



December 9, 2008

TIMOTHY C. HANEY
VICE PRESIDENT, NORTHEAST AREA OPERATIONS

SUBJECT: Audit Report – Vehicle Maintenance Facilities –
Scheduled Maintenance Service in the Northeast Area
(Report Number DR-AR-09-001)

This report presents the results of our self-initiated audit of Vehicle Maintenance Facilities (VMF) – Scheduled Maintenance Service in the Northeast Area (Project Number 08XG009DR000). The overall objectives were to assess whether the Northeast Area accomplished all required scheduled maintenance and whether they integrated both VMFs and local commercial resources for optimum efficiency. See [Appendix A](#) for additional information about this audit.

Conclusion

The Northeast Area completed nearly all the required scheduled preventive maintenance (SPM)¹ during fiscal year (FY) 2007 on their delivery vehicles. However, management could further optimize VMF efficiencies through more effective use of VMF and local commercial resources. The Northeast Area could save an estimated \$14.8 million over 10 years by better optimizing its resources.

Scheduled Maintenance Performance

Northeast Area VMF units and local commercial vendors (LCVs) completed an average of 98 percent of all SPM during FY 2007. Four units completed all of the SPM, while the other four units reviewed completed between 94 and 99 percent of the required SPM. Management stated that some of the SPM were not completed due to the additional maintenance hours used for increased unscheduled maintenance and repair and a staffing shortage in FY 2007.

Without completing all required scheduled maintenance and repairs, Postal Service vehicles are vulnerable to breakdowns, which could adversely impact timely mail delivery and potentially impact the well-being of employees and the public. Since the

¹ An SPM usually includes a preventive maintenance inspection and any repairs needed to maintain the vehicle or meet safety and reliability standards.

Postal Service does not plan to replace its current fleet of long life vehicles (vehicles that are more than 20 years old) until 2018, we believe it is critical that these vehicles receive timely SPM. See [Appendix B](#) for additional information about this issue.

We recommend the Vice President, Northeast Area Operations, direct district managers to:

1. Require vehicle maintenance facility officials to complete all required scheduled maintenance and immediately conduct any missing or past due maintenance.
2. Assess vehicle maintenance technician positions at individual vehicle maintenance facilities to ensure sufficient staff is available for maintenance service.

Optimum Use of Resources

The Northeast Area did not always optimize its resources to ensure management spent maintenance and repair funds in the most efficient and cost effective manner. Specifically, VMF officials often used LCVs for vehicle maintenance and repairs when using VMF resources would have been more efficient and economical. Likewise, VMF officials often used VMF resources when it would have been more efficient and economical to use LCVs. Additionally, VMF officials used maintenance employees to shuttle vehicles between facilities for maintenance and repairs when more economical means existed. See [Appendix C](#) for additional information on the optimum use of resources.

The following factors contributed to these conditions. Although VMF units had a vehicle maintenance plan, the plan did not fully consider:

- The optimal combination of VMF resources and LCVs for performing scheduled maintenance and repairs.
- The cost effectiveness of using LCVs instead of VMF resources to shuttle vehicles between facilities for maintenance and repairs.

As a result, the Northeast Area expended more resources than necessary to complete vehicle maintenance and repairs. By optimizing its resources, the Northeast Area could reduce operating costs by about \$823,203 annually, or approximately \$14.8 million projected over 10 years. See [Appendix D](#) for our detailed analysis of the monetary impact.

We recommend the Vice President, Northeast Area Operations, direct district managers to:

3. Work with vehicle maintenance facility officials to:

- Maintain the most efficient combination of vehicle maintenance facility and commercial resources based on geographical location and costs.
- Make optimal use of the Postal Service's national vehicle shuttle agreement or other local commercial shuttle services, when cost effective, for transporting vehicles to and from maintenance facilities.

Management's Comments

Management agreed with our findings and recommendations. Management will direct all district managers to require VMF officials to immediately develop a plan to complete all scheduled maintenance in arrears and have each district maintain a current preventative maintenance status. In addition, management will continue to use the staffing model developed at the Northeast Area until the Postal Service Headquarters national staff requirements package is complete. Further, management stated district managers and vehicle maintenance managers will review their maintenance operations to determine if there is a more efficient and cost effective combination when using VMF and commercial resources. Also, management stated they are in the process of finalizing a cost comparison for shuttling operations for each VMF in the Northeast Area. For any VMF where it is cost effective, management will require that facility to use contractor services for shuttling vehicles. Finally, management stated they were not in agreement with the identified savings opportunity and methodology of \$14.8 million over 10 years; they calculated the savings opportunity at \$13.6 million over 10 years. See [Appendix G](#) for management's comments, in their entirety.

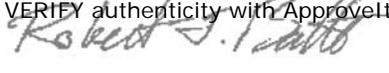
Evaluation of Management's Comments

The U.S. Postal Service Office of Inspector General (OIG) considers management's comments responsive to the recommendations and management's corrective actions should resolve the issues identified in the report. The OIG considers recommendation 3 significant and, therefore, requires OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective actions are completed. This recommendation should not be closed in the follow-up tracking system until the OIG provides written confirmation that the recommendation can be closed.

