

**FEMA Should Recover
\$20.4 Million in Grant
Funds Awarded to
Diamondhead Water and
Sewer District, Mississippi**





DHS OIG HIGHLIGHTS

FEMA Should Recover \$20.4 Million in Grant Funds Awarded to Diamondhead Water and Sewer District, Mississippi

May 4, 2018

Why We Did This Audit

The Diamondhead Water and Sewer District (District), received a Federal Emergency Management Agency (FEMA) grant award of \$49.3 million from the Mississippi Emergency Management Agency (Mississippi) for damage resulting from Hurricane Katrina in 2005. We had concerns because it took the District about 10 years to break ground on its new wastewater treatment plant. We also wanted to determine whether FEMA accurately applied its “50 Percent Rule.”

What We Recommend

FEMA should disallow \$20.4 million of ineligible and unsupported costs, and direct Mississippi to provide additional technical assistance and monitoring to the District for its compliance with Federal Requirements.

For Further Information:

Contact our Office of Public Affairs at (202) 254-4100, or email us at DHS-OIG.OfficePublicAffairs@oig.dhs.gov

What We Found

Mississippi did not fulfill its grantee responsibility to ensure the District followed applicable Federal grant requirements.

Additionally, FEMA officials incorrectly applied the agency’s “50 Percent Rule” – a cost comparison tool which FEMA officials use to compare certain repair costs to certain replacement costs when deciding to replace, rather than repair, the Diamondhead Wastewater Treatment Plant. As a result, FEMA awarded the District \$18.9 million in ineligible replacement costs.

Finally, we identified \$1.5 million of improper procurement, unsupported costs, duplicate insurance benefits, and uncompleted project costs that FEMA should disallow to the District.

These problems were largely the result of Mississippi not fulfilling its grantee responsibility to ensure the District properly managed FEMA funds. Mississippi is responsible for monitoring subgrant activities, and is compensated with Federal funds to support subgrant management and oversight. It is FEMA’s responsibility to hold Mississippi accountable for proper grant administration.

Therefore, FEMA should disallow \$20.4 million of ineligible and unsupported costs, and direct Mississippi to provide additional technical assistance and monitoring to the District.

FEMA Response

FEMA officials agreed with our findings and seven recommendations. Appendix D includes FEMA’s written response in its entirety.



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Department of Homeland Security

Washington, DC 20528 / www.oig.dhs.gov

May 4, 2018

MEMORANDUM FOR: Gracia Szczech
Regional Administrator, Region IV
Federal Emergency Management Agency

FROM: John E. McCoy II *JEM II*
Assistant Inspector General for Audits

SUBJECT: *FEMA Should Recover \$20.4 Million in Grant Funds
Awarded to Diamondhead Water and Sewer District,
Mississippi*

Attached for your action is our final report, *FEMA Should Recover \$20.4 Million in Grant Funds Awarded to Diamondhead Water and Sewer District, Mississippi*. We incorporated the formal comments your office provided.

The report contains seven recommendations. Your office concurred with all recommendations. Based on information provided in your response to the draft report, we consider recommendations 1 and 7 closed and recommendation 2 resolved and open. To close recommendation 2, the Federal Emergency Management Agency (FEMA) must provide documentation showing that it directed Mississippi to provide additional technical assistance and monitoring to the District. In its response to our draft report, FEMA initially expected to complete its proposed corrective actions to close recommendations 3, 4, and 5 by January 31, 2018. However, after we requested an update from FEMA on the date it expects to complete corrective actions, FEMA indicated it wanted to wait for the final report. Therefore, we consider report recommendations 3, 4, and 5 unresolved and open. Although FEMA agreed with recommendation 6, FEMA did not provide a date it expects to complete its proposed corrective action; therefore, we consider recommendation 6 unresolved and open. Please provide our office documentation necessary to inform us about the status of the open recommendations.

We audited FEMA Public Assistance grant funds awarded to the Diamondhead Water and Sewer District (District), Mississippi. As of September 14, 2016, the District had received a Public Assistance award of \$49.3 million from the Mississippi Emergency Management Agency (Mississippi), a FEMA grantee, for damages resulting from Hurricane Katrina in August 2005. The award provided 100 percent funding for emergency protective measures and permanent work. We audited five projects totaling \$41.3 million — about 84 percent — of the \$49.3 million award. Table 1 shows the gross and net award amounts before and after insurance and other reductions for all projects and for those in our scope.



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Table 1: Gross and Net Award Amounts

	Gross Award Amount	Insurance Reduction	Other Reduction	Net Award Amount
All Projects	\$49,332,979	\$455,590	\$64,376	\$48,813,013
Audit Scope	\$41,266,180	\$271,207	\$13,421	\$40,981,552

Source: FEMA project worksheets

As of September 14, 2016, the District had submitted claimed costs of \$35.5 million to Mississippi for reimbursement. The District had not completed work on all projects and had not submitted a final claim to Mississippi for all project expenditures.

Consistent with our responsibility under *the Inspector General Act*, we will provide copies of our report to congressional committees with oversight and appropriation responsibility over the Department of Homeland Security. We will post the report on our website for public dissemination, including FEMA’s formal comments as an appendix to the report.

Please call me with any questions or your staff may contact Paul Wood, Acting Deputy Assistant Inspector General for Audits, at (202) 254-4100.

Background

On August 29, 2005, Hurricane Katrina’s Category 5 winds, coupled with an 18-foot tidal surge, devastated the community of Diamondhead in Hancock County, Mississippi.¹ The storm destroyed homes and businesses, deposited heavy debris, and caused extensive damages to infrastructure — specifically, the Diamondhead Wastewater Treatment Facility, which serves approximately 3,900 residential and commercial customers. The plant was out of service for 4 weeks after the storm and required temporary repairs to function. Using FEMA funding, the District’s personnel resumed operations with limited capacity. However, the plant sustained permanent damage due to corrosion caused by the inundation of salt water. The President issued a major disaster declaration for Hancock County on August 29, 2005.

