



Department of Homeland Security Office of Inspector General

Gulf Coast Recovery: FEMA's Management of the Hazard Mitigation Component of the Public Assistance Program





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Preface

The Department of Homeland Security (DHS) Office of Inspector General (OIG) was established by the *Homeland Security Act of 2002* (Public Law 107-296) by amendment to the *Inspector General Act of 1978*. This is one of a series of audit, inspection, and special reports prepared as part of our oversight responsibilities to promote economy, efficiency, and effectiveness within the department.

This report addresses the strengths and weaknesses of the Federal Emergency Management Agency's management of the hazard mitigation component of the Public Assistance Program within the Gulf Coast states impacted by hurricanes Katrina and Rita in 2005. It is based on interviews with Federal Emergency Management Agency, grantee, and subgrantee employees and officials; direct observations; and a review of applicable documents.

The recommendations herein have been developed to the best knowledge available to our office, and have been discussed in draft with those responsible for implementation. We trust this report will result in more effective, efficient, and economical operations. We express our appreciation to all of those who contributed to the preparation of this report.

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Abbreviations

BCA	benefit-cost analysis
CEF	cost-estimating format
DHS	Department of Homeland Security
FEMA	Federal Emergency Management Agency
GCRO	Gulf Coast Recovery Office
HMGP	Hazard Mitigation Grant Program
LATRO	Louisiana Transitional Recovery Office
NEMIS	National Emergency Management Information System
OIG	Office of Inspector General
PA Program	Public Assistance Program
PO	project officer
PPT	Project Phase Tool
PW	project worksheets
SOP	standard operating procedure
TAC	technical assistance contractor
TRO	Transitional Recovery Office

Executive Summary

This report addresses the Federal Emergency Management Agency's management of the hazard mitigation component of its Public Assistance Program. We evaluated hazard mitigation activities in Louisiana, Mississippi, Alabama, and Texas after the widespread devastation and damage caused by hurricanes Katrina and Rita. Our objective was to determine whether the agency effectively managed grant funding for this public assistance component. Appendix A provides additional details regarding the audit objective, scope, and methodology.

The Federal Emergency Management Agency continues to face challenges in managing public assistance-funded hazard mitigation work in the Gulf Coast region. Specifically, the agency needs to draw on lessons learned from past disasters to improve (1) overall oversight of program activities, (2) specific training on the Public Assistance Program's hazard mitigation component, (3) plans for deploying trained staff to disaster-damaged areas, and (4) processes and procedures for developing project worksheets, including a requirement to document hazard mitigation scope of work and funding determinations. In addition, the Federal Emergency Management Agency faces challenges in Louisiana regarding the implementation of an effective hazard mitigation strategy that (1) improves delivery of hazard mitigation assistance to disaster-stricken communities, (2) improves coordination of project development with state officials, and (3) expedites project development and funding.

Our report includes eight recommendations to improve the Federal Emergency Management Agency's management of hazard mitigation measures funded through the Public Assistance Program. We also are questioning approximately \$3.6 million in public assistance-funded hazard mitigation work that did not comply with federal regulations and Federal Emergency Management Agency guidelines.

Background

Over the period August through November 2005, hurricanes Katrina, Rita, and Wilma battered the Gulf Coast region, caused unprecedented damage, devastated whole communities and neighborhoods, and left hundreds of thousands of people without shelter and employment. In their aftermath, the Federal Emergency Management Agency (FEMA) created the Gulf Coast Recovery Office (GCRO) and established Transitional Recovery Offices (TROs) in Alabama, Louisiana, Mississippi, and Texas to deliver and administer effective and consistent recovery programs. This included the identification of timely and effective hazard mitigation assistance to reduce future risks and to protect people and communities. On April 10, 2009, the Acting FEMA Administrator (1) announced the dissolution of the GCRO; (2) indicated that the Alabama, Mississippi, and Texas TROs had already transitioned back to their respective FEMA Regional Offices; and (3) said that the Louisiana TRO would continue to operate under its own leadership with a direct report to the FEMA Administrator.

The *Robert T. Stafford Disaster Relief and Emergency Assistance Act* (Stafford Act), P.L. 93-288, gives FEMA the authority to fund the restoration of eligible facilities that sustained disaster damage. Section 406 of the legislation contains a provision for the discretionary funding of additional measures, not required by applicable codes and standards, that would enhance a facility's ability to resist similar damage in future events. In providing this additional discretionary authority, Congress recognized that, during the repair of damaged components of facilities, there would be unique opportunities to prevent recurrence of similar damage from future, similar disaster events ("Section 406–Hazard Mitigation" or "406 Mitigation").

Although the law provides that the President may authorize funds for eligible hazard mitigation projects, it does not require funding. FEMA, grantee, and subgrantee interests in disaster assistance must be balanced with the supplemental nature of disaster assistance and FEMA's obligation for the prudent stewardship of federal disaster funds. Once approved under Section 406, the hazard mitigation component of the Public Assistance (PA) Program becomes a condition of federal disaster assistance and the applicant is required to perform the work.

FEMA has specific policies for the effective implementation of 406 Mitigation. Those policies require adequate inspection of damaged facilities and elements, and a proper evaluation and determination of eligible mitigation assistance and related scope of work. Appendix D provides additional details regarding the eligibility and funding requirements for Section 406–Hazard Mitigation projects.

Results of Audit

As a result of the 2005 hurricanes, FEMA faced major challenges in delivering effective 406 Mitigation assistance to grantees and subgrantees in the Gulf Coast states that sustained widespread damage. FEMA needs to improve its processes for ensuring effective oversight of 406 Mitigation work. In addition, FEMA still faces challenges in implementing an effective 406 Mitigation strategy in Louisiana.

Management of Section 406–Hazard Mitigation

At the onset of disaster recovery efforts after the hurricanes of 2005, identifying 406 Mitigation opportunities was not a FEMA priority. FEMA personnel deployed to work on disaster recovery programs need additional training to ensure effective delivery of the PA Program, including the hazard mitigation component. Further, FEMA needs to strengthen its practices for recording, documenting, and funding 406 Mitigation projects.

Program Management

The GCRO did not manage 406 Mitigation activities at the four TROs effectively. FEMA established the GCRO to lead and coordinate recovery and rebuilding efforts in the Gulf Coast region temporarily and to monitor the TROs' delivery of disaster assistance. FEMA also expected the GCRO to ensure that FEMA programs were consistently and effectively administered.¹ However, GCRO did not make 406 Mitigation a priority during initial inspections of damaged facilities and collected only limited statistical data about PA activity, such as the number of project worksheets (PWs) processed and funding obligated.

The Louisiana and Mississippi TROs did not follow established guidelines and processes for implementing the 406 Mitigation activities because this component of the PA Program was not a priority when initial inspections of damaged facilities were performed. TRO officials explained that the devastation was overwhelming and that priorities for field inspections were to identify damaged elements quickly and develop scopes of work to return damaged facilities to their pre-disaster condition. As a result, project repairs often were performed before hazard mitigation work was identified. Therefore, opportunities for 406 Mitigation assistance were potentially eliminated. Since 406 Mitigation provides a unique opportunity to prevent recurrence of similar damage from future, similar disaster events, FEMA should improve its management of this PA Program component by developing

¹ March 15, 2007, Statement of Deputy Director of Gulf Coast Recovery before the House Appropriation Committee, Subcommittee on Homeland Security.

procedures that hold employees accountable for identifying and documenting 406 Mitigation work in PWs early in the recovery process.

