



# Homeland Security

July 28, 2004

MEMORANDUM FOR: John E. Pennington  
Regional Director  
FEMA Region X

FROM: *Robert J. Lastrico*  
Robert J. Lastrico  
Field Office Director  
Office of Audits

SUBJECT: *City of Seattle, Washington*  
*Public Assistance Identification Number 033-63000*  
*FEMA Disaster Number 1159-DR-WA*  
*Audit Report Number DS-17-04*

The Office of Inspector General (OIG) audited public assistance funds awarded to the City of Seattle, Washington (City). The objective of the audit was to determine whether the City expended and accounted for Federal Emergency Management Agency (FEMA) funds according to federal regulations and FEMA guidelines.

The City received a public assistance award of \$5 million from the State of Washington Military Department's Emergency Management Division (EMD), a FEMA grantee, for debris removal, emergency protective measures, and repair and restoration of facilities damaged by winter storms that precipitated land slides, mud slides, and flooding that began December 26, 1996 and continued through February 10, 1997. The award provided for 75 percent FEMA funding for 49 small projects and 24 large projects<sup>1</sup> that EMD closed on February 8, 2001. The audit covered the period December 26, 1996, to February 8, 2001, and included the review of 1 small project and 12 large projects with a total award of \$3.2 million (see Exhibit).

The OIG performed the audit under the authority of the Inspector General Act of 1978, as amended, and according to *Government Auditing Standards* issued by the Comptroller General of the United States. The audit included the review of FEMA, EMD, and City records, and other auditing procedures determined necessary under the circumstances.

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<sup>1</sup> Federal regulations in effect at the time of the disaster set the large project threshold at \$46,000.

## RESULTS OF AUDIT

The City generally expended and accounted for public assistance funds according to federal regulations and FEMA guidelines for the 1 small project and 6 of the 12 large projects reviewed. However, for the other six large projects, the OIG is questioning \$409,264 in costs claimed by the City (FEMA's share is \$306,948). These costs included \$356,882 in ineligible ground stabilization costs, \$29,680 in unsupported force account labor costs, \$12,742 in ineligible force account labor and excessive fringe benefits costs, \$7,549 in other unsupported costs, and \$2,411 in duplicate costs. In addition, as noted in finding F below, the OIG identified that improvement was needed in FEMA's procedures for project management and monitoring.

### **Finding A – Ineligible Ground Stabilization Costs**

The City's claim for projects 60530, 21676, and 73551 included \$356,882 in ineligible ground stabilization costs resulting from unapproved changes in project scope. According to Title 44, Code of Federal Regulations, Section 206.223(a)(1) [44 CFR § 206.223(a)(1)], to be eligible for financial assistance, an item of work must be required as a result of the major disaster event. Also, according to FEMA's 1995 Landslide Policy,<sup>2</sup> the City is responsible for the cost of stabilizing a site when the disaster damage is associated with a pre-existing, identified, and unstable ground condition. This policy however, allows FEMA funding for integral ground restoration necessary to physically support a facility.

- For project 60530,<sup>3</sup> the City claimed \$171,673 in costs incurred for ineligible ground stabilization work. The original scope of work described the damage as “[the] loss of shoulder, guardrail, [and] part of paved lane for approximately 80 lf x 2, and 10’x10’. Conduct geotech study to design repairs.”

On July 14, 1997, FEMA prepared a supplemental DSR 73553 that changed (expanded) the scope of work to include the construction of a “1000 SF soldier pile wall” that was not identified in the damage description and scope of eligible work in DSR 60530. The estimated cost of the proposed work, including the 1,000 SF wall, was \$115,912. However, FEMA placed the project in suspension until the applicant could provide various studies, reports, environmental assessments, and/or design documents to EMD.

On May 29, 1998, EMD changed the cost of the proposed work on supplemental DSR 73553 from \$115,912 to \$307,823 and wrote “... Remove from suspension. All work is complete.” On September 9, 1998, FEMA removed the project from suspension and approved funding of \$307,823 to reflect the costs of work already completed. However, upon final inspection, FEMA adjusted total eligible costs with supplemental DSR 27469 to reflect actual project costs of \$231,787.

