | \$4,456,475,584 | \$5,334,407,883 | \$877,932,299 | |

Source: Postal Service Form 10-K and OIG analysis of EDW data.

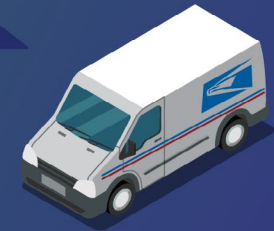
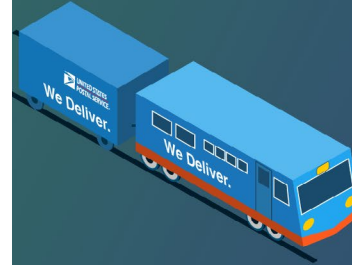
The Postal Service attributed these increases to the nationwide shortage of long-haul truck drivers, highway contract rate increases, and rising fuel costs in FY 2018.

Surface Transportation Costs from FY 2014 to FY 2018

for the two largest operational segments, HCR and PVS, increased by about

\$878 million

or about **20%**



Highway Contract Routes

The Postal Service uses outsourced transportation (HCRs) to transport mail and other products between plants and other designated stops for distances over 50 miles. HCRs also provide Contract Delivery Service (CDS), which moves

mail to homes and businesses. The Postal Service maintains about 12,500¹ contracted surface transportation routes, which are the largest single group of fixed priced² contracts and costing about \$4.2 billion in FY 2018. HCR contracted transportation accounted for about 1.4 billion miles and CDS accounted for about 144.8 million miles as of February 2019 (see Table 3).

Table 3. Surface Contracted Transportation by Area as of February 2019

| Area | CDS Contracts | Annual CDS Miles | Annual CDS Costs | HCR Contracts | Annual HCR Miles | Annual HCR Costs |
|---------------|---------------|--------------------|----------------------|---------------|----------------------|------------------------------|
| Capital Metro | 538 | 6,404,631 | \$27,395,281 | 310 | 84,603,749 | \$182,722,155 |
| Eastern | 854 | 16,239,234 | \$41,883,363 | 894 | 143,374,266 | \$326,796,028 |
| Great Lakes | 269 | 4,692,932 | \$12,413,370 | 594 | 103,770,426 | \$247,374,715 |
| Northeast | 648 | 8,755,537 | \$30,679,918 | 704 | 82,164,969 | \$226,285,161 |
| Pacific | 514 | 8,443,390 | \$28,374,664 | 259 | 70,259,353 | \$180,487,693 |
| Southern | 1,475 | 29,825,778 | \$90,283,912 | 590 | 158,849,590 | \$346,007,649 |
| Western | 3,105 | 70,438,729 | \$160,965,301 | 1,122 | 156,410,333 | \$342,790,467 |
| Other- HQ | | | | 599 | 578,195,018 | \$1,141,005,109 ³ |
| Total | 7,403 | 144,800,231 | \$391,995,811 | 5,072 | 1,377,627,704 | \$2,993,468,977 |

Source: February 2019 paybook data provided by the Postal Service.

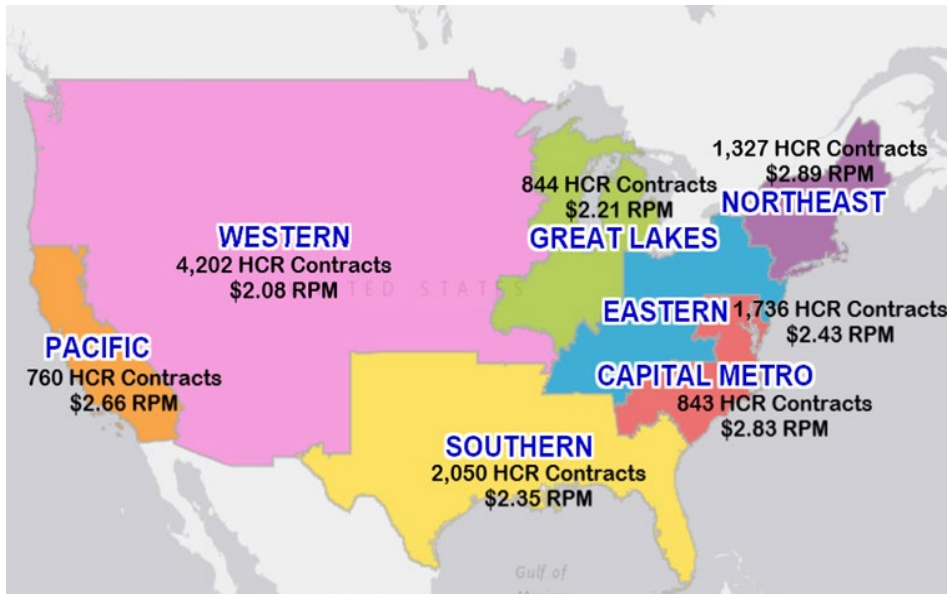
HCR suppliers are compensated using rate per mile (RPM) based on annual miles driven. The average RPM ranged from \$2.08 in the Western Area to \$2.89 in the Northeast Area (see [Figure 1](#)).

1 Contracted types of routes include HCRs, combinations routes, and CDS.

2 An HCR regular contract is a fixed-term contract for four years that may be renewed at the end of the contract term.

3 Surface Operations HQ oversees inter-area plant and inter-Network Distribution Center (NDC) HCRs.

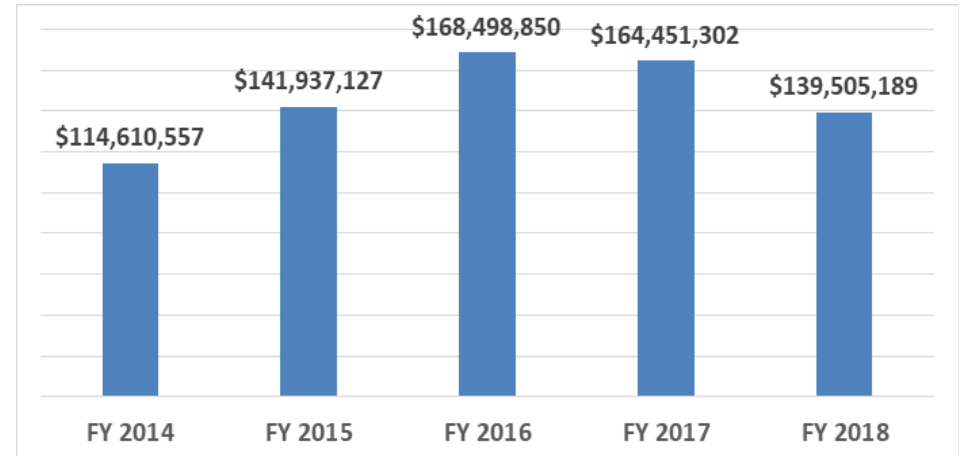
Figure 1. Map of HCR Contracts and Average RPM



Source: February 2019 paybook provided by the Postal Service.⁴

The Postal Service incurred additional costs to supplement regularly scheduled transportation with exceptional service. Exceptional service is additional transportation used to perform scheduled or back-up route operations (such as extra, detour, and late trips). Exceptional service costs totaled \$729 million for FYs 2014 through 2018 (see Figure 2).

Figure 2. HCR Exceptional Service Costs, FYs 2014-2018



Source: OIG analysis of EDW data.

Our analysis of FY 2018 HCR exceptional service payment data from the Service Change Request (SCR) system⁵ revealed that these costs were not allocated to the proper accounts (general ledger) and are, therefore, understated. Specifically, we compared the \$139.5 million reported in the general ledger for exceptional service to the SCR total payment data, which totaled \$239.3 million⁶ and could not reconcile the difference of about \$99.8 million (or 42 percent). While we were unable to fully reconcile the difference, we did identify 23 incorrect account numbers used to record exceptional service payments for extra trips. For example, fixed regular HCR transportation costs recorded in account number 53618, contained about \$50 million in extra trip costs (see Table 4). This occurred because management did not effectively monitor field personnel to ensure proper accounts were used to record these costs. As a result, the exceptional service costs were understated and, consequently, management did not have the proper visibility to effectively manage and control them.

