



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

**Supervisor Workhours and
Span of Control**

Management Advisory

April 4, 2013

Report Number NO-MA-13-005



BACKGROUND:

Span of control is defined as the number of subordinates in an organization who report directly to one supervisor. The U.S. Postal Service has established a span of control target of one supervisor for every 25 craft employees (1:25).

Our objective was to assess the use of supervisor workhours and span of control at mail processing facilities. This report responds to a request from the postmaster general and chief executive officer and impacts mail processing operations nationwide.

WHAT THE OIG FOUND:

Although the Postal Service generally reduced supervisor workhours in relation to craft employee workhours, it did not always achieve its span of control target. Specifically, we found that, based on the 1:25 span of control target, there was a shortage of 412 regular supervisors nationwide and an excess of 1.8 million replacement supervisor workhours used in fiscal year (FY) 2012. Replacement supervisors are craft employees used to backfill supervisors.

These conditions occurred because the Postal Service did not always adjust

supervisor positions in relation to craft positions to achieve span of control targets. In addition, the Postal Service did not always monitor span of control during the plant consolidation process. Furthermore, span of control targets could be inaccurate, as the Postal Service had not re-evaluated them since the spring of 2011. As a result, the Postal Service incurred excess costs from replacement supervisor workhours with no real added benefit.

WHAT THE OIG RECOMMENDED:

We recommended the vice president, Network Operations:

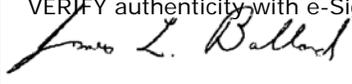
- Re-evaluate span of control targets and determine the appropriate targets.
- Fill vacant supervisor positions up to the appropriate span of control level and reduce supervisor replacement workhours accordingly.
- Ensure that span of control targets are achieved during the consolidation process to the fullest extent possible.

[Link to review the entire report](#)



April 4, 2013

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

E-Signed by James Ballard
VERIFY authenticity with e-Sign


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

SUBJECT: Management Advisory – Supervisor Workhours and Span of Control (Report Number NO-MA-13-005)

This report presents the results of our review of Supervisor Workhours and Span of Control (Project Number 13XG002NO000).

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact James L. Ballard, director, Network Processing and Transportation, or me at 703-248-2100.

Attachments

cc: Patrick R. Donahoe
Megan J. Brennan
Linda M. Malone
Corporate Audit and Response Management

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Introduction

This report presents the results of our review of Supervisor Workhours and Span of Control (Project Number 13XG002NO000). The report responds to a request from the postmaster general and chief executive officer to review the use of supervisor workhours and span of control at mail processing facilities. This review addresses operational risk. See [Appendix A](#) for additional information about this review.

Span of control is defined as the number of subordinates in an organization who report directly to one supervisor and is determined by evaluating several factors (see [Table 1](#)). The U.S. Postal Service has established two span of control targets: one for the total of managers of distribution operations (MDO) and supervisors to craft employees (1:22) and one for only supervisors to craft employees (1:25).¹ We are using the latter span of control in this report.

Table 1. Factors Influencing Span of Control

← Narrow Spans		Wide Spans →	
Complex	Nature of the work	Not complex	
Different	Similarity of activities performed	Similar	
Not clear	Clarity of organizational objectives	Clear	
Fuzzy	Degree of task certainty	Definite rules	
High	Degree of risk in the work for the organization	Low	
High	Degree of public scrutiny	Low	
Weak	Supervisor’s qualifications and experience	Strong	
Heavy	Burden of non-supervisory duties	Light	
High	Degree of coordination required	Low	
None	Availability of staff assistance	Abundant	
Weak	Qualifications and experience of subordinates	Strong	
Dispersed	Geographic location of subordinates	Together	
← More Supervisors		Fewer Supervisors →	

Sources: Public Knowledge Inc. and the Kemp Consulting Group.

¹ The criteria for span of control ratios are stated in area mail processing (AMP) worksheets and the *Operations Complement Management* report.

Conclusion

Although the Postal Service generally reduced supervisor workhours in relation to craft employee workhours,² it did not always achieve its span of control target. Specifically, we found that, based on the 1:25 span of control target, there was a shortage of 412 regular supervisors nationwide and an excess of 1.8 million replacement supervisor³ workhours used in fiscal year (FY) 2012.

These conditions occurred because the Postal Service did not always adjust supervisor positions in relation to craft positions to achieve span of control targets. In addition, the Postal Service did not always monitor span of control during the plant consolidation process.⁴ Furthermore, span of control targets could be inaccurate, as the Postal Service had not re-evaluated them since the spring of 2011. As a result, the Postal Service incurred excess costs from replacement supervisor workhours with no real added benefit.