The “50 Percent Rule”

The 50 Percent Rule is a decision-making tool that FEMA officials use to compare certain repair costs to certain replacement costs to determine whether

¹ The Saffir–Simpson hurricane wind scale (SSHWS) classifies hurricanes that exceed the intensities of tropical depressions and tropical storms into five categories distinguished by the intensities of their sustained winds. The highest classification on the scale is Category 5, with winds exceeding 156 miles per hour.



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FEMA should fund the repair or replacement of a disaster-damaged facility (figure 1).² The calculation used to make that decision specifically excludes many allowable repair and replacement costs that FEMA will ultimately pay under the Public Assistance program.

FEMA policy excludes these costs because including them in the repair or replacement calculation could distort the results. For example, according to FEMA, if the repair side of the calculation included costs of upgrading undamaged elements of a building, the repair costs for older buildings with minor damage could exceed the 50 percent threshold due to the comparatively high cost of code-required upgrades, among other factors.

FEMA bases its exclusion of certain costs on the premise that, when a facility is so severely damaged (not including code-required whole-building upgrades) that the cost to repair the damage exceeds 50 percent of the cost of a new building, it is often justifiable and reasonable to replace the building.

Specifically, the numerator of the fraction includes only the direct costs of repairing the disaster damage, referred to as “hard” costs, and may include costs associated with the current repair codes and standards that apply to the damaged elements only.³ The numerator does not include costs associated with the following:

- a. upgrades and other elements triggered by building codes and standards;
- b. design work associated with upgrades;
- c. demolition of an entire facility;
- d. site work;
- e. applicable project management costs;
- f. contents; and
- g. hazard mitigation measures.

The denominator of the fraction is the cost of replacing the facility based on its pre-disaster design and according to codes and standards currently in effect. These codes and standards may relate to structural elements such as mechanical or electrical systems, or the size of a structure. The denominator does not include costs associated with the following:

- a. demolition;
- b. site work;

² According to 44 Code of Federal Regulation (CFR.) § 206.226(f)(1), “A facility is considered repairable when disaster damages do not exceed 50 percent of the cost of replacing a facility...” FEMA refers to this regulation as the “50 Percent Rule” and implements it according to its Disaster Assistance Policy 9524.4.

³ FEMA Disaster Assistance Policy 9524.4, § VII.C.2 (as amended in March 2009). Project 11240 was written in November 2010.



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- c. applicable project management costs;
- d. contents; and
- e. hazard mitigation measures.

Deciding to repair a facility may not necessarily result in cost savings to taxpayers after all allowable costs under the Public Assistance program are included. However, FEMA caps the total repair costs at the estimated cost to replace the facility.

Figure 1: Repair vs. Replacement (50 Percent Rule)

IF	$\frac{\text{Repair Cost}}{\text{Replacement Cost}} < 50\%$	THEN only the repair cost is eligible
IF	$\frac{\text{Repair Cost}}{\text{Replacement Cost}} \geq 50\%$	THEN the replacement cost is eligible

Source: FEMA 322 *Public Assistance Guide*, Ch. 2, at 29 (FEMA-322, July 2001)

OIG’s Recommendations and FEMA’s Efforts to Clarify Its 50 Percent Rule

In previous audits which involved the 50 Percent Rule, Office of Inspector General made several recommendations to FEMA and agreed to work with FEMA officials to assist in improving and clarifying policies for replacement decisions.⁴ For example, in response to a June 2012 Office of Inspector General audit report, *FEMA’s Decisions to Replace Rather than Repair Buildings at the University of Iowa* (Audit Report DD-12-17), FEMA agreed that its policy and methods for implementing the 50 Percent Rule were in need of review and revision. In September 2015, in response to our recommendations, FEMA implemented a policy clarification to help prevent improper calculations.⁵

Results of Audit

Mississippi did not fulfill its grantee responsibility to ensure the District followed applicable Federal grant requirements. It is FEMA’s responsibility to hold Mississippi accountable for proper grant administration.

Additionally, FEMA officials made errors in calculating the 50 Percent Rule when deciding to replace, rather than repair, the Diamondhead Wastewater Treatment Plant. As a result, FEMA awarded the District \$18.9 million in

⁴ DHS OIG Audit Report No. OIG-14-123-D, *FEMA’s Progress in Clarifying its “50 Percent Rule” for the Public Assistance Grant Program*, August 7, 2014.

⁵ FEMA Recovery Policy 9524.4, Repair vs. Replacement of a Facility under 44 CFR § 206.226(f) (The 50 Percent Rule) – Policy Clarification and Cost Estimating and Review Requirements, September 2015 (Superseded on January 1, 2016).



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ineligible replacement costs. This occurred because FEMA did not follow the established guidelines for applying the 50 Percent Rule.

Finally, the District did not follow Federal procurement standards when awarding five contracts totaling \$990,179 for professional architectural and engineering (A/E) and construction services. Specifically, the District did not:

- take the required affirmative steps to ensure the use of disadvantaged firms when possible;
- provide full and open competition; or
- conduct an adequate cost or price analysis.

As a result, FEMA has no assurance that disadvantaged firms had sufficient opportunities to bid on federally funded work. Additionally, the lack of full and open competition increased the risk of favoritism, collusion, fraud, waste, and mismanagement of Federal funds. Finally, the absence of a cost or price analysis increased the likelihood of unreasonable contract costs and misinterpretations or errors in pricing.

