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State Auditor

A Review of
**Expenditures Related to Hurricane Ike
at the General Land Office**

April 22, 2009

Members of the Legislative Audit Committee:

The General Land Office (Land Office) is responsible for management of the Texas coastline, which was damaged by Hurricane Ike (see text box). Hurricane Ike—the third most destructive hurricane in U.S. history in terms of economic loss—caused shoreline recession on Galveston Island that averaged 136 feet and ranged from 50 feet to 280 feet along a 7.6-mile stretch of coastline.

The Land Office's Estimate of Losses

The Land Office estimates that its losses from Hurricane Ike will total \$263.9 million. It expects to recover \$175.9 million from the Federal Emergency Management Agency (FEMA), resulting in an estimated \$88.1 million potential cost to the State. These estimates do not represent all Hurricane Ike-related damage to the Texas coast: the Land Office has proposed an additional \$1.0 billion in projects to improve beaches, protect the shoreline, and make other improvements to public coastal land. While some of these projects contain components that address damage caused by Hurricane Ike, the Land Office did not distinguish which costs are for Hurricane Ike-related repairs and which costs are not related to Hurricane Ike. Therefore, the costs associated with these additional projects were not included in the estimates of total Hurricane Ike-related losses cited in this report.

Auditors' Estimate of Losses

Auditors estimate that the Land Office's losses from Hurricane Ike will total \$263.9 million and that the Land Office will recover \$174.6 million in FEMA reimbursements—resulting in a \$89.3 million potential cost to the State. (See the attachment to this letter for a detailed list of estimated costs).

The majority of the difference between auditors' and the Land Office's estimates of FEMA reimbursements is primarily due to differing estimated reimbursements for repairing the Blue Water Highway. FEMA must determine whether it will reimburse the Land Office for the beach restoration portion of this project. Auditors' estimate of total FEMA reimbursements did not include potential reimbursements related to the beach restoration portion of the project; the Land Office's estimate did include these potential reimbursements. Table 1 on the next page lists the total estimated loss from Hurricane Ike at the Land Office.

Background Information

Hurricane Ike hit the Texas coast on September 13, 2008. The storm surge removed huge quantities of sand from Gulf beaches and deposited sand in the bays and inland along the Texas coast as the storm came ashore. The hurricane also deposited debris on Gulf beaches and the beaches' surf zones.

The areas most severely impacted by the storm surge were those located on the northeastern quadrant of the hurricane's eye wall and included the Bolivar Peninsula of Galveston County.

The General Land Office is responsible for management of 367 miles of Texas coastline, from the vegetation line on the beach to 10.3 miles into the Gulf of Mexico, as well as millions of acres of submerged land in coastal bays.

SAO Report No. 09-033

Table 1

Total Estimated Losses for Recovery from Hurricane Ike at the Land Office (in millions)						
Description	Auditors' Estimated Losses	Land Office's Estimated Losses ^a	Land Office's Estimated Total Potential Funding from Non-state Sources ^a	Auditors' Estimated Total Potential Funding from Non-state Sources	Land Office's Estimated Potential Cost to the State ^a	Auditors' Estimated Potential Cost to the State
Hurricane-related Incurred Costs	\$ 181.7	\$ 181.7	\$130.9	\$ 129.6	\$ 50.8	\$ 52.1
Lost Revenues	16.3	16.3	0.0	0.0	16.3	16.3
Mitigation	66.0	66.0	45.0	45.0	21.0	21.0
Totals^b	\$ 263.9	\$ 263.9	\$175.9	\$ 174.6	\$ 88.1	\$ 89.3
^a Estimates were as of March 30, 2009. ^b The column totals do not always sum precisely due to rounding						

Sources: Data for the Land Office's estimates was provided by the Land Office. All other data is based on auditors' analysis.

Additional Information

The Land Office received \$39 million from the Texas Public Finance Authority on October 31, 2008, to remove beach debris. Currently, if FEMA reimburses the State for these costs, the reimbursements are to be deposited in the State Treasury as undedicated revenue. However, the engrossed version of House Bill 4586 (81st Legislature) appropriates any FEMA reimbursements received for these costs back to the Land Office. In addition, the Land Office has requested that the 81st Legislature appropriate \$35.2 million under House Bill 4586 to the Land Office to pay for (1) some losses that will not be reimbursed from FEMA and (2) certain mitigation measures. The Land Office did not carry insurance that would pay for any of the Hurricane Ike-related losses; some damage, such as sand loss, may not be insurable. Table 2 lists the Land Office's projects to be funded through House Bill 4586.