The two TROs (Louisiana and Mississippi) could not monitor 406 Mitigation work after the initial damage inspections because records supporting inspections were incomplete and FEMA's National Emergency Management Information System (NEMIS)² did not provide an easy way to extract 406 Mitigation information from the system. TRO staff explained that because NEMIS data were often inaccurate or untimely, ad hoc systems were developed and used to produce information on 406 Mitigation work. However, these systems were not always effective. Consequently, FEMA missed opportunities for effective 406 Mitigation of damaged structures.

On April 10, 2009, FEMA dissolved the GCRO. As of that date, only the Louisiana TRO remained in operation, and FEMA Regions IV and VI absorbed the responsibilities of the Alabama, Mississippi, and Texas TROs.

FEMA needs to develop policies and procedures that require inspectors to identify eligible 406 Mitigation work early in the disaster recovery process – especially for catastrophic events. FEMA also needs to develop and adopt a standardized management reporting process that provides timely, accurate, and reliable information on 406 Mitigation activities.

Program Delivery and Staffing

According to disaster applicants in Louisiana and Mississippi,³ FEMA project officers (POs) did not always have the technical proficiency or training to identify 406 Mitigation work. Some applicants said that FEMA's practice for rotating disaster personnel impacted 406 Mitigation program delivery. POs are critical to the project formulation and funding process and are the primary link between FEMA and disaster applicants. POs perform site inspections, determine the level of disaster-related damage, develop scopes of work, and identify hazard mitigation work eligible for financial assistance. In addition, FEMA requires POs to collect all necessary information to support project funding decisions.

There were concerns with the POs' technical proficiency in determining eligible 406 Mitigation work during initial inspections or subsequently as disaster recovery work began. Applicants noted that while some POs had knowledge of engineering and construction practices, they did not fully understand the federal requirements for identifying PA-funded hazard mitigation work. For example, an official with a parish school said work delays and missed mitigation

² NEMIS records all project information, including PWs and supporting documentation, obligations, deobligations, and overall project status.

³ Under the PA Program, applicants who obtain assistance are formally identified as subgrantees.

assistance occurred because timely and accurate assistance could not be obtained from the PO.

Although identifying 406 Mitigation measures was not an initial priority in Louisiana and Mississippi, the POs' level of training in and experience with 406 Mitigation before the disaster impacted their ability to identify 406 Mitigation work as disaster recovery progressed. The limited training the TROs provided to POs with little or no practical experience in 406 Mitigation did not improve the quality and completeness of the PWs. In some cases, PWs omitted 406 Mitigation scopes of work when mitigation measures were available or justifications for mitigation measures when project scopes changed. Also, mitigation work was (1) inconsistently documented, (2) identified as emergency work instead of permanent work, and (3) added months after the disaster without subsequent inspection or further documentation. In Louisiana and Mississippi, most of the POs were technical assistance contractor (TAC) employees with little experience in 406 Mitigation Programs.⁴ The TACs and FEMA management employees we interviewed said that training should be enhanced to provide a more in-depth review of the PA Program, including the 406 Mitigation component.

Frequent rotations of POs (primarily TACs) made it difficult to maintain an orderly and consistent project formulation process because the work performed and the records collected by the POs during the process did not always transition to new POs. One applicant provided the same documentation to at least four different POs. POs often rotated every 90 to 120 days and usually did not return to serve the same applicants. As a result, control and maintenance of records collected during inspections were difficult. FEMA needs to develop guidance for recordkeeping as rotations occur.

FEMA needs to improve training, personnel rotation practices, and control of project records to ensure that project eligibility determinations are adequate and federal funding is made available for eligible 406 Mitigation work.

Project Development Documentation

FEMA did not maintain appropriate documentation to support its decision to fund 13 of 66 projects we reviewed. Project documentation is vital to support the eligibility of the work and the funding provided to subgrantees for project execution. Appendix C identifies the projects and the related audit issues, which can be categorized as follows:

- Expected insurance proceeds were not offset against PW estimated costs, including costs associated with 406 Mitigation.

⁴ In Louisiana, TACs comprised about 80% of the PO cadre.

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- Project records did not have documentation to support 406 Mitigation funding.
 - Project officials provided conflicting information regarding the eligibility of 406 Mitigation projects.
 - The cost-estimating format was misapplied and resulted in replacing rather than repairing a facility.

In addition, FEMA staff prepared benefit-cost analyses (BCAs) to support the cost-effectiveness of mitigation projects but did not maintain documentation identifying the source and applicability of the data used in the calculations. For example, one project in Louisiana had two BCAs prepared more than a year apart. The first BCA produced a funding decision that supported 406 Mitigation work. Project records noted that a second BCA was required because of increases in project scope and estimated costs. With assumptions remaining the same, higher project costs should have produced a BCA that was less cost-effective than the original BCA. However, the second BCA showed greater cost-effectiveness than the first, and documentation to support that decision was not available.

In some instances, because BCA computations included costs not associated with the damaged elements of a facility, FEMA funded questionable 406 Mitigation projects. In other cases, because project documentation was incomplete, we were unable to determine the adequacy and accuracy of BCA calculations. FEMA should establish procedures for maintaining project documentation used to perform BCA calculations.

Project Funding Determinations

Funding determinations were not always consistent with federal regulations and FEMA guidelines for determining 406 Mitigation work eligibility. As discussed below, use of a systems approach in Louisiana resulted in funding determinations that appeared cost-effective because they included work unrelated to the damaged elements of a facility. FEMA guidance limits 406 Mitigation funding to specific damaged elements of a facility.

Louisiana TRO (LATRO). LATRO's 406 Hazard Mitigation Section (406 Team) implemented a systems approach to 406 Mitigation. This approach resulted in mitigation projects for both damaged and undamaged elements of a facility.

Under the systems approach, the 406 Team concluded that when damaged elements, such as windows and roofs, were part of a system in a damaged facility, then funding could be provided for undamaged elements. For example, the 406 Team recommended \$12 million in 406 Mitigation funding

for improvements to an undamaged berm that protected the New Orleans – East Bank Waste Water Treatment Facility (project 16335). Project records did not identify any 406 Mitigation work and attributed the damage to a flood door that was left open, not to a failure of the berm.

The 406 Team’s decision to fund this project was based primarily on a desk review of records obtained by the PO who performed the field inspection. The 406 Team used its systems approach and developed a BCA that included the costs to repair disaster-damaged buildings and the costs to upgrade the berm. Late in the process, FEMA management discovered the error and took action to deobligate funding. The applicant and state appealed FEMA’s determination, and the issue is now in second appeal.⁵

The following two instances illustrate how the 406 Team applied the systems approach to fund ineligible hazard mitigation work, reversing decisions made by POs that performed the onsite damage inspections.

