

U.S. Department of Homeland Security
 Eastern Region
 Office of Emergency Management Oversight
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Homeland Security

December 4, 2008

MEMORANDUM FOR: Major P. (Phil) May, Regional Administrator
 FEMA Region IV *C. David Kimble*

FROM: C. David Kimble, Director
 Eastern Regional Office

SUBJECT: *Hurricane Ivan, Dennis, and Katrina Activities for
 Baldwin County, Alabama*
 Public Assistance Identification Number 003-99003-00
 FEMA Disaster Nos. 1549, 1593, and 1605-DR-AL
 Report Number DA-09-03

We audited FEMA Public Assistance funds awarded by the Alabama Emergency Management Agency (AEMA), a FEMA grantee, to Baldwin County, Alabama, for removal and disposal of debris, emergency protective measures, and repair of buildings and roads damaged as a result of Hurricanes Ivan, Dennis, and Katrina. Our audit objective was to determine whether the county accounted for and expended FEMA funds according to federal regulations and FEMA guidelines.

As of January 2008, the county had received awards totaling \$41.3 million and had received \$35.5 million of FEMA funds under the three disasters. We limited our review to \$39.6 million awarded under 23 large projects¹ and 3 small projects (see Exhibits 1 and 2). The specifics for each disaster are shown in the table below.

Disaster	Disaster No.	Amount Awarded (Millions)	Large Projects Audited	Small Projects Audited	Audit Scope (Millions)	Federal Funds Received (Millions)
Hurricane Ivan	1549	\$36.0	16	3	\$35.1	\$31.1
Hurricane Dennis	1593	\$.8	2	0	\$.6	\$.7
Hurricane Katrina	1605	\$4.5	5	0	\$3.9	\$3.9
Total		\$41.3	23	3	\$39.6	\$35.7

¹ Federal regulations in effect at the time of Hurricanes Ivan, Dennis, and Katrina set the large project thresholds at \$54,100, \$55,500, and \$55,500, respectively.

Under Hurricane Ivan, the federal cost share was 90%, and under Hurricanes Dennis and Katrina, the federal cost share was 100%. For Hurricane Ivan, the audit covered the period September 2004 through February 2008. The audit periods for Hurricanes Dennis and Katrina were July 2005 through February 2008, and August 2005 through February 2008, respectively.

We conducted this performance audit under the authority of 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 on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

We judgmentally selected samples of project cost documentation (generally based on dollar value); interviewed county, AEMA, and FEMA personnel; reviewed the county's method of disaster-grant accounting and its procurement policies and procedures; and performed other procedures considered necessary under the circumstances. We did not assess the adequacy of the county's internal controls applicable to its grant activities because it was not necessary to accomplish our objectives. We did, however, gain an understanding of the county's grant accounting system and policies and procedures for administering the activities provided for under the FEMA awards.

BACKGROUND

During the 11-month period of September 2004 through August 2005, the county was struck by three hurricanes: Ivan in September 2004, Dennis in July 2005, and Katrina in August 2005. According to county records, more than 2.6 million cubic yards of construction and demolition (C&D) and vegetative debris were generated by the hurricanes. The majority of the debris was generated by Hurricane Ivan with over 2.2 million cubic yards, or 88% of the debris collected and disposed of by the county under the three disasters.

FEMA's Public Assistance (PA) Grant Program provides assistance to states, local governments, and certain non-profit organizations to recover from and to repair damages resulting from major disasters or emergencies declared by the President. The PA program is administered through a coordinated effort between FEMA, the state (grantee), and the subgrantees.

The state is responsible for the use of PA funds, for notifying the subgrantees that funds are available, and for disbursing those funds to the subgrantees. The state is also responsible for providing technical advice and assistance to eligible subgrantees, providing support for damage assessment operations, and submitting the necessary paperwork for grant awards.

The subgrantee is responsible for completing the scope of work identified in project worksheets in accordance with federal laws and regulations and for preparing and submitting documented summaries of costs to the state for reimbursement.

RESULTS OF AUDIT

The county's claims under the three disasters included \$10.5 million (FEMA share \$9,547,088) of questioned costs resulting from excessive and duplicate charges, and costs covered by insurance proceeds.

- A. Tipping Fees. The county claimed \$8.5 million in tipping fee charges for disposing of vegetative debris at county-owned landfills under debris removal projects for Hurricanes Ivan, Dennis, and Katrina. However, we determined that \$7.7 million of the charges were excessive and did not represent actual costs associated with disposal of the debris.