⁴ The map illustrates 11,762 HCR contracts with per mile and per annual pay types. It excludes HQ contracts for RPM calculations.

⁵ We did not review any other payment systems that may include exceptional service costs.

⁶ Payments in the SCR system coded as DRO payments were excluded from the exceptional service costs.

Table 4. Examples of Improper General Ledger Accounts - Extra Trips, FY 2018

| Improper General Ledger Accounts | Account Name | Extra Trip Costs Recorded in the Account |
|----------------------------------|--------------------------|--|
| 53618 | Regular Contract Cost | \$50,490,027 |
| 53191 | MTE Transportation Cost | \$16,554,107 |
| 53601 | Regular Contract Cost | \$10,491,207 |
| 53134 | Plant Load Contract Cost | \$8,806,080 |
| 53622 | Peak Season Cost | \$8,278,048 |

| Other Improper General Ledger Accounts Containing Exceptional Service Charges | | |
|---|--------------------------|--|
| Other Improper General Ledger Accounts | Account Name | |
| 53621 | Emergency Contract Cost | |
| 53138 | Highway Van Detention | |
| 53604, 53613, 53617, 53623, 53624, 53625, 53626 | Peak Season Cost | |
| 53135 | Plant Load Contract Cost | |
| 53127, 53131, 53170, 53605, 53609, 53614 | Regular Contract Cost | |
| 53136 | Trailer Lease Cost | |
| 53183 | Water Cost | |

Source: OIG analysis of SCR payment data.

Postal Vehicle Service

PVS operations are internally operated by the Postal Service and cost about \$1 billion in FY 2018. PVS is used to transport large mail volume between facilities, inner-city delivery offices, local firms, and mailers. PVS operations include about 8,700 uniformed motor vehicle and tractor trailer operators and about 600 administrative support employees and is managed at local facilities.

PVS fleet assets include 4,073 cargo vans, 2,647 tractors and spotter tractors, and 3,861 trailers normally commuting within a 50-mile radius of the facilities, traveling about 69 million miles in local cities and suburban areas in FY 2018 (see [Table 5](#)).

Table 5. PVS Information by Area

| Area | Miles FY 2018 ⁷ | Drivers ⁸ | Routes ⁹ | Vehicles ¹⁰ | Costs FY 2018 |
|------------------|----------------------------|----------------------|---------------------|------------------------|------------------------|
| Capital Metro | 18,883,126 | 1,023 | 1,305 | 844 | \$111,088,213 |
| Eastern | 7,898,378 | 1,181 | 1,662 | 992 | 127,470,828 |
| Great Lakes | 8,576,883 | 1,219 | 1,630 | 871 | 122,013,134 |
| Northeast | 12,525,185 | 1,884 | 2,611 | 1,503 | 204,058,307 |
| Pacific | 6,346,426 | 996 | 1,198 | 816 | 98,592,530 |
| Southern | 6,742,460 | 1,380 | 1,884 | 927 | 134,998,182 |
| Western | 8,480,491 | 1,010 | 1,511 | 767 | 111,958,361 |
| Fleet Management | | | | | 121,315,246 |
| Fuel Costs | | | | | 55,896,398 |
| Total | 69,452,949 | 8,693 | 11,801 | 6,720 | \$1,087,391,198 |

Source: OIG analysis of Solutions Enterprise Asset Management (SEAM), webCOINS, and EDW data.

Surface Transportation Performance

Surface Transportation is responsible for servicing a fixed network and requiring daily transportation to and from about 35,000 postal facilities, regardless of mail volume. The surface transportation network is decentralized and managed locally. Local management of the surface network is critical to controlling surface transportation costs.

Surface Transportation management utilizes six key performance indicators (KPI) for extra trips, late trips, canceled trips, unrecorded trips, trips departed not arrived, and trailer usage in the surface transportation dashboard to monitor and

manage the surface network. We analyzed these six indicators for the period FY 2014 through FY 2018.

Extra Trips: The *Postal Operations Manual* states that extra trips should not be scheduled unless necessary to prevent serious delay of mail such as Express Mail, Priority Mail, or an increase in mail volume. An extra trip is defined as an infrequent, additional trip for an existing route, resulting in increased transportation costs. However, we found that Postal Service management of the extra trip process is not effective. Extra trips increased from 776,000 trips in FY 2014 to 1.5 million trips in FY 2018, or by about 90 percent (see [Appendix B](#) for additional information on extra trips).

⁷ PVS mileage was extracted from SEAM.

⁸ PVS driver information came from webCOINS.

⁹ PVS routes extracted from Vehicle Information Transportation Analysis Logistic system as of July 2019.

¹⁰ Vehicle data was extracted from Solutions Enterprise Asset Management system as of July 2019.

The Postal Service reported 62,642 payment transactions for these extra trips costing over \$220 million in FY 2018. We reviewed a statistical sample of 207 payment transactions representing 6,353 extra trips costing \$549,348. We found that 79 of the 207 payment transactions (38 percent) were not recorded in SV.

Postal Service Management Instruction (MI) PO-530-2017-1, *Highway Contract Route Exceptional Service Performance Payment Reconciliation*, dated August 31, 2017, states that the AO ensures that the network specialist has correctly entered the transportation information, including PS Form 5397, Contract Route Extra Trip Authorization, into the SV or SVWeb database daily. In addition, before submitting the request for payment approval, PS Form 5429, the AO must review each claim PS Form 5397 and reconcile each extra trip against Postal Service transportation records.

We determined the AO would not have been able to reconcile PS Forms 5397 to the SV record for these 79 transactions before approving them for payment. Therefore, the Postal Service incurred \$28.8 million in unsupported questioned costs for extra trips that were approved and paid without reviewing or performing the required reconciliation for accuracy and ensuring the SV extra trip information was complete. Additionally, extra trip data in the SV dashboard is incomplete and inaccurate because these extra trips were not reflected in SV.

Late Trips: The Postal Service had a total of about 39.5 million surface transportation trips in FY 2018, about 11.3 million of which (or about 29 percent) were late trips. Late trips are trips arriving or departing after their scheduled times.¹¹ All trips have scheduled times in SV and are scanned as late trips if they arrive or leave the facility outside of that scheduled time. Dock personnel are responsible for selecting late trip reasons from a drop-down menu of choices. Our review of the late trips show that they increased from about 7.1 million in FY 2014 to about 11.3 million in FY 2018, or by about 60 percent (see [Appendix B](#) for additional information on late trips).

Canceled trips: Canceled trips occur when the Postal Service cancels a trip for various reasons, or when the HCR contractor fails to perform the scheduled

trip. Our review of canceled trips data reflected an increase from about 2 million in FY 2014 to about 3.8 million in FY 2018, or about 93 percent. The top five reasons for trip cancellations were:

- Not Scheduled - 924,930 trips (changes not reflected on set schedule).
- Other - 489,552 trips (trip did not fall within one of the pre-defined menu options).
- Bypass - 175,702 trips (avoids additional handling at one or more facilities).
- Dynamic Route Optimization (DRO) - 146,303 trips (new initiative still being implemented to reduce routes and transportation mileage).
- Contractor failure -125,238 trips. (supplier or driver failed to observe contract schedule).

In the event the Postal Service cancels a scheduled trip, the HCR contract statement of work provides for a pro-rata percentage reduction in payment to the HCR supplier. We judgmentally reviewed eight HCR contracts and found that four included verbiage specifying a 75 percent reduction in payments and one had verbiage of a 50 percent reduction in payment. The other three HCR contracts did not include any verbiage regarding a percentage reduction in payments. This inconsistent contract verbiage for payments or lack thereof could result in overpayments to suppliers.