- For project 14689 (*1603-DR-LA*), FEMA provided \$2,932,276 in 406 Mitigation funding for a hospital emergency backup generator system (redundancy project). In 2005, the existing backup generator system was repaired to pre-disaster condition, and FEMA denied funding for the redundancy project. However, in 2007, FEMA reversed its decision. To justify funding the project, FEMA prepared a BCA that considered the cost of the new system and an additional \$6.4 million associated with other disaster damage caused by the failure of the existing backup generator system. Using these costs, the BCA supported the project’s cost-effectiveness and was used as FEMA’s justification for funding the project.
- For project 3704 (*1603-DR-LA*), FEMA provided \$621,400 in 406 Mitigation funding to repair bus and automobile maintenance equipment (lifts) damaged by flooding at a regional transit authority. A vendor provided repair estimates, and FEMA determined that hazard mitigation was not technically feasible. However, FEMA funded the replacement of the lifts based on apparent flood resistance of the newer model. Project records did not include a BCA analysis or support FEMA’s decision. Also, the manufacturer of the lifts told us that the new lift equipment offered no more flood resistance than the older lifts if flooding similar to that experienced with hurricane Katrina occurred.

Based on LATRO’s use of the systems approach, we question FEMA obligations of \$3,553,676 (\$2,932,276 plus \$621,400) because the scopes of

⁵ According to Title 44, Code of Federal Regulations, Section 206.206, FEMA regions make first appeal determinations and FEMA headquarters makes the second appeal determinations.

work for the two projects did not meet 406 Mitigation eligibility requirements (see appendix C for additional project details).

Alabama, Mississippi, and Texas TROs. These states had fewer 406 Mitigation projects and fewer errors in eligibility determinations. In Mississippi, for example, a few projects initially identified for 406 Mitigation became replacement projects and were funded with PA funds. Under federal regulations,⁶ FEMA can approve PA funds to replace a damaged facility when the cost to repair the facility equals or exceeds 50% of the costs to replace it to current codes and standards. Although we did not question any costs associated with 406 Mitigation funding decisions in the Mississippi and Texas TROs, we identified various administrative issues. We questioned a FEMA obligation of \$4,073⁷ in 406 Mitigation work not completed by the City of Mobile, Alabama (see appendix C for details).

Conclusion

406 Mitigation was not a priority in the early stage of disaster recovery because of the significance of the devastation in Louisiana and Mississippi. However, regardless of the level of damage caused by a disaster, FEMA needs to ensure that its employees, whether full-time, intermittent, or contractor, have the experience and training to identify and develop hazard mitigation projects when deployed to field offices. In addition, deploying trained personnel to disaster-damaged areas during a multistate event and holding disaster employees accountable for effectiveness and efficiency is essential to the success of 406 Mitigation. Lastly, FEMA needs to improve the process of developing, recording, and documenting 406 Mitigation work to support the cost-effectiveness of the work it deems eligible for mitigation funding.

Recommendations

We recommend that the Administrator, FEMA:

Recommendation #1: Develop policies and procedures that require inspectors to identify eligible 406 Mitigation work early in the disaster recovery process and develop and adopt a standardized management reporting process that gives FEMA project managers timely, accurate, and reliable information on 406 Mitigation activities.

Recommendation #2: Establish training guidelines to ensure that staff (including TACs) are knowledgeable in FEMA's 406 Mitigation policies and procedures, including identifying and recording 406 Mitigation data in NEMIS.

⁶ Title 44, Code of Federal Regulations, Section 206.226(f).

⁷ PW 1580; 1605-DR-AL.

Recommendation #3: Modify PA Program technical assistance agreements to mitigate project formulation problems caused by frequent TAC employee rotations and develop guidance for managing and transitioning site inspection project records as rotations take place.

Recommendation #4: Establish procedures for maintaining project documentation, including documentation used to perform BCA calculations, before funding 406 Mitigation proposals, and ensuring that 406 Mitigation eligibility determinations are correct and performed in a timely manner.

Recommendation #5: Require LATRO to disallow the \$3,553,676 of questionable obligations resulting from the use of the systems approach.

Recommendation #6: Require FEMA Region IV to disallow \$4,073 for 406 Mitigation work not completed by the City of Mobile, Alabama.

Management Comments and OIG Analysis

Appendix B provides the complete text of FEMA's responses to these six recommendations. FEMA officials concurred with Recommendations #1, #2, #4, and #6 but did not concur with Recommendations #3 and #5. Synopses of FEMA comments and our analysis of those comments are provided below.

Recommendations #1, #2, and #4

FEMA officials concurred and convened a Section 406 Hazard Mitigation National Workgroup in September 2009 to (1) develop national guidance consisting of standard operating procedures (SOPs) and protocols for evaluating 406 Mitigation opportunities, (2) adopt the Mitigation Directorate's Benefit/Cost Analysis (BCA) methodology for 406 Mitigation projects, and (3) develop a staffing and training plan to increase the pool of trained and experienced 406 Mitigation specialists.

FEMA officials said that the national guidance will address the hazard mitigation specialist's role in preliminary damage assessments and kickoff meetings in order to assess 406 Mitigation opportunities and review projects early in the process. In addition, FEMA has developed a standardized management report, *Public Assistance Mitigation Profile*, in the Emergency Management Mission Integrated Environment that provides hazard mitigation project details by category, size of project, dollar amount, and percentage of total projects for the disaster.

Regarding procedures for maintaining project documentation, FEMA officials said that in August 2009, a memorandum was issued stating that the PA Program plans to adopt a consistent BCA methodology to support and

encourage cost-effective mitigation. In addition, FEMA will revise its Disaster Assistance Policy 9526.1, *Hazard Mitigation Funding Under Section 406 (Stafford Act)*, as necessary to reflect the new methodology.

The actions planned or taken, as summarized above, meet the intent of Recommendations # 1, #2, and #4. We consider these recommendations resolved but open pending review and evaluation of FEMA's more detailed corrective action plan to be provided subsequent to the issuance of this report.

Recommendation #3

FEMA officials did not concur with this recommendation. They said that the development of national guidance for all PA staff to adhere to in the field will accomplish the goal without the need to modify the TAC agreements. They further said that the SOP currently under development will provide guidance on document management including the transfer of files and information between project officers or PA coordinators (permanent, temporary, or contractor employees) prior to rotating out of a joint field office.

FEMA action to develop a SOP that will provide document management guidance on the transfer of files and information during staff transitions satisfies the intent of this recommendation. While the guidance will be provided to all individuals (including TAC employees) involved in 406 Mitigation, the SOP should include procedures that ensure the guidance is carried out. Although FEMA did not concur, its action satisfies the intent of the recommendation. Therefore, we consider the recommendation resolved but open pending receipt and evaluation of the SOP.

Recommendation #5

As discussed below, FEMA officials did not concur that LATRO should disallow nearly \$3.6 million of questionable 406 Mitigation costs that resulted from using a systems approach to determine the cost-effectiveness of projects.

FEMA comments on project 14689 (Touro Infirmary, 1603-DR-LA).