Management recalculated the savings opportunity at \$13.6 million over 10 years by using the national average of 13.4 hours per vehicle inspection rather than the Northeast Area average of 14.5 hours per inspection. However, the methodology we used to calculate savings was based on the Northeast Area average, which we believe

provides a reasonable estimate because it accounts for the Northeast Area's specific maintenance activities. Therefore, we will report \$14,817,650 of funds put to better use² in our *Semiannual Report to Congress*.

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

E-Signed by Robert Batta 
VERIFY authenticity with ApproveIt


Robert J. Batta
Deputy Assistant Inspector General
for Mission Operations

Attachments

cc: Patrick R. Donahoe
William P. Galligan
Anthony M. Pajunas
Jordan M. Small
Wayne W. Corey
Katherine S. Banks

² Funds that could be used more efficiently by implementing recommended actions.

APPENDIX A: ADDITIONAL INFORMATION

BACKGROUND

The Postal Service invested more than \$3 billion in vehicle assets to transport and deliver the mail. The vehicle inventory consists of 219,522 delivery, transport, and administrative vehicles, of which delivery and collection vehicles (see the examples in Figure 1) account for 195,211 (or about 89 percent) of the total fleet. The Postal Service acquired the majority of these vehicles between 1987 and 1994 and planned to maintain them for 24 years. About 7,700 of these vehicles purchased in 1987 are approaching the end of their useful life. However, the Postal Service recently stated that capital constraints now dictate that many of these vehicles must stay in service until 2018 — 7 years more than the planned lifespan.

Figure 1
Delivery and Collection Vehicles in VMFs for SPM



Source: Postal Service

Management established 190 main and 131 auxiliary VMFs to maintain these assets in a technically reliable, safe, clean, and neat condition for efficient mail transportation. Vehicle maintenance includes selecting and training maintenance technicians; providing garages, tools, and equipment; performing repairs; and monitoring and maintaining preventive maintenance standards. The geographic location of VMFs and auxiliary VMFs varies in each area as needed to support vehicle maintenance and reduce transportation costs. Management established auxiliary VMFs for situations where vehicle maintenance requirements exceed VMF resources or where shuttle time or geographical distances warrant use of an auxiliary VMF.

Area officials are responsible for validating staffing requirements for vehicle related positions and ensuring an adequate scheduled maintenance program. Vehicle maintenance managers have overall responsibility for oversight of all maintenance and repair services performed at VMF units, as well as any work contracted to commercial vendors. Although the VMF manager has overall responsibility for vehicle maintenance, vehicles are usually assigned to Vehicle Post Offices (VPOs). VPOs can be post offices, branches, stations, associated offices, or other delivery and support facilities.

Officials at VPOs can also contract with LCVs for maintenance and repair services, but they are required to document the repairs and obtain the VMF manager’s approval for repairs and services costing more than \$250.

The Postal Service developed Handbook PO-701, *Fleet Management*, to assist operating personnel in maintaining the vehicle fleet in the most economical manner possible. The handbook requires a maintenance plan that provides for regular examination and service of Postal Service-owned vehicles. VMF managers must prepare a vehicle maintenance plan designating where and when each vehicle will receive scheduled maintenance. The handbook also emphasizes that preventive or scheduled maintenance is preferable to reactive or unscheduled maintenance. See [Appendix F](#), “Scheduled Maintenance Process,” for a flowchart.

The Postal Service also established a Model Vehicle Maintenance Facility Performance Review Program. The program is an integral part of VMF operations and a key tool for determining the efficiency of a unit at a given time and identifying areas that need corrective action. Districts must ensure VMFs perform self-reviews quarterly. A VMF must achieve a score of 85 or more to be certified. The area must certify or recertify each unit at least every 3 years.

The Postal Service uses the Vehicle Management Accounting System (VMAS) to code and track costs. VMAS is a computer-based support system designed to collect, process, store, present, and communicate vehicle maintenance data. The table below shows VMF expenses, including commercial vendors’ expenses, for FY 2007.

Table 1. Maintenance Expenditures for FY 2007 by Area

Postal Service Area of Operation	VMF and Commercial Expenditures		
	Commercial Vendor Expenses in FY 2007	VMF Expenses in FY 2007	Total Expenses in FY 2007
Southeast	\$13,867,484	\$52,648,111	\$66,515,595
Great Lakes	15,152,866	46,536,525	61,689,391
Eastern	12,213,149	45,085,152	57,298,301
Northeast	10,382,055	45,808,493	56,190,548
Pacific	9,105,547	42,819,217	51,924,764
Northeast	10,821,346	37,860,317	48,681,663
New York Metro	12,433,942	36,814,803	49,248,745
Southwest	7,194,386	36,503,347	43,697,733
Capital Metro	7,643,667	32,808,458	40,452,125
Total	\$98,814,442	\$376,884,423	\$475,698,865

Source: Postal Service Category Management Center

OBJECTIVES, SCOPE, AND METHODOLOGY

The objectives of this audit were to assess whether the Northeast Area accomplished all required scheduled maintenance and whether they integrated both VMFs and local commercial resources for optimum efficiency.