Additionally, we reviewed canceled trip information in SV for the five HCRs which had payment reduction contract verbiage to determine if they were omitted from the HCR payments. We found 37,803 of the total 69,512 canceled trips (or 54 percent) were still active but were terminated in the Transportation Contracting Support System (TCSS) and the payment reductions did not occur. Since, a high number of these canceled trips are part of regular contracted service this could indicate service adjustments are needed to remove these trips and avoid unnecessary costs associated with cancelling these trips. As a result, the Postal Service incurred over \$2 million in unsupported questioned costs for canceled trips in FY 2018 that were not omitted from supplier payments (see [Table 6](#)).

¹¹ Late trips occur when surface transportation trips are delayed beyond the scheduled leave time. There is no grace period for holding a trip beyond its scheduled leave time.

Table 6. Canceled Trips to be Omitted from HCR Suppliers Payment, FY 2018

| Facility Name | HCR Contracts | Canceled Trips | Canceled Trips Still Active | Total Cost of Canceled Trips | Percent to be Omitted | Amount to be Omitted |
|------------------------------------|---------------|----------------|-----------------------------|------------------------------|-----------------------|-----------------------|
| Pennwood Place P&DC, ██████, PA | 1 | 44,964 | 17,664 | \$317,949 | 75% | \$238,462 |
| Philadelphia P&DC, PA | 2 | 4,193 | 3,843 | 463,522 | 75% | 347,498 ¹² |
| Philadelphia NDC, PA | 3 | 10,396 | 7,077 | 594,731 | 75% | 446,048 |
| Stamford P&DC, CT - NJ, NDC, NJ | 4 | 5,230 | 5,162 | 843,232 | 75% | 632,424 |
| Ybor P&DC, FL - Peachtree P&DC, GA | 5 | 4,729 | 4,057 | 706,199 | 50% | 353,099 |
| Total | | 69,512 | 37,803 | \$2,925,633 | | \$2,017,531 |

Source: OIG analysis of canceled trip data in SV, TCSS, and HCR contracts.

We also identified that data in the SV dashboard is incomplete and inaccurate for canceled trips. Specifically, we found 344 expired HCRs representing 802,538 trips that were inactive in the TCSS; however, they were populated in SV as scheduled trips. Consequently, the cancelled trips data reported in the management dashboard was overstated and management did not have accurate canceled trip data. See [Appendix B](#) for additional information on canceled trips.

The Postal Service could also better manage HCR contractor’s performance by holding them accountable when they have a failure to perform the scheduled transportation. PS Form 5500, Contract Route Irregularity Report, is issued by dock personnel when suppliers have these failures. These forms were not always issued for suppliers’ failures to document trip performance issues. We found the Postal Service recorded about 2.1 million contractor failures in SV, and only issued 190,795 PS Forms 5500 (see Table 7). When a contractor failure occurs for

a canceled trip, 100 percent of the trip costs are required to be omitted from the supplier’s payment.

Table 7. Contractor Failures vs. Issued PS Forms 5500, FY 2018

| Category | Canceled Trips | Late Trips | Total |
|--------------------------------|----------------|------------|-----------|
| Number of Contractor Failures | 125,238 | 1,925,582 | 2,050,820 |
| Number of PS Forms 5500 Issued | 40,925 | 149,870 | 190,795 |
| PS Forms 5500 not Issued | 84,313 | 1,775,712 | 1,860,025 |
| Percentage of Compliance | 33% | 8% | 9% |

Source: OIG analysis of SV data.

¹² We identified a \$143 reduction in payment for this HCR contract payment and deducted it from the grand total of \$347,641.

Unrecorded or Incomplete Trips: These are incomplete trip activities for which partial data was entered into the SV system. Transportation managers are responsible for ensuring policies and procedure for scan compliance are followed. This includes ensuring there is adequate staffing and scanning equipment, reporting any SV connectivity issues, and training staff on the proper scanning categories (assign, close, load, unload, arrive, depart and terminate).

Unrecorded and incomplete trips increased from about 684,000 in FY 2014 to about one million in FY 2018, or about 50 percent. Furthermore, unrecorded or incomplete trips did not have the required trip information documented in SV. For example, a missed outbound or inbound trip scan would result in missing information for that segment of the trip. Consequently, management would not have visibility of the complete trip details within its network when using the transportation dashboard (see [Appendix B](#) for additional information on unrecorded and incomplete trips).

Trips Departed Not Arrived: Trips Departed Not Arrived (TDNA) indicates the trip was recorded or scanned at the originating (outbound) facility, however, was not recorded or scanned at the destinating (inbound) facility. The management dashboard data and the underlying root cause analysis of TDNA provides management with insight into the operational issues that may exist in the current transportation process. Possible causes that contribute to TDNA are:

- Ineffective scanner setup for a particular tour that, if missed, will not show in the next tour setup.
- Failure to perform arrival scan at the destinating or inbound facility.
- Dispatch personnel not following or adhering to the scan policy and procedures.
- Contract drivers dropping trailer at the destinating or inbound facilities and failing to report it to the dock expeditors.
- Inexperienced expeditors.

Potential impacts of TDNA are:

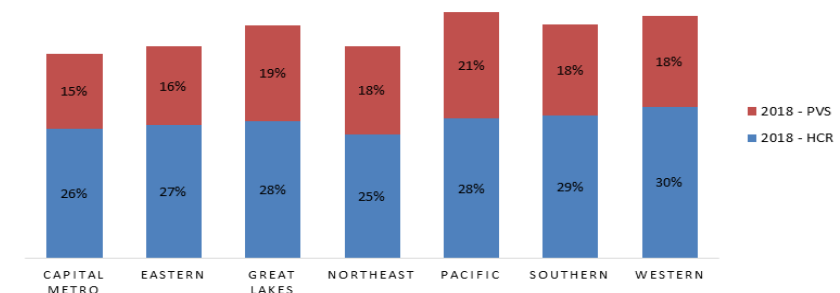
- Risk of lost trailers and mail.
- Service performance may be negatively impacted due to delays.
- Customer service, customer loyalty, and the Postal Service brand could be negatively impacted.

TDNA decreased from about 90,000 in FY 2017 to about 67,000 in FY 2018 or about 25 percent (see [Appendix B](#) for additional information on TDNA¹³). Due to the lack of inbound scanned information or data, management cannot monitor or determine on-time performance and have visibility or insight into operational issues encountered during the trip.

Trailer Utilization: Trailer utilization measures the cubic feet capacity used to transport mail and equipment based on 100 percent available floor space in the trailer. Average trailer utilization for PVS and HCR nationwide increased from about 21 percent in FY 2014 to about 24 percent in FY 2018.

Trailer utilization by area shows utilization rates ranging between 15 and 21 percent for PVS and 25 and 30 percent for HCR in FY 2018 (see Figure 3). While there is a marginal improvement in trailer utilization between FY 2014 to FY 2018, the Postal Service still has excess trailer capacity and an opportunity to improve its trailer utilization.

Figure 3. Trailer Utilization for HCR and PVS by Area



Source: OIG analysis of SV data.

¹³ The Postal Service began tracking TDNA data in August, FY 2016. Therefore, we excluded FY 2016 from our analysis since it only represented two months of data.

Based on our analysis and the results of the key metrics, the surface transportation network dashboard is lacking accurate and reliable data. Consequently, management is unable to fully identify and resolve systemic issues affecting service and operational efficiencies within the transportation network which continues to increase costs.

Recommendation #1

We recommend the **Vice President, Logistics**, ensure extra trips are reconciled against Surface Visibility data when submitting payments in the Service Change Request system.

Recommendation #2

We recommend the **Vice President, Supply Management**, in coordination with the **Vice President, Controller**, ensure authorized account numbers are used for exceptional service in the Service Change Request system.

