



John Keel, CPA  
State Auditor

A Review of

# Expenditures Related to Hurricane Ike at the Parks and Wildlife Department

July 8, 2009

Members of the Legislative Audit Committee:

The Parks and Wildlife Department (Department) is responsible for state parks and wildlife management areas, several of which were damaged by Hurricane Ike when it made landfall on September 13, 2008. In addition to sustaining damage to facilities, the Department also suffered revenue losses and expects to incur other hurricane-related costs.

The Department's January 2009 funding request for rebuilding costs was \$80.85 million.

The Department sought \$60.85 million in funding to rebuild facilities damaged by Hurricane Ike in a January 27, 2009, legislative funding request. Department management included an additional \$20.00 million in its request to reserve funds to rebuild Sea Rim State Park. As a result, the Department's total estimated rebuilding cost for 9 of 32 sites that received hurricane damage (see text box) totaled \$80.85 million. The Department has significantly modified its plans for rebuilding Sea Rim State Park since January 2009 so that rebuilding that park would only cost approximately \$2.00 million. The Department had received \$684,000 from the Federal Emergency Management Agency (FEMA) for infrastructure repairs as of April 27, 2009. Of that amount, the Department had transferred \$357,000 to the Department of Transportation for debris removal from Department sites.

Auditors' estimate of the Department's total costs is \$88.21 million.

Auditors estimate that, if the Department follows its current preliminary plans, its total rebuilding and recovery costs could total \$88.21 million. Auditors' estimate is more comprehensive than the Department's funding request because it is an estimate of the Department's total rebuilding and recovery costs, rather than just the Department's funding needs. Auditors estimate that the Department could recover \$66.59 million of these costs from non-State sources, primarily FEMA, resulting in a \$21.62 million cost to the State.

Auditors also determined that, for projects for which both the Department and FEMA estimated rebuilding or repair costs for the same facility, the Department's estimates were \$50.2 million higher than FEMA's. One reason for this difference is that the Department's plans to incorporate preventive measures against the risk of future storm damage in rebuilding its facilities will significantly increase the cost of rebuilding these facilities. The Department estimates it could cost as much as \$600 to \$1,000 per square foot to build these modified facilities. During a tour of Sea Rim State Park, auditors observed that facilities modified in this

## Background Information

Hurricane Ike damaged several Parks and Wildlife Department (Department) sites including:

- 18 state parks.
- 6 wildlife management areas.
- 3 fish hatcheries.
- 3 state historic sites.
- 1 regional office.
- 1 marine lab.

Galveston Island State Park and Sea Rim State Park sustained the most significant damage. Sea Rim State Park, which is located on the Texas Coast near Port Arthur, was still closed to the public as of July 2009 because of damage from Hurricane Rita and Hurricane Ike. Galveston State Park reopened for public beach camping on July 2, 2009.

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manner had been destroyed by Hurricane Ike. Department management stated that these modified facilities were built in 1974.

Future decisions made by the Legislature and the Department regarding how many of the damaged facilities will be rebuilt and how they will be rebuilt will increase or decrease the total estimated cost to the State. The State's share of costs for rebuilding sites, especially Galveston Island State Park, will depend on what portion of the cost of modifications designed to prevent future storm damage FEMA will fund. Department management stated that the Department must complete a master plan to rebuild the damaged parks before FEMA will consider paying for any additional building costs. It could be 2.5 years before the Department will know how much of Hurricane Ike-related expenditures FEMA will fund. Without this information, the Department cannot accurately determine the State's costs of rebuilding specific facilities. If the Department can complete this process prior to August 2010, it can include more accurate cost estimates in its Legislative Appropriation Request to the 82nd Legislature. The \$12 million allocated to the Department through House Bill 4586 (81st Legislature) would cover the Department's estimated \$8 million cost to develop a master plan, complete environmental and cultural assessments, and produce a construction design document for Galveston Island State Park. Department management stated that the Department would not spend state funds for facility modifications and repairs on projects for which federal funding would not provide reimbursements, unless specifically directed to do so by the Legislature.

There are understatements in the Department's estimates.