Under the three disasters, the county's debris removal contractor picked up and hauled hurricane-generated debris (vegetative and C&D) directly to county-owned landfills.² The contractor invoiced the county a contracted cubic yard rate for hauling the debris and a \$4.15 tipping fee, which was assessed to the contractor by the county, for every cubic yard of debris that was brought to the landfills. The county paid the contractor the invoiced amount, which included the tipping fees. After the contractor received the payment from the county, the tipping fees were returned to the county where they were deposited into an interest bearing account. The contractor's invoices became the basis of the county's claim to FEMA for the debris removal project worksheets.

After the contractor delivered the debris to the landfills, county workers buried the C&D debris in the landfills and reduced the vegetative debris by burning. The county claimed a total of \$36.4 million for debris picked up and delivered to the landfills by the contractor under the three disasters, which included \$8.5 million in tipping fee charges related to the disposal of vegetative debris.

FEMA reimburses tipping fees to compensate applicants for the diminished capacity of a landfill resulting from the disposal of disaster-generated debris. As stated above, the county burned the vegetative debris to reduce the landfill space that would have been used had the raw vegetative debris been buried in the landfills. The county's claim for tipping fees, however, was based on the raw volume of debris brought to the landfills by the contractor. As a result, the county's claim of \$8.5 million for tipping fees for disposal of vegetative debris is excessive and does not represent the county's actual costs for disposal of such debris. According to federal cost principles for State, Local, and Indian Tribal Governments (*OMB Circular A-87, Attachment A, Paragraph C.3a.*), a cost is allocable to a particular cost objective if the goods or services involved are chargeable or assignable to such cost objective in accordance with relative-benefits received.

According to FEMA debris removal guidance (*Debris Operations Job Aid, FEMA 9580.1, August 2000, page 21*), burning vegetative debris reduces its volume by approximately 95%. According to county records, 2.1 million cubic yards of unprocessed vegetative debris were brought to the county landfills for disposal after the three disasters. Using FEMA's estimated 95% reduction rate, we calculated that the 2.1 million cubic yards of debris was reduced to 107,000 cubic yards of ash. Based on the 107,000 cubic yards of residual ash, we determined that

² Under Hurricane Ivan, vegetative debris was initially brought to county-established temporary sites where it was burned. However, the county closed the temporary sites less than a month after they were established.

the county should have been reimbursed \$443,000 (107,000 cubic yards x \$4.15) for tipping fees associated with disposing of the vegetative debris into the landfills, or \$8.05 million less than the amount claimed and received by the county.

Because the county charged a tipping fee on the unprocessed volume of debris entering the landfills, the labor, equipment, or material costs for burning the vegetative debris were not claimed. According to FEMA guidelines (*Public Assistance Guide*, FEMA 322, October 1999, pages 33-36), if an applicant uses its own workforce to accomplish eligible emergency work, including debris removal activities, it can claim the reasonable costs of such work. These costs include overtime pay and associated benefits of its permanently employed personnel and costs of temporary employees, equipment, materials, and rental equipment used in the performance of the work. We requested the above cost data from county officials for each of the three disasters. However, they told us that they did not separately account for the costs of processing disaster-related vegetative debris because FEMA officials advised them that the tipping fee of \$4.15 per cubic yard was an acceptable charge for reimbursement and included all eligible costs.

Nonetheless, during our review of FEMA Region IV project files, we identified an unprocessed project worksheet, dated March 9, 2005, on which the county had requested reimbursement of \$450,172 for force account overtime labor, material, and equipment costs. According to a county official, the \$450,172 represented the county's total costs associated with burning Hurricane Ivan vegetative debris. We asked for documentation to support the \$450,172 but the official could only provide records for \$366,890 of costs, which covered the period September 6, 2004, through December 26, 2004. Accordingly, we reduced the \$8.5 million in questioned tipping fees to \$7.7 million to account for the \$366,890 of identified eligible costs. The table below shows the calculation of the \$7.7 million of questioned tipping fee charges.

Description	FEMA 1549 Hurricane Ivan	FEMA 1593 Hurricane Dennis	FEMA 1605 Hurricane Katrina	Total
Total Cubic Yards (Vegetative/Stumps)	1,821,607	44,561	192,710	2,058,878
Times 5 % residual (95 % reduction rate)	.05	.05	.05	.05
Estimated cubic yards buried at the landfills	91,080	2,228	9,636	102,944
Times tipping fee rate	\$4.15	\$4.15	\$4.15	\$4.15
Estimated Eligible Tipping Fees for Ash Disposal	\$ 377,982	\$ 9,246	\$ 39,990	\$ 427,218
Other Eligible costs	\$ 366,890	0	0	\$ 366,890
Total Eligible Costs	\$ 744,872	\$ 9,246	\$ 39,990	\$ 794,108
Less Claimed Costs for Vegetative Debris	(\$7,559,819)	(\$ 172,853)	(\$ 799,745)	(\$8,532,417)
Total Excessive Tipping Fees	\$6,814,947	\$ 163,607	\$ 759,755	\$7,738,309