To accomplish the objectives, we randomly selected and reviewed vehicle service files from eight³ of the 18 VMFs in the Northeast Area. We documented the scheduled maintenance and the amount of SPM required and whether it was conducted in a timely manner, and reviewed work order files to document whether SPM performed was considered actual SPM, based on the time required for maintenance. We reviewed the [REDACTED] to analyze vehicles in “maintenance in arrears” status and compared the number of SPMs completed to actual maintenance records. We also obtained data from Web Complement Information System (WebCOINS) on the number of vehicle maintenance technicians and other data from the Enterprise Data Warehouse (EDW) System.

We obtained a random sample of eight of the Northeast Area’s VMFs from all districts and reviewed FY 2007 VMAS data for scheduled maintenance services for the selected Northeast Area VMFs. See [Appendix E](#) for more information. We identified the number of Preventive Maintenance Inspections (PMI)⁴ to be performed at each auxiliary VMF and the VPOs where the vehicles were located and their distance from the VMFs, and documented the number of vehicle maintenance technicians assigned to each VMF.

We identified each VMF’s and LCV’s expenditures for scheduled maintenance. In discussions with VMF managers and reviews of maintenance records, we documented the amount of SPM and SPM inspections required for each location on a yearly basis. Using the VMAS vehicle work order history, we analyzed the average time to perform an SPM for the eight units reviewed in our sample.

We developed an optimization model that used the above operational data to establish a baseline, standards, key characteristics, shuttle usage, and cost. Using this data, we established an optimum operating efficiency for each VMF. Based on the above analyses, assumptions, and constraints, we estimated the Northeast Area could increase overall VMF efficiency and we projected the cost savings for the Northeast Area’s universe of 18 VMFs. See [Appendix D](#), “Calculation of Cost Savings,” for the model and assumptions we used to compute monetary benefits.

³ We reduced the random sample from ten to eight because we excluded the Buffalo and Fall River VMFs due to their unique geographical challenges and the difficulty in verifying SPMs due to discrepancies in vehicle inventory.

⁴ A PMI is that portion of required scheduled maintenance a vehicle must receive to determine if mechanical and safety systems are functioning properly.

We conducted this performance audit from November 2007 through December 2008 in accordance with generally accepted government auditing standards and included tests of internal controls that 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 objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. We relied on data from VMAS and WebEIS. We did not audit these systems, but performed a limited review of data integrity to support our reliance on the data. We discussed our observations and conclusions with management officials on October 16, 2008, and included their comments where appropriate.

PRIOR AUDIT COVERAGE

The OIG has issued eight reports related to our objectives in the last several years.

Report Title	Report Number	Final Report Date	Report Results
<i>Vehicle Maintenance Facilities – Scheduled Maintenance Service in the New York Metro Area</i>	DR-AR-08-011	September 30, 2008	\$25,287,093
<i>Vehicle Maintenance Facilities – Scheduled Maintenance Service in the Pacific Area</i>	DR-AR-08-010	September 30, 2008	\$21,580,236
<i>Vehicle Maintenance Facilities – Scheduled Maintenance Service in the Great Lakes Area</i>	DR-AR-08-009	September 29, 2008	\$28,224,843
<i>Vehicle Maintenance Facilities – Scheduled Maintenance Service in the Western Area</i>	DR-AR-08-008	September 29, 2008	\$14,251,384
<i>Vehicle Maintenance Facilities – Scheduled Maintenance Service in the Southeast Area</i>	DR-AR-08-007	September 16, 2008	\$27,620,773
<i>Vehicle Maintenance Facilities – Scheduled Maintenance Service in the Southwest Area</i>	DR-AR-08-006	August 14, 2008	\$34,522,159
<i>Maintenance and Repair Payments to Commercial Vendors</i>	DR-MA-07-005	September 21, 2007	\$1,571,517

<i>Using Postal Service Form 8230, Authorization for Payment</i>			
<i>Management of Delivery Vehicle Utilization</i>	DR-AR-06-005	June 14, 2006	\$22,796,487

The previous 2008 audits, like this one of the Northeast Area, are part of a series of audits on this topic. Similar to these prior audits, the Northeast Area did not complete SPM on all vehicles and did not always integrate both VMF and LCV resources for optimum efficiency. Management agreed with our findings and recommendations and generally agreed with the monetary impact on our prior reports.

The 2007 audit concluded that using Postal Service (PS) Form 8230, Authorization for Payment, to pay commercial vendors for maintenance and repair services was not cost effective and did not include controls to reconcile payments and ensure repair costs were reasonable. Management agreed with our findings, recommendations, and monetary impact.