Auditors also identified errors in the Department's methodology for calculating certain costs, including costs for contractor's bonds and insurance and inflation associated with future construction costs. These understatements also affected the Department's calculation of architectural and engineering costs and project management and operation costs. Specifically:

- The Department mistakenly calculated the costs for contractor's bonds and insurance as \$117,000 based on a 0.25 percent rate of project costs; however, the rate that the Department had intended to use was 2.5 percent of project costs, which would result in an estimated cost of \$1.3 million for all repairs identified by auditors.
- The Department estimated that construction costs will increase by an un compounded 3 percent each year from 2009 through 2011. However, this is not consistent with recent trends. As of April 17, 2009, the cost indices for construction and materials show that the annual inflation rate for construction was 5.1 percent and the inflation rate for building (which focuses more on skilled labor) was 4.1 percent. If the Department had based its estimated construction costs using an un compounded 5.1 percent annual inflation rate, the inflation costs would total \$8.2 million for all projects identified by auditors instead of the \$3.8 million the Department estimated.

Table 1 on the next page shows the difference between FEMA's estimates and the Department's estimates of hurricane-related damage. The rebuilding estimates cited in Table 1 include auditors' adjustments to correct the Department's errors discussed above in calculating the costs related to contractor's bond, insurance, and inflation. Department estimates discussed in this report contain these corrections unless stated otherwise.

Table 1

FEMA's Estimated Losses Compared to the Department's Estimate of Rebuilding Costs Related to Hurricane Ike		
Description	FEMA Estimated Infrastructure Losses as of April 20, 2009 <sup>a</sup>	Department's Estimated Rebuilding Costs as of February 11, 2009 <sup>b</sup>
Estimated Rebuilding Costs for Facilities with Both a Department Estimate and a FEMA Estimate	\$7.05	\$57.26
Estimated Rebuilding Costs for Facilities with a Department Estimate, but no FEMA Estimate	0.00	24.71
Estimated Rebuilding Costs for Facilities with a FEMA Estimate, but no Department Estimate	0.93	0.00
Other Infrastructure Division Losses as of January 12, 2009	0.00	0.07
<b>Total Estimated Infrastructure Rebuilding Costs</b>	<b>\$7.97 <sup>c</sup></b>	<b>\$82.05 <sup>c</sup></b>
<p><sup>a</sup> The FEMA total does not include \$2.9 million in estimated losses for facilities at Sea Rim State Park, which the Department may not replace under its current plans.</p> <p><sup>b</sup> Auditors used cost estimates for debris removal developed by the Department of Transportation for certain sites. The Department of Transportation will be performing this work.</p> <p><sup>c</sup> Total does not sum precisely due to rounding.</p>		

Sources: FEMA's estimates are from completed FEMA worksheets. Other estimates are based on Department-provided information.

**FEMA's loss estimates differ from the Department's rebuilding estimates.**

The Department's rebuilding estimates exceeded FEMA loss estimates by \$50.2 million for facilities for which both entities estimated repair or rebuilding costs. Department management stated that the FEMA estimates are lower than Department estimates because FEMA estimates are intended to fund the rebuilding of facilities to their pre-disaster conditions; the Department's estimates are designed to rebuild facilities to incorporate preventive measures against the risk of future storm damage and to comply with current building requirements. Specifically:

- As discussed above, new construction that incorporates preventive measures against the risk of future storm damage will significantly increase rebuilding costs. Management stated that the Department is planning to expand facilities only as needed to comply with building codes and regulations and, as needed, to incorporate damage prevention measures. FEMA may pay some of these costs with pre-approval. Regardless of whether FEMA pays some of these costs, the Department and the Legislature may wish to consider whether it is cost-effective to incorporate these design modifications.
- New facilities must be built according to current building codes and applicable regulations, such as the Americans with Disabilities Act, which will add costs that FEMA did not include in its initial estimates.

Additionally, the Department's estimates include certain indirect cost factors, such as inflation, engineering and architectural expenses, and project management costs. These factors account for \$30.9 million of the difference. FEMA guidelines indicate that all of these indirect costs may be eligible for reimbursement. The effect of all of these factors on rebuilding costs is discussed in more detail in the attachment to this letter.

The Department's funding request does not include all its rebuilding and recovery costs from Hurricane Ike.