In addition to the improper procurement, we also identified:

- \$332,138 of claimed costs that were not supported;
- \$172,861 in duplicate insurance benefits; and
- \$21,045 for a small project not completed.

This occurred because the grantee (Mississippi) did not ensure that the subgrantee (the District) understood and complied with grant requirements. Mississippi, as a FEMA grantee, is responsible for ensuring the District is aware of and complies with grant requirements, as well as for providing technical assistance and monitoring grant activities.

Therefore, FEMA should disallow \$20.4 million of ineligible and unsupported costs; and direct Mississippi to provide additional technical assistance and monitoring to the District to correct the deficiencies identified in this report and ensure compliance with grant requirements.

Finding A: Grant Management

Mississippi did not fulfill its grantee responsibility to ensure the District followed applicable Federal grant requirements, and FEMA did not ensure the grantee performed its responsibilities. The nature and extent of issues we identified concerning improper contract costs, costs not adequately supported, and duplicate insurance benefits demonstrate that Mississippi should have been more thorough in overseeing the District. Federal regulations require



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grantees to ensure that subgrantees are aware of Federal regulations; manage the operations of subgrant activity; and monitor subgrant activity to ensure compliance.⁶ Therefore, FEMA should direct Mississippi to provide additional technical assistance and monitoring to the District to ensure compliance with all Federal grant requirements for future disasters.

Finding B: Incorrect Decision to Replace Rather than Repair

FEMA officials incorrectly applied the 50 Percent Rule when deciding to replace, rather than repair, the Diamondhead Wastewater Treatment Plant. As a result, replacing the plant is estimated to cost \$18.9 million more than repairing it. FEMA calculated that the plant was 56.5 percent damaged and ultimately awarded the District \$36.5 million to relocate and replace the plant. However, FEMA's determination was made in error because it included data entry errors and costs not allowed under the 50 Percent Rule — specifically, costs for temporary facilities, site work, demolition, equipment rentals, and ancillaries.⁷ Additionally, FEMA did not include the cost of pilings⁸ in the replacement cost, which is required by FEMA guidelines. Our recalculation of the repair versus replacement percentage using the correct data revealed that the plant could be as low as only 30.78 percent damaged.

Appeals and Arbitration of 50 Percent Rule Actions

In September 2005, the District submitted a Request for Public Assistance to FEMA for disaster-related damages and was approved as an applicant eligible for Public Assistance. The District submitted FEMA its damage and repair estimates prepared by its engineering firm. In April 2006, under Project 8117, FEMA determined the Wastewater Treatment Plant as a single facility was 59 percent damaged and should be replaced in accordance with its 50 Percent Rule. In October 2006, FEMA issued additional guidance to supplement its 50 Percent Rule, reiterating only hard costs should be included in the calculation and that the 50 Percent Rule should apply to individual components of a wastewater treatment plant.⁹

In August 2007, FEMA prepared version 2 of Project 8117 to implement the new guidance, splitting the Wastewater Treatment Plant into 26 components. FEMA applied the 50 Percent Rule calculation to each of these 26 components separately. FEMA determined that 11 of the components were beyond 50

⁶ 44 CFR §§ 13.37(a)(2), 13.40(a).

⁷ See appendix B and related footnotes.

⁸ Pilings are wooden, concrete, or metal posts that are pushed into the ground and on which buildings or bridges are built. Pilings are often used in very wet areas so that the buildings do not flood.

⁹ FEMA Guideline #19 – Revision #1, FEMA-1604-DR-MS, *50 Percent Rule Calculation* (October 12, 2006), at 2, 4.



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percent damaged and therefore eligible for full replacement and relocation. Furthermore, FEMA determined that 7 components were less than 50 percent damaged and eligible for repairs; and the remaining 8 had no damages and, therefore, were not eligible for FEMA funding. Of the 11 components determined to be more than 50 percent damaged, 3 were ultimately removed from Project 8117 and written into a separate project (10942).

In June 2009, the District — in a letter to Mississippi — requested that the wastewater treatment plant be rated a “critical facility.”¹⁰ As a critical facility, the wastewater treatment plant is eligible for protection against a 500-year flood.¹¹ FEMA approved the request.

In September 2009, the District requested public assistance for the cost of pilings to build a new plant to 500-year flood requirements. Also in September 2009, FEMA added a comment to version 2 of Project 8117, stating that the cost of pilings may be an eligible expense for only those components that qualified for full replacement. A comment is also added to Project 11012, which covers the plant sitework, stating that assistance to elevate components will be limited to the less stringent 100-year flood level.¹²

In December 2009, the District appealed the 26 components decision, contending that full replacement costs should be eligible, including pilings to elevate to the 500-year flood level, plus relocation. In August 2010, in its response to the District’s appeal, FEMA determined that the plant —

should more properly be assessed as being composed of 14 identifiable components.... Moreover, FEMA has determined that the integrated nature of this facility is such that the entire plant should be assessed under the FEMA ‘50 percent rule’ as the multiple components of the facility cannot be easily segregated. When this calculation is applied to the 14 components, repair costs exceed 50 percent of the replacement costs of the plant (56.5 percent).¹³

FEMA granted full replacement costs and elevation to the 500-year flood level, but denied relocation costs. In September 2010, the District requested

¹⁰ “A critical facility should not be located in a floodplain if at all possible. If a critical facility must be located in a floodplain it should be provided a higher level of protection so that it can continue to function and provide services after the flood.” (www.fema.gov/critical-facility)

¹¹ Base Flood is defined as the flood having a 1 percent chance of being equaled or exceeded in any given year. The 1 percent annual chance flood is also referred to as the 100-year flood. The 0.2 percent annual chance flood is referred to as the 500-year flood. 44 CFR § 9.4.