Recommendation #3

We recommend the **Vice President, Logistics**, in coordination with the **Vice President, Supply Management**, evaluate Highway Contract Route contracts to include consistent language to omit payment when trips are canceled by the Postal Service and ensure they are omitted from supplier's payment per contract terms.

Recommendation #4

We recommend the **Vice President, Logistics**, perform data validation for the information in the Surface Visibility system to ensure the extra and canceled trips key performance indicators are accurate and complete.

Finding #2: Air Transportation Spend and Performance

Air Management Structure

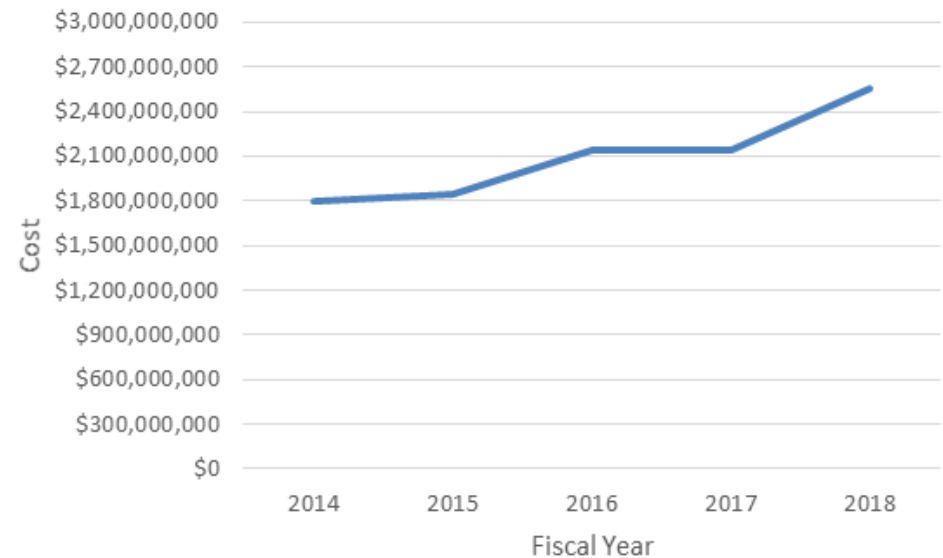
Management of the air transportation network is centralized at Postal Service HQ for contracting and contract monitoring, planning (forecasting), mail assignment, and payment. The HQ Logistics group assigns mail to air carriers, develops and

maintains air transportation models and systems, and monitors air transportation spend and performance. HQ Logistics works with the seven Postal Service areas daily to execute the assignment plans including meeting minimum contractual air lift requirements and accommodating excess mail volume that requires additional air lift. They address operational execution issues and identify and mitigate differences in planned and actual mail volume and needed airlift. This centralized approach minimizes actions by field personnel that could affect costs; however, even with centralization air, costs continue to increase.

Air Transportation Spend

From FY 2014 to FY 2018, air transportation spend for the three largest components — FedEx, UPS, and CAIR — increased from \$1.8 billion to \$2.6 billion, or about 42 percent (see Figure 4). The Postal Service attributes this increase to increased fuel costs, increased package volume, and use of additional contract air charters. In addition, we found that costs increased due to lack of competitive choices in air carriers, regulatory requirements, and the USO.

Figure 4. FedEx, UPS, and CAIR Spend, FYs 2014-2018

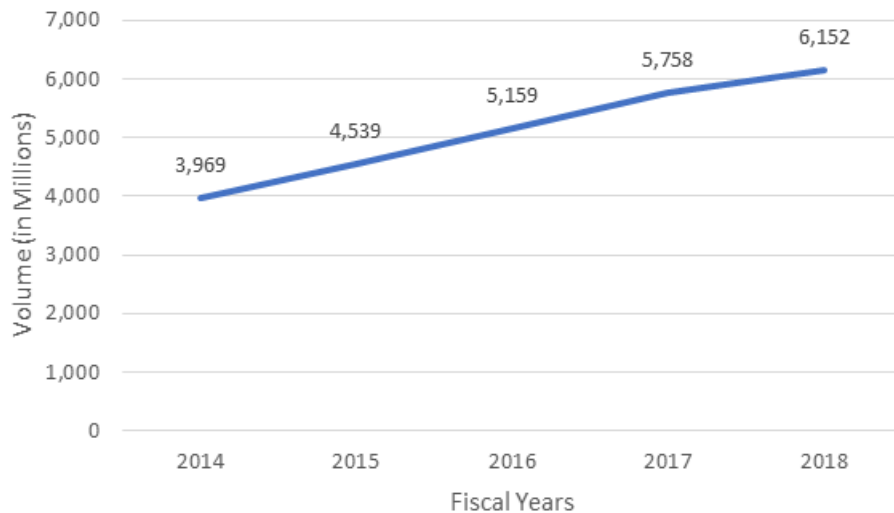


Source: EDW-Financial Performance Report.

Growth in Package Services

Shipping and package service volume grew 35 percent (2.2 billion piece increase) from FY 2014 to FY 2018 (see Figure 5). The Postal Service reported that variations in the volume and weight of transported mail and packages has also significantly impacted transportation expenses. Increased package volume elevates costs because space (cubic feet) is a key consideration in formulating price. Since packages vary in size, shape and weight, they occupy more space to containerize which in turn costs more to transport.

Figure 5. Shipping and Packages Volume, FYs 2014-2018



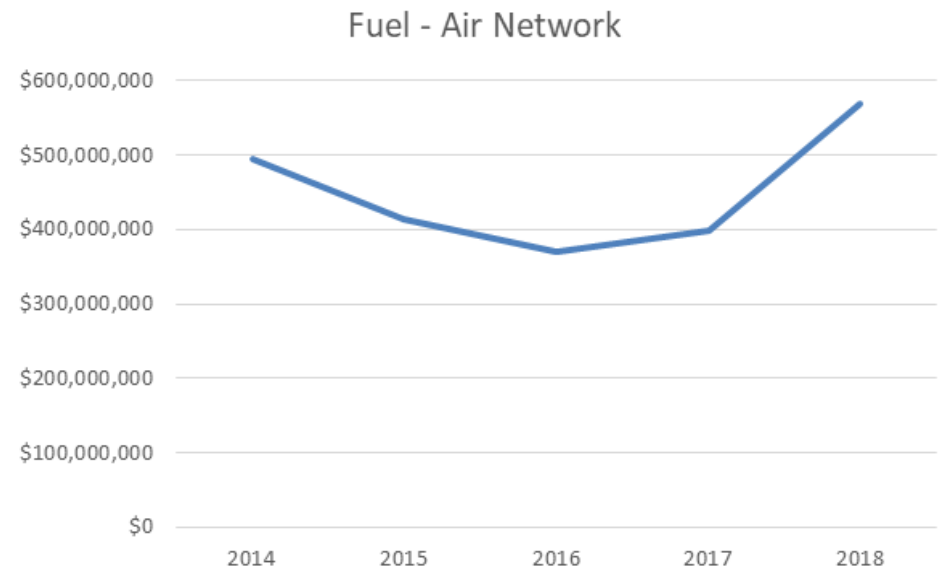
Source: Postal Service Financial Reports - Forms 10-K.

Air Transportation Fuel Spend

Fuel (diesel, gasoline, and jet fuel) has been an extremely unstable cost for businesses to manage. Unanticipated events — both domestically and globally — including natural disasters, disruptions or reductions in fuel supply and increased taxes can significantly affect fuel prices. Fuel costs for mail and parcels transported by Postal Service air carriers are paid and tracked by the Postal Service. Fuel costs are indexed for fluctuations using the U.S. Energy Information Administration's (EIA) U.S. Gulf Coast prices for kerosene-type jet

fuel. Jet fuel adjustments are generally made in accordance with contractual provisions for both upward and downward changes in jet fuel prices. According to the EIA, national fuel costs have been trending upward. From FY 2014 through 2018, Postal Service jet fuel spend increased by 13 percent, from \$493.7 million in FY 2014 to about \$568.7 million in FY 2018. The largest increase in fuel spend occurred in FY 2018 when air fuel spend increased by \$171 million, which corresponds with EIA index prices (see Figure 6).

