September 28, 2009

MICHAEL S. FUREY
MANAGER, NORTHERN VIRGINIA DISTRICT

SUBJECT: Audit Report – Effects of the Flats Sequencing System on Delivery Operations – Northern Virginia District (Report Number DR-AR-09-011)

This report presents the results of our audit of the Effects of the Flats Sequencing System (FSS) on selected delivery operations (Project Number 09XG004DR000). Our objective was to evaluate the effects of FSS on delivery operations and operating costs at selected Northern Virginia District delivery units. This audit addressed operational risk. See Appendix A for additional information about this audit.

Conclusion

Results in the Northern Virginia District

The five Northern Virginia District delivery units had all improved[1] in delivery operations during the initial 6 months of FSS testing.[2] However, flat volumes decreased by more than 50 percent during this testing period, so we could not determine how much of these operational gains were due to the implementation of FSS.

Specifically, we found reductions in:

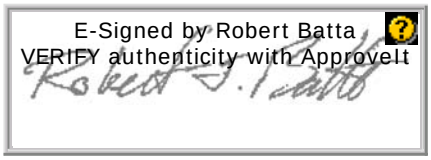
- City carrier workhours
- City carrier overtime hours
- City carrier routes
- Manual distribution clerk workhours and positions

These improvements contributed to an overall 6 month cost reduction of approximately $1.3 million (see Appendix C for calculations). In addition to cost reductions, customer service also improved in the selected Northern Virginia District delivery units. Since we

[1] Other factors such as declining mail volume could have also contributed to delivery improvements.
[2] The initial 6 months of FSS testing dates vary due to different start dates for each delivery unit during fiscal year (FY) 2008. The Postal Service did not have an estimated cost reduction goal over their FSS test period. Per the FSS Decision Analysis Report (DAR) cost savings will not be realized for city delivery, mail processing and support operations until fiscal year 2012, which is the first full year of savings. OIG cost reduction calculations were based on comparative analysis of mail volume and number of workhours before and after the testing period.

did not find any adverse effects on delivery operations, we are not making any recommendations in this report. See Appendix B for our detailed analysis of this topic. The U.S. Postal Service agreed with the findings, but chose not to comment because there were no recommendations.

We appreciate the cooperation and courtesies provided by your staff during the audit. If you have any questions or need additional information please contact Rita Oliver, Director, Delivery, or me at (703) 248-2100.



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Attachment

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APPENDIX A: ADDITIONAL INFORMATION

BACKGROUND

The Postal Service currently processes about 53 billion flat mailpieces annually. Mailers presort approximately 57 percent of this mail to individual carrier routes. In October 2006, the Postal Service recommended an investment of $1.49 billion in the Phase I Decision Analysis Report (DAR) to develop, purchase, and deploy 100 flats sequence sorting machines at 33 sites. The FSS is designed to perform automatic sequencing function for flat sized mail, which includes large envelopes, newspapers, catalogs, circulars, and magazines.

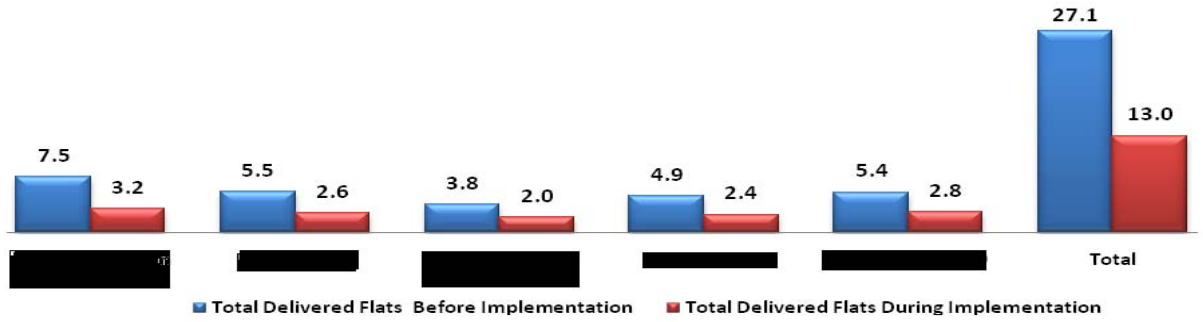
The FSS processes flat mailpieces from mail streams produced by the Automated Flat Sorting Machine 100 and the Upgraded Flat Sorting Machine 1000. In addition, the FSS processes a significant portion of the flat mailpieces that otherwise would have arrived at delivery units in mailer-prepared bundles and sacks. The flat mailpieces processed on the FSS arrive at a delivery unit in walk sequence order, ready for delivery by the carrier without additional mail movement or manual sorting. The Postal Service is expected to achieve delivery unit savings by:

- Eliminating manual city carrier casing.
- Reducing the number of carrier routes.
- Reducing manual distribution clerk workhours.