The 2006 audit concluded that Postal Service officials made significant strides in reducing costs associated with delivery vehicle expenditures over the previous 3 years. However, delivery management officials could further improve the use of vehicles that support delivery operations. Management agreed with our findings, recommendations, and monetary impact.

APPENDIX B: SCHEDULED MAINTENANCE PERFORMANCE

The Northeast Area completed 98 percent of their required SPM during FY 2007. Four units completed all of their SPM, while the other four units we reviewed completed between 94 and 99 percent of the required SPM. See Table 2.

Table 2. Scheduled Preventive Maintenance Performed in FY 2007

VMF Location	Required in FY 2007	Performed	Percentage Performed ⁵
██████████	1,610	1,610	100
██████████	3,083	3,007	97
██████████	2,114	2,100	99
██████████	2,361	2,214	94
██████████	1,191	1,191	100
██████████	1,573	1,523	96
██████████	1,608	1,607	100
██████████	1,236	1,231	100
██████████	Not Verified	Not Verified	N/A
██████████	Not Verified	Not Verified	N/A
Total/Average	14,776	14,483	98%

Source: VMAS and OIG optimization model

Extensive Unscheduled Maintenance and Repair. Management attributed past due SPM to the additional maintenance hours used to repair rust and corrosion damage to the frames and chassis of approximately 179 vehicles. Winter weather conditions in the Northeast Area caused the damage to these vehicles. The Northeast Area performed the frame and chassis repairs on the vehicles concurrently with the SPM. As a result, the additional repairs used maintenance hours that would have gone toward performing the remaining SPM in FY 2007.

Staffing Shortage. VMF officials stated they did not complete all required SPM due to a shortage of 13 vehicle maintenance technicians during FY 2007. Officials indicated they based their staffing requirements on a study a headquarters task force completed several years ago. Based on the results of this study, management allocated each VMF a number of maintenance technician positions per facility. VMF officials used this data because headquarters had not established a formal staffing policy for VMF maintenance technician positions. While WebCOINS showed the Northeast Area with the 13 full-time maintenance technician vacancies, our optimization model analysis does not support additional full-time maintenance technicians for these VMFs if the units performed at an optimal level.

⁵ Percentage of required SPMs performed was rounded.

In fact, our analysis showed a decrease of three maintenance technicians was necessary. See Table 3.

**Table 3. Estimated VMF Staffing Increase/Reduction Needs
Based on OIG Optimization Model**

VMF Location	Currently Assigned Vehicles	Technicians Assigned	Staff Increase (Reduction) per OIG Optimization Model
██████████	753	13	0
██████████	1438	30	-1
██████████	998	17	0
██████████	1022	20	0
██████████	597	13	0
██████████	714	15	0
██████████	704	13	0
██████████	753	13	-2
Total	6,979	134	-3

Tracking and Monitoring. The maintenance process tracks the status of vehicles in arrears⁶ rather than the SPM performed. Vehicles in arrears indicate vehicles with incomplete scheduled maintenance; however, any adjustment to the SPM schedule has the impact of removing all vehicles in arrears from VMAS. Although we determined the sampled VMFs⁷ performed the majority of their SPM, the process of verifying this proved difficult.⁸ We attributed this to the way scheduled maintenance was tracked for VMFs nationwide.

Without completing all required scheduled maintenance and repairs, Postal Service vehicles are vulnerable to breakdowns, which may create mail delays and service problems. Further, by performing the required SPM, the number of vehicle accidents could decrease, thereby lowering costs and increasing the well-being of employees and the public. Since the Postal Service does not plan to begin replacing its current fleet of long life vehicles (vehicles that are more than 20 years old) until 2018, we believe it is critical that these vehicles receive the required maintenance.

⁶ The “vehicles in arrears” status is a performance measure for VMFs.

⁷ We excluded two VMFs (██████████) from our sample due to the difficulty and time involved in verifying the number of SPMs performed because of discrepancies of vehicle inventory.

⁸ The issue of more easily tracking and monitoring scheduled maintenances requires action by Postal Service Headquarters and we will address it in a national capping report for scheduled maintenance.

APPENDIX C: OPTIMUM USE OF RESOURCES

The Northeast Area did not always optimize its resources to ensure it expended maintenance and repair funds in the most efficient and cost effective manner. Specifically, maintenance officials sometimes used LCVs for vehicle maintenance and repairs when using VMF resources would have been more efficient and economical. Likewise, management sometimes used VMF resources when it would have been more efficient and economical to use LCVs. Additionally, VMF officials used maintenance employees to shuttle vehicles from the VPO to the VMF when means that are more economical existed.

Several factors contributed to these conditions.

- o Optimum use of VMF and Local Commercial Resources. The vehicle maintenance plan did not consider an optimum combination of both VMF and commercial resources.⁹ Generally, it is more cost effective¹⁰ for the VMF to perform SPM on vehicles stationed within 50 miles of the VPO. However, we concluded a local commercial vendor should perform SPM on vehicles when the VPO is more than 50 miles from the nearest VMF. We determined that 1,755 SPMs should have been performed at the other site-either the VMF or the commercial facility. See Table 4.

Table 4. VMF and Local Commercial Vendor Resources

VMF Location	FY 2007 SPMs Performed by		Total SPMs Performed	Sites SPMs Were Performed		Total SPMs That Could Have Been More Optimally Performed by Either VMF or Local Vendors
	VMF	Local Vendors		VMF	Local Vendors	
Brockton	1,610	0	1,610	0	17	17
Hartford	3,083	0	3,007	0	64	64
Manchester	1,926	174	2,100	11	401	412
New Haven	2,214	0	2,214	0	431	431
Portland	1,132	59	1,191	0	337	337
Stamford	1,523	0	1,523	0	120	120
Waterbury	1,561	46	1,607	10	226	236
Worcester	1,045	186	1,231	66	72	138
Total	14,094	465	14,483	87	1,668	1,755

Source: VMAS data and OIG optimization model

⁹ VMAS does not track the number of SPMs accomplished. The OIG's efficiency and optimization model estimated the number completed by analyzing all work orders assigned to code 22 (scheduled maintenance) and, with some adjustment, considered all work of at least 2 hours as an SPM.

¹⁰ We base cost effectiveness on the overhead costs to transport vehicles between the VMF and the VPO using vehicle maintenance technicians or other VMF personnel.

- Vehicle Shuttling. In most cases, we found the Postal Service’s national vehicle shuttle agreement or local commercial shuttling services were more cost effective than using VMF maintenance technicians. The Northeast Area used about 13,083 workhours for vehicle maintenance technicians to shuttle vehicles rather than perform maintenance. The shuttle workhours related to SPM were equal to seven vehicle maintenance technician positions at a cost of \$563,092.¹¹ See Table 5.

Table 5. Vehicle Maintenance Technician Hours Used for Shuttling

VMF Location	Number of Vehicle Maintenance Technicians Assigned	Estimated Scheduled Maintenance Hours Available	Total Shuttle Hours Used in FY 2007	Percentage of Direct Maintenance Hours Used for Shuttling	Shuttle Hours Used for Scheduled Maintenance	Equivalent Maintenance Technician Positions	Cost of Shuttle Hours Used by Maintenance Technicians
Brockton	13	18,242	0	0	0	0	\$0
Hartford	30	42,096	5,180	12	3,768	2.15	\$162,175
Manchester	17	23,854	1,797	8	1,021	0.58	\$43,944
New Haven	20	28,064	4,814	17	3,711	2.12	\$159,721
Portland	13	15,435	889	6	455	0.26	\$19,583
Stamford	15	21,048	1,972	9	1,784	1.02	\$76,783
Waterbury	13	18,242	2,876	16	2,337	1.33	\$100,584
Worcester	13	18,242	10	0	7	0	\$301
Totals/Percent	134	185,222	17,538	9	13,083	7	\$563,092

Source: VMAS and OIG optimization model

We found the Northeast Area VMF Managers and the Vehicle Management Program Analyst to be proactive in managing vehicle maintenance and receptive to the intent of our audit and recommendations. Management officials did express concern that:

- VMFs may not always find cost effective shuttle alternatives. They also raised the possibility of union concerns with using contractors instead of VMF personnel.
- The quality of maintenance that LCVs perform is often not at the same level as that of the VMFs and they do not have staff and time to monitor LCVs’ work.
- The new policies restricting the ability to fill existing vacancies caused by attrition and a reduction or elimination of overtime could compromise the VMFs’ ability to capture cost savings.
- The use of additional maintenance workhours to repair extensive rust and corrosion damage was due to the winter weather conditions of an aging fleet.

¹¹ This estimate of equivalent technician positions applies only to the hours used for shuttling. It does not relate to any actual reductions in this report.

The OIG acknowledges the issues and concerns management raised and the challenges the Postal Service faces regarding VMF operations. Notwithstanding these concerns and challenges, in our opinion, opportunities exist to become more efficient and save money. Specifically, the Northeast Area could lower overall VMF operating costs by an average of \$823,203 annually. These efficiencies, when projected for the 18 VMFs in the Northeast Area, could save an estimated \$14 million over a 10-year period. See [Appendix D](#) for more information.

APPENDIX D: OIG CALCULATION OF COST SAVINGS

The OIG identified \$14,817,650 in funds put to better use over the next 10 years for the Northeast Area’s 18 VMFs.¹²

Savings in Dollars

VMF Location	Average Annual Savings	Estimated Savings Over 10 Years
Brockton	\$83,558	\$835,578
Hartford	126,279	1,262,789
Manchester	237,410	2,374,099
New Haven	59,164	591,644
Portland	231,971	2,319,714
Stamford	55,275	552,751
Waterbury	12,583	125,825
Worcester	16,963	169,628
Totals	\$823,203	\$8,232,028
Projected Potential Savings Over 18 VMFs in Northeast Area		\$14,817,650

Source: OIG optimization model

We calculated the savings based on the following methodology and assumptions:

- Each VMF has a list of VPOs for which it is responsible for vehicle maintenance. Each VPO has a number of Postal Service vehicles that require regular SPM. The amount of SPM that a vehicle requires is determined at the beginning of the year based on the demands the assigned route places on the vehicle. VMFs must perform all SPM for a given year on each vehicle; however, the VMF may delegate some of this workload to commercial vendors that are near the VPOs. We refer to this contract labor as LCVs.
- The purpose of this audit was to determine the optimal use of the SPM to be performed by the VMFs and LCVs. We took into consideration the mechanics’ labor costs and all relevant shuttling costs. As with the SPMs, VMFs may contract out shuttling. The Postal Service has a national vehicle shuttle agreement and the OIG used that rate in the analysis. However, VMFs can use a less expensive local shuttle contractor if it can identify one.

¹² At a 95 percent confidence level, the OIG estimates the 10-year savings amount to range between \$8.5 and \$28.5 million. We used the midpoint estimate of \$14.8 million in our statistical projection.

- We developed the optimization model to find a least-cost solution based on performing all required SPM. We used the VMFs' FY 2007 operational data. We considered any SPM not currently performed by VMFs to be completed by LCVs.¹³ We restricted the scope of this audit to maintenance technicians' time spent performing scheduled maintenance and shuttling activities. This analysis draws no conclusions regarding the time dedicated to other activities, or how maintenance technicians used the remainder of their time.
- We optimized the VMFs' scheduled maintenance and shuttling time for the next 10 years, assuming the Postal Service would reduce the labor contingent by 4.5 percent per year, the historical Northeast Area attrition rate.¹⁴ This optimization gives the least-cost solution and specifies how the SPM at each VPO should be distributed between the VMFs and the LCVs. The model shows which shuttling jobs both the VMFs and the contractors should perform. The model analyzes all costs and hours (for SPM at VMFs, SPM at LCVs, VMF shuttling, and contract shuttling). The model also compares total SPM currently performed by the VMFs and local vendors to the total amount that could be more optimally performed by VMFs or LCVs.
- In these optimizations, we assumed that each VMF would operate at a standard efficiency. We used the sampled eight VMFs' average time per SPM as a standard for the time it takes to complete an SPM in that area. If a particular VMF performed better than this standard, we assumed the VMF maintained its current efficiency.
- VMAS does not track the number of SPMs accomplished for each vehicle. The OIG's efficiency and optimization model estimated the number of SPMs completed by analyzing all work orders assigned to code 22 (scheduled maintenance) and with adjustments (i.e., new vehicles and commercial repairs) considered all work lasting at least 2 hours¹⁵ as an SPM. We explained the process to the VMF manager and then confirmed/adjusted the number of SPMs required and completed.

¹³ We obtained the current number of SPMs performed by VMFs and LCVs from VMAS databases located at the VMFs and [REDACTED]. Because a VMF may not perform all its required SPMs, we assumed LCVs would perform the remaining SPMs. In addition, in some cases, a VMF performed more SPMs than required at a VPO. We credited the VMFs with these additional SPMs and determined a comparable solution by reassigning these SPMs to the closest location with a shortfall. We accomplished this in part by assuming that the baseline case kept the scheduled maintenance hours and shuttling hours constant at current levels.

¹⁴ The historical attrition rate for Northeast Area maintenance technicians was determined by averaging the past 7 years' (2001-2007) worth of data obtained from the [REDACTED].

¹⁵ We used 2 hours because of the Postal Service's requirement for a "Type A" and "Type B" maintenance inspection prior to any repair work. These inspections require between 1.5 and 2.5 hours.

- We identified cost savings if the VMF was not efficiently using its shuttling time. We compared the VMF's total shuttling time to the aggregate time that should be needed to perform all of the VMFs' shuttling, assuming that two vehicles were transported on each trip. The cost of any excess time was time the VMFs could have saved, although the actual amount of time that could be saved was likely to be higher because the VMFs probably did not perform all of their own shuttling.
- For our model, we reviewed the minimum and maximum overtime hours per week from what the VMFs used during the first 6 months of FY 2008 determined from the EDW system. The number of hours of straight time each mechanic worked per year is 1,754.¹⁶
- Based on the above analyses and projections, we estimated the Northeast Area could reduce costs by using local commercial resources for shuttling and SPM when appropriate. We projected over the Northeast Area's universe of 18 VMFs, a reduction of costs by approximately \$823,203 annually, or more than \$14 million over a 10-year period. These savings include any reduction in the number of vehicle maintenance technician positions through attrition over time.

