



Homeland
Security

July 27, 2004

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

Robert J. Lastrico

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

SUBJECT: *Audit of King County
Seattle, Washington
Public Assistance Identification Number 033-00000
FEMA Disaster Number 1159-DR-WA
Audit Report Number DS-16-04*

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

The County received an award of \$4.6 million from the State of Washington, Emergency Management Division (EMD), a FEMA grantee, for debris removal, emergency protective measures, and permanent repairs to facilities damaged by winter storms that precipitated land slides, mud slides, and flooding. The incident period began on December 26, 1996, and continued through February 10, 1997. The award provided 75 percent federal funding for 56 small projects and 18 large projects.¹ The audit covered the period of December 26, 1996, to September 20, 2002, and included a review of eight large projects with a total award of \$3.4 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 a review of FEMA, EMD, and County records, a judgmental sample of project expenditures, and other auditing procedures considered necessary under the circumstances.

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

RESULTS OF AUDIT

The County claimed \$527,908 in ineligible, excessive, or unsupported costs for six of the eight projects reviewed (FEMA's share - \$395,931). Specifically, the OIG questions \$337,135 of ineligible ground stabilization costs, \$150,984 of ineligible project charges, \$18,737 of excessive force account equipment charges, \$10,677 of cost associated with accounting errors, and \$10,375 of unsupported costs.

Finding A – Ineligible Ground Stabilization Costs

The County's claim for project 59244² included \$337,135 in ineligible ground stabilization costs resulting from an unapproved change 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. Further, 44 CFR § 206.226 requires that eligible facilities generally be restored on the basis of the design of such facilities as they existed immediately prior to the disaster. Lastly, according to FEMA's 1995 Landslide Policy,³ the County is responsible for the cost of stabilizing a site when the disaster damage is associated with a pre-existing, identified, and unstable ground condition.

- **Original scope of work and funding history.** The original scope of work for the project (Damage Survey Report [DSR] 59243) entailed the restoration of approximately 800 lineal feet of storm drain damaged by the disaster including surface restoration and stabilization. FEMA's scope of work and estimated project costs were based on a repair recommendation proposed by the County's geo-technical consultant (consultant) in February 1997. The consultant recommended replacement of the existing storm drain with a surface mounted drain using high-density polyethylene (HDPE) pipe instead of the corrugated metal pipe that was damaged during the disaster. The consultant noted that the advantage of using HDPE pipe was that the joints were fused and nearly as strong as the pipe itself, the pipe could be suspended for short distances without support, and using HPDE pipe would bring the storm drain up to the County's engineering standard for steep and unstable slopes. FEMA estimated the original scope of work for this project at \$122,200 and prepared DSR 59243 on April 9, 1997, as follows:

<u>Original Scope of Work</u>	<u>Estimated Costs</u>
Catch Basin Type 2 (with additional re-enforcing)	\$ 8,000
12" Diameter HDPE pipe (including trenching)	64,000
Pipe Anchors	24,000
Surface Restoration and Stabilization	25,000
Catch Basin Type 1	<u>1,200</u>
Total	<u>\$122,200</u>

However, funding was not provided to the County. Rather, the DSR was placed in suspension pending the County's submittal of a design for the project. On April 23, 1997, FEMA provided initial funding of \$10,800 under DSR 59244 for project engineering and design services. On October 27, 1997, the County submitted project plans and specifications to EMD for a scope of

² The Damage Survey Reports (DSRs) prepared for this project included primary DSR 59244 (engineering and design services) and supplemental DSRs 59243, 27284, and 27121.

³ *Landslide Policy Relating to Public Facilities* – November 30, 1995

work different than the project described above. At the same time, the County notified EMD that it had proceeded with the work.

On January 14, 2000, the County prepared a *Notice of Completion and Acceptance* and certified that the project had been completed and accepted as of December 4, 1997.⁴ On January 23, 1998, FEMA removed DSR 59243 from suspension and approved costs of \$327,340. On November 19, 1998, FEMA approved DSR 27284 to fund increased project costs of \$186,161 for items not previously addressed. These items included gabion baskets instead of compacted fill, force account labor and equipment, additional consultant costs, additional contract costs associated with relocating the pipe, and the addition of gravel and sub-drains. Following FEMA approval of an additional \$59,106 (DSR 27121) at project closeout, final project costs were \$583,407.