FEMA officials provided information on two separate mitigation proposals – one proposal dealing with a fuel filtration system to mitigate against damages caused by contaminated fuels, and one proposal dealing with a looped electrical distribution network combined with automatic switching equipment that would mitigate against damages caused by overloading the backup generators.

For the first proposal, FEMA officials said that LATRO reviewed 14 PWs containing the damages caused by the loss of environmental control due to failure of the emergency power generator system and concluded this damage would not have occurred if the generator system continued to

function. FEMA recalculated the BCA using 13 of the 14 PWs and stated the recalculated BCA still resulted in a cost-effective 406 Mitigation project.

For the second proposal, FEMA officials said that the work performed was a cost-effective mitigation project per Section [1]E.8 of the appendix to FEMA Policy 959521.1, *Hazard Mitigation Funding Under Section 406, (Stafford Act)*.

OIG analysis. We disagree with FEMA's position that the project was cost-effective and therefore eligible for 406 Mitigation funding. The two mitigation measures discussed in FEMA's response go hand-in-hand as justification for the funding provided in 2007 of the looped distribution capability. PW 14689 identified the damaged element of the emergency power generator system as a clogged fuel line between the ground tank and the generator day tank that resulted in the system taking in fuel contaminated with particles of sand. Damage repairs performed in 2005 included replacing filters, oils, batteries, and fluids at a total cost of \$14,430.

FEMA's comments noted that the claimed costs associated with 13 PWs served as the basis for its determination that the project was cost-effective. However, many of the costs included in the BCA computation were unrelated to the clogged fuel line bringing that calculation into question. Examples of the unrelated work included: (a) cleanup of Main Hospital PW#2292 – \$1,753,055; (b) Main Hospital Carpet PW#2452 – \$260,844; (c) Main Hospital Complex Ceiling Tile replacement PW#2475 – \$988,539; and (d) Replacement of Telecom Switching Equipment PW#4890 – \$632,904. These disaster costs resulted from the facility being physically compromised by the hurricane and were not directly attributable to the clogged fuel line.

Although FEMA policy allows for the installation of looped electrical distribution service or other redundancies in the electrical service to critical facilities, other criteria must be met. Specifically, the same appendix to Disaster Assistance Policy 9526.1 referenced in FEMA's response says that certain infrastructure systems (including electrical power distribution systems) are determined to be cost-effective if they:

- Do not exceed 100% of project cost,
- Are appropriate to the disaster damage,
- Will prevent future similar damage, and
- Are directly related to the damaged eligible elements.

Paragraph 7.a. of the policy says “The mitigation measures must be related to eligible disaster-related damages and must directly reduce the potential of future, similar disaster damages to the eligible facility.”

PW 14689, Version 0, Special Consideration #5, page 6 of 15, referred to the mitigation proposal and noted “a lack of a fuel filter assembly between the ground tank and day tanks caused the damage. **The loop system would not have prevented the damage.**”(emphasis added) FEMA's initial analysis recognized that contaminated fuel and an inadequate filtering system caused the damage to the emergency power generator system. In addition, electrical demand after the disaster did not represent a catastrophic problem since the hospital’s staff manually transferred the electric load to a remaining generator after the first two generators shut down.

We assert that mitigation measure taken: (a) did not resolve the potential of future, similar disaster damages to the electrical system should the only source of diesel fuel again prove to be contaminated and (b) was not cost-effective since disaster damages unrelated to the clogged fuel line were included in the BCA computation. Therefore, we question the \$2,932,276 expended for the mitigation measure.

FEMA comments on project 3704 (Regional Transit Authority, 1603-DR-LA). FEMA officials said that since the original proposal in 2006, the subgrantee has provided design information that shows the proposed work is eligible as a "least cost alternative" and as such, does not require 406 Mitigation funding. These officials also said that Hazard Mitigation Grant Program funds committed to this project would be deobligated as FEMA moved forward with the scope alignment process for restoring the facility.

OIG analysis. The finding addresses 406 Mitigation funding to repair bus and automobile maintenance equipment damaged by flooding. FEMA's action to deobligate the mitigation funds committed to this project satisfactorily addresses \$621,400 of the \$3,553,676 we questioned. This assumes that the amount FEMA disallows relates to 406 Mitigation funding rather than the Hazard Mitigation Grant Program (Section 404) funding referred to in FEMA's comment.

Based on our analysis of FEMA's response to this recommendation and the additional comments we provide above, we consider Recommendation #5 unresolved.

Recommendation #6

FEMA officials consider this recommendation resolved because the subgrantee, the City of Mobile, Alabama, completed the 406 Mitigation portion of the project in 2008.

At the time of our fieldwork, the City of Mobile had repaired (rather than replaced) a generator damaged by flooding but had not elevated it as specified in project 1580 (1605-DR-AL). Although FEMA officials did not comment on how it verified that the work had been accomplished (inspection or subgrantee certification), their responses indicate that the work was completed, thus mitigating against of future flooding damage. Therefore, we consider the recommendation resolved and closed.

Challenges in Louisiana

LATRO used various strategies to implement the 406 Mitigation component of the PA Program in Louisiana, but these strategies did not produce desired results. Identifying and funding 406 Mitigation work early in disaster recovery was inconsistent and resulted in delays in reconstructing critical facilities. LATRO needs to develop a strategy and standard operating procedures (SOPs) that address (1) project scope corrections, (2) development and funding of additional 406 Mitigation work, and (3) the benefits available to the state and the applicants by the partnering of 406 Mitigation work with the Hazard Mitigation Grant Program (HMGP, or 404 Mitigation).

406 Mitigation Strategy

LATRO implemented a 406 Database Mining program in March 2007 because potentially eligible hazard mitigation work had not been identified early in the recovery process. The mining effort included (1) a desk review of approved PWs, (2) identification of damaged elements, and (3) application of mitigation solutions to those elements. During a 6-month period, LATRO staff reviewed approximately 6,000 PWs and identified about 700 projects that had hazard mitigation possibilities. Because many of the possibilities were no longer eligible for 406 Mitigation consideration because disaster repairs had already been completed, LATRO terminated this time-consuming effort.

Next, LATRO placed mitigation specialists with POs in the field. However, because the process did not produce significant results and the work became overwhelming for the few mitigation specialists assisting the many POs, LATRO terminated this effort.

In March 2008, LATRO began training LATRO and state field personnel on 406 Mitigation, and jointly with the state, drafted an SOP on how

406 Mitigation should be managed in Louisiana. In January 2009, LATRO informed us that the final draft SOP had been provided to the state. The SOP describes a process for (1) identifying and communicating feasible and cost-effective 406 Mitigation work to applicants, (2) establishing uniform goals and expectations, (3) tracking and reporting projects, and (4) training field staff. At the conclusion of our fieldwork, the SOP was pending state approval.

LATRO's 406 Mitigation strategy and SOP should address:

- (1) How and when project scope corrections will be handled,
- (2) Steps that can be taken to expedite project development for applicants with cash flow difficulties, and
- (3) The benefits available to the state and applicants by partnering the 406 Mitigation component of the PA Program with the HMGP.

Project Scope Corrections. LATRO initiated a project scope realignment process (PW scope of work and funding revisions) applicable to eligible unfinished work because some previously approved 406 Mitigation projects were not developed using best practices and some projects contained errors or may have been undervalued. This occurred, in part, because some POs did not physically inspect damaged facilities but rather relied on the damages identified by insurance adjusters who may not have been familiar with 406 Mitigation work eligibility requirements. Other scope corrections being considered by LATRO relate to eligible repair work inappropriately identified as 406 Mitigation work, changes in material and cost estimates that made a mitigation project not cost-effective, and eligible work to meet *Americans With Disabilities Act* requirements.

Project scope realignment is a time-consuming effort for LATRO staff and applicants. LATRO estimates that at least 4,700 PWs with 406 Mitigation need realignment.

Project Development. Immediately following the hurricanes of 2005, the state and many applicants experienced financial instability, cash flow difficulties, personnel shortages, and building material and contractor shortages, all of which impacted project development. LATRO's continued involvement with the state and applicants, and a moderate increase in available contractors, has helped the state and many subgrantees to move forward with reconstruction. However, cash flow difficulties continue to delay developing scopes of work for some subgrantees.

While initial federal funding for public assistance was 75%, P.L. 110-28 § 4501 increased the federal share of assistance to 100% for eligible costs

applied for before May 25, 2007. Despite the 100% funding provided under P.L. 110-28, FEMA generally requires subgrantees to incur repair and reconstruction costs before seeking reimbursement from the grantee. In addition, some local ordinances require subgrantees to have funds available before awarding contracts for design or construction work. Consequently, applicants with cash flow difficulties cannot commit to projects, including projects with a 406 Mitigation component, until they have cash to cover the costs before seeking reimbursement from the state. Applicants who implemented 406 Mitigation measures explained that a key to their success was obtaining funding from sources other than FEMA. One applicant used bond money, and others drew lines of credit from banks to begin repairs. LATRO officials noted that they are working with applicants to expedite project development and PW preparation.

Partnering Hazard Mitigation Programs. Louisiana needs to expand the partnership between the 406 Mitigation component of the PA Program and the HMGP. Unlike 406 Mitigation funding, which is limited to disaster-damaged elements of public facilities, HMGP funds are available for disaster-related and non-disaster-related projects identified by the state.

As part of recovery efforts in the Gulf Coast states, in January 2007, FEMA headquarters implemented a post disaster Partnering Mitigation Program initiative to maximize the use of 406 Mitigation and HMGP funding. In Louisiana, FEMA and state efforts to partner both 406 Mitigation and HMGP funding did not begin until the latter part of 2008 because \$1.1 billion of the \$1.5 billion in HMGP funds awarded to the state was earmarked to the state's Road Home Homeowner Assistance Program.

In June 2008, Louisiana released \$320 million of the \$1.1 billion allocated to the Road Home program to fund HMGP projects. As of that date, Louisiana had more than \$700 million in HMGP funds that could be partnered with 406 Mitigation funding. In January 2009, FEMA officials explained that the partnering program in Louisiana had begun to produce results, as the state had earmarked HMGP funding to specific localities, including critical projects in New Orleans. Expanding the partnership of these two hazard mitigation programs would make more funding available to reduce the likelihood of future losses from natural disasters and ensure the continued functionality of critical services and facilities after a disaster event similar to the hurricanes of 2005. In addition, the need for federal assistance for future disasters should decrease as a result of effective mitigation measures taken during the repair and reconstruction process in Louisiana.

Conclusion

LATRO is making progress implementing 406 Mitigation. This effort includes (1) changing the management of the program, (2) training field

personnel, (3) reevaluating previous eligibility determinations, (4) working with applicants to overcome cash flow difficulties impacting project development, and (5) partnering 406 Mitigation with HMGP funding to provide cost-effective mitigation measures to protect public facilities from future disaster damage.

Recommendations

We recommend that the Administrator, FEMA:

Recommendation #7: Require that, within 60 days, LATRO complete the development and issuance of a 406 Mitigation strategy that describes the steps to be taken in (a) reevaluating previously approved project scopes of work, (b) deobligating unneeded or ineligible funding, and (c) maximizing the use of 406 Mitigation and HMGP funding to protect public facilities from future disaster damage.

Recommendation #8: Require that, within 60 days, LATRO (1) finalize and implement SOPs that will improve delivery of 406 Mitigation, (2) improve coordination for project development with state officials, and (3) expedite project development and funding.

Management Comments and OIG Analysis

Appendix B provides the complete text of FEMA's responses to these two recommendations. FEMA officials concurred with both recommendations and provided us with the current versions of its strategy for implementing the 406 Mitigation program and the FEMA/GOHSEP-developed SOP. These officials said that the SOP is a living document that is evolving and changing as FEMA and GOHSEP move forward, and they are continuing to refine acceptable metrics for 406 Mitigation performance and delivery. We consider both recommendations resolved and closed.

We audited FEMA’s management of the hazard mitigation component of the PA Program (406 Mitigation) during the Gulf Coast region recovery process. The objective of the audit was to determine whether FEMA effectively managed PA Program hazard mitigation grant funding across the Gulf Coast region following the 2005 hurricanes.

We evaluated FEMA’s delivery of 406 Mitigation funding through its PA Program to the Gulf Coast states devastated by hurricanes Katrina and Rita. We evaluated program oversight; management tools used to measure progress and success; project development, including site inspections and PW preparation; and staffing. We also documented the challenges that FEMA faces in the overall Gulf Coast region recovery process.

We performed the audit under the authority of the *Inspector General Act of 1978*, as amended, and according to *Government Auditing Standards* issued by the Comptroller General of the United States. These standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

To accomplish our objective, we visited FEMA’s Gulf Coast Recovery Office, Transitional Recovery Offices, FEMA Regions IV and VI, and several grantees and subgrantees. At each location, we interviewed responsible officials regarding the overall delivery and effectiveness of the 406 Mitigation component of the PA Program. We also reviewed NEMIS information, management reports, PWs, and project records. We performed other auditing procedures considered necessary under the circumstances.

We selected the highest value 406 Mitigation projects for review, and interviewed appropriate state and local officials responsible for those projects.

States	Projects Selected	Applicants/ Subgrantees	Project Dollars (millions)	406 Mitigation Dollars (millions)	Applicants Interviewed
LA	20	15	\$249.5	\$56.4	8
MS	14	8	81.8	14.5	8
TX	24	3	22.5	3.1	3
AL	8	4	17.1	10.0	4
Total	66	30	\$370.9	\$84.0	23

We also considered FEMA’s efforts to complete projects by combining 406 Mitigation and HMGP funding, but we did not evaluate FEMA’s effectiveness in managing the HMGP in the Gulf Coast region.


We held an exit conference on January 12, 2009, with FEMA's Gulf Coast Recovery Office officials. We gave those officials a written summary detailing audit results and proposed recommendations, and the officials provided verbal and written responses to the findings but not to the recommendations.