As discussed above, the Department's January 27, 2009, funding request of \$80.85 million for rebuilding costs does not include all rebuilding and recovery costs due to Hurricane Ike. The Department's request, which would be \$62.85 if it were adjusted to reflect the Department's updated plans for Sea Rim State Park, does not include:

- \$13.5 million in estimated debris removals. This amount is based on estimates developed by the Department, FEMA, and the Department of Transportation. The Department did not include these costs in its funding request because the Department of Transportation agreed to perform this work.
- \$593,000 in rebuilding costs from 23 Department sites that were not included in the Department's request. Management stated that the Department will use its operating funds to absorb these costs. The Department's request included only rebuilding costs from the following nine sites: (1) Galveston Island State Park, (2) J.D. Murphree Wildlife Management Area, (3) Justin Hurst Wildlife Management Area, (4) Lower Neches Wildlife Management Area, (5) Lake Livingston State Park, (6) Martin Dies, Jr. State Park, (7) Mission Tejas State Park, and (8) Sea Center Fish Hatchery.
- \$3.5 million costs from the nine Department divisions other than the Infrastructure Division that produced loss estimates. Management stated that the Department will use its operating funds to absorb these costs.
- \$1.8 million in revenue losses.

Costs associated with Sea Rim State Park will depend on the work to be done at that facility.

The Department's and the Legislature's decisions regarding the future of Sea Rim State Park also will affect the total cost to the State. Sea Rim State Park was damaged by Hurricane Rita on September 24, 2005. The Department had almost completed the repairs from that hurricane when the park was severely damaged by Hurricane Ike.

Department management plans to reopen Sea Rim State Park in a reduced capacity as a day-use park, which it currently estimates will cost \$2 million. The Department originally estimated that it would cost \$34 million to restore Sea Rim State Park to its pre-Hurricane Rita functionality with facilities designed to withstand storm damage. Management included \$20.00 million for Sea Rim State Park in its \$80.85 estimate because management determined it would not be prudent to spend more than that amount to restore Sea Rim State Park. After estimating the costs of restoring this park, Department management modified its plans and now currently plans to rebuild Sea Rim State Park as a day-use park. If FEMA approves this plan and pays 75 percent of the cost, the State would pay approximately \$496,000.

The 81st Legislature provided the Department \$2 million in funding to repair hurricane-related damages to Sea Rim State Park in House Bill 4586, Section 83. Unlike the \$12 million that the Department also received through House Bill 4586 (Section 55), the Department is not required to pay back the \$2 million to the State if the Department receives reimbursements from third parties, such as the federal government.

The Department may be able to use FEMA funds that would be available to replace facilities at Sea Rim State Park to instead build new facilities at other sites. In certain instances, FEMA guidelines allow funding for damages to be applied to alternative or relocated facilities. Due to the preliminary nature of these plans, auditors did not include these projects in their estimate of rebuilding costs.

The Department's estimated costs are preliminary estimates that may change as the Department develops more sophisticated plans.

The Department produced estimates that management states are consistent with established international and national standards. The Department was unable to produce a precise estimate of its rebuilding costs from Hurricane Ike because of the large scale of damage caused by the hurricane; a total of 32 Department sites suffered damage. Some facilities that were damaged by Hurricane Ike are located in areas that are difficult to access, which further impeded the Department's ability to estimate precise repair and rebuilding costs. In some cases, park superintendents provided Department management with incomplete or inaccurate damage listings. Ten of the Department's 11 divisions each produced damage estimates. In some cases, costs had to be allocated across divisions, which further complicated the estimation process.

Auditors noted the following issues regarding the reliability of these initial estimates:

- Some of the Department's initial estimates significantly exceeded the Department's subsequent actual costs or revised cost estimates. For example, the Department initially estimated that it would cost \$15.3 million to individually contract for the clearing of debris from six sites. The Department of Transportation, which is performing the work, has cleared a portion of this debris and estimated that the total cost of this work will be \$5.9 million. While this demonstrates that the initial estimates were high, it also demonstrates that there were savings to the State by agreeing to allow the Department of Transportation to clear the debris. (As discussed earlier, auditors' total estimate for debris removal from all Department facilities is \$13.5 million.)
- The Department did not have sufficient supporting documentation for several of its costs estimates. For example, the Department estimated that it would cost \$7.3 million for site grading and \$5.2 million to replace shelters at Galveston Island State Park, but it did not have documentation showing how it determined these costs.

Table 2 on the next page lists auditors' total estimated losses and rebuilding costs from Hurricane Ike, which could result in a \$21.62 million cost to the State.