County Response: County officials said that the costs should be allowed because debris removal guidance published by FEMA gives very little direction for entities that own and operate a landfill. According to the officials, FEMA reviewed the county's debris contract and the tipping fees charged by the landfills and determined them to be reasonable when compared with neighboring jurisdictions and prior debris response efforts. They said that the county's solid waste department charged the normal and customary amount of \$4.15 per cubic yard that had been in effect since January 1999, and that the fee included the costs of managing, monitoring, handling, burning, and final disposition of the hurricane-related debris.

They also disagreed with the 95% reduction rate factor for vegetative debris because they said numerous loads of vegetative debris were not burned because they were contaminated with harmful or hazardous materials. Furthermore, they said that an on-site FEMA representative specifically instructed them to not track individual expenses associated with managing, handling, and disposing of the debris because such costs were included in the tipping fee. Therefore, they said it is now impossible to go back and accurately determine the exact volume of debris burned versus debris actually deposited in the landfills. They also said that our calculation does not take into consideration the long-term costs and expenses associated with the diminished life and capacity of the landfills resulting from disposal of the hurricane debris.

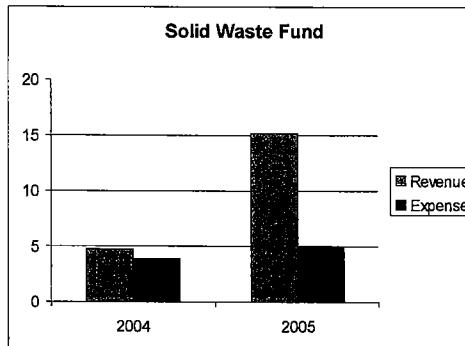
OIG Response: According to the FEMA's *Public Assistance Guide* (FEMA 322, October 1999, pages 33-36), when an applicant using its own workforce to accomplish eligible emergency work, it is entitled to be reimbursed the reasonable costs of such work. Since the county used its own workforce to reduce and dispose of the vegetative debris it should only be reimbursed the reasonable costs of overtime pay and associated benefits of its permanently employed personnel and the costs of temporary employees, equipment, materials, and rental equipment used in the performance of the work. It should also be reimbursed eligible tipping fees associated with final disposition of the debris into the landfills as we have indicated in the discussion of the finding.

We also acknowledge that it is possible some of the vegetative debris could have been contaminated, which would have affected the reduction rate. However, it appears that this may have been minimal. In the October 5, 2004, minutes of the Baldwin County Commission, which was held several weeks after Hurricane Ivan, the county's landfill director advised the commission that "the county is not taking away from the air [landfill] space because of the reduction they are getting." Therefore, absent documentation of the volume of debris actually buried in the landfills, we believe that the 95% reduction rate factor determined by FEMA provides a reasonable basis for the calculation of excessive tipping fees.

Furthermore, according to federal regulations (44 CFR 13.22(a)(2)), grant funds may not be used for any fee or profit to a grantee or subgrantee. However, financial data contained in the county's audited financial statements for fiscal year 2005 indicates that the county's solid waste fund, which includes the costs of maintaining the county's landfills, benefitted from tipping fees related to the hurricanes.³ For instance, as shown in the bar graph below, revenues in the fund increased

³ The period covered by fiscal year 2005, which was October 1, 2004 through September 30, 2005, was used for comparison purposes because this would have been the period most affected by debris removal activities of Hurricanes Ivan and Dennis, which occurred in September 2004 and July 2005, respectively.

3.25 times, from \$4.7 million in 2004 to over \$15.2 million in 2005, while expenses increased only 1.29 times, from \$3.9 million to \$5.0 million for the same period. The notes to the financial statements indicate that the increase in revenue was attributable to increase in landfill fees from hurricane debris disposal. The notes also indicate that the expenses include an allowance for landfill closure and post-closure costs based on the amount of landfill space used during the year. Accordingly, we believe that this financial data provides further evidence that the county's cost to dispose of the vegetative debris was significantly less than the amount it claimed to FEMA.



- B. Stump Removal Charges. The county claimed \$2,441,000 of contract costs associated with the removal of stumps based on a contracted per stump price of \$100 for small stumps, \$300 for medium stumps, and \$500 for large stumps. The prices included the costs of extracting the stumps from the ground and hauling them to a final disposal site. However, county officials told us that the contractor did not extract the stumps. Instead, the stumps were extracted by individual homeowners and placed on the curb for pickup and disposal by the contractor. As a result, we question the reasonableness of \$1,633,295 of the claim because it includes the cost of an activity (extraction) that was not performed by the contractor.

