



# INSURABLE STATE ASSETS INTERIM STUDY

## FINAL REPORT

House Bill No. 3750, 84<sup>th</sup> R.S.

---

*Draft(s) Issued: August-October, 2016*

*Final Report: Issued December, 2016*

*Subject to Further Revision*



**THIS PAGE INTENTIONALLY LEFT BLANK**

# INSURABLE STATE ASSETS INTERIM STUDY

## BACKGROUND

As noted by the Legislative Budget Board (LBB) in its 2013 *State Real Property Inventory* issue brief to the Texas Legislature:

*The State of Texas owns significant amounts of real property of varying types and purposes. While several state agencies have information about state-owned property, the information varies and is inconclusive. There is currently no single state entity that maintains a complete database of property sites with consistent specifics including location, size, improvements and value. The lack of information and oversight negatively affects the state's ability to adequately manage and protect its real property assets, and to assess applicable values.*<sup>1</sup>

Pursuant to HB 3750 84<sup>th</sup> Regular Session, the LBB was asked to collect detailed information from each state agency and institution of higher education that possesses real property, and to provide that information to the State Office of Risk Management (Office) for consolidation, findings, analysis, and any recommendations regarding a statewide strategy to ensure that all real property owned by the state is adequately insured. The following Insurable Assets Interim Study is the result of that process.

To decrease the burden and potential fiscal impact on individual state agencies, the LBB coordinated with the Office, the Texas Higher Education Coordinating Board (THECB, for higher education information), the General Land Office (GLO, for certain other state entities), and six other selected entities,<sup>2</sup> to assist in compiling the statewide data.

### Other State-Owned Real Property Reports

- **2013 Issue Brief**  
Legislative Budget Board
- **2013 Interim Study**  
State Office of Risk Management
- **2011 Interim Study**  
State Office of Risk Management
- **2014 Facilities Master Plan Report**  
Texas Facilities Commission
- **State Real Property Evaluation Reports**  
General Land Office

---

<sup>1</sup> LBB Issue Brief #304, *State Real Property Inventory*, April 2013.

[http://www.lbb.state.tx.us/Documents/Publications/Issue\\_Briefs/304\\_State%20Property.pdf](http://www.lbb.state.tx.us/Documents/Publications/Issue_Briefs/304_State%20Property.pdf)

<sup>2</sup> Additional entities include the Texas Department of Housing and Community Affairs, Texas Workforce Commission, Texas Health and Human Services System, Teacher Retirement System, Employee Retirement System, and Texas State Preservation Board.

## **EXECUTIVE SUMMARY**

### **HB 3750 Implementation**

The fundamental premise of HB 3750 is that consolidating and analyzing comprehensive asset data will allow the Legislature and the State of Texas to better understand what assets the State owns, and other relevant information, for the purposes of making important public policy and strategic and operational determinations at an enterprise level. By collecting this data, the Office has sought to identify and verify assets detail at a previously unconsidered level, identify any issues in the mechanisms by which data is reported or the accuracy of that data, and to specify any uninsured and underinsured exposures associated with those assets. The ultimate purpose of HB 3750 is to support consideration of possible approaches to improving reporting, the criteria associated with that reporting, and to support any recommendations for protecting State-owned assets in the most efficient and cost-effective manner.

### **Key Findings and Recommendations**

**There is a Significant Potential of Financial Loss to the State from Possibly Uninsured and Underinsured Real Property.** Current reported assets information indicates total values of building, land, and contents in excess of \$80 Billion. Based on data collected, this study identified potential uninsured and underinsured exposures in excess of \$59.7 Billion. However, a significant portion of this potential exposure may in fact be fully or partially insured. While detailed data was not reported to the Office pursuant to HB3750, major institutions of higher education submitted additional information reducing this sum to approximately \$7.4 Billion. While not all of this exposure requires risk transfer through insurance, appropriate determinations require assessment of accurate and complete data, and mechanisms for funding attritional uninsured or underinsured losses.

**Inaccuracy, Incompleteness, and Decentralization of Data Reduces Full Analysis Capability and Reduces Valuation Confidence.** Issues with current data accuracy and integrity have been identified. Knowing the full extent of the State's exposure is the first step in determining the appropriate risk prevention and control measures the State should implement to prevent or reduce claims and losses, and make other strategic and operations determinations. Comprehensive data on state-owned assets can give the State a better understanding of risks the State faces. With this knowledge, the State can begin to make informed decisions regarding the mechanisms the State will use to prevent, reduce, and mitigate potential loss.

**The Statewide Strategy to Ensure the State Is Adequately Insured Requires Legislative Action.** This report recommends a hybridized system that incorporates multiple approaches to managing the State’s risk as being the most advantageous to the State. This model incorporates a centralized, mandatory state property insurance program that incorporates a pooling and reserve approach, in concert with a self-insured retention limit and reinsurance for larger, catastrophic losses. The actual mechanism(s) chosen for a statewide strategy to ensure that State assets are adequately insured should be determined after the State has a thorough understanding of its risks. From an insurance perspective, accurate and current data is necessary to calculate the maximum probable and maximum possible losses per state-owned building and across the entire State enterprise. Additional relevant considerations are the impact of the selected options on overall state operations, the costs associated with retaining the risk versus transferring the risk through reinsurance, and should provide clear procedures for identifying when and how funding will be made available in emergencies.

**The Potential Benefits of Maintaining a Comprehensive Database of State-Owned Property Will Require Multi-Agency Partnership.** This report concludes that maintaining a centralized, consistent, and comprehensive database of state-owned property would provide detailed and up-to-date information on state-owned property supporting informed decision-making and long-term planning. Complete and accurate data is foundational to the design of any comprehensive asset protection strategy and enterprise maintenance. Once data is collected, the data must be continually maintained and updated to ensure accuracy and completeness, and in a consistent format to ensure the State’s ability to identify, track, and report on state-owned property. Any centralization would ideally support simultaneous availability of information to multiple agencies, with the ability to create analytics and reports based on the entirety or any subset of the collected data.

**The Potential Risk of Maintaining a Comprehensive Database of State-Owned Property May Require Protections From the Public Information Act (PIA).** The database will necessarily contain information about state-owned assets such as security systems, land and building values, information technology infrastructures, and other confidential information. Most of the information contained in the database is a categorical exception from the PIA. Safeguarding the database would reduce the potential for market exploitation or inadvertently creating a security threat against a state-owned asset.

**THIS PAGE INTENTIONALLY LEFT BLANK**

# Contents

A.	DETAILED FINDINGS .....	7
1.	State-Owned Property .....	7
a.	General Overview .....	7
b.	Notable Specifics .....	9
2.	State Exposure .....	10
a.	Potentially Uninsured/Underinsured Assets .....	10
b.	Higher Education Post-Collection Detail .....	11
3.	Incomplete Data .....	11
a.	Value .....	12
b.	COPE Data .....	13
c.	Contents .....	13
B.	DATA COLLECTION AND CONSOLIDATION .....	14
1.	Data Integrity .....	14
a.	Consistency .....	14
b.	Accuracy and Validation .....	15
c.	Outdated Data .....	15
2.	Data Challenges .....	16
a.	Procedural Impediments .....	16
b.	Time Constraint Consideration .....	16
C.	STATEWIDE STRATEGY TO ENSURE STATE IS ADEQUATELY INSURED .....	17
1.	Risk Retention .....	17
2.	Risk Transfer .....	17
D.	RECOMMENDATIONS .....	18
1.	Continue Collection to Address Accuracy and Completeness of Data, and Validate and Maintain Data through a Centralized, Consolidated Database .....	18
2.	Establish Consistent Data Elements .....	18
3.	Require Regular Data Updates .....	18
4.	Utilization of Consolidated Data .....	19
5.	Require Security and Confidentiality of State-Owned Property Data .....	20
	APPENDICES .....	21
1.	Appendix A .....	23
2.	Appendix B .....	32
3.	Appendix C .....	33
4.	Appendix D .....	54

**THIS PAGE INTENTIONALLY LEFT BLANK**

## A. DETAILED FINDINGS

---

### 1. State-Owned Property

As a result of HB 3750, the Office implemented a risk managing information system, or RMIS, a single database system capable of accommodating the comprehensive data on state-owned land, buildings, and contents. This system includes capabilities for significant analytics, and is extensible and includes the first iteration of consistent reporting requirements by including elements of HB 3750 and relevant existing data fields of existing data repositories.

#### a. General Overview

The consolidated database currently contains 15,246 individual reported records. These records include buildings (13,633), state-owned land (1,376), and contents (237).

Based on the reported record dataset, the total estimated replacement cost of the reported state-owned assets is currently \$80,860,698,320.

The number of state-owned buildings account for 89.42% of the total estimated replacement cost value. The number of state-owned land accounts for 9.03% of total estimated market value.

The highest concentration of reported state-owned buildings is in Austin with 812, facilities while the highest concentration of estimated replacement cost is in Houston, with \$12,962,784,035 of values.

Figure 1 Number of Buildings by City<sup>3</sup>

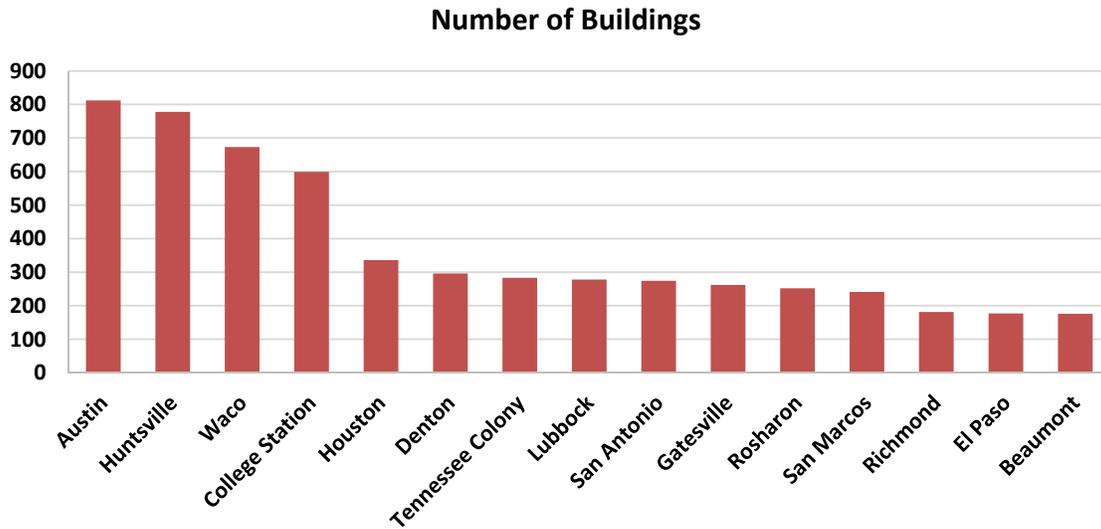
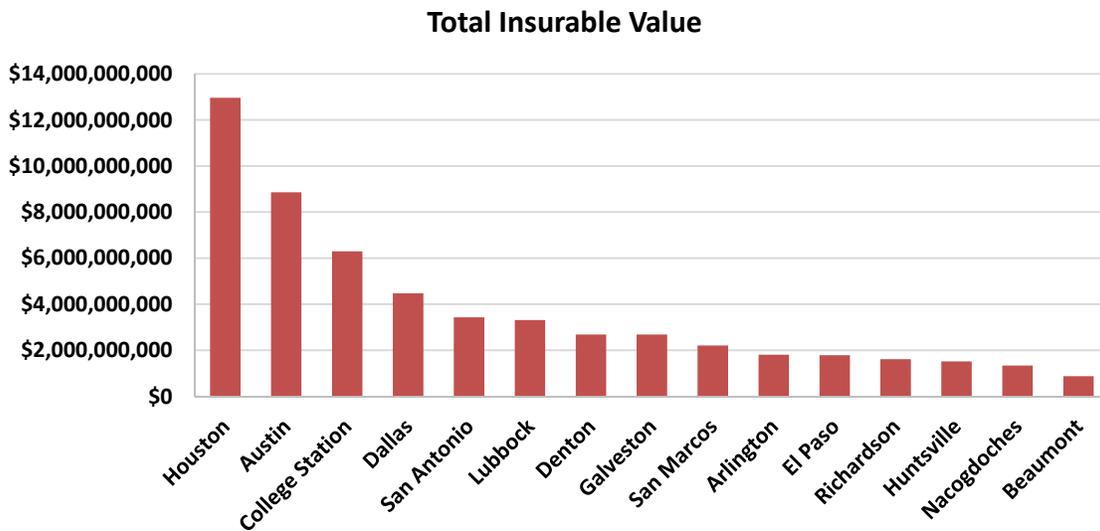


Figure 2 Total Estimated Total Insurable Value by City<sup>4</sup>



The total acreage of state-owned land is approximately 10,124,425 acres. According to the United States Department of Agriculture’s Natural

**At a Glance:**  
**Buildings & Facilities**  
 ➤ Texas Park and Wildlife Department owns 1,552 buildings/facilities.

<sup>3</sup> Figure 1 charts the top 15 cities with highest concentrations of reported state-owned buildings. A grand total of 392 cities were reported to contain, at least, 1 state-owned building.

<sup>4</sup> Figure 2 charts the top 15 cities with the highest reported total insurable value of state-owned buildings. A grand total of 273 cities were reported to have a state-owned building with a reported total insurable value.

Resources Conservation Service, the total surface area of Texas is 171,051,900 acres.<sup>5</sup> Reported acreage constitutes the state of Texas owns approximately 6% of the state's total area.

The state owns an array of buildings and facilities that range from historically significant and irreplaceable sites to barns, prisons, parks, and football stadiums. The construction dates of the state-owned buildings range from the 1830s to 2010s.

- Texas State Technical College- Waco owns 641 buildings/facilities.
- Land**
- Texas Department of Transportation owns 275 parcels of land.
- University of Texas System owns 88 parcels of land.

State-entities and institutions of higher education were not required by HB 3750 to report the same data regarding contents. Contents data that was reported was not consistent or verifiable within the timeframe allotted by HB 3750 for conclusion of reporting and analysis. The Office utilized data from the FY15 Comprehensive Annual Financial Report to determine the value of furniture and equipment, other capitol, and computer software for the entire state at \$9,974,439,000.

As noted above, the best estimated total replacement cost for buildings, and contents for currently reported state-owned assets is \$80,860,698,320 the market value for land is 2,687,660,810. The Office previously estimated approximately 60 – 80 billion dollars in state-owned assets through extrapolation of incomplete data (non-consolidated, non-reported data). Reported data verifies the general accuracy of those estimates, but the incompleteness of reported data indicates current values may be higher.

**b. Notable Specifics**

Institutions of higher education own 6,064 of 13,633 buildings reported (44%). Other state entities owned the remaining 7,569 of 13,633 buildings (56%). Reported land parcels of institutions of higher education and other state entities was similar to building ownership ratio, with higher education owning 555 of 1,376 parcels (40%) of the total parcels of land reported, while state-entities owned 821 of 1,376 parcels (60%).

The Texas Parks and Wildlife Department, Texas Department of Transportation, and Health and Human Services Commission own the most buildings, respectively, when comparing state entities, with a total of 3,391 of 7,569 buildings (44%). The Texas Department of Transportation, The Texas Parks and Wildlife Department and the Department of Public Safety own the highest number of land parcels, with 560 of 821 parcels (68%).

---

<sup>5</sup> [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcseprd396218.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd396218.pdf)

With regard to the institutions of higher education, Texas State Technical College at Waco, Texas A&M University, and The University of Texas at Austin own 1,714 of 6,064 buildings (28%).

The University of Texas System, Texas Woman's University, Texas A&M University Forestry Services rank the three highest owners of land. These institutions of higher education own 164 of 555 parcels (29%).

## **2. State Exposure**

The consolidation of data on state-owned assets has increased the overall understanding of the state's risk exposure, indicating that further statistical and data analysis of consolidated information can be used to identify potential exposures leading to implementation of a statewide risk strategy and insurance plan. Through a comprehensive statewide risk strategy and insurance plan, the state of Texas can mitigate exposure and reduce the potential for catastrophic damages and loss.

With complete data, the state could produce more definitive hurricane models with information from a consolidated database.<sup>6</sup> Based upon extrapolated information from the state Sponsored Property Insurance Program but including excepted programs, Texas has a .04% chance that a single hurricane (250 year storm) could cause losses exceeding \$2 Billion.

Complete data would also produce more definitive hail and tornado models. Texas leads the nation in hail loss claims.<sup>7</sup> Texas is also one of the top five states in tornado occurrences.<sup>8</sup> The knowledge which could be extracted from a comprehensive consolidated database could be used in developing mitigation strategies relative to exposures and potential losses due to weather related risks.

### **a. Potentially Uninsured/Underinsured Assets**

For potentially uninsured/underinsured properties, the state as a whole does not have a specific funded reserve for losses. When a loss is sustained, the affected individual entity must absorb the loss within current budgets and/or request a supplemental appropriation from the Legislature.

The consolidated database contains 13,633 records on reported state-owned buildings, with the total estimated value of \$70,886,259,320.50. However, the final version of

---

<sup>6</sup> Appendix A: RPS Analytics 2016 Hurricane Catastrophe Analysis Executive Summary. This summary is based upon the 40 state entities and institutions of high education participating in the State Sponsored Property Insurance Program as a sample.

<sup>7</sup> 19% of all hail related claims are located in Texas from the National Insurance Crime Bureau ForeCAST Report May 2, 2016.

<sup>8</sup> U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service *Quick Facts: Tornadoes*, July 20, 2009.

HB3750 did not retain a provision requiring entities to report insurance coverage. Of 13,633 buildings reported, 1,452 properties are specifically known to be insured due to participation in the Statewide Insurance Purchasing Program administered by the Office.

Insured Building	Number of Buildings	TIV
Not reported	12,181	\$ 59,728,642,293.19
Yes	1,452	\$ 11,157,617,027.31
<b>Grand Totals</b>	<b>13,633</b>	<b>\$ 70,886,259,320.50</b>

At the time of data compilation and analysis, a maximum of 12,181 appeared to be potentially uninsured or underinsured (89%) and the total potential exposure of uninsured/underinsured properties, as expressed in total insurable value, was \$59,728,642,293.<sup>9</sup> This figure represents collected data only, and should not be solely relied upon. **Importantly, institutions of higher education subsequently communicated with the Office and provided important additional detail on a significant portion of this exposure, as described below.**

**b. Higher Education Post-Collection Detail**

The Texas A&M University System, the University of Texas System, the Texas Tech University System, and the Texas State University System each manage their own insurance programs. Consistent with the testimony at a March 2016 hearing of the House Committee on Business and Industry, and again subsequent to the HB3750 joint committee hearings and data collection process, each of the four university systems has represented that they have confirmed property insurance programs in place, including reserving capacity. The insurable assets subject to the four institutions insurance programs, as reported to the Office, represent approximately \$52.3 billion of the \$70.9 billion in state assets as compiled in this study. With the Office’s program covering approximately \$11.2 billion (non-reserved), the remaining unverified uninsured/underinsured property is more estimated to be approximately **\$7.4 billion**.

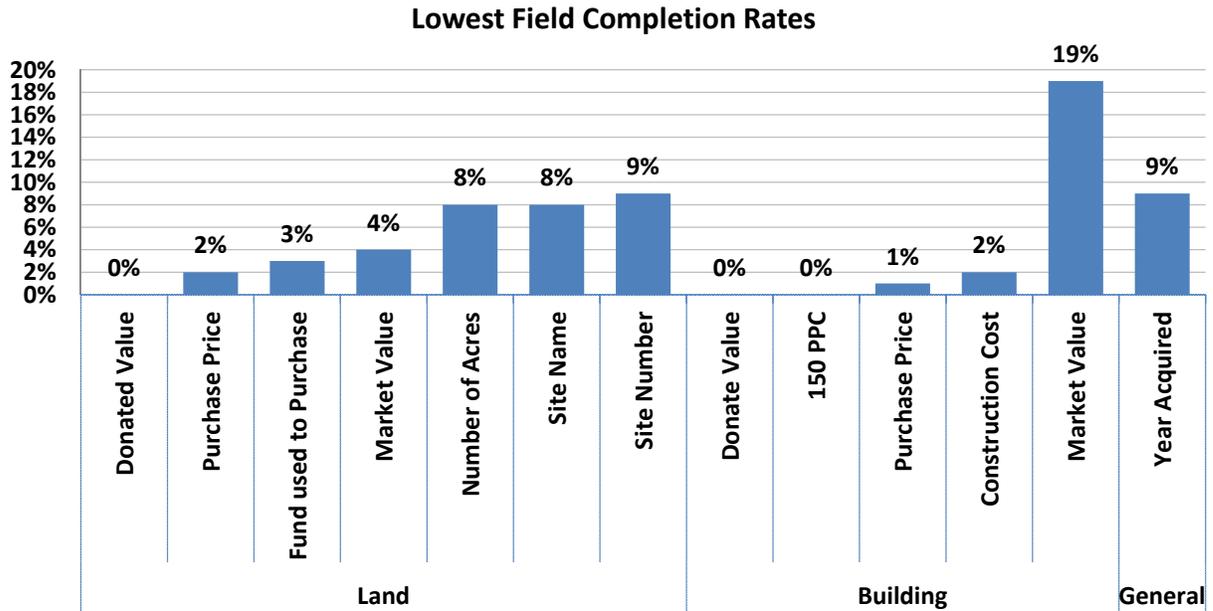
**3. Incomplete Data**

Complete and accurate data is foundational to the design of any comprehensive asset protection strategy. Once data is collected, the data must be continually maintained and updated to ensure accuracy and integrity.

---

<sup>9</sup> Appendix B: Insured and Uninsured Buildings.

The HB 3750 analysis does raise concerns regarding the accuracy, consistency, and integrity of data on state-owned property. Consistent with legislative concern, analysis of data integrity reveals instrumental information is incomplete. This is due to a number of factors, including but not limited to statewide inconsistencies on how data was recorded, different methodologies in determining values, and lack of relevant data.



**a. Value**

Value can be expressed in various ways by state entities - purchase price, market value, replacement cost, etc. - and a variety of methods and formulas can be used to determine value. HB 3750 required state entities to report the value of the building base upon replacement value, market value, donated value, or purchase price. Aside from inconsistent market valuation techniques, market value was not reported for 11,043 buildings (18.4%). Therefore, of those 11,043 buildings, 2,019 building records in the database have a reported replacement cost of zero, as a result of the replacement cost not being captured at the time of an appraisal or not being reported to the Office.

Some valuation data submitted was based on appraisals, and may be generally relied upon to determine replacement value. Of reported records, 6,950 buildings of 13,633 (51%) had appraisals on record. However, the Office notes that some appraisals were not current or verifiable, dating as far as back as 1996, and some others did not include relevant data. For tax purposes, the Texas Comptroller of Public Accounts recommends that appraisals should be conducted every three to four years to ensure up-to-date

replacement cost information is available.<sup>10</sup> The standard in the risk management and insurance industry is similar, with a three to five year cycle.

The state's ability to accurately calculate replacement cost of the entire pool of state-owned property is negatively affected by these issues. While a single standard for valuation to accurately calculate replacement cost in the event of loss would enable the Office to better assess risk maintenance, risk avoidance (insurance), and risk assumption, valuation is used for different purposes by various agencies. Nonetheless, providing consistency in determining market value and replacement cost statewide would provide more accurate comparisons suitable for enterprise-level analysis and determinations.

**b. COPE Data**

Construction, occupancy, protection, and exposure (COPE) data is essential for evaluation of risk. State-owned buildings may require improved construction techniques to mitigate damage from hail storms, tornados, and flood. Occupancy can assist with risk planning affecting state employees when catastrophic events occurs. In addition, fire and security protections and exposure management mitigate against potential loss of property and lives.

All reported protection information was consolidated into the database. Audible and visual fire alarm systems, active sprinkler systems, presence of smoke detectors and secure entry locations were recorded but are incomplete for all state entities.

Consistent data on fire protection systems is key to the State Fire Marshall's Office (SFMO) assessments of state-owned buildings' protections against fire hazards, and is vital information to efficiently plan safety strategies for the highest risk state-owned buildings. This data is also necessary for accurate insurance quoting representing exposures. Complete and consistent COPE data is necessary for risk planning, and developing policies and procedures to effectively plan and mitigate against potential loss.

**c. Contents**

Property insurance claims will include the damaged contents inside the building. An analysis of the data collected indicates that 165 state entities did not report contents. To provide actionable estimated information in this report, the Office has utilized the Comprehensive Accounting Financial Report (CAFR) from the 2015 fiscal year for alternative data. The CAFR reports \$9,974,439,000 in furniture and equipment, other capitol, and computer software. The Office notes that this total is not inclusive of all

---

<sup>10</sup> <http://comptroller.texas.gov/propertytax/local-protest/remedies/valuing-property.html>. Though the Comptroller's recommendation for property appraisal is for tax purposes, the recommendation would be kept consistent.

state-owned contents as the minimum threshold reporting requirement excludes furniture and equipment valued under \$5,000 and software valued under \$100,000. The minimal threshold reporting requirements could exclude contents that could cumulatively increase the value of the reported contents.

## **B. DATA COLLECTION AND CONSOLIDATION**

---

Significant caution must be taken for any conclusions drawn from, or reliance upon, the consolidated data on state-owned assets. It is important to note that the consolidated data is known to be incomplete, because all data on all state-owned land, buildings, and contents was not reported or was only partially reported. The data in this study is based upon information that was previously reported to, or maintained by, other collecting entities for specific purpose and use. To that end, this consolidation is a snapshot of HB 3750-related information as it exists today in various other locations, subject to limited verification and correction as required for valid inclusion in analysis. Therefore, the overall valuation, exposure, and insurance strategy is likely to be revised in the event of an increased completion rate and confidence level.

### **1. Data Integrity**

The Office imported and then audited the data it received from the LBB. During the audit, the Office identified data discrepancies and other items that affected the integrity of the data in the consolidated database. While typographical errors may have a minor impact on data analysis, incomplete reporting of fields did hinder accurate data analysis. Other data integrity issues include:

#### **a. Consistency**

As expected, the information reported for state entities regarding assets was not uniform because the information was not centralized and was collected for specific use. In addition, HB 3750 listed five different standards that could be used to express the value of a reported asset. Asset value could be based on replacement cost, market value, donated value, purchase price, or appraised value.

Valuation does depends upon focus. From an insurance perspective, total insurable value and replacement costs are essential. From a market standpoint, appraised values are important. Some reported property values in the consolidated database were based upon outdated values, which does not account for inflation or other variances.

State entities that compile data from other state entities collect different data elements and maintain the data in different formats, including paper files. Tracking and reporting on state-owned assets is not based on the same source of information. The data reported may not be defined by the same terms or concepts between entities. For example, some entities use a numeric system (e.g. “3”) and others assign a term (e.g. “fair”) to indicate the condition of a building. These differing criteria affect the ability to analyze and compare important data elements for the purpose of statewide focus.

**b. Accuracy and Validation**

The collection, compilation, and verification of state-owned assets data reveals inaccuracy and inconsistencies between the consolidated database, state-entities' data on state-owned assets, and data maintained by individual state entities.

As an audit sampling and confidence determination, several entities were asked to validate the property data collected on behalf of the entity and supplied to the Office. Where validated, corrections and updates were addressed and the deviance was noted as an area of concern. However, agency representatives were often hesitant to make changes to or add omitted data because the source and/or accuracy of the data was unknown. When omitted data is not added or reported, or data is not amended to become accurate or complete, the data is diluted, which hinders thorough validation.

In many instances, the same address was provided for every building on a parcel of land instead of a unique physical address for each structure. By providing one address for multiple buildings, the ability to validate locations of state-owned building is difficult.

**c. Outdated Data**

State entities that were asked to validate the data reported on their behalf identified at least 21 properties that are no longer owned by the State.

As stated above, the consolidated data revealed appraisals on 6,950 state-owned buildings were reported. However, 6,376 (96%) of the reported appraisals are five years or older and the most recent appraisals were completed in 2012. Outdated appraisals cannot be relied upon because there is no price appreciation from the original date of the appraisal to the current year. Relying upon outdated appraisals to calculate replacement value does not account for any increase in value due to current market conditions or inflation.

**Table 1 The Number of Appraisals per Year.**<sup>11</sup>

Last Appraisal Year Building	Location Count
1996	8
1999	81
2002	11
2003	13
2004	10
2005	15
2006	269
2007	88

<sup>11</sup> The years in white indicate outdated appraisals. Those appraisals in blue indicated appraisals that could possibly be used to indicate replacement value.

2008	221
2009	172
2010	2835
2011	735
2012	1918
2013	529
2014	23
2015	14
2016	8
<b>Grand Total</b>	<b>6950</b>

## 2. Data Challenges

Given the constrained timeframe under HB 3750, the LLB, GLO, TFC, THECB, and the Office coordinated efforts to collect a massive amount of data on behalf of the state. The coordinated effort for collection, verification, and consolidation presented a significant challenge to the entities involved, as no such data collection has been previously performed in the state. Therefore, the entities involved had to mine and collect data without existing procedures, criteria, and terminology to define the data collected. Although the consolidation of information raises the concerns outlined herein, it is important to note that inconsistencies and other issues were anticipated.

### a. Procedural Impediments

To meet the prescribed time constraints in HB 3750, the consolidated database was populated through a data import using a specially formatted Excel template. The template was designed with drop down menus for many data fields to attempt to increase consistency and decrease human error. Criteria used within the template drop down menus were expanded to accommodate differences between how data was tracked or labeled at the state-entity level.

This method was implemented to accommodate export of data from existing collection databases, rather than direct input by individual agencies. However, use of the template was complicated by the use of the criteria captured by the expanded selections made data analysis difficult. Different state-entities used different versions of the Excel software and compatibility issues between different Excel versions introduced consistency variances. For example, drop down menus designed to standardize data elements were able to be bypassed and non-standard data introduced, requiring manual correction or notation.

### b. Time Constraint Consideration

Also due to the time constraints in the bill, the LBB and the Office could not ask each individual state entity to provide missing data, update asset records, or validate data. Some data, such as the fund type used to purchase a building, contents, and TIV, was not readily available and could not be compiled in the timeframe provided for the data

collection. Therefore, some data not subject to sampling and audit remains either incomplete or based on extrapolation.

## **C. STATEWIDE STRATEGY TO ENSURE STATE IS ADEQUATELY INSURED**

---

A large number of state assets are not currently protected from loss through insurance. The Office has previously recommended the creation of a centralized, mandatory state property insurance program to normalize the cost of ordinary losses to individual state entity budgets. This recommendation is restated and incorporated by reference herein. That statewide strategy incorporates use of a combination of traditional insurance options and risk retention and risk transfer mechanisms to minimize the budgetary impact of ensuring state-owned assets are adequately insured.<sup>12</sup>

### **1. Risk Retention**

Self-insured retention plans would allow a state entity, or the state as a whole, to pay for losses up to a certain level out of existing budgets, without the costs associated with traditional insurance. With this method, the state entity, or the State as a whole, would need to create and maintain dedicated funds in a minimum amount that are allocated for and dedicated to payment of claims up to a predetermined dollar amount. These costs are anticipated losses, known as attritional losses (or simply as the cost of doing business).

Pooling is a risk retention strategy that combines resources to finance experienced losses. State pools could be created based upon common exposures, geography, or any mutually supporting combination. Each participant would contribute resources to the pool that would be used to the equal benefit of the participants. Pooling programs would allow the state to include or exclude entities based on their ability to meet underwriting guidelines. Pooling would stabilize the premium (contribution) for individual participants and create more consistency in annual budgeting.

Thereafter, reinsurance or excess insurance can be used to assist with losses that exceed a self-insured retention limit or a pool's resources.

### **2. Risk Transfer**

The state can insure its assets against damage or loss through insurance options. However, insuring all state-owned assets through traditional insurance routes would likely represent the most expensive option for the state. Traditional insurance is primarily advantageous for small geographical spreads. To finance large losses, the state could establish a reserve sufficient to deal with moderate spikes in losses from year to year and consider purchasing reinsurance for large, catastrophic losses. Determining the dollar limits for reinsurance is dependent upon accurate and comprehensive data on state-owned assets.

---

<sup>12</sup> See, Appendix D: State Office Risk Management 2011 Insurable Assets Study; Appendix E: State Office Risk Management 2013 Insurable Assets Subsequent Study

In order to implement a complete and thorough statewide asset protection plan, the following recommendations are made.

## **D. RECOMMENDATIONS**

---

As a result of HB 3750, the Office was able to base observations on state-owned assets and generalized risk assessments. Specifically, the consolidated database provided an opportunity to better manage, understand, and analyze state-owned assets. With standardized, accurate, and comprehensive data, regardless of where the consolidated data is housed, the Office could prepare thorough risk analyses and a statewide asset insurability plan to better protect the state from all types of loss.

The unique challenges in collecting, auditing, and validating data for HB 3750 warrant consideration of the continuation and potential expansion of a centralized, consolidated database for state-owned assets.

### **1. Continue Collection to Address Accuracy and Completeness of Data, and Validate and Maintain Data through a Centralized, Consolidated Database**

State entities should participate in identifying essential statutory data and any additional data that would be beneficial to risk and insurability analysis. A comprehensive set of data elements should be created and applied uniformly across all state entities that possess state-owned assets. A consolidated database can be used to centralize this data and provide easy accessibility.

### **2. Establish Consistent Data Elements**

Future extension of the purposes underlying HB 3750 should include expectations, guidelines, and clearly defined data criteria to increase efficiency in reporting and ensure accurate, complete data is reported in a timely manner. Formal procedures on data reporting would streamline how data is reported, audited, and validated in the consolidated database. Defining the data would create more consistent information and provide an opportunity for more thorough, complete, and extensive analysis of statewide risk exposures. With consistent and unified data criteria, the scope of the data could be refined to provide more accuracy and simplify reporting.

### **3. Require Regular Data Updates**

State entities should be allowed/required to update their reported data annually or more frequently as needed. Through data revision, verification, and updating, the data in the consolidated database can become more refined, insightful, and contemporary to address statewide issues as they arise.

Having an up-to-date appraisal for a building is essential for a comprehensive asset protection plan. Current appraisals are a more accurate assessment of the actual cost to replace a building because the value is based on current market conditions, cost of construction index, and contemporary labor costs.

Clear guidelines on the content and structure of state-owned property appraisals would ensure consistent and comprehensive data is collected with every appraisal and eliminate gaps in the data. Guidelines that set forth procedures, define data, and establish the scope of the data would enhance the accuracy and consistency of appraisals. State entities should provide and/or update appraisal data to ensure accurate replacement values for the buildings are reported. Direct reporting as changes occur will improve the accuracy of the data and remove potentially outdated data sooner.

#### **4. Utilization of Consolidated Data**

The consolidated database would be a conduit for state entities to coordinate their respective operational goals and increase efficiency. Data from one entity could be utilized by another state entity for validation and to fulfill statutory obligations.

The consolidated data could also be used for predictive catastrophic event and risk modeling. Statewide predictive risk modeling would allow the Office and other entities to perform more detailed risk and insurance analyses and enhance statewide risk and insurance strategies. This data could also support trend tracking and benchmarking of state-owned assets subject to significant risk exposures. The consolidated data could further be used to obtain better competitive market rates for uninsured state-owned buildings and contents. Readily available and accurate underwriting data can expedite risk transfer through insurance. Each entity's costs for retained and transferred risks could be tracked and analyzed. TFC, GLO, and other state entities could identify underutilized or unoccupied space in state-owned buildings leading to better utilization or sale of state-owned assets that have not been utilized.

The LBB, SAO, and the Comptroller could use the database to document the sale and acquisition of property and the source of the funds used to purchase the property. The data could assist in audits and for budgeting purposes. Information pertaining to income generation through the sale of property and the use of general revenue funds for maintenance, renovation projects, and new construction can be audited and analyzed for comprehensive budget purposes.

The State Fire Marshal's Office (SFMO) has an expanded role for fire protection of state-owned buildings and the safety of state employees in state-owned and leased buildings. The consolidated database could be used to track and benchmark fire inspections. The SFMO could use other data within the consolidated database, such as fire safety protections, alarm protections, building occupancy, and severity of loss of life indicators to schedule inspections. Similarly, the Office could select locations for loss control inspections using the consolidated data.

The Texas Public Finance Authority (TPFA) issues debt on behalf of multiple agencies and certain institutions of higher education. State law allows general obligation bonds to be

backed by the full faith credit of Texas. Self-Supporting debts are expected to be repaid through loan repayments. Not self-supporting debts are expected to be repaid with general revenue (e.g. repair and construction projects).<sup>13</sup> TPFA could use the database to ascertain budgeting levels, debt ratios, and other structured finance analyses. The data could demonstrate the state's management of its fiscal affairs and debt management. With improved information and greater ability to examine the state's financials, Texas' credit rating/bond solid credit rating can be sustained or increased.

##### **5. Require Security and Confidentiality of State-Owned Property Data**

Property and content information in the database should be exempted from the Public Information Act (PIA), Texas Government Code Chapter 552. Knowledge that any data reported to the consolidated database would be secure and not subject to PIA would encourage state entities to report more thorough data and decrease enterprise risk concerns. For example, information pertaining to protection systems could compromise the integrity of a state building. Likewise, the disclosure of the state's information technology infrastructure could make it susceptible to cyber-attack. The Capitol Complex, Governor's Mansion, Texas Department of Criminal Justice, and Texas Military Department are only a few of the state entities with highly sensitive security information about their respective buildings and contents.

Exempting information in the consolidated database from the PIA would safeguard the state's ability to obtain appropriate levels of insurance at reasonable and appropriate rates. By pooling statewide risks, individual agencies with average or poor risk ratings are able to benefit from the group buying power of the Statewide Sponsored Property Insurance Program. Diluting participation in that program would drive up insurance costs for the state.

Texas Government Code §552.105 exempts information relating to the location of real and personal property for a public purpose prior to a public announcement of a project. Appraisal and purchase price are also excepted prior to the formal award of contracts for the property.

