



John Keel, CPA
State Auditor

Expenditures Related to Hurricane Ike at the University of Texas Medical Branch at Galveston

A Review of

April 24, 2009

Members of the Legislative Audit Committee:

The University of Texas Medical Branch at Galveston (Medical Branch) was closed to students on September 10, 2008, and patients were evacuated on September 11, 2008, in preparation for Hurricane Ike. The storm surge flooded the Medical Branch on September 12, 2008. In addition to sustaining damage to buildings and equipment, the Medical Branch also suffered business operating losses.

The Medical Branch's Estimate of Losses

The Medical Branch estimates that its losses from Hurricane Ike will total \$1.36 billion, which includes \$831.8 million in emergency work and permanent work costs, \$438.0 million in construction costs for a new hospital tower, and \$93.2 million in business operating losses before depreciation. It expects to recover \$899.3 million from external funding sources—\$592.6 million from the Federal Emergency Management Agency (FEMA), \$106.7 million from insurance proceeds, and \$200.0 million from the Sealy Smith Foundation—resulting in a \$463.8 million cost to the State.

However, these estimates are not the Medical Branch's final cost estimates; Medical Branch management stated that the cost estimation process may not be complete until December 2009 (see text box for more information on the Medical Branch's process for estimating permanent work costs). The Medical Branch has requested that the 81st Legislature appropriate \$300.0 million under House Bill 4586 to help pay for losses that will not be reimbursed by external sources. Included in that request is \$150.0 million: \$141.0 million to help pay for the construction of the new hospital tower and \$9.0 million for repairs to the John Sealy Hospital.

Auditors' Review of Estimated Losses

Auditors determined that the Medical Branch was unable to produce a completely reliable estimate of its losses because of the large scale of damage caused by Hurricane Ike to its campus; of the Medical Branch's more than 180 buildings, an estimated 76 were flooded and 110 suffered wind damage. These same factors prevented auditors from determining whether the Medical Branch's estimate of total losses was accurate or reasonable. In addition, the Medical Branch lacked sufficient data to support the estimated costs of permanent work, which accounts for 52 percent of the Medical Branch's estimated losses. The estimated

Background Information

The University of Texas Medical Branch at Galveston (Medical Branch) evacuated 469 patients in preparation for Hurricane Ike. The 2,338 students enrolled at the Medical Branch also had to evacuate as a result of the hurricane, which flooded the campus on September 12, 2008.

The Medical Branch sustained hurricane damage including:

- Wind damage to 110 buildings.
- Flood damage to 76 buildings, with 41 buildings having more than 3 feet of floodwater.

The Medical Branch's Process for Estimating Permanent Work Costs

The Medical Branch based its estimates for permanent work costs on estimates calculated by disaster recovery consultants. The consultants based their cost estimates on the insurance values of the buildings and equipment damaged by Hurricane Ike. The Medical Branch later adjusted some of these cost estimates after Medical Branch employees and consultants completed walk-throughs of each damaged building.

FEMA workers will conduct final walk-throughs of each building and develop project worksheets describing the damage and necessary repairs. After FEMA completes project worksheets, the Medical Branch can begin work to repair buildings and equipment based on actual contracts. All FEMA reimbursements must be based on actual expenditures. The Medical Branch expects approximately 2,000 project worksheets to be developed by December 2009 for damages related to Hurricane Ike.

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cost for permanent work totals \$709.8 million and includes repairs to equipment and buildings, including some historical buildings. The total cost for permanent work does not include \$438.0 million for the new hospital tower. Auditors could not independently verify these cost estimates. (See the attachment to this letter for a detailed list of estimated costs.)

The Medical Branch based its cost estimates for permanent work on (1) the insurance values of damaged buildings and their contents and (2) subsequent adjustments to these values based on walk-throughs of the damaged buildings. The Medical Branch’s methodology for estimating these costs could be improved. Specifically:

- The Medical Branch based its estimates on buildings’ insurance values without adjusting for inflation. After adjusting for inflation, construction costs in 2008 would be approximately 48 percent higher than costs in 2005; this would increase the Medical Branch’s costs for permanent work by \$117.8 million.
- The Medical Branch did not adjust cost estimates for buildings that are more than 50 years old, which may increase restoration costs.
- The Medical Branch applied the same cost estimation factors to all flooded buildings even though the flood levels varied among these buildings.
- The Medical Branch lacked sufficient documentation to support the quantity, type, and potential cost of adjusted building damages determined during walk-throughs.

