PRELIMINARY REPORT:

INSURANCE STUDY OF SINKHOLES

Submitted to the State of Florida

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II. INTRODUCTION

The 2004 Florida Legislature mandated that a study of the feasibility and cost-benefit of a Florida Sinkhole Insurance Facility and other matters related to affordability and availability of sinkhole insurance be conducted. The study was completed by the Florida State University, College of Business, Department of Risk Management/Insurance, in consultation with the State Board of Administration and the Florida Geological Survey (FGS).

The legislative mandate provided that the study analyze the potential functions of the facility including:

1. Serving as the direct insurer or the reinsurer for all or some sinkhole losses.
2. Providing training, communication, and other educational services to the public, engineers, the construction industry, insurance professionals, or others.
3. Providing uniform standards for use by insurers in evaluating sinkhole loss claims.
4. Providing consulting services for insurers.
5. Maintaining a public database of all confirmed sinkholes and paid sinkhole loss claims for use by consumers and by the insurance, building construction, banking, and real estate industries.

The legislation also provided the feasibility study address the following issues:

1. Where the facility should be housed, including, but not limited to, the options of creating a separate facility or using the Citizens Property Insurance Corporation or the Florida Hurricane Catastrophe Fund.
2. Federal income taxation implications.
3. Funding options and costs associated with operating the facility, including means of funding sinkhole insurance through premiums that are adequate to fund covered losses.
4. Applicability of the experience of similar facilities of other states.
5. Other economic impact considerations pertinent to a facility.
6. Alternative dispute resolution mechanisms.
7. The impact of all present requirements in the Florida Insurance Code on the affordability and availability of sinkhole insurance and recommendations to address such impacts.

As such, this study will focus on the methods employed to manage the risk of subsidence in other states. These methods include reinsurance facilities, mine reclamation, and government-sponsored insurance. These devices will be discussed generally. The report will then analyze in detail the operation of the various mechanisms in relation to the criteria specifed in the legislative mandate.

II. BACKGROUND

A. SUMMARY OF THE 1993 REPORT[1]

A study of sinkholes was conducted by the Florida State University Center for Insurance Research in 1993. The research team found that many of the problems that existed in 1969, when Florida first addressed the issue of insurability of sinkholes, remained. In 1969, a reinsurance facility was put in place to cover the peril of sinkhole loss. This reinsurance facility was rendered obsolete by the fact that very few policyholders purchased the optional coverage and subsequently the coverage was added as a covered peril in the homeowners policy.

The 1993 study addressed:

1. The rate impact of sinkhole damage upon homeowners insurance coverage.
2. The effect of sinkhole occurrences on property values.
3. Residual market mechanisms and their need to provide insurance to qualified risks who are otherwise unable to purchase insurance.
4. Claims standards and the practices in adjusting sinkhole claims.
5. The need for an ongoing facility to collect and disseminate sinkhole information and to conduct research on the formation and occurrence of sinkholes.
6. The insurability of earth movement.

A summary of the findings pertaining to the six subject matter areas follows.

Rate Impact[2]

With regard to the rate impact of sinkhole damage upon homeowner insurance, the study used insurance data for its analysis that was collected from the responses of eleven insurance companies to a mail survey. These eleven companies wrote about fifty-five percent (55%) of the homeowners premiums in 1990, and thus should have provided a representative sample. There

[1] A complete copy of the executive summary of this report can be found in Appendix A-a.
[2] A copy of supporting exhibits related to rate impact compiled from the 1993 study can be found in Appendix A.

was some concern that the data received as a result of this survey were not accurate. The study found that while the data was not completely reliable, they were indicative of trends.

The data indicated that both the frequency and severity of sinkhole claims increased dramatically over time. The number of sinkhole claims made had risen from only 35 in 1987, to 426 in 1991, and increased by 250 claims from 1990 to 1991 (the period in which the claims data seemed to be most reliable). During the same period, the amounts expended to pay sinkhole losses and related loss adjustment expenses grew significantly, both in absolute terms (from .006% in 1987 to .052% in 1991) and by almost a factor of ten as a percentage of premiums. Sinkhole losses, on average, also were much larger than the typical home property loss (approximately twenty times as large as the average homeowner claim in 1990 and 1991).

In spite of these rapid increases in frequency and severity, sinkhole losses still represented a very small portion of the premium dollars. In addition, at the time of the study, the problem was restricted in large part to the Tampa Bay area (although sinkhole activity was a possibility throughout a large area of Florida). Since there was no explicit rate charged for sinkhole coverage and no distinction was made with regard to territory, it was clear that homeowners throughout the state were subsidizing those in the high-risk areas. The equity of such a subsidy was questioned.

The question also arose as to whether the indicated trends in loss frequency and severity would continue in the future. The limited reliability of the insurance company data (particularly prior to 1990) made it difficult to formulate long-term predictions. In addition, the incidence of sinkhole activity was dependent upon a number of factors not measurable from the insurance claims data. Apart from the geological make-up of the earth, factors such as weather, population

growth, land development, and water usage appeared to play a role in the occurrence of sinkholes.

The Effect on Property Values[3]

To examine the effect that sinkhole occurrences have on property value, two primary methods were employed. The first, a survey methodology, was used to obtain the perceptions of government officials and market professionals. An empirical methodology was then employed to examine house price movements in response to sinkhole events.

Elected county property appraisers, independent fee appraisers, and real estate brokers were surveyed to obtain their perceptions of house price reactions to sinkhole occurrences. Of the sixty-seven elected property appraisers surveyed, eighteen reported some sinkhole activity in their county. Only a very small percentage reported the presence of sinkhole occurrences in populated areas, with an accompanying request by owners for reassessments of their taxable values. There was no discernable trend in the size of the adjustment made to the taxable values of affected properties.

Of the independent fee appraisers surveyed, most (70%) had not had experience appraising properties directly affected or near sinkhole sites. Of those which indicated experience with such properties, most made adjustments based on the cost to correct. For both properties directly affected and those located near sinkhole sites, the adjustments varied considerably. Again, as reported for the elected property appraisers, no consistent value effect was apparent. The value effect ranged from zero to one hundred percent (0% - 100%) for

[3] A copy of the supporting exhibits related to the effect on property values from the 1993 study can be found in Appendices A-d through A-g.

properties directly affected, and from zero to thirty percent (0% - 30%) for those located near a sinkhole occurrence.

A survey of real estate brokers yielded results consistent with the surveys of both elected county property appraisers and independent fee appraisers. Real estate brokers indicated, in general, that while property values were affected by sinkholes, the size of the effect varied considerably. Over twenty percent (20%) of the brokers indicated that houses directly affected by a sinkhole could commonly experience a forty percent (40%) reduction in value. In addition, a large majority of the brokers surveyed indicated properties proximate to sinkhole occurrences were substantially influenced.

It appeared that while there was a consensus in the market that property values were substantially affected by sinkhole occurrences, there was little consensus as to the size of the effect. It seemed likely that the effect on property value was related to the size of the sinkhole, distance to the sinkhole, possibly the time passed since the occurrence, and the degree of publicity surrounding the occurrence (news articles). These issues were examined in the empirical portion of this section. Unfortunately, the data available were quite limited, largely because the value (sale price) of properties which have not sold is not observable, and the extent of the property damage to a specific property is not known. However, noting these limitations, average price movements were estimated.

Empirical estimates were conducted on two substantially different sets of data. Initially, fifty-two Orange County properties which were affected by single sinkhole occurrences were identified and examined. The model estimates suggested that adjacent properties experienced slight average declines of about five to ten percent (5% - 10%). However, the estimates were not statistically significant from zero, suggesting a wide dispersion of price effects. Surprisingly, no

measurable value impact was found for properties directly affected by a single-area sinkhole occurrence. The most likely explanation for this is that limited transaction data exist for directly impacted properties sold after the sinkhole event (properties which were dramatically affected were not sold; perhaps, they were either abandoned, or held throughout the sample period).