Declining mail volume is a symptom of the ailing economy. During FY 2008, mail volume declined by approximately 9.5 billion pieces. Per our analysis, flat volume[3] in the selected Northern Virginia District delivery units decreased by approximately 14.1[4] million pieces from 27.1 million to 13.0 million pieces. See Chart 1.

[3] Delivered flats are total number of flat mailpieces delivered to delivery units, in walk sequence and requiring manual sorting.
[4] These numbers are rounded.

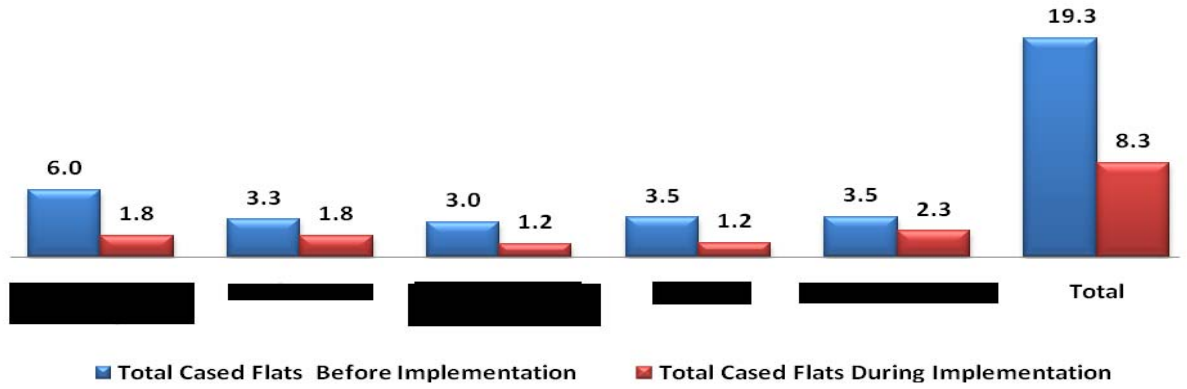
Chart 1. Delivered Flats



Source: Enterprise Data Warehouse (EDW)

The delivery units reviewed also had overall reductions in cased flats[5] of approximately 11.0 million going from approximately 19.3 million to 8.3 million flat pieces.[6] See Chart 2.

Chart 2. Cased Flats



Source: EDW

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to determine the effects of FSS on delivery operations and delivery operating costs at selected Northern Virginia District delivery units. Due to staggered FSS testing start dates, the selected delivery units reviewed were integrated into the process during different months during FY 2008. Our audit scope covered June 2007 to

[5] Cased flats are mailpieces that require the carrier to manually sort in walk sequence.
[6] This flat piece count compares the 6 months before the FSS implementation to the initial 6 months of testing.

January 2009, a 6-month period before FSS testing and the first 6 months during FSS testing[7] for each delivery unit reviewed. See Table 1.

Table 1. FSS Testing Periods

FSS Site	6 Months Before FSS Testing	Testing Start Month	First 6 Months of FSS Testing
[redacted]	June 2007 – November 2007	December 2007	December 2007 – May 2008
[redacted]	July 2007 – December 2007	January 2008	January 2008 – June 2008
[redacted]	October 2007 – March 2008	April 2008	April 2008 – September 2008
[redacted]	October 2007 – March 2008	April 2008	April 2008 – September 2008
[redacted]	February 2008 – July 2008	August 2008	August 2008 – January 2009

Source: Postal Service Northern Virginia District Management

To accomplish our objective, we:

- Judgmentally selected five of the 10 initial[8] FSS delivery unit locations in the Northern Virginia District.
- Reviewed applicable documentation, policies and procedures such as the FSS DAR, dated October 20, 2006, and the approved FSS Work Methods memorandum of understanding between the Postal Service and the National Letter Carrier Association, dated November 24, 2008.
- Obtained and reviewed data from the EDW and eFlash that included the total delivered flat mailpieces, cased flat mail volumes, sequenced flat mail volumes, city carrier office and street workhours, and manual distribution clerk workhours.
- Obtained and reviewed performance indicator data such carriers returning after 5 p.m. and Managed Service Points (MSP) scan percentages for FYs 2008 through 2009, Quarter 3.
- Conducted visits to the selected delivery unit locations.
- Conducted interviews with Postal Service Headquarters, Capital Metro Area, and Northern Virginia District officials.

We conducted this performance audit from October 2008 through September 2009[9] 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

[7] The scope limitations are due to differences in the FSS Pre-Production Testing start dates for each delivery unit.
[8] The 10 initial FSS sites included [redacted]
[9] This project was suspended on January 5, 2009, and reopened March 25, 2009, in order to complete work on higher priority projects.

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 officials on September 21, 2009, and included their comments where appropriate. We relied on data obtained from U.S. Postal Service database systems. We did not directly audit the systems, but performed limited data integrity review to support our data reliance.

PRIOR AUDIT COVERAGE

The OIG has issued 5 reports related to our objective in the last several years.

Report Title	Report Number	Final Report Date	Monetary Impact	Report Results
Flats Sequencing System Contractual Remedies	CA-AR-09-006	July 1, 2009	$7,733,522	This audit determined that management of the FSS contract process resulted in increased financial risk to the Postal Service. Management agreed with findings and recommendations 1 and 2 but only partially agreed with the finding and recommendation 3.
Flats Sequencing System: Program Status	DA-AR-09-001	December 23, 2008	None	The audit determined that program management was attentive to system performance and schedule risks. Management agreed with the finding and recommendation in this report.
Management of Contract Changes – Flats Sequencing System	CA-MA-09-002	December 1, 2008	None	The report did not identify any unnecessary or inappropriate increased costs to the Postal Service because of changes to the FSS contracts. Management agreed with the finding and recommendation in this report.
Flats Sequencing System: Production First Article Testing Readiness and Quality	DA-AR-08-006	June 4, 2008	None	The audit determined the Postal Service needed to focus greater attention on workload, the First Article Testing schedule, and critical deliverables. Management generally agreed with the finding and recommendation in this report.
Flats Sequencing System Risk Management	DA-AR-07-003	July 31, 2007	None	The audit determined that Postal Service Engineering needed to focus greater attention on risk management standards to ensure the significant risks associated with deployment of the FSS were adequately identified and managed. Management agreed with findings and recommendations 1 and 2, but disagreed with findings and recommendations 3 and 4 of this report.