The cost of emergency work totaled an estimated \$122.0 million, which accounts for 9 percent of the Medical Branch’s total estimated losses. The Medical Branch based its estimates for those costs on several sources, including actual costs and bids and estimates from contractors. In addition, the Medical Branch estimates that it will cost \$438.0 million to construct the new hospital tower, which would be designed to replace the beds lost in modernization and mitigation modifications to another hospital building. Table 1 lists the total estimated losses from Hurricane Ike at the Medical Branch.

Table 1

The Medical Branch’s Total Estimated Losses for Recovery from Hurricane Ike (In millions)					
Description	The Medical Branch’s Estimated Losses	Total Potential Funding from Non-state Sources			Potential Cost to the State ^a
		FEMA Reimbursement	Insurance	Other Sources	
Hurricane-related Incurred Costs (Including Mitigation for Existing Buildings)	\$ 831.8	\$592.6	\$ 67.9	\$ 75.0	\$96.4
Business Operating Loss Before Depreciation	93.2	0	38.8	0	54.4
Capital Funds for Construction of New Hospital Tower	438.0	0	0	125.0	313.0
Totals	\$1,363.0	\$592.6	\$106.7	\$200.0	\$463.8
^a Potential costs do not always sum precisely due to rounding.					

Source: Medical Branch.

As of January 22, 2009, the Medical Branch reported that it had made \$64.5 million in hurricane-related expenditures and had encumbered an additional \$15.6 million for hurricane-related costs. Auditors tested \$8.5 million in Medical Branch expenditures and encumbrances for hurricane-related damage as of January 22, 2009, and determined that these expenditures and encumbrances were supported and documented. Auditors identified no indications of fraud, waste, or abuse with respect to the Medical Branch's hurricane-related expenditures.

The Medical Branch plans to recoup some hurricane-related costs from FEMA and insurance proceeds. The Medical Branch provided documentation that supports its estimates for insurance proceeds. In addition, the Sealy Smith Foundation has offered the State \$125.0 million toward the construction of a replacement hospital facility and an additional \$75.0 million toward the mitigation and repairs of the John Sealy Hospital, subject to the State and the University of Texas System agreeing to certain terms.

We appreciate the Medical Branch's cooperation during this review. If you have any questions, please contact Ralph McClendon, Audit Manager, or me at (512) 936-9500.

Sincerely,

John Keel, CPA
State Auditor

Attachment

cc: Members of the University of Texas System Board of Regents
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Attachment

Expenditures Related to Hurricane Ike at the University of Texas Medical Branch at Galveston

Hurricane Ike hit Galveston on September 13, 2008. The University of Texas Medical Branch at Galveston (Medical Branch) suffered losses due to the storm surge and flooding on September 12, 2008. More than 1 million square feet of first-floor space on the Medical Branch's campus sustained damage from saltwater flooding.

The Medical Branch estimates that its losses from Hurricane Ike will total \$1.36 billion, which includes \$831.8 million in costs related to permanent and emergency work, \$438.0 million in construction costs for a new hospital tower, and \$93.2 million in business operating losses before depreciation. Auditors determined that the Medical Branch was unable to produce a completely reliable estimate of its losses because of the large scale of damage caused by Hurricane Ike to its campus. Of the Medical Branch's more than 180 buildings, an estimated 76 were flooded and 110 suffered wind damage. These same factors prevented auditors from determining whether the Medical Branch's estimate of total losses was accurate or reasonable. In addition, the Medical Branch's estimates lacked sufficient data to support the estimated costs for permanent work.

Below is a summary of the Medical Branch's estimated costs and business-operating losses related to Hurricane Ike.

Permanent Work (Buildings and Equipment, Infrastructure, Utilities) - \$709.8 million

The Medical Branch estimated it would incur \$709.8 million in permanent work costs as a result of damage done by Hurricane Ike. Auditors could not independently verify this cost estimate. The Medical Branch is seeking Federal Emergency Management Agency (FEMA) funding and could receive reimbursement for 75 percent of the uninsured portion of these costs if all costs are approved by FEMA.

