

Department of Homeland Security **Office of Inspector General**

FEMA Hazard Mitigation Grant
Program Funds Awarded to
Comal County, Texas





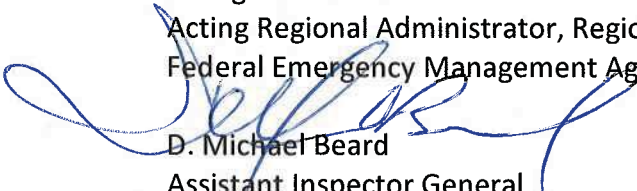
OFFICE OF INSPECTOR GENERAL

Department of Homeland Security

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JUN 21 2012

MEMORANDUM FOR: George A. Robinson
Acting Regional Administrator, Region VI
Federal Emergency Management Agency

FROM: 
D. Michael Beard
Assistant Inspector General
Office of Emergency Management Oversight

SUBJECT: *FEMA Hazard Mitigation Grant Program Funds Awarded to
Comal County, Texas*
FEMA Disaster Number 1606-DR-TX
Audit Report Number DD-12-13

We audited Hazard Mitigation Grant Program (HMGP) funds awarded to Comal County, Texas (County). Our audit objectives were to determine whether the County accounted for and expended Federal Emergency Management Agency (FEMA) grant funds according to Federal regulations and FEMA guidelines; the County's project met FEMA eligibility requirements; and project management complied with applicable regulations and guidelines.

The Texas Division of Emergency Management (TDEM), a FEMA grantee, awarded the County \$16,302,516 (\$12,226,887 Federal share) for one project.¹ TDEM selected the County's project for submission to FEMA from applications it received following Hurricane Rita, which occurred in September 2005.

The purpose of the award was to construct a drainage improvement structure to mitigate future flooding losses. The award provided FEMA funding for 75 percent of eligible project costs. At the time of our audit, the project was not complete. The audit covered the period from application submittal in January 2006 to our audit cutoff date in November 2011. During this time, the County claimed \$6,272,845 in direct project costs. Because the County was still working to complete the project, we focused our audit procedures on eligibility and project management, rather than costs claimed.

¹ TDEM awarded \$7 million in February 2008 and an additional \$9.3 million in December 2010 because of a design flaw in the County's original engineering plans.



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We conducted this performance audit between November 2011 and May 2012 pursuant to the *Inspector General Act of 1978*, as amended, and according to generally accepted government auditing standards. 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 upon our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based upon our audit objectives. We conducted this audit according to the statutes, regulations, and FEMA policies and guidelines in effect at the time of the disaster.

We interviewed FEMA, TDEM, and County officials, reviewed factors and assumptions used in determining project eligibility, and performed other procedures considered necessary to accomplish our objectives. Because we determined that the entire project was ineligible, there was no need to address two of our audit objectives: (1) to determine whether the County accounted for and expended FEMA grant funds according to Federal regulations and FEMA guidelines; and (2) to determine whether project management complied with applicable regulations and guidelines. We did not assess the adequacy of the County's internal controls applicable to grant activities because it was not necessary to accomplish our audit objectives. However, we did gain an understanding of the County's method of accounting for project-related costs.

BACKGROUND

FEMA provides HMGP grants on a cost-shared basis to eligible applicants within a State declared eligible for Federal assistance to implement measures designed to reduce the loss of life and property from natural disasters. FEMA's eligibility criteria require that an applicant have a FEMA-approved hazard mitigation plan and that projects be cost effective, comply with environmental and historic preservation requirements, and provide a long-term beneficial impact. Eligible applicants include State and local governments, certain private nonprofit organizations and institutions, and Indian tribes or tribal organizations. Although FEMA is primarily responsible for determining project eligibility, the State, as grantee, is required to demonstrate that the project is cost effective. The grantee also has primary responsibility for project management and the accountability of funds.

RESULTS OF AUDIT

The County's project did not meet FEMA eligibility requirements. As a result, we question the entire project totaling \$16,302,516 (\$12,226,887 Federal share) as ineligible costs. FEMA officials approved this ineligible project because they did not review the County's benefit cost analysis (BCA) methodology and, therefore, were not



aware that the project did not meet FEMA eligibility requirements. Therefore, we also recommend that FEMA develop and implement project review and approval processes and procedures, which will ensure that project eligibility requirements are enforced in the future.

Finding: Project Eligibility

The County's project is not cost effective according to Federal regulations in effect at the time of the County's HMGP application. As a result, the project is not eligible for FEMA funding, and we question the \$16,302,516 (\$12,226,887 Federal share) in total project costs. Federal regulations at 44 CFR 206.434(c)(5)(ii) required that a project be cost effective and that costs and benefits be computed on a net present value (NPV) basis. FEMA's guidance at the time the County submitted its application described "cost effective" as having a benefit-to-cost ratio of one or greater. Although the County computed a benefit-to-cost ratio of 1.17, this ratio was incorrect because the County did not calculate its total project costs and benefits on an NPV basis. Rather, the County used a different methodology, as explained below. If the County had calculated its BCA correctly, the benefit cost ratio would have been 0.36, making the project ineligible. FEMA officials approved the County's initial HMGP project application without reviewing the County's BCA methodology and, therefore, were not aware that the project did not meet FEMA eligibility requirements. Although FEMA policy at the time of the County's application did not limit an applicant to using only a FEMA BCA module, the policy stated that, if an applicant uses an alternate methodology, FEMA must approve the alternate BCA methodology in advance. Such an alternate methodology had to be consistent with FEMA's modules and use NPV in calculating project costs and benefits.

FEMA officials said that they had a large void in their HMGP grants management team and that they are now focusing on modernizing their overall grants portfolio management. Additionally, in July 2011, FEMA Headquarters released a standardized application review process for all regions to use. After we discussed the County's incorrect BCA methodology with FEMA officials, they recommended that TDEM suspend additional funding of this project pending resolution of our audit report.

FEMA established its cost effectiveness analysis based on the principle that a project has to return more money over its life than it costs initially. The return is money saved because a mitigation measure reduces or prevents future damages. The NPV of benefits is the total value of benefits over a project's useful life, discounted at a rate provided by the Office of Management and Budget in its Circular A-94, Revised, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*. FEMA calculates the NPV of annual inspection and vegetation removal costs in the same manner.



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The County established cost effectiveness by assuming that it would fund the project on its own. To establish project costs, the County would incur a \$7 million debt for 30 years at 5.5 percent interest, which was in line with its other debt instruments at the time it submitted its HMGP application. The County added the estimated yearly maintenance costs to the total amortized costs to determine total project costs. The County divided those costs by the project’s useful life of 100 years, and then divided the average annual benefit (projected by a U.S. Department of Agriculture software application, not a FEMA BCA module) by the average annual cost to arrive at the benefit cost ratio of 1.17.

The County’s methodology was inappropriate for several reasons: it was not consistent with any of FEMA’s BCA modules, it was not approved by FEMA in advance of its use, and it established project costs based on a debt it would not fully incur because FEMA would fund 75 percent of the project. However, the most significant flaw in the County’s methodology was that it did not consider the present value of future benefits.

Table 1 compares the BCA methodology the County used to the methodology that incorporates the use of NPV. The project cost, annual maintenance cost, average annual benefit amount, and the project’s useful life used in both methodologies are the same as those the County used in its project application.

Table 1: Comparison of County’s BCA Methodology to Required Methodology

Comal County Methodology		Required Methodology	
2006 Cost of Project	\$7,000,000	2006 Cost of Project	\$7,000,000
Total Principal and Interest Payments Over a 30-year Period	\$14,372,407		
Assumed Average Annual Cost Over a 100-Year Useful Life	\$143,724		
Annual Maintenance Costs	\$7,323	Annual Maintenance Costs	\$7,323
		Net Present Value (NPV) of Annual Maintenance Costs	\$104,499
Annual Cost of Structure	\$151,047	NPV of Total Project Cost	\$7,104,499
Average Annual Benefit	\$177,289	Average Annual Benefit	\$177,289
		NPV of Average Annual Benefit	\$2,529,914
Benefit to Cost Ratio*	1.17	Benefit to Cost Ratio**	0.36

* Average Annual Benefit divided by Annual Cost of Structure

** NPV of Average Annual Benefit divided by NPV of Total Project Costs



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The use of NPV, as required by FEMA regulations, results in a project benefit cost ratio of 0.36. Because this ratio is not one or greater, the County's project is not cost effective and therefore, not eligible for HMGP funding.

RECOMMENDATIONS

We recommend that the Acting Regional Administrator, FEMA Region VI:

Recommendation 1: Disallow \$16,302,516 (\$12,226,887 Federal share) as ineligible because the project did not meet HMGP eligibility requirements.

Recommendation 2: Develop and implement project review and approval processes and procedures to ensure that FEMA Region VI enforces project eligibility requirements in the future.

DISCUSSION WITH MANAGEMENT AND AUDIT FOLLOWUP

We discussed our finding and recommendations with County, TDEM, and FEMA officials and have included their comments in this report as appropriate. We also provided a draft report in advance to these officials and discussed it at exit conferences held on May 8, 2012, with FEMA; May 16, 2012, with TDEM; and May 17, 2012, with the County. FEMA officials agreed with our finding and recommendation 2, but withheld comment on recommendation 1. TDEM and the County withheld comment on the finding and both recommendations.

Within 90 days of the date of this memorandum, please provide our office with a written response that includes your (1) agreement or disagreement, (2) corrective action plan, and (3) target completion date for the recommendations. Also, please include responsible parties and any other supporting documentation necessary to inform us about the current status of the recommendations. Until your response is received and evaluated, the recommendations will be considered open and unresolved.

Consistent with our responsibility under the *Inspector General Act*, we are providing copies of our report to appropriate congressional committees with oversight and appropriation responsibility over the Department of Homeland Security. We will post the report on our website for public dissemination. Significant contributors to this report were Tonda Hadley, Moises Dugan, Paige Hamrick, Sharon Snedeker, and Jacob Farias.



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Should you have questions, please call me at (202) 254-4100, or your staff may contact Tonda Hadley, Director, Central Regional Office, at (214) 436-5200.



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EXHIBIT

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FEMA Disaster Number 1606-DR-TX**

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