Table 2

Land Office Projects to be Funded by House Bill 4586 (81st Legislature)	
Project	Amount (in millions)
Required Match to Purchase Hazard-prone Property with FEMA Hazard Mitigation Grant Program Funds	\$15.0
Required Match to Repair the Blue Water Highway (Brazoria County Road 257) from Surf Side to San Luis Pass Bridge	13.7
Closure of Rollover Pass	6.0
Other Expenses	0.5
Total	\$ 35.2

In addition, auditors reviewed the list of additional proposed projects that totaled \$1.0 billion. In that review, auditors identified \$54.5 million in Hurricane Ike-related costs that the Land Office and auditors had already included in their earlier estimates. Therefore, the total estimated cost for these additional projects is \$952.5 million. It should be noted that the Land Office estimates that FEMA will reimburse the State for 75 percent of the costs related to these additional projects. FEMA will determine how much assistance it provides the State for these projects.

As of February 10, 2009, the Land Office reported that it had made \$640,000 in hurricane-related expenditures and owed an additional \$43.1 million for hurricane-related costs. The Land Office based its estimates on several sources, including:

- Estimates from contractors.
- Cost history figures generated by similar past Land Office projects.
- Projects completed by other entities that were similar to proposed Land Office projects.
- Previous contracts.

Auditors tested \$548,000 (85.6 percent) of the \$640,000 in hurricane-related expenditures as of February 10, 2009. All expenditures tested were supported and documented, and auditors identified no signs of fraud, waste, or abuse.

We appreciate the Land Office'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: The Honorable Jerry Patterson, Land Commissioner
Members of the School Land Board
Mr. Todd F. Barth
Mr. David S. Herrmann



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Attachment

Expenditures Related to Hurricane Ike at the General Land Office

The General Land Office (Land Office) is the lead agency for coastal management in Texas. The Land Office is responsible for protecting and enhancing 367 miles of gulf-fronting beaches and more than 3,300 miles of bay shoreline in Texas. On September 13, 2008, Hurricane Ike made landfall on the Gulf Coast, and the storm surge removed large quantities of sand from Gulf beaches and deposited sand in bays and inland. It also deposited debris on Gulf beaches and on the beaches' surf zones. The Land Office estimates that its losses from Hurricane Ike will total \$263.9 million. Below is a summary of the Land Office's costs and revenue losses related to Hurricane Ike.

Cost Categories

The Land Office and auditors estimate that the Land Office incurred \$181.7 million in costs as a result of the damage done by Hurricane Ike. Auditors examined the Land Office's cost estimation methodologies for three projects totaling \$137 million. Unless otherwise noted, auditors used Land Office estimates. The totals cited below are auditors' estimates.

Emergency Work-Debris Removal—\$70.3 million

These costs were for the removal of debris from the Texas coast area and removal of vessels that were submerged during the hurricane. Table 3 lists estimated debris removal costs.

Table 3

Estimated Debris Removal Costs (in millions)		
Project	Estimated Cost	Description
Bay Marine Debris Removal	\$38.8	Side sonar scanning and removal of underwater debris from the bays and estuaries impacted by the storm, which encompassed approximately 364,000 acres.
Beach Debris Removal	15.0	Removal of large debris; demolition of concrete debris and disposal; excavation and demolition of beach utilities; scraping one foot of sand, screening the sand, and then returning the sand to the beach; and screening stockpiled sand from other sources and placing sand on the beach.
Submerged Vessel Removal	7.5	Costs associated with the disposal of 301 recreational and commercial vessels that were candidates for removal in seven coastal counties.
Surf Zone Debris Removal	4.0	Side sonar scanning and debris removal from the surf zone to 4 miles off the coast along a 75-mile stretch from Quintana, Galveston Island to the Bolivar Peninsula.