¹² FEMA determined the Diamondhead Wastewater Treatment Plant was in the 100-year flood zone at the time of the disaster.

¹³ Letter from FEMA Regional Administrator to Executive Director of Mississippi Emergency Management Agency, August 6, 2010, at 1-2.



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arbitration, asserting that it should be granted relocation costs. In November 2010, FEMA and the District reached a settlement, granting relocation costs and capping the project at \$36.5 million.¹⁴ This figure is derived from a project estimate prepared by the District's engineering firm.

FEMA officials never incorporated the cost of pilings to elevate plant facilities to the 500-year flood level into their repair versus replacement decision as version 2 of Project 8117 directed after FEMA approved the District to elevate the plant to the 500-year flood level.

FEMA and the District's arbitration settlement is the result of the District's complaint about FEMA's 26 components decision, pilings to elevate to the 500-year flood level, and relocation costs; not disagreements over cost factors that should be included in the repair versus replacement calculation. Therefore, the issue concerning the use of incorrect cost factors is outside of the arbitration settlement decision.

FEMA's Repair Versus Replacement Calculation

In its calculation of repair versus replacement costs, FEMA made several mistakes when determining whether to repair or replace all of the 14 components. For 3 of the 14 components, the errors did not affect the separate repair versus replace percentages; however, the calculation errors concerning 11 of the components changed the percentage of each component (appendix B, table 5). Overall, these mistakes resulted in an erroneous repair versus replace percentage, and ultimately an incorrect replace and relocation decision. FEMA's calculations included data entry errors and excessive equipment rentals; as well as costs for demolition, temporary facilities, site work, and ancillaries, which are not allowed in the repair versus replace calculation under the 50 Percent Rule.

For example, FEMA erroneously included \$1.9 million in costs not allowed in the repair cost calculation of component 3. The calculation included —

- \$1.8 million to construct a temporary facility;
- \$82,652 for dewatering two ditches; and
- \$27,486 for excessive equipment rentals.

These costs are not allowed under FEMA guidelines. Therefore, the error led to a decision that it would be more feasible to replace component 3, rather than repair it.

¹⁴ The District filed a protective Second Appeal to request relocation costs of the Wastewater Treatment Plant.
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Finally, the cost of pilings is not included in FEMA’s calculation, although FEMA officials noted in version 2 of Project 8117 that “If it is later determined that piling is required for reconstruction at the existing site, the project worksheet would need to be re-evaluated.”¹⁵ In addition, FEMA guidelines provide that costs associated with elevating to the pre-existing Base Flood Elevation (BFE) — if formally adopted and enforced prior to the disaster — can be considered an official code and standard. Therefore, the cost to elevate to the BFE must be included in the Replacement Cost of the 50 Percent Rule calculation.¹⁶ The county in which the District is located formally adopted and enforced the BFE prior to the disaster¹⁷; therefore, costs associated with the pilings must be included in the replacement cost. The District’s engineer provided an estimate of the cost to replace the Diamondhead Wastewater Treatment Plant at the old site — including a cost of \$4.9 million for pilings, which FEMA deemed reasonable. However, after FEMA approved the costs of pilings, the repair and replacement costs were not re-evaluated to consider the effect of the pilings on the repair versus replacement decision. The re-evaluation in light of the \$4.9 million increase in pilings costs would reduce the repair versus replacement percentage to 30.78 percent (table 2).

Table 2. FEMA and Office of Inspector General (OIG) Calculation of 50 Percent Determinations

FEMA Calculation		OIG Calculation	
Repair	Replace	Repair	Replace
\$6,004,637	\$8,617,166	\$4,059,158	\$13,189,537
69.68%		30.78%	

Source: OIG analysis of cost estimates and calculations (appendix B, table 5)

Conclusion

After determining the amounts that FEMA improperly included in and excluded from the calculation, we recalculated the repair and replacement costs and determined that the percentage was only 30.78 percent. Therefore, FEMA should have awarded the District only \$17.6 million (\$10.1 million from Project 8117, \$103,426 from Project 10942, and \$7.4 million from Project 11012) for repair costs. FEMA could not provide a reason to defend its improper decision. Therefore, we recommend that FEMA deobligate \$18.9 million (\$36.5 million

¹⁵ FEMA Project 8117 Project Worksheet Report (December 2, 2010), at 5.

¹⁶ FEMA Guideline #19 – Revision #1, FEMA-1604-DR-MS, *50 Percent Rule Calculation* (October 12, 2006), at 3.
Disaster Specific Guidance #19 Revision #1

¹⁷ Minutes of the Board of Supervisors, Hancock County, Mississippi, December 2004, at 570.
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minus \$17.6 million) from the District for the Diamondhead Wastewater Treatment Plant.

Finding C: Contracting Procedures

The District did not follow Federal procurement standards in awarding five contracts totaling \$990,179 for professional A/E and construction services to repair the Diamondhead Wastewater Treatment Plant and various lift stations. As a result, FEMA has no assurance that disadvantaged firms received an opportunity to bid, the District selected the most qualified contractors, or that these costs were reasonable. This occurred because District officials were not aware of the cost or price analysis requirement. Furthermore, District officials did not offer an explanation as to why there was no full and open competition or affirmative steps taken for certain procurement actions. Finally, Mississippi’s lack of proper oversight contributed to the District improperly managing FEMA funds. Federal procurement standards at 44 CFR § 13.36 required the District, among other responsibilities, to —

1. take all necessary affirmative steps to ensure the use of small and minority firms, women’s business enterprises, and labor surplus area firms when possible (44 CFR § 13.36(e)(1));
2. conduct all procurement transactions in a manner providing full and open competition. Subgrantees may use noncompetitive procurement under certain circumstances, one of which is when the public exigency or emergency will not permit a delay resulting from competitive solicitation (44 CFR §§ 13.36(c)(1), 13.36(d)(4)(i)(B)); and
3. perform a cost or price analysis in connection with every procurement action, including contract modifications, to determine the reasonableness of the proposed contract price (44 CFR § 13.36(f)(1)).