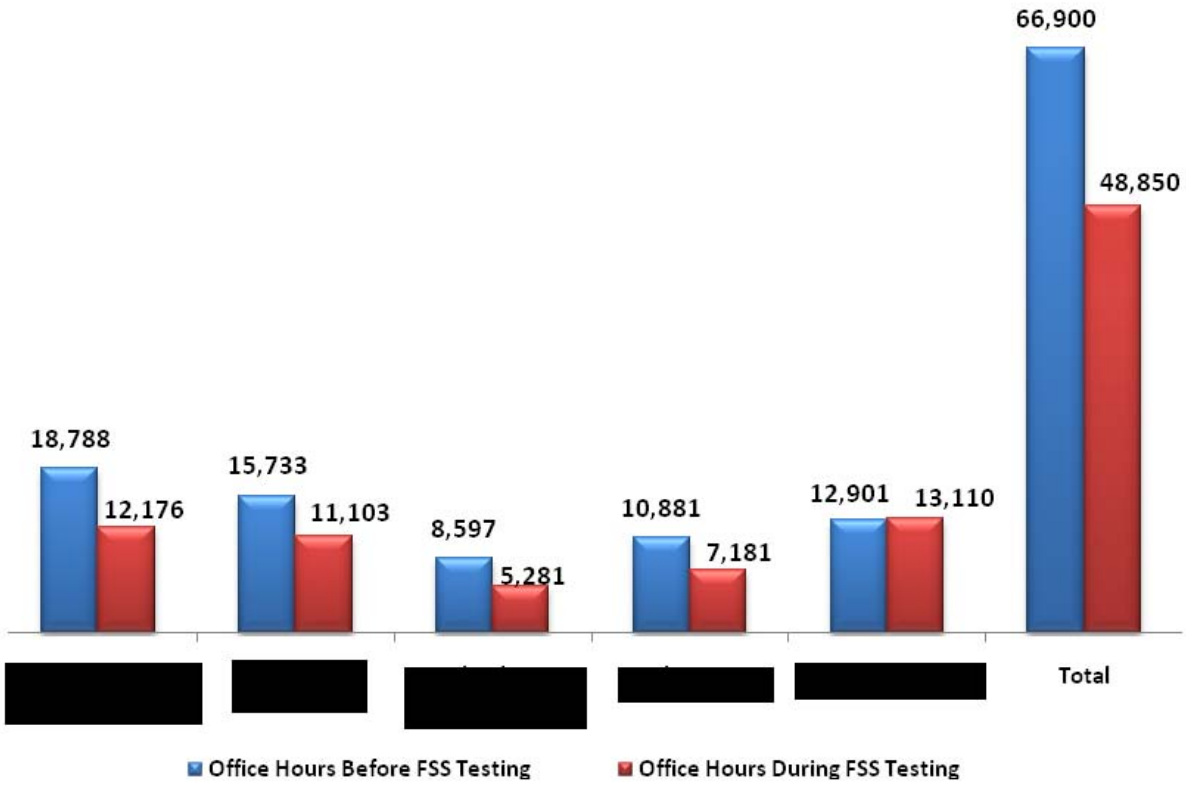
APPENDIX B: DETAILED ANALYSIS

The Northern Virginia District delivery unit locations reviewed improved their delivery operations and reduced operating costs during the initial 6 months of FSS testing. However, flat volumes decreased by more than 50 percent during this testing, so we could not determine how much of these operational gains were due to the implementation of FSS.

City Carrier Workhours

City carrier office hours declined at the selected units. In the 6 months prior to the implementing FSS, city carriers used 66,900 office hours. Office hours during the initial 6 months of FSS testing declined to 48,850. To manage the reduced flat mail volume and its impact on the morning office time, delivery unit officials adjusted carriers' work schedules to later start times. However, OIG analysis of the data showed workhours for one location, [redacted] increased slightly during the initial 6 months of FSS testing. This was because the unit's initial testing period included Christmas holiday workhours. See Chart 3.