U.S. Department of Homeland Security
500 C Street, SW
Washington, DC 20472



FEMA

MEMORANDUM FOR: Matt Jadacki
Deputy Inspector General
Office of Emergency Management Oversight
Office of Inspector General

FROM: David J. Kaufman  1/19/09
Director
Office of Policy and Program Analysis

SUBJECT: Comments on OIG Draft Report, *FEMA's Management of the Hazard Mitigation Component of the Public Assistance Program*

Thank you for the opportunity to review and comment on the Office of Inspector General's (OIG's) subject draft audit report. As the Federal Emergency Management Agency (FEMA) works toward refining its programs, the OIG's independent analysis of program performance greatly benefits our ability to continuously improve our activities.

FEMA concurs with recommendations 1, 2, 4, 6, 7, and 8 and has been diligently working to correct these issues identified in your report. While we will provide a more detailed corrective action plan with timeframes in our 90-day response, we submit the following information relative to the six recommendations we do concur with. We do not concur with recommendations 3 and 5. Our responses for each recommendation are as follows:

Recommendation #1: Develop policies and procedures that require inspectors to identify eligible 406 Mitigation work early in the disaster recovery process and develop and adopt a standardized management reporting process that gives FEMA project managers timely, accurate, and reliable information on 406 Mitigation activities.

Response: FEMA concurs with this recommendation. FEMA convened the Section 406 Hazard Mitigation National Workgroup in September 2009, with FEMA headquarters and regional participation. The goal of the Workgroup is to support implementation to maximize approval of Section 406 Hazard Mitigation projects and funding. In order to accomplish this objective, the Workgroup is: (1) developing national guidance consisting of standard operating procedures (SOPs) and protocols for evaluating Section 406 mitigation opportunities; (2) adopting the Mitigation Directorate's Benefit/Cost Analysis methodology for use on Section 406 Hazard Mitigation projects in the Public Assistance (PA) Program; and (3) developing a staffing and training plan to increase the pool of trained and experienced Section 406 mitigation specialists.

The national guidance will address how Hazard Mitigation Specialists can effectively participate with PA in conducting Preliminary Damage Assessments and Kickoff Meetings to assess Section 406 mitigation opportunities and review projects early in the process.

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Gulf Coast Recovery: FEMA's Management of the Hazard
Mitigation Component of the Public Assistance Program

A standardized management report, *Public Assistance Mitigation Profile*, has been developed in the Emergency Management Mission Integrated Environment (also known as EMMIE), which is replacing the National Emergency Management Information System (NEMIS). The report provides details by disaster, listing all hazard mitigation projects by category (i.e., Codes and Standards, Good Construction Practices, Mitigation Policy, Benefit/Cost Analysis), size of project, dollar amount, and as a percent of total projects for that disaster.

Recommendation #2: Establish training guidelines to ensure that staffs (including technical assistant contractors [TACs]) are knowledgeable in FEMA's 406 Mitigation policies and procedures, including identifying and recording 406 Mitigation data in NEMIS.

Response: FEMA concurs with this recommendation.

Recommendation #3: Modify PA Program technical assistance agreements to mitigate project formulation problems caused by frequent TAC employee rotations and develop guidance for managing and transitioning site inspection project records as rotations take place.

Response: FEMA does not concur with this recommendation. Developing the guidance for all PA staff to adhere to in the field will accomplish the goal without modifying the TAC agreements. Modifying PA Program technical assistance agreements is not necessary. The PA Program is addressing this issue with an effort that is underway to develop a Standard Operating Procedure (SOP) to provide guidance on ensuring consistency during staff transitions for all PA staff in the field. This will provide guidance documentation management and the formal transfer of files and information between Project Officers/PA Coordinators (Permanent Full-time employees, Disaster Assistance Employees, and TACs) prior to rotating out of a Joint Field Office.

Recommendation #4: Establish procedures for maintaining project documentation, including documentation used to perform benefit cost analysis (BCA) calculations, before funding 406 Mitigation proposals, and ensuring that 406 Mitigation eligibility determinations are correct and performed in a timely manner.

Response: FEMA concurs with this recommendation. An August 2009 FEMA Memorandum stated that the Public Assistance program plans to adopt the Mitigation Directorate's BCA methodology for Section 406 hazard mitigation projects in order to achieve consistency across program areas and to maximize FEMA's ability to support and encourage cost-effective hazard mitigation. Aligning the BCA methodologies between the Mitigation and Disaster Assistance Directorates will simplify the process for staff and stakeholder, further encourage mitigation measures nationwide, enhance a strong working partnership in field operations, and maximize FEMA's ability to support and approve mitigation measures as investments to lessen or reduce future disaster-related damages.

Guidance on how to perform BCA for 406 Hazard Mitigation Projects is currently in development. FEMA will revise its policy, DAP9526.1, Hazard Mitigation Funding Under Section 406 (Stafford Act), as necessary, to reflect the new BCA methodology being adopted.

Recommendation #5: Require the Louisiana Transitional Recovery Office (LATRO) to disallow the \$3,553,676 of questionable obligations resulting from the use of the systems approach.

Response: FEMA does not concur with this recommendation. The OIG states that the systems approach resulted in 406 Mitigation projects for damaged and undamaged elements of a facility. This mitigation project proposes two different measures. The first project proposes a fuel filtration system to mitigate against the damages caused by contaminated fuel resulting in the failure of the emergency power generators that caused the loss of environmental control. The LATRO reviewed each of the project worksheets (PWs) containing the damaged elements and found that 13 of the 14 PWs contain costs from damages caused by the loss of environmental control due to the failure of the emergency power generator system. Such a loss of environmental control could have been prevented had the emergency power generation system functioned. FEMA recalculated the BCA using only the 13 PWs. This recalculation still resulted in a positive BCA; thus this is an eligible 406 Hazard Mitigation Project.

The second mitigation project proposes a looped electrical distribution network combined with automatic switching equipment that serves to mitigate against damages caused by the overloading of back-up generators. This is an approved cost-effective mitigation project per FEMA Policy 9526.1, Cost-Effective Measures Appendix, Section E, 8. See Exhibit A, copy of FEMA Policy 9526.1.

The mitigation proposal supports the use of self-contained bus lifting units and the elevation of the controls, pumps, and electrical components, which would prevent similar damage in a future event. Since the original submittal of this proposal in 2006, the applicant has recently moved to the design phase and has provided information demonstrating that the lifts are eligible as a least cost alternative; therefore, the mitigation values have been realized without the use of 406 funding for this repair. The Hazard Mitigation Grant Program (HMGP) funds will be deobligated as FEMA moves forward with the scope alignment process for restoring the facility.

Recommendation #6: Require FEMA Region IV to disallow \$4,073 for 406 Mitigation work not completed by the City of Mobile, Alabama.

Response: FEMA considers this recommendation resolved. The City of Mobile completed its 406 mitigation project in 2008. Therefore, FEMA does not need to disallow the \$4,073 in funds.

Recommendation #7: Require that within 60 days, LATRO complete the development and issuance of a 406 Mitigation strategy that describes the steps to be taken in (a) reevaluating previously approved project scopes, (b) deobligating unneeded or ineligible funding, and (c) maximizing the use of 406 Mitigation and HMGP funding to protect public facilities from future disaster damage.

Response: FEMA concurs with this recommendation. Since the last OIG visit, the LATRO has developed a strategy for implementing the 406 Mitigation program. The strategy is consistent with OIG recommended actions in this report. See Exhibit B, copy of this strategy.