FEMA may grant exceptions to Federal administrative grant requirements — which include Federal procurement standards — on a case-by-case basis (44 CFR § 13.6(c)). Table 3 summarizes the five contracts the District awarded and the associated \$990,179 that we question as ineligible.

Table 3. Contracts Non-compliant with Procurement Standards

Scope of Work	Amount Questioned	Noncompliance with Procurement Standards 1-3		
		1	2	3
Construction – Wastewater Treatment Plant	\$230,046	X		
Architect & Engineering Services Contract 1	143,743	X	X	X



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Architect & Engineering Services Contract 2	152,341			X
Architect & Engineering Services Contract 3	335,034			X
Architect & Engineering Services Contract 4	129,015	X	X	X
Total Amount	\$990,179			

Source: OIG analysis of District procurement records

Disadvantaged Firms

The District did not take all the required affirmative steps in awarding three contracts valued at \$502,804 for construction and A/E professional services for disaster work on seven project worksheets to repair the Diamondhead Wastewater Treatment Plant and various lift stations and sewer infrastructure. Therefore, FEMA has no assurance that disadvantaged firms received sufficient opportunities to bid on federally funded work, as Congress intended. The required steps listed at 44 CFR § 13.36(e)(2)(v) include using the services and assistance of organizations such as the Small Business Administration and the Department of Commerce’s Minority Business Development Agency in the solicitation and use of these firms. District officials said that they could not say why previous management had not taken affirmative steps when awarding these contracts, but that all bid advertisements are now sent to the Mississippi Development Authority (MDA) to be advertised through the Mississippi Procurement Technical Assistance Program, which operates as a bureau in the MDA Minority and Small Business Development Division.

Full and Open Competition

The District did not provide full and open competition when awarding two contracts for A/E professional services, valued at \$272,758. The contracts were for disaster work on seven project worksheets to repair the Diamondhead Wastewater Treatment Plant and various lift stations and sewer infrastructure. Full and open competition increases the probability of reasonable pricing from the most qualified contractors and helps discourage and prevent favoritism, collusion, fraud, waste, and mismanagement of Federal funds. The District did not maintain records sufficient to detail the history of selecting its A/E firm for one of the contracts as required by Federal regulations.¹⁸ However, for the second A/E contract, based on our review, District officials did not seek competitive bids because the District had used the A/E firm since 1992 and had an ongoing agreement with the firm. In addition, the District was familiar with the firm’s work, and the A/E firm was familiar with the District’s facilities; thus, the firm could provide expedient assistance.

¹⁸ 44 CFR § 13.36(b)(9).
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Although Federal regulations allow procurements by noncompetitive proposals when the public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation, the contract work in question is not for emergency work and did not occur during exigent circumstances.¹⁹ It is permanent repair work that the District began almost a year after the disaster. Therefore, we question \$272,758 for contract work the District procured without full and open competition.²⁰

Cost or Price Analysis

The District did not perform adequate cost or price analysis in awarding four contracts for A/E professional services totaling \$760,134. The contracts were for disaster work on seven project worksheets to repair the Diamondhead Wastewater Treatment Plant and various lift stations and sewer infrastructure. The absence of a cost or price analysis increases the likelihood of unreasonable contract costs and misinterpretations or errors in pricing. District officials stated they were not aware of this requirement. Therefore, we question \$760,134 for contract work the District procured without a cost or price analysis.²¹

Summary

As a result of the District's actions and Mississippi's lack of proper oversight, FEMA has no assurance that costs were reasonable and all potential contractors received an opportunity to bid, including disadvantaged firms. We question \$990,179 in contract costs as ineligible procurement costs.²²

Finding D: Unsupported Costs

The District did not provide adequate documentation to support \$332,138 of contract costs. As a result, FEMA has no assurance that these costs are valid and eligible. Subgrantees must maintain accounting records that adequately identify the source and application of Federal funds and maintain source documentation to support those accounting records.²³ Furthermore, Federal cost principles require costs to be adequately documented to be allowable.²⁴

¹⁹ 44 CFR § 13.36 (d)(4)(i)(B).

²⁰ All of these questioned costs are also questioned under "Disadvantaged Firms."

²¹ \$272,758 of these questioned costs is also questioned under "Disadvantaged Firms" and "Full and Open Competition."

²² We did not recount the same contract costs that were questioned multiple times under each of the three Procurement Standards.

²³ 44 CFR §§ 13.20(b)(2), (6).

²⁴ *Cost Principles for State, Local, and Indian Tribal Governments* in OMB Circular A-87, 2 CFR 225, App. A, § C(1)(j).



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The District claimed \$6 million under Project 11240 for A/E professional services provided by six firms for disaster work. However, the District claimed \$17,604 for project management services performed prior to execution of the contract. In addition, the District did not provide timesheets and mileage data to support costs claimed on invoices totaling \$314,534. The District's professional services firms provided invoices for their work, but did not provide mileage data and/or timesheets to support some of their invoices. The District attempted to obtain this information from these firms, but was unable to do so. Without maintaining sufficient records, the District cannot provide reasonable assurance it properly monitored and documented contractor expenses. Therefore, we question \$332,138 of unsupported costs.