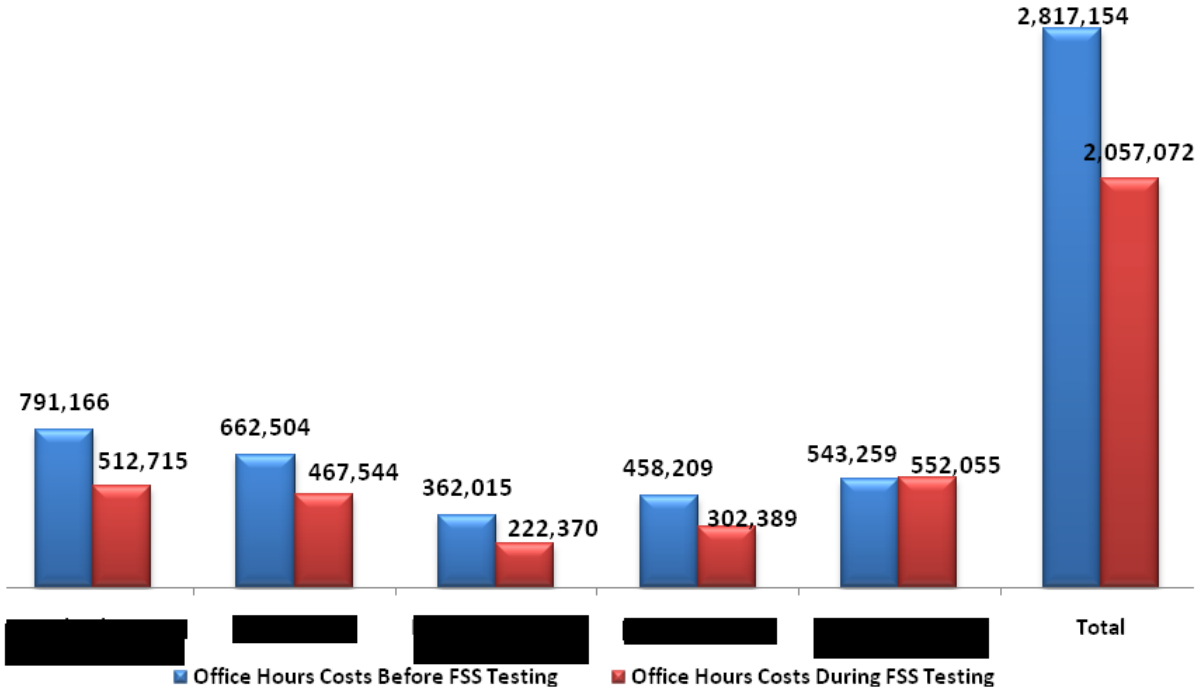
Chart 3. City Carrier Office Hours



Source: EDW

For the 6-month period prior to implementing FSS, city carriers' office hours costs were approximately $2.8 million[10] and during the initial 6 months of FSS testing declined to approximately $2.1 million. This resulted in a cost reduction of approximately $760,000. See Chart 4.

Chart 4. City Carrier Office Hour Costs



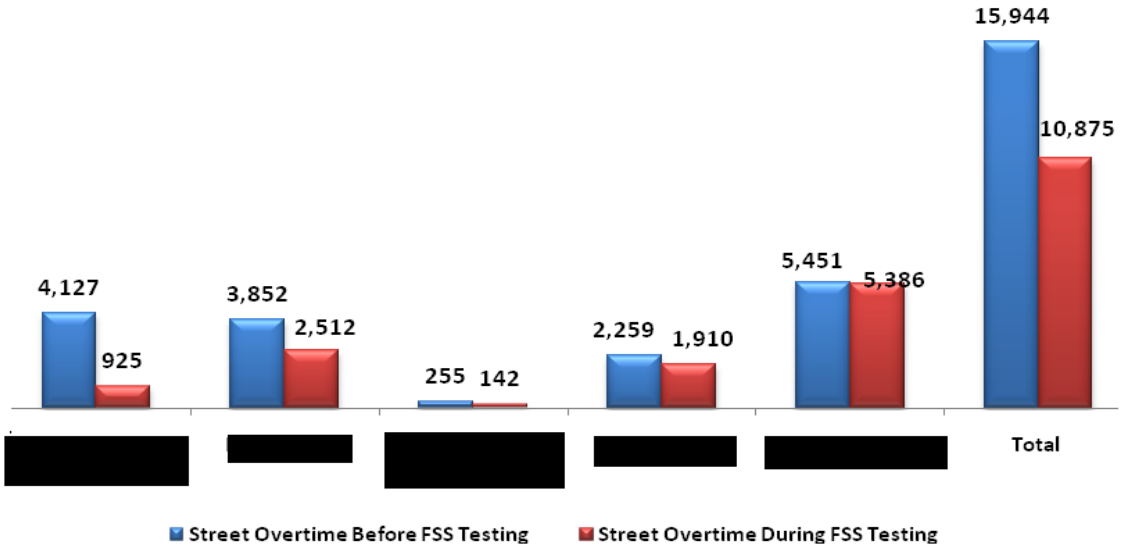
Source: EDW

City Carrier Overtime

The amount of overtime in the selected units was also reduced during the testing period. Specifically, since FSS reduced the number of flats carriers had to sort, carriers reported to their routes earlier thereby reducing overtime related to carriers returning after 5:00 p.m. For example, as shown in Chart 5, during the 6 months prior to the FSS implementation, city letter carriers used 15,944 of overtime hours as compared to the 10,875 of overtime hours used during the initial 6 months of FSS testing. This resulted in a cost reduction of $320,158. See Chart 5.

[10] We calculated carrier office hour costs calculated using the FY 2008 rate of $42.11.