Recommendation #8: Require that, within 60 days, LATRO (1) finalize and implement SOPs that will improve delivery of 406 Mitigation, (2) improve coordination for project development with state officials, and (3) expedite project development and funding.

Response: FEMA concurs with this recommendation. FEMA has jointly developed and implemented an SOP in coordination with the Governor's Office of Homeland Security and

Emergency Preparedness (GOHSEP), which includes the tracking and reporting elements. FEMA and GOHSEP will continue to refine acceptable metrics for 406 HMGP performance and delivery. The SOP is a living document; therefore, it continues to evolve and change as FEMA and GOHSEP move forward. The latest changes include procedures to address items from this OIG report. See Exhibit C, copy of the current SOP.

Please contact Brad Shefka, Chief, FEMA GAO/OIG Audit Liaison Office, at 202-646-1308, if you have any questions or concerns regarding this response.

Thank you again for the opportunity to comment on this draft report; we look forward to working with you on other issues as we both strive to improve FEMA.

Attachments:
Exhibits A, B, and C

OIG Note: FEMA Exhibits A, B, and C are not included herein.

Appendix C
Projects Reviewed and Audit Issues

Louisiana

#1 *LA, Superdome (1603-DR-LA, PW 2205, \$16 million)*
Scope of work: Install a roofing system to code requirements, furnish PBX box and elevate to second floor, and replace 448 damaged plastic laminate toilets.
Audit Issue: *Administrative: No allocation of insurance proceeds.* Facility was insured at the time of the disaster; however, estimated costs in the PW were not netted for expected insurance proceeds.

#2 *UNO Kieffer Lakefront Arena (1603-DR-LA, PW 4831, \$543,568)*
Scope of work: The applicant (FP&C) proposes to add 156 18'8" steel reinforcing beams to provide additional reinforcement points of support for the facility's fascia, soffit, and lower roof. The proposed mitigation measures (additional support) will increase the wind resistance to a rating of 135 MPH, a 50% increase in wind resistance.
Audit Issue: *Administrative: No allocation of insurance proceeds.* Facility was insured at the time of the disaster; however, estimated cost in PW was not reduced for expected insurance proceeds.

#3 *HR LSUHSC Lion's Eye Clinic (1603-DR-LA, PW 9289, \$8.2 million)*
Scope of work: Mitigation of architectural; essential mechanical, electrical, and plumbing (MEP); nonessential MEP; operating theater; and contents of the Lion's Eye Cohn Learning Center, caused by flooding as a result of hurricane Katrina.
Audit Issue: *Administrative: No allocation of existing insurance.* Facility was insured at the time of the disaster; however, estimated cost in PW was not reduced for expected insurance proceeds.
Audit Issue : *Administrative: Project records did not have documentation describing disaster damage.* The information in the PW and related project records was not sufficient to determine the magnitude and dimensions of the damage being mitigated. We could not determine the nature of the 406 Mitigation funding or the project's cost-effectiveness.

4 *East Bank Wastewater Treatment Facility (1603-DR-LA, PW 16335, \$12 million)*
Scope of work: Raising existing protective earthen berm surrounding the plant from approximately 12 feet to 18 feet.
Audit Issue: *Administrative: Project records identified conflicting eligibility opinions by FEMA officials.* The berm received minor damage as a result of the disaster. Overall, the flooding of the facility was caused when a floodgate failed. Under the 406 Mitigation Program, only damages caused by disaster are eligible for funding. While FEMA eventually denied funding for the project, the applicant appealed FEMA's determination. The applicant's decision to appeal appears to be caused by conflicting information provided by FEMA employees.

#5 *Lafitte Elementary School (1603-DR-LA, PW 9866, \$626,522)*
Scope of work: Three building roofs (Annex, Main, and Cafeteria) were damaged to varying degrees. A mitigation proposal was written to replace all three roofs to establish a wind resistance guarantee.

Audit Issue: *Administrative: Roof replacement for three buildings not supported with documentation.*

Documentation in the PW states that the architect's estimate for square footage of roof repairs was not used. The documentation provides no explanation for this change or justification for the revised square footage of repairs. The damaged roof area recorded in the mitigation proposal did not match the area of roof replaced.

#6
Scope of work: *LA, Touro Infirmiry (1603-DR-LA, PW 14689, \$2.9 million)*
The cost to repair the plugged fuel lines totaled \$14,430. The hazard mitigation work consisted of replacing the existing emergency generator system with a looped distribution service for redundancy. Key component changes: (a) generators – 500K VA replaced with 750 KVA, (b) increase the fuel storage capacity, (c) redesign the diesel fuel pumping scheme, and (d) associated construction.

Audit Issue: *Cost Questioned: Repairs and expansion beyond the damaged elements.* FEMA provided \$2,932,276 in 406 Mitigation funding for a hospital emergency backup generator system; and \$14,430 to repair and replace filters and fluids for an existing generator system that was reported as damaged by the disaster.

In November 2005, the hospital requested FEMA funding to replace the existing generator system with a state-of-the-art redundant system (electrical mechanical and fuel system). FEMA denied the request as not eligible for 406 Mitigation funding and noted that the damage to the existing system was not disaster related but was caused by lack of a fuel filter assembly. FEMA concluded that the proposed new system would not prevent damage if an event similar to hurricane Katrina occurred.

However, in May 2007, FEMA approved the redundancy project. To justify funding the project, FEMA prepared a BCA that considered the cost of the new system (14 PWs) and an additional \$6.4 million (15 PWs) associated with other disaster damage caused by the failure of the existing backup generator system. Using these costs, the BCA yielded a favorable result and was used to justify funding the redundant system.

We question the \$2,932,276 in funding for the redundant system because the project did not meet federal eligibility requirements for 406 Mitigation. The disaster did not damage the backup generator system or cause its failure. In addition, the state-of-the-art redundant system will not prove any more effective should the reliable supply of diesel fuel again become a problem.

Administrative: Justification based on a broad definition of damaged elements. The 406 Hazard Mitigation Group generated a hazard mitigation proposal based on FEMA's incurred claimed costs of \$6.4 million for 14 hospital repair PWs. Many of those costs were unrelated to the generator failure. Those unrelated costs included: (a) cleanup of Main Hospital PW#2292 – \$1,753,055; (b) Main Hospital Carpet PW#2452 – \$260,844; (c) Main Hospital Complex Ceiling Tile replacement PW#2475 – \$988,539; and (d) Replacement of Telecom Switching Equipment PW#4890 – \$632,904.

#7.
Scope of work: *LA, Regional Transit Authority (1603-DR-LA, PW 3704, \$621,400)*
Replace 13 bus lifts with a new self-contained modular unit. The new system uses the latest environmental protection capabilities. It is flood resistant because the system is totally contained in a steel enclosure and protected with an "enviroguard" protective

coating.

Audit Issue: *Cost Questioned: Eligible claimed repair cost not determined.* FEMA provided \$621,400 in 406 Mitigation funding to repair bus and automobile maintenance equipment damaged by flooding at a regional transit authority (authority). The flooding resulted in 13 bus lifts and 5 light-duty automobile lifts being submerged in oily, corrosive floodwaters for approximately 2 weeks.