According to federal cost principles (U.S. Office of Management and Budget, *Circular A-87*), costs must be both necessary and reasonable to be allowable under a federal award. The Circular defines a reasonable cost as cost that does not exceed that which would be incurred by a prudent person under the circumstances prevailing at the time the decision was made to incur the cost. In determining cost reasonableness, the Circular also requires grant recipients to consider sound business practices, federal regulations and guidelines, and market price for comparable goods and services.

To determine reasonable costs for the stump removal work actually performed by the county's contractor (picking up stumps from curbside and hauling them to a disposal facility), we reviewed guidelines (*Disaster Specific Guidance #17*) established by FEMA's Region IV office in November 2004, a few months after Hurricane Ivan made landfall. Although the guidance specifically addresses the eligibility of stump removal costs for disaster activities in Florida, we believe it provides a basis for determining reasonable contract costs to be reimbursed by FEMA for similar work in other localities. In this guidance, FEMA stated that stumps picked up from public rights-of-way by an applicant's contractor and transported to a disposal site would be reimbursed based on the unit cost per volume or weight, at rates (as determined by a FEMA

stump conversion table) consistent with the debris removal contract between the applicant and the contractor. Accordingly, using (1) the number and sizes of stumps collected by the contractor, (2) the FEMA stump conversion table, and (3) the county's average contract cubic yard price of \$8.23 for hauling vegetative debris, we concluded that reasonable contract costs for picking up and hauling the stumps from the county's rights-of-ways was \$807,705, or \$1,633,295 less than the amount claimed. Therefore, we question the \$1,633,295 of excessive contract charges as shown in the table below.

Description	Small Stumps (12 to 23.9")	Medium Stumps (24" to 47.9")	Large Stumps (48" plus)	Total
Number of stumps collected by debris removal contractor	13,472	2,706	564	16,742
Average CY/ Stump ⁴	4.1	11.5	20.9	
Total Cubic Yards of Stumps (conversion from diameter)	55,235	31,119	11,787	98,141
Avg. Cost of Hauling Debris	\$8.23	\$8.23	\$8.23	
Eligible Costs	\$454,584	\$ 256,109	\$ 97,012	\$807,705
Amount Claimed	(\$1,347,200)	(\$811,800)	(\$282,000)	(\$2,441,000)
Excessive Stump Removal Fees	\$892,616	\$ 555,691	\$ 184,988	\$1,633,295

County Response: County officials said that the costs should be allowed because FEMA officials had reviewed and approved the county's debris removal contract, which included the costs for stump removal.

OIG Response: We disagree that these costs should be allowed. The contractor did not extract the stumps, but rather picked up and hauled them to a disposal site after they had been placed on the curb by homeowners. Therefore, the county should only be reimbursed reasonable costs for the work that was actually performed by the contractor.

- C. Interest Earned on Tipping Fees. As discussed under Finding A, we concluded that the county's claim under the three disasters included excessive tipping fee charges for disposal of vegetative debris. In total, FEMA reimbursed the county an estimated \$10.1 million of tipping fee charges for vegetative, and construction and demolition debris, which were deposited into an interest bearing account. According to county records, the funds had earned interest totaling almost \$1.6 million as of February 11, 2008. Since the county received FEMA reimbursement on an estimated \$7.7 million in excessive tipping fees and benefited from such reimbursement by means of interest income, we believe that a proportionate share of the interest income should be returned to FEMA. Accordingly, using the total interest earnings of \$1.6 million, we calculated that \$1,085,151 of the interest was applicable to the excess tipping fees identified during the audit. Therefore, we question the \$1,085,151.

⁴ The average cubic yards for each size stump as determined by FEMA's Stump Conversion Table.

County Response: County officials disagreed with this finding because they maintain that the county did not receive excessive tipping fees.

D. Duplicate Charges. The county's claim under Hurricane Ivan included duplicate charges of \$28,569, as follows:

- Under Project 2099, the county claimed \$15,452 to repair equipment used during the disaster, which included \$3,299 for mechanics and \$12,153 for service vehicles. The county, however, used rates from the FEMA Schedule of Equipment Rates, which already incorporates the costs of depreciation, overhead, all maintenance, field repairs, fuel, lubricants, etc., to charge equipment costs to the FEMA claim. As a result, the costs were charged twice to the claim, once as a direct charge and again as part of the equipment rate.
- Under Project 2768, the county inadvertently charged the FEMA claim \$13,117 of material costs twice, once as asphalt and again as limestone.