---

<sup>13</sup> [http://www.lbb.state.tx.us/Documents/Publications/Presentation/2214\\_Debt\\_Summary.pdf](http://www.lbb.state.tx.us/Documents/Publications/Presentation/2214_Debt_Summary.pdf)

## **APPENDICES**

**THIS PAGE INTENTIONALLY LEFT BLANK**



## APPENDIX A

Knowledge. Relationships.  
Trust and Confidence.

# HB3750 2016 HURRICANE CATASTROPHE ANALYSIS EXECUTIVE SUMMARY

Requested by Risk Placement Services

August, 2016



Risk Placement Services, Inc.

ANALYTICS



Knowledge. Relationships.  
Trust and Confidence.

## Table of Contents

<b>EXECUTIVE SUMMARY</b>	<b>3</b>
<b>PORTFOLIO ASSUMPTIONS &amp; INSURED VALUE SUMMARY</b>	<b>3</b>
<b>ANALYSIS SUMMARY</b>	<b>5</b>
<b>GLOSSARY OF TERMS</b>	<b>7</b>
<b>APPENDIX 1: OEP ANALYSIS DESCRIPTION</b>	<b>8</b>
<b>DISCLAIMER</b>	<b>9</b>

*RPS Analytics does not endorse one model over another, nor is it the intent of this summary to compare the results or methodologies of the models to each other. RPS Analytics strongly recommends the use of multiple models, which provides clients a range of results from different scientific approaches.*



Knowledge. Relationships.  
Trust and Confidence.

## Executive Summary

This document reports the results of RPS Analytics catastrophe analyses of HB3750 2016 hurricane portfolio commissioned by Risk Placement Services (RPS). This report includes HB3750's property exposure summary detailing its locations exposed to the peril of hurricane events.

RPS Analytics reviewed and reformatted the exposure data as necessary and used them as input to AIR Worldwide Touchstone v3.1 model and Risk Management Solutions (RMS) RiskBrowser v15.0<sup>tm</sup> model. These models are systems of computer programs that incorporate the fundamental physical characteristics of hurricanes and earthquakes, expressed mathematically.

Through our hazard analysis we will identify exposure values and geocoding resolution. Secondary characteristics, where provided will also be applied in the modeling.

With a series of deterministic and probabilistic analyses performed, we will be able to identify the 20 to 1,000 year expected losses. The portfolio was run on an Occurrence Exceeding Probability (OEP). The loss estimates produced will help HB3750 to:

- Develop risk management guidelines that account for hurricane risk.
- Manage and control exposure to hurricane losses.

## Portfolio Assumptions & Insured Value Summary

For each line of business, the following assumptions will be made:

- All locations are insured to value (i.e. total limit = total value).
- Number of stories, year built and square footage where provided were applied in the models.
- Secondary characteristics where provided were applied in the models.
- All values listed in this portfolio are in whole dollars unless otherwise noted.
- All hurricane analyses include demand surge.

➤ Values Summary

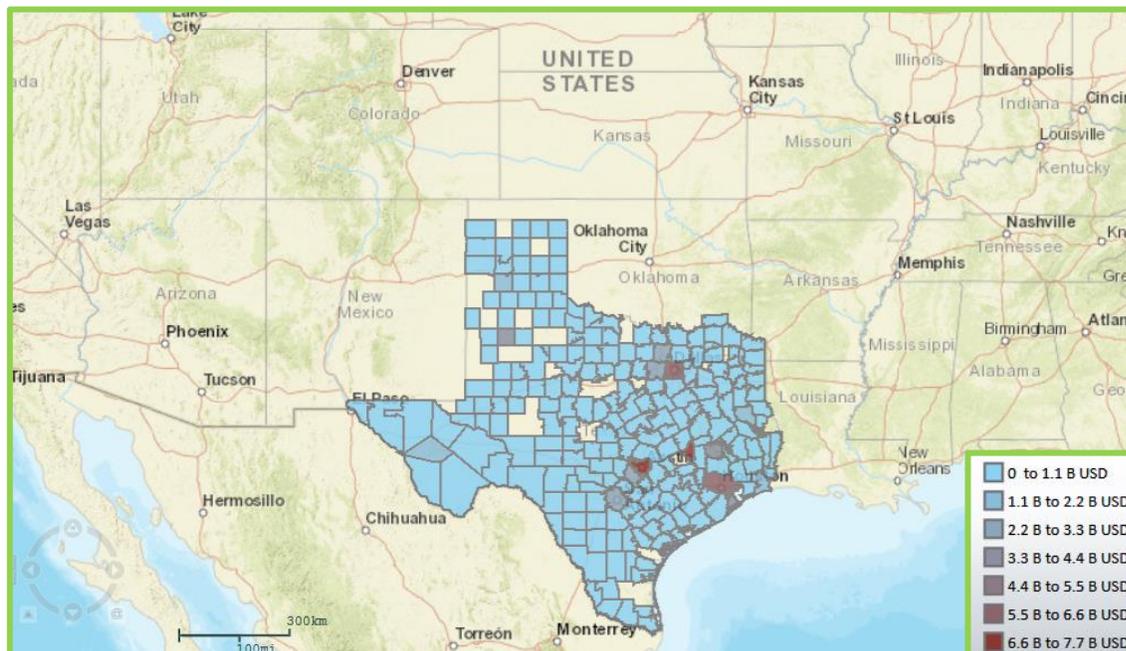
Building	Content	Business Interruption	Total
\$69,506,460,019	\$0	\$0	\$69,506,460,019
100.00%	0.00%	0.00%	100.00%

➤ The order of geo-coding scheme is coordinate, building, parcel, street, block, postal code, and city. The more exact address HB3750 provided us, the more accurate loss we can provide through each analysis. The chart below shows that 100.00% of locations geocoded to coordinate.

Geocode Resolution	No of Risks	Total Values	% Total
Coordinate	14,001	\$69,506,460,019	100.00%
<b>Total</b>	<b>14,001</b>	<b>\$69,506,460,019</b>	<b>100.00%</b>

➤ 99.87% of exposed values modeled are in the State of Texas.

State	No of Risks	Total Values	% Total
TX	13,978	\$69,415,897,678	99.87%
OK	23	\$90,562,341	0.13%
<b>Total</b>	<b>14,001</b>	<b>\$69,506,460,019</b>	<b>100.00%</b>



## Analysis Summary

### Hurricane (Incl Storm Surge)

HB3750 has approximately \$69 Billion in values exposed to hurricane related events in the United States. **Figure 1-1** illustrates the probability of ground up losses exceeding various amounts due to one event in a given year, as described by the Occurrence Exceedance Probability (OEP). The 250yr event loss probability is commonly used by the insurance marketplace as a gauge for insurance pricing.

Critical Prob.	Return Period	AIR	RMS
		Ground Up	Ground Up
0.10%	1,000	\$3,827,515,575	\$4,279,821,943
0.20%	500	\$3,047,842,763	\$3,286,235,142
<b>0.40%</b>	<b>250</b>	<b>\$2,128,904,675</b>	<b>\$2,420,519,525</b>
1.00%	100	\$1,230,281,164	\$1,439,285,923
2.00%	50	\$703,016,947	\$846,797,873
5.00%	20	\$256,623,107	\$311,299,284
<b>AAL</b>		<b>\$57,908,355</b>	<b>\$68,231,947</b>

Figure 1-1

### AIR:

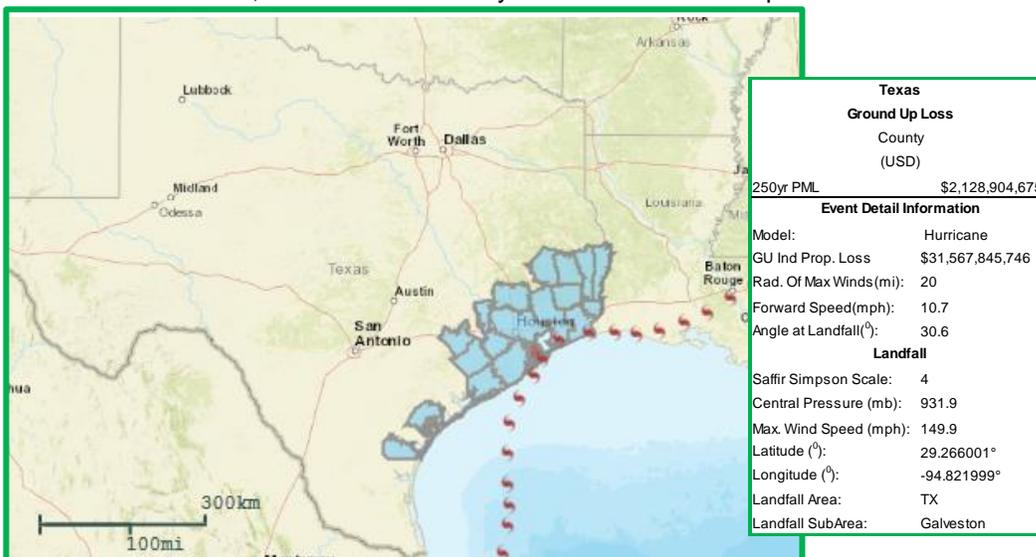
➤ According to AIR Touchstone, there is a 0.4% annual probability (a.k.a. the 250 year event) that a single hurricane (OEP) event will cause losses that will exceed \$2.1 billion.

### RMS:

➤ According to RMS RiskBrowser, there is a 0.4% annual probability (a.k.a. the 250 year event) that a single hurricane (OEP) event will cause losses that will exceed \$2.4 billion.

### 250Yr Event Loss

The AIR 250yr ground-up stochastic event producing the loss of \$2.1 billion is a hurricane making landfall in Galveston, Texas at an intensity of 4 on the Saffir Simpson Scale.



**Hurricane (Excl Storm Surge)**

HB3750 has approximately \$69 Billion in values exposed to hurricane related events in the United States. **Figure 1-2** illustrates the probability of ground up losses exceeding various amounts due to one event in a given year, as described by the Occurrence Exceedance Probability (OEP). The 250yr event loss probability is commonly used by the insurance marketplace as a gauge for insurance pricing.

Critical Prob.	Return Period	AIR	RMS
		Ground Up	Ground Up
0.10%	1,000	\$3,248,411,583	\$4,053,059,517
0.20%	500	\$2,617,704,620	\$3,092,647,154
<b>0.40%</b>	<b>250</b>	<b>\$1,693,451,210</b>	<b>\$2,260,622,886</b>
1.00%	100	\$1,001,898,715	\$1,331,629,391
2.00%	50	\$547,581,309	\$783,393,388
5.00%	20	\$214,540,262	\$291,265,094
<b>AAL</b>		<b>\$48,262,554</b>	<b>\$63,908,752</b>

Figure 1-2

**AIR:**

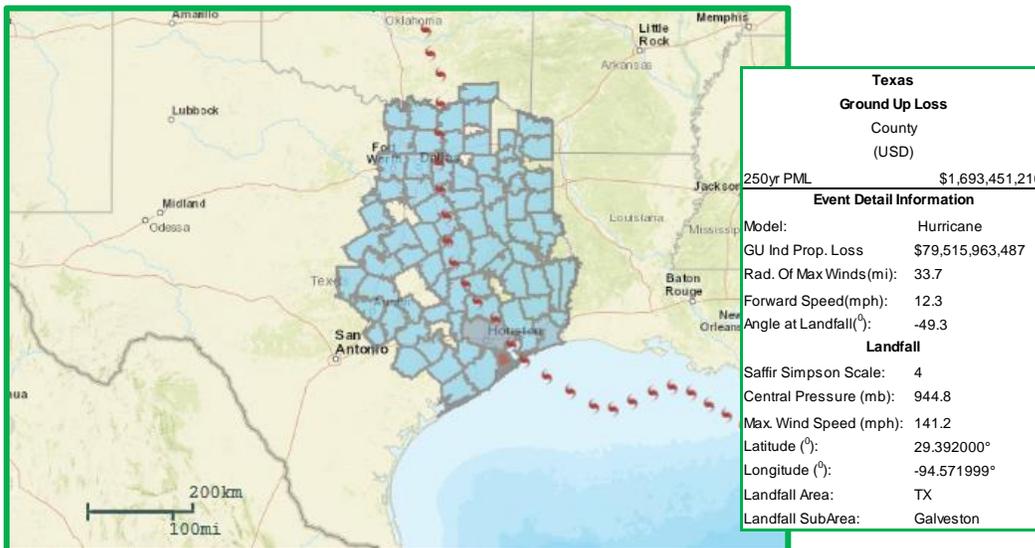
➤ According to AIR Touchstone, there is a 0.4% annual probability (a.k.a. the 250 year event) that a single hurricane (OEP) event will cause losses that will exceed \$1.7 billion.

**RMS:**

➤ According to RMS RiskBrowser, there is a 0.4% annual probability (a.k.a. the 250 year event) that a single hurricane (OEP) event will cause losses that will exceed \$2.3 billion.

**250Yr Event Loss**

The AIR 250yr ground-up stochastic event producing the loss of \$1.7 billion is a hurricane making landfall in Galveston, Texas at an intensity of 4 on the Saffir Simpson Scale.





Knowledge. Relationships.  
Trust and Confidence.

## Glossary of Terms

**Average Annual Loss (AAL):** the annualized estimate of loss to a representative unit of exposure from a broad range of modeled catastrophe events;

**Centroid:** A point latitude and longitude which is meant to represent the center of a defined geographical area.

**Demand Surge:** 'Post loss inflation' of building materials/labor, typically applied only to the building damage, and not to the business interruption/contents loss components;

**Geocoding:** the process of associating an address, such as a street or postal address, with an estimate of the latitude and longitude coordinates that represent the location on the ground

**Ground Up Loss:** the amount of loss sustained before deductions, underlying coverages and reinsurance are applied.

**Gross Loss:** the insurer's or cedant's loss after deductibles, attachment point(s), and limits are applied, but before any reinsurance.

**Modified Mercalli Intensity (MMI Scale):** subjective scale used to describe the observed local shaking intensity and related effects of an earthquake. The scale ranges from 1 (barely felt) to 12 (total destruction), with slight damage beginning at 6. In general, the MMI will decrease with distance from the fault, except in regions with poor soils. Intensity is different from magnitude, which is a measure of earthquake dimension, rather than effects. The MMI scale differs from the Richter scale in that it is used to measure the intensity of an earthquake in a particular area.

**Occurrence Exceedance Probability (OEP):** the probability that the most costly event in any one year will exceed a certain threshold. These are the figures relevant for Catastrophe excess of loss reinsurance;

**Probable Maximum Loss (PML):** estimate of the maximum loss on a particular risk as a result of a single event, assessed with due care and taking into account all risk elements;

**Return Period:** the expected length of time between recurrences of two events with similar characteristics. The return period can also refer to specific level of loss;

**Richter scale:** the original magnitude scale developed by Charles Richter in 1935. Usually referred to as local magnitude, this scale is still often used by scientists for measuring earthquake intensity. The Richter magnitudes are based on a logarithmic scale (base 10).

**Saffir-Simpson Scale:** Scale commonly used to measure windstorm intensity. Uses a range of 1 to 5, with 5 being the most intense storms. Named after Herbert Saffir and Robert Simpson.

**Storm Surge:** the effect of flood caused by storm. Modeling a portfolio with storm surge will generate larger losses for a given return period than modeling that same portfolio without storm surge.



Knowledge. Relationships.  
Trust and Confidence.

**APPENDIX 1**

**Occurrence Exceeding Probability (OEP™) Analysis Descriptions**

**For Information Purposes Only**

RPS Analytics conducted a series of deterministic and probabilistic analyses, utilizing catastrophe models, to assess the catastrophe risk to which a portfolio is exposed. These analyses included an Occurrence Exceeding Probability (OEP™) analysis and an Average Annual Loss analysis. Each of these analyses is briefly described below.

**Occurrence Exceeding Probability (OEP™) Analysis**

The OEP™ analysis represents a comprehensive analysis of possible catastrophic events. A series of events encompassing the complete range of probable United States events is simulated. The resulting event losses and standard deviations are used to create a severity distribution for the size of loss given that an event has occurred. Uncertainty in the loss amount caused by an event, known as secondary uncertainty, is reflected in these calculations. Similarly, the event rates are used to create a frequency distribution for the number of occurrences in a given year. A simulation approach is then used, sampling from the frequency and severity distributions, to arrive at 10,000 simulated years of losses with at least one occurrence per year.

In order to create an OEP™, the maximum loss for each simulated year is selected and the probability of each simulated year is calculated as one divided by the total number of simulated years. For example, during the sampling process, if 20,000 iterations were needed in order to get 10,000 iterations with at least one occurrence, then the probability for each simulated year would be 1/20,000 or 0.005%. These simulated years are then sorted by maximum loss, from largest to smallest loss, for each financial perspective separately. A cumulative probability, which represents the probability of incurring a loss of the specified amount or greater (i.e., an occurrence exceeding probability), is then calculated for each loss level by aggregating the individual simulated year probabilities, beginning with the probability associated with the largest loss.

A sample of the results of an OEP™ analysis is provided in the table below. The Estimated Maximum Loss and Cumulative Annual Probability column represent the two elements used to create an OEP™ curve.

Simulated Year	Probability of Occurrence	Estimated Maximum Loss	Cumulative Annual Probability of Exceedance	Loss Return Period
2	0.005%	\$200M	0.005%	20,000 years
3	0.005%	\$150M	0.010%	10,000 years
1	0.005%	\$90M	0.015%	6,667 years

The table above indicates that there is a 0.015% annual probability of losing \$90 million or more as a result of a single event. In other words, a loss of \$90 million or greater would be expected to occur on average every 6,667 years (the loss return period for a \$90 million loss is 6,667 years). Since the OEP™ analysis considers all storms and their probabilities; it is the cornerstone analysis for understanding the probability of various levels of overall portfolio loss. Using this analysis, the probability of a specific dollar level of loss or the level of loss associated with a specific probability can be established.

**Annual Estimated Loss Analysis**

The Average Annual Loss analysis calculates a single loss number for the portfolio that reflects the average amount of loss that can be expected on an annual basis based on all possible events that could impact the portfolio. Average Annual Loss is calculated by weighting all potential losses by their associated annual probabilities. This analysis presents the reader with insight into the expected annual losses to the portfolio. It is also useful for determining the relative risk of various components of the portfolio. Within this report, the relative risk of individual postal codes and counties is examined.

**Secondary Uncertainty**

Note that the inclusion of secondary uncertainty (i.e., the uncertainty around the mean loss at a particular loss perspective) in RMS’s model, analysis can sometimes result in gross loss exceeding ground-up losses and net losses exceeding pre-cat net losses.

**RPS Analytics Primary and Secondary Model**

Currently, RPS Analytics will produce OEP Curves using two catastrophe models. RPS Analytics performed careful research before licensing two catastrophe models that, in our opinion, represent the best technology available. The varying results between models should further illustrate that these tools should be understood to only create benchmarks for your considerations.



Knowledge. Relationships.  
Trust and Confidence.