Finding E: Duplicate Benefits from Insurance

The District and Mississippi did not advise FEMA it could potentially receive \$172,861 more in insurance proceeds than initially anticipated for Projects 6226, 8067, and 11240. FEMA estimated damages for the three projects in question at \$36.7 million and reduced that amount by \$262,838 for actual and anticipated insurance proceeds. FEMA based the reduction on insurance payments the District received and its review of the District's insurance policies. However, ranging from 4 months to almost 2 years prior to FEMA preparing versions to these projects to apply insurance reductions, the District had already received actual insurance proceeds, and could potentially receive additional proceeds from depreciation holdback, totaling \$435,700 for the three projects (table 4). As a result, the District's claim could have included ineligible duplicate benefits totaling \$172,861 (\$435,700 minus \$262,838).²⁵

No entity should receive assistance for any loss for which it has received financial assistance from any other program, insurance, or any other source.²⁶ Furthermore, FEMA is required to deduct actual and anticipated insurance recoveries from otherwise eligible costs.²⁷

FEMA contends that the District may not have provided all insurance documentation. However, the District states that it provided all insurance documentation to Mississippi. Since the District could potentially receive \$172,861 more in insurance proceeds than initially anticipated, we question that amount as ineligible duplicate benefits.

²⁵ Difference due to rounding.

²⁶ *Robert T. Stafford Disaster Relief and Emergency Assistance Act*, Pub. L. No. 100-707, § 312(a), 102 Stat. 4689, 4693 (1988), *amended by* Pub. L. No. 106-390 (2000).

²⁷ 44 CFR § 206.250(c).



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Table 4: Project Costs Covered by Insurance

Project Number	Project Description	Net Award Amount	Anticipated Insurance Proceeds	Potential Insurance Proceeds	Amount Questioned
6226	Replace Generator, Truck, and Tractors	\$ 31,379	\$ 54,639	\$ 54,739	\$ 100
8067	Garage and Out Buildings	61,007	55,030	90,441	35,411
11240	Diamondhead Wastewater Treatment Plant	36,301,009	153,170	290,520	137,350
Total		\$36,393,395	\$262,839	\$435,700	\$172,861

Source: FEMA project worksheets, District records, and OIG analysis

Finding F: Uncompleted Small Project

The District received \$21,045 of FEMA funding under Project 5029 to repair the brick facade and canopy of the District’s main office building. However, as of September 2016, more than 10 years after the disaster, the District had not completed the scope of work. Failure to complete a project may require that the Federal payment be refunded.²⁸

We visually inspected the main office building and noted that the brick facade and canopy had not been replaced. We discussed this with District officials who agreed that this work had not been done, but could not explain why. District officials agreed with our finding, and subsequent to our visit, provided us with a document that had been delivered to Mississippi requesting Project 5029 be withdrawn.

FEMA denied the District’s request to withdraw the project, but wrote a version instead to deobligate all project funding. In April 2017, the District issued a check to the Mississippi State Treasurer for \$21,150 as a refund, plus administrative costs. Therefore, we consider this finding “closed.”

Recommendations

Recommendation 1: We recommend the Regional Administrator, Federal Emergency Management Agency Region IV, provide better oversight of Mississippi to ensure it performs its grantee responsibilities (finding A).

Recommendation 2: We recommend the Regional Administrator, Federal Emergency Management Agency Region IV, direct Mississippi to provide additional technical assistance and monitoring to the District to correct the

²⁸ 44 CFR § 206.205(a).
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deficiencies identified in this report and ensure compliance with grant requirements (finding A).

Recommendation 3: We recommend the Regional Administrator, Federal Emergency Management Agency Region IV, disallow \$18,896,508 of ineligible replacement costs (finding B).

Recommendation 4: We recommend the Regional Administrator, Federal Emergency Management Agency Region IV, disallow \$990,179 of ineligible contract costs that the District did not procure in accordance with Federal requirements, unless Federal Emergency Management Agency decides to grant an exception for all or part of the costs as 44 CFR § 13.6(c) allows and determines that the costs are reasonable (finding C).

Recommendation 5: We recommend the Regional Administrator, Federal Emergency Management Agency Region IV, disallow \$332,138 as unsupported contract costs unless the District provides additional documentation that Federal Emergency Management Agency determines is sufficient to support the costs (finding D).

Recommendation 6: We recommend the Regional Administrator, Federal Emergency Management Agency Region IV, disallow \$172,861 as ineligible duplicate benefits that insurance provided and review the District's insurance policies to ensure Federal Emergency Management Agency has applied all proceeds to reduce applicable projects (finding E).

Recommendation 7: We recommend the Regional Administrator, Federal Emergency Management Agency Region IV, deobligate \$21,045 of unused Federal funds and put those funds to better use (finding F).

Discussion with Management and Audit Follow-up

We discussed the results of our audit with District, Mississippi, and FEMA officials during our audit. We also provided a Notice of Findings and Recommendations in advance to these officials and discussed it at the exit conference on August 1, 2017.

The Office of Audits major contributors to this report are Larry Arnold, Director; Melissa Powe Williams, Audit Manager; Rickey Smith, Auditor-in-Charge; Christopher Stephens, Auditor; Patti Smith, Independent Reference Reviewer; Kevin Dolloson, Communications Analyst; and Victor Leung, Independent Reference Reviewer.