Figure 6. Fuel Spend, FYs 2014-2018



Source: Corporate energy interface system with OIG analysis of fuel spend.

The substantial increase in ecommerce and package volume transported by air subjects the Postal Service to major financial exposure if jet fuel prices increase. Fuel surcharges are common in the transportation industry (trucking companies and airlines) when fuel prices increase beyond an expected or budgeted level. Surcharges allow transportation operators to pass the additional fuel price fluctuations to their customers. However, air transportation contracts require the Postal Service to pay for jet fuel price fluctuations in accordance with its

contractual adjustment methodology and it is prohibited by law from using fuel surcharges to recover increased fuel spend from rate payers.¹⁴

Air Transportation Constraints

The Postal Service’s air network operates within a structure whose primary focus is meeting service standards. Depending on how far the mail needs to travel and the service standard applied to that mail, the Postal Service uses air transportation to meet the service requirement. This process creates a reliance on a network with limited competition and significant regulatory requirements, which limits flexibility and increases costs.

Limited Competition in the Air Network

The Postal Service contracts with carriers such as FedEx, UPS, and CAIR to transport mail. The domestic air transportation industry has limited options that can provide the national reach and sorting capabilities of [REDACTED] to meet transportation requirements. However, this contractual relationship provides its own challenges. [REDACTED]

Table 8. [REDACTED] Tier Pricing Based on Volume

| Volume Structure ¹⁷ | Base | Tier 1 | Tier 2 | Tier 3 | Tier 4 | Tier 5 | Tier 6 | Tier 7 | Tier 8 |
|---------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Cubic Foot Range | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |
| Non-Fuel Linehaul ¹⁸ | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] | [REDACTED] |

Source: [REDACTED]

In its analysis for the 2017 [REDACTED] renewal option, the Postal Service concluded that without alternative options for capacity, leveraging the existing agreement with [REDACTED] provided the best opportunity to obtain the needed service responsive air transportation. Currently [REDACTED] of the mail transported by air is on

cargo carriers [REDACTED] because of the limited alternatives that meet Postal Service requirements.

¹⁴ Postal Accountability and Enhancement Act of 2006, Public Law No. 109-435, in which Congress imposed a price cap on Postal Service charges to “create predictability and stability in rates” and limited increases in most products (e.g., FCM and Periodicals) to the rate of inflation. A narrow exception to the price cap exists for “extraordinary or exceptional circumstances,” but this exception does not entail the market responsiveness ordinarily expected of a fuel surcharge mechanism. 39 U.S.C. §3622(d)(1)(E).

[REDACTED]

¹⁷ Applies to non-peak and peak operating periods.

[REDACTED]

Limited Ability to Expand CAIR Program to Other Carriers

Based on projected air lift demands, the Postal Service in some cases finds itself with a lift shortfall; not enough air carriers providing lift for the volume of mail they need to transport by air. Postal Service contract requirements limit the expansion of CAIR in certain markets where the Postal Service struggles to obtain adequate lift for first class mail. The Postal Service noted that Postal Inspection Service requirements may deter some CAIR carriers from engaging with the Postal Service.¹⁹ Management further explained that some airlines are not participating because of constraints such as scanning requirements they may not want to invest in or security of mail and employee screening requirements which may conflict with current collective bargaining agreements in place with their employees.

Federal Restrictions that Impact Air Transportation Spend

There are federal restrictions on the weight of packages transported on CAIR because of the terrorist attacks of September 11, 2001. However, the Postal Service has opportunities to reduce spend in its air transportation network if it can expand the use of CAIR for packages. This change in the air network would provide considerable flexibility to the Postal Service and also allow it to reduce costs by using the lower cost carriers to transport packages currently placed on the [REDACTED].

Air Transportation Performance

The Postal Service HQ Logistics Team is responsible for managing an air network comprised of about 80 air stops throughout the country. It also manages 69 Terminal Handling Service (THS) sites which are used to prepare and dispatch mail for [REDACTED]. Air Transportation Logistics management uses six KPIs to monitor and manage the air network. These six KPIs are:

- FedEx Service Performance
- UPS Service Performance

- CAIR Service Performance
- Delayed Mail on Air Network
- Mixed vs. Bypass Containers
- Air Network Utilization

In FY 2017, the Postal Service re-negotiated all air contracts; therefore, our analysis for the air network was conducted on performance indicators for FY 2018 through FY 2019, Q2. In addition, the service performance scores below for [REDACTED] represent service performance based on Postal Service data only. Contractually, the Postal Service engages with its suppliers to review and reconcile service performance scores based on events that may negatively impact service but are no fault of the carriers.

[REDACTED] Service Performance

In 2001, the Postal Service entered into an agreement with [REDACTED] to transport mail. The vast majority of the contract involves moving [REDACTED] on the day network²⁰ on a per [REDACTED] cost basis. The current day network services [REDACTED] air stops daily. [REDACTED] service performance contractually requires an on-time performance of [REDACTED]. Based on the service scores provided by Postal Service, performance for FY 2018 was [REDACTED] and FY 2019, Qs 1 and 2, was [REDACTED] percent. These service scores were not reconciled with [REDACTED] and may not be the actual service performance scores achieved had that reconciliation process occurred.²¹

When broken down by postal area, [REDACTED]
[REDACTED]
[REDACTED]

¹⁹ JetBlue, Frontier, and Southwest are examples of commercial airlines which do not currently participate in the air transportation program.

²⁰ [REDACTED]

²¹ [REDACTED]

[REDACTED]

Source: Surface Air Support System (SASS).

[REDACTED] – Service Performance

The Postal Service has a long-term agreement with [REDACTED] that began in 2006. The current [REDACTED] contract was awarded in 2017. [REDACTED] handles the line haul, ground handling, and the terminal handling for [REDACTED] air stops throughout the country. This contract involves moving [REDACTED] basis on the existing [REDACTED] network.

[REDACTED] service performance contractually requires an [REDACTED]
[REDACTED]

When broken down by postal area, [REDACTED] performance scores [REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

Source: EDW.

For [REDACTED]
[REDACTED]

[Redacted]

[Redacted]

Source: EDW.

Commercial Air Service Performance

Under the CAIR series of contracts, established in 2003, with new contracts negotiated in 2017, commercial air carriers assist in the transportation of mail using their existing network of flights. Each of these carriers transports mail on passenger flights, if space is available. The six carriers currently in the CAIR network are:

- Delta Airlines
- United Airlines
- American Airlines
- Alaska Airlines

- Sun Country Airlines
- Hawaii Airlines

Although there are six airlines in the CAIR network, our audit focused on the [Redacted] — American, United, and Delta. CAIR service performance contractually requires an on-time performance of [Redacted]

[Redacted]

When broken down by Postal Area, CAIR FCM performance scores [Redacted]

[Redacted]

[Redacted]

[Redacted]

Source: EDW-SASS.

For [Redacted]
[Redacted]



standards. Air transportation requirements are planned six months in advance and mail volume is allocated across the network based on the available lift by air stop. In FY 2018, delayed mail totaled about 33 million pounds, or 1.4 percent of total mail volume in pounds moved through the air network (see Table 9).

Table 9. Total Delayed Mail (in pounds) by Area, FY 2018

| Area | Delayed FCM | Delayed Priority Mail | Total Delayed Mail |
|---------------|-------------------|-----------------------|--------------------------------|
| Capital Metro | ██████ | ██████ | ██████ |
| Eastern | ██████ | ██████ | ██████ |
| Great Lakes | ██████ | ██████ | ██████ |
| Northeast | ██████ | ██████ | ██████ |
| Pacific | ██████ | ██████ | ██████ |
| Southern | ██████ | ██████ | ██████ |
| Western | ██████ | ██████ | ██████ |
| Total | 22,031,181 | 10,738,428 | 32,769,609²² |

Source: Logistics Condition Reporting System (LCRS).