## Disclaimer

AIR Worldwide Touchstone (AIR) v3.1 and Risk Management Solutions (RMS) RiskBrowser v15.0 are licensed technologies used in combination in providing this information are based on the scientific data, mathematical and empirical models, and encoded experience of earthquake engineers, wind engineers, structural engineers, geologists, seismologists, meteorologists, and geotechnical specialists. As with any models of complex physical systems, particularly those with low frequencies of occurrence and potentially high severity outcomes, the actual losses from catastrophic events may differ from the results of simulation analyses. Furthermore, the accuracy of predictions depends largely on the accuracy and quality of the data input by the user.

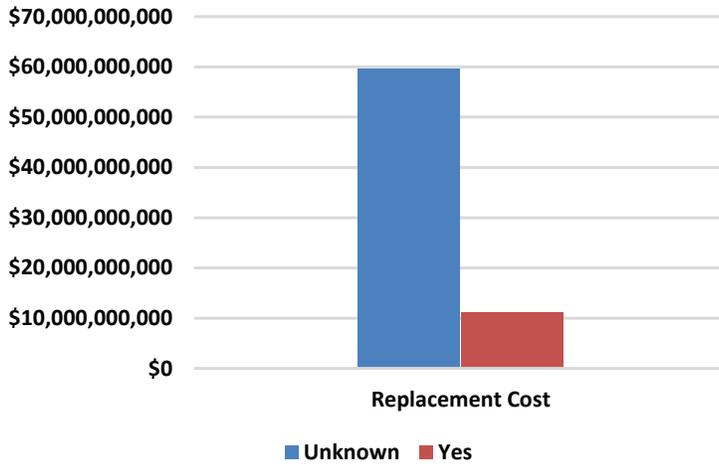
The loss estimates and their associated probabilities are estimates of the magnitude of losses that may occur in the event of such natural hazards; they are not factual and do not predict future events. Actual loss experience can differ materially. They depend on data and inputs supplied by the client over which RPS Analytics exercises no control. The assumptions that RPS Analytics used in creating them may not constitute the exclusive set of reasonable assumptions and methodologies. The use of alternative assumptions and methodologies could yield materially different results.

RPS Analytics does not recommend making catastrophic risk management decisions based solely on the information contained in this report. Rather, this report should be viewed as a supplement to other information, including your company's specific business practice and financial situation.

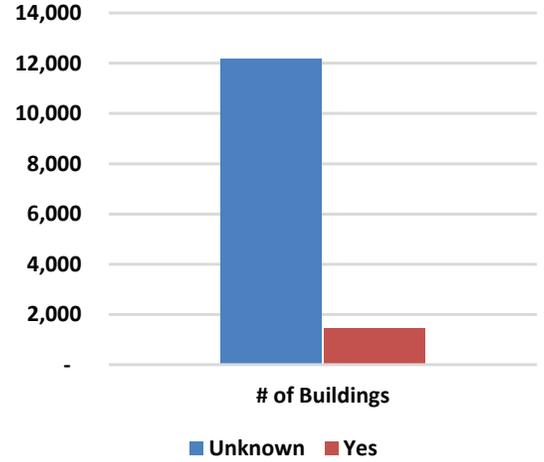
THIS INFORMATION IS PROVIDED "AS-IS", AND AIR WORLDWIDE CORP. AND/OR RISK MANAGEMENT SOLUTIONS, INC., DISCLAIMS ALL WARRANTIES, WHETHER EXPRESS OR IMPLIED, WITH RESPECT TO THE INFORMATION, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL AIR WORLDWIDE CORP. AND/OR RISK MANAGEMENT SOLUTIONS, INC., OR RPS ANALYTICS BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND ARISING FROM ANY USE OF THIS INFORMATION.

## APPENDIX B

### SORM Insured Building by Replacement Cost



### SORM insured Building Count



APPENDIX C



**STATE OFFICE OF RISK MANAGEMENT**  
**Senate Bill No. 1, 81<sup>st</sup> R.S.**

# **STATE INSURABLE ASSETS STUDY**



JANUARY 2011



# Table of Contents

I.	Background .....	1
II.	Methodology .....	3
III.	Options .....	4
	A. Financing Options.....	4
	1. Traditional/Commercial Insurance .....	4
	2. Individual Self-Insured Retention.....	5
	3. Statewide Self-Insured Retention .....	6
	4. Pooling .....	6
	5. Captives .....	7
	6. CAT Bonding .....	8
	B. Non-Financial Options.....	9
	1. Procedural Mandates .....	9
	2. Asset Restructuring .....	9
	C. Hybridized System.....	10
IV.	Considerations.....	11
	A. Adjusting Services .....	11
	B. Loss Prevention/Risk Control Services.....	11
V.	Recommendations.....	12
	Appendices.....	13
	Appendix 1 .....	14
	Appendix 2 .....	16
	Acknowledgements .....	17



## I. Background

The State Office of Risk Management (Office) is responsible for administering insurance services obtained by State agencies, including the government employees' workers' compensation insurance program and the State risk management programs.<sup>1</sup> Pursuant to Senate Bill No. 1, 81<sup>st</sup> R.S., as codified in the General Appropriations Act, the Office was directed to prepare a report and offer recommendations for a potential statewide strategy to insure State assets against damage or loss and comment on the advisability of various insurance options, including self-insurance, privately placed insurance, and stop-loss insurance.<sup>2</sup>

The Office currently administers the voluntary State of Texas Property Insurance Program, which currently insures approximately \$11B in Total Insurable Values (TIV). State agencies are not generally required to insure their assets, but 27 agencies have elected to participate to insure their real property and contents, either for a business purpose or to comply with external requirements, such as property financed with public bonds or as a prerequisite to Federal Emergency Management Agency assistance. Only a minority of State property is currently covered by insurance. The Office estimates the State in total has approximately 40,000-45,000 properties with a combined TIV of \$50B-\$80B.

It is often assumed the State of Texas self-insures its real and personal property.<sup>3</sup> This long-held belief partially stems from the 1921 Senate Concurrent Resolution No. 3, 37<sup>th</sup> R.S., and partially from the existence of unappropriated general revenue and mechanisms for requesting supplemental appropriations for sustained losses.<sup>4</sup> The latter is not technically self-insurance, as the State has no specific funded reserve for losses to real or personal property nor has it established a process for adjusting claims and distributing payments. Most agencies are functionally uninsured, unless they have obtained specific insurance policies or established agency funding reserves.

Under the current statutory insurance program administered by the Office, each agency makes an individual decision to either insure its property, or a portion thereof, or retain any potential loss. When uninsured losses occur, the agency must either absorb those losses within current budgets or request additional appropriations from the Legislature.

---

<sup>1</sup> Texas Labor Code §412.011, et seq.

<sup>2</sup> GAA, pg. I-80, Rider 4

<sup>3</sup> For the purposes of this report, real property is defined as "land and immovable structures attached to the land," and personal property is defined as "tangible property, which is often called 'contents.'" Richard V. Rupp, CPCU, Rupp's Insurance & Risk Management Glossary, 2<sup>nd</sup> Edition, 1996

<sup>4</sup> The 1921 resolution sets forth that it is "the policy of the state to self-insure its buildings" and recommended establishment of a fund for paying losses. No fund has been established.

For agencies that do not purchase insurance, the Legislature has historically assisted those agencies in financing uninsured catastrophic losses. Past sessions have seen multiple agencies requesting financial assistance from the Legislature for damage sustained; most recently from natural disasters such as Tropical Storm Allison and Hurricanes Rita, Katrina, Dolly, Gustav, and Ike. Similar situations may occur from manmade events, such as the arson attack on the Governor's Mansion in June 2008.<sup>5</sup>

Requests for financial assistance over the last few legislative sessions have exceeded a quarter of a billion dollars. Known appropriations for general costs caused by natural disasters from Sept. 1, 2007, through June 29, 2009, as reported in HB 4586, are provided in the Appendix. These figures reflect only known payments that were to be distributed to the respective agencies at the time of the report.

---

<sup>5</sup> The building had a Builder's Risk insurance policy in place during a roof repair at the time of the fire. The Builder's Risk insurance policy provided some recovery but was well below the approximately \$22M requested of the Legislature to rebuild the historically classified building to its previous state.

## II. Methodology

While the State tracks some properties in a centralized manner, there is currently no single existing source that identifies or tracks the condition, replacement value, and geographical location of all State assets. The lack of complete current or verifiable information regarding full exposures prohibits accurate cost evaluations as part of this report. According to industry experts consulted during the preparation of this report, this is a common issue in state insurance plans and is a fundamental prerequisite to performing a cost analysis for all methods of protection.

The Office's study was conducted by identifying categorical strategies, utilizing reasonable extrapolations based on data collected in the current voluntary program, and consulting with practicing industry experts on various strategies, including strategies utilized by other states. The experts provided information and responded to specific inquiries on concepts and approaches. The strategies identified include both financial and non-financial options, including traditional insurance, individual self-insured retention, pooling, captives, CAT (catastrophic) bonding, and set asides. Non-financial options include strengthening of procedural mechanisms and potential legislative policy.

To compare various approaches, experts addressed the following inquiries from the Office:

What should be the goal of a State Property Program?

What are the recommended approaches for the State to handle the risk of its insurable assets?

What are other states' approaches to property programs, specifically those with similar exposures and size of Texas?

What important aspects must be, and should be, addressed prior to, during, and after instituting a statewide program?

What additional services would the State require to implement various strategies?

How should agencies be motivated to participate?

What are available and/or recommended approaches to funding a statewide program?

### III. Options

All of the industry experts consulted stressed the importance of developing and maintaining a comprehensive database of all of the real property and contents currently owned by the State, the geographical location of the properties, the replacement cost, and the COPE (Construction, Occupancy, Protection, and Exposure) characteristics on each piece of property before any program can or should be recommended or implemented. Complete and accurate identification of the property to be insured is a necessary prerequisite of all the approaches discussed.

The experts offered diverse options, recommended best practices, and proposed methodologies for structuring a large insurance program for State use. The following sections address the potential distinct approaches and strategies identified by the Office and by consultants responding to the Office's request for consultations. The options presented are not listed in order of benefit, preference, or advisability for adoption.

#### A. Financing Options

##### 1. Traditional/Commercial Insurance

Traditional insurance is a component of most basic risk financing plans. In general, traditional insurance transfers the risk of loss from damage to property from the owner to an insurance company, which collects a premium from the owner in return for payment of covered losses.

Advantages. Traditional insurance reduces the financial uncertainty of accidental losses, as a known premium can be incorporated with attendant deductibles to limit State exposure in the event of a large loss. Transferring this risk, particularly in the event of a large (or catastrophic) loss, provides additional financial resources for the State to address other needs. Claims handling and risk control services are typically incorporated in traditional insurance options, providing for value-added services and potential loss control.

Disadvantages. In commercial insurance, terms and conditions of an off-the-shelf policy may be unstable, as may be premium charges in response to loss experience both at the individual agency and within the industry-covered population. Traditional insurance routes would likely represent a more expensive option for the State, based on the potential number of buildings and total insurable value of the buildings. Traditional insurance is primarily advantageous for small geographical spreads and may be inappropriate for a statewide approach. In a time of catastrophic

losses, some insurance companies may opt to discontinue insurance coverage in certain counties within the State, leaving portions of the State or subsets of agencies uninsured. Commercial insurance will include the insurer's expense, profits, and risk charges in the premium paid. The insurance premium to cover an estimated 40,000-45,000 buildings could be a considerable increase over current premium costs, decreasing the cash flow for the State. Traditional insurance may not be a complete transfer of hazard risk, as some agencies may have exposures that an insurance company may not be willing to cover (e.g., agencies located in flood zones may be required to purchase additional flood insurance from the National Flood Insurance Program).

## **2. Individual Self-Insured Retention**

Individual self-insured plans would require each state entity to pay for its losses out of its own budget, but without the costs associated with procuring insurance. This type of strategy requires a specific, formal system for recording losses and processing payments from a dedicated revenue source.

Self-insurance works best for high frequency and low severity claims. Unpredictable, high severity claims, such as property losses, are not ideal for this type of program as the claims fund may be inadequate to pay a large loss. Self-insurance is best suited to organizations committed to risk control, able to tolerate risk retention, and willing to provide funding and administrative resources necessary to make the program work. Self-insured programs are usually coupled with excess liability insurance to assist in covering catastrophic losses.

Advantages. A self-insured program would allow the State to have control over its own claims: claims adjusters could be independently selected; claims handling guidelines can be written to State specifications; and timelines for settling claims could be handled internally. There is a potentially significant cost savings if the frequency and severity of losses is minimal, avoiding recurrent premium and administrative costs associated with traditional insurance. This approach is not reliant on insurance market trends.

Disadvantages. Frequency and severity of losses can be unpredictable, leading to loss of cost savings compared to premium-based, risk-transfer mechanisms. Catastrophic property losses, even if infrequent, must be allocated for and dedicated funds protected in the form of minimum reserves in the event of a large loss. The financial costs of property losses, particularly from

natural disasters or external intentional acts, can be extremely large and subject to events outside effective loss control mechanisms, unlike other forms of self-insurance where losses may be limited or controlled (e.g., tort liability limitations, workers' compensation losses, etc.). Internal administrative handling of a self-insured program (recording, adjusting, scheduling, payment, and possible litigation) can require significant resources when dealing with losses. Assets and reserves must be rebuilt after payment processing, further reducing potential savings over other strategies.

**3. Statewide Self-Insured Retention**

This strategy is identical to the preceding section, excepting its State-level approach (i.e., the funds for paying losses are retained centrally by the Legislature or a designated agency that receives a direct appropriation). This option is most closely associated with Senate Concurrent Resolution No. 3, 37<sup>th</sup> R.S., which is attached as Appendix 2.

**4. Pooling**

The concept of pooling refers to the strategy of entities combining resources to finance experienced losses. Pools may be grouped by common exposure(s), business focus, geography, genesis, or any other mutuality supporting combination. Each entity contributes resources to the group as a whole, used for the equal benefit of the members.

Generally, protection against exceeding pool resources must be factored in, including consideration of reinsurance treaties purchased to ensure the pool does not become insolvent in a particularly catastrophic year, or obtaining excess insurance based on the catastrophic exposures in different demographic areas (in this configuration, the pool would fund the primary layer of coverage and excess would cover losses exceeding the primary layer).

The State of Arkansas uses an "all in or all out" pooling approach, with universities permitted exemption. The Arkansas pool uses a state's master insurance policy form, although the form may be altered to suit Arkansas' universities' specific needs. Buildings are appraised every three years to ensure they are insured to value (however, Arkansas insures approximately 3,600 structures compared to Texas' potential estimated 40,000-45,000 structures).

Pooling programs would allow the State to include or exclude agencies based on ability to meet underwriting guidelines and create layers for certain properties based on exposure to catastrophic losses.

Potentially, each entity would be treated as a separate insured and have separate limits of liability for each insured building. As noted, a reinsurance treaty would be recommended to follow form to the master policy and stand behind it to ensure pool solvency. Claims handling may be outsourced or internally administered (either centrally and/or on a loss-value basis by individual entities), with authority of the pool administrator to set retention rates, designate surcharges, exclude non-maintained or non-compliant buildings, or assess penalties or modifiers for loss control failures.

Advantages. Pooling increases the predictability of each participant's losses by reducing the variability of their average loss.<sup>6</sup> Premium (contribution) stability in risk pooling allows for more consistency in the annual budgeting for agencies. Similar to individual self-insurance retention, pooling allows the State the option of handling claims either in-house or through a third-party administrator and adds additional consistency in the regulation of loss-control programs for participants. Pooling is a common approach to real and personal property protection in the United States, and there is an availability of third parties to assist in the administration of this strategy.

Disadvantages. Pooling requires large participation and diversification of the State's property to be successful and to avoid adverse selection limiting the successful spreading of risks (i.e., high and low risks, covered properties both in and out of Tier 1). Statewide participation may be required to be mandated by the Legislature to ensure pool viability. Losses may exceed pooled assets, or assets may be substantially reduced by losses or other events, leading to pool insolvency.

## **5. Captives**

Captives are another form of risk financing that operates to pool the State's risks and refers to a dedicated subsidiary insurer or insurers to address the State's risk financing needs. In such a strategy, the State retains a significant share of its own losses in exchange for the benefit of having its own dedicated insurer, who collects premiums, issues policies, and handles claims. A Captive insurer usually purchases reinsurance to transfer some of the loss exposure to another insurance company.

A Captive approach may also operate to centralize the loss retentions between agencies, allowing for potentially higher loss retentions at a statewide level, and the dedicated nature of the subsidiary relationship

---

<sup>6</sup> Risk Financing, 4<sup>th</sup> Edition, Berthelsen, Elliott & Harrison, 2006, at 24.

allows the parent to design and control the claims-handling process to suit its needs.

Advantages. Generally, the administrative costs associated with procuring traditional insurance are not included in Captives. Captives typically adjust the claims, reducing internal resources and/or funds that would have been spent on a third-party administrator, and overhead or profit costs are eliminated from premiums. Direct access to the international market of reinsurers is immediately available through the Captive (where a self-administered pool would have to be certified by the Texas Department of Insurance or otherwise specifically authorized through legislation to access these markets). Captives may have increased negotiating power with commercial insurers during market downturns, particularly in a statewide program with a large TIV.

Disadvantages. Captive insurance requires a considerable capital outlay and start-up cost. Start-up and annual operating costs for a Captive are estimated to range from \$35,000-\$150,000 depending on the size of the insured base. Unless directly funded by the Legislature, each State agency would need to have a designated fund available for costs associated with utilizing the Captive, including adequate retention limits, administrative costs, premiums, and other charges. If the Captive is designed with inadequate resources and losses exceed the Captive's ability to pay, the loss could financially cripple the Captive and the State. Reinsurers may choose not to follow the form of a Captive, leaving gaps in coverage.

## **6. CAT Bonding**

A CAT Bond is an insurance-linked security. The purpose of a CAT Bond is to transfer otherwise insurable large risks to potential investors. CAT Bonds were developed because of the limited availability and affordability of catastrophe reinsurance. These bonds are issued by securitization and special purpose vehicles (SPV) of large reinsurers, insurers, or large corporations. They are designed to imitate the traditional excess catastrophic insurance and reinsurance. They can be issued for any type of catastrophic insurable risk such as hurricanes, tornados, and other naturally occurring risks.

CAT Bonds are highly specialized and are not a commonly used form of protection of assets. The strategy is identified herein as an option that may warrant additional consideration should the Legislature specifically identify further study respecting non-traditional or highly specialized risk transfer mechanisms.

## **B. Non-Financial Options**

### **1. Procedural Mandates**

One aspect of catastrophic losses experienced by the State is the lack of standardized and recurring procedural methodologies for the reporting, oversight, financing/appropriation, and payment of losses.

Given the estimated 40,000-45,000 structures owned by the State, it should be possible, with adequate data, to project the average annual loss with a fair degree of accuracy. While the State of Texas has some concentrations of property (notably in Austin, Tier 1 coastal areas, and college campuses) the size and diversity of the State makes it unlikely that any single catastrophic event could threaten all of its assets. Put in simpler terms, while we cannot establish the probability that an individual State building will experience a loss with any degree of accuracy, given historical and current data, we should be able to project the average annual loss across all state properties.

To finance large losses that currently fall to the legislative budget process, the State could establish a reserve sufficient to deal with moderate spikes in losses from year to year and establish a formalized process for requesting necessary financing. The details of application could be established by legislation, and oversight and administration could be delegated if, and as, required.