Chart 5. City Carrier Overtime Hours



Source: EDW

Additionally, we reviewed the city delivery performance indicators pertaining to street delivery, MSP[11] and carriers returning after 5:00 p.m.[12] We found MSP percentages remained unchanged after management adjusted the carrier's route start times. MSP scans averaged 95 percent for all five delivery units, which suggest that carriers were scanning key service points and customers were receiving consistent delivery of their mail at approximately the same time, each day.

Carriers Returning After 5:00 p.m.

The implementation of the FSS appears to have contributed to a reduction in the number of carriers returning after 5:00 p.m. Specifically, carriers returning after 5:00 p.m. averaged:

- 54 percent in FY 2008 Quarter 1 before FSS environment.
- 70 percent in FY 2009 Quarter 1 during FSS testing, which includes the Christmas holiday and inclement weather issues.

However, at the end of FSS testing phase and beginning of FSS full-production in FY 2009 Quarter 3, the carriers returning after 5:00 p.m. percent significantly decreased to an average of 10.5 percent, which suggest carriers were delivering the mail within their authorized street times. For example, for [redacted] return percentages decreased to 1.3 percent, 4.4 percent, and 4.6 percent, respectively. See Table 2.

[11] The percentage of street performance for scans during street delivery. The goal is 95 percent on time scans.
[12] The percentage of carriers returning to the station from delivering the mail after 5 p.m.

Table 2. Percentage of Carriers Returning After 5:00 p.m.

	FY 2008 Q1	FY 2008 Q2	FY 2008 Q3	FY 2008 Q4	FY 2009 Q1	FY 2009 Q2	FY 2009 Q3
[redacted]	44.40	26.50	48.00	70.60	74.50	19.70	1.30
[redacted]	48.30	30.00	46.30	66.70	71.30	27.10	26.70
[redacted]	52.80	32.60	44.20	57.80	60.00	21.90	4.40
[redacted]	63.50	43.20	59.30	60.50	78.00	23.60	4.60
[redacted]	63.10	56.00	57.30	62.00	66.20	40.90	15.70
Averages	**54.42**	**37.66**	**51.02**	**63.52**	**70.00**	**26.64**	**10.54**

Source: OIG City Delivery Performance Analysis Risk Indicator Scans Model

City Carrier Routes

The FSS also impacted the number of routes in the selected units. The justification for FSS required route adjustments, which included combining or eliminating routes to capture workhour reductions. District management conducted route adjustments after implementation of the FSS reducing routes from 154 routes to 134. These adjustments removed 195 base hours from routes in the selected units. See Table 3.

Table 3. Cost of Base Route Hours

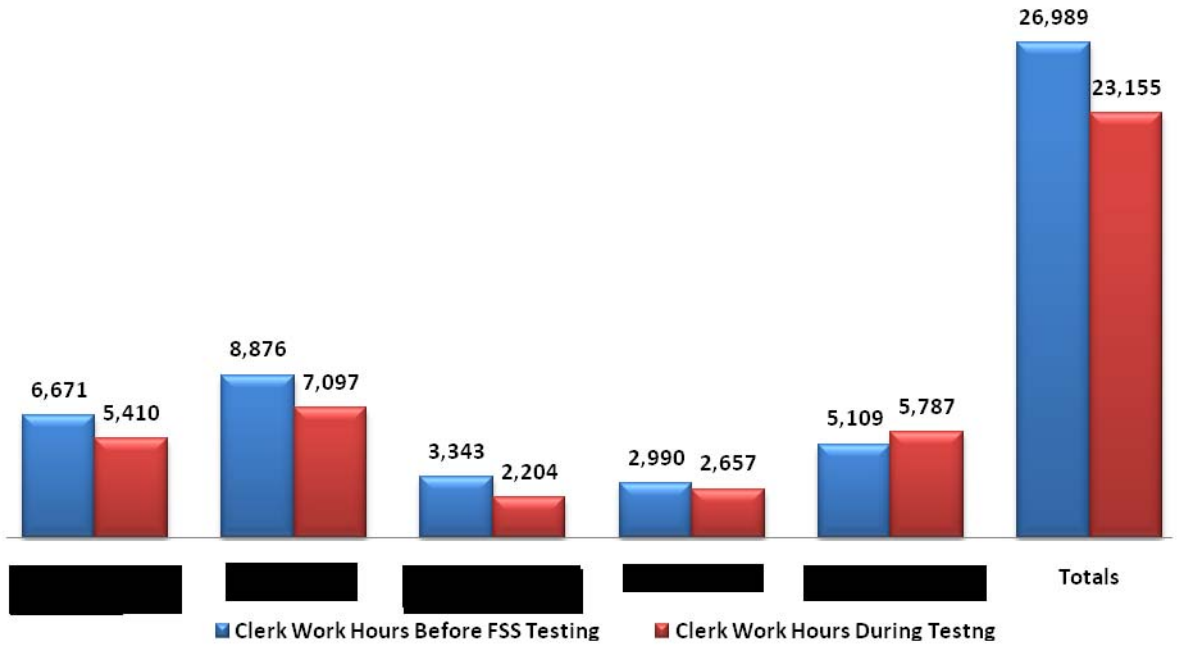
Delivery Unit	Total Daily Route Base Hours Before Route Adjustments	Total Daily Route Base Hours After Route Adjustments	Base Hours Reduction
[redacted]	306	259	47
[redacted]	263	204	59
[redacted]	152	134	18
[redacted]	185	165	20
[redacted]	331	280	51
Totals	**1,237**	**1,042**	**195**