A June 14, 1997, geo-technical evaluation of the project site and surrounding area determined the damage was caused by a landslide that resulted from the disaster. This evaluation identified various instances of landslides and a history of soil instability prior to the disaster. The geo-technical report indicated that, “...the optimum method for providing stability of the

<sup>2</sup> “Landslide Policy Relating to Public Facilities” – November 30, 1995.

<sup>3</sup> The Damage Survey Reports (DSRs) prepared for this project included primary DSR 60530 (engineering geo-technical study), and supplemental DSRs 73553 and 27469.

roadway edge and underlying soils is to construct a retaining wall with steel-reinforced concrete piles and timber lagging. This type of wall will stabilize the soils against future long-term vertical and lateral settlements and sudden landslide failure.”

Project records showed that the work actually completed included the construction of a wall, an item of work recommended for ground stabilization. The ineligible ground stabilization costs identified for this project are \$96,471 for the construction of a wall (aggregate, concrete, steel piles, and drainage), prorated costs of \$50,368 for contractor charges, and \$24,834 for consultant and engineering fees.

The geo-technical report and the plans and specifications corroborate the fact that this project was on an ancient landslide, a slide mass that extends from 49<sup>th</sup> Avenue SW down slope beyond 50<sup>th</sup> Avenue. This is further documented (geo-technical report and plans) in the fact that mention is made of two deteriorated and subsequently failed retaining structures on the down slope side of 49<sup>th</sup> Avenue and the discovery of a buried and failed wall on the down slope side of 50<sup>th</sup> Avenue.

The City, EMD, or FEMA did not provide the OIG any information to substantiate that the retaining wall in question was required to support integral ground, other than it was a recommendation from the geo-technical consultant. The geo-technical recommendation focused on repairs to stabilize the hill from further movement and did not address repairs relative to integral ground restoration for the damaged facility (roadway).

Were the 50<sup>th</sup> Avenue retaining structure functional prior to the disaster, funding for its replacement could have been eligible for reimbursement. However, as evidenced by the geo-technical report, pre-disaster repairs to the 50<sup>th</sup> Avenue road surface rendered this part of the facility non-functional (damaged and deteriorated) and, therefore, not eligible for reimbursement.

- For Project 21676,<sup>4</sup> the City claimed \$149,385 in ineligible ground stabilization costs. The DSR damage description consisted of “...pavement damage on Chilberg Ave. (60 LF x 15’ W), a water-main break below Boyd Place and some lateral movement of a retaining wall on the west edge of Boyd Place (60 LF North-most Section).” The scope of work consisted of: “(1)...Construct 60 LF x 4’ H soldier pile retaining wall along west edge of Chilberg Ave. to support road restoration, 2) repair 60 LF x 15’W road base and pavement on Chilberg Ave., 3) repair broken 8” water-main, 4) the Boyd Place retaining wall movement is not sufficient to warrant rebuilding the foundation by deepening the soldier piles as the City has proposed. No restoration for existing retaining wall.” Also, the inspectors noted in the comments section of DSR 21676 that “No technically feasible mitigation opportunities observed... Repair around Boyd Place is ineligible because it is a pre-existing damage.” The original scope of work for this project was estimated by FEMA at \$81,186.

On July 10, 1997, FEMA placed the project in suspension until the applicant has provided various studies, reports, environmental assessments, and/or design documents to EMD.

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<sup>4</sup> The DSRs prepared for this project included primary DSR 21676 (which identified the scope of eligible work and estimated costs) and supplemental DSR 27228 to approve funding of final eligible costs.

On May 29, 1998, EMD changed (expanded) the project scope on DSR 21676 to include a construction of a 54 LF soldier pile retaining wall along east edge of Boyd Place and to repair 214 LF road base and pavement on Boyd Place. This work was not identified and/or included in the original damage description and scope of eligible work on DSR 21676. On September 8, 1998, the project was removed from suspension and funded at the estimated cost of \$81,186. At the date of final inspection, November 30, 2000, supplemental DSR 27228 was approved for \$223,177 based on an April 2000 re-estimate by EMD of eligible costs of \$304,363 that included two new soldier pile walls (one at Chilberg Ave and the other at the east side of Boyd Place). The comments section of the DSR also stated, "Comparing actual eligible costs to the updated estimate reveals the overrun (\$223,177) would be reduced to \$104,537."