- Actual scope of work performed and ineligible ground stabilization costs. The work completed by the County while the project was suspended included significant changes in the original scope of work and significant cost increases. The work did not include restoring the surface mounted storm drain to pre-disaster condition as envisioned in the original DSR. Rather, the project included a buried storm drain and ground stabilization work with additional costs totaling \$337,135. The ineligible ground stabilization work consisted of contract, engineering, consultant, and survey costs as depicted below:

<u>Work Category</u>	<u>Additional Costs</u>
Contract Bid Item #7 – Backfill Materials Special Gravel Barrow (3,330 tons at \$40/ton)	\$133,200
Contact Bid Item #13 – 6" Quarry Rocks (340 tons at \$36/ton)	12,240
Contract Bid Item #31 – Coconut Fiber Matting (1,610 S.Y. at \$4/SY)	6,440
Contract Change Order #1 – Additional Backfill Materials – Special Gravels Barrow (1,712 tons)	74,367
Contract Change Order #2 – Gabion Wall	14,781
Contract Change Order #3 - Fills for Keystone Wall	1,515
Prorated Costs for Contractor Mobilization & Clearing	<u>26,680</u>
Sub-Total	\$269,223
<u>Engineering, Consultant, Survey</u>	
Prorated Costs for Engineering, Geo-technical, and Surveying	<u>67,912</u>
Total	<u>\$337,135</u>

FEMA, EMD, and County records did not support or justify the eligibility of the work accomplished by the County. Based on the County’s plans and specifications for the project, much of the work was specific to ground stabilization, an item of work not eligible for disaster funding. In fact, a separate geo-technical evaluation report of the area, dated March 14, 1997 disclosed, “The entire area has experienced significant land sliding in the Advance Outwash and the units below it. The area is marginally stable in its current condition.”

⁴ While the County certified that the project was completed on December 4, 1997, the *Project Completion and Certification Report* (Report P.4) forwarded by EMD to FEMA indicated that the work was completed on July 18, 1998.

On March 24, 2004, the OIG held a joint meeting with FEMA, EMD, and County officials. At this meeting, County officials explained the piping was relocated to a more stable hillside area and was not placed back to its pre-disaster location.

- Acceptance of the scope of work as a hazard mitigation measure. The change in scope of work discussed above was recognized by FEMA as a mitigation measure in the narrative comments supporting DSR 59243 when it was removed from suspension and funded on January 23, 1998. It is unclear how the FEMA reviewer determined this work to be a mitigation measure when the project file and the DSR itself stated that there were no feasible mitigation opportunities available for this project. Nonetheless, a benefit/cost analysis, a primary tenet of approving mitigation measures, was performed and the measure was determined to be cost effective. However, the benefit/cost analysis did not include all costs associated with the measure, e.g., additional excavation, special gravel barrow, 6"quarry rocks, coconut fiber matting, etc. Regardless of the cost effectiveness of the project as a mitigation measure, ground stabilization costs are generally not eligible for FEMA funding.

Summary. The OIG does not believe the work accomplished by the County should have been funded by FEMA for the following reasons:

- First and foremost, the work performed by the County did not restore the storm drain based on the design of that “facility” as it existed immediately prior to the disaster. The eligible work and estimated costs for restoring the storm drain were addressed in the original DSR and included a superior above ground pipe (HDPE), surface restoration, and anchoring of the new drainage system. The County realigned the new storm drain outside the original footprint and buried it. This resulted in ineligible ground stabilization and additional costs associated with engineering and design, contracting and contract management, and force account labor and equipment.
- The County did not obtain prior FEMA approval for changes in the scope of work. According to 44 CFR § 13.30(d) and (f), the County was required to obtain prior written approval from the awarding agency whenever any revision of the scope or objectives of a project is anticipated. While the original scope of work was specific as to the nature of the project, the County changed and improved the design and construction method without seeking approval from the Region. 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 (i.e., the storm drain), 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.
- The County did not request additional funding prior to incurring the additional costs. In fact, the County incurred most project costs while the project was in suspension. According to 44 CFR § 13.30(c)(2), the County was required to obtain prior written approval for any budget revision which would result in the need for additional funds. Further, the County did not request EMD approval of a budget/project revision. According to 44 CFR § 13.30(f)(3), a subgrantee (County) request for prior approval will be addressed in writing to the grantee (EMD), and EMD will obtain the federal agency’s (FEMA’s) approval before approving the subgrantee’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 this project was suspended by FEMA, the County proceeded with the work and did not request additional funding until the project was completed, even though actual project costs were nearly 2.5 times the original FEMA project estimate when the project was removed from its suspended status.⁵

- The project scope of work accomplished by the County constituted an “unapproved” improved project. 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, this project did not qualify for a categorical exclusion because:
 - Improvements were accomplished by the County without FEMA’s approval,
 - The project had been suspended by FEMA when the County accomplished the work, and
 - FEMA did not adequately determine if the scope of work accomplished by the County had an adverse effect on the quality of the human environment.