Table 2

Auditors' Total Estimated Rebuilding Costs and Losses for Recovery from Hurricane Ike (in millions)			
Description	Estimated Rebuilding Costs and Losses <sup>a</sup>	Auditors' Estimated Total Potential Funding from Non-state Sources <sup>b</sup>	Estimated Cost to the State
Infrastructure Rebuilding Costs	\$82.90	\$65.47	\$17.43
Other Infrastructure Division Losses	0.07	0.00	0.07
<b>Subtotal - Total Infrastructure Losses and Rebuilding Costs</b>	<b>\$82.97</b>	<b>\$65.47</b>	<b>\$17.51</b>
Department's Estimated Non-infrastructure Losses as of January 12, 2009	3.49	1.12	2.37
Departments Revenue Losses as of January 12, 2009	1.75	0.00	1.75
<b>Total Estimated Losses and Rebuilding Costs (as of April 20, 2009)<sup>c</sup></b>	<b>\$88.21</b>	<b>\$66.59</b>	<b>\$21.62</b>

<sup>a</sup> Estimated Rebuilding Costs and Losses are based on FEMA's estimated losses as of April 20, 2009, and the additional amount included in the Department's estimated losses as of January 12, 2009, the Department's estimated rebuilding costs as of February 11, 2009, and the Department of Transportation's estimated cost to remove debris from some Department sites as of March 11, 2009.

<sup>b</sup> These columns include \$0.94 million in anticipated insurance proceeds (as of June 22, 2009) and \$19,000 in anticipated proceeds from the federal Oil Spill Liability Trust Fund administered by the U. S. Coast Guard.

<sup>c</sup> Total does not sum precisely due to rounding.

Sources: FEMA's estimates are from completed FEMA worksheets. Other estimates are based on Department-provided information.

### Additional Information

As of January 12, 2009, the Department reported that it had made \$3.4 million in hurricane-related expenditures and owed or encumbered another \$40,000 for hurricane-related costs. The Department's hurricane-related costs included direct costs, as well as revenue losses. The Department based its estimates on several sources, including:

- RS Means cost data, which lists industry-wide standards for construction costs.
- Cost of previous work completed on Department sites.
- Estimates from Department employees who have extensive construction experience.

All \$116,383 (3 percent) of \$3.4 million spent or encumbered for hurricane-related damage as of January 12, 2009, that auditors tested was supported and documented. Auditors identified no indications of fraud or abuse with respect to the Department's hurricane-related expenditures.

The Department plans to recoup some hurricane-related costs from three non-State sources: FEMA, insurance proceeds, and the federal Oil Spill Liability Trust Fund. The Department provided documentation that supports its current estimate for insurance proceeds.

Members of the Legislative Audit Committee

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We appreciate the Department'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 Parks and Wildlife Commission

Mr. Peter M. Holt, Chairman

Mr. T. Dan Friedkin, Vice-Chairman

Mr. Mark E. Bivins

Mr. Ralph H. Duggins

Dr. Antonio Falcon

Ms. Karen J. Hixon

Mr. Dan Allen Hughes, Jr.

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Mr. Carter Smith, Executive Director, Parks and Wildlife Department



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# *Attachment*

## *Expenditures Related to Hurricane Ike at the Parks and Wildlife Department*

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The Parks and Wildlife Department (Department) provides outdoor recreational opportunities by managing and protecting wildlife and wildlife habitats and acquiring and managing parkland and historic areas. Hurricane Ike struck the upper Texas Coast on September 13, 2008, and inflicted damage to state parks, wildlife management areas, fish hatcheries, and some of the Department's regional office buildings.

### **Cost Categories**

The Department requested \$80.85 million in funding to rebuild facilities damaged by Hurricane Ike in a January 27, 2009, legislative funding request. Auditors developed a comprehensive estimate of \$88.21 million, which includes \$86.46 million in rebuilding and recovery costs and \$1.75 million in lost revenues. A total of \$68.34 million (77 percent) of the Department's losses is related to damage sustained at Galveston Island State Park.

The Department was unable to produce a completely reliable estimate of its losses in February 2009 from Hurricane Ike because of the large scale of damage the hurricane caused to the Department's sites. A total of 32 Department sites suffered hurricane-related damage. The Department's methodology for estimating its hurricane-related costs could be improved.