Estimated Debris Removal Costs (in millions)		
Project	Estimated Cost	Description
Side Scan Sonar	2.0	This is a detection device used for underwater scanning and locating debris to be removed.
Total	\$67.3	

Source: Land Office.

Auditors reviewed the Land Office’s methodology for estimating the costs to remove debris from bays and estuaries impacted by the storm (“Bay Marine Debris Removal” in Table 3). Based on similar projects completed by agencies in Louisiana and Mississippi after Hurricane Katrina and Hurricane Rita, the Land Office estimated that the cost of removing debris from bays and estuaries would be between \$10 million and \$200 million. The Land Office subsequently signed a contract for a not-to-exceed amount of \$38.8 million for the removal of the bay marine debris.

Auditors did not review the methodologies the Land Office used to estimate the cost of the other debris removal projects. The Land Office based its estimates for the other debris removal projects on research, contractor estimates, and consultation with salvage professionals.

It is likely that the Land Office will be able to recover all of the costs associated with the debris removal projects from the Federal Emergency Management Agency (FEMA). However, the Land Office must complete debris removal by April 27, 2009, to claim full FEMA reimbursement.

In addition to the above costs, the Land Office is expected to pay an estimated \$3 million to specialists it hired to help it maximize FEMA reimbursements.

Emergency Protective Measures—\$582,000

The largest portion of these costs is associated with the construction of a clay core dune from Pocket Park #1 to the west end of the Galveston seawall. As of February 10, 2009, the Land Office had spent or encumbered \$423,000 of the \$500,000 it planned to spend for this project. In addition, the Land Office estimated that it would spend \$112,000 for other emergency protective efforts; actual expenditures and encumbrances for other emergency protective measures totaled \$82,000 as of February 10, 2009.

The costs associated with this category are eligible for 100 percent reimbursement from FEMA if they were incurred prior to October 27, 2008. If the federal government does not amend the disaster declarations, the Land Office will be reimbursed for only 75 percent of costs incurred after that date.

Permanent Work—\$110.8 million

The costs in this category are associated with three projects.

Repair and mitigation of the Blue Water Highway (Brazoria County Road 257) (\$54.8 million). Brazoria County’s portion of the Blue Water Highway runs from Surfside Beach to the San Luis Pass Bridge. Repairs will include reconstructing the roadway to pre-Hurricane Ike conditions. Additionally, the Land Office’s plan includes (1) the construction of a rock revetment to protect the road from future storms and (2) the nourishment of beaches and dunes adjacent to the road. This project is funded through the Land Office and not the Texas Department of Transportation because the Blue Water Highway is a county road, not a state-supported highway. Because the beaches adjacent to the Blue Water Highway have not been previously engineered, FEMA has not determined how much it will pay for the beach nourishment costs. Table 4 lists the costs and estimated FEMA reimbursements for the Blue Water Highway project.

Table 4

Estimated Costs and Reimbursements for Blue Water Highway Repair and Mitigation (in millions)			
Item	Total Estimated Cost	Estimated FEMA Funding	Estimated Cost to the State
Road Restoration	\$10.5	\$ 7.9	\$ 2.6
Rock Revetment Construction	41.0	30.7	10.3
Beach Nourishment	3.3	Undetermined ^a	3.3
Totals	\$54.8	\$38.6	\$16.2

^a As of April 2009, FEMA had not determined how much assistance it would provide.

Sources: Data for Total Estimated Cost was provided by the Land Office. All other data is based on auditors’ analysis.

Repair of previous coastal erosion projects damaged by Hurricane Ike (\$54.5 million). FEMA considers beaches to be eligible for permanent repair funding only if they are engineered beaches and have been routinely maintained prior to a disaster. Texas has engineered beaches since 1999 through the Coastal Erosion Planning and Response Act. There were 11 engineered beaches in the area damaged by Hurricane Ike.

The Land Office has requested that the 81st Legislature appropriate \$54.5 million to re-engineer these 11 beaches. For 10 of the 11 beaches, the Land Office is requesting state funding that is more than the estimated costs associated with restoring the beaches to pre-Hurricane Ike condition. This is because the Land Office is proposing to supplement the re-engineering with beach nourishment and dune restoration projects designed to reverse 15 years of erosion on these 10 beaches. The \$25.4 million in estimated costs

associated with repairing Hurricane Ike-related damage should be eligible for FEMA reimbursement. Table 5 lists the costs for repairing Hurricane Ike-related damage and additional beach nourishment and dune restoration work for the 11 beaches.