FEMA Environmental Policy Memorandum # 3, dated May 3, 1996, states, “It is FEMA’s policy that action initiated and/or completed without fulfilling the specific documentation requirements of NEPA may not be considered for funding.”

- On October 28, 1997, FEMA’s Executive Associate Director, Response and Recovery Directorate, issued a memorandum to the Regional Directors addressing unapproved improved projects. That memorandum discussed situations in which subgrantees perform work well beyond approved scopes of work and make substantial improvements without obtaining grantee and FEMA approval. By doing so, the subgrantees deny FEMA the opportunity to comply with NEPA. The Executive Associate Director requested 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.

County officials explained that the broken storm drain and water exiting the up-slope collection system eroded the hillside to the extent that a 50-foot-high, near-vertical cut was created. The eroded hillside deposited soft unstable soils in the existing pipe. According to these officials, to reinstall the HDPE pipe in the pre-disaster location would have required substantial excavation at greatly increased cost. They also noted there were constructability issues associated with any repairs to the existing corrugated metal pipe system. Despite these comments, the County did not provide the OIG estimates for this ‘substantial excavation’ or for the repair of the pre-disaster storm drain at its original location.

⁵ Actual project costs of \$583,407 were nearly 4.8 times the original estimate of \$122,200 at project closeout.

County officials further explained that a decision was made to relocate the storm drain to the eastern edge of the eroded area, an area purported to be more stable. The new HDPE pipe was routed around the eroded area to minimize the severity of the slope (accomplished by the addition of a gabion wall at the head of the eroded area), to ensure safety, constructability, and hillside stability. The OIG noted that the County did significant excavation work at the new location to stabilize the slope in that area.

The OIG understands the County's decision to stabilize the hillside and relocate the storm drain. However, the issue remains that the County claimed ineligible ground stabilization costs caused by a change in project scope. Therefore, the OIG questioned \$337,135; which consisted of \$269,223 for construction costs and \$67,912 for related engineering, design, geo-technical, and surveying costs.

Finding B - Ineligible Project Charges

The County's claim contained \$150,984 in project costs that were not disaster related. According to 44 CFR § 206.223(a)(1), to be eligible for financial assistance, an item of work must be required as the result of the major disaster event. Also, FEMA's *Public Assistance Guide* (FEMA 286, page 81) states that subgrantees will be reimbursed only for those costs incurred up to the latest approved completion date for a particular project.

- The County claimed \$42,112 in costs not related to project 22715. The charges included \$29,149 in force account labor costs and \$12,963 in equipment costs incurred for projects 22167 and 22714. These costs were not claimed against the correct projects because the two projects were closed before the expenditures were incurred. County officials agreed that the costs claimed did not relate to project 22715 but should be allowed since they were incurred for other FEMA-approved projects and were disaster related.
- The award for project 23939 provided \$379,500 for the removal of 22,000 cubic yards (CY) of sediment at Hidden Lake, including \$49,500 provided for permits. FEMA and County records showed that Hidden Lakes required the removal of 33,000 CYs of sediment; however, since not all sediment could be associated to the disaster, FEMA and the County agreed to share the cost. FEMA agreed to pay for 22,000 CYs (or two-thirds) and the County would pay for 11,000 CYs (or one-third). At project closeout, the County claimed included \$313,890 for the removal of only 10,000 CYs of sediment. Of the total amount claimed by the County, \$2,230 was previously determined unallowable by FEMA, \$4,149 was not identified to the disaster or approved in the project scope of work, and \$102,493 was for non-disaster sediment removal costs. Therefore, as discussed below, the OIG questioned \$108,872 in costs claimed against this project.
 - \$2,230 related to the planting of native plants at the project site even though FEMA had previously advised the County that such costs were not allowable. The County agreed that the costs should not have been claimed.
 - \$4,149 was for fence repairs, an item of work not identified to the disaster or approved in the project scope of work. The County agreed that the fence repairs were not included in the project scope.

- \$102,493 pertained to the cleanup of non-disaster sediment at Hidden Lake. Deducting the unallowable and ineligible costs identified above from the total amount claimed by the County resulted in sediment removal costs of \$307,511 (\$313,890 less \$2,230 less \$4,149). Since FEMA paid the entire claim and did not deduct the County's agreed to share (1/3 of the costs), the OIG questioned \$102,493 (\$307,511 times .3333).

County officials explained to the OIG that while only about 10,000 CYs of sediment were removed, they had not agreed to share the clean up cost with FEMA. These officials did not explain why clean up costs had remained relatively high, although less sediment was removed.

Since the County could not support that the project costs identified above were properly claimed or were otherwise eligible, the OIG questioned a total of \$150,984.