A vendor provided repair estimates ranging from \$20,000 (clean and repair) to \$67,000 (clean, repair, and replace cylinders), and told the authority that newer automobile lifts systems offered an in-ground coated housing that protected against corrosive effects of immersion in water. FEMA field staff who inspected the damage determined that “hazard mitigation was considered but not technically feasible to seal underground lifts from another flood event.” However, despite its earlier determination, FEMA provided the authority with \$621,400 in 406 Mitigation funding to replace the bus lifts with the newer model.

Although the required BCA was not found in FEMA’s project records, FEMA justified and funded the replacement of the lifts based on the apparent flood resistance of the newer model. However, the manufacturer of the lifts told us that the new equipment offered no more flood resistance than the older lifts if flooding similar to that experienced with hurricane Katrina occurred.

We question the \$621,400 because the work did not meet federal eligibility requirements for 406 Mitigation. Even with a broad interpretation of 406 Mitigation funding criteria, it is unlikely that this project would provide a cost-effective mitigation measure to prevent future damage. FEMA should have considered the replacement of the bus lifts as an improved project and limited funding to the cost of repairing the lifts to their pre-disaster condition (maximum of \$67,000).

Administrative: Project documentation does not support hazard mitigation benefit claim. The new system is “flood resistant” because the system is totally contained in a steel enclosure and protected with an “enviroguard” protective coating. However, we were unable to locate in either the company’s literature or through contacting the company the basis for the assertion that the new lifts had “flood-resistant” properties. The only supportable assertion is that the containment housing protects against ground water.

#8
Scope of work: *Orleans Parish Criminal Sheriff’s Office (1603-DR-LA, PW 4876, \$9.4 million)*
Audit Issue: *Administrative: Cost-estimating format (CEF) calculations with errors used to justify replacement of the damaged facility.* Wind and flood damage to two detention facilities, identified as Templeman 3 and 4. This error resulted from not properly computing the project’s midpoint of construction. Either the number of months FEMA used for the escalation factor did not agree with the information recorded in the CEF Notes, or the stated assumptions did not have the required detail. For example, the CEF Notes identified a factor of 14 months to the midpoint of construction. However, the factor actually applied was 24 months. CEF calculations were improperly used to justify facility replacement.

Appendix C
Projects Reviewed with Audit Issues

Mississippi

#9

Hancock Medical Center (1604-DR-MS, PW 7082, \$12,914,832)

Scope of work: Repair, remove, and replace ceilings, tiles, walls, etc., for the main hospital building including a 406 Mitigation proposal of \$8.8 million dollars to fund entirely a new building to house the Operating Room, Emergency Room, Imaging Laboratory, and Service Laboratories, including considerable amounts of ancillary spaces.

Audit Issue: **Administrative: FEMA's quality control/quality assurance review process for project formulation needs improvement.** FEMA approved \$8.8 million in 406 Mitigation funding for the project. Records indicated that more than a year after the funding was approved, FEMA informed the applicant that the scope of work was not eligible for 406 Mitigation, deobligated the funding, and requested that the applicant submit a revised scope of work. FEMA will reimburse the applicant about \$165,000 in costs incurred in error.

Alabama

#10

Alabama State Port Authority (1605-DR-AL, PW 1289, \$15 million)

Scope of work: Debris removal and disposal, dredge/re-excavate an equipment access channel, and dump and shape unclassified material, including hazard mitigation proposal of \$9.5 million for riprap at Gaillard Island.

Audit Issue: **Administrative: BCA calculations not adequately supported.** Because of insufficient documented evidence supporting changes to BCA calculations, we were unable to determine the adequacy of \$3.6 million in 406 Mitigation funding for this project.

#11

City of Mobile (1605-DR-AL, PW 1580, \$22,800)

Scope of work: Remove and dispose of a 500 KVA transformer damaged by the disaster. Install a new 500 KVA transformer and raise it on a steel stand. Installation to include additional stranded copper wire.

Audit Issue: **Cost Questioned: Repair work omitted 406 Mitigation.** FEMA provided \$4,073 in 406 Mitigation funding for work on a small project; however, the work was not performed. The original project was to replace and elevate a 500 KVA transformer at an estimated cost of \$22,000. The applicant repaired the transformer but did not elevate it to meet the 406 Mitigation funding requirements. Therefore, we question the \$4,073 in 406 Mitigation funding provided for this project.

Texas

#12

Memorial Herman Baptist Hospital (1606-DR-TX, PW 2471 - \$1.2 million, PW 3187 - \$6.1 million, PW 3241 - \$5.9 million)

Scope of work: Repairs to various buildings.

Audit Issue: **Administrative: Disproportional allocation of insurance proceeds.** The applicant did not allocate the insurance proceeds proportionally among all insured risks based on documentable damages. Instead, the applicant disproportionately allocated insurance proceeds to business interruption losses, an item not eligible for federal reimbursement.

Appendix C
Projects Reviewed with Audit Issues

#13 *Lamar University (1606-DR-TX, PW 1749, 17 different PWs)*
Scope of work: Project entailed roof replacements at the Gladys City/Boomtown Museum Complex (Museum Complex) and 16 other university buildings.
Audit Issue: *Administrative: Ineligible public assistance costs.* University records identified that the roofs at the Museum Complex required only general repairs and were not eligible for replacement or 406 Mitigation funding. Those records also identified that roof damage to 16 other university buildings may not have been adequately determined. Also, collateral internal damage to the 16 buildings did not correlate and justify the need for complete roof replacements.

Section 406 of the Stafford Act provides discretionary authority to fund mitigation measures in conjunction with the repair of a disaster-damaged facility so that the additional measures enhance the ability to resist similar damage in future events. Title 44, *Code of Federal Regulations*, Section 206.226 interprets and codifies the requirements of the Stafford Act and provides clarification on federal funding for hazard mitigation.

FEMA’s Disaster Assistance Policy 9526.1 (August 13, 1998 [subsequently revised on July 30, 2007]) provides guidance on the appropriate use of the discretionary funding available under Section 406 of the Stafford Act. FEMA’s *Public Assistance Guide* 322 provides additional direction on this topic.

To be eligible for this discretionary funding, proposed 406 Mitigation measures:

- Must be appropriate to the disaster damage and must prevent future damage similar to that caused by the declared disaster.
- Must be applied only to the damaged element(s) of a facility. This criterion is particularly important when repairing a portion of a system.
- Cannot increase risk or cause adverse effects to the facility or to other property.
- Must consist of work that is above and beyond the eligible work required to return the damaged facility to its pre-disaster design, and the funding cannot be applied to replacement buildings.

In addition, the 406 Mitigation measure must be cost-effective. The measure may amount to up to 15% of the project’s repair costs or up to 100% if FEMA has determined that the measure is cost-effective. If the measure’s cost exceeds the project’s repair cost, the cost-effectiveness must be demonstrated through an acceptable BCA. FEMA must approve the 406 hazard mitigation measure to ensure eligibility, technical feasibility, environmental and historical compliance, and cost-effectiveness.

Appendix E
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