### **2. Asset Restructuring**

Ownership of the asset involves ownership of the risk of loss and responsibility for replacement and/or repair. Some states have utilized nominal sales of state assets and period lease-backs from investors as a method of balancing the budget.<sup>7</sup> While outside the scope of this study, these budget approaches raise the possibility of transferring risk from the state to the owners of leased properties, at least in situations where there would be no ownership interest retained (i.e., outright sale to a new owner with leasing rights versus a nominal sale as collateral with buy back rights). This approach represents a significant shift in the State's current risk management policy. Although this method of risk transfer has been utilized by other states, none were the size of or had the estimated TIV of the State of Texas. Asset restructuring is mentioned here in an effort to present the Legislature with as many risk management options as possible.

---

<sup>7</sup> See, <http://tucsoncitizen.com/hot-off-the-press-release/2010/01/14/state-sells-buildings-for-735-million-money-to-help-balance-budget/> for a description of such an approach by the State of Arizona.

### **C. Hybridized System**

Given that each option has both identified strengths and weaknesses, an ideal program would be specifically designed to ensure an approach customized to meet the unique needs and exposures of Texas. The development of a hybridized system is heavily dependent on accurate and current information for the selection of procedure, programs, services, and products.

One problem with the State's current decentralized and non-mandatory approach to insuring State properties is that incurred losses do not fall to agencies proportionally. While small losses may be absorbed within agencies' operational budgets, large losses can threaten an agency's continuity of service and fall disproportionately on the legislative budget process. By creating a centralized, mandatory state property insurance program, whether funded by assessments to covered agencies, legislative appropriation, or some combination thereof, it would be possible to normalize the cost of ordinary losses to individual State agency budgets at minimized additional expense. Such a program offers the additional benefit of providing timely disbursements of funds to covered entities that experience a loss to minimize disruption of agency operations. Importantly, the losses described here are not new expenditures. Because a majority of State property is currently not protected by insurance and the State currently pays the entire loss from some part of its budget, this approach is intended to improve the current process for paying losses.

A mandatory property insurance program as described would pool losses to the extent that individual agencies would minimize the budget impact of a casualty loss, but in such a system the legislative budget process retains the liability of large losses. This approach can be combined with other financing approaches as described above.

To finance large losses that currently fall to the legislative budget process, the State could establish a reserve sufficient to deal with moderate spikes in losses from year to year and even consider purchasing reinsurance for large, catastrophic losses. Determining the dollar limits that should be applied to the portion of the loss that would be retained by the State, including deductibles paid by the affected property owner, and the portion that would be commercially insured is a matter for legislative discretion and will be heavily influenced by market conditions and the availability of reinsurance.

## **IV. Considerations**

As the State agency administering the specialized government employees' workers' compensation program and the State's risk management program, including the insurance purchasing program, the Office strongly emphasizes the following considerations as part of any evaluation of identified strategies herein.

### **A. Adjusting Services**

Claims handling involves a team of specially trained individuals able to adjust the many varieties of property loss the State could experience. Claims handlers require specialized skills in adjusting, settling and administering claim payments, so decentralization of this function should be carefully scrutinized. Should the State undertake internal claim management as part of any insurance strategy, it is strongly recommended that any program emphasize professional training and standardization, including potential centralization, and have the resources required to adequately oversee timely and accurate claim processing.

Alternatively, as discussed above, a third-party administrator (TPA) may be used for handling the State's claims. Depending on claim frequency, a TPA may bring additional flexibility to handle spikes of activity related to catastrophic claims. Another potential advantage to this approach is additional transfer of liability for handling the claims to the external administrator. On the negative consideration, there is a financial trade-off respecting the cost of contracting with a TPA for such a program. Contract maintenance and oversight and specific fiscal controls must be put in place for such an arrangement, including consideration of long-tail claims that could potentially cross vendor and/or insurer contracts.

### **B. Loss Prevention/Risk Control Services**

To ensure a program results in long-term savings to the State, any program must be proactive in reducing claims. Risk control services specifically related to property and historical buildings, as well as best practices for property maintenance, prevention, and control of losses will be highly important to a successful strategy. As with adjusting, the State may utilize in-house staff to provide the loss prevention and loss control services or opt for a contracted service.

## V. Recommendations

The actual mechanism(s) chosen for a statewide strategy for adequately insuring State assets should be determined by the Legislature after considering the impact on overall State operations, the costs associated with retaining the risk versus transferring the risk through reinsurance, and should provide clear procedures for identifying when and how funding will be made available in emergencies. Based on the study identifications, a **hybridized system** that incorporates multiple approaches would be the most advantageous to the State.

To determine which, if any, of the identified options is most financially advantageous to the State within such a system, an appraisal must be commissioned identifying all property and contents currently owned by the State, the geographical location of the properties, the replacement cost, and the COPE characteristics on each piece of property. The maximum probable and maximum possible losses should also be calculated per building and across the entire program from reported information, allowing for accurate provisioning and selection of an appropriate strategy.

It is recommended the Legislature allocate responsibility and resources to undertake a data collection and modeling process, including legislative mandates for agency compliance and a time frame for the completion of the data collection. Completion of reporting, analysis, and modeling should result in a formal recommendation of prioritized strategies for Legislative consideration on the best-suited model and strategies for protecting State of Texas assets.

After selection and authorization of strategy, procurement, and marketing, implementation should be undertaken under designated agency authority and require ongoing analysis and data collection to ensure the State is insuring its assets in the most cost-effective way for the taxpayers.

The Board of Directors and staff of the State Office of Risk Management are available to respond to any inquiries and to undertake all efforts respecting the matters herein. Any inquiries may be directed to Jonathan D. Bow, Executive Director, State Office of Risk Management, P.O. Box 13777, Austin, TX 78711-3777, by telephone to (512) 936-1502, or facsimile at (512) 370-9025.

## Appendices

# Appendix 1

Table 1  
**Appropriations for General Costs Caused by Natural Disasters  
 Reported in the Sept. 1, 2007, Biennial Presentation  
 to the Legislature on June 29, 2009**

<b>State Agencies that Received Money from Legislature</b>	<b>Funds provided from the General Revenue Fund</b>	<b>Notation Location</b>
UT Medical Branch at Galveston	\$150,000,000	H.B. No.4586 Section 55
Brazosport College	\$120,111	H.B. No.4586 Section 55
Parks and Wildlife Department	\$12,000,000	H.B. No.4586 Section 55
UT M.D. Anderson Cancer Center	\$1,725,995	H.B. No.4586 Section 55
Alvin College	\$2,358,771	H.B. No.4586 Section 55
Texas A&M Galveston	\$6,200,000	H.B. No.4586 Section 55
Texas Forest Service	\$385,091	H.B. No.4586 Section 55
Houston Community College	\$1,507,670	H.B. No.4586 Section 55
Commission on Environmental Quality	\$4,600,000	H.B. No.4586 Section 55
San Jacinto College	\$3,045,820	H.B. No.4586 Section 55
Galveston College	\$407,406	H.B. No.4586 Section 55
Texas Engineering Extension Service	\$1,200,000	H.B. No.4586 Section 55
Adjutant General's Department	\$1,244,007	H.B. No.4586 Section 55
The University of Texas at Brownsville	\$1,200,000	H.B. No.4586 Section 55
Lamar University	\$2,803,561	H.B. No.4586 Section 55
Lamar Institute of Technology	\$2,007,758	H.B. No.4586 Section 55
Lamar State College - Port Arthur	\$829,530	H.B. No.4586 Section 55
Texas Southern University	\$9,720,192	H.B. No.4586 Section 55
College of the Mainland	\$176,236	H.B. No.4586 Section 55
The University of Texas Pan American	\$102,258	H.B. No.4586 Section 55
The University of Texas Health Center at Tyler	\$1,461,557	H.B. No.4586 Section 55
The University of Texas Health Science Center at Houston	\$1,000,000	H.B. No.4586 Section 55
University of Houston System Administration	\$7,339,000	H.B. No.4586 Section 55
Texas State Technical College - Harlingen	\$904,558	H.B. No.4586 Section 55
Lamar State College - Orange	\$600,000	H.B. No.4586 Section 55

Prairie View A&M University	\$488,864	H.B. No.4586 Section 55
Lee College	\$137,554	H.B. No.4586 Section 55
Department of Agriculture	\$20,000,000	H.B. No.4586 Section 55
<b>Total</b>	<b>\$233,565,939</b>	

Table 2  
**Certain Appropriations for Disaster Relief  
Reported in the Sept. 1, 2007, Biennial Presentation  
to the Legislature on June 29, 2009**

<b>State Agencies that Received Money from Legislature out of this fund</b>	<b>Appropriated Funds from the General Revenue Fund to the Trusted Program of the Office of the Governor</b>	<b>Notation Location</b>
Texas Education Agency	\$10,000,000	H.B. No.4586 Section 58
Texas Engineering Extension Service	For TX Task force 1 Flooding - No \$ amount provided.	H.B. No.4586 Section 58
General Land Office	For repairs made to the Protective Dune System for County Road 257. No \$ amount provided.	H.B. No.4586 Section 58
<b>Total Available for Disbursement</b>	<b>\$62,000,000</b>	<b>HB4586 Appropriations for state agencies.doc</b>

## Appendix 2

GENERAL LAWS.

369

# CONCURRENT RESOLUTIONS

---

## PROVIDING THAT THE STATE SHALL CARRY ITS OWN INSURANCE ON STATE BUILDINGS AND CONTENTS

S. C. R. No. 3.]

Whereas, It is of great financial importance to the State that a fixed policy be established with reference to carrying fire insurance upon buildings and contents belonging to the State and its various institutions, and

Whereas, The insurance data and information tabulated and set out on page 261 of the First Annual Report of the State Board of Control indicate that a substantial saving can be made to the State in carrying its own insurance; therefore be it

Resolved, by the Senate of the State of Texas, the House of Representatives concurring herein, That hereafter it shall be and is the fixed policy of this State that the State shall carry its own insurance upon State buildings and contents, and that no insurance policies shall be taken out upon any of the public buildings of this State, nor upon the contents thereof, and the State Board of Control and all other Boards having charge of buildings of the State, and the contents of such buildings, are hereby instructed not to have such buildings nor property insured, notwithstanding there may be items in the appropriation bills authorizing the expenditure of money for the payment of insurance premiums.

Provided that it is declared to be the policy of the State hereafter at the end of each two years period to set aside approximately one per cent of the value of all public buildings owned by the State, as a sinking fund until ten per cent of the total value of all such buildings has been accumulated, and that this sinking fund shall be invested in school bonds in the school districts of this State.

Provided, however, that this resolution, or any part of its provisions shall not apply to or affect the University of Texas, and its branches, and that it is the fixed policy of the State that all buildings and the contents thereof belonging to the University of Texas, and its branches, shall be kept insured at all times against any loss by fire or tornadoes.

[NOTE.—The foregoing resolution was adopted by the Senate, August 24, 1921; and was adopted by the House August 24, 1921.]

24—Laws.

## **Acknowledgements**

The State Office of Risk Management would like to thank the following entities for their assistance and expertise in gathering information about state insurance programs around the nation. The experts shared examples of various insurance options, and their experiences regarding property programs administered in other states.

American Appraisal

Arthur J. Gallagher Risk Management Services

Cedar Consulting LLC

Munich RE

North American Solutions

Texas Department of Insurance

Wells Fargo Insurance Services USA

Willis Group Holdings

York Insurance Service Group, Inc.

APPENDIX D



---

State Office of Risk Management

STATE OFFICE OF RISK MANAGEMENT  
House Bill No. 1, 82<sup>nd</sup> R.S.

**STATE INSURABLE ASSETS STUDY**  
***2013 Subsequent Report***



January 2013

# Table of Contents

I. Background.....	1
II. Considerations .....	2
A. Data Compilation .....	2
B. Database Management .....	3
C. Legislative Direction and Program Administration .....	5
D. Funding Structure.....	6
III. Recommendations .....	7
IV. Contact .....	8
V. Acknowledgements.....	8
APPENDIX A .....	A 1
APPENDIX B .....	B 1

## **I. Background**

In 2009 the State Office of Risk Management (Office) was directed, pursuant to Senate Bill No. 1, 81st R.S., to prepare a report and offer recommendations for a potential statewide strategy to insure State assets against damage or loss and comment on the advisability of various insurance options, including self-insurance, privately placed insurance, and stop-loss insurance. That report, attached as Appendix B, was filed in January of 2011, and identified categorical strategies, utilizing reasonable extrapolations based on data collected in the current voluntary program and through consultation with practicing industry experts on various strategies, including strategies utilized by other states. The strategies identified include both financial and non-financial options, including traditional insurance, individual self-insured retention (SIR), pooling, captives, catastrophic (CAT) bonding, and set asides. Non-financial options include strengthening of procedural mechanisms and potential legislative policy.

The 2011 report identified a primary lack of centralized identification or tracking of the condition, replacement value, and geographical location of State assets, and recommended the Legislature allocate responsibility and resources to undertake a formal data collection and modeling process, including legislative mandates for agency compliance and a time frame for the completion of the data collection. Subsequent to this data collection effort, the Office proposed implementation of a hybridized model of a centralized, mandatory state property insurance program, incorporating a pooling and reserve approach, in concert with reinsurance for larger, catastrophic losses.

This 2013 report is submitted pursuant to House Bill No. 1, 82nd R.S., which retained the rider requiring submission of the instant study to the Legislature. This 2013 report adopts the 2011 findings and recommendations, provides additional detail respecting statewide programs operating in other select states, and explores additional considerations.

## II. Considerations

To further explore efficacy of centralized approaches, the Office conducted direct surveys of five US states with established State Property Programs. The states of Alabama, Florida, Louisiana, North Carolina, and South Carolina were selected based on similar catastrophic (CAT) exposures or geographical similarities to Texas. Summaries of the questions and research conducted are provided in Appendix A, and have been verified and approved by the participating states.

Following these comparable state interviews and ongoing discussions with insurance industry experts handling other U.S. state property programs, the foremost task the State of Texas currently faces remains the collection of data for insurance purposes and identifying the real and historical replacement costs of state owned buildings and contents for approximately 152 state agencies. In order to collect the necessary information required to design a comprehensive program, the following major considerations have been identified, including applicable experience and approaches utilized by the survey states:

### A. Data Compilation

Complete and accurate data is foundational to the design of any comprehensive asset protection strategy. The collection of state assets, especially for a state the size of Texas, is time consuming and will require specially trained engineers to accurately collect the construction, occupancy, protection and exposure (COPE) information, and to appraise historical and non-historical buildings for their accurate replacement cost value. COPE is an industry term describing the unique characteristics of a building, used by underwriters to evaluate the risk and by risk managers to assess and control loss.

To expedite data compilation, a business agreement between the state and a third party with trained engineers to collect COPE data and complete historical and non-historical appraisals may be considered. Alternatively, this responsibility may be assigned to an agency or collection of agencies, with corollary expectations for professional training and standardization, including potential centralization, and have resources required to adequately oversee the timely and accurate data collection and continued maintenance of this data.

- **Alabama:** State agencies are required to send annual updated property schedules, which include COPE information. All buildings and contents are inspected every three to four years by the State's eight loss control employees. They provide survey information and photographs of the buildings to the six underwriters who complete a Marshall & Swift building cost appraisal to calculate the replacement cost for each

building. Third party vendors are utilized when historical or unusual buildings need appraising.

- **Florida:** Each state agency is required to report their COPE information and property valuation to the Division of Risk Management on an annual basis. There are concerns about the accuracy of the valuations, as some agencies hire appraisers, while others estimate their values based on prevailing property values in the area.
- **Louisiana:** The Louisiana Office of Risk Management maintains a complete inventory of state owned buildings, but they have limited COPE data. Appraisals are conducted every four years by third-party loss prevention personnel. A third-party appraisal company has been hired in the past to conduct multiple appraisals in a short period of time.
- **North Carolina:** State agencies are required to report updated COPE and total insurable values (TIV) for all state appropriated buildings annually to the North Carolina Office of Risk Management. Appraisals are not currently completed on state assets because it is not cost effective for the state.
- **South Carolina:** Property appraisals are completed by a third party firm through a five year contract agreement. The firm completes appraisals for 20% of the scheduled property locations each year so that by the end of the contract, 100% of the properties have been appraised.

## **B. Database Management**

Once collected, the data must be continually maintained and updated to ensure accuracy and completeness. Software selected or designed for this purpose should include the capabilities to upload risk management loss control reports, provide appraisal documentation, generate invoices and coverage documents, process claims, generate boiler and machinery reports, input and pull loss data, generate frequency and severity reports, contain photographs of insured buildings and contents, and include contact information for the building manager or contents coordinator at each state agency.

The state agencies and regulating state agency should have the capability to upload responses to loss control recommendations, print certificates of coverage, file claims, obtain information about their insured locations or run relevant reports pertinent to insured building(s) and contents. It is recommended the program have the capability to plot the State assets within counties on a map of Texas so an overall picture of where state owned assets are and their total replacement dollar value can be ascertained. It would be

beneficial to utilize a software program that not only plots the owned assets, but tracks CAT exposures that could potentially cause damage to state owned assets now and in future years. Early identification of potential exposures for state agencies and the implementation of policies, practices, and procedures to mitigate the size of these losses for potential CAT exposures in affected areas will decrease the bottom line costs to the state at the time of a CAT loss. Such a platform would be a long-term investment and would require the capability of being updated and enhanced as needed.

- **Alabama:** In 1990, Alabama built the State Risk Management and Insurance Software Program. The program stores property and contents data, as well as loss control reports, recommendations, underwriting information, and data for all other lines of insurance and related administrative information.
- **Florida:** The state maintains a comprehensive database of all state owned property, including unimproved land. The Division of Risk Management currently utilizes this database to store COPE information, premium calculations, and to track premium payments. In the next year, Florida will upgrade to the SOLARIS database system, which will also track property valuations and other information.
- **Louisiana:** The Office of Risk Management maintains a dedicated system that tracks TIV, replacement cost, and other information concerning each property. This program is purely a property-tracking database, and does not have other functions to process claims, issue certificates, etc.
- **North Carolina:** In 1990, North Carolina utilized a one man proprietary to build their customized, comprehensive risk management operational software system. This individual still maintains the program today. The software program holds the State's inventory, tracks losses, and handles the accounting.
- **South Carolina:** The Insurance Reserve Fund maintains a comprehensive and adaptable IT database management system that has been in existence for over twenty-five years. The system is a hybrid of internal and external design consisting of web based features for over 900 different programs. The IT database system is the utmost integral component of the IRF allowing data management and workflow capabilities for the entire state's insurance program to be administered by a relatively small division. All policies, documents, invoices, and correspondence are automatically generated by the IT management system, and information is issued to the participants via electronic transfer or paper mail.

### C. Legislative Direction and Program Administration

Centralizing responsibility for the collection of data and/or the operation and maintenance of a comprehensive program will be essential to any statewide strategy. Legislation will be required to assign responsibility and authority to a designated entity or entities for the collection, administration and maintenance of any comprehensive state property and asset program. The suggested legislation should include a requirement for all state agencies to provide required data to the third party vendor or state representative/agency handling the data collection within a set time frame, as well as set forth responsibilities for the management of property and coordination of contents on an ongoing basis. Any established program should also include necessary risk management services and loss control strategies, with rulemaking and potential compliance authority.

- **Alabama:** The State Insurance Fund was established by the legislature in 1923 to insure all state owned property, K-12 systems, post-secondary education systems and state university properties against direct physical loss. Participation by state agencies is mandatory. City boards of education may elect to insure school buildings and property either in the Fund or with a commercial insurance company, whichever provides the best coverage.
- **Florida:** All state agencies are required to insure their property through the Division of Risk Management. The Division issues certificates of coverage and publishes rules to set standards for coverage.
- **Louisiana:** All state agencies currently participate in the Louisiana Office of Risk Management property insurance program as required by statute. The Office publishes rules to set standards for coverage.
- **North Carolina:** All state agencies are required to insure their property and contents for fire losses only. The division of risk management manages the collection of data, premiums and provides certificates of coverage.
- **South Carolina:** Every state agency is statutorily required to participate in the property insurance program and insure all state owned buildings and contents. The office of risk management has the authority to purchase insurance and to collect premiums to pay for insured losses. The Insurance Reserve Fund operates like an insurance company by issuing policies, collecting premiums (based on actuarially calculated rates), and paying claims from the accumulated premiums in accordance with the terms and conditions of the insurance policies it has issued.

## D. Funding Structure

The hybridized model recommended in the 2011 study assumed an approach designed to ensure customization to meet the State's unique needs and exposures (see Page 10 of the 2011 study at Appendix 1). That model assumed establishment of a pooled reserve sufficient to deal with known and moderate spikes in losses from year to year, with the centralized purchase of reinsurance for large, catastrophic losses. In order to establish such a reserve, a dedicated account may be created for the payment of losses and funded through assessments or appropriation. Another option may be to evaluate the use of the existing Economic Stabilization Fund, with deposits made to the account through the same assessments or appropriations. Authority may be granted by the Legislature for the appropriation and disbursement of funds in accordance with provisions of the Texas Constitution and the relevant enacting legislation. This latter approach would have the benefit of significantly protecting the State's reserve while normalizing expenditures substantially at the statewide level.

- **Alabama:** The State Insurance Fund maintains a self-insured retention of \$3.5 Million per occurrence for non-CAT losses and a self-insured retention of \$20 Million per occurrence for named windstorm losses. Excess coverage is obtained to provide \$1 Billion of coverage for all other perils (AOP) and \$200 Million for named storms. The Self Insured Fund also maintains a 3 year term CAT Bond for Alabama's coastal exposure that renews annually at a cost of approximately \$860,000. The state appropriates money to cover state agencies against fire losses only. State agencies must pay for additional property coverage out of their budget. The division of risk management collects premiums and provides certificates of coverage.
- **Florida:** The State Risk Management Trust Fund maintains a self-insured retention of \$2 Million for non-CAT losses and purchases excess insurance to pay for losses in excess of the SIR, with up to \$200 Million for AOP coverage and \$50 Million for terrorism coverage. For windstorm and flood losses, Florida maintains a \$2 Million deductible per occurrence, and has a \$40 Million aggregate retention. The Division purchases excess insurance to pay for additional CAT loss costs up to the \$92 Million limit. The Trust Fund is funded on a cash flow basis, where each state agency is charged an assessment based on the size of their exposure and loss history.
- **Louisiana:** The Office of Risk Management maintains a SIR, and purchases excess insurance to cover losses in excess of the SIR. The amount of money available to the SIR may vary annually based on budgetary and market conditions. Louisiana's current SIR is approximately \$50 Million

for catastrophic claims, and \$10 Million AOP. The SIR is funded on a cash flow basis, where each state agency is charged an assessment based on the size of their exposure and loss history.

- **North Carolina:** North Carolina maintains a \$2.5 Million self-insured retention and purchases \$750 Million reinsurance for all other perils and \$150,000 Million for named storm coverage for all state agencies. North Carolina follows the principle that the retention for their property program should not exceed 10% of the self-insured fund reserves. North Carolina's self-insured fund is currently approximately \$25 Million.
- **South Carolina:** The current property program (excluding terrorism) consists of four multi-stratified layers of \$100 Million each. The terrorism portion is written as a single layer of \$150 Million. The Insurance Reserve Fund assumes a \$10 Million self-insured retention for the first event during a policy period, with a \$1 Million self-insured retention for subsequent events. The Insurance Reserve Fund utilizes third party actuaries to determine rates, incurred but not reported (IBNR) reserves, adequacy of loss reserves, and adequacy of policy holder's equity in making management recommendations to the Budget and Control Board regarding the financial management of The Fund. The Insurance Reserve Fund is a revenue agency and does not receive any appropriation from general funds. The IRF is not subject to the state procurement codes and is able to obtain contracts for brokers and other insurance related services as necessary for the benefit of the program.

### III. Recommendations

The primary recommendations for this report are identical to the 2011 study set forth in Appendix B. The actual mechanism(s) chosen for a statewide strategy for ensuring that State assets are adequately insured should be determined by the Legislature after considering the impact on overall state operations, the costs associated with retaining the risk versus transferring the risk through reinsurance, and should provide clear procedures for identifying when and how funding will be made available in emergencies. Based on the study identifications, a hybridized system which incorporates multiple approaches would be the most advantageous to the State.

To determine which, if any, of the identified options is most financially advantageous to the State within such a system, a comprehensive series of appraisals should be commissioned identifying all property and contents currently owned by the State, the geographic locations of the property, the replacement cost, and the COPE characteristics on each piece of property, The maximum probable and maximum possible losses should also be calculated per building and across the entire program

from reported information, allowing for accurate provisioning and selection of appropriate strategy.

It is recommended the Legislature allocate responsibility and resources to undertake a data collection and modeling process, including legislative mandates for agency compliance and a time frame for the completion of the data collection. Completion of reporting, analysis and modeling should result in a formal recommendation of prioritized strategies for Legislative consideration on the best-suited model and strategies for protecting State of Texas assets. Ideally, this recommendation would involve additional review and in-depth analysis of operating programs at other state levels.

After selection and authorization of strategy, procurement, marketing and implementation should be undertaken under a designated agency authority, and require ongoing analysis and data collection to ensure the State of Texas is insuring its assets in the most cost effective way for the taxpayers.

#### **IV. Contact**

The Board of Directors and staff of the Texas State Office of Risk Management are available to respond to any inquiries and to undertake all efforts respecting the matters herein. Any inquiries may be directed to Jonathan D. Bow, Executive Director, State Office of Risk Management, P.O. Box 13777, Austin, TX 78711-3777, by telephone to (512) 936-1502, or facsimile at (512) 472-0234.

#### **V. Acknowledgements**

The Texas State Office of Risk Management is grateful to the states of Alabama, Florida, Louisiana, North Carolina, and South Carolina for their valuable time and input regarding the structure, staffing, and maintenance of their state run property insurance programs. The Office also extends its sincere thanks to Arthur J. Gallagher Risk Management Services for its continued assistance and expertise.

**APPENDIX A**  
**RESEARCH SUMMARIES**

## Methodology

To further explore efficacy of centralized approaches, the Office conducted direct surveys of five US states with currently-established State Property Programs. The states of Alabama, Florida, Louisiana, North Carolina, and South Carolina were selected based on similar catastrophic (CAT) exposures or geographical similarities to Texas.

Each state was surveyed on the following:

1. Whether the state maintains a complete inventory of all buildings including location; Construction, Occupancy, Protection, and Exposures (COPE); and the Total Insurable Values (TIV) for insurance purposes;
2. Whether insuring of state owned property is voluntary or mandatory;
3. How building inventory is maintained;
4. How appraisals are completed;
5. The total insurable value of state owned assets;
6. The number of buildings in the program;
7. What type of tools are used to track state assets;
8. Whether any comprehensive risk management operational software programs are in place to manage your state's risk exposure (i.e. claims, IT, insurance documents, accounting, underwriting, loss and trend analysis, and capabilities to generate reports for each department's needs);
9. If a specified software program is in place, whether the program would be recommended to other states;
10. The overall structure of the state program (i.e. traditional insurance, self-insured retention, captives, pools, etc.);
11. Any legislative rules or statutes which govern the property program;
12. Length of time the current program has been in effect;
13. Funding structure for the program;
14. How a state's initial self-insured retention and fund was established;
15. How a state's initial self-insured retention and fund is protected;
16. Whether any needed improvements have been identified;
17. How many employees are involved in daily operations of the property program;
18. The titles and number of employees which manage the property program;
19. The approximate annual cost to administer the property program;
20. The CAT exposures faced in the state;
21. The number and percentage of buildings exposed to these CATs;
22. The total insurable value and percent of TIV exposed to these CATs;
23. Whether losses have been adequately funded since the program's existence;
24. How the state funds uncovered losses.

## State Programs Review

### 1. Alabama Property Program

Alabama's state agencies insure approximately 31,000 buildings and personal property through the State Finance Department, Division of Risk Management. Their risk management team consists of twenty-three in-house staff members who administer an approximate \$50 Billion property program. The team consists of one risk manager, five claims handlers (who adjust all lines of insurance), eight loss control employees (who complete building inspections at a minimum of three year intervals), six underwriters (who underwrite all lines of insurance), one attorney (who conducts regular operations but works with the claims department during claims disputes), one accountant, and one administrative staff member. Alabama contracts actuarial services to a third party vendor, and also have independent adjusters. The Department of Finance, Division of Risk Management, 2010 Annual Report, indicated that the annual operating expenses for The State Insurance Fund, year ending September 30, 2010, were \$29,921,253.

#### **History and Legislative Rules Associated with the Program**

Alabama's property program is titled "The State Insurance Fund" (The Fund). This program was established by the Alabama Legislature in 1923 under the Code of Alabama 1975, Section 41-15-1, for the purposes of insuring direct physical loss on building and contents in the State of Alabama. The fund requires that all state owned property be insured for no more than its replacement cost and no less than 80% of its actual cash value. The Fund insures all state owned properties, K-12 systems, post-secondary education systems and state university properties. City boards of education may elect to insure school buildings and property either in The Fund or with a commercial insurance company, whichever provides the best coverage. Of the 67 county and many additional municipal school systems, only ten municipal school systems opt not to participate in the State Insurance Fund.

#### **Program Structure**

The Alabama State Insurance Fund functions like an insurance company wherein premiums are charged based on loss exposure. Coverage documents are supplied as proof of coverage and the state entity receives a payment if a loss occurs. Private insurance industry markets are utilized to establish rates, premium discounts, and experience credit to result in equitable premiums charged to policy holders. Excess insurance and reinsurance is acquired to assure the solvency of The Fund. The schedules of buildings and contents are updated annually by the state agencies. All state owned buildings are inspected every three to four years by the loss control employees, providing survey information and photographs of the buildings to the underwriting department, who then complete a Marshall & Swift building cost appraisal value for replacement cost. If an unusual or historical building is inspected, Alabama utilizes the skills of a third party vendor to complete an appraisal. Building cost appraisals were introduced due to state owned assets being previously underinsured.

Once accurately appraised, the values for the state assets went from \$8-12 Billion to approximately \$50 Billion.

Alabama's State Insurance Fund has differing self-insured retentions depending on exposure, and excess coverage is obtained from both domestic and foreign insurance companies. Alabama has an all other perils self-insured retention of \$3.5 Million per occurrence and a wind self-insured retention of \$20 Million per occurrence. The excess insurance coverage provides \$1 Billion for all perils and \$200 Million of wind damage coverage for named storms. It costs approximately \$22 Million annually to purchase these limits of coverage for Alabama. Each covered or participating organization has a deductible per event, with the deductible chosen by the entity and varying from \$500 to \$10,000. Due to the higher wind retentions set at Alabama's last renewal (\$20 Million all wind), the state purchased a second event buy-down product so that in the event of a second wind event loss, the state would only be subjected to a \$1 Million deductible. This second event buy down product costs approximately \$2.4 Million. The Fund also maintains a three year term CAT Bond for coastal exposure that renews annually at a cost of approximately \$860,000. The total costs of the insurance products purchased for property program of the Self Insured Fund for the FY2012 was approximately \$24.75 Million (up from approximately \$14 Million for FY2011).

The property program renews annually on April 1<sup>st</sup>. The State Insurance Fund currently has approximately \$190 Million in its surplus fund, dedicated to insuring physical loss on buildings and contents for covered causes of loss predetermined by the Finance Director.

Agencies with state owned properties, K-12 systems, and state university properties receive a policy each year. The program began as a New York Fire Policy, which now has between 24-26 endorsements attached. Each time loss control personnel visit a state owned location, they bring complete data including building photographs, square footage, itemized property coverage purchased on each building, and previous loss control recommendations. On inspection, corrected loss control issues and low loss history for the year result in better experience rating toward annual premium, incentivizing agencies to better maintain state owned assets.

K-12 schools have a residual need on the property policy. The state commits to make the school whole if there is a loss. There is an optional gap policy which allows them to be insured for damages not normally included in traditional insurance. A rate is calculated based on types of existing construction to be upgraded or to meet newer code and the premium is added to their current schedule.

### **Exposures and Loss Information**

Hurricanes and tornadoes are the greatest exposures Alabama's property program faces. Approximately 10-12% (approximately \$5-6 Billion) of the state's assets are

located in Tier 1 and 2 (approximately 2,500 buildings). Historically, the state has always had enough money in the fund to pay for property and content losses.

### **Property Related Risk Management Services**

In 2004, the Boiler and Pressure Law was enacted, mandating the inspection of all boilers on a biennial basis. The State previously charged a \$60 fee per boiler inspection and an additional fee for the certificate of compliance. Alabama contracted with Travelers Insurance Company to provide the service for free, thus reducing state expenditure and resource commitments. The state also offers a Boiler Operator Training Course for boiler operators and maintenance personnel at no cost to agencies participating in the State Insurance Fund. Over 5,000 boilers and pressurized machinery within state owned buildings were inspected in 2010, reducing the effects of breakdowns, property damage, and personal injury.

### **Risk Management Operational Software System**

In 1990, Alabama designed and developed a State Risk Management and Insurance Software Program, utilizing a single programmer. The state's owned property and contents data are stored on this system along with loss control reports, recommendations, underwriting information, and data for all other lines of insurance and related administrative information. Alabama reports that continuity of such a software program must be considered when selecting a vendor or consultant to create a computer software program for a state.

## **2. Florida Property Program**

Total Insurable Value: \$21,749,103,926

Number of Buildings: 17,003

Annual Property Losses: \$250,000 - \$600,000 (in non-CAT years)

Reinsurance Premium: Approximately \$9.5 Million annually

Staff Salaries: \$110,000 per year

### **History & Legislative Rules Associated with the Program**

Florida's property insurance program began in 1917 and was merged with the Division of Risk Management in 1972. Approximately ten years ago, Florida's independent casualty and property trust funds were merged into a single State Risk Management Trust Fund. At the time of Hurricane Andrew in 1992, the state had \$2 Million in retention. In 2003, the retention had been increased to \$8 Million, and retention is currently approximately \$40 Million. Florida utilizes a broker to purchase excess insurance.

### **Program Structure**

All state agencies are required to insure their property through the Division of Risk Management. Florida's Division of Risk Management issues certificates of coverage and publishes rules to set standards for coverage. The State Risk Management Trust Fund pays for all types of losses (i.e. property, auto, and general liability), operational costs,

and the purchase of surplus insurance. The Trust Fund is funded on a cash-flow basis, wherein each state agency is charged an assessment based on the size of their exposure and loss history.

Florida maintains a self-insured retention (SIR) of \$2 Million per occurrence for non-CAT losses in the State Risk Management Trust Fund. The state purchases excess insurance to pay losses in excess of the SIR, with up to \$200 Million in AOP coverage and \$50 Million for terrorism coverage. For flood and windstorm losses, Florida pays a \$2 Million deductible per occurrence and has a \$40 Million aggregate retention. Once the \$2 Million deductible is paid and the \$40 Million annual aggregate retention is exhausted, excess insurance pays additional loss costs up to a \$92 Million limit. Because the Division of Risk Management does not have the full \$42 Million in the Trust Fund to pay its share of a single catastrophic loss, it would be required to borrow money from the Budget Stabilization Fund to pay the remainder of the retention in such an event.

Per legislative requirements, Florida's Division of Risk Management provides coverage on an actual cash value basis and not on a replacement cost basis. The Legislature designed the program this way as a loss prevention incentive wherein each agency shares in a loss (enterprise level pooling). The state agency must pay a \$2,500 deductible per loss, plus the difference between their ACV and the replacement cost, with a 60% maximum depreciation value. Each state agency is required to report their property information and actual cash value valuation to the Division. Florida reports concerns about the accuracy of these valuations, however; some agencies utilize professional appraisers, while others estimate their values based on prevailing property values in the area.

The Florida Division of Risk Management employs three staff and a director to oversee their property program. One staff member is an operations review specialist, another is an insurance analyst (database manager), and the third is an adjuster who is utilized when needed. Staff spends the remainder of time adjusting tort claims. Florida pays approximately \$3,000 per year in retainer fees for third party adjusters that provide assistance in the event of a CAT loss.

### **Exposures and Loss Information**

While all of Florida is considered a Tier 1 exposure for property insurance purposes, most of the state-owned property is located in the interior of the state. Florida's main catastrophic exposures are hurricanes and flooding.

### **3. Louisiana Property Program**

TIV: \$17 Billion (approximate)

Number of Buildings: 10,000 (approximate)

CAT Exposure: At least 40% in tier 1 (approximate)

### **History & Legislative Rules Associated with the Program**

All state entities currently participate in the Louisiana Office of Risk Management property insurance program. The State of Louisiana established its property insurance program in the late 1970s to early 1980s. At that time, not every state agency participated, and the SIR was set up on a reserve basis. In the 1990s, it became mandatory for every state agency to participate and the SIR became funded on a cash basis, rather than an actuarial basis. Each state agency is charged an annual premium based on exposure and loss history.

Louisiana law establishes the insurance program and the authority of the Office of Risk Management, but did not specify the conditions of the property insurance program. Additional enactments established the Self Insurance Fund, and authorized the Office of Risk Management a broad base of authority to change the size of the retention from year to year based on budgetary and market conditions. The Legislature has the ability to take money from the Self Insurance Fund.

### **Program Structure**

The Louisiana Office of Risk Management maintains a SIR, and purchases excess insurance to cover losses in excess of the SIR. The amount of money available to the SIR may vary annually based on budgetary and market conditions. The Office of Risk Management negotiates with excess insurance carriers, and will raise its retention limit if it is cost-prohibitive to maintain a low SIR. Louisiana's current SIR is approximately \$50 Million for catastrophic claims (windstorm, flood, and earthquake), and \$10 Million AOP.

Each state agency pays a \$1,000 deductible per occurrence, regardless of cause of loss. However, on occasion, the Office of Risk Management will waive the deductible for CAT losses.

The Office of Risk Management employs four FTEs to run the property insurance program. Three of the FTEs are professional level employees who procure excess insurance, process insurance policies, maintain the statewide property inventory, and other functions. There is one administrative staff member, and approximately four third party adjusters (with more contracted when needed to process CAT losses).

### **Exposures and Loss Information**

The Office of Risk Management has a complete inventory of state owned buildings, but has limited COPE data. Appraisals are conducted every four years by third party loss prevention personnel through a third party administrator. These loss prevention personnel use a computer program to calculate the value of buildings. A third party appraisal company has been hired in the past to conduct multiple appraisals in a short period of time. Louisiana reports it has been difficult to obtain accurate appraisals on historical buildings.

In years when there are no CAT losses, Louisiana can generally pay losses within the parameters of its program. With some CAT losses, the Office of Risk Management has had to access other funding sources to pay for losses.

The Office of Risk Management has a dedicated system that tracks TIV, replacement cost, and other information concerning each property. This program is purely a property-tracking database, and does not have other functions such as claim processing, certificate issuance, or other functionality.

#### **4. North Carolina Property Program**

North Carolina has a team of 11 people employed by the Department of Insurance who administer its \$33.6 Billion property program. The team consists of a Director of Risk Management, a risk manager, one loss control and claims specialist, two administrative/accounting staff, and six certified building inspectors. Some of these employees have overlapping responsibilities, but all play a vital role in administering the property program. It costs an estimated \$620,000 annually (excluding benefits, office expenses, and travel costs) to employ the property management team.

##### **History and Legislative Rules Associated with the Program**

The North Carolina property program was established in 1945. North Carolina has mandated that all real and personal property will be specifically insured for fire coverage. From 1945 until 1981, the state appropriated funds for the purpose of providing a reserve against losses from fire for state agencies and institutions; the State Treasury is the custodian of this fund and invests its assets. After 1981, North Carolina stopped appropriating funds to the State Property Fire Insurance Fund. Under the current arrangement, the Risk Management Division collects premiums for all insured real and personal property from each state agency to fund property losses. State agencies that receive the majority of their funding from state appropriations are not charged for fire coverage, while agencies that receive funding outside of state appropriations must pay for fire coverage

##### **Program Structure**

North Carolina maintains \$2.5 Million in retention with approximately 18 reinsurers providing up to \$750 Million for all perils and \$150,000 Million named storm wind coverage for all state agencies. North Carolina targets property program retention at not more than 10% of the self-insured fund reserves (that reserve is currently \$25 Million). This ensures that North Carolina has enough money in the fund to pay for multiple losses.

The program provides property insurance to approximately 14,000 state owned assets. The risk management department collects COPE and total insurable values for all state appropriated buildings on a database. Each state agency provides current values, add new or delete demolished buildings, and notifying the risk management department of any elections to broaden property coverage on any specific building(s) on

an annual basis. State agencies and institutions of higher education are required to maintain fire coverage for state-owned buildings and contents, but may elect to purchase additional property coverage for a premium (including but not limited to riot, earthquake, volcanic eruption, civil commotion, hail, hurricane, sinkhole, wind, and others). Entities may also elect to purchase flood insurance for an additional premium, and the self-insurance fund stands in the place of the National Flood Insurance Program for those agencies that choose to purchase flood insurance. Appraisals are not currently completed on state assets because it is not currently cost effective for the state.

A self-insured fund is collected from premiums paid for by fire coverage obtained by those agencies that are not primarily funded by state appropriations and from additional property coverage purchased by all agencies and universities. The rates are calculated by the risk management department using a loss cost analysis. This self-insured fund pays for the \$2.5 Million retention for losses before the reinsurance starts paying, and pays the \$11-12 Million annual premium for reinsurance. The North Carolina organization handling the property program is a subsidiary of the Independent Insurance Agents of North Carolina, with the state of North Carolina as its only client. North Carolina hires an Agent of Record to access the wholesale market. The wholesale broker approaches approximately 35 to 40 reinsurers. There is currently no protection in place to stop the fund from being appropriated by the Legislature for other governmental needs.

Rather than issue insurance policies to insured agencies, North Carolina issues a certificate of coverage which lists every asset insured against fire losses, and any additional elected property insurance coverage for each structure. North Carolina notes a desire to make it compulsory for every state asset to be covered for all risk, and for all agencies to pay for all coverage, including fire.

### **Exposures and Loss Information**

Hurricanes and tornadoes are the greatest exposures that North Carolina's property programs faces. Approximately \$2.25 Million, or 7%, TIV, of the state's assets are located in Tier 1. The program requires each state agency to pay a \$5,000 standard deductible for every loss, which is automatically deducted from the final claim payout by the risk management department. Higher deductibles may be chosen for a reduced premium. Historically, North Carolina has been able to fully fund the state's property losses.

### **Risk Management Operational Software System**

North Carolina utilized a single individual to build and maintain their customized, comprehensive risk management operational software system constructed in the 1990s. This software program holds the state's inventory, tracks losses, and handles accounting. It is not solely an insurance database and does not include any underwriting information. Their consultant completed the software customization at a reasonable price and has since updated the system. North Carolina would recommend

this individual to help set up any other state agency specific program, but recognizes business continuity concerns since it is just one individual. The risk management department administers the property program, excess liability, automobile, directors' and officers', student health insurance, and many more lines of insurance for the State, excepting workers' compensation.

#### **FEMA**

Per FEMA requirements, any state building damaged by a catastrophic event must purchase insurance on that building up to the value of the loss if it receives FEMA funding. FEMA has historically recognized the \$2.5 Million self-insured retention as a form of insurance. Following Hurricane Irene in 2011, FEMA did not recognize the state's self-insured retention as a form of insurance and did not provide funding to restore damaged buildings. North Carolina is currently working with FEMA to resolve this issue.

#### **5. South Carolina Property Program**

The State of South Carolina has approximately a \$35 Billion property program administered by the Insurance Reserve Fund (IRF), an office of the South Carolina Budget and Control Board. Every state agency is statutorily required to participate in the property insurance program and insure all of their buildings and contents. Counties, municipalities, and school districts have the option of purchasing through the IRF, or purchasing independently with the private sector. In addition to providing property insurance, the IRF also administers general tort liability insurance, automobile insurance, inland marine, medical professional liability and others lines of approved insurance. The FY11 Budget expenditures for the IRF total \$6,661,102. The estimated employee count managing the day to day administration of the property program consists of 12 identified positions:

- IRF Director (1)
- Assistant Director of Underwriting (1)
- Assistant Director of Claims (1)
- Underwriters (3)
- CPA (1, part of the Administrative team of 5)
- Claims Managers, Adjusters and support staff (26)
- Field Agents (2)
- IT employees (11, shared)

#### **History and Legislative Rules Associated with the Program**

South Carolina established the General Sinking Fund after the Civil War to manage state owned property and to finance the reconstruction and repair of damaged state buildings. This fund was first established as a "self-funded insurance program" for South Carolina's state government. The Budget and Control Board was created by law in 1950 and consisted of different divisions with an essential role to improve efficiency and general management of state government. The Sinking Fund was merged with the

Board of Claims and State Budget Commission to create a new State Finance Committee. The Board later created additional divisions to address the rapid growth of South Carolina's state government, later shifting budget power to the state auditor. In 1978, the position of the state's Executive Director was created to serve as a point of coordination and leadership for the Board and all of state government. The Sinking Fund exists today as the Insurance Reserve Fund. The IRF functions as a governmental insurance operation, and is authorized to provide insurance to governmental entities by statute. Comprehensive statutory provisions detail the authority to purchase insurance, requirements for all state owned property and contents to be insured, and authority to hold premiums to pay for insured losses. All premiums received by the Insurance Reserve Fund are deposited with the Office of the State Treasurer where the funds are maintained as the Insurance Reserve Fund Trust Account.

### **Program Structure**

The current limit of the property reinsurance program is \$400 Million, consisting of four multi-stratified layers of \$100 Million each. A separate terrorism portion is written as a single layer of \$150 Million. The Insurance Reserve Fund assumes a \$10 Million self-insured retention for the first event during a policy period, with a \$1 Million self-insured retention for subsequent events. The policy is filed on "South Carolina Paper" using a modified version of the ISO all risks commercial property insurance policy edition 1985.

The Fund pays for direct physical loss of, or damage to, covered property on a replacement cost basis with an 80% coinsurance clause and deductible options of \$1,000 to \$50,000 per occurrence. Additional sublimits and coverage is available by endorsement. Each state agency maintains renewal dates based on when they entered the program.

The Insurance Reserve Fund operates like an insurance company by issuing policies, collecting premiums (based on actuarially calculated rates), and paying claims from the accumulated premiums in accordance with the terms and conditions of the insurance policies it has issued. The IRF utilizes third party actuaries to determine rates, IBNR reserves, adequacy of loss reserves, and adequacy of policy holder's equity in making management recommendations to the Budget and Control Board regarding the financial management of The Fund. The Insurance Reserve Fund is a revenue agency and does not receive any appropriation from general funds.

Property appraisals are completed by a third party firm through a five year contract agreement. The firm completes appraisals for 20% of the scheduled property locations each year so that by the end of the contract, 100% of the properties have been appraised.

The IRF offers limited risk management services. Each state agency is responsible for the development of its own risk management programs. Claims history does impact the annual premiums that each agency is responsible for; thus encouraging state agencies

to develop effective risk management programs. The IRF is not subject to the state procurement codes and is able to obtain contracts for brokers and other insurance related services as necessary for the benefit of the program. Property and Terrorism Re-Insurance coverage is purchased through Broker services.

The IRF maintains a comprehensive and adaptable IT database management system that has been in existence for over twenty-five years. The system is a hybrid of internal and external design consisting of web based features for over 900 different programs. All policies documents invoices and correspondence are automatically generated by the IT management system, and issued to the participants via electronic transfer or paper mail. The IT database system is the utmost integral component of the IRF, allowing data management and workflow capabilities for the entire state's insurance program to be administered by a relatively small division.

### **Exposures and Loss Information**

Hurricane, flood, windstorm, hail, earthquake, fire, and tornado are the primary catastrophic exposures that South Carolina faces (the entire state of South Carolina is identified as a Tier 1 catastrophe zone according to RMS 11, the most widely used wind storm modeling currently available). The property insurance program applies appropriate rates for insurance on properties located in three defined exposure code territories: beach, seacoast, and inland. The IRF has generated equity on more than one occasion, and South Carolina has never been in a position where it was unable to pay for state property losses. A five year rate comparison to ISO, IFR was able to maintain a low cost of \$91 per \$100,000 of value vs. ISO's \$423 per \$100,000 of value.

Because the Fund has successfully generated policy holder equity, it has periodically been subject to mandated provisions that have reduced net assets. In 2003-2004, the IRF was directed to waive renewal premiums for all lines of insurance. The IRF was also directed to transfer \$22,937,800 of assets to the General Fund. These provisos reduced net assets by approximately \$51 Million. Additionally, legislative loans have been taken out against the IRF with outlined and approved repayment terms in one session, followed by subsequent legislation dispensing with repayment to the IRF. The IRF has adjusted by granting premium holidays and continuing insurance coverage for all participants with no collection of annual premium(s) for fiscal years in which substantial equity is earned. The Insurance Reserve Fund indicates it would like to have constitutional protections for the Trust Fund to secure policy holder equity.

## **APPENDIX B**

### **STATE INSURABLE ASSETS STUDY 2011 REPORT**

*\*Content as originally filed; general formatting changes incorporated  
for inclusion within the 2013 report structure.*



**STATE OFFICE OF RISK MANAGEMENT**  
**Senate Bill No. 1, 81<sup>st</sup> R.S.**

# **STATE INSURABLE ASSETS STUDY**



**JANUARY 2011**

## Table of Contents

I.	Background .....	1
II.	Methodology.....	3
III.	Options.....	4
	A. Financing Options .....	4
	1. Traditional/Commercial Insurance.....	4
	2. Individual Self-Insured Retention.....	5
	3. Statewide Self-Insured Retention .....	6
	4. Pooling.....	6
	5. Captives .....	7
	6. CAT Bonding .....	8
	B. Non-Financial Options .....	9
	1. Procedural Mandates.....	9
	2. Asset Restructuring.....	9
	C. Hybridized System .....	10
IV.	Considerations .....	11
	A. Adjusting Services .....	11
	B. Loss Prevention/Risk Control Services .....	11
V.	Recommendations .....	12
	 Appendices .....	 13
	Appendix 1.....	14
	Appendix 2.....	16
	 Acknowledgements .....	 17

## I. Background

The State Office of Risk Management (Office) is responsible for administering insurance services obtained by State agencies, including the government employees' workers' compensation insurance program and the State risk management programs.<sup>1</sup> Pursuant to Senate Bill No. 1, 81<sup>st</sup> R.S., as codified in the General Appropriations Act, the Office was directed to prepare a report and offer recommendations for a potential statewide strategy to insure State assets against damage or loss and comment on the advisability of various insurance options, including self-insurance, privately placed insurance, and stop-loss insurance.<sup>2</sup>

The Office currently administers the voluntary State of Texas Property Insurance Program, which currently insures approximately \$11B in Total Insurable Values (TIV). State agencies are not generally required to insure their assets, but 27 agencies have elected to participate to insure their real property and contents, either for a business purpose or to comply with external requirements, such as property financed with public bonds or as a prerequisite to Federal Emergency Management Agency assistance. Only a minority of State property is currently covered by insurance. The Office estimates the State in total has approximately 40,000-45,000 properties with a combined TIV of \$50B-\$80B.

It is often assumed the State of Texas self-insures its real and personal property.<sup>3</sup> This long-held belief partially stems from the 1921 Senate Concurrent Resolution No. 3, 37<sup>th</sup> R.S., and partially from the existence of unappropriated general revenue and mechanisms for requesting supplemental appropriations for sustained losses.<sup>4</sup> The latter is not technically self-insurance, as the State has no specific funded reserve for losses to real or personal property nor has it established a process for adjusting claims and distributing payments. Most agencies are functionally uninsured, unless they have obtained specific insurance policies or established agency funding reserves.

Under the current statutory insurance program administered by the Office, each agency makes an individual decision to either insure its property, or a portion thereof, or retain any potential loss. When uninsured losses occur, the agency

---

<sup>1</sup> Texas Labor Code §412.011, et seq.

<sup>2</sup> GAA, pg. I-80, Rider 4

<sup>3</sup> For the purposes of this report, real property is defined as "land and immovable structures attached to the land," and personal property is defined as "tangible property, which is often called 'contents'." Richard V. Rupp, CPCU, Rupp's Insurance & Risk Management Glossary, 2<sup>nd</sup> Edition, 1996

<sup>4</sup> The 1921 resolution sets forth that it is "the policy of the state to self-insure its buildings" and recommended establishment of a fund for paying losses. No fund has been established.

must either absorb those losses within current budgets or request additional appropriations from the Legislature.

For agencies that do not purchase insurance, the Legislature has historically assisted those agencies in financing uninsured catastrophic losses. Past sessions have seen multiple agencies requesting financial assistance from the Legislature for damage sustained; most recently from natural disasters such as Tropical Storm Allison and Hurricanes Rita, Katrina, Dolly, Gustav, and Ike. Similar situations may occur from manmade events, such as the arson attack on the Governor's Mansion in June 2008.<sup>5</sup>

Requests for financial assistance over the last few legislative sessions have exceeded a quarter of a billion dollars. Known appropriations for general costs caused by natural disasters from Sept. 1, 2007, through June 29, 2009, as reported in HB 4586, are provided in the Appendix. These figures reflect only known payments that were to be distributed to the respective agencies at the time of the report.

---

<sup>5</sup> The building had a Builder's Risk insurance policy in place during a roof repair at the time of the fire. The Builder's Risk insurance policy provided some recovery but was well below the approximately \$22M requested of the Legislature to rebuild the historically classified building to its previous state.

## II. Methodology

While the State tracks some properties in a centralized manner, there is currently no single existing source that identifies or tracks the condition, replacement value, and geographical location of all State assets. The lack of complete current or verifiable information regarding full exposures prohibits accurate cost evaluations as part of this report. According to industry experts consulted during the preparation of this report, this is a common issue in state insurance plans and is a fundamental prerequisite to performing a cost analysis for all methods of protection.

The Office's study was conducted by identifying categorical strategies, utilizing reasonable extrapolations based on data collected in the current voluntary program, and consulting with practicing industry experts on various strategies, including strategies utilized by other states. The experts provided information and responded to specific inquiries on concepts and approaches. The strategies identified include both financial and non-financial options, including traditional insurance, individual self-insured retention, pooling, captives, CAT (catastrophic) bonding, and set asides. Non-financial options include strengthening of procedural mechanisms and potential legislative policy.

To compare various approaches, experts addressed the following inquiries from the Office:

- What should be the goal of a State Property Program?
- What are the recommended approaches for the State to handle the risk of its insurable assets?
- What are other states' approaches to property programs, specifically those with similar exposures and size of Texas?
- What important aspects must be, and should be, addressed prior to, during, and after instituting a statewide program?
- What additional services would the State require to implement various strategies?
- How should agencies be motivated to participate?
- What are available and/or recommended approaches to funding a statewide program?

### III. Options

All of the industry experts consulted stressed the importance of developing and maintaining a comprehensive database of all of the real property and contents currently owned by the State, the geographical location of the properties, the replacement cost, and the COPE (Construction, Occupancy, Protection, and Exposure) characteristics on each piece of property before any program can or should be recommended or implemented. Complete and accurate identification of the property to be insured is a necessary prerequisite of all the approaches discussed.

The experts offered diverse options, recommended best practices, and proposed methodologies for structuring a large insurance program for State use. The following sections address the potential distinct approaches and strategies identified by the Office and by consultants responding to the Office's request for consultations. The options presented are not listed in order of benefit, preference, or advisability for adoption.

#### A. Financing Options

##### 1. Traditional/Commercial Insurance

Traditional insurance is a component of most basic risk financing plans. In general, traditional insurance transfers the risk of loss from damage to property from the owner to an insurance company, which collects a premium from the owner in return for payment of covered losses.

Advantages. Traditional insurance reduces the financial uncertainty of accidental losses, as a known premium can be incorporated with attendant deductibles to limit State exposure in the event of a large loss. Transferring this risk, particularly in the event of a large (or catastrophic) loss, provides additional financial resources for the State to address other needs. Claims handling and risk control services are typically incorporated in traditional insurance options, providing for value-added services and potential loss control.

Disadvantages. In commercial insurance, terms and conditions of an off-the-shelf policy may be unstable, as may be premium charges in response to loss experience both at the individual agency and within the industry-covered population. Traditional insurance routes would likely represent a more expensive option for the State, based on the potential number of buildings and total insurable value of the buildings. Traditional insurance is primarily advantageous for small geographical spreads and may be inappropriate for a statewide approach. In a time of catastrophic losses, some insurance companies may opt to discontinue insurance coverage in certain counties within the State, leaving portions of the State or subsets

of agencies uninsured. Commercial insurance will include the insurer's expense, profits, and risk charges in the premium paid. The insurance premium to cover an estimated 40,000 to 45,000 buildings could be a considerable increase over current premium costs, decreasing the cash flow for the State. Traditional insurance may not be a complete transfer of hazard risk, as some agencies may have exposures that an insurance company may not be willing to cover (e.g., agencies located in flood zones may be required to purchase additional flood insurance from the National Flood Insurance Program).

## **2. Individual Self-Insured Retention**

Individual self-insured plans would require each state entity to pay for its losses out of its own budget, but without the costs associated with procuring insurance. This type of strategy requires a specific, formal system for recording losses and processing payments from a dedicated revenue source.

Self-insurance works best for high frequency and low severity claims. Unpredictable, high severity claims, such as property losses, are not ideal for this type of program as the claims fund may be inadequate to pay a large loss. Self-insurance is best suited to organizations committed to risk control, able to tolerate risk retention, and willing to provide funding and administrative resources necessary to make the program work. Self-insured programs are usually coupled with excess liability insurance to assist in covering catastrophic losses.

Advantages. A self-insured program would allow the State to have control over its own claims: claims adjusters could be independently selected; claims handling guidelines can be written to State specifications; and timelines for settling claims could be handled internally. There is a potentially significant cost savings if the frequency and severity of losses is minimal, avoiding recurrent premium and administrative costs associated with traditional insurance. This approach is not reliant on insurance market trends.

Disadvantages. Frequency and severity of losses can be unpredictable, leading to loss of cost savings compared to premium-based, risk-transfer mechanisms. Catastrophic property losses, even if infrequent, must be allocated for and dedicated funds protected in the form of minimum reserves in the event of a large loss. The financial costs of property losses, particularly from natural disasters or external intentional acts, can be extremely large and subject to events outside effective loss control mechanisms, unlike other forms of self-insurance where losses may be limited or controlled (e.g., tort liability limitations, workers'

compensation losses, etc.). Internal administrative handling of a self-insured program (recording, adjusting, scheduling, payment, and possible litigation) can require significant resources when dealing with losses. Assets and reserves must be rebuilt after payment processing, further reducing potential savings over other strategies.

**3. Statewide Self-Insured Retention**

This strategy is identical to the preceding section, excepting its State-level approach (i.e., the funds for paying losses are retained centrally by the Legislature or a designated agency that receives a direct appropriation). This option is most closely associated with Senate Concurrent Resolution No. 3, 37<sup>th</sup> R.S., which is attached as Appendix 2.

**4. Pooling**

The concept of pooling refers to the strategy of entities combining resources to finance experienced losses. Pools may be grouped by common exposure(s), business focus, geography, genesis, or any other mutuality supporting combination. Each entity contributes resources to the group as a whole, used for the equal benefit of the members.

Generally, protection against exceeding pool resources must be factored in, including consideration of reinsurance treaties purchased to ensure the pool does not become insolvent in a particularly catastrophic year, or obtaining excess insurance based on the catastrophic exposures in different demographic areas (in this configuration, the pool would fund the primary layer of coverage and excess would cover losses exceeding the primary layer).

The State of Arkansas uses an “all in or all out” pooling approach, with universities permitted exemption. The Arkansas pool uses a state’s master insurance policy form, although the form may be altered to suit Arkansas’ universities’ specific needs. Buildings are appraised every three years to ensure they are insured to value (however, Arkansas insures approximately 3,600 structures compared to Texas’ potential estimated 40,000-45,000 structures).

Pooling programs would allow the State to include or exclude agencies based on ability to meet underwriting guidelines and create layers for certain properties based on exposure to catastrophic losses. Potentially, each entity would be treated as a separate insured and have separate limits of liability for each insured building. As noted, a reinsurance treaty would be recommended to follow form to the master policy and stand behind it to ensure pool solvency. Claims handling may be outsourced or internally administered (either centrally and/or on a loss-value basis by

individual entities), with authority of the pool administrator to set retention rates, designate surcharges, exclude non-maintained or non-compliant buildings, or assess penalties or modifiers for loss control failures.

Advantages. Pooling increases the predictability of each participant's losses by reducing the variability of their average loss.<sup>6</sup> Premium (contribution) stability in risk pooling allows for more consistency in the annual budgeting for agencies. Similar to individual self-insurance retention, pooling allows the State the option of handling claims either in-house or through a third-party administrator and adds additional consistency in the regulation of loss-control programs for participants. Pooling is a common approach to real and personal property protection in the United States, and there is an availability of third parties to assist in the administration of this strategy.

Disadvantages. Pooling requires large participation and diversification of the State's property to be successful and to avoid adverse selection limiting the successful spreading of risks (i.e., high and low risks, covered properties both in and out of Tier 1). Statewide participation may be required to be mandated by the Legislature to ensure pool viability. Losses may exceed pooled assets, or assets may be substantially reduced by losses or other events, leading to pool insolvency.

## **5. Captives**

Captives are another form of risk financing that operates to pool the State's risks and refers to a dedicated subsidiary insurer or insurers to address the State's risk financing needs. In such a strategy, the State retains a significant share of its own losses in exchange for the benefit of having its own dedicated insurer, who collects premiums, issues policies, and handles claims. A Captive insurer usually purchases reinsurance to transfer some of the loss exposure to another insurance company.

A Captive approach may also operate to centralize the loss retentions between agencies, allowing for potentially higher loss retentions at a statewide level, and the dedicated nature of the subsidiary relationship allows the parent to design and control the claims-handling process to suit its needs.

Advantages. Generally, the administrative costs associated with procuring traditional insurance are not included in Captives. Captives typically adjust the claims, reducing internal resources and/or funds that

---

<sup>6</sup> Risk Financing, 4<sup>th</sup> Edition, Berthelsen, Elliott & Harrison, 2006, at 24.

would have been spent on a third-party administrator, and overhead or profit costs are eliminated from premiums. Direct access to the international market of reinsurers is immediately available through the Captive (where a self-administered pool would have to be certified by the Texas Department of Insurance or otherwise specifically authorized through legislation to access these markets). Captives may have increased negotiating power with commercial insurers during market downturns, particularly in a statewide program with a large TIV.

Disadvantages. Captive insurance requires a considerable capital outlay and start-up cost. Start-up and annual operating costs for a Captive are estimated to range from \$35,000-\$150,000 depending on the size of the insured base. Unless directly funded by the Legislature, each State agency would need to have a designated fund available for costs associated with utilizing the Captive, including adequate retention limits, administrative costs, premiums, and other charges. If the Captive is designed with inadequate resources and losses exceed the Captive's ability to pay, the loss could financially cripple the Captive and the State. Reinsurers may choose not to follow the form of a Captive, leaving gaps in coverage.

#### **6. CAT Bonding**

A CAT Bond is an insurance-linked security. The purpose of a CAT Bond is to transfer otherwise insurable large risks to potential investors. CAT Bonds were developed because of the limited availability and affordability of catastrophe reinsurance. These bonds are issued by securitization and special purpose vehicles (SPV) of large reinsurers, insurers, or large corporations. They are designed to imitate the traditional excess catastrophic insurance and reinsurance. They can be issued for any type of catastrophic insurable risk such as hurricanes, tornados, and other naturally occurring risks.

CAT Bonds are highly specialized and are not a commonly used form of protection of assets. The strategy is identified herein as an option that may warrant additional consideration should the Legislature specifically identify further study respecting non-traditional or highly specialized risk transfer mechanisms.

## **B. Non-Financial Options**

### **1. Procedural Mandates**

One aspect of catastrophic losses experienced by the State is the lack of standardized and recurring procedural methodologies for the reporting, oversight, financing/appropriation, and payment of losses.

Given the estimated 40,000-45,000 structures owned by the State, it should be possible, with adequate data, to project the average annual loss with a fair degree of accuracy. While the State of Texas has some concentrations of property (notably in Austin, Tier 1 coastal areas, and college campuses) the size and diversity of the State makes it unlikely that any single catastrophic event could threaten all of its assets. Put in simpler terms, while we cannot establish the probability that an individual State building will experience a loss with any degree of accuracy, given historical and current data, we should be able to project the average annual loss across all state properties.

To finance large losses that currently fall to the legislative budget process, the State could establish a reserve sufficient to deal with moderate spikes in losses from year to year and establish a formalized process for requesting necessary financing. The details of application could be established by legislation, and oversight and administration could be delegated if, and as, required.

### **2. Asset Restructuring**

Ownership of the asset involves ownership of the risk of loss and responsibility for replacement and/or repair. Some states have utilized nominal sales of state assets and period lease-backs from investors as a method of balancing the budget.<sup>7</sup> While outside the scope of this study, these budget approaches raise the possibility of transferring risk from the state to the owners of leased properties, at least in situations where there would be no ownership interest retained (i.e., outright sale to a new owner with leasing rights versus a nominal sale as collateral with buy back rights). This approach represents a significant shift in the State's current risk management policy. Although this method of risk transfer has been utilized by other states, none were the size of or had the estimated TIV of the State of Texas. Asset restructuring is mentioned here in an effort to present the Legislature with as many risk management options as possible.

---

<sup>7</sup> See, <http://tucsoncitizen.com/hot-off-the-press-release/2010/01/14/state-sells-buildings-for-735-million-money-to-help-balance-budget/> for a description of such an approach by the State of Arizona.

### **C. Hybridized System**

Given that each option has both identified strengths and weaknesses, an ideal program would be specifically designed to ensure an approach customized to meet the unique needs and exposures of Texas. The development of a hybridized system is heavily dependent on accurate and current information for the selection of procedure, programs, services, and products.

One problem with the State's current decentralized and non-mandatory approach to insuring State properties is that incurred losses do not fall to agencies proportionally. While small losses may be absorbed within agencies' operational budgets, large losses can threaten an agency's continuity of service and fall disproportionately on the legislative budget process. By creating a centralized, mandatory state property insurance program, whether funded by assessments to covered agencies, legislative appropriation, or some combination thereof, it would be possible to normalize the cost of ordinary losses to individual State agency budgets at minimized additional expense. Such a program offers the additional benefit of providing timely disbursements of funds to covered entities that experience a loss to minimize disruption of agency operations. Importantly, the losses described here are not new expenditures. Because a majority of State property is currently not protected by insurance and the State currently pays the entire loss from some part of its budget, this approach is intended to improve the current process for paying losses.

A mandatory property insurance program as described would pool losses to the extent that individual agencies would minimize the budget impact of a casualty loss, but in such a system the legislative budget process retains the liability of large losses. This approach can be combined with other financing approaches as described above.

To finance large losses that currently fall to the legislative budget process, the State could establish a reserve sufficient to deal with moderate spikes in losses from year to year and even consider purchasing reinsurance for large, catastrophic losses. Determining the dollar limits that should be applied to the portion of the loss that would be retained by the State, including deductibles paid by the affected property owner, and the portion that would be commercially insured is a matter for legislative discretion and will be heavily influenced by market conditions and the availability of reinsurance.

## **IV. Considerations**

As the State agency administering the specialized government employees' workers' compensation program and the State's risk management program, including the insurance purchasing program, the Office strongly emphasizes the following considerations as part of any evaluation of identified strategies herein.

### **A. Adjusting Services**

Claims handling involves a team of specially trained individuals able to adjust the many varieties of property loss the State could experience. Claims handlers require specialized skills in adjusting, settling and administering claim payments, so decentralization of this function should be carefully scrutinized. Should the State undertake internal claim management as part of any insurance strategy, it is strongly recommended that any program emphasize professional training and standardization, including potential centralization, and have the resources required to adequately oversee timely and accurate claim processing.

Alternatively, as discussed above, a third-party administrator (TPA) may be used for handling the State's claims. Depending on claim frequency, a TPA may bring additional flexibility to handle spikes of activity related to catastrophic claims. Another potential advantage to this approach is additional transfer of liability for handling the claims to the external administrator. On the negative consideration, there is a financial trade-off respecting the cost of contracting with a TPA for such a program. Contract maintenance and oversight and specific fiscal controls must be put in place for such an arrangement, including consideration of long-tail claims that could potentially cross vendor and/or insurer contracts.

### **B. Loss Prevention/Risk Control Services**

To ensure a program results in long-term savings to the State, any program must be proactive in reducing claims. Risk control services specifically related to property and historical buildings, as well as best practices for property maintenance, prevention, and control of losses will be highly important to a successful strategy. As with adjusting, the State may utilize in-house staff to provide the loss prevention and loss control services or opt for a contracted service.

## V. Recommendations

The actual mechanism(s) chosen for a statewide strategy for adequately insuring State assets should be determined by the Legislature after considering the impact on overall State operations, the costs associated with retaining the risk versus transferring the risk through reinsurance, and should provide clear procedures for identifying when and how funding will be made available in emergencies. Based on the study identifications, a **hybridized system** that incorporates multiple approaches would be the most advantageous to the State.

To determine which, if any, of the identified options is most financially advantageous to the State within such a system, an appraisal must be commissioned identifying all property and contents currently owned by the State, the geographical location of the properties, the replacement cost, and the COPE characteristics on each piece of property. The maximum probable and maximum possible losses should also be calculated per building and across the entire program from reported information, allowing for accurate provisioning and selection of an appropriate strategy.

It is recommended the Legislature allocate responsibility and resources to undertake a data collection and modeling process, including legislative mandates for agency compliance and a time frame for the completion of the data collection. Completion of reporting, analysis, and modeling should result in a formal recommendation of prioritized strategies for Legislative consideration on the best-suited model and strategies for protecting State of Texas assets.

After selection and authorization of strategy, procurement, and marketing, implementation should be undertaken under designated agency authority and require ongoing analysis and data collection to ensure the State is insuring its assets in the most cost-effective way for the taxpayers.

The Board of Directors and staff of the State Office of Risk Management are available to respond to any inquiries and to undertake all efforts respecting the matters herein. Any inquiries may be directed to Jonathan D. Bow, Executive Director, State Office of Risk Management, P.O. Box 13777, Austin, TX 78711-3777, by telephone to (512) 936-1502, or facsimile at (512) 370-9025.

# Appendices

# APPENDICES

## Appendix 1

Table 1

**Appropriations for General Costs Caused by Natural Disasters**  
Reported in the Sept. 1, 2007, Biennial Presentation to the Legislature on June 29, 2009

State Agencies that Received Money from Legislature	General Revenue Funds	Notation Location
UT Medical Branch at Galveston	\$150,000,000	H.B. No.4586 Section 55
Brazosport College	\$120,111	H.B. No.4586 Section 55
Parks and Wildlife Department	\$12,000,000	H.B. No.4586 Section 55
UT M.D. Anderson Cancer Center	\$1,725,995	H.B. No.4586 Section 55
Alvin College	\$2,358,771	H.B. No.4586 Section 55
Texas A&M Galveston	\$6,200,000	H.B. No.4586 Section 55
Texas Forest Service	\$385,091	H.B. No.4586 Section 55
Houston Community College	\$1,507,670	H.B. No.4586 Section 55
Commission on Environmental Quality	\$4,600,000	H.B. No.4586 Section 55
San Jacinto College	\$3,045,820	H.B. No.4586 Section 55
Galveston College	\$407,406	H.B. No.4586 Section 55
Texas Engineering Extension Service	\$1,200,000	H.B. No.4586 Section 55
Adjutant General's Department	\$1,244,007	H.B. No.4586 Section 55
University of Texas at Brownsville	\$1,200,000	H.B. No.4586 Section 55
Lamar University	\$2,803,561	H.B. No.4586 Section 55
Lamar Institute of Technology	\$2,007,758	H.B. No.4586 Section 55
Lamar State College - Port Arthur	\$829,530	H.B. No.4586 Section 55
Texas Southern University	\$9,720,192	H.B. No.4586 Section 55
College of the Mainland	\$176,236	H.B. No.4586 Section 55
University of Texas Pan American	\$102,258	H.B. No.4586 Section 55
University of Texas Health Center at Tyler	\$1,461,557	H.B. No.4586 Section 55
University of Texas Health Science Center at Houston	\$1,000,000	H.B. No.4586 Section 55
University of Houston System Administration	\$7,339,000	H.B. No.4586 Section 55
Texas State Technical College - Harlingen	\$904,558	H.B. No.4586 Section 55
Lamar State College - Orange	\$600,000	H.B. No.4586 Section 55
Prairie View A&M University	\$488,864	H.B. No.4586 Section 55
Lee College	\$137,554	H.B. No.4586 Section 55
Department of Agriculture	\$20,000,000	H.B. No.4586 Section 55
<b>Total</b>	<b>\$233,565,939</b>	

Table 2

**Certain Appropriations for Disaster Relief**

Reported in the Sept. 1, 2007, Biennial Presentation to the Legislature on June 29, 2009

State Agencies that Received Money from Legislature out of this fund	Appropriated Funds from the General Revenue Fund to the Trusted Program of the Office of the Governor	Notation Location
Texas Education Agency	\$10,000,000	H.B. No.4586 Section 58
Texas Engineering Extension Service	For TX Task force 1 Flooding - No \$ amount provided.	H.B. No.4586 Section 58
General Land Office	For repairs made to the Protective Dune System for County Road 257. No \$ amount provided.	H.B. No.4586 Section 58
<b>Total Available for Disbursement</b>	<b>\$62,000,000</b>	<b>HB4586 Appropriations for state agencies.doc</b>

## CONCURRENT RESOLUTIONS

---

### PROVIDING THAT THE STATE SHALL CARRY ITS OWN INSURANCE ON STATE BUILDINGS AND CONTENTS

S. C. R. No. 3.]

Whereas, It is of great financial importance to the State that a fixed policy be established with reference to carrying fire insurance upon buildings and contents belonging to the State and its various institutions, and

Whereas, The insurance data and information tabulated and set out on page 261 of the First Annual Report of the State Board of Control indicate that a substantial saving can be made to the State in carrying its own insurance; therefore be it

Resolved, by the Senate of the State of Texas, the House of Representatives concurring herein, That hereafter it shall be and is the Fixed policy of this State that the State shall carry its own insurance upon State buildings and contents, and that no insurance policies shall be taken out upon any of the public buildings of this State, nor upon the contents thereof, and the State Board of Control and all other Boards having charge of buildings of the State, and the contents of such buildings, are hereby instructed not to have such buildings nor property insured, notwithstanding there may be items in the appropriation bills authorizing the expenditure of money for the payment of insurance premiums.

Provided that it is declared to be the policy of the State hereafter at the end of each two years period to set aside approximately one per cent of the value of all public buildings owned by the State, as a sinking fund until ten per cent of the total value of all such buildings has been accumulated, and that this sinking fund shall be invested in school bonds in the school districts of this State.

Provided, however, that this resolution, or any part of its provisions shall not apply to or affect the University of Texas, and its branches, and that it is the fixed policy of the State that all buildings and the contents thereof belonging to the University of Texas, and its branches, shall be kept insured at all times against any loss by fire or tornadoes.

[NOTE.—The foregoing resolution was adopted by the Senate, August 24, 1921; and was adopted by the House August 24, 1921.]

## **VI. Acknowledgements**

The State Office of Risk Management would like to thank the following entities for their assistance and expertise in gathering information about state insurance programs around the nation. The experts shared examples of various insurance options, and their experiences regarding property programs administered in other states.

**American Appraisal**

**Arthur J. Gallagher Risk Management Services**

**Cedar Consulting LLC**

**Munich RE**

**North American Solutions**

**Texas Department of Insurance**

**Wells Fargo Insurance Services USA**

**Willis Group Holdings**

**York Insurance Service Group, Inc.**