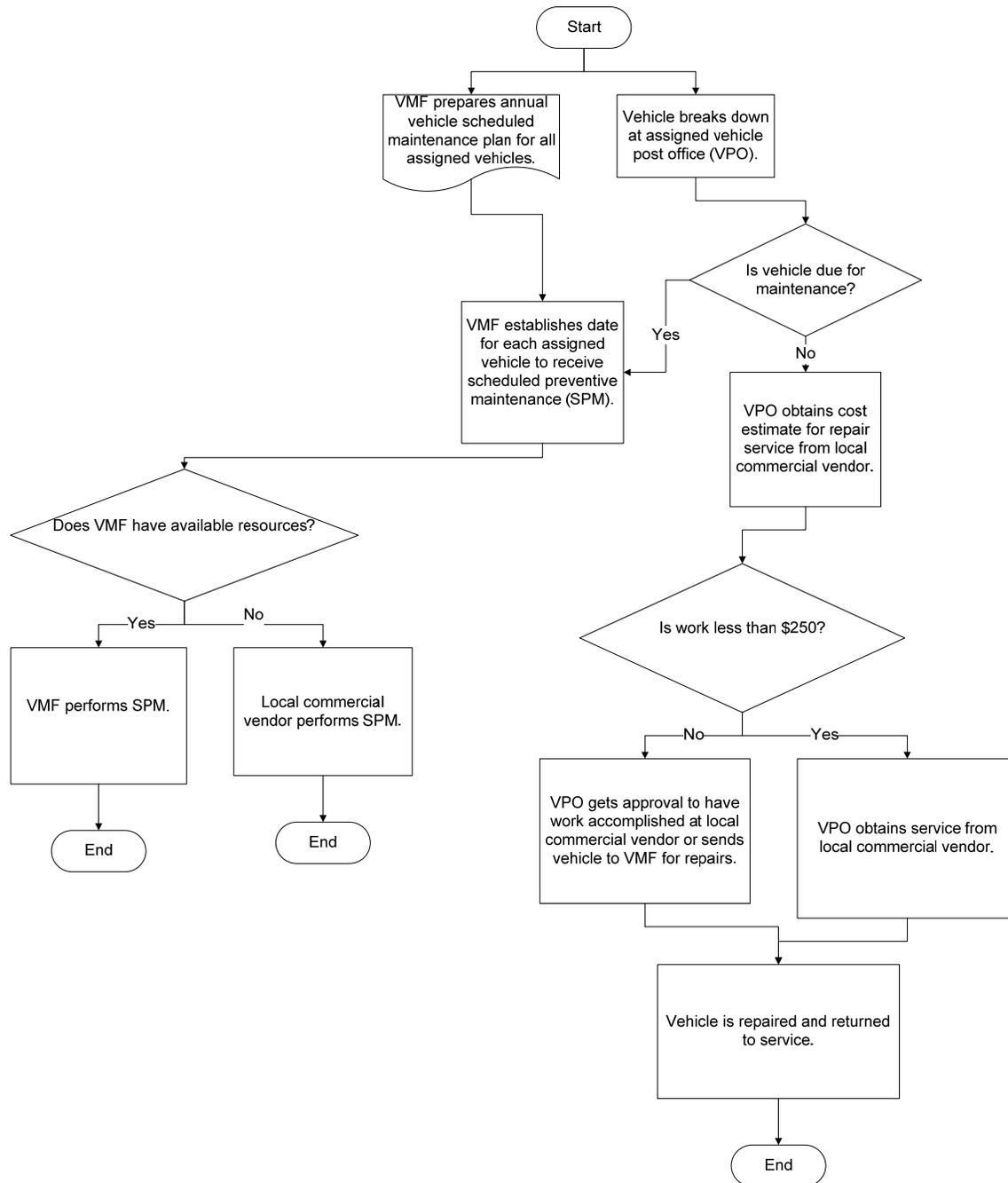
¹⁶ Source: Finance Memorandum dated March 6, 2006, "Workhour Rates for Fiscal Years 2005-2007."

**APPENDIX E: SELECTED DISTRICTS AND
VEHICLE MAINTENANCE FACILITIES**

District	VMF
Connecticut	Hartford
	New Haven
	Stamford
	Waterbury
Maine	Portland
Massachusetts	Worcester
New Hampshire/Vermont	Manchester
Southeast New England	Brockton

Source: OIG Experts Sample

APPENDIX F: SCHEDULED MAINTENANCE PROCESS¹⁷



¹⁷Source: Postal Service Handbook PO-701, *Fleet Management*, March 1991.

APPENDIX G: MANAGEMENT'S COMMENTS

TIMOTHY C. HANEY
VICE PRESIDENT, AREA OPERATIONS
NORTHEAST AREA



November 18, 2008

MEMORANDUM FOR LUCINE M. WILLIS, DIRECTOR AUDIT OPERATIONS

SUBJECT: Draft Audit Report – Vehicle Maintenance Facilities –
Scheduled Maintenance Service (Report Number DR-AR-08-DRAFT)

We have reviewed the above referenced document, including the three recommendations, to ensure compliance and completion of all scheduled maintenance, assess vehicle maintenance staffing, and work with the vehicle maintenance facility managers to maintain efficiency and optimize the national shuttle agreement. The Northeast Area is in agreement with these recommendations. However, we are not in agreement with the identified savings opportunity and methodology which was represented at \$14.8 million over 10 years.