The Medical Branch based its cost estimate on (1) the insurance values of damaged buildings and their contents and (2) subsequent adjustments to these values based on walk-throughs of the damaged buildings. As of January 22, 2009, the Medical Branch had spent or encumbered only \$1.6 million for permanent work. The Medical Branch relied heavily on consultants' damage estimates in its calculations. However, the Medical Branch's methodology for estimating these costs could be improved.

The Medical Branch did not adjust insurance values to reflect replacement costs.

The Medical Branch based its estimated costs on insurance values, many of which were set in 2005, for buildings and equipment damaged by the hurricane; however, it did not adjust these values to reflect current replacement costs. Specifically:

- The Medical Branch did not adjust the building insurance values for inflation. The Medical Branch based its current cost estimates for permanent work on the buildings' insurance values; however, these values had not been adjusted for inflation since 2005. As a result, these costs may be underestimated. For example, the Medical Branch initially estimated that it would cost approximately \$247.0 million to repair flood damage to its facilities, based on each building's insurance value. However, according to the University of Texas System Office of Facility Planning and Construction, construction costs increased by an average of 11 percent each year from 2005 to 2007. They increased by 8 percent in 2008 and are expected to increase by 5 percent in 2009. When adjusted for inflation, the original estimate should have been \$364.8 million, a 48 percent increase. As of February 26, 2009, the Medical Branch increased its cost estimate to \$331.8 million based on the damage identified during walk-throughs of the buildings. These adjusted estimates are based on the Medical Branch's initial estimate; as a result, they still may be underestimated.
- The Medical Branch did not adjust the insurance values for 37 buildings that are more than 50 years old. Some or all of these buildings may have historical significance, which could increase their restoration costs. For example, the Ashbel Smith building, also known as "Old Red," was built in 1889, and the Medical Branch estimates that restoration costs will be \$16.8 million, which is the building's 2005 insurance value. However, under FEMA guidelines, the restoration costs of historical buildings can be increased by 1 to 7 percent of their repair costs.
- The Medical Branch used insurance values as the basis for its estimated costs for equipment. The insurance value was the acquisition cost of the equipment, rather than the replacement cost.

The Medical Branch used an across-the-board percentage to estimate repair costs for flood- and wind-damaged buildings, regardless of the differing levels of damage.

The Medical Branch determined that 76 buildings were flooded by Hurricane Ike. To estimate the repair costs, the Medical Branch multiplied each building's insurance value by 90 percent, regardless of the level of flooding in each building. The Medical Branch developed this ratio by comparing standard renovation costs with insurance value unit costs on a single dormitory hall. However, using site visit documentation provided by the

Medical Branch, auditors determined that there were significant differences in the flood levels among the damaged buildings (see Table 2).

Table 2

Buildings Flooded by Hurricane Ike on the Medical Branch Campus	
Number of Buildings	Flood Level
6	Under 1 foot
19	Between 1 foot and 3 feet
28	Over 3 feet
13	Fully flooded
10	Flood level not provided

Source: Medical Branch.

The Medical Branch estimated that 90 percent of all equipment on the basement and/or ground floor of the flooded buildings needed to be replaced. However, as discussed above, the flooding levels varied among the flooded buildings, which could result in differing levels of equipment damage.

To estimate the cost of damage to buildings and equipment caused by the hurricane's winds, the Medical Branch initially calculated 5 percent of the total insurance value of all buildings and equipment. According to Medical Branch management, these figures were later adjusted after consultants and Medical Branch employees determined during walk-throughs that the extent of the wind damage was less severe than initially estimated.

The Medical Branch lacked adequate support for subsequent cost estimate adjustments.

Medical Branch employees and disaster recovery consultants conducted joint walk-throughs of the buildings on campus that were damaged by Hurricane Ike. Based on the observations made during these walk-throughs, the Medical Branch adjusted several of its initial cost estimates for permanent work needed to repair the buildings and equipment. However, the Medical Branch's walk-through documentation does not specify the quantity, type, and potential costs of the damage identified to support the adjustments. For example, only two of nine walk-through worksheets auditors reviewed specified that equipment was damaged; however, the Medical Branch increased its initial estimates for equipment damage for all nine buildings.