Finding C – Excessive Force Account Equipment Charges

The County's claim for projects 22167, 22715, and 22714 included \$18,737 in equipment charges in excess of FEMA established rates. According to 44 CFR § 206.228(a)(1)(i), use of force account equipment rates in excess of \$75 per hour require FEMA approval, and the FEMA Schedule of Equipment Rates should be the basis for reimbursement in all cases where an applicant does not have rates established or approved under State guidelines. This regulation also provides that when an applicant uses reasonable rates established or approved under State guidelines, reimbursement for equipment that has an hourly rate of \$75 or less shall be based on such rates. The following table identifies the three projects and the questioned costs.

<u>Project Number</u>	<u>Force Account Equipment</u>
22167	\$ 8,563
22715	9,119
22714	<u>1,055</u>
Totals	<u>\$18,737</u>

County project records supporting the claim showed the County applied force account equipment rates that exceeded rates established by FEMA. For example:

- For project 22167, the County applied a rate of \$26.45 per hour for a 1991 Caterpillar while the FEMA rate was \$20.00 per hour.
- For project 22715, the County applied a rate of \$36.31 per hour for a 1984 Caterpillar while the FEMA rate was \$23.00 per hour.
- For project 22714, the County applied a rate of \$15.91 per hour for a 5-yard dump truck while the FEMA rate was \$11.00 per hour.

County officials stated that the rates claimed were developed using State guidelines that required the exclusion of replacement costs, and that the rates were approved by EMD and FEMA. They explained that while an audit opinion had not been obtained for the rates, County auditors normally

reviewed the rates during the County's annual financial statement audits and the audits had not reported any findings related to the rates. EMD provided the OIG with the State guidelines⁶ for developing force account equipment rates. The guidelines did not include a specific methodology for developing the rates nor did they require the exclusion of replacement costs. The guidelines however, did require an annual review of the rates by the County's legislative body.

The County did not provide the OIG with evidence that its rates were developed using the State guidelines provided by EMD, that an audit of the rates was performed, or that the rates were reviewed and approved by EMD and FEMA. Therefore, the \$18,737 was questioned.

Finding D – Accounting Errors

The County's claim for three projects included \$10,677 in accounting errors. Details follow.

- For project 30146, the County overpaid a contractor \$6,963 due to various computation errors.
- For project 22715, the County paid \$3,062 twice for debris dumping costs and made a math error of \$83 for a total of \$3,145 on this project.
- For project 22167, the County claim \$569 in force account labor fringe benefits relating to force account labor costs previously disallowed by FEMA.

According to 44 CFR § 13.20(b)(1), the County is required to accurately report the results of financially assisted activities. The County agreed with the questioned costs of \$10,677 relating to accounting errors.

Finding E – Unsupported Costs

The County's claim for project 22715 included \$10,375 of unsupported costs consisting of \$10,169 in rental equipment costs and \$206 in tree removal services. County accounting records did not include invoices or similar documentation proving the costs were disaster related. According to 44 CFR § 13.20(b)(6), grantees and subgrantees must maintain accounting records that identify how FEMA funds are used and must be supported by source documents such as cancelled checks and paid bills. County officials agreed the \$10,375 was claimed in error.

RECOMMENDATION

The OIG recommends that the Acting Regional Director, FEMA Region X, in coordination with EMD, disallow \$527,908 of costs claimed by the County.

DISCUSSION WITH MANAGEMENT AND AUDIT FOLLOW-UP

The OIG discussed the audit results with FEMA, EMD, and County officials on March 24, 2004. County officials agreed with findings D and E; and did not agree with findings A, B, and C.

⁶ Revised Code of Washington, Sections 36.33A.010 and 36.33A.040

Please advise this office by September 27, 2004, of the actions taken to implement the recommendation 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, Antonio Fajardo, and Jeff Flynn.

Schedule of Audited Projects
 King County,
 Seattle, Washington
 Public Assistance Identification Number 033-00000
 FEMA Disaster Number 1159-DR-WA

Project Number	Amount Awarded	Questioned Costs	Finding Reference
22167	\$298,185	\$9,132	C, D
22714	160,756	1,055	C
22715	1,445,081	64,751	B, C, D, E
59244	583,407	337,135	A
22436	262,864	0	
23939	313,890	108,872	B
30146	279,156	6,963	D
74419	<u>63,495</u>	<u>0</u>	
Totals	<u>\$3,406,834</u>	<u>\$527,908</u>	

Finding Reference Legend:

- A. Ineligible Ground Stabilization Costs
- B. Ineligible Project Charges
- C. Excessive Force Account Equipment Charges
- D. Accounting Errors
- E. Unsupported Costs