Below is a summary of the Department's costs and revenue losses related to Hurricane Ike as calculated by auditors using estimates developed by the Federal Emergency Management Agency (FEMA), the Department, and the Department of Transportation.

### **Infrastructure Division - \$83.0 million**

Auditors used estimates developed by FEMA, the Department, and the Department of Transportation as of April 20, 2009 to produce a cumulative estimate showing that the Department could incur \$83.0 million in infrastructure rebuilding costs as a result of damages sustained during Hurricane Ike. Table 3 on the next page provides details on that estimate by source.

Table 3

Estimated Rebuilding Costs for the Infrastructure Division by Source <sup>a</sup>		
(in millions)		
Source	Amount	Methodology
FEMA estimates	\$ 7.0	FEMA provided an estimate, through FEMA worksheet(s), for a project for which the Department also provided an estimate.
The Department's additional estimated losses for facilities with FEMA estimates	50.2	This was calculated as the difference between the Department's estimates and FEMA's estimates for facilities for which both entities made an estimate.
The Department's estimated losses for facilities with no FEMA estimates	24.7	This estimate is for facilities for which there is a Department estimate but no corresponding FEMA estimate.
FEMA estimates for facilities	0.9	This estimate is for facilities for which there is a FEMA estimate but no corresponding Department estimate.
Department estimates for Infrastructure Division losses	0.1	This estimate is for non-rebuilding, hurricane-related expenses incurred by the Infrastructure Division
<b>Total</b>	<b>\$83.0<sup>b</sup></b>	
<sup>a</sup> Auditors used cost estimates for debris removal developed by the Department of Transportation, rather than preliminary Department estimates, for certain sites. The Department of Transportation performed this work. <sup>b</sup> Total does not sum precisely due to rounding.		

Sources: Department data as of February 11, 2009; Department of Transportation estimates as of March 11, 2009; and FEMA worksheets as of April 20, 2009.

Department estimates differ from FEMA estimates by \$50.2 million.

For facilities for which both the Department and FEMA estimated the cost, the Department's total estimates were \$50.2 million higher<sup>1</sup>. Table 4 provides details on this difference.

Table 4

Differences Between the Department's and FEMA's Infrastructure Cost Estimates	
(in millions)	
Site	Amount by which the Department's Estimate Exceeded FEMA's Estimate
Galveston Island State Park	\$43.1
All Other Facilities	7.1
<b>Total</b>	<b>\$50.2</b>

Source: Auditors' analysis of Department and FEMA estimates.

<sup>1</sup> As discussed in the letter, auditors adjusted the Department's estimate to correct understatements in the Department's calculations for the costs related to contractor's bonds, insurance, and inflation. Department estimates discussed in this attachment contain these corrections unless stated otherwise.

Auditors and Department management identified four factors that contributed to this difference. While auditors could readily identify costs associated with the first factor (indirect cost estimates), the other three factors were part of costs for Galveston Island State Park and the other facilities in Table 4 above. The four factors that contributed to the difference between the Department's and FEMA's estimates were:

- New construction that incorporates damage prevention measures to reduce the risk of future storm damage will significantly increase rebuilding costs. Department management stated that the Department is planning to expand facilities only as needed to comply with building codes and regulations, and to incorporate damage prevention measures as needed. The Department's estimates include the costs of rebuilding the headquarters building at Galveston Island State Park on piers, which could increase the estimated cost per square foot to \$1,000. FEMA's estimated cost per square foot for rebuilding this structure as it existed prior to the hurricane is \$183.20. This increase would add \$2.70 million to the cost of the Headquarters Building. The Department would relocate the Headquarters Building from the beach side of the park as an additional measure to prevent future storm damage. As part of this change, the Department would build a new fee booth on the beach side.

FEMA guidelines indicate it may provide funding assistance for measures to prevent future storm damage. The Legislature and the Department may wish to consider whether it is cost-effective in the long term to build facilities that are not modified to prevent future storm damage in some coastal sites, even if FEMA will not fund costs related to rebuilding these facilities. Auditors observed facilities that had been designed to withstand storm damage that were destroyed by Hurricane Ike at Sea Rim State Park. If the Department builds facilities that are not redesigned to withstand storm damage with the square footage (using FEMA's cost estimate of \$183 per square foot) in its current plans, the cost would be \$922,000. This results in a cost savings of \$3.9 million without including indirect costs. If FEMA paid 75 percent of these costs, the resulting net cost to the State would be \$1.1 million, which would be greater than the cost of the facility that was not specifically designed to withstand storm damage, even if the State did not receive any FEMA funding for the project.