According to the Medical Branch, it relied on its own and the consultants' prior experience in rebuilding efforts to make these cost adjustments. The adjustments increased the Medical Branch's estimated costs for permanent work by 6.6 percent, from an initial estimate of \$666.0 million to a new estimate of \$709.8 million (see Table 3 on the next page). While the Medical

Branch decreased its wind damage estimate by \$76.0 million, it increased its estimate of flood damage by \$101.7 million. The Medical Branch increased its estimates for equipment flood damage across the board by 11 percent for 66 of the 76 flooded buildings. However, as discussed previously, the Medical Branch lacked sufficient documentation supporting these adjustments.

Table 3

Comparison of the Medical Branch's Initial and Adjusted Cost Estimates for Permanent Work (In millions)		
Description of Cost	Original Estimate	Adjusted Estimate (as of February 26, 2009)
Building Repairs	\$307.8	\$350.8
Equipment Repairs	82.7	83.5
Infrastructure Repairs	100.0	100.0
Mitigation Efforts	126.0	126.0
Other Costs	6.5	6.5
Contingency Adjustment	43.0	43.0
Totals	\$666.0	\$709.8

Source: Medical Branch.

Infrastructure Costs - \$100.0 million

The Medical Branch estimates that its infrastructure costs will total \$100.0 million, including repairs to chilled and steamed water systems, elevators, and telecommunications. Auditors reviewed \$34.1 million of estimated infrastructure costs and determined they were supported. However, as part of its \$100.0 million cost estimate, the Medical Branch included \$12.4 million in costs to repair and/or replace elevators, which were also included in the insurance value of the buildings and formed the basis for the Medical Branch's cost estimates for building repairs. As a result, some of these costs may have been counted twice.

Mitigation Costs - \$126.0 million

The Medical Branch estimates that it will cost \$126.0 million to mitigate buildings against future flooding. The Medical Branch calculated this estimate by multiplying the insurance values for buildings and equipment by 30 percent; however, it lacks sufficient documentation to support those estimates. To receive reimbursement for hurricane-related costs, FEMA may require institutions to implement certain mitigation measures.

It should be noted that there are some equipment and buildings for which the Medical Branch will have difficulty mitigating the risk of flood damage. For example, the Medical Branch has a cryo-electron microscope facility for which it will pay \$3.9 million to replace microscopes damaged by Hurricane Ike. The microscopes are very sensitive to vibrations, which will make it difficult to relocate them to a higher floor to reduce the risk of future flood damage.

Contingency Adjustment - \$43.0 million

The Medical Branch included a contingency adjustment of \$43.0 million in its total estimated costs for permanent work. This amount was based on an approximate 7 percent inflation factor for two years.

Other Costs - \$6.5 million

Other costs include costs related to site work and parking garages.

Emergency Work - \$122.0 million

Debris Removal - \$270,000

These expenditures were for the removal of debris from the campus. The total amount of expenditures as of January 2009 was \$262,453, which is 97 percent of the estimated debris removal costs. This work was conducted by a contractor that had a contract with the University of Texas System. It is likely that the Medical Branch will be able to recover all of these costs from FEMA because the disaster declaration affecting Galveston allows public entities to be reimbursed for 100 percent of costs for clearing debris. However, the Medical Branch must remove any remaining debris by April 27, 2009, to claim full FEMA reimbursement.

Emergency Protective Measures - \$121.7 million

These costs were mainly for emergency repairs, including structure drying and dehumidification, stabilization measures, and generators. The Medical Branch estimates that costs in this category will total \$121.7 million. As of January 2009, the Medical Branch had made \$78.2 million in expenditures and encumbrances for emergency protective measures. Of this amount, auditors tested \$8.5 million and determined that the Medical Branch had adequate supporting documentation.

The Medical Branch may be able to recover 100 percent of these costs from FEMA. However, the due date for incurring fully reimbursable costs in this category was October 27, 2008. If the federal government does not amend the disaster declarations, the Medical Branch may be reimbursed for a smaller percentage of the costs incurred after October 27, 2008, which could limit the Medical Branch's reimbursement from FEMA for the \$43.5 million in estimated costs for which funds were not spent or encumbered as of January 2009.