In FY 2019, Qs 1 & 2, delayed mail was over 15 million pounds, or 1.3 percent of total mail volume in pounds (see Table 10).

Source: EDW-SASS.

Delayed Mail on Air Network

Delayed mail caused by the Postal Service and the air carriers impacts the actual airlift for the next day and requires the Postal Service to either procure extra air transportation above its daily network capacity or move mail through surface transportation which potentially places the mail at risk of not meeting service

²² Delayed mail in Tables 9 and 10 represents mail that was delayed by both postal facilities and air carriers. These figures may not affect air carriers service performance scores if the delayed mail was excusable on the part of the carrier.

Table 10. FY 2019, Qs 1 & 2 Total Delayed Mail (by pounds) by Area

| Area | Delayed First Class | Delayed Priority Mail | Total Delayed Mail |
|---------------|---------------------|-----------------------|--------------------|
| Capital Metro | ██████ | ██████ | ██████ |
| Eastern | ██████ | ██████ | ██████ |
| Great Lakes | ██████ | ██████ | ██████ |
| Northeast | ██████ | ██████ | ██████ |
| Pacific | ██████ | ██████ | ██████ |
| Southern | ██████ | ██████ | ██████ |
| Western | ██████ | ██████ | ██████ |
| Total | 9,148,307 | 6,229,495 | 15,377,802 |

Source: LCRS.

Mixed or Bypass Containers – Terminal Handling Services Operations

THS are responsible for transferring mail between the Postal Service and its aviation suppliers, such as ██████ or for air transportation services for regional locations, such as the Mid-West, Alaska, Hawaii, Pacific/Micronesia, and the Caribbean, which are more dedicated in nature. In general, THS spend about \$98 million and prepares mail for boarding onto air transportation at origins and for subsequent processing or delivery at destinations. Currently, there are THS contracts in place to support the Air Cargo Network ██████ at 69 airports.

THS operations sort mail into mixed or Bypass containers. Unlike bypass containers, mixed containers have multiple destinations and require additional handling and sortation which is more expensive. The Postal Service has a planned Bypass metric that quantifies Bypass containers based on forecasted volume by air stop. However, in FY 2018, the Postal Service did not use 59.72 percent of its planned Bypass containers (see Table 11).

Table 11. Bypass Container Information by Area, FY 2018

| Area | Planned Bypass Containers | Used Bypass Containers | Used | Not Used |
|---------------|---------------------------|------------------------|--------------|--------------|
| Capital Metro | 17,244 | 4,502 | 26.1% | 73.9% |
| Eastern | 17,205 | 8,390 | 48.8% | 51.2% |
| Great Lakes | 22,079 | 5,835 | 26.4% | 73.6% |
| Northeast | 26,725 | 13,829 | 51.7% | 48.3% |
| Pacific | 62,900 | 29,802 | 47.4% | 52.6% |
| Southern | 34,492 | 7,334 | 21.3% | 78.7% |
| Western | 47,273 | 22,105 | 46.8% | 53.2% |
| Total | 227,918 | 91,797 | 40.3% | 59.7% |

Source: EDW.

Network Utilization

Network utilization determines if forecasting plans are met and if the network is used at capacity. The air network utilization forecast versus actual mail volume for January 2018 through March 2019 has shown a national average difference of 1.15 percent. However, airlift shortages and excess volume discrepancies exist by area and by month. For example, Postal Service HQ Logistics was able to forecast volume to a .03 percent accuracy rate for the Southern Area, meaning the forecasted volume was less than the actual volume by 137,000 pounds of mail. Conversely, the forecast accuracy rate for the Capital Metro Area was -2.59 percent, meaning the forecasted volume exceeded the actual volume by 5.2 million pounds of mail (see Table 12).

Table 12. Air Network Utilization Forecast vs. Actual Mail Volume By Area - January 2018 through March 2019

| Postal Service Area | Priority Mail Variance | FCM Variance | Total Mail Variance |
|---------------------|------------------------|--------------|---------------------|
| Capital Metro | -3.48% | -0.92% | -2.59% |
| Pacific | -1.76% | -3.14% | -2.29% |
| Northeast | -0.47% | -4.63% | -2.27% |
| Great Lakes | -3.06% | 0.49% | -1.72% |
| Western | -0.62% | 0.50% | -0.25% |
| Southern | -1.89% | 3.86% | 0.03% |
| Eastern | -0.07% | 2.95% | 0.75% |

Source: OIG analysis of forecasting data provided by Postal Service network analytics.

We plan to conduct additional audit work related to transportation network efficiency and assess efforts to reduce costs and we recommended the Postal Service perform a cost-benefit analysis of current service performance targets in our report *Assessment of the U.S. Postal Service's Service Performance and Costs* (Report Number [NO-AR-19-008](#), dated September 17, 2019).

Recommendation #5

We recommend the **Vice President, Logistics**, in coordination with the **Vice President, Supply Management**, explore opportunities to increase the use of commercial air carriers to transport packages presently restricted by federal regulations.

Cost Reduction and Technology Initiatives

The Postal Service's various cost reduction and technology-based initiatives to optimize its transportation network have had limited success. For example,

our recent audit of the Postal Service's HCR Optimization Initiative²³ found the savings calculations were not documented and included errors, resulting in a negative cost savings.

The Postal Service implemented the technology-based Dynamic Route Optimization (DRO) initiative to reduce miles and costs across the surface transportation network. The initiative did not achieve planned cost savings for FYs 2017 and 2018 because the Postal Service did not identify and resolve program issues before national rollout and did not accurately measure related KPIs.

For the air network, there are currently three cost savings initiatives — using the lowest cost air carrier, maximizing the density of air containers, and the new initiative started in FY 2019 to optimize the use of bypass containers which do not require extra sortation. Postal Service management reported that in FYs 2018 and 2019, the lowest cost carrier initiative exceeded planned savings, but the density of air containers initiative did not. In FY 2019 the use of bypass containers initiative has also exceeded planned savings.

Management's Comments

Management agreed with the findings, recommendations, and monetary impact.

Regarding recommendation 1, management stated that they will change and automate the 5429 process so only those trips entered into the SV system would be processed for payment. The target implementation date is October 31, 2020.

Regarding recommendation 2, management stated that the appropriate account numbers for exceptional service should be put into the eSCR system. They will conduct an analysis to ensure the appropriate exceptional service codes are correctly aligned with valid account codes. The target implementation date is July 31, 2020.

Regarding recommendation 3, management requested the OIG close the recommendation as HCR contracts currently include language that supports deductions for cancelled or omitted service. Management also stated that in

²³ *Highway Contract Routes – Optimization Initiative Savings Calculation Methodology and Accuracy* (Report Number [NL-AR-19-002](#), issued January 30, 2019).

FY 2019 they standardized the process by requiring requests for deductions to be entered and tracked through the eSCR system.

Regarding recommendation 4, management stated that with extra and omitted service functions being automated through Service Now and tied to the SV, the data will only reflect what is in the SV system. The target implementation date is October 31, 2020.

Regarding recommendation 5, management stated they are currently working on a pilot with commercial carriers to increase the use of commercial air carriers. The target implementation date is June 30, 2020.

See [Appendix C](#) for management's comments in their entirety.

Evaluation of Management's Comments

The OIG considers management's comments responsive to the recommendations and management's corrective actions should resolve the issues identified in the report.

Management requested that we close recommendation 3 upon issuance of the report and stated that HCR contracts currently include language that supports deductions for cancelled or omitted service and the deductions are entered into and tracked through the eSCR system. To close the recommendation, the OIG will follow up with management for supporting documentation to ensure that all HCR contracts include this stipulation and are tracked through the eSCR system. Additionally, the OIG will be reviewing extra and cancelled trips as part of its FY 2020 audit plan.