- The Department included indirect cost allowances. The five indirect cost allowances, which are listed in Table 5 on the next page, accounted for \$21.7 million (43 percent) of the \$50.2 difference shown in Table 4. These indirect cost allowances accounted for \$30.9 million of the total \$83.0 million in infrastructure rebuilding cost estimates detailed in Table 3. These costs are allowable under FEMA guidelines, and the Department may be able to recover them.

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<sup>2</sup> The FEMA worksheet cites RSMean CostWorks SF Replacement Guide 2009 as a source for this rate.

Table 5

Indirect Cost Allowances the Department Used in Estimating Hurricane-related Infrastructure Costs for Facilities for Which There Is Both a Department Estimate and a FEMA Estimate (in millions)		
Allowance	Amount	Methodology
Contingency	\$6.2	The Department calculated this allowance so it would be equal to 20 percent of estimated costs. FEMA guidelines allow a contingency allowance of 15 to 20 percent for a project in the preliminary engineering analysis stage.
Contractor's Bonds and Insurance	0.9	The Department erroneously calculated this allowance so it would be equal to 0.25 percent of estimated costs plus contingency. The allowance should have been calculated so it was equal to 2.5 percent of estimated costs plus contingency. Auditors corrected this error. FEMA guidelines allow a 3.3 percent allowance for contractor's payment and performance bonds, builder's risk insurance, and public liability insurance.
Inflation	5.7	The Department calculated this allowance so it would be equal to a 3 percent inflation rate for 3 years. FEMA guidelines allow agencies to use inflation rates in the Construction Cost Index or the Building Cost Index. These indices calculated that average inflation rate for construction costs and material costs in April 2009 were 5.1 percent and 4.1 percent, respectively. Auditors updated the Department's estimate to 5 percent.
Architectural and Engineering Services	6.6	The Department calculated these two allowances so they would total 20 percent (15 percent for architectural and engineering services and 5 percent for project management and construction management) of the sum of estimated costs, contingency, contractor's bond and insurance, and inflation. FEMA guidelines allow agencies up to a 34 percent allowance for these services, depending on the cost and complexity of a construction project.
Project Management and Construction Management	2.2	
<b>Total</b>	<b>\$21.7<sup>a</sup></b>	
<sup>a</sup> Total does not sum precisely due to rounding.		

Sources: Department data and *FEMA's Cost Estimating Format for Large Projects Instructional Guide*, Version 2, November 1998.

- Department management asserted that new facilities must be built according to current building codes and applicable regulations. Department management asserted that the Headquarters Building at Galveston Island State Park was constructed in 1976, prior to passage of the Americans with Disabilities Act, and that it was not compliant with building design requirements in this law. FEMA requires that replacement buildings comply with all applicable codes, including the Americans with Disabilities Act. Department management's preliminary plans show that the Department will have to add 1,100 square feet at a cost of \$1.1 million to the Headquarters Building to comply with the Americans with Disabilities Act. FEMA guidelines indicate it pays the cost of code compliance within limits.

- Department management asserted that initial FEMA estimates do not sufficiently consider all factors in actual rebuilding costs. Department management provided auditors with data related to four examples of Hurricane Rita-related repair projects to demonstrate that FEMA does not always consider all factors in actual rebuilding costs in its initial cost estimates. The data showed that the Department spent \$820,000 to complete these projects, which had total FEMA estimates of \$700,000 (85 percent of the final project cost). In one of these cases, the FEMA estimate was \$79,000, which was 37 percent of the \$212,000 final cost.

The Headquarters Building at Galveston Island State Park, which was destroyed by Hurricane Ike, provides another example of such a potential understatement. FEMA based its estimate of replacing this facility on an estimated square footage of 1,655, while the Department’s estimated square footage for this structure is 3,328. Table 6 shows the effect of this and the other factors impacting the cost of the Headquarters Building.