New Hospital Tower (Jennie Sealy Replacement Hospital) - \$438.0 million

The Medical Branch estimates that it will cost \$438.0 million to construct the Jennie Sealy Replacement Hospital, which would replace 200 in-patient beds expected to be lost during the modernization and mitigation of the existing John Sealy Hospital. The Medical Branch has requested \$141.0 million in capital fund appropriations from the 81st Legislature and has received a commitment of \$125.0 million from the Sealy Smith Foundation to help pay for these costs. The Medical Branch plans to issue debt for the difference (see Revenue from Non-state Sources below), along with a minor land swap with the Sealy Smith Foundation. However, it should be noted that the Medical Branch's 2007 Capital Improvement Plan already included the construction of the Jennie Sealy Replacement Hospital for surgical care and supporting services, which was to be partially funded by the Sealy Smith Foundation on its land and leased to the Medical Branch.

Business Operating Losses Before Depreciation - \$93.2 million

The Medical Branch estimated that it incurred \$93.2 million in operating losses before depreciation for fiscal year 2009 as a result of Hurricane Ike. The Medical Branch calculated its operating losses based on its actual revenues from the first quarter of fiscal year 2009, historical data from the final nine months of fiscal year 2008, and a set of reasonable assumptions for the remainder of fiscal year 2009.

The \$93.2 million represents the Medical Branch's business operating loss before depreciation for fiscal year 2009. All three of the Medical Branch's functional areas—Institutional Support, Health Systems, and Academic Enterprise—incurred operating losses. The Medical Branch provided auditors sufficient documentation to support its estimated operating losses for fiscal year 2009.

Examination of Expenditures

Auditors tested \$8.5 million of \$80.1 million that the Medical Branch had spent or encumbered for hurricane-related expenditures as of January 22, 2009. All transactions tested were supported and documented. Auditors did not identify any indications of fraud, waste, or abuse with respect to the Medical Branch's hurricane-related expenditures.

Revenue from Non-state Sources

The Medical Branch expects to recoup \$899.3 million of its hurricane-related costs from three sources: FEMA, insurance proceeds, and private donations.

FEMA - \$592.6 million

Auditors estimate that the Medical Branch should be eligible to receive \$592.6 million in FEMA reimbursements based on the Medical Branch's total estimated losses. The Medical Branch had received \$72.7 million in reimbursements related to emergency work from FEMA as of February 4, 2009. It continues to work with consultants and FEMA personnel to develop project worksheets, which must be completed before the Medical Branch can begin work on reimbursable repairs. As of February 4, 2009, FEMA had assigned worksheet numbers with funding amounts to 49 of 2,000 projects. The remaining projects were in varying stages of completion.

Insurance Proceeds - \$106.7 million

The Medical Branch initially estimated that it would receive \$100.0 million in insurance proceeds. It increased this estimate to \$106.7 million because it (1) identified additional policies covering damage to selected buildings and (2) will receive approximately \$97.0 million from the proceeds of a \$100.0 million University of Texas System insurance policy. The Medical Branch provided supporting documentation for the entire amount of its estimated insurance proceeds.

The Medical Branch is working with FEMA to determine the permitted allocation of insurance proceeds. The Medical Branch is requesting to allocate 60 percent of the proceeds to capital improvements and 40 percent to business operating losses. Applying insurance proceeds to business operating losses will allow more FEMA funding to be applied to capital costs, resulting in a lower overall cost to the State.

Other Sources - \$200.0 million

The Sealy Smith Foundation has offered the State \$125.0 million toward the construction of a replacement hospital tower. It has also offered the State an additional \$75.0 million toward mitigation and repairs of the John Sealy Hospital. Both of these grants would be subject to the State and the University of Texas System agreeing to the following terms:

- The State and the University of Texas System must provide continued operational support and maintenance of at least 500 in-patient beds and a level 1 trauma center at the Medical Branch in Galveston.
- The new hospital tower will be named the Jennie Sealy Hospital and will have a minimum of 200 in-patient beds.
- The Sealy Smith Foundation must acquire from the Medical Branch title to the additional required land under the new hospital tower, and it must execute a lease with the Medical Branch for 50 years with a clause requiring that 200 in-patient beds be maintained in the new tower.