Project records showed that, prior to the disaster, the City repaired the existing retaining wall after being damaged by a landslide in early 1970. The records also disclosed that two geo-technical evaluations of the area had detected continued ground movement, as follows:

- A May 7, 1997 geo-technical report ("Historical Data Review") disclosed the location had experienced three landslides prior to the disaster. This report also recommended stabilization measures.
- A second geo-technical report, dated June 18, 1997, disclosed ground movement in the area and recommended ground stabilization measures, such as replacing the piles in the existing retaining walls and adding new walls. The report specifically recommended, "... replacing the piles in the existing retaining wall and adding a new retaining wall in order to stabilize the area in the vicinity ... The new retaining wall will serve two purposes: 1) it will help to stabilize the ground movement that resulted in the damage to Chilberg Avenue SW by reinforcing the slide plane; and 2) it will allow movement of Boyd Place SW off of unstable fill soil to the east onto more stable soil..."

As a result of the disaster and the two previous geo-technical evaluations, the City contracted for two new soldier pile walls (one at Chilberg Ave and the other at the east side of Boyd Place). The OIG questions the City's claim associated with these walls because the walls were built to stabilize known landslide areas. The ineligible ground stabilization costs identified for this project were \$121,140 in charges for materials ("quarry-spalls") and for redesigning the walls, \$21,200 in prorated costs for geo-technical fees, and \$7,045 in prorated costs for contractor mobilization.

In the case of the two projects above, the City: (1) completed the work while the projects were in suspension, (2) followed the geo-technical reports' recommendations for stabilization, and (3) did not obtain FEMA's approval prior to proceeding with the work. The City identified the damage as caused by unstable ground conditions that pre-existed the disaster and performed repairs that exceeded integral ground restoration work. Further, FEMA, EMD, and City records did not support or justify the eligibility of the ground stabilization work or for funding as mitigation measures.

While the incurred and claimed costs were for ineligible ground stabilization work, the OIG also considered the work accomplished on each project as an "unapproved" improved project. According to 44 CFR § 206.203(d)(1), if a subgrantee desires to make improvements, but still restore the pre-disaster function of a damaged facility, the grantee's approval must be obtained

and funding for such improved projects will be limited to the federal share of the approved estimate of eligible costs. Further, because improved projects restore facilities substantially beyond that which existed prior to a disaster, it was FEMA's responsibility under the National Environmental Policy Act (NEPA) to ensure that any required environmental reviews were performed. According to 44 CFR § 10.8, early determination regarding NEPA documentation requirements helps ensure that the necessary documentation is prepared and integrated into the decision making process. While in certain circumstances 44 CFR § 10.8(d)(2)(xvi) allows for improvements and small-scale hazard mitigation measures to be categorically excluded from NEPA review requirements, these projects did not qualify for categorical exclusions because FEMA did not adequately determine if the scope of work accomplished by the City would have an adverse effect on the quality of the human environment.

FEMA Environmental Policy Memorandum # 3, dated May 3, 1996, states that "It is FEMA's policy that action initiated and/or completed without fulfilling the specific documentation and procedural requirements of NEPA may not be considered for funding." Also, on October 28, 1997, FEMA's Executive Associate Director, Response and Recovery Directorate, issued a memorandum to the Regional Directors requesting that regional public assistance officials notify subgrantees that they must receive approval from the grantees prior to initiating improved projects. Further, approval by the grantees is contingent upon notifying FEMA and obtaining NEPA clearance in order to prevent possible deobligation of all project funding.

Questioned costs for this project revolve around costs for two retaining walls, one on the east side of Boyd Place, the other on the west side of Chilberg Avenue. In addition, quarry spalls used between the two walls and on the up slope side of Chilberg Avenue. Discussions with FEMA Region X suggested that these walls were necessary to support 'integral ground' for Chilberg Avenue.

Although the Chilberg Avenue wall could have been considered necessary to support 'integral ground' for the eligible facility (road surface), it was not addressed in the original scope of work. The Boyd Place easterly wall does not satisfy any requirements. The clearing and grubbing of the area between the Chilberg Avenue wall and the easterly Boyd Place wall, as well as the quarry spalls used for erosion control in this same area, are not eligible, as the area, per the plans and specifications, is not engineered, i.e., to no particular degree of compaction necessary for this type of facility, and, therefore, not integral ground. This also applies to the spalls used on the east side of Chilberg Avenue.

As was the case with the prior project, the geo-technical report also focused on recommending repairs to stabilize the area (hill) from further movement and did not address repairs.

- For project 73551,<sup>5</sup> the City claimed \$35,824 in costs for materials used for ground stabilization. The project scope of work included the replacement of a drainage facility damaged as a result of a landslide and project costs totaled \$444,128. FEMA eligible work totaled \$188,548 for the replacement of a storm drain, a catch basin, and two weirs (walls/barriers) as mitigation measures. The project site was located in an area that had suffered a landslide,<sup>6</sup> and had been stabilized at the City's expense because the work was not eligible for federal funding.

<sup>5</sup> The DSRs prepared for this project included primary DSR 73551 (which identified the scope of eligible work and estimated costs) and supplemental DSR 61114 to approve funding of final eligible costs.

<sup>6</sup> Sunset Avenue landslide.

Nonetheless, project records supporting FEMA funded costs included \$35,824 for expenditures for "quarry spalls", a type of material not authorized in the scope of the project but used for stabilization. The \$35,824 is questioned since FEMA does not fund ground stabilization costs and the material was not required in the scope of the project.

The FEMA approved original scope of work included 220 cubic yards (cy) of 'sacked concrete' for use in the check dams and weirs, with an additional 40 cy for the approved mitigation. The review of the original estimate determined that this material was considered "stabilization costs."

The original contract estimate for 'quarry spalls' enumerated 440 tons, which was used in lieu of the 'sacked concrete' noted above. Accordingly, the claim for 1136 tons of 'quarry spalls' is apparently for stabilization. The City's claim that this material was 'necessary to provide access to the project site and use as base from which to make repairs is not consistent with the actual use of this material.

The costs questioned by the OIG were discussed with the EMD and City officials on March 24, 2004. These officials disagreed with the OIG stating the projects were eligible because work performed was not ground stabilization and the projects were approved by FEMA. They noted that the projects were not placed in suspension pending stabilization but due to environmental reviews. They also noted:

- For project 60530, the work questioned by the OIG should not be classified as a pre-existing condition because the work was determined to be necessary when unstable ground was identified after construction began.
- For project 21676, unstable ground was not identified at the project site. The unstable ground was identified at another project location repaired with City funds.
- For project 73551, City officials explained that the quarry spalls were not used for "stabilization", but rather the materials were necessary to provide access to the project site and to use as a base from which to make repairs.

Despite the City's comments, the issue remains that the City's claim included ground stabilization costs not eligible for FEMA funding. For project 60530, a June 14, 1997 geo-technical evaluation disclosed that the damage was caused by a landslide resulting from the disaster. This evaluation also disclosed soil instability in the area prior to the disaster and prior to the beginning of construction. For project 21676, City records and geo-technical reports disclosed that the project location had a history of ground movements and landslides, and that in 1970, a landslide damaged the area. However, the City did not stabilize the project location until after the December 1996 disaster. For project 73551, the quarry spalls were not identified in the project scope of work since this type of material is commonly used for ground stabilization. As noted above, the City performed ground stabilization work at its own expense near the project site; and City project records did not support the City officials' explanation for including the costs in the claim. Therefore, the OIG concluded that the City inadvertently claimed the quarry spalls used for its own work under project 73551. Based on the documentation made available during the audit, the OIG continues to question \$356,882 of the City's claim as follows; \$171,673 for project 60530, \$149,385 for project 21676, and \$35,824 for project 73551.

### **Finding B – Unsupported Force Account Labor Costs**

The City's claim for projects 24112 and 74330 included \$29,680 in force account labor costs that were unsupported. Federal regulation 44 CFR § 13.20(b) requires the City to maintain records identifying how FEMA funds are spent and to support its claim with source documents.

- For project 24112, the City claimed \$24,821 in force account labor costs that were not supported with payroll records such as time sheets or similar documentation. In a few instances, the City did not have time sheets to support the claim. In other instances, the City had time sheets that included less hours worked than the hours claimed. For example, for one employee, the City did not have support for 44 overtime hours. The City agreed with \$695 of the amount questioned. For the remaining \$24,126 (\$24,821 minus \$695), the City provided the OIG a summary worksheet that identified the overtime hours by employee, but did not provide supporting documentation that proved the hours were disaster related.
- For project 74330, the City claimed \$4,859 in unsupported overtime costs. This included \$2,928 in labor hours not supported with time sheets or similar documentation and \$1,931 in labor hours not related to the performance of actual disaster work (holidays and other paid time off). The City stated that the costs were disaster related but was not able to locate supporting documentation.

Since the City could not provide support that the claimed force account labor costs were disaster related, the OIG questioned \$29,680.

### **Finding C – Ineligible Force Account Labor and Excessive Fringe Benefits Costs**

The City's claim for project 24112 included \$12,742 in force account labor costs that were ineligible, excessive, or not in conformance with the City's pay scale in effect during the disaster.

- The City claimed \$4,997 in force account labor costs that consisted of \$3,606 in charges not in compliance with the City's pay scale in effect at the time of the disaster, and \$1,391 in standby costs. City officials agreed that the \$3,606 was not an eligible cost. As to the \$1,391 in standby costs, City officials stated the costs were disaster related and were based on City policy that provided compensation to employees who were placed on a standby status and also performed disaster work. The compensation included an added 10 percent pay based on an employee's pay for disaster related work. The City provided the OIG with a copy of the City policy that authorized the 10 percent additional pay. However, the City was not able to provide the OIG with payroll documentation showing that the \$1,391 in claimed costs was associated with the actual performance of disaster related tasks.
- The City claimed \$7,745 in excess fringe benefits costs. City payroll records showed that the City actually applied an 8.34 percent fringe benefit rate to overtime hours and not the 16 percent rate claimed. City officials explained that the 16 percent rate was claimed in error.

According to 44 CFR § 206.223(a)(1), to be eligible for FEMA funding, an item of work must be disaster related. OMB Circular A-87, Cost Principles for State, Local, and Indian Tribal Governments, Attachment B, paragraph 11, allows federal reimbursement for salaries, wages, and fringe benefits paid to employees if the compensation is reasonable. Since the City claimed force

account labor costs that were ineligible, excessive, or not in conformance with the pay scale in effect during the disaster, the \$12,742 was questioned.

#### **Finding D – Other Unsupported Costs**

The City claimed \$7,549 in costs that were not supported by source documentation. According to 44 CFR § 13.20(b), the City is required to maintain documentation and records such as cancelled checks, paid bills, and invoices to support disaster related expenditures.

- For project 73545, the City claimed \$4,006 in payments to a contractor for emergency work. At the time of the disaster, the contractor was performing other work for the City under a pre-existing contract. The City added the emergency work by issuing change orders to the contract. However, City records supporting payments included invoices that were not backed with source documents showing what emergency work was performed and the associated costs. The costs questioned by the OIG included \$1,984 for equipment, \$1,538 for labor, and \$484 for materials. City officials agreed the \$4,006 was not supported.
- For project 73551, the City claimed \$3,543 for miscellaneous costs incurred by the City's Department of Public Works. City officials explained the costs were incurred for permit fees, but were unable to produce documentation supporting the expenditure. These officials disagreed that the costs should be questioned.

Since the City could not provide documentation proving the costs claimed were incurred and were disaster related, the \$7,549 was questioned.

#### **Finding E - Duplicate Costs**

The City claimed \$2,411 in consultant fees once against project 73545 and again against project 73565. The OIG questioned the duplicate cost against project 73545. City officials agreed that the costs were claimed twice in error.

#### **Finding F – Project Management and Monitoring**

The City's claims for projects 60530, 21676, and 73565 were not documented properly proving the costs were disaster related and that budget and scope increase were justified. As discussed in finding A, the OIG questioned \$171,673 claimed for project 60530 and \$149,385 claimed for project 21676 because the claimed amounts included ineligible ground stabilization work and improvements. For project 73565, we visited the site (East Boston Terrace Bridge) on March 10, 2004 and discussed the nature of the work performed with FEMA and City officials. We concluded the claimed costs for this project were related to the disaster and therefore eligible for FEMA funding. However, we also concluded that the procedures for managing and monitoring all three FEMA funded projects needed improvement.

FEMA and EMD records for the projects did not adequately justify the need for work, justify budget and scope revisions, or show that the projects were cleared of environmental and other special considerations necessitated by the City's apparent "betterments". Further, the records did not include any documentation indicating that improved project procedures were discussed or considered in project funding:

- It was not evident from project documentation that the “facilities” funded for repair by FEMA were in fact damaged by the disaster when funding decisions were made. According to 44 CFR § 206.223(a)(1), to be eligible for financial assistance, an item of work must be as a result of the major disaster event.
- The City did not request additional funding prior to incurring the additional costs. According to 44 CFR § 13.30(c), the City was required to obtain prior written approval for any budget revision which would result in the need for additional funds.
- The City did not obtain prior FEMA approval for changes in the scopes of work. According to 44 CFR § 13.30(d)(1), the City was required to obtain these approvals from FEMA whenever a revision of the scope or objectives of a project was anticipated.
- The City did not request EMD approval of a budget/project revision. According to 44 CFR § 13.30(f)(3), any City requests for prior approval will be addressed in writing to EMD, and EMD will obtain FEMA’s approval before approving the City’s request.
- According to 44 CFR § 206.204(e), subgrantees may find during project execution that cost overruns, due to such things as variations in unit prices and change in scope of eligible work, are necessary. In such cases, subgrantees are required to evaluate each overrun, and, when justified, submit a request for additional funding through the grantee to the Region for a final determination. While these projects were suspended by FEMA, the City continued with the work and did not request additional funding until the projects were nearly complete, even though actual project costs were substantially higher than the original FEMA project estimates.
- The three projects had the appearance of being “unapproved” improved projects because they seemingly restored facilities substantially beyond that which existed prior to a disaster. As indicated in finding A, 44 CFR § 206.203(d)(1) requires that EMD approve improved projects and that FEMA limit approved funding to the federal share of the approved estimate of eligible costs. Since the work was performed while the projects were suspended, FEMA may not have been aware of the actual scope of work accomplished by the City as evidenced by the lack of any documentation supporting the City’s scope increases. As such, and as previously discussed, FEMA could not adequately determine if these revised scopes of work had an adverse effect on the quality of the human environment as required by NEPA.

## RECOMMENDATIONS

The OIG recommends that:

1. The Regional Director, FEMA Region X, in coordination with EMD, disallow questioned costs of \$409,264.
2. FEMA Region X take necessary steps to improve procedures for managing and monitoring projects and require EMD and its subgrantees to adhere to the provisions of the federal regulations cited in this report.

## **DISCUSSION WITH MANAGEMENT AND AUDIT FOLLOW-UP**

The OIG discussed the results of this audit with the FEMA Region X officials on March 9, 2004 and with City and EMD officials on March 24, 2004. City officials disagreed with finding A; partially agreed with findings B, C, and D, and agreed with finding E. Region X officials agreed with finding F. The City's verbal comments are summarized in each of the above findings.

Please advise this office by September 28, 2004, of the actions taken to implement the recommendations in this report. Should you have any questions concerning this report, please contact me at (510) 627-7011. Key contributors to this assignment were Humberto Melara, Arona Maiava, Gloria Conner, and Jeff Flynn.

Schedule of Audited Projects  
City of Seattle, Washington  
Public Assistance Identification Number 033-63000  
FEMA Disaster Number 1159-DR-WA

Project Number	Amount Awarded	Questioned Costs	Finding Reference
<u>Large Projects</u>			
13000	\$ 286,985	\$ 0	
73551	188,548	39,367	A, D
29469	65,913	0	
29470	88,803	0	
24112	172,723	37,563	B, C
21676	304,363	149,385	A
60530	231,787	171,673	A
73565	434,211	0	
73545	84,770	6,417	D, E
29258	108,810	0	
73697	152,117	0	
74330	<u>999,592</u>	<u>4,859</u>	B
Sub-Total	<u>\$3,118,622</u>	<u>\$409,264</u>	
<u>Small Project</u>			
73575	42,411	0	
Total	<u>\$3,161,033</u>	<u>\$409,264</u>	

Finding Reference Legend:

- A. Ineligible Ground Stabilization Costs
- B. Unsupported Force Account Labor Costs
- C. Ineligible Force Account Labor and Excessive Fringe Benefits Costs
- D. Other Unsupported Costs
- E. Duplicate Costs