All recommendations require OIG concurrence before closure. The OIG requests written confirmation when corrective actions are completed. Recommendations 1 through 5 should not be closed in the Postal Service's follow-up tracking system until the OIG provides written confirmation that the recommendations can be closed.

Appendices

Click on the appendix title below to navigate to the section content.

| | |
|---|----|
| Appendix A: Additional Information..... | 26 |
| Scope and Methodology | 26 |
| Prior Coverage | 27 |
| Appendix B: Key Performance Indicator Information | 28 |
| Appendix C: Management’s Comments..... | 32 |

Appendix A: Additional Information

Scope and Methodology

The scope of our audit was to evaluate Postal Service trends and practices used to optimize the transportation network. We also identified and analyzed nationwide KPIs and initiatives the Postal Service used during FYs 2014 through 2018 to monitor and control transportation costs. In FY 2017, the Postal Service renegotiated all air contracts; therefore, we conducted our analysis for the air network on performance indicators for FY 2018 through FY 2019, Q2.

To accomplish our objective, we:

- Interviewed Postal Service HQ management and identified KPIs used to monitor, control, and optimize transportation network costs.
- Identified and obtained cost data for the transportation surface and air networks from EDW and performed cost trending by each segment.
- Reviewed air contracts covering FedEx, UPS, and CAIR; and discussed contracts terms and requirements with contracting and operational managers.
- Interviewed HQ Logistics management to obtain an understanding of centralized operations, processes, and controls, as well as their interaction with the areas.

- Analyzed data from TCSS, eSCR, SASS, EDW, LCRS, and SV.
- Identified transportation cost reduction initiatives and its potential impact.

We conducted this performance audit from November 2018 through November 2019 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 October 4, 2019 and included their comments where appropriate.

We assessed the reliability of the Postal Service's SV, eSCR, and SASS systems by interviewing knowledgeable agency officials, reviewing related documentation, testing for completeness, recalculating the data, and comparing data to other related data. We determined that the data from these systems were sufficiently reliable for the purposes of this report.

Prior Coverage

| Report Title | Objective | Report Number | Final Report Date | Monetary Impact (in millions) |
|--|--|----------------|-------------------|-------------------------------|
| <i>Management Alert - Charter Flights</i> | Provide Postal Service officials immediate notification of the issues identified during our ongoing audit. The issue outlined in this report requires immediate attention and remediation. | NL-MT-19-002 | 9/5/2019 | None |
| <i>What's Driving Postal Transportation Costs?</i> | Gain a better understanding of how much transportation costs have increased over the last 10 years. | RARC-WP-19-002 | 3/18/2019 | None |
| <i>HCR Optimization Initiative Savings Calculation Methodology and Accuracy.</i> | Evaluate the Postal Service's HCR Optimization Cost Savings Methodology and the accuracy of reported savings for FY 2017. | NL-AR-19-002 | 1/30/2019 | None |
| <i>Highway Contract Routes - Extra Trips in the Mid-Carolinas District</i> | Assess the effectiveness of the U.S. Postal Service's extra trip process for Highway Contract Routes in the Mid-Carolinas District. | NL-AR-18-010 | 9/17/2018 | \$2.5 |
| <i>Terminal Handling Services - Southern Area</i> | Assess the effectiveness of the Terminal Handling Services the Postal Service uses to sort and transport mail in the Southern Area. | NL-AR-18-009 | 7/27/2018 | \$4.5 |

Appendix B: Key Performance Indicator Information

Extra Trips

Our review of extra trips data over the five-year period shows the Southern Area had the largest increase, from 83,000 in FY 2014 to 294,000 in FY 2018, or 256 percent. On the other hand, the Great Lakes Area was the only area decreasing extra trips, from 141,000 in FY 2014 to 128,000 in FY 2018, or negative 9 percent (see Table 13).

Table 13. Extra Trips by Area, FYs 2014-2018

| Area | 2014 | 2018 | Total Increase 2014-2018 | Percent Increase 2014-2018 |
|---------------|----------------|------------------|--------------------------|----------------------------|
| Capital Metro | 147,907 | 216,016 | 68,109 | 46% |
| Eastern | 136,714 | 227,137 | 90,423 | 66% |
| Great Lakes | 140,928 | 128,424 | -12,504 | -9% |
| Northeast | 113,639 | 243,908 | 130,269 | 115% |
| Pacific | 78,877 | 166,388 | 87,511 | 111% |
| Southern | 82,524 | 293,453 | 210,929 | 256% |
| Western | 75,185 | 199,552 | 124,367 | 165% |
| Total | 775,774 | 1,474,878 | 699,104 | 90% |

Source: OIG analysis of SV data.

Late Trips

Our review of late trips data shows the Southern Area had the largest increase, from about 1.2 million in FY 2014 to about 2.2 million in FY 2018, which is the

second largest increase at 90 percent. The Capital Metro Area had the largest increase of 139 percent for the five-year period. Conversely, the Western Area had the smallest increase, from 1.1 million in FY 2014 to 1.3 million in FY 2018, or 18 percent (see Table 14).

Table 14. Late Trips by Area, FYs 2014-2018

| Area | 2014 | 2018 | Total Number Increase 2014-2018 | Total Percent Increase 2014-2018 |
|---------------|------------------|-------------------|---------------------------------|----------------------------------|
| Capital Metro | 714,084 | 1,703,999 | 989,915 | 139% |
| Eastern | 1,176,061 | 1,805,034 | 628,973 | 54% |
| Great Lakes | 966,550 | 1,386,283 | 419,733 | 43% |
| Northeast | 1,240,224 | 1,876,823 | 636,599 | 51% |
| Pacific | 764,271 | 1,088,647 | 324,376 | 42% |
| Southern | 1,152,265 | 2,186,891 | 1,034,626 | 90% |
| Western | 1,053,978 | 1,244,518 | 190,540 | 18% |
| Total | 7,067,433 | 11,292,195 | 4,224,762 | 60% |

Source: OIG analysis of SV data.

We obtained the details and reason codes for 10.3 million late trips and found that 4.5 million (or 44 percent) were 15 or fewer minutes late (see Table 15). This indicates that a minor schedule change could correct or eliminate many late trips and reduce costs. Late trips cost the Postal Service about \$15 million dollars in FY 2018.

Table 15. Late Trips Minutes and Percentages, FY 2018

| | O-5 Minutes | 6-15 Minutes | 16-30 Minutes | 31-60 Minutes | <61 Minutes | Total Trips Late |
|------------|-------------|--------------|---------------|---------------|-------------|------------------|
| Late Trips | 1,979,329 | 2,515,117 | 2,113,579 | 1,899,194 | 1,756,420 | 10,263,639 |
| % Late | 19% | 25% | 21% | 19% | 17% | 100% |

Source: OIG analysis of SV data.

We reviewed five facilities with the highest number of late trips and the main reason cited for the late trips was dock operations, indicating there were issues at the dock which prevented the trucks from dispatching on time (see Table 16).

Table 16. Examples of Facilities with High Late Trips and the Root Causes

| Area | Facility | Routes | Late Trips | Late Trips Costs FY 2018 | Late Trip Root Cause |
|---------------|--|--------|----------------|--------------------------|----------------------|
| Capital Metro | Capital Metro (MD) Surface Transfer Center (STC) | ██████ | 24,370 | \$133,607 | 38% Dock Operations |
| Southern | Royal Palm (FL) P&DC | ██████ | 57,435 | \$295,509 | 44% Dock Operations |
| Capital Metro | Capital Metro (MD) STC | ██████ | 19,978 | \$118,392 | 36% Dock Operations |
| Southern | Austin (TX) P&DC | ██████ | 5,613 | \$168,043 | 23% Dock Operations |
| Great Lakes | Chicago (IL) Network Distribution Center (NDC) | ██████ | 13,463 | \$110,177 | 33% Dock Operations |
| Total | | | 120,859 | \$825,728 | |

Source: OIG analysis of SV data.