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Evaluation of Management Comments

FEMA provided a written response on August 29, 2017, and agreed with our findings and recommendations (appendix D). The response indicated that FEMA has taken corrective action to resolve and close recommendations 1, 2, and 7; however, for recommendation 2, FEMA did not provide documentation showing that it directed Mississippi to provide additional technical assistance and monitoring to the District. Therefore, we consider recommendations 1 and 7 closed with no further action required from FEMA but recommendation 2 resolved and open. In its response to our draft report, FEMA initially expected to complete its proposed corrective actions to close recommendations 3, 4, and 5 by January 31, 2018. However, after we requested an update from FEMA on the date it expects to complete corrective actions, FEMA indicated it wanted to wait for the final report. Therefore, we consider report recommendations 3, 4, and 5 unresolved and open. Although FEMA agreed with recommendation 6, FEMA did not provide a date it expects to complete its proposed corrective action to close recommendation 6; therefore, we consider recommendation 6 unresolved and open. We will close recommendations 2, 3, 4, 5, and 6 when we receive and review documentation that FEMA has completed its proposed corrective actions.



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Appendix A

Objective, Scope, and Methodology

We audited Public Assistance grant funds awarded to the District (Public Assistance Identification Number 045-01FE3-00). Our audit objective was to determine whether the District accounted for and expended FEMA grant funds according to Federal regulations and FEMA guidelines.

As of September 14, 2016, the District had received a Public Assistance award of \$48.8 million (net of insurance and other adjustments) from Mississippi, a FEMA grantee, for damages resulting from FEMA Disaster Number 1604-DR-MS that occurred in August 2005. The audit covered the period August 29, 2005, through September 14, 2016, which is the cutoff date of our audit. The award provided 100 percent FEMA funding for 24 large projects and 2 small projects.²⁹

We reviewed five projects totaling \$41 million (net), or 84 percent of the net Federal funds awarded to the District (see additional discussion about the audit scope and gross and net awards, p.1, table 1). As of September 14, 2016, the District had submitted a cost claim of \$31.2 million to Mississippi for reimbursement. Therefore, the District had not completed work on all projects and not submitted a final claim to Mississippi for all project expenditures.

We interviewed FEMA, Mississippi, and District officials; gained an understanding of the District's method of accounting for disaster-related costs; reviewed the District's procurement policies and procedures and contracting documents; and judgmentally selected and reviewed (generally based on dollar values) project costs and procurement transactions for the projects in our audit scope. We also performed other procedures considered necessary to accomplish our objective. We did not perform a detailed assessment of the District's internal controls over its grant activities because it was not necessary to accomplish our audit objective. However, we did gain an understanding of the District's method of accounting for disaster-related costs and its policies, procedures, and business practices the District used and plans to use to administer activities provided for under the FEMA award.

We conducted this performance audit between September 2016 and August 2017, 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

²⁹ Federal regulations in effect at the time of Hurricane Katrina set the large project threshold at \$55,500. See Notice of Adjustment of Disaster Grant Amounts, 69 Fed. Reg. 201 (October 19, 2004).



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conclusions based upon our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based upon our audit objective. We conducted this audit by applying the statutes, regulations, and FEMA policies and guidelines in effect at the time of the disaster.



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Appendix B
FEMA and OIG 50 Percent Calculations

Table 5. FEMA and OIG Calculation of 50 Percent Determinations

Component	Description	Subgrantee/ FEMA Initial Calculation ³⁰	FEMA Calculation ³¹	OIG Calculation ³²
1	Sitework (fences)	32.47%	29.83%	0.00%
2	Headworks	34.01%	5.83%	3.61%
3	Aeration	47.46%	101.24%	29.05%
4	Recirculation Pump Station	22.14%	20.48%	18.97%
5	Aerobic Digester/Thickener	100.28%	23.32%	15.10%
6	Sludge Holding Tank	74.10%	85.71%	51.43%
7	Sludge Drying Bed Filter Media	100.00%	28.03%	33.33%
8	UV Chambers	69.35%	68.50%	41.11%
9	Belt Filter Press Building	0.00%	0.00%	0.00%
10	Electrical	100.00%	100.00%	100.00%
11	Plant Ops and Laboratory	100.00%	100.00%	60.00%
12	Maintenance Shop	100.00%	100.00%	60.00%
13	Storage Building	100.00%	100.00%	60.00%
14	Ancillary Roads	0.00%	0.00%	0.00%
Total Percent Damaged		56.50%	69.68%	30.78%

Source: OIG analysis of cost estimates and calculations

³⁰ May 2007 estimate of repair and replacement costs prepared by the District's engineer. FEMA used this estimate – and committed formula errors – in its determination that the Diamondhead Wastewater Treatment Plant was 56.50 percent damaged, which FEMA officials cited in their first appeal decision.

³¹ Computed in September 2010 using the 2006/2007 estimate FEMA used to prepare Project Worksheet 8117 version 2.

³² The \$4.9 million cost for pilings are included as a weighted average percentage since the cost is not broken down by component.



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Appendix C
Potential Monetary Benefits

Table 6: Projects Audited and Questioned Costs

Project Number	Category of Work – Project Scope ³³	Net Amount Awarded	Amount Claimed	Questioned Costs	Questioned Costs Findings
5029	E – DWSD Main Office Building	\$ 21,045	\$ 21,045	\$ 21,045	F
11240	F – Diamondhead Wastewater Treatment Plant	36,301,009	22,956,466	19,753,438	B, C, D, E
6425	F – Lift Station 29	4,567,112	4,968,044	531,450	C
Projects Included in Contract Review Only: ³⁴					
5759	F – Diamondhead Wastewater Treatment Plant	1,558,273	1,589,384	28,400	C
8429	F – Lift Station	1,290,532	93,554	26,181	C
8693	F – Diamondhead Water and Sewer District	927,768	1,082,269	8,641	C
8844	F – Repair Water Well 2	503,650	728,715	7,891	C
10314	F – Sewage Level Control and Communications System	1,806,197	2,493,621	175	C
Projects Included in Insurance Review Only:					
6226	F – Replace Generator, Truck and Tractors	31,379	225,513	100	E
8067	E – Garage and Out Buildings	61,007	91,111	35,411	E
Totals		\$47,067,972	\$34,249,723³⁵	\$20,412,731³⁶	

Source: FEMA project worksheets, District records, and OIG analysis

Table 7: Summary of Potential Monetary Benefits

³³ FEMA classifies disaster-related work by type: debris removal (Category A), emergency protective measures (Category B), and permanent work (Categories C through G).