Shortage of Regular Supervisors

We estimated a shortage of 412 regular supervisors nationwide. To attain the span of control target of 1:25 in FY 2012, the Postal Service would need 3,453 regular supervisors; however, FY 2012 complement data showed only 3,041 supervisors on the rolls (see [Table 2](#)). Consequently, the Postal Service had to use replacement supervisors to make up the shortfall. In FY 2012, the Postal Service used about 2.6 million replacement supervisor workhours.

² The Postal Service reduced supervisor and craft employee workhours in the mail processing network from FYs 2010 to 2012. During this period, supervisor workhours declined by 13 percent while craft employee workhours declined by 10 percent.

³ Replacement supervisors are craft employees paid at a higher level to backfill supervisor absences.

⁴ We calculated the supervisor to craft employee span of control for 52 AMP plant consolidations implemented in FY 2011. Of the 43 gaining plants, only four had a span of control below the target of 1:25. The remaining 39 had a higher span of control ranging from a high of 1:79 to a low of 1:25.

**Table 2. Estimated Shortage of Supervisors by Plant Group⁵
FY 2012**

Plant Group	Number of Regular Supervisors (October 2012)	Regular Supervisors Required for 1:25 Span of Control ⁶	Shortage of Regular Supervisors
1	1,328	1,470	142
2	832	932	100
3	443	500	57
4	204	263	59
5	147	172	25
6	63	82	19
7	24	35	11
Total	3,041	3,453⁷	412⁸

Sources: U.S. Postal Service Office of Inspector General (OIG) and Web Complement Information System (WebCOINS).

Excessive Replacement Supervisor Workhours

We found that about 1.8 million replacement supervisor workhours used in FY 2012 were excessive. For example, to attain the span of control target of 1:25 in FY 2012, about 6.3 million supervisor workhours would be required; however, FY 2012 data showed that the Postal Service used about 8.1 million supervisor workhours (see [Table 3](#)). The excess replacement supervisor workhours represent 22 percent of total supervisor workhours used in FY 2012 and resulted in questioned costs of about \$12 million. See [Appendix B](#) for our detailed calculation of questioned costs.

⁵ We stratified facilities that process mail into seven groups ranked by FY 2010 first-handling piece (FHP) mail volume. A FHP is a letter, flat, or parcel that receives its initial distribution at a Postal Service facility. See Table 5 in Appendix A for more information.

⁶ We calculated the number of regular supervisors required by dividing the number of craft employees by 25.

⁷ Difference due to rounding.

⁸ Difference due to rounding.

**Table 3. Excess Replacement Supervisor Workhours Used
FY 2012**

Plant Group	Required Supervisor Workhours at 1,820⁹ Workhours/Year	Total Supervisor Workhours (Excluding Managers)	Excess Replacement Supervisor Workhours	Percentage of Total Supervisor Workhours
1	2,675,240	3,359,497	684,257	20%
2	1,695,701	2,161,638	465,937	22%
3	910,888	1,200,024	289,136	24%
4	478,325	607,979	129,654	21%
5	312,603	445,761	133,158	30%
6	148,366	226,544	78,178	35%
7	63,278	99,835	36,557	37%
Total	6,284,402	8,101,278	1,816,876	22%

Sources: OIG, WebCOINS, and Enterprise Data Warehouse (EDW).

Plant Performance Indicators

We found that using more supervisor workhours did not result in substantial benefit to the plants. To determine whether the amount of supervisor workhours affected plant performance, we performed correlation analyses using FY 2012 data for Group 1 plants.¹⁰ Correlation analysis measures the relationship between two or more variables. We compared the percentage of supervisor workhours to the following plant performance indicators:

- FHP productivity.¹¹
- Overnight service scores.
- Percent overtime.
- Percent delayed mail.
- Number of accidents.

As shown in [Table 4](#), we found that the indicators measured have almost no correlation to the percentage of supervisor workhours used. This indicates that high usage of replacement supervisors was not effective in improving overall plant performance.

⁹ The average number of workhours used by a supervisor in a year.

¹⁰ Group 1 plants process a minimum of 1.3 billion FHPs based on FY 2010 mail volume.

¹¹ We calculated FHP productivity by dividing FHP volume by Function 1 workhours.

This may be attributed to the labor agreement¹² between the Postal Service and the American Postal Workers Union, which restricts assigning replacement supervisors to supervisory positions for longer than 90 days or they will lose their regular bid assignment. Because of this restriction, replacement supervisors are generally less qualified, independent, experienced, and accountable compared to their regular supervisor counterparts. In addition, the intent of the replacement supervisor program is to train and develop future supervisory positions rather than serve as the primary means of providing mail processing oversight.

**Table 4. Group 1 Plant Performance Impacts
FY 2012**

Indicators	Coefficient of Correlation ¹³ (r)	Effect on Indicator ¹⁴ (r ²)	Strength of Correlation ¹⁵
FHP Productivity	-.064	0.41%	Very Weak
Overnight Service Scores	-0.15	2.3%	Weak
Percent Overtime	.025	0.063%	Very Weak
Percent Delayed Mail	0.18	3.2%	Weak
Accidents	-.016	0.026%	Very Weak

Sources: OIG, Web Mail Condition Reporting System (WebMCRS), and EDW.

These conditions occurred because the Postal Service did not always adjust supervisor positions in relation to craft positions to achieve span of control targets. In addition, the Postal Service did not always monitor span of control during the plant consolidation process. We calculated the supervisor to craft employee span of control for 52 AMP plant consolidations implemented in FY 2011. Of the 43¹⁶ gaining plants, only four had a span of control below the 1:25 target. The remaining 39 plants had a higher span of control, ranging from a high of 1:79 to a low of 1:25. Furthermore, span of control targets could be inaccurate, as management had not re-evaluated them since spring of 2011.

¹² American Postal Workers Union Agreement (November 21, 2010 – May 20, 2015) Article 37.3A.8.

¹³ The correlation coefficient, denoted by r , is a measure of the strength of the straight-line or linear relationship between two variables. The correlation coefficient takes on values ranging between +1 and -1.

¹⁴ A statistical method, denoted by r^2 , that explains how much of the variability of a factor can be caused or explained by its relationship to another factor.

¹⁵ A strong relationship is indicated by a coefficient of correlation of 1 or -1 (inverse relationship). A coefficient of correlation of .35 or less is weak with 0 indicating no relationship whatsoever.

¹⁶ Of the 52 total AMPs, three gaining plants did not have any Function 1 staffing, 11 had consolidations from multiple losing plants, and five consolidated operations into two gaining plants (52 minus 14 plus 5 equals 43).

Recommendations

We recommend the vice president, Network Operations:

1. Re-evaluate span of control targets and determine the appropriate targets.
2. Fill vacant supervisor positions to the appropriate span of control level and reduce supervisor replacement workhours accordingly.
3. Ensure that span of control targets are achieved during the consolidation process to the fullest extent possible.

Management's Comments

Management agreed with the findings and recommendations. With regard to recommendations 1 and 2, management agreed to re-evaluate span of control targets and ensure authorized staffing levels are maintained at correct span of control levels as well as reduce supervisor replacement workhours accordingly. Management also agreed with recommendation 3 to ensure that during the consolidation process, estimated staffing levels at gaining and losing sites are realized to the fullest extent possible. In subsequent correspondence, management also agreed with the monetary impact. Management plans to complete these actions by March 2014. 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 corrective actions should resolve the issues identified in the report.

The OIG considers recommendation 2 significant, and therefore requires OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective action is completed. This recommendation should not be closed in the Postal Service's follow-up tracking system until the OIG provides written confirmation that the recommendation can be closed.

Appendix A: Additional Information

Background

Managers and supervisors provide oversight at processing and distribution centers, processing and distribution facilities, and post offices with mail processing operations. Title 39, U.S.C. §101 Part 1, Chapter 1, states that the Postal Service “. . . shall provide prompt, reliable, and efficient services to patrons in all areas . . .” In addition, the Postal Accountability and Enhancement Act of 2006¹⁷ highlights the need for the Postal Service to increase its efficiency and reduce its costs, including infrastructure costs, to help maintain a high quality, affordable organization. As part of Postal Service’s cost reduction efforts, span of control¹⁸ is an important factor to consider.

Based on a review of AMP worksheets used in the plant consolidation process and the Postal Service’s Operations Complement Management website, the Postal Service uses an average span of control of supervisors to craft employees of 1:25. When MDOs are added to this population, the average span of control target falls to 1:22. When reviewing what the appropriate spans of control should be, factors such as environmental stability,¹⁹ nature of the work,²⁰ experience level of personnel,²¹ and budgetary constraints²² should be considered. Factors used in determining appropriate spans of control are highlighted in [Table 1](#).

¹⁷ Public Law 109-435, Title II, dated December 20, 2006.

¹⁸ Span of control is defined as the number of subordinates in an organization who report directly to one supervisor.

¹⁹ When the external environment is more stable than dynamic, more employees can be supervised by a single manager. A stable environment is less demanding and reduces the need for quick response; thereby, more flexibility in workhours and schedules is provided.

²⁰ Routine jobs, tasks that require limited skills or are focused, and tasks that require only occasional management decision and coaching can have wider spans of control.

²¹ When the average job-related experience of employees is high, employees require little training or direction so tasks can be easily delegated. Under such situations, a supervisor’s span of control can be increased.