Our analysis of late trip reason codes listed by the Postal Service in FY 2018 identified the reasons why trips were late, (see [Figure 12](#)).

Figure 12. Top Reasons for Late Trips, FY 2018



Source: OIG analysis of late trip reason codes listed in SV data.

Specifically, our analysis of the 10.3 million late trips determined the top five reasons for late trips included:

- Dock Operations with 2,659,487 late trips, or 25.91 percent.
- Contractor Failure with 2,066,826, or 20.14 percent.
- Mail Processing with 1,501,028, or 14.62 percent.
- Late Processing with 981,164, or 9.56 percent.
- Dock Congestion with 800,586, or 7.80 percent.

The Postal Service has opportunities to control the high occurrence rates and added costs of late trips associated with internal processes through increased oversight and management of operations.

Canceled Trips

Our review of canceled trips data shows the Northeast Area had the largest increase, from 219,000 trips in FY 2014 to 698,000 in FY 2018, or 218 percent. Conversely, the Great Lakes Area had the smallest increase in canceled trips from 361,000 in FY 2014 to 409,000 in FY 2018, or 13 percent (see Table 17).

Table 17. Canceled Trips by Area, FYs 2014-2018

| Area | 2014 | 2018 | Total Number Increase 2014-2018 | Total Percent Increase 2014-2018 |
|---------------|------------------|------------------|---------------------------------|----------------------------------|
| Capital Metro | 373,573 | 517,217 | 143,644 | 38% |
| Eastern | 356,266 | 592,217 | 235,951 | 66% |
| Great Lakes | 361,115 | 409,001 | 47,886 | 13% |
| Northeast | 219,334 | 697,508 | 478,174 | 218% |
| Pacific | 148,653 | 336,337 | 187,684 | 126% |
| Southern | 262,555 | 645,839 | 383,284 | 146% |
| Western | 242,791 | 586,112 | 343,321 | 141% |
| Total | 1,964,287 | 3,784,231 | 1,819,944 | 93% |

Source: OIG analysis of SV data.

Unrecorded or Incomplete Trips

Our review of unrecorded and incomplete trips data shows the Pacific Area had the largest increase, from 43,000 in FY 2014 to 164,000 in FY 2018, or 283 percent. The Great Lakes Area was the only area with reduced unrecorded and incomplete trips of 73,000, or 65 percent from FYs 2014 to 2018 (see Table 18).

Table 18. Unrecorded and Incomplete Trips by Area - FY 2014 to FY 2018

| Area | 2014 | 2018 | Total Number Increase 2014-2018 | Total Percent Increase 2014-2018 |
|---------------|----------------|------------------|---------------------------------|----------------------------------|
| Capital Metro | 111,812 | 218,996 | 107,184 | 96% |
| Eastern | 90,602 | 120,212 | 29,610 | 33% |
| Great Lakes | 112,843 | 39,504 | -73,339 | -65% |
| Northeast | 52,926 | 148,399 | 95,473 | 180% |
| Pacific | 42,843 | 164,276 | 121,433 | 283% |
| Southern | 153,887 | 197,110 | 43,223 | 28% |
| Western | 118,658 | 136,939 | 18,281 | 15% |
| Total | 683,571 | 1,025,436 | 341,865 | 50% |

Source: OIG analysis of SV data.

Trips Departed Not Arrived

Our review of trips departed not arrived shows the Capital Metro Area had the largest number increase from over 16,000 in FY 2017 to about 20,000 in

FY 2018, or 23 percent. The Great Lakes Area had the lowest number of these trips in FY 2018 at about 5,000. All areas except for Capital Metro were able to decrease their total number of trips departed not arrived from FY 2017 to FY 2018 (see Table 19).

Table 19. Trips Departed Not Arrived by Area - FY 2017 to FY 2018

| Area | 2017 | 2018 | Total Number Increase 2017-2018 | Total Percent Increase 2017-2018 |
|---------------|---------------|---------------|---------------------------------|----------------------------------|
| Capital Metro | 16,116 | 19,828 | 3,712 | 23% |
| Eastern | 17,017 | 6,962 | -10,055 | -59% |
| Great Lakes | 8,970 | 4,749 | -4,221 | -47% |
| Northeast | 10,334 | 10,073 | -261 | -3% |
| Pacific | 9,175 | 7,402 | -1,773 | -19% |
| Southern | 11,510 | 11,039 | -471 | -4% |
| Western | 16,516 | 7,347 | -9,169 | -56% |
| Total | 89,638 | 67,400 | -22,238 | -25% |

Source: OIG analysis of SV data.

Appendix C: Management's Comments



October 31, 2019

LAZERICK POLAND
DIRECTOR, AUDIT OPERATIONS

SUBJECT: U.S. Postal Service Transportation Network Operations and Cost
Optimization Practices (Report Number NL-AR-20-DRAFT)

Thank you for providing the United States Postal Service with an opportunity to review and comment on the recommendations contained in the draft audit report, "U.S. Postal Service Transportation Network Operations and Cost Optimization Practices". Management agrees with the findings, recommendations and monetary impact.

OIG Recommendations:

We recommend the vice president, Logistics:

Recommendation #1:

Ensure extra trips are reconciled against Surface Visibility data when submitting payments in the Service Change Request system.

Management Response to Recommendation #1:

Management agrees with this recommendation. The 5429 process will be changed/automated so that only trips entered into SV can be put forward for payment.

Target Implementation Date:

October 2020

Responsible Official:

Director Surface Transportation, Network Operations

We recommend the vice president, Supply Management, in coordination with the vice president, Controller:

Recommendation #2:

Ensure authorized account numbers are used for exceptional service in the Service Change Request system.

Management Response to Recommendation #2:

Management agrees that the appropriate account numbers should be used for exceptional service in the Service Change Request system. Management will conduct an analysis of the system to ensure the appropriate exceptional service codes are correctly aligned with valid account codes.

Target Implementation Date:

July 2020

Responsible Official:

Manager, Supply Chain Management Strategies

We recommend the vice president, Logistics, in coordination with the vice president, Supply Management:

Recommendation #3:

Evaluate Highway Contract Route contracts to include consistent language to omit payment when trips are canceled by the Postal Service and ensure they are omitted from supplier's payment per contract terms.

Management Response to Recommendation #3:

Management agrees with this recommendation. Our contracts currently have language that supports deductions for cancelled or omitted service. In FY19, we further standardized the process by requiring those requests for deduction to be entered and tracked through the eSCR system. As such, we request that this recommendation be closed.

Target Implementation Date:

Implemented

Responsible Official:

Manager, Transportation Portfolio

We recommend the vice president, Logistics:

Recommendation #4:

Perform data validation for the information in the Surface Visibility system to ensure the extra and canceled trips key performance indicators are accurate and complete.

Management Response to Recommendation #4:

Management agrees with this recommendation. With extra and omitted service functions being automated through Service Now and tied to SV the data will only reflect what is in SV.

Target Implementation Date:

October 2020

Responsible Official:

Director Surface Transportation.

We recommend the Vice President, Logistics, in coordination with the Vice President, Supply Management:

Recommendation #5:

Explore opportunities to increase the use of commercial air carriers to transport packages presently restricted by federal regulations.

Management Response to Recommendation #5:

Management agrees with this recommendation and is currently working on a pilot with the commercial carriers to increase the use of commercial air carriers.

Target Implementation Date:

June 2020

Responsible Official:

Manager, Air Transportation



Robert Cintron
Vice President
Logistics



Mark A. Guilfoil
Vice President
Supply Management



Cara M. Greene
Vice President
Controller

cc: Corporate Audit Response Management



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