Per vehicle inspection time, the Northeast Area is lower than the national average which, in this case, puts the Northeast Area in jeopardy for its efficiency. The national average should be used and standardized to provide a realistic conclusion. The Northeast Area produces at 13.4 hours per inspection; the national average is 14.5 per inspection. When adjusting the Northeast Area to the national average, the saving is \$13.6 million over 10 years.

Recommendation 1

Require vehicle maintenance facility officials to complete all required scheduled maintenance and immediately conduct any missing or past due maintenance.

Response:

Northeast Area concurs that maintaining a current status of all scheduled vehicle maintenance preserves USPS assets, reduces costs, and increases employee safety. The Northeast Area ranks as the best in the country in scheduled maintenance indicators and has the fewest services in arrears. (Reference 98 per cent completion in FY 07, despite being understaffed by 13 mechanic positions.)

6 GRIFFIN ROAD NORTH
WINDSOR, CT 06006-7010
860-285-7040
FAX 860-285-1253

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Action:

The Vice President, Northeast Area, will direct all District Managers to require VMF officials to immediately develop a plan for completion of all scheduled maintenances in arrears, including how they plan to maintain a current preventative maintenance status.

These plans will be submitted to the Northeast Area VMPA for approval and tracking.

Recommendation 2

Assess vehicle maintenance technician positions at individual vehicle maintenance facilities to ensure sufficient staff is available for maintenance service.

Response:

The Northeast Area developed and implemented a staffing model in FY08 (this review was based on FY07) and currently uses this model to staff the Vehicle Maintenance Facilities in the Northeast Area. The HRMB at the Northeast Area carefully reviews all request for hire and ensures that the districts review the opportunity for local service agreements and other commercial resources.

Action:

We will continue to use the model developed at the Northeast Area. HQ is currently in the process of piloting a national staffing requirements package and, once completed, the Northeast Area will implement.

Recommendation 3

Work with vehicle maintenance facility officials to:

- Maintain the most efficient combination of vehicle maintenance facility and commercial resources based on geographical location and costs.
- The cost effectiveness of using LCVs instead of VMF resource to shuttle vehicles between facilities for maintenance and repairs.

Response:

The Northeast Area agrees that the VMFs need to determine the best use of postal vehicle maintenance technicians and quality contractor service to maintain the fleet in a current scheduled maintenance status. District Managers and Vehicle Maintenance Managers will review their maintenance operations to determine if there is a more efficient and cost effective combination. Local VMF managers, with knowledge of their geographic areas and past experience with contractors, have the latitude to determine whether a vehicle should be serviced at the VMF or with a contractor.

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The Northeast Area agrees to explore the feasibility of using the national vehicle shuttle contract or other local commercial shuttle services based on availability, cost, local resources, and Article 32 considerations of the National Agreement.

Action:

The Northeast has begun and will finalize a cost comparison for shuttling operations for each VMF in the Northeast Area. In any vehicle maintenance facility, where it is cost effective, we will require that facility to use contractor services for shuttling of vehicles. (samples attached)


Timothy C. Haney

Attachment

RURAL ROUTE REPORTING SYSTEM
Facility: NORTHEAST AREA

Clusters	EOY FY 08	DACA F QWL-EI
ALBANY	/20/2008	6,602.26
CONNECTICUT	/20/2008	4,519.89
MAINE	/20/2008	4,412.17
MASSACHUSETTS	/20/2008	6,373.43
NEW HAMPSHIRE	/20/2008	3,650.44
SE NEW ENGLAND	/20/2008	3,133.42
WESTERN NEW YORK	/20/2008	3,835.17
Total		32,526.78

Vehicle Maintenance Facilities – Scheduled
Maintenance Service in the Northeast Area

DR-AR-09-001

	13.4	14.5	15	15.5	16	16.5	17	17.5
Per Inspection	0.9241379	0.8933333	0.8645101	0.8375	0.8121212	0.7882353	0.7657143	
	835,478	772,097	748,360	722,284	699,713	678,509	658,553	639,737
	1,262,789	1,166,991	1,126,092	1,091,701	1,057,586	1,025,538	995,375	966,936
	2,374,099	2,193,995	2,120,862	2,052,447	1,988,308	1,928,066	1,871,349	1,817,882
	591,644	546,761	526,535	511,488	495,502	480,487	466,355	453,030
	2,319,714	2,143,736	2,072,278	2,005,430	1,942,760	1,883,899	1,828,480	1,776,238
	552,751	510,818	493,791	477,862	462,929	448,901	435,898	423,249
	125,825	116,290	112,404	108,778	105,378	102,185	99,180	96,346
	169,628	158,760	151,534	148,646	142,063	137,758	133,707	129,887
Total 8 VMFs	8,231,928	7,607,437	7,353,856	7,116,635	6,894,240	6,685,323	6,488,696	6,303,305
All 18 NEA VMFs	14,817,650	13,693,552	13,237,101	12,810,087	12,409,762	12,033,728	11,679,795	11,346,086