County Response: County officials concurred with this finding.

E. Insurance Proceeds. According to federal regulations (44 CFR 206.250(c)), insurance recoveries shall be deducted from otherwise eligible FEMA project costs. The county's claim under Hurricane Ivan, however, included \$10,302 of costs that were covered by insurance proceeds, as follows:

- Under Project 3113, the county applied insurance proceeds of \$114,117 that reduced the project award down to \$5,433 from \$119,550. However, actual costs to complete work under the project totaled \$100,316, which was less than the insurance proceeds. Similarly, under Project 1762, the county was awarded \$1,041 to complete work under the project but received \$2,854 of insurance proceeds, which covered the costs of the project's authorized work. As a result, the \$6,474 of FEMA funding received under the two projects was not needed.
- Under Project 1042, the county received FEMA funding of \$10,587 to complete work under the project but failed to reduce project costs for insurance proceeds of \$3,828.

County Response: County officials concurred with this finding.

RECOMMENDATION

We recommend that the Regional Administrator, FEMA Region IV, in coordination with AEMA, disallow the \$10,495,626 of questioned costs, consisting of:

- \$7,738,309 of excessive tipping fee charges,
- \$1,633,295 of excessive contract charges for stump removal,
- \$1,085,151 of interest earned on tipping fees,
- \$28,569 of duplicate charges, and
- \$10,302 of costs covered by insurance proceeds.

DISCUSSION WITH MANAGEMENT AND AUDIT FOLLOW-UP

The audit results were discussed with county and AEMA officials on April 16, 2008, and with FEMA officials on April 29, 2008. County officials disagreed with Findings A, B, and C. Their comments, where appropriate, have been incorporated into the body of this report.

Please advise me by February 2, 2009, of actions taken to implement the recommendations contained in this report. Should you have any questions, please contact me at (404) 832-6702. Key contributors to this assignment were Mary Stoneham and Tom Going.

cc: DHS Audit Liaison
FEMA Audit Liaison
Deputy Director, GCRO
Chief Financial Director, Gulf Coast Recovery Office
Public Assistance Office, FEMA Alabama TRO
Alabama State Coordinating Officer
Alabama Legislative Auditor
Director of Finance, Gulf Coast Recovery Office

Baldwin County, Alabama
FEMA Disaster 1549-DR-AL
Schedule of Amount Awarded, Claimed, and Questioned

Project Number	Amount Awarded	Amount Claimed	Amount Questioned
Large Projects:			
5	\$ 3,209,539	\$ 3,209,539	
10	1,917,928	1,917,928	
192	10,614,067	10,614,067	
471	913,267	913,267	
607	6,072,010	6,072,010	
632	4,373,148	4,373,148	
3219	331,568	331,568	
3193	542,735	542,735	
3221	998,177	998,177	
2095	3,650,936	3,650,936	
1278	205,893	205,893	
3124	274,028	274,028	
1245	4,360	4,360	
Sub-total Debris Removal ⁵	\$ 33,107,656	\$33,107,656	\$ 9,446,514
2099	936,761	936,761	15,452
2768	274,841	274,841	13,117
3122/254	800,098	800,098	
Total-Large	\$ 35,119,357	\$35,119,357	\$ 9,475,083
Small Projects:			
1762	\$ 1,041	\$ 1,041	\$ 1,041
1042	10,588	10,588	3,828
3113	5,434	5,434	5,434
Total-Small	\$ 17,063	\$ 17,063	\$ 10,302
Total-All	\$35,136,420	\$35,136,420	\$ 9,485,385

⁵ We audited the debris removal projects (Category A) as one project. Therefore, the questioned costs of \$9,446,514 are applicable to all of the debris removal projects.

Baldwin County, Alabama
Schedule of Amount Awarded, Claimed, and Questioned
FEMA Disaster Nos. 1593 and 1605-DR-AL
Large Projects

Disaster 1593 – Hurricane Dennis			
Project Number	Amount Awarded	Amount Claimed	Amount Questioned
710	\$ 69,866	\$ 69,866	
711	577,691	577,691	\$ 179,014
Total	\$ 647,557	\$ 647,557	\$ 179,014

Disaster 1605 – Hurricane Katrina			
Project Number	Amount Awarded	Amount Claimed	Amount Questioned
21	\$ 2,917,202	\$ 2,917,202	\$ 831,227
281	301,075	301,075	
586	245,607	245,607	
1482	138,835	138,835	
1588	303,273	303,273	
Total	\$ 3,905,992	\$ 3,905,992	\$ 831,227