Table 6

Cost of Rebuilding Galveston Island State Park Headquarters Building (in thousands)	
Site	Cost
Initial FEMA estimate	\$ 303
Difference in square footage between FEMA and the Department	307
Added cost to comply with the Americans with Disabilities Act	1,100
Cost of incorporating damage prevention measures in new headquarters building	2,718
Cost of building fee booth	360
<b>Total Cost <sup>a</sup></b>	<b>\$4,788</b>
<sup>a</sup> This total cost figure does not include the five indirect cost allowances discussed above.	

Source: The Department.

### Galveston Island State Park

Analysis of the costs associated with Galveston Island State Park demonstrates how the factors discussed above lead to the Department’s estimate exceeding FEMA’s estimates. The Department estimated that it will cost \$68.34 million to remove debris and repair or replace infrastructure in Galveston Island State Park. From fiscal year 2004 to fiscal year 2008, the Department earned an average of \$275,000 annually from entrance fees to Galveston Island State Park. The Department estimates that this park contributes more than \$7 million to the local and regional economy each year.

The Department plans to incorporate damage prevention measures in rebuilding this park, such as moving facilities away from the Gulf of Mexico. Implementing these measures will add significant rebuilding costs.

#### Sea Rim State Park

Department management plans to reopen Sea Rim State Park in a reduced capacity as a day-use park, which it estimates will cost \$2 million. The Department originally estimated that it would cost \$34 million to restore Sea Rim State Park to its pre-Hurricane Rita functionality with facilities designed to withstand storm damage. After estimating the costs of restoring this park, management plans to reopen it as a day-use park.

The Department closed Sea Rim State Park in September 2005 due to damage from Hurricane Rita. From 2005 to 2009, the Department spent \$302,000 to repair the damage. However, Hurricane Ike made landfall only a few months before the date that Department management had estimated that it would be able to reopen the park, and Hurricane Ike further damaged the park. Park facilities that were destroyed by Hurricane Ike included the park headquarters and park residences, which had been built on piers to attempt to prevent or reduce storm damage.

The Department earned an average of \$31,000 annually from entrance fees to Sea Rim State Park from fiscal year 2002 to fiscal year 2005, which were the four most recent years that the park was open to the public.

The Department used rough estimates to calculate some initial estimated costs.

The Department used an expedited estimation technique that resulted in “rough estimates” that may differ from the actual costs from minus 50 percent to plus 100 percent. Three staff members in the Department’s Infrastructure Division prepared these rough estimates. These individuals have a combined 68 years of experience in the construction industry.

In addition, the Department did not maintain sufficient supporting documentation for most of its cost estimates. For example, when generating the initial estimates, Department staff contacted construction professionals for general cost estimates on items such as construction costs for storm-resistant doors. However, staff did not document the source or the specific information obtained through these contacts. In some cases, Department staff could not produce documentation to substantiate their assertions that they used a more reliable methodology, such as the use of RS Means cost information, to estimate costs.

The Department reduced the State's cost by contracting with the Department of Transportation to clear debris.

The Department originally estimated that it would cost \$15.3 million to clear debris from six sites. These estimates were based on the Department contracting individually for these sites. Instead, the Department of Transportation is performing the debris cleanup work for the State. The cost to clear the Department's portion of the debris is estimated to be \$5.9 million, which represents a savings of \$9.4 million.

**Other Costs - \$72,000**

In addition to the specific costs described above, the Department also included \$72,000 in certain other costs in its estimate of total Hurricane Ike-related costs for its Infrastructure Division. These are costs that cannot be assigned to one particular site and include payroll costs, travel costs, and other administrative costs.

## Estimated Costs for Other Divisions - \$3.5 million

Nine of the Department's other divisions reported \$3.5 million in estimated hurricane-related costs (see Table 7).

Table 7

Estimated Hurricane Ike-related Costs by Other Department Divisions (in thousands)				
Division	Emergency Work	Permanent Work	Other Costs	Total Costs
Executive	\$ 3	\$ 0	\$ 0	\$ 3
Administrative Resource	0	0	1	1
Information Technology	0	0	14	14
Communication	0	0	25	25
Law Enforcement	970	0	157	1,127
State Parks	1,085	568	58	1,711
Coastal Fisheries	157	18	69	244
Inland Fisheries	8	0	20	27
Wildlife	124	211	0 <sup>a</sup>	336
Totals <sup>b</sup>	\$2,347	\$ 798	\$ 344	\$3,488
<sup>a</sup> The Wildlife Division's other costs total \$112, which rounds to \$0 when rounding to the nearest thousand. <sup>b</sup> Totals may not sum precisely due to rounding.				