Source: Postal Service Northern Virginia District Management

Manual Distribution Clerk Workhours and Positions

Finally, clerk workhours were also reduced at the selected units. Specifically, the 6 months prior to the FSS implementation, clerks used 26,989 workhours compared to the 23,155 workhours used during the initial 6 months of FSS testing. There was an increase in the workhours at the [redacted] unit during the initial 6 months of FSS testing because the unit's testing included Christmas holiday workhours. See Chart 6.

Chart 6. Manual Distribution Clerk Hours



Source: EDW

The FSS environment caused a significant change in the clerk's workload. For instance, the clerk's responsibility for the breakdown and distribution of carrier routed mail was almost totally eliminated. However, clerks will continue to sort and distribute some mail due to mail arrival[13] and learning curves associated with revised schemes. Additionally, according to the National Labor Agreement, management must schedule a full-time clerk for 40 hours of work regardless of the workload.[14] The change in workload during FSS testing resulted in eliminating four positions at the selected units saving about $181,000. See Table 4.

Table 4. Manual Distribution Clerk Positions

Delivery Unit	Total Manual Distribution Clerk Positions Before FSS Testing	Total Manual Distribution Clerk Positions During FSS Testing	6 Month Costs of Manual Distribution Clerk Positions Before FSS Testing	6 Month Costs of Manual Distribution Clerk Positions During FSS Testing	6 Month Cost Reductions
[redacted]	8	7	$361,920	$316,680	$45,240
[redacted]	8	7	361,920	316,680	45,240
[redacted]	6	5	271,440	226,200	45,240
[redacted]	3	3	135,720	135,720	0
[redacted]	7	6	316,680	271,440	45,240
Total	**32**	**28**	**$1,447,680**	**$1,266,720**	**$180,960**

Source: Postal Service Northern Virginia District Management

As a result of the initial 6 months of FSS testing in selected Northern Virginia District delivery units, mail service improved to the customer as many carriers were returning before 5:00 p.m. to their units. We did not find any adverse effects on delivery operations. To address the declining mail volume and changes in workload due to FSS, district officials indicated they established schedule adjustments, used part time flexible employees, and assigned clerks to other delivery units. They also moved clerks from the delivery area to the retail sales window and eliminated clerk positions when possible. District officials indicated they are monitoring the new FSS environment and making adjustments, where needed to assist with managing the daily workload.

[13] Mail arriving late to the processing plant may not be processed on the FSS.
[14] We plan to review additional sites where the FSS has been implemented in the full production mode in FY 2010, and will further evaluate the effects of FSS on delivery operations.

APPENDIX C: TOTAL ESTIMATED COST REDUCTIONS CALCULATION

Workhours	Cost for 6 Months Before FSS Testing	Cost for 6 Months During FSS Testing	6 Months Cost Reductions
Office Hours	$2,817,154	$2,057,072	$760,082
Overtime Hours	1,007,023	686,865	320,158
Clerk Positions	1,447,680	1,266,720	180,960
Net Reductions	**$5,271,857**	**$4,010,657**	**$1,261,200**

Source: OIG