

Audit Report

Department of Public Works, Bureau of Highways

Snow Removal Contractor Operations



Office of the County Auditor
Baltimore County, Maryland
August 2013



BALTIMORE COUNTY, MARYLAND
OFFICE OF THE COUNTY AUDITOR

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August 9, 2013

Honorable Members of the County Council
Honorable Kevin Kamenetz, County Executive
Baltimore County, Maryland

We have audited the procedures and controls over the Department of Public Works, Bureau of Highways' snow removal contractor operations for the 2009-2010 snow season (i.e., November 1, 2009 through April 30, 2010). We selected the 2009-2010 snow season for review due to the intensity of snow events that occurred then.

During the 2009-2010 snow season, there were a total of 10 snow events costing approximately \$20.8 million. The Bureau engaged its on-call snow removal contractors for 9 of the events and, as a result of back-to-back blizzard-like snow events, engaged "emergency" contractors for 3 of these events. Payments to the 30 on-call and 90 emergency contractors totaled \$5.6 million and \$4.2 million, respectively.

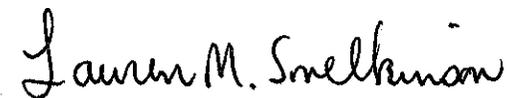
Our audit disclosed that the Bureau's documentation was inadequate to substantiate payments to on-call snow removal contractors totaling \$1.3 million, and that the Bureau did not maintain a record of its negotiated terms with the emergency snow removal contractors as required. Our audit also disclosed that certain retainer payments to on-call contractors for successful participation in the snow events were inadequately substantiated or improperly approved. Our audit further disclosed inadequate written policies and procedures for the oversight of County rock salt, the repair of contractors' trucks and equipment, the provision of County fuel to contractors, and the administration of snow removal agreements at the various highway shops.

A response to our audit is included as Appendix A to this report.

We wish to express our appreciation to the Department of Public Works, Bureau of Highways for the cooperation and assistance extended to us during our audit.

Our audit reports and responses thereto are available to the public and may be obtained on-line at "www.baltimorecountymd.gov/agencies/auditor" or by contacting the Office of the County Auditor, 400 Washington Avenue, Towson, Maryland 21204.

Respectfully submitted,

A handwritten signature in cursive script that reads "Lauren M. Smelkinson".

Lauren M. Smelkinson, CPA
County Auditor

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Background

The Department of Public Works, Bureau of Highways (the "Bureau") is responsible for maintaining the County's roadways. As part of this responsibility, the Bureau is responsible for ensuring that the County's 2,600 miles of road are clear of snow and ice and passable within a reasonable timeframe. The Bureau utilizes County (Department of Public Works, Bureaus of Highways and Utilities; and Department of Recreation and Parks) and Baltimore County Public Schools (BCPS) resources (staff, trucks, equipment, and fuel) and engages contractors as needed (e.g., for snow events with anticipated snow accumulations exceeding 4 inches) to perform snow removal and de-icing services.

During the 2009-2010 snow season (November 1 – April 30), there were a total of 10 snow events costing approximately \$20.8 million, including 9 events in which the County engaged its on-call contractors to perform snow removal services. As a result of back-to-back blizzard-like snow events, the County also engaged "emergency" contractors for 3 of the 9 events. Payments to the 30 on-call and 90 emergency contractors totaled \$5.6 million and \$4.2 million, respectively.

The Bureau maintains 11 highway shops throughout the County. Six highway shop superintendents are responsible for overseeing the Bureau's snow removal operations, including managing the snow removal contractors.

On-Call Snow Removal Contractors

Each on-call snow removal contractor's scope of work, including the number and types/sizes of trucks and equipment to be provided, and hourly compensation rates are contractually established. Under the contracts, upon request by the Bureau, each contractor is to report for duty and bring all contracted trucks and/or equipment (usually requested only for severe snow events) to its assigned highway shop(s). (A contractor's fleet could be assigned to multiple highway shops.) Hourly compensation rates vary by type/size of truck and equipment and cover the service being provided, including the manpower and fuel to operate the truck/equipment. On-call contractors are to be paid based on the actual hours the truck or equipment is in service, plus allowable travel time (at the contracted hourly compensation rate for the truck/equipment) between the contractor's base location and the assigned County highway shop. Additionally, each contract provides for a \$500 retainer payment for successful participation in all snow events throughout the snow season. The appropriate highway shop superintendent(s) is (are) responsible for approving payments to the on-call contractors. The County is to provide all rock salt for spreading on road surfaces.

Emergency Snow Removal Contractors

Due to back-to-back blizzard-like snow events, the 2009-2010 snow season was the first since the 2002-2003 snow season for which the Bureau engaged contractors on an emergency basis. The Assistant Bureau Chief negotiates each emergency snow removal contractor's terms, including the scope of work (e.g., number and types/sizes of trucks and equipment) and the hourly compensation rates. The negotiated hourly compensation rates are generally comparable to those of the on-call contractors (for similar sized trucks and equipment) or are specialized as necessary (for trucks and/or equipment not previously contracted) and cover the service being provided, including the manpower and fuel to operate the truck/equipment. Emergency contractors are to be paid based on the actual hours the truck or equipment is in service, plus allowable travel time (at the contracted hourly compensation rate for the truck/equipment) between the contractor's base location and the assigned County highway shop or a mobilization charge (typically for out-of-state contractors). The Bureau generally applies to the emergency engagements its operational policies and procedures for on-call contractors (e.g., truck/equipment operators sign in for and out from duty on logs, utilize County rock salt, etc.), except that the emergency contractors are not eligible for the \$500 retainer. The Assistant Bureau Chief or the appropriate highway shop superintendent(s) is (are) responsible for approving payments to the emergency contractors.

Findings and Recommendations

1. **The Bureau's documentation was inadequate to substantiate payments to on-call snow removal contractors totaling \$1.3 million.**

Each on-call snow removal contractor's scope of work, including the number and types/sizes of trucks and equipment to be provided, and hourly compensation rates are contractually established. The contract requires the contractor to submit an invoice for payment reflecting the services performed. The contract also states that each truck/equipment operator must sign in for and out from duty on a log maintained at the assigned County highway shop. The Bureau's procedures require the appropriate highway shop superintendent(s) to approve the contractor-submitted invoice(s) for payment based on the completed contractor sign in/out log(s) (verifying dates and hours worked, including start/end dates and times, and number and types/sizes of trucks/equipment provided) and to sign the invoice(s) to provide evidence of such review and approval for payment. The Bureau's procedures also require an account clerk to periodically verify the hourly compensation rates on the approved invoice(s) to the contract for accuracy prior to submitting the invoice(s) to the Office of Budget and Finance for payment.

However, our review of 31 invoices and the Bureau's related contractor sign in/out logs to support payments totaling \$1.3 million disclosed that none of the payments were supported by adequate documentation. Specifically, our review disclosed that each invoice and/or the related sign in/out log(s) lacked sufficient detail to identify all contractor services provided and to enable verification that the appropriate hourly compensation rate(s) was (were) billed. For example: some invoices and/or logs lacked any description of services provided; some service descriptions were inadequate (did not specify the truck type/size or the hours worked); and some logs were not maintained.

Our review also disclosed that 6 of the 31 invoices, totaling \$268,740, lacked at least one authorizing signature to evidence the appropriate highway shop superintendent's review and approval for payment. Our review further disclosed no evidence that the Bureau had verified the accuracy of the hourly compensation rates on the 31 invoices.

Additionally, we noted that the Bureau's procedures did not require the verification for accuracy of all hourly compensation rates on all contractor invoices or a recalculation of the invoiced charges, prior to payment, to ensure the proper amounts were paid.

Without adequate documentation of the contractors' services provided and evidence of the Bureau's review and approval of contractor-submitted invoices, payments to on-call snow removal contractors totaling \$1.3 million were unsubstantiated. Without adequate review and approval of all hourly compensation rates on all contractor invoices (including

a recalculation of the invoiced charges), there was a lack of assurance of the propriety and accuracy of payments totaling \$5.6 million made to on-call snow removal contractors.

We recommend that the Bureau ensure that both the sign in/out logs and contractor-submitted invoices contain sufficient detail (i.e., dates and hours worked, including start/end dates and times, and type/size of each truck and equipment) to support the payments for such services. In this regard, the Bureau's logs should be sufficient to enable the contractor to document the detail of services provided, and the Bureau should require the contractor to submit invoices that adequately identify the services provided in order to receive payment. Additionally, we recommend that the Bureau comply with its established procedure requiring the appropriate highway shop superintendent(s) to sign each invoice to provide evidence that it has been reviewed and approved for payment. Finally, we recommend that the Bureau verify that each hourly compensation rate on each invoice matches the contracted rate, recalculate the invoiced charges to ensure accuracy, and require the appropriate personnel to sign the invoice to provide evidence of such review.

- 2. The Bureau did not maintain record of its negotiated terms with emergency snow removal contractors in accordance with the County's records retention policy for vendor correspondence.**

Due to back-to-back blizzard-like snow events during the 2009-2010 snow season, the Bureau engaged 90 contractors on an emergency basis. The Bureau advised that it verbally negotiated the contract terms (i.e., number and type/size of each truck and equipment and the hourly compensation rates) with each emergency snow removal contractor, informally documented (e.g., handwritten notes) the negotiated terms, and maintained this documentation for approximately 3 to 6 months.

In this regard, our audit disclosed that the Bureau did not maintain the negotiated terms in compliance with the County's 2-year records retention policy for vendor correspondence. Consequently, the Bureau lacked the supporting documentation necessary to substantiate payments totaling \$4.2 million made to emergency snow removal contractors.

We recommend that the Bureau comply with the County's records retention policy for vendor correspondence by maintaining adequate documentation of the negotiated terms of each emergency contract, including the number and type/size of each truck and equipment and the hourly compensation rates, for the required 2-year period.

3. Retainer payments totaling \$27,500 were not adequately substantiated. Additionally, retainer payments totaling \$10,000 were approved for ineligible trucks and equipment, and retainer payments totaling \$10,000 were not properly approved.

Each on-call snow removal contractor's scope of work, including the number and types of trucks and equipment, and hourly compensation rates are contractually established. Each contract provides that the contractor is eligible to receive a \$500 incentive (i.e., retainer) if the contractor is "available and present during all snow events throughout...the snow season." The Bureau's policy is to grant a \$500-per-truck retainer for each on-call contractor truck that completes its contracted duties and performs services at a satisfactory level. The Bureau does not grant the retainer for contracted equipment.

The Bureau's procedures require the appropriate highway shop superintendent(s) to approve the contractor-submitted retainer invoice(s) for payment based on the completed contractor sign in/out logs (verifying that each contracted truck was present for and completed each snow event during the snow season) and the Bureau's internal tracking reports (verifying that each contracted truck provided satisfactory services for each snow event during the snow season). The Bureau's procedures also require the superintendent(s) to sign the invoice(s) to provide evidence of such review and approval for payment. During the 2009-2010 snow season, the Bureau approved retainer payments totaling \$57,000 to 23 of the 30 on-call snow removal contractors.

However, our audit disclosed that the Bureau's retainer payment policy was not documented, was not accurately and consistently reflected in the contracts in effect, and was not consistently implemented by the highway shop superintendents. For example, the Bureau advised that retainer payments for 4 of the 6 highway shops were based solely on performance documented in the Bureau's internal tracking reports rather than being based on both performance and the substantiation of each truck's completion of each snow event throughout the snow season. We noted that retainer payments for these 4 highway shops totaled \$27,500.

Our audit further disclosed that the Bureau improperly approved retainer payments, as follows:

- \$4,500 to 4 on-call contractors for 9 trucks that were not present for all snow events and \$500 to another contractor for a piece of equipment;
- \$5,000 to 6 on-call contractors for 10 trucks that were not reflected in the on-call contracts; and

- \$10,000 for an on-call contractor that had serviced multiple (4) shops, although the invoice, which totaled \$13,000, did not evidence three of the four shop superintendents' approvals for payment of the invoiced charges.

We recommend that the Bureau ensure that its retainer policy is documented and is reflected accurately and consistently in all snow removal contracts. We further recommend that the Bureau comply with its policy and procedures for approving payment of the \$500 retainer.

4. Procedures were inadequate for safeguarding County rock salt provided to snow removal contractors.

Effective internal control requires assets to be protected against the risk of loss, theft, or misuse. However, our audit disclosed that the Bureau's procedures did not adequately safeguard rock salt provided to snow removal contractors against loss, theft, or misuse. During the 2009-2010 snow season, the County provided a total of 94,477 tons of rock salt valued at \$5.4 million to contractors and County road crews.

The County provides rock salt to snow removal contractors for de-icing and salt application services. Contractors report to County highway shops to obtain salt and are required to return any remaining salt at the end of each work shift. Our audit disclosed that, although the Bureau's procedures require its highway shop personnel to verify that each snow removal contractor truck returns any remaining salt at the end of its work shift, the procedures do not require the verification to be documented.

Our review also disclosed that the Bureau does not proactively monitor salt usage data by contractor truck to detect potential instances of salt usage above ordinary levels.

As a result, there is a lack of assurance that salt provided to snow removal contractors is protected against the risk of loss, theft, or misuse.

To safeguard County rock salt against loss, theft, or misuse, we recommend that the Bureau require its personnel to document the verification of returned rock salt from snow removal contractors. Such documentation could be included on the highway shops' contractor logs in conjunction with the contractors' sign out. We also recommend that the Bureau proactively monitor salt usage to identify and resolve any questionable salt usage activity.

5. The Bureau had not established written policies and procedures for the repair of snow removal contractors' trucks and equipment or for contractors' usage of County fuel in extenuating circumstances.

Effective internal control includes written policies and procedures to ensure that management's directives are properly communicated and implemented on a consistent basis. Our audit disclosed that in order to keep snow removal contractors' trucks and equipment in service, the Department permits: (1) its Equipment Operations and Maintenance (EOM) mechanics to perform "minor" repairs at no cost to the contractor upon receiving verbal authorization from either the Bureau Chief or Assistant Bureau Chief and (2) its snow removal contractors to use County fuel in extenuating circumstances.

Our audit disclosed at least 5 instances where EOM mechanics performed repairs to contractors' trucks or equipment. Our audit further disclosed 5 instances whereby two contractors used 177 gallons of County fuel. However, we could not determine whether these repairs and fuel usages were allowable and authorized since the Bureau had not established written policies and procedures (defining the types of "minor" repairs that may be performed and the circumstances under which contractors may use County fuel) and did not require documented authorization.

Without written policies and procedures, including those requiring documented authorization, there is a lack of assurance that snow removal contractors receive only authorized and allowable repairs and fuel.

We recommend that the Bureau establish written policies and procedures related to repairs to snow removal contractors' trucks and equipment and the contractors' usage of County fuel. Such written policies and procedures should specify the circumstances under which such repair work and fuel usage are permissible and the process for authorizing (and documenting authorization of) such.

6. The Bureau's policies and procedures for snow removal contractor operations at its highway shops were undocumented and inadequate to ensure consistent and proper compensation of snow removal contractors.

Effective internal control includes written policies and procedures to ensure that management's directives are properly communicated and implemented on a consistent basis. The Bureau's 11 highway shops are responsible for managing the snow removal contractors and ensuring that contractors provide services and are consistently and properly compensated for the services provided. However, our review disclosed that the

Bureau's policies and procedures were undocumented and inadequate to ensure consistent and proper compensation of snow removal contractors. For example, our review disclosed the following:

- The Bureau's policies and procedures did not require the use of a uniform contractor sign in/out log. As a result, not all highway shops utilized logs that sufficiently documented each truck/equipment operator's services and signature. For example, we noted that logs used at 4 highway shops did not include a "truck/equipment type" column. Additionally, one highway shop utilized an electronic log that was not presented to truck/equipment operators for signature.
- Policies and procedures to allow snow removal contractors to provide substitute and additional trucks and/or equipment and to utilize subcontractors were not documented and were in conflict with the contracts. For example, we noted instances where on-call contractors brought more, less, or different trucks and/or equipment than reflected in the contract. We also noted inconsistencies in the Bureau's payments to on-call contractors for substitute trucks and/or equipment (e.g., hourly compensation rate for the contracted truck/equipment as opposed to the truck/equipment actually provided). We further noted instances whereby on-call contractors utilized subcontractors to provide services.
- Policies and procedures for providing highway shops with contracted truck and equipment information (number and types/sizes) were inadequate to ensure that the shops' information was complete and accurate. For example, the lists of on-call contractors provided to the highway shops for the 2009-2010 snow season did not include all approved on-call contractors, did not reflect any equipment, and inaccurately reflected the number and types/sizes of trucks for 15 on-call contractors.
- The Bureau's established travel policy, which provides on-call snow removal contractors a maximum of 2 hours of travel time (i.e., one hour each way) between the contractor's base location and the assigned County highway shop, was not accurately reflected in the contracts or otherwise documented.

Without adequate, written policies and procedures for snow removal contractor operations at its highway shops, there is a lack of assurance that snow removal contractors are consistently and properly compensated.

We recommend that the Bureau establish adequate, written policies and procedures for snow removal contractor operations at its highway shops. These policies and procedures should ensure consistent and proper compensation of snow removal contractors.

Audit Scope, Objectives, and Methodology

We have audited the procedures and controls over the Department of Public Works, Bureau of Highways' snow removal contractor operations for the 2009–2010 snow season (i.e., November 1, 2009 through April 30, 2010). The audit was conducted in accordance with generally accepted government auditing standards, except for the requirement of an external quality control review. 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 that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In accordance with the Baltimore County Charter, Section 311, the objectives of our audit were to evaluate the adequacy of internal control practices and procedures over snow removal contractor operations and to determine compliance with applicable snow removal contract terms, policies, and procedures. In planning and conducting our audit, we focused on snow removal contractors, including the related payments for services made during the 2009–2010 snow season, managed and approved by the Bureau based on assessments of materiality and risk.

Our audit procedures included inquiries of appropriate personnel, inspections of documents and records, and tests of snow removal contractor payments. We also tested transactions and performed other auditing procedures that we considered necessary to achieve our objectives. Data provided in this report for background or informational purposes were deemed reasonable but were not independently verified.

The Bureau's management is responsible for establishing and maintaining effective internal control over snow removal contractor operations, including the approval of the related payments for snow removal services, and for compliance with applicable contract terms, policies, and procedures. Internal control is a process designed to provide reasonable assurance that objectives pertaining to the reliability of financial records, effectiveness and efficiency of operations including safeguarding of assets, and compliance with applicable contract terms, policies, and procedures are achieved.

Because of inherent limitations in internal control, errors or fraud may nevertheless occur and not be detected. Also, projections of any evaluation of internal control to future periods are subject to the risk that conditions may change or compliance with policies and procedures may deteriorate.

Our reports on fiscal compliance are designed to assist the Baltimore County Council in exercising its legislative oversight function and to provide constructive recommendations

for improving County operations. As a result, our reports generally do not address activities we reviewed that may be functioning properly.

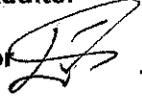
This report includes findings and recommendations relating to conditions that we consider to be significant deficiencies in the design or operation of internal control and administrative and operating practices and procedures that could adversely affect the County's ability to maintain reliable financial records, operate effectively and efficiently, and/or comply with applicable contract terms, policies, and procedures. Other less significant findings that did not warrant inclusion in this report were communicated to the Bureau.

APPENDIX A

Department of Public Works

Response

DEPARTMENT OF PUBLIC WORKS
Baltimore County, Maryland

TO: Lauren Smelkinson, County Auditor
FROM: Edward C. Adams, Jr., Director 
DATE: August 6, 2013
SUBJECT: Snow Removal Contractor Operations Audit

After working with the Auditors over the course of the past 2½ years, the Department has already initiated your recommendations regarding documentation of sign in/sign out logs, contractor submitted invoices, retention policy, and verification of materials returned after an event. Additionally, we have taken recommendations as they apply to payment of retainers.

The Bureau is in the process of finalizing the policies and procedures mentioned in your audit and plan to have them implemented in the upcoming snow season.

We would like to thank the auditors for their professionalism and assistance through this process.

cc: Kimberly A. Bauer-Weeks, Audit Manager
Fred Homan, Administrative Officer
Keith Dorsey, Director, Budget & Finance
Matt Carpenter, Budget Analyst, Budget & Finance
Steve Hinkel, Chief, Administrative Services, DPW
James Lathe, Chief, Bureau of Highways

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