Source: The Department.

## Revenue Losses - \$1.8 million

The Department estimated that its Hurricane Ike-related revenue losses totaled \$1.8 million. Of this amount, the Department's Wildlife Division reported that it lost an estimated \$22,000 in revenues. All of the Wildlife Division's reported revenue losses are based on refunds offered to customers by the Department for various licenses and permits that could not be used due to damages sustained by Department sites from Hurricane Ike.

The Department's State Parks Division estimated that it will incur \$1.7 million in revenue losses during fiscal year 2009 based on two factors: (1) actual revenue losses it experienced from September 1, 2008, to December 2008, and (2) Galveston Island State Park's actual revenues from fiscal year 2008. The Department estimated that Galveston Island State Park would be closed for all of fiscal year 2009. However, the park was opened on a limited basis on March 21, 2009, and was opened for camping on July 2, 2009.

The Department did not include the costs of hosting evacuees in its calculation of revenue losses. The Department allowed 5,123 evacuees to stay at certain state parks free of charge after the hurricane, waiving \$112,000 in park fees.

### **Examination of Expenditures**

Auditors tested approximately \$116,383 (3 percent) of \$3.4 million that the Department spent for hurricane-related expenditures as of January 12, 2009. The majority of expenditures tested were supported and documented. However, auditors identified several instances in which the Department miscoded Hurricane Ike-related expenditures. None of the identified miscoded amounts was significant. Auditors did not identify any instances of fraud or abuse with respect to the Department's hurricane-related expenditures.

### **Revenue from Non-State Sources**

Auditors estimate that the Department could recoup \$66.6 million of its hurricane-related costs from three sources: FEMA reimbursements, insurance proceeds, and federal Oil Spill Liability Trust Fund reimbursements.

#### **FEMA - \$65.6 million**

Auditors estimate that the Department could be eligible to receive approximately \$65.6 million in FEMA reimbursements based on the Department's total estimated losses.

#### **Insurance Proceeds - \$0.9 million**

As of June 22, 2009, the Department estimated that it will receive \$0.9 million from insurance proceeds. Auditors examined the Department's commercial property insurance policy to verify that the policy was applicable to Hurricane Ike damages.

#### **Other Sources - \$19,426**

The Department's Inland Fisheries Division expects to receive \$19,426 in reimbursements from the federal Oil Spill Liability Trust Fund administered by the U. S. Coast Guard. These funds will be used to clean up oil spills along the Texas coast caused by Hurricane Ike.

## Objectives, Scope, and Methodology

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The objectives of this review were to:

- Examine the Department's hurricane-related expenditures to determine whether the expenditures were supported and documented.
- Examine the Department'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 Department's hurricane-related expenditures.
- Identify which cost estimates are subject to reimbursement by FEMA and other non-state funding sources.

The scope for this review of expenditures was from September 1, 2008, to January 12, 2009. Auditors examined the Department's methodology for calculating estimated damages as of February 11, 2009.

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

Information collected and reviewed included the following:

- The Department's estimated hurricane-related expenses, including estimated FEMA reimbursements.
- The Department's *Legislative Appropriations Request* to the 81st Legislature.
- The Department's accounting system data, including timesheet and expenditure data.
- The Department's insurance policies.
- FEMA project worksheets.
- Supporting documentation for the Department's expenditures.
- Control questionnaires completed by Department staff.
- Department policies and procedures.

Procedures and tests conducted included:

- Testing Hurricane Ike-related expenditures and encumbrances to determine whether they were supported and documented. Auditors also reviewed for indications of waste, fraud, or abuse
- Evaluating the reasonableness of the methodologies that the Department used to develop revenue loss and cost estimates related to Hurricane Ike
- Evaluating the Department's costs related to Hurricane Ike for possible FEMA eligibility and reimbursement.
- Examining the Department'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.
- Governor Perry's Emergency Disaster Proclamation and its amendments.

## **Project Information**

Fieldwork for this review was conducted from January 2009 through May 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)
- Sherry Sewell, CGAP (Team Leader)
- Benjamin Carter
- Melissa Dozier
- Adam Wright
- Leslie P. Ashton, CPA (Quality Control Reviewer)

- Ralph McClendon, CCP, CISA, CISSP (Audit Manager)