The Medical Branch does not anticipate receiving FEMA funding for the new hospital tower; however, the Medical Branch may qualify for FEMA reimbursement of some of the construction costs if the new hospital tower is used to replace hospital functions lost in the mitigation of the John Sealy Hospital.

Estimated Costs for the University of Texas Medical Branch at Galveston's Recovery from Hurricane Ike

Table 4 lists the estimated costs for the University of Texas Medical Branch at Galveston (Medical Branch) recovery from Hurricane Ike. The Medical Branch estimates that its losses from Hurricane Ike will total \$1.36 billion. This includes \$831.8 million in emergency work and permanent work costs, \$438.0 million in construction costs for a new hospital tower, and \$93.2 million in estimated business operating losses before depreciation for fiscal year 2009. The Medical Branch expects to recover \$592.6 million from the Federal Emergency Management Agency (FEMA), \$106.7 million from insurance proceeds, and \$200.0 million from the Sealy Smith Foundation. As a result, the potential cost to the State totals \$463.8 million. The Medical Branch has requested that the 81st Legislature appropriate \$300.0 million under House Bill 4586 to help pay for losses that will not be reimbursed by external sources. Included in that request is \$150.0 million: \$141.0 million to help pay for the construction of the new hospital tower and \$9.0 million for repairs to the John Sealy Hospital.

Table 4

The Medical Branch's Total Estimated Losses for Recovery from Hurricane Ike (In millions)									
Description	The Medical Branch's Total Estimated Losses as of February 26, 2009	Expenditures as of January 22, 2009	Encumbrances as of January 22, 2009	Possible Funding Sources			Total Non-state Funding Sources as of February 26, 2009	Potential Cost to the State as of February 26, 2009	
				Estimated FEMA Payments	Insurance Proceeds	Other Sources ^a			
Expenses									
Permanent Work									
Water Control Facilities, Buildings and Equipment, Utilities, and Other Items ^b	\$583.8	\$1.4	\$0.2	\$387.0	\$67.9	\$75.0	\$529.8	\$54.0	
Mitigation for Existing Buildings	126.0	0.0	0.0	94.5	0.0	0.0	94.5	31.5	
Total Permanent Work	\$709.8	\$1.4	\$0.2	\$481.4	\$67.9	\$75.0	\$624.3	\$85.5	
Emergency Work									
Debris Removal	\$ 0.3	\$ 0.3	\$ 0.0	\$ 0.3	\$ 0.0	\$ 0.0	\$ 0.3	\$ 0.0	
Emergency Protective Measures	121.7	62.8	15.4	110.9 ^c	\$ 0.0	0.0	110.9	10.9	
Total Emergency Work	\$122.0	\$63.1	\$15.4	\$111.1	\$ 0.0	\$ 0.0	\$111.1	\$10.9	

**The Medical Branch's Total Estimated Losses for Recovery from Hurricane Ike
(In millions)**

Description	The Medical Branch's Total Estimated Losses as of February 26, 2009	Expenditures as of January 22, 2009	Encumbrances as of January 22, 2009	Possible Funding Sources			Total Non-state Funding Sources as of February 26, 2009	Potential Cost to the State as of February 26, 2009
				Estimated FEMA Payments	Insurance Proceeds	Other Sources ^a		
Total Expenses	\$831.8	\$64.5	\$15.6	\$592.6	\$67.9^d	\$75.0	\$735.5	\$96.4
Business Operating Loss Before Depreciation (as of March 11, 2009)								
Business Operating Losses Before Depreciation (Fiscal Year 2009)	\$93.2	\$0.0	\$0.0	\$0.0	\$38.8 ^e	\$0.0	\$38.8	\$54.4
Total Business Operating Losses Before Depreciation	\$93.2	\$0.0	\$0.0	\$0.0	\$38.8	\$0.0	\$38.8	\$54.4
New Hospital Tower (House Bill 4856 Request)								
Capital Funds for Construction of New Hospital Tower	\$438.0	\$0.0	\$0.0	\$0.0	\$0.0	\$125.0	\$125.0	\$313.0
Total Costs for New Hospital Tower	\$438.0	\$0.0	\$0.0	\$0.0	\$0.0	\$125.0	\$125.0	\$313.0
Total Costs Related to Hurricane Ike^f	\$1,363.0	\$64.5	\$15.6	\$592.6	\$106.7	\$200.0	\$899.3	\$463.8

^a The Sealy Smith Foundation is expected to provide funding to help pay for the construction of a new hospital tower and for mitigation and repairs on the John Sealy Hospital.

^b The Medical Branch did not include in its estimated costs (1) whether a building was more than 50 years old, which could increase renovation costs or (2) inflation in building construction costs since 2005.

^c This estimate is based on a FEMA reimbursement rate of 100 percent for expenses incurred before October 27, 2008, and a 75 percent reimbursement rate for expenses incurred after that date.

^d The Medical Branch stated it plans to apply 60 percent of \$97 million in proceeds from a University of Texas System insurance policy and 100 percent of \$9.71 million in proceeds from another insurance policy to capital improvements.

^e The Medical Branch stated it plans to apply 40 percent of \$97 million in proceeds from a University of Texas System insurance policy to business operating losses.

^f Totals do not always sum precisely due to rounding.

Sources: Medical Branch and auditors' analysis.

Objectives, Scope, and Methodology

The objectives of this review were to:

- Examine the University of Texas Medical Branch at Galveston's (Medical Branch) hurricane-related expenditures to determine whether the expenditures were supported and documented.
- Examine the Medical Branch's hurricane-related impact and costs to determine whether they were developed using reasonable methodologies.
- Determine whether there are any indications of fraud, waste, or abuse with respect to the Medical Branch's hurricane-related expenditures.
- Identify the Medical Branch's estimates for reimbursement by the Federal Emergency Management Agency (FEMA) and other non-state funding sources.

The scope for the review of expenditures was from September 13, 2008, to January 22, 2009. Auditors examined the Medical Branch's methodology to calculate estimated damages as of February 26, 2009.

The methodology included collecting information and documentation; performing selected tests and other procedures; analyzing and evaluating the results of the tests; and conducting interviews with Medical Branch management and staff.

Information collected and reviewed included the following:

- The Medical Branch's estimated hurricane-related expenditures, including estimated FEMA reimbursements.
- The Medical Branch's accounting system reports and supporting documentation.
- Initial damage estimates developed by the Medical Branch's consultant.
- The Medical Branch's insurance policies.
- The Medical Branch's FEMA project worksheets.
- *Interim Report to the 81st Texas Legislature*, House Select Committee on Hurricane Ike Devastation to the Texas Gulf Coast, January 2009.
- Inflation factors for construction projects.

Procedures and tests conducted included:

- Touring selected buildings on the Medical Branch campus on January 20, 2009, and observing damage and repairs completed as of that date.
- Testing Hurricane Ike-related expenditures and encumbrances to determine whether these expenditures were supported and documented. Auditors also reviewed for indications of waste, fraud, or abuse.
- Evaluating the reasonableness of the methodologies that the Medical Branch used to develop business operating loss and cost estimates related to Hurricane Ike.
- Evaluating the Medical Branch's actual and estimated expenditures for eligibility for FEMA reimbursement.
- Examining the Medical Branch's insurance policies to determine potential recovery amounts.

Criteria used included:

- *Texas Disaster Recovery Manual*, Division of Emergency Management, Office of the Governor, March 24, 2006.
- FEMA disaster declarations FEMA-3294-EM and FEMA-1791-DR and their amendments.
- *Public Assistance Guide*, FEMA 322, June 2007.
- *FEMA's Cost Estimating Format for Large Projects Instructional Guide*, November 1998.
- Governor Perry's Emergency Disaster Proclamation and its amendments.

Project Information

Fieldwork for this review was conducted from January 2009 through March 2009. This project was a review; therefore, the information in this report was not subjected to all the tests and confirmations that would be performed in an audit. However, the information in this report was subject to certain quality control procedures to help ensure accuracy.

The following members of the State Auditor's staff performed the audit:

- Gregory Scott Adams, MPA, CPA, CGFM (Project Manager)
- Jennifer Wiederhold, CGAP (Assistant Project Manager)
- Michael Boehme, CIA, PHR

- Tessa Mlynar
- Anca Pinchas, MSC, MAcy, CPA
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