Table 5

Costs Associated with Re-engineering and Nourishing Beaches Damaged by Hurricane Ike (in millions)			
Beach	Requested State Funding	Estimated Hurricane Ike-related Damage	Additional Beach Nourishment and Dune Restoration Work
Pirates Beach/Palm Beach/ Pirate's Beach West	\$18.4	\$7.9	\$10.5
Bermuda Beach	7.9	3.4	4.5
Spanish Grant	5.8	2.5	3.3
Jamaica Beach	5.0	2.2	2.8
Kahala Beach	4.1	1.8	2.3
Quintana Beach	3.6	1.6	2.0
Hershey Beach	3.4	1.4	2.0
Seascape/Dellanera Park	2.2	2.2	0.0
Sunny Beach	1.9	0.8	1.1
West Beach Grand Riviera I & II	1.2	0.5	0.7
Surfside Beach	0.9	1.1	0.0
Totals^a	\$54.5	\$25.4	\$29.2
^a Columns may not sum exactly due to rounding.			

Source: Land Office.

Auditors reviewed the Land Office's cost estimates for restoring six miles of beach that included most of the beaches listed in Table 5 and determined that the estimates for these projects were consistent with the costs incurred during recent non-Hurricane Ike-related projects. In addition, auditors traced the estimated Hurricane Ike-related damage for seven of these beaches to the Land Office's FEMA worksheets.

Repair of four piers in the Gulf of Mexico (\$1.5 million). The Land Office estimates that it will cost \$371,000 to repair each of four piers damaged by Hurricane Ike. Two of these piers are located on the Bolivar Peninsula, one is in Freeport, and the other is in Surfside. FEMA guidelines allow reimbursement for repairs to publicly-owned piers. While the Land Office owns these piers, it leases the right to use the land and the structures to third parties. Land Office management stated that, generally, lessees are responsible for all operating expenditures associated with the pier, including insurance. However, management also reported that the lease contracts associated with these specific piers were older and did not require the lessee to

maintain sufficient insurance to cover catastrophic losses. If the contracts did not require the lessees to obtain sufficient insurance and the lessees do not have insurance, the State may qualify for FEMA reimbursement of up to 75 percent of total repair costs for the piers.

Other costs in this category include repair of three buoys that are part of the Texas Automated Buoy Systems at an estimated cost of \$67,000. In addition, the Land Office reported that a permit service center truck incurred \$17,000 in damage. The Land Office should receive 75 percent FEMA reimbursement for both items. These estimates are based on completed FEMA project worksheets.

Revenue Losses

The Land Office estimates that hurricane-related revenue losses total \$16.3 million. None of these losses are reimbursable from third parties, such as insurance or FEMA. These losses are in two categories: (1) loss of oil and gas royalty revenues and (2) loss of lease revenues.

Oil and Gas Royalty Revenues—\$16 million

The Land Office reported that it receives oil and gas production royalties from approximately 900 entities. The Land Office's and auditors' estimates of lost oil and gas royalty revenues are based on the difference between the oil and gas royalties that the Land Office received for the three months preceding Hurricane Ike (June-August 2008) and the royalties it received during September 2008 and the two months following Hurricane Ike (October-November 2008). Auditors concluded that, although falling oil and gas prices contributed to the Land Office's losses, price changes were not the most significant factor in the Land Office's revenue losses. However, the Land Office's total revenue losses may be more than these estimates because Land Office management reported that some wells may no longer be used as a result of the extensive damage they sustained in the storm.

Lease Revenues—\$247,000

The Land Office reported that it earns approximately \$13.5 million from approximately 9,300 leases along the Texas coast; most of these leases are commercial pier leases. The Land Office granted its lessees credits ranging from 25 percent to 50 percent of annual rent based on Hurricane Ike's impact on the properties, resulting in an estimated revenue loss of \$247,000.

Mitigation

In its request for hurricane-related state funding, the Land Office included \$66 million in state funds to pay for costs related to mitigation.

Structure Buyouts—\$60 million

The Land Office plans to purchase multiple privately-owned structures along the gulf side of Galveston Island and the Bolivar Peninsula using FEMA Hazard Mitigation Grant Program funds. The Land Office estimated that 1,632 properties valued at \$386 million are potential candidates for purchase. Based on past experience and data from the Galveston Central Appraisal District, the Land Office expects it will have the opportunity to purchase approximately 250 properties with an average value of \$240,000 totaling \$60 million. The Land Office should be eligible to receive reimbursement from FEMA for 75 percent of this cost.

Closure of Rollover Pass—\$6 million

The Land Office plans to close Rollover Pass, which is a man-made strait that was opened in 1955 and cuts through the Bolivar Peninsula and links the Gulf of Mexico with East Bay. According to the Land Office, the pass allows enough silt to be carried into the Gulf Intracoastal Waterway to require annual dredging to keep the waterway operational. The Land Office obtained a \$5 million itemized initial written quotation to close the pass from a firm that made modifications to the pass in 1993. The Land Office increased the estimated cost for this project to \$6 million to account for inflation because the earliest that work could begin on the project is September 2009.

Other Projects That May Contain Hurricane Ike-related Costs

In addition to the costs discussed above, the Land Office is seeking state funding for 16 projects in its Coastal Protection Plan, the removal of certain oil platforms, and the plugging of some oil wells. The costs of these additional projects total \$952.5 million, and they include repairs of Hurricane Ike-related damages, as well as mitigation and restoration of coastal areas to levels higher than pre-Hurricane Ike conditions. Neither the Land Office nor auditors could determine which portion of these costs was related to Hurricane Ike damage.

Beach Nourishment/Dune Restoration Projects—\$632.2 million

These projects primarily restore beaches and dunes that have suffered erosion. Some of these projects also increase protection of the Gulf Intracoastal Waterway. Determining which costs are for Hurricane Ike-related repairs and which are not is problematic because some of these projects seek to reverse 15 years of erosion, which in some cases includes damage from Hurricane Ike. Table 6 on the next page lists the Beach Nourishment and Dune Restoration projects in the Coastal Protection Plan.

Table 6

Coastal Protection Plan Beach Nourishment/Dune Restoration Projects		
Description of Coastal Area to be Restored	Miles of Engineered Beaches in Area ^a	Estimated Cost (in millions)
Shoreline from Sabine Pass to High Island	0.9	\$182.7
Shoreline from Sargent Beach to the Colorado River	0.0	\$165.5
Bollivar Peninsula Shoreline from High Island to Magnolia Lane	1.3	\$110.2
North Padre Island Seawall	1.3	\$49.5
West Galveston Island Shoreline from 10th Street to San Luis Pass	9.6	\$44.6
Town of South Padre Island Shoreline	0.0	\$43.8
Village of Surfside Beach	0.7	\$23.1
Shoreline from Quintana Beach to FM 1495	0.7	\$12.9
^a Engineered beaches included in this column include those in the Land Office's request in House Bill 4586 (81st Legislature).		

Source: February 2009 draft version of the Land Office's Coastal Protection Plan.

FEMA will have to determine whether the restoration of sand on non-engineered beaches beyond the level that is necessary to provide emergency protection is eligible for public assistance funds.

Shoreline Protection/Wetland Restoration Projects—\$281.8 million

These projects involve restoring marshes and wetlands; constructing jetties, breakwaters, and revetments; and mitigating shoreline erosion. FEMA will determine whether the shoreline protection/wetland restoration projects listed in Table 7 would be eligible for assistance. The Galveston Island Bay Shoreline project is the only proposed project that contains engineered marshes and shorelines.

Table 7

Shoreline Protection/ Wetland Restoration Projects		
Description of Coastal Area Containing Project	Project Type	Estimated Cost (in millions)
Galveston Island Bay Shoreline	Wetland Restoration	\$71.4
Shoreline from Magnolia Beach to Port O'Connor	Shoreline Protection	\$40.5
Mad Island Wildlife Management Area	Shoreline Protection/ Wetland Restoration	\$38.7
Corpus Christi Ship Channel	Shoreline Stabilization	\$34.4
Pleasure Island	Shoreline Stabilization	\$32.4
Mustang Island Bay Shoreline	Shoreline Protection/ Wetland Restoration	\$27.5

Shoreline Protection/ Wetland Restoration Projects		
Description of Coastal Area Containing Project	Project Type	Estimated Cost (in millions)
Bolivar Peninsula Bay Shoreline	Wetland Restoration	\$24.9
Bay Shoreline from Dickenson Bay to Virginia Point	Wetland Restoration	\$12.0

Source: February 2009 draft version of the Land Office's Coastal Protection Plan.

Dredging and Beneficial Use-San Bernard River Reopening—\$2.8 million

This project involves dredging sand that is currently blocking the flow of the San Bernard River; this sand would then be used in area beach restoration projects. The Land Office based its cost estimate on a previous project it conducted with the U.S. Army Corps of Engineers.

Oil Platform Removal and Well Plugging in Galveston and Chambers Counties—\$35.7 million

These projects include (1) removing 14 oil platforms in Galveston and Chambers counties, (2) paying well plugging and abandonment costs for 27 oil wells that were closed due to Hurricane Ike damage, and (3) cleaning up three facilities. The Land Office is seeking alternative private funding to help pay for these projects. The Land Office also is seeking priority in a bankruptcy filed by a major responsible third party. The Land Office calculated initial cost estimates for these projects. Specifically:

- \$2 million for each structure.
- \$100,000 for each well.
- \$5 million to clean up three facilities.

Examination of Expenditures

Auditors tested \$548,000 (85.6 percent) of \$640,000 that the Land Office had spent for hurricane-related expenditures as of February 10, 2009. All transactions tested were supported and documented. There were no indications of fraud, waste, or abuse.

Revenue from Non-state Source

The Land Office does not have insurance that would mitigate the State's financial impact associated with Hurricane Ike-related losses. The Land Office estimates it will receive a total of \$175.9 million in FEMA reimbursements. Auditors estimate that the Land Office is eligible to recover \$174.6 million in FEMA reimbursements. Table 8 lists differences between the Land Office's estimated reimbursements and auditors' estimated reimbursements

Table 8

Land Office's and Auditors' Estimates of Potential FEMA Reimbursements (in millions)				
Line Item	Land Office's Estimated Reimbursement	Auditors' Estimated Reimbursement	Difference ^a	Auditors' Comments
Debris Removal	\$ 70.3	\$70.3	0	Auditors and Land Office estimates were the same.
Emergency Protective Measures	0.5	0.4	(0.1)	Auditors' estimate of costs not associated with the construction of clay core dunes was lower than the Land Office's estimate.
Permanent Work	60.2	58.9	(1.2)	FEMA has not determined whether it will pay for the beach restoration portion of the Blue Water Highway project.
Mitigation	45.0	45.0	0	Auditors and Land Office estimates were the same.
Totals	\$175.9	\$174.6	(\$1.3)	
^a Estimates may not sum exactly to the total difference due to rounding.				

Source: Analysis by auditors based on *Public Assistance Guide*, FEMA 322, June 2007.

Estimated Costs for General Land Office's Recovery from Hurricane Ike

Table 9 lists the estimated costs for the General Land Office's (Land Office) recovery from Hurricane Ike as of March 30, 2009. FEMA reimbursement, total non-state funding sources, and potential cost to the State and Land Office are based on auditors' estimated costs.

Table 9

Land Office's Total Estimated Losses for Recovery from Hurricane Ike ^a (in thousands)						
Description	Auditors' Estimated Losses	Land Office's Estimated Losses as of March 30, 2009	Expenditures as of February 10, 2009	Payables and Encumbrances as of February 10, 2009	Auditors' Estimated FEMA Reimbursement	Auditors' Estimated Potential Cost to the State
Costs						
Emergency Work - Debris Removal						
Debris Removal	\$ 67,252	\$ 67,252	\$ 120	\$40,000	\$ 67,252	\$0
Hurricane Recovery Specialists	3,000	3,000	463	2,537	3,000	0
Subtotal	\$70,252	\$70,252	\$583	\$42,537	\$70,252	\$0
Emergency Work - Emergency Protective Measures						
Clay Core Dunes	\$ 500	\$ 500	\$ 0	\$ 423	\$ 375	\$ 125
Other Emergency Protective Measures	82	112	57	25	62	21
Subtotal	\$582	\$612	\$57	\$448	\$437	\$146
Permanent Work						
Blue Water Highway (Brazoria County Road 257)	\$54,800	\$54,800	\$ 0	\$ 0	\$ 38,625	\$ 16,175
Previous Coastal Erosion Projects Damaged by Hurricane Ike	54,458	54,458	0	0	19,117	35,341
Repair Gulfside Piers	1,484	1,484	0	0	\$1,113	371
Repair Buoys	67	67	0	67	51	17
Service Center Truck	17	17	0	0	13	4
Subtotal	\$ 110,826	\$ 110,826	\$ 0	\$67	\$58,918	\$ 51,908
Total Costs	\$181,661	\$181,690	\$640	\$43,053	\$129,607	\$52,054

Land Office's Total Estimated Losses for Recovery from Hurricane Ike ^a
(in thousands)

Description	Auditors' Estimated Losses	Land Office's Estimated Losses as of March 30, 2009	Expenditures as of February 10, 2009	Payables and Encumbrances as of February 10, 2009	Auditors' Estimated FEMA Reimbursement	Auditors' Estimated Potential Cost to the State
Lost Revenues						
Oil and Gas Royalties	\$16,005	\$16,005	\$0	\$0	\$0	\$ 16,005
Leases	247	247	0	0	0	247
Total Lost Revenues	\$16,252	\$16,252	\$0	\$0	\$0	\$ 16,252
Mitigation						
Closure of Rollover Pass	\$6,000	\$6,000	\$0	\$0	\$0	\$ 6,000
FEMA Buyout	60,000	60,000	0	0	45,000	15,000
Total Mitigation	\$66,000	\$66,000	\$ 0	\$ 0	\$45,000	\$21,000
Total Losses Related to Hurricane Ike	\$ 263,913	\$ 263,943	\$ 640	\$ 43,053	\$ 174,607	\$ 89,306

^a Totals do not always sum to the total costs due to rounding.

Sources: Data for "Land Office's Estimated Losses as of March 30, 2009," "Expenditures as of February 10, 2009," and "Payables and Encumbrances as of February 10, 2009," was provided by the Land Office. All other data is based on auditors' analysis.

Objectives, Scope and Methodology

The objectives of this review were to:

- Examine the General Land Office's (Land Office) hurricane-related expenditures to determine whether the expenditures were supported and documented.
- Examine the Land Office'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 Land Office's hurricane-related expenditures.
- Identify which cost estimates were subject to reimbursement by the Federal Emergency Management Agency (FEMA) and other non-state funding sources.

The scope of the review of expenditures was from September 13, 2008, to March 31, 2009. Auditors examined the Land Office's methodology for calculating estimated damages as of March 31, 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 the Land Office management and staff.

Information collected and reviewed included the following:

- The Land Office's estimated hurricane-related costs, including estimated FEMA reimbursements.
- Accounting system reports and supporting documentation.
- The Land Office's Emergency Recovery and Business Continuity Plan.
- The Land Office's initial damage estimates.
- The Land Office's FEMA project worksheets.
- *Draft version of Coastal Protection Plan*, Land Office, February 2009.

Procedures and tests conducted included:

- Testing Hurricane Ike-related expenditures and encumbrances to determine whether they were supported and documented. Auditors also looked for indications of waste, fraud, or abuse.

- Evaluating the reasonableness of the methodologies used by the Land Office to develop cost and revenue estimates related to Hurricane Ike.
- Evaluating possible FEMA eligibility and reimbursements for the Land Office's costs related to Hurricane Ike.
- Determining whether the Land Office had insurance policies and, if so, calculating 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.
- Governor Perry's Emergency Disaster Proclamation and its amendments.

Project Information

Fieldwork for this review was conducted from February 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, CPA, MPA, CGFM (Project Manager)
- Jennifer Wiederhold, CGAP (Assistant Project Manager)
- Brendi Tubbs (Team Leader)
- Michael Boehme, CIA, PHR
- Debra Dobson
- Lauren Godfrey, CGAP
- Kemba Valentine
- Leslie P. Ashton, CPA (Quality Control Reviewer)
- Ralph McClendon, CCP, CISA, CISSP (Audit Manager)