³⁴ We did not audit these Projects. "Questioned Costs" are listed here for these five projects because we identified an A/E contract that was not awarded properly and noted that the District claimed costs billed by this A/E firm on these five projects, as well as Projects 6425 and 11240.

³⁵ Difference due to rounding.

³⁶ Difference due to rounding.



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Type of Potential Monetary Benefit	Rec No.	Amount	Federal Share
Questioned Costs - Ineligible	3,4,6	\$ 20,059,548	\$ 20,059,548
Questioned Costs - Unsupported	5	332,138	332,138
Funds Put to Better Use	7	21,045	21,045
Totals		\$20,412,731	\$20,412,731

Source: OIG analysis of report findings



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Appendix D
FEMA's Response to Report

U. S. Department of Homeland Security
Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341



FEMA

August 29, 2017

MEMORANDUM FOR: John E. McCoy II
Acting Assistant Inspector General
Office of Emergency Management Oversight

FROM: Gracia B. Szczec 
Regional Administrator

SUBJECT: Management Response to Draft Report
"FEMA Should Recover \$20.4 Million in Grant Funds
Awarded to Diamondhead Water and Sewer District,
Mississippi"
FEMA Disaster: 1604-DR-MS
Draft Audit Report Number: OIG-17-XX-D

Thank you for the opportunity to review and comment on this draft report. The U.S. Department of Homeland Security's Federal Emergency Management Agency (DHS-FEMA) appreciates the work of the Office of Inspector General (OIG) in planning and conducting its review and issuing this report.

The DHS-FEMA is strengthening its processes with implementing the Public Assistance program in order to promote consistency and transparency in its management and efficient disbursement of federal funds. DHS-FEMA is committed to successfully implementing the Public Assistance program to assist communities in recovering from the devastating effects of disasters by providing assistance in an efficient, effective, consistent and customer-friendly manner while ensuring the appropriate stewardship of taxpayer dollars.

The draft report contained seven recommendations with which DHS-FEMA concurs. Please see the attached for our detailed response to each recommendation.

Again, we thank you for the opportunity to review and comment on this draft report. Technical comments on the OIG's "Tentative Notice of Finding and Recommendations" were previously provided under separate cover. Please feel free to contact me if you have any questions. We look forward to working with you again in the future.

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**DHS Management Response to Recommendations
Contained in OIG-17-XX**

“Recommendation 1: Provide better oversight of Mississippi to ensure it performs its grantee responsibilities required by 44 CFR 13.37(a)(2) and 44 CFR 13.40(a) (finding A).”

Response: Concur. FEMA will enhance its oversight of Mississippi to ensure it performs its grantee responsibilities required by 44 CFR 13.37(a)(2) and 44 CFR 13.40(a). We consider this recommendation resolved and closed.

“Recommendation 2: Direct Mississippi to provide additional technical assistance and monitoring to the District to correct the deficiencies we identified in this report and to ensure compliance with grant requirements (finding A).”

Response: Concur. FEMA will direct Mississippi to provide additional technical assistance and monitoring to the District to ensure compliance with grant requirements. We consider this recommendation resolved and closed.

“Recommendation 3: Disallow \$18,896,508 of ineligible replacement costs, unless FEMA decides to grant an exception for all or part of the costs as 44 CFR 13.6(c) allows (finding B).”

Response: Concur. FEMA will review the calculations that were applied during the 50% rule calculation to determine whether any repair or replacement costs were incorrectly included during its analysis. FEMA will also review the implications of the settlement agreement that was reached between the parties, as well as how Section 705(c) of the Stafford Act applies in this scenario. Estimated Completion Date (ECD): January 31, 2018.

“Recommendation 4: Disallow \$990,179 of ineligible contract costs that the District did not procure in accordance with Federal requirements, unless FEMA decides to grant an exception for all or part of the costs as 44 CFR 13.6(c) allows and determines that the costs are reasonable (finding C).”

Response: Concur. FEMA will allow the District an opportunity to provide any additional information and will determine if the improperly procured costs were nonetheless reasonable, and may de-obligate funding for all or part of those costs as appropriate. ECD: January 31, 2018.

“Recommendation 5: Disallow \$332,138 as unsupported contract costs unless the District provides additional documentation that FEMA determines is sufficient to support the costs (finding D).”

Response: Concur. FEMA will review the documentation on file and will work with the District to collect any additional information that meets FEMA requirements for the questioned costs. FEMA will de-obligate funding for costs that are not supported by adequate documentation. ECD: January 31, 2018.



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“Recommendation 6: Disallow \$172,861 as ineligible duplicate benefits that insurance provided and review the District’s insurance policies to ensure FEMA has applied all proceeds to reduce applicable projects (finding E).”

Response: Concur. FEMA will review the District’s insurance policy and statement of loss to see if any of the costs covered by insurance received duplicative funding from FEMA.

“Recommendation 7: Deobligate \$21,045 of unused Federal funds and put those funds to better use (finding F).”

Response: Concur. FEMA de-obligated \$21,045 from Project Worksheet 5029 on April 19, 2017. FEMA considers this recommendation resolved and closed.



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Appendix E
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