²² When an organization is facing financial hardship or is downsizing, it needs to increase span of control.

To assess the processing and distribution network, we developed seven plant groups based on FHP mail volume in FY 2010. Table 5 shows the mail volume breakdowns in each group.

Table 5. FY 2010 FHP Mail Volume Breakdowns by Group

Plant Group	FHP Volume Range (in millions)
1	1,300 and above
2	765 to 1,300
3	476 to 765
4	340 to 476
5	221 to 340
6	136 to 221
7	0 to 136

Sources: OIG and EDW.

Objective, Scope, and Methodology

Our objective was to assess the use of supervisor workhours and the span of control at mail processing facilities. To accomplish our objective, we:

- Identified trends in supervisor and craft employee workhours from FYs 2010 – 2012.
- Evaluated span of control based on supervisor and craft employee workhours from FYs 2010 – 2012.
- Evaluated the span of control based on the actual number of supervisor and craft employees for October 2012.
- Performed correlation analyses to determine whether a relationship existed between the percentage of supervisor workhours and plant performance indicators.
- Reviewed plant consolidations to determine whether span of control targets were achieved.

We conducted this review from October 2012 through April 2013 in accordance with the Council of the Inspectors General on Integrity and Efficiency, *Quality Standards for Inspection and Evaluation*. We discussed our conclusions with management on January 28, 2013, and included their comments where appropriate.

To conduct this review, we relied on computer-processed data maintained by Postal Service operational systems, which included WebMCRS, WebCOINS, and the EDW.

We did not test the validity of controls over these systems. However, we verified the accuracy of the data by confirming our analysis and results with Postal Service managers and other data sources. We determined that the data were sufficiently reliable for the purposes of this report.

Prior Audit Coverage

The OIG did not identify any prior audits or reviews related to the objective of this review.

Appendix B: Monetary Impacts

Monetary Impact

Recommendation	Impact Category	Amount
2	Questioned Costs ²³	\$11,955,046

To calculate total questioned costs, we determined the number of questioned workhours by plant group and multiplied this number by the difference between the Executive Administrative Schedule 17 (Salary and Fringe) rate of \$49.82/workhour and the Postal Service (PS)-6 clerk (Salary and Fringe) rate of \$43.24/workhour. The difference between these two rates is \$6.58.

Plant Group	Questioned Workhours	Questioned Costs
1	684,257	\$4,502,412
2	465,937	3,065,864
3	289,136	1,902,514
4	129,654	853,123
5	133,158	876,178
6	78,178	514,409
7	36,557	240,547
Total	1,816,876	\$11,955,046

Sources: OIG and EDW.

²³ A cost the OIG believes is unnecessary, unreasonable, unsupported, or an alleged violation of law, regulation, or contract.

Appendix C: Management's Comments

DAVID E. WILLIAMS
VICE PRESIDENT, NETWORK OPERATIONS



April 1, 2013

JUDITH LEONHARDT
DIRECTOR, AUDIT OPERATIONS (OIG)

SUBJECT: Response-Supervisor Workhours and Span of Control Report
(Project Number 13XG002NO000)

This is a response to your recommendations in the Supervisor Workhours and Span of Control Report.

While there is general agreement on the need to establish appropriate span of control targets, and achieve those span of control targets in order to avoid unnecessary costs, the specific recommendations require additional comment.

Recommendation: Re-evaluate span of control targets and determine the appropriate targets.

Response: Management agrees with the recommendation. Organizational Effectiveness, Processing Operations, and Operations Complement Management (OCM) will re-evaluate span of control targets and consult with the appropriate management associations.

Target Date: March 2014

Responsible Official: Manager, Processing Operations

Recommendation: Fill vacant supervisor positions up to the appropriate span of control level and reduce supervisor replacement workhours accordingly.

Response: Management agrees with this recommendation. Operations Complement Management (OCM) will provide this step during the normal course of the Field Staffing Review process. When the Field Staffing Review process is implemented, regular on-going review of Supervisor, Distribution Operations (SDO) as well as Manager, Distribution Operations (MDO) staffing across all facilities will ensure authorized staffing levels are maintained at correct span of control levels.

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Target Date: October 2013

Responsible Official: Manager, Processing Operations

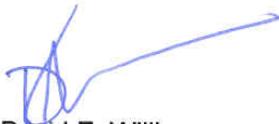
Recommendation: Ensure that span of control targets are achieved during the consolidation process to the fullest extent possible.

Response: Management agrees with this recommendation. OCM will provide particular focus on consolidation facilities to ensure estimated staffing levels at gaining and losing sites are realized to the fullest extent possible.

Target Date: March 2014

Responsible Official: Manager, Processing Operations

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



David E. Williams