Second, the impact that concentrated sinkhole occurrences had on single-family property values was examined using data from Pinellas County (Dunedin area). Estimates indicated that widespread property value declines have not occurred throughout the city of Dunedin. Property values in Dunedin have moved consistent with the Pinellas County and the city of Largo. All of the areas examined experienced slight declines in single-family residential property values in 1991.

Property values have declined significantly in Section 35 (Township, Range, and Section 28S15E35) of the city of Dunedin relative to other areas in Dunedin (and Pinellas County). Section 35 includes the Patricia/Lakewood Estates area, an area characterized by a large number of reported sinkhole occurrences. Comparing indexes for the areas studied suggested that Section 35 had experienced an average loss in property values of twenty percent (20%) since 1990. It should be noted, however, that individual properties were purchased, from July of 1990 to July of 1992, for prices both consistent and substantially lower than similar properties located elsewhere in Dunedin.

Statistical regression estimates suggested that informed buyers (those aware of the neighborhood sinkhole occurrences at the time of purchase) purchased properties in the Patricia/Lakewood Estates area at prices approximately 38.5 percent (38.5%) below similar properties in unaffected areas of Dunedin. Uninformed buyers purchased residences in the Patricia/Lakewood Estates area at a discount of 9.8 percent (9.8%), from February 1991 to July

1991, relative to other similar properties in Dunedin. Finally, estimates indicated that the value effects to other properties extended approximately one mile from the center of the Patricia/Lakewood Estates area. Thus the effect on value, on average, declined at a rate of twenty-five percent (25%) per quarter mile from the Patricia/Lakewood Estates area.

Residual Markets

With regard to residual markets, the study noted the need for residual markets exists when insurance is unavailable. Individuals experienced difficulty in obtaining coverage when they had received payment for a claim but had not made the repairs. These individuals continued to occupy the premises and coverage was available through the surplus lines market or through a tenant homeowner policy or other policy form.

Sinkhole claims present the problem of ascertaining the exact cause of loss. Was the loss due to a sinkhole or a different peril? Illinois had experienced a similar problem regarding the cause of loss with the peril of mine subsidence. The utilization of a mechanism similar to the Illinois Mine Subsidence Fund to address sinkhole claims in Florida was suggested. The use of consulting adjusters and geologists and engineers with specialized expertise was suggested to alleviate the problem of inconsistent results being reached as a result of utilization of inappropriate means of determining cause of loss.[4]

Claims Standards

With regard to claim standards, the study found the practices of insurers were consistent with the adjustment of other types of loss. However, one unique feature of the adjustment of

sinkhole claims was that there is a great deal of reliance upon and deference to the opinions of the professional geologist or engineer utilized in the examination of the site. The research team held a "Sinkhole Summit" and found that there was no uniform set of criteria that can be universally applied to the investigation of sinkhole claims. Rather, the determination of the cause of loss was very site specific and required an evaluation by highly trained individuals who possessed great expertise. It was recommended that a list of guidelines be compiled. This list of guidelines relied heavily on the professional judgment of the geotechnical expert in its application. If the expert decided not to pursue an item on this checklist, the rationale should be noted in the report. Specific minimum guideline recommendations included a description of pre-site, on-site, and detailed site assessment issues which should be addressed. Furthermore, it was highly recommended that:

1. soil tests be required in areas of the state with a known presence of shrink/swell clay;
2. building codes be improved to conform with the Southern Building Code Congress International (SBCCI) "deemed to comply" standard and be enforced; and
3. the results of the geotechnical investigation be given to the homeowners in layman's terms.

Because of the unique nature of sinkhole losses and the necessity for an *ad hoc* evaluation of losses, as well as an expert's evaluation of what testing standards are appropriate in a given instance, it was suggested that a procedure which would centralize evaluation and utilize highly trained, highly-competent professionals who would uniformly approach the problem would be desirable.

With regard to the effectiveness of the efforts to repair damage, the results of a telephone survey of thirty-two homeowners who had sinkhole damage repaired indicated approximately

[4] A detailed discussion of the current subsidence and residual market facilities, including the Illinois Mine Subsidence Fund, is included in Section IV of this report. A general summary comparing the facilities is contained

forty-four percent (44%) experienced subsequent damage. The findings of this small sample survey suggested that repair methods were somewhat unreliable. Further specialized investigation of this expensive repair process was suggested to explain why subsequent damages occurred.

The Need for an Ongoing Sinkhole Information and Research Facility

With regard to the need for an ongoing facility to collect and disseminate information, there was general agreement among the geologists, engineers, and academic institutions surveyed that there was a need for an ongoing facility to collect and disseminate sinkhole information and to conduct research on the formation and occurrence of sinkholes. The increase in sinkhole activity and the resulting difficulties it has created for homeowners, insurers, agencies, and local governments has highlighted the importance of identifying, explaining, and predicting sinkhole occurrences and related phenomena. It has also led to a broad-based interest in the information that would be collected by such a resource center. At the same time, the demise of the Florida Sinkhole Research Institute has already resulted in the decentralization of the existing sinkhole database and a lack of coordination among the activities of these interested parties.

There was a consensus among the respondents and proposals submitted to the research team that the Florida Geological Survey should play a central role in the development and maintenance of a sinkhole database. In addition to its own proposal, the responses from both Florida State University and the University of South Florida indicated that the FGS should be used as the central clearinghouse for the collection of sinkhole data and for its dissemination to the public. It has considerable experience in fulfilling this role, as well as established facilities and personnel in both the geological and administrative support staff areas.

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in Appendix D.

The Insurability of Earth Movement

Damage to land can result from many different perils, natural and man-made, subtle and dramatic. For example, perils such as toxic chemicals, erosion, sinkholes, liquefaction, and earthquakes, among others which can cause damage to land. However, some coverage exists only for some sudden and dramatic earth movement perils such as volcanic eruption. Even in cases in which coverage for some earth movement perils is provided, such as in the standard homeowners' policy, the 1993 study noted the damage to the land was not covered.

The lack of coverage for land is partially attributable to the long-term nature of damaged caused by subtle earth movements as there are problems are associated with recognizing and identifying both the time and cause of loss. The problems are not normally encountered in the provision of first-party property insurance coverage. Subtle earth movement damage cannot always be considered unexpected or fortuitous, and, thus, raises the issue of "adverse selection."

Also, in many cases, human action is involved in the cause of subtle earth movement damage—either by creating the cause of loss (e.g., removing coal from under the ground surface) or by increasing the probability of loss (e.g., utilizing inadequate construction practices in areas where earth movement can be expected to occur). Although people are almost always involved in causing these losses, it is usually very difficult to isolate the responsible parties. If identification is possible, case law, statutory limitations, and/or the costs of litigation often discourage, if not prevent, pursuing recovery from those responsible for the damage.

When the concept of indemnification is applied to subtle earth movement, several questions must be addressed. First, many questions arise as to the extent to which first-party property insurance coverage for structures should respond to loss mitigation activities involving

the land instead of the structure. Other questions deal with how policy limits, loss adjustment, and loss payment obligations can respond to damages and losses which occur over a period of time—often longer than the usual one-year policy period. Issues associated with the concept of "constructive total loss" must be considered. Additionally, many property policies exclude coverage for foundations because they are not affected by such property insurance perils as fire or windstorm, yet the foundation is most affected by earth movement. Current repair and reconstruction techniques do not contemplate continuing damage, and it is questionable whether they will, at least in the near future. Further consideration is needed concerning how deductibles, aggregate limits, and other policy conditions might prevent claims for "normal maintenance" losses—e.g., cosmetic damage caused by seasonal shifting or normal settling. Finally, the issue of the value of the insured property, and how that value is assessed and/or changes as the earth movement event continues, have to be addressed.

However, coverage for earth movement might be feasible at a relatively affordable premium under the following conditions:

1. where the environment is stabilized through relatively consistent and predictable land use and construction standards and controls;
2. when standard, cost-effective repair techniques are applied;
3. if policy conditions are specific regarding the limits and extent of coverage;
4. where the coverage is purchased by a large enough percentage of the potential market;
5. where the environment is provided by a single source which could employ "economies of scale" in cause and origin determination, and thereby control the expense of the activity to a level which, when distributed over a large enough number of insureds, might be affordable.

Before serious consideration can be given to losses from subtle earth movements, these issues must be addressed. Without resolution of these issues, the losses from subtle earth movement are not likely to be sufficiently predictable in the aggregate to develop a reasonable

measure of overall loss. Consequently, a fair and adequate insurance premium would be difficult to calculate. (A copy of the Executive Summary of the 1993 report is found in Appendix A.)

Conclusions of the 1993 Report

The 1993 report concluded that "utilization of a mechanism to address sinkhole claims similar in function to the Illinois Mine Subsidence Fund has many advantages and is recommended. Such a facility can provide a centralized loss adjustment process. This feature is crucial in situations involving earth movement losses because the adjustment expenses are rather high and determination of the actual cause of loss is difficult. Additionally, it was discovered at the public hearing conducted in Dunedin and in discussions with residents, many policyholders are frustrated by what they perceive as a lack of consistent carrier adjustment practices. Keeping policyholders informed and involved in the determination of the cause of loss would be beneficial.

The use of such a sinkhole subsidence fund would restore public confidence in the adjustment process and assure the policyholders that they are being treated equally. Centralization would promote a consistent approach and would aid in the development of knowledge in this area. In addition, a sinkhole fund could promote and help support research in the areas of sinkholes, proper remedial measures, and the insurability of other earth movement perils. A resource to maintain sinkhole data and provide service is needed. The Florida Geological Survey could perform this function and also coordinate research with the universities and sinkhole fund. In the interim, the legislative prohibition on cancellation and nonrenewals for claims should be continued.

Sinkhole losses represent a small portion of premium dollars. However, data indicate a rapid increase in claim frequency and severity. Utilization of a territorial approach would be one method of addressing the problem. The state would be divided into four territories (the 1969 map remains accurate).[5] However, the territories with a higher potential for loss would automatically have coverage through the fund for sinkhole losses unless rejected in writing. The premium would vary by territory. The above approach addresses the fundamental problems in a coordinated manner. Piecemeal approaches would appear to be inadequate."

[5] A listing of counties/regions is contained in Appendix B-i.

B. SUMMARY OF THE 2002 REPORT

A closed claims survey was conducted to examine recent sinkhole activity in the state of Florida. This survey was a follow-up to the 1993 study that collected information on sinkhole claims occurring between 1982 and 1991. The survey was distributed to insurers operating in Florida through the Property Committee of the Florida Insurance Council with the approval of the Florida Department of Insurance. One problem with the results is the small response rate. The results are helpful in identifying trends, but caution should be exercised in using the results for other purposes.

The electronic survey requested information on all closed sinkhole claims occurring in Florida between 1996 and 2001.[6] Insurers were asked to provide general information on the location of the claim by zip code, the date the loss was reported, and the date the claim was closed. In addition, specific questions were asked regarding the type of sinkhole and the testing procedures employed. For claims that were paid or compromised, the amount paid was requested for the structure, land, other damage, and allocated loss adjustment expense. For denied claims, the survey asked for the reason for denial.

Of the 877 closed claims received, 812 were useable. Thirty-six observations were removed because the insured withdrew the claim or there was no contact from the insured. An additional 29 claims were removed because the final disposition of the claim or some other crucial information was not provided.

The data was first examined and compared across years. Then, regional and county level analyses were conducted. The purpose of these analyses was to determine if the number of claims, the disposition of claims, and testing procedures for sinkholes varied by county or region. A summary of the major findings of the study follows.

Statewide Results[7]

Frequency of Sinkhole Claims. The first portion of the report addressed the question of whether sinkhole claims frequency has increased during the sample period. Total reported claims rose from 16 in 1996, to 317 in 2001. While the increase was fairly consistent over the entire period, there was a dramatic rise in the number of closed claims in 2000 and 2001.

Approximately nine percent (9%) of the claims were cover collapse sinkholes, while nearly eighty-one percent (81%) were subsidence. Insurers paid more than ninety-five percent (95%) of the claims that were classified as cover collapse and subsidence claims. The most common reason for the denial of these types of claims was lack of damage to the premises. The remaining claims were reported under the clay shrinkage and other categories. Insurers paid about twenty percent (20%) of the claims classified as clay shrinkage and only six percent of the claims classified as other occurrences.

Severity of Sinkhole Claims. The second major question the report addressed related to the severity of sinkhole claims. Insurers were asked to report the amounts paid for damage to the structure, land, and other damage. In addition, they were asked about the allocated loss adjustment expenses, deductibles, and total coverage available in each case. There was a fairly steady increase in average payments for damage to the structure observed during the sample period. Most of the payment categories fluctuated during the period. Land was the exception. This category showed the greatest increase in average payments during the sample period, rising

[6] A copy of the survey can be found in Appendix B-a.
[7] A copy of the supporting exhibits related to the state wide results from the 2002 report can be found in Appendices B-b through B-e.

from an average of $2,632 in 1996 to an average of $12,070 in 2001. This is an increase of more than three hundred fifty percent (350%). The rise in payments for damage to land was considered to reflect the use of remedial measures to prevent future damage to the structure. In addition, the average paid claim increased from $40,218 to $62,628 during the sample period. This represents an increase in claims cost of approximately fifty-five percent (55%). The change was thought to be partially attributed to the increase in the price and cost of construction.[8]

Disposition of Claims and Testing Procedures. An examination of the disposition of claims suggested that the behavior of insurers had changed during the sample period. Of the 812 claims in the final sample, a majority were denied. Examining the denial rate per year, the results indicated the percentage of claims denied increased steadily during the sample period. The years with the highest denial rates, 2000 and 2001, also were the years in which the most claims were filed.

Insurers cited a variety of reasons for denying these claims with the most common reason for denial being earth movement not related to the presence of a sinkhole. "Settling, decay, or compression of organic debris" was reported with the greatest frequency as the reason for denial, followed by "soil settlement" and "clay shrinkage." These reasons accounted for nearly eighty percent (80%) of the denials. "Erosion" was reported as the reason for denial with the least frequency, occurring in less than two percent of claims. Several insurers identified reasons other than those listed as the reason for denial. These include "sewer pipe collapse/damage," "septic tank collapse/damage," "no damage to structure," and "upheaval of structure by trees."

[8] The *Statistical Abstract of the United States (2000)* published by the Bureau of Census indicates that, between 1996 and 2000, the construction costs increased 10.3 percent.

Testing Procedures. Insurers reported the use of a variety of testing procedures. In many cases, an insurer employed more than one method in testing for sinkhole activity. During the sample period, the average number of testing procedures used increased for both paid/compromised and denied claims. However, a means comparison did not indicate that insurers use a significantly higher number of tests to investigate paid/compromised versus denied claims.

The most common testing procedures used with both paid/compromised and denied claims were shallow boring, deep boring, and ground penetrating radar. However, when the individual testing methods are analyzed, it appeared that shallow boring is used more on average with denied claims, while deep boring was utilized at a higher rate with paid claims. Physical inspections (by engineers or others) and penetrometer probes were used more commonly for claims that were subsequently denied.

The results indicate that the testing procedures used most frequently have changed over time. In the early sample years, shallow boring was commonly used as a testing procedure for claims that were subsequently denied. For example, one hundred percent (100%) of the denied claims used shallow boring in 1996, compared to thirteen percent (13%) for paid/compromised claims. In the later years, there was an increase in the use of deep boring, ground penetrating radar, and test pits for denied claims. For paid/compromised claims, there was an increase in the use of shallow boring, deep boring, and test pits. The use of ground penetrating radar actually decreased for this group of claims. This result suggested that insurers had made a general shift toward the use of more complex testing procedures and that the shift was more evident for paid/compromised claims. For both paid/compromised and denied claims, several insurers listed other testing procedures employed. These included moisture testing, organic testing, electro-

resistivity testing, and floor slab surveys. In several cases, it appears the insurers relied on test results obtained by condominium associations or others in lieu of conducting their own tests.

Regional and County Results

Region Level Analyses.[9] Over ninety percent (90%) of the reported claims occurred in the central portions of the state. Approximately fifty-three percent (53%) of these claims occurred in the Central West region of the state and thirty-two percent (32%) occurred in the Central region. The North Central and Central East regions had the next highest percentage of claims. The Southwest region had the fewest claims, with only 8 claims reported. This is approximately one percent (1%) of the total reported claims occurring in the state.

The denial rate varied by region. For example, in the central portion of the state, where most of the claims are concentrated, the denial rate ranged from fifty-six to eighty-eight percent (56% - 88%). The northern regions had the highest denial rates, with one hundred percent (100%) of the claims being denied in the Northwest.

The analysis of testing methods indicated that shallow and deep boring were consistently the most common testing methods used across the regions, especially in the regions reporting the highest number of claims. In these areas, shallow boring was used in approximately seventy to eighty percent (70% - 80%) of the claims while deep boring was used in about seventy-five to eighty-eight percent (75% - 88%) of the claims. Ground penetrating radar was used least frequently in all regions. Insurers reported using this test for about one-third of the claims.

[9] A copy of the supporting exhibits related to the regional results from the 2002 report can be found in Appendices B-f through B-h.

County Level Analysis. On a countywide basis, 40 of the 67 counties in Florida reported sinkhole claims during this time period.[10] The counties with the largest number of claims included Pasco, Pinellas, Hillsborough, and Marion with 154, 119, 75, and 73 closed claims reported, respectively. These counties account for over sixty percent (60%) of the sinkhole claims reported in the sample and approximately two-thirds of the claims in which insurers paid some amount. Over half of the counties in the state reported less than five claims during the sample period. Of these counties, only three reported any claims in which the insurer paid. In addition, nearly half of the counties reporting claims had denial rates of 100 percent.

In terms of severity, Lee, Seminole, Leon, and Hillsborough had the highest average claims payments, with total claims costs ranging from $73,807 to $126,183. It should be noted that Lee and Leon each had fewer than three paid claims in the sample period, and Seminole had fewer than ten claims. Hillsborough is the only county with a high frequency of claims in the group. In five of the 22 counties, the greatest expenditure was for land.

Summary of Results and Comparison to Prior Closed Claim Report

The results of the 2002 survey indicated that the problem of sinkholes in the state of Florida had increased in terms of both frequency and severity in recent years. The results of this survey showed a rise in the occurrence of sinkhole claims, which was consistent with the results of the 1992 survey. The results of the current survey found that the frequency of sinkholes were concentrated in the central regions of the state. This also was consistent with the results of the

[10] The following counties reported no claims during the sample period: Baker, Calhoun, Collier, De Soto, Dixie, Flagler, Franklin, Gadsden, Glades, Gulf, Hamilton, Hardee, Hendry, Holmes, Jefferson, Lafayette, Liberty, Madison, Martin, Monroe, Okeechobee, St. Lucie, Taylor, Union, Wakulla, Walton, and Washington.

1992 survey, which found a concentration of claims in the Central West portion of the state, further supporting that sinkhole losses are generally a regional issue.

An examination of denial rates for this survey showed an increase in the percentage of claims denied. The denial rate in more recent years was higher than that found in the 1992 survey. Findings from both studies indicated that the reasons for denials have been fairly consistent over the years with most denials being associated with earth movement other than sinkholes.

III. DISCUSSION OF MAJOR POINTS OF INTEREST

A. OVERVIEW

Existing Facilities

This section provides a review of several state and federal programs designed to cover subsidence and other single peril losses. Due to the similarities in the peril of mine subsidence and sinkholes, mine subsidence facilities provide a natural basis from which to develop a potential model for a Florida Sinkhole Insurance Facility. In addition, information gathered on the National Flood Insurance Program and the California Earthquake Authority also is discussed.[11]

This section is organized as follows. First, brief descriptions of existing facilities are provided. Then, detailed discussions of key aspects of the facilities that are of concern to the state of Florida in covering the peril of sinkhole are presented. The key facets of the programs discussed are: 1) program organization; 2) training, communication, and education; 3) uniform evaluation standards; 4) consulting services for insurers; 5) public database of claims and exposures; 6) housing of the facility; 7) tax implications; 8) availability, coverage options, and costs; 9) economic impact of facilities; 10) alternative dispute resolution; and 11) affordability and insurability of the peril. A general comparison of these facilities can be found in Appendix D.

[11] *Other Residual Markets* - The Terrorism Risk Insurance Act of 2002 (Public Law 107-297, 116 Stat.2322) was signed into law on November 26, 2002. Section 102(6)(A)(iv) of the Act provides that insurers are required to participate in the Act's Program include State residual market insurance entities or State workers' compensation funds. A Department of the Treasury rule found in the Federal Register at 68 FR 59715 (October 17, 2003) addresses issues associated with the participation of residual market mechanisms under the Act. The rule provides

Subsidence Funds. Subsidence funds in several states, new construction in previously undeveloped areas led to buildings being constructed atop abandoned mine shafts and tunnels. In some instances, the land (and the structures above) collapsed into these shafts or tunnels, resulting in significant property damage. Since private insurance companies generally consider earth movement uninsurable, some states have developed separate state-run facilities to specifically address the problems created by subsidence losses. Pennsylvania was the first state to develop such a facility in 1961 followed by Illinois, in 1979. The rest of the facilities were developed in the 1980s—West Virginia in 1982, Kentucky in 1984, Indiana in 1986, and Ohio in 1987. Details related to these plans are discussed below.

National Flood Insurance Program. The National Flood Insurance Program (NFIP) was established in 1968. Prior to that, the response to flood disasters was generally limited to construction of dams, levees, and seawalls. These remediation techniques did not discourage unwise development, and in some cases, may have even encouraged additional development in flood-prone areas. The U.S. Congress created the NFIP in the hopes of reducing future flood damage by encouraging communities to develop floodplain management ordinances. In exchange for doing so, communities would be able to help their residents obtain some protection from flood disasters through an insurance program. The NFIP is housed in the Mitigation Division of the Federal Emergency Management Administration (FEMA), which is itself housed in the Department of Homeland Security.

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that the Treasury will release and maintain a list of state residual market mechanisms that are mandatory participants in the Program. A list of these residual market mechanisms can be found in Appendix C.

California Earthquake Authority. The California Earthquake Authority (CEA) was established as a result of a chain of events following the 1994 Northridge earthquake, which resulted in an excess of $12 billion in insured losses. As noted earlier, earth movement is typically excluded in the standard homeowner's policy. However, California passed a law in 1985 requiring companies that sold fire insurance to also offer coverage for the peril of earthquakes. After seeing the devastation of the Northridge quake and realizing the potential liability, and after experiencing a significant increase in the demand for insurance from consumers reacting to the Northridge quake, insurers decided the risk was too great to handle. Rather than offer this coverage, many insurers chose not to write new homeowner's policies in California. In late 1995, the state legislature designed a catastrophic residential earthquake policy, effectively lowering the minimum standard for earthquake coverage. This strategy alleviated the problem, but did not solve it. In response, the California Earthquake Authority was formed the following year.

B. PROGRAM ORGANIZATION

There are basically two ways in which states can handle subsidence-related losses – as a direct insurer or through the use of a reinsurance facility. Generally, in the case of facilities operating as reinsurers, the facility reimburses insurers in the state for covered losses stemming from the insured peril (i.e. mine subsidence, earthquake, or flood). However, Ohio, claims are paid directly from the fund to the homeowner. In all states, the fund retains the ultimate determination of whether or not a claim is to be paid.

In the case of the facilities operating as a primary insurer, the facility takes on the role of writing coverage directly for the insured without the use of a primary insurer. In each case, the scope of responsibilities and the services provided by the facility can vary. The facilities examined that operate as reinsurers are the Illinois Mine Subsidence Fund, the Ohio Mine Subsidence Fund, Kentucky Mine Subsidence Fund, Ohio Mine Subsidence Fund, West Virginia Mine Subsidence Fund, the California Earthquake Authority, and the National Flood Insurance Program. The Pennsylvania Mine Subsidence Insurance Fund is structured as an insurer.

Reinsurance Facilities

There are some basic similarities in the structure of the reinsurance programs. The basic aspects of the mine-subsidence facilities in Illinois, Ohio, Kentucky, Indiana, and West Virginia are discussed below along with the National Flood Insurance Program and California Earthquake Authority. Further details on the operations of the facilities are contained in later sections.

Illinois. Illinois began to operate the Illinois Mine Subsidence Insurance Fund (the Fund) in 1979. The Fund does not write the insurance directly, but acts as a reinsurer for approximately

250 insurers (Illinois Mine Subsidence Fund, 2003b). In the 34 counties designated as most susceptible to subsidence losses, the coverage is automatically included in property contracts. Insureds do have the option to waive the coverage. In all other counties, insurers must make the coverage available to those homeowners who request it. The Fund currently reinsures more than 350,000 policies. Under this plan, only structures are covered. Though private insurance companies write the coverage, the Fund sets the rates, assists in the underwriting process, and is responsible for investigating and settling losses.

Ohio. The Ohio Mine Subsidence Fund (OMSF) and the Ohio Mine Subsidence Insurance Underwriting Association (OMSIUA) were established in the mid-1980s. The OMSF was originally financed by the state and federal governments, but now operates as a reinsurance facility. Like the Illinois Mine Subsidence Fund, the OMSF has designated that coverage be mandatory in certain counties and requires insurers to make it available in several other counties but insureds can waive coverage. In addition, coverage is limited to damage to the dwelling. Like the Illinois Mine Subsidence Fund, the OMSF sets rates, whereas the OMSIUA is responsible for investigating claims. The Ohio Fair Plan Underwriting Association (OFPUA), however, handles claims administration.

Kentucky. Kentucky's Mine Subsidence Insurance Fund was established on July 13, 1984, and currently has more than 30,000 policyholders. Eligibility is determined by county. The fiscal courts of individual counties must approve of the availability of mine subsidence insurance within that county. Of the 55 eligible counties, where coal-bearing stratum is known to exist, 34 counties have chosen to participate in the mine subsidence insurance program (Kentucky Mine

Subsidence Insurance Fund Plan of Operation, Section 4, definitions 15 and 16). As in Illinois and Ohio, consumers living in counties that have mandated coverage can waive coverage, but consumers living in counties that have not chosen to participate in the program may not purchase mine subsidence insurance from the fund in Kentucky.

Indiana. In Indiana, the State Department of Natural Resources is tasked with the responsibility of maintaining a list of counties that are at least partially within the Illinois Coal Basin or underlain by coal-bearing rock formations of the Pennsylvanian system (Indiana Code 27-7-9-6). Mine subsidence insurance is only available in these counties identified by the DNR (currently 26). The insurance commissioner establishes premium rates. The commissioner also must annually evaluate experience data to determine if a rate adjustment is necessary.

West Virginia. In 1982, the West Virginia legislature decreed that the Board of Risk and Insurance Management would establish and administer a coal mine subsidence reinsurance facility. The mine subsidence program accounts for only about 3 percent of the Board's overall losses, and less than 5 percent of its total revenue. Coverage is mandated in certain counties, but can be waived by the insured. Unlike Kentucky's program, consumers living in West Virginia counties that are exempt from the mandate can still purchase mine subsidence insurance from an insurer, but the consumers must request the coverage (it is not automatically offered). The Board establishes premium rates that reflect the experience of the program, making changes if necessary. Claims investigation is handled by the board, which approves all payments.

National Flood Insurance Program. The National Flood Insurance Program (NFIP) was established in 1968, with the hopes of reducing future flood damage by encouraging communities to develop floodplain management ordinances. In exchange for doing so, communities would be able to help their residents obtain some protection from flood disasters through an insurance program. The NFIP is operated as a reinsurance facility.

California Earthquake Authority. California passed a law in 1985 requiring companies that sold fire insurance to also offer coverage for the peril of earthquakes. In late 1995, the state legislature designed a catastrophic residential earthquake policy, effectively lowering the minimum standard for earthquake coverage. The residual market did not provide an adequate solution for California. As a result, the California Earthquake Authority was formed the following year. The California Earthquake Authority operates as a reinsurance facility, with participating insurers writing policies and investigating claims. Of the facilities examined, California Earthquake Authority is the only facility that reinsures some of the risks it has underwritten.

Direct Insurer

In contrast to other mine-subsidence facilities, Pennsylvania has opted to operate its mine-subsidence facility as a direct insurer, handling all aspects of the insurance functions, from establishing and collecting premiums to investigating and settling claims (Pennsylvania Department of Environmental Protection, 2002b). Pennsylvania created the Mine Subsidence Insurance Fund in 1961. The Mine Subsidence Insurance Fund offers insurance directly to homeowners and is administered by the Mine Subsidence Insurance Board, which is part of the

Pennsylvania Department of Environmental Protection. Coverage is only available to residential homeowners and only covers structures.

C. TRAINING, COMMUNICATION, AND EDUCATION

Among the states with subsidence programs, the mission of consumer education has varying degrees of emphasis. All of the states have information available on the Internet, but some states have significantly more information than others. Both the National Flood Insurance Program and the California Earthquake Authority see consumer education as a significant responsibility, as well as a marketing tool. Several examples of training, communication, and educational material are included for sample purposes in Appendix F-A list of the programs' websites also is provided in Appendix F-a.

Illinois

The Illinois Mine Subsidence Insurance Fund maintains a website that provides a wealth of information to consumers. This includes basic information on mine subsidence and the damage mine subsidence can cause to property. Mine maps for affected counties also are provided. In addition, there is a section that provides answers to frequently asked questions, as well as brochures that cover topics such as whether or not a homeowner needs mine subsidence coverage and how coverage can be obtained. Several years of annual reports also are available. The most recent annual report available can be found in Appendix K-a.

Ohio

The Ohio mine subsidence insurance program provides all kinds of consumer information on its website, from the history of the program to detailed instructions on how to file a claim. It also provides: (1) all the forms used in providing coverage are available online, both for consumers and for insurers; (2) detailed statistics on the number of mines in each county; and (3)

a frequency asked questions section similar to that of the Illinois fund. In addition, several years of annual reports are available online. Claims experience by county is contained in the reports. The most recent annual report can be found in Appendix K-c. Finally, the program provides speakers for individuals, groups, and government agencies on the topic of the mine subsidence program.

Kentucky

Kentucky provides some information on its website including a booklet entitled, "Insuring Your Property Against Underground Mine Collapse" (see Appendix F-b-ii). It describes the history of the program, lists the counties in which coverage is offered, explains what is and what is not covered under the program, and details the types of mine subsidence. It also explains the claims handling process.

National Flood Insurance Program

The National Flood Insurance Program has an exhaustive Internet site with a wealth of information for consumers, claims adjusters, insurance professionals, lenders, surveyors, and state and local officials. The site includes, detailed mapping data, answers to most questions, and a large quantity of data at both the state and county levels. More than 40 official publications also are available online.

California Earthquake Authority

The website for the California Earthquake Authority provides a great deal of information, as well as several publications for consumers and insurers. The CEA has extensive information

on the history of the facility, coverage details, and the determination of rates. The CEA also has a premium calculator, which consumers can use to estimate premiums might be under different scenarios. For example, consumers can see how much it costs to have a 10 percent rather than a 15 percent deductible. Additionally, the CEA has a separate section available for agents of member companies.

D. UNIFORM EVALUATION AND PROCESS STANDARDS

Several of the programs studied have worked to develop uniform evaluations standards. Commonly, insurers are responsible for the initial investigation and to issuances of payment if damage is clearly caused by subsidence. However, some states have the subsidence fund investigate the claim in all situations. In all states, the fund retains the ultimate determination of whether or not a claim is to be paid. The following information contains a sample of the standards provided by some of the facilities.

Illinois

The Illinois Mine Subsidence Fund recently implemented a new claims processing system. In 2002, the fund began using what it terms "Designated Adjusters." These are adjusters with a minimum of two years of experience handling property claims that also have received specialized training of the Fund on the identification of mine subsidence losses. The purposed of using these adjusters is to: 1) improve the accuracy of identifying mine subsidence losses; 2) cut down on claims processing time; and 3) provide the insured with a single contact person to address questions. The adjuster reports to the claim supervisor of the respective insurance companies.

Ohio

In Ohio, the Ohio Mine Subsidence Insurance Underwriting Association (OMSIUA) directly handles claims investigation. If needed, the fund will pay the costs of qualified engineers to assist in determining whether a subsidence loss is covered. In addition, claims can be electronically submitted to the facility through the website.

Kentucky

In Kentucky, the initial claims investigation is handled by the insurer. If the insurer questions the cause of the loss, the fund will contact a consultant adjuster to issue an opinion. If this consultant adjuster is unable to certify the cause of the reported loss, the administrator of the fund may use a geological firm to verify:

1. That mining did in fact take place in the immediate area,
2. The date of mining activity (Claims from mining prior to 8/3/1977 are paid from the fund, but claims from mining after 8/3/1977 are expected to be paid by the responsible mining company. The responsible company will also be expected to pay for claim investigation services).
3. That the cause of the loss is mine subsidence, and not other causes of earth movement such as settling, landslide, or earthquake.

The geological firm then reports to the fund, and copies of all correspondence are sent to the insurer. The claims payment is made to the insured by the insurance company, and then the fund reimburses the insurer. The adjustment costs are paid by the fund. Both the insurer and the fund retain the right of subrogation, so that if a mining company is later found to be responsible, the fund and the insurer may have some recourse.

Indiana

In Indiana, the initial claim investigation is done by the insurer; however, the fund becomes involved in claims investigation as soon as the insurer determines that mine subsidence is a potential cause of loss. The statute that created the mine subsidence insurance program gave the commissioner the authority to use either the fund's staff or contract with outside providers to assist in the loss adjustment process. As with the funds in most other states, claims are paid by the insurer, and reimbursed by the fund upon verification of the loss.

West Virginia

In West Virginia, the Board of Risk and Insurance Management handles claims investigation and approves all payments.

National Flood Insurance Program

Claims of the National Flood Insurance Program are handled in a coordinated, strategic fashion. Typically, after a major flood, a Flood Response Office is established in the region to assist in adjustment of sustained losses. Adjusters can use the resources of the office to expedite claims processing.

California Earthquake Authority

The California Earthquake Authority encourages claims to be made to the insurance company through which the policy was purchased. However, claims can be reported directly to the fund. In this case, the authority forwards the claim to the appropriate insurance company. The insurance companies issue payment, and apply to the fund for reimbursement.

E. CONSULTING SERVICES FOR INSURERS

Many of the services provided by the funds have been described in other parts of the report. However, for completeness, some of the main consulting and service functions of the facilities for the insurers are described. These services include underwriting, marketing, and claims assistance.

Underwriting

In states that have mine subsidence reinsurance facilities, the insurance companies issue policies that are then reinsured by the facilities. The facilities have information on eligibility requirements, which are typically defined by statute. The scope on underwriting authority varies by facility.

Illinois. The Illinois Mine Subsidence fund assists in the underwriting process, by assessing eligibility requirements and providing reinsurance forms and other plan documents to member insurers.

Ohio. The Ohio Mine Subsidence Insurance Underwriting Association (OMSIUA) provides a detailed procedural manual that outlines not only eligibility requirements, but also the limits of liability and the rating schedule. Applications and coverage forms are included as well.

Pennsylvania. Pennsylvania operates its mine subsidence facility as a direct insurer. For this reason, it has historically handled all of the underwriting functions. Although recently, Pennsylvania has enlisted the help of insurers to assist in the offering process. The Board has

designated territories that are eligible for mine subsidence insurance. The Board reviews applications to ensure that the policyholders' property meets the relevant criteria.

Marketing

Several of the funds provide services related to the marketing of the mine subsidence insurance products. The use of pamphlets and brochures is also common among the states with mine subsidence facilities.

Illinois. Illinois publishes two brochures, entitled "What You Should Know About Mine Subsidence When Buying A Home" and "Insurance For Your Property Against Loss From Mine Subsidence". Illinois also publishes a sheet of frequently asked questions, entitled, "Do I Need Mine Subsidence Insurance?" Please refer to Appendix – F-b-i for copies of these documents.

Kentucky. Kentucky publishes a booklet entitled "Insuring Your Property Against Underground Mine Collapse". A copy of this document can be found in Appendix – F-b-ii.

Pennsylvania. As mentioned previously, Pennsylvania has started to enlist private insurers to help market its mine subsidence insurance policies as well as using the contracted services of a marketing firm.

These publications are available to insurers and to the public, and can be found in Appendix F. Additional information related to marketing can be found in the training, communication, and education section.

Claims

Facilities also provide services to the insurer in the form of claim investigation. In Pennsylvania and Ohio, the claims process is entirely initiated and completed by the fund. In the other states with mine subsidence facilities, there are varying degrees of cooperation between insurers and the respective funds. The involvement of the fund in the claims process is discussed in detail in the "Uniform Evaluation and Processing Standards" section.

F. PUBLIC DATABASE OF CLAIMS AND EXPOSURE

The fund facilities in the various states compile their own databases of information regarding claims for internal use. Kentucky, Pennsylvania, Ohio, and Illinois all have internal documents, but do not share any of their information, citing insurance privacy acts. In addition, in some cases the funds and other government agencies or entities compile data related to these perils or the areas that are most prone to the peril. For example, a listing of abandoned mines is available from the Abandoned Mine Land Program. Maps of the known abandoned mines in most of the states and several tribal areas are available (see Appendix H for examples of maps from this source).

Illinois

Illinois provides detailed information about old mines through the clerks' offices of the various counties. This information is available from the fund's website. In addition, the Illinois Department of Natural Resources, Office of Mines and Minerals has information available to consumers.

Indiana

The statute establishing the fund in Indiana requires that the fund provide a report every three years that summarizes: "(1) the number of claims filed; (2) amount paid for each claim; and (3) the amount remaining in the mine subsidence insurance fund." In addition, Indiana will share information on a case-by-case basis, and eventually plans to make some information public (Personal Interview).

Ohio

The OMSUA provides claims information by county in its annual report. It includes claims activity such as the number of reported claims and the number of closed claims, as well as policy information, such as the number of polices in forces as well as premium volume. In addition, the amount of reserves, as well as total claims payments and loss adjustments expenses are reported.

National Flood Insurance Program

The NFIP provides a variety of statistics on its website. This includes information by state and by county. Specifically, the number of open and closed claims as well as the total payments made during the year are provided beginning in 1978. In addition, the number of policies in force and premium information is included.

G. HOUSING OF FACILITY

The funds vary in the way in which they are housed in the state and the way in which the fund reports to other state organizations. Additional details can be found in the statutes related to each facility. Copies of the statutes can be found in Appendix E.

Illinois

The Illinois Mine Subsidence Insurance Fund is independent, but is overseen by the Illinois Division of Insurance. The Board of Directors for the fund consists of six members with insurance industry experience, four members of the public, and an insurance agent. The Fund's responsibilities are providing reinsurance to insurers for mine subsidence losses, establishing rating schedules, assisting insurers in the underwriting process, and investigating claims.

Ohio

In Ohio, three entities are involved in the administration of the mine subsidence program. Every insurer selling property insurance in the state must be a member of the Ohio Mine Subsidence Insurance Underwriting Association. OMSIUA is governed by the mine subsidence insurance governing board, which consists of the Director of Natural Resources, the Superintendent of Insurance, and an insurance industry representative from an Ohio-domiciled carrier. The board is responsible for the plan of operation of the Ohio Mine Subsidence Insurance Fund. The Ohio Fair Plan Underwriting Association handles claims administration.

Indiana

In Indiana, oversight of the Indiana Mine Subsidence Insurance Fund and the Indiana Mine Subsidence Insurance Program rests with the Consumer Services Division of the Indiana Department of Insurance. A deputy commissioner, reporting to the insurance commissioner, has primary responsibility for the funds operations.

West Virginia

In West Virginia, the mine subsidence program is housed within the state's Board of Risk and Insurance Management, which also provides for the development of the state's property and liability self-insurance program, in which more than 150 state agencies participate. The board is composed of five members appointed by the governor.

Kentucky

The Kentucky Mine Subsidence Insurance Fund is housed in the Division of State Risk and Insurance Services at the Department of Insurance, which administers the fund. The administrating division of the fund is permitted to designate a manager to handle the day to day operations of the fund.

Pennsylvania

In Pennsylvania, the Coal and Clay Mine Subsidence Fund is overseen by a Board of Directors, and is housed within the Department of Environmental Protection. The board consists

of the Secretary of Environmental Resources, as chair, the Commissioner of Insurance, and the State Treasurer.

National Flood Insurance Program

The NFIP is housed in the Mitigation Division of the Federal Emergency Management Administration (FEMA). FEMA is itself housed in the Department of Homeland Security.

California Earthquake Authority

The CEA's structure is unique in that it has both a governing board and an advisory panel. The governor, the treasurer, the insurance commissioner, the speaker of the assembly, and the chair of the senate rules committee comprise the board. The advisory panel consists of twelve members appointed by the governor, the insurance commissioner, the speaker of the assembly, and the chair of the senate rules committee, two of which must represent insurance carriers and one of which must be a licensed insurance agent.

H. TAX IMPLICATIONS

Traditionally, residual market mechanisms in the United States for auto insurance, property insurance, and other lines of insurance have been subject to federal income taxes, either directly or indirectly, through allocation of revenues and expenses to taxable member insurers. While these mechanisms are not for profit, they are usually structured as associations of their member insurers and are governed by boards whose members are selected substantially or wholly by the member insurers.

Examples of Residual Markets with Tax Exempt Status

Because of the hurricane and earthquake catastrophes in the 1990s, California, Florida, and Hawaii each established special insurance mechanisms that the Internal Revenue Service (IRS) determined were exempt from federal income taxes as "integral parts of the state." In each case the IRS issued one or more private letter rulings setting forth its analysis and conclusions. The entities covered by these private letter rulings were the California Earthquake Authority, the Florida Hurricane Catastrophe Fund (CAT FUND), and the Hawaii Hurricane Relief Fund (HHRF).

Separately, the Florida Residential Property and Casualty Joint Underwriting Association (JUA) undertook an effort in 1999 to obtain federal tax-exempt status by convincing the IRS that it was an integral part of the State of Florida. The JUA argued that it had substantially the same characteristics as the CEA, CAT FUND and HHRF. In 2000, the JUA filed a lawsuit in the U.S. District Court for the Northern District of Florida. The Federal Court received motions for

summary judgment and heard oral arguments in late 2001, and it ruled in favor of the JUA in early February 2002. [12]

As the JUA's lawsuit was nearing its conclusion in late 2001, Tom Gallagher, Florida's State Treasurer and Insurance Commissioner (now Chief Financial Officer), submitted a request to the IRS for a ruling that Citizen Property Insurance Corporation (CITIZENS) would be exempt from federal income taxes if the Florida Legislature enacted legislation he had proposed to combine the JUA and the Florida Windstorm Underwriting Association into CITIZENS. This request was submitted to the IRS in October 2001, and the IRS issued a favorable ruling in late February 2002. The IRS ruling was thought to be an important factor in the subsequent passage of the CITIZENS' legislation.[13]

IRS Position

The important question is what characteristics did the CEA, CAT FUND, HHRF, JUA and CITIZENS have that distinguished them from the dozens of traditional residual market mechanisms and that led the IRS and a federal court to grant them tax exempt status as an integral part of the state? The answer to this question will provide significant guidance to the Florida Legislature in developing legislation to establish a sinkhole insurance facility.

The IRS position on whether an enterprise is an integral part of the state has evolved through numerous IRS rulings and a limited number of court decisions. The recent position of the IRS is set forth in the statement below:

> (I)n determining whether an enterprise is an integral part of the state, it is necessary to consider all of the facts and circumstances, including the state's degree of control over the enterprise and the state's financial commitment to the enterprise.

[12] See Appendix I-a for a copy of the District Court ruling related to the JUA's request for tax-exempt status.
[13] See Appendices I-b and I-c for correspondence and rulings related to the tax-exempt status for CITIZENS.

The factors considered by the IRS do not constitute a bright line test but involve a weighing of the evidence. An enterprise, such as a residual market mechanism, falls somewhere along a spectrum with all private sector characteristics at one end and all governmental characteristics at the other. At some point on the spectrum, which is not clearly identified, an enterprise has enough governmental attributes to be considered an integral part of the state. With fewer such attributes, it does not achieve this status.

The IRS position set forth above focuses on, but is not limited to, two areas of interest: (1) the nature and extent of the state's control of the enterprise; and (2) the nature and extent of the state's financial commitment to the enterprise. While other factors are relevant, these two areas seem to be of utmost concern to the IRS.

Nature and Extent of State Control. The IRS seems to focus initially on the governing board that oversees and sets policy for the enterprise. It wants to see the board made up or under the clear control of one or more high-level government officials. This distinguishes the enterprise from those that are merely authorized by or regulated under state statutes. In this regard, the IRS has accepted various approaches to achieving direct state control.

California Earth Quake Authority - The governing board of the CEA consisted at the outset of the Governor, the Insurance Commissioner, and the State Treasurer. Later, two legislative leadership positions were added.

Florida CAT FUND - The CAT FUND's governing board is the State Board of Administration, which at the time of the CAT FUND's creation, consisted of the Governor, the State Treasurer, and the State Comptroller.

Hawaii Hurricane Relief Fund - The HHRF board consists of the Insurance Commissioner and six other members: two appointed by the Governor, two appointed by the Senate President, and two appointed by the Speaker of the House. In addition, the Governor appoints the board chairman and vice chairman.

CITIZENS and JUA - The legislation creating CITIZENS took a different but equally successful approach. Control of CITIZENS is placed with the Chief Financial Officer of Florida who appoints all members of the CITIZENS board, appoints the board chairman, and has the power to remove board members without cause. The JUA statute, which was initially enacted in December 1992, took a less direct approach, which contributed to the JUA having to sue the IRS to achieve tax exempt status. The State Treasurer had the authority to appoint eight of the 13 board members, which the JUA argued placed control of the JUA with the State Treasurer. This and numerous examples of indirect control of the JUA by the State Treasurer seems to have been sufficient to convince the Federal Court on this point.

Because residual market mechanisms typically operate pursuant to a plan of operation, the degree of state control over the plan of operation is a relevant consideration. The Office of Insurance Regulation (OIR) in the Department of Financial Services has the authority to approve or disapprove the CITIZENS' plan of operation by order, to subject the plan of operation to continuous review, and to withdraw approval by order of all or a portion of the plan of operation

if the OIR "determines that conditions have changed since approval was granted and that the purpose of the plan require changes in the plan." The JUA statute contained similar language before the creation of CITIZENS.

Nature and Extend of State Financial Commitment. With regard to the state's financial commitment to an enterprise, the IRS does not seem to favor any particular approach but does require a substantial financial contribution from the state at the outset or over the life of the enterprise.

California Earthquake Authority - The CEA is required by California law to include the state premium tax in its rates; however, the CEA is not required to pay the premium tax to the state. In its private letter ruling on the CEA, the IRS stated:

> California will have a significant financial interest in the (CEA). California effectively makes an annual contribution of the 2.35% premium tax equivalent that is charged to the policyholders and retained by the (CEA). The result is substantially the same in this case if California had collected the premium tax and contributed the full amount of that premium tax directly to the (CEA).

CITIZENS - The CITIZENS statute contains a variation of the CEA approach. The rates charged by CITIZENS include the state premium tax, which CITIZENS pays to the state. The CITIZENS' rates are also required by statute to include an additional amount equal to the state premium tax, which CITIZENS retains to augment its financial resources. This approach has three beneficial effects: (1) Florida state government continues to receive the same premium tax revenues it received previously; (2) CITIZENS receives a state-directed financial contribution

each year; and (3) the additional amount included in the CITIZENS' rates help keep the rates from being competitive with rates charged by private insurers.

The State of Florida's financial commitment to CITIZENS has a number of other elements. The CITIZENS statute provides exemptions from corporate income and intangible taxes and the express authority to levy and retain the proceeds of Market Equalization Surcharges on its policyholders. While these surcharges help keep CITIZENS' rates from being competitive with rates charged by private insurers, they also have the effect of directly supplementing the financial resources of CITIZENS.

Florida CAT FUND - The State of Florida's financial commitment to the CAT FUND was of a different nature. The Legislature appropriated $25 million to the CAT FUND each year during its initial two years of operation for a total of $50 million. Because the CAT FUND is housed in the State Board of Administration, it does not pay any state taxes such as premium taxes, corporate income taxes or intangible taxes.[14]

Hawaii Hurricane Relief Fund - The primary approach used by the State of Hawaii to fund the HHRF was to impose a one tenth of one percent special recording fee on the principal amount of various mortgage instruments. This fee was suspended as of July 1, 2001 when the HHRF was deactivated. The HHRF statute also exempts the HHRF from taxes and fees applicable to insurance companies.

Other Relevant Factors. While the state's degree of control of and financial commitment to the enterprise are very important, they are not the only considerations the IRS takes into account.

Fundamentally, the IRS evaluates all aspects of the enterprise to determine whether the enterprise is more public or more private in its purpose, nature and structure.

The CEA, CAT FUND, JUA, HHRF, and CITIZENS each have other characteristics that enhanced their public character and further differentiated them from private entities. These other characteristics were important elements in the ultimate judgment that these entities should be exempt from federal income taxation as an integral part of the state. Although none of these entities has all of the characteristics listed below, it is important to consider the applicability of these characteristics to any enterprise seeking tax exempt status.

- The CEA, CAT FUND, and CITIZENS statutes each have a clear statement of public purpose related to the benefits the state and its citizenry receive from having an insurance mechanism to make insurance coverage available when private insurers are unwilling or unable to do so and, thereby, enhance the public health, safety and welfare and the economy of the state and local governments.

- The CITIZENS statute includes a statement of legislative intent that income of CITIZENS be exempt from federal income taxation and that interest on the debt obligations issued by CITIZENS be exempt from federal income taxation. Similar language was contained in the CAT FUND statute.

- The CITIZENS statute states that "no part of the income of (CITIZENS) may inure to the benefit of any private person."

- All of the employees of the CEA except for the three senior executives are employees of the State of California.

- The CAT FUND is a state trust fund administered by the State Board of Administration, and the staff of the CAT FUND are SBA employees.

- The CITIZENS statute gives the Chief Financial Officer of Florida the power to engage the Executive Director and senior managers of CITIZENS, who serve at the CFO's pleasure. The statute also provides that the Executive Director is responsible for employing other staff as needed but that these hiring decisions are subject to review and concurrence by the Office of the CFO. This level of control over the staff of CITIZENS seems to have been acceptable to the IRS as an alternative to its apparent preference for most or all of the staff being state employees.

[14] See Appendices I-d and I-e for IRS communications concerning the tax-exempt status of the Florida CAT FUND.

- The HHRF statute places the HHRF in the Department of Commerce and Community Affairs for administrative purposes.

- CITIZENS is subject to the "Government in the Sunshine" Act and, with certain statutory exceptions, to the Public Records Act. During most of its existence, the JUA statute contained the same requirements.

- The CITIZENS statute requires that its rates not be competitive with rates of private insurers. This is intended to achieve the stated legislative intent that CITIZENS only provide coverage to those persons who are otherwise eligible to obtain coverage but are unable to obtain coverage in the private insurance market. The JUA statute had similar language.

- The CITIZENS statute provides that, upon dissolution of CITIZENS, all assets remaining after payment of obligations become the property of the State of Florida to be deposited into the CAT FUND. The JUA statute had similar language.

- The HHRF statute states that upon its dissolution net assets of the HHRF may be placed in either the state general revenue fund or the loss mitigation grant fund.

- The CAT FUND statute provides that, upon termination of the CAT FUND, all of its assets revert to the state general revenue fund.

- CITIZENS is required by statute to submit special monthly reports to the Office of Insurance Regulation beyond those required of private insurers.

- CITIZENS and its agents, employees, board members, committee members, and assessable insurers are granted statutory immunity from lawsuits, with certain exceptions. The JUA statute had similar language. The HHRF statute also has a similar immunity provision.

- Employees of CITIZENS (and before CITIZENS, employees of the JUA) have been issued State of Florida identification cards and authorized to utilize state travel and hotel discounts.

Summary

The experiences of the CEA, CAT FUND, HHRF, JUA, and CITIZENS all provide guidance regarding how similar state-created insurance mechanisms may be able to obtain exemption from federal income taxation as an integral part of the state. The statutes creating these entities had to shape their governance, structure, financing and operations to meet IRS guidelines related to: (1)

state control, (2) state financial commitment, and (3) other factors that, taken together, clearly established their public character and differentiated them from private entities.

I. AVAILABITY, COVERAGE OPTIONS, AND COSTS

For existing subsidence programs, most states require coverage to be offered to all residents in counties where mines are known to exist, through an endorsement of the homeowner's policy. Residents in counties where mines are not known to exist also may purchase coverage, though it is not mandatory to offer it. As shown in Appendix M, all six states with some type of subsidence program had different maximum coverage limits. All states also restrict coverage to the lower of the maximum limit or Coverage A of the insured's homeowners policy. The cost of mine subsidence insurance is relatively inexpensive, ranging from 10 cents per thousand dollars of coverage in Ohio to 83.4 cents per thousand dollars of coverage in Pennsylvania.[15] Typically, the rate is quoted at a base rate for the first level of coverage, and additional coverage at a lower rate per $5,000 of additional coverage. Most of the mine subsidence programs have identical deductible structures. When a loss occurs, the insured is responsible for two percent (2%) of the total coverage amount, but no less than $250 and no more than $500. The exception is Pennsylvania, where a $250 deductible applies, regardless of the size of the loss. Specific details related to the states are provided below. [16]

Illinois

In 34 counties of Illinois that are designated as most susceptible to loss, the coverage is automatically included in property contracts. The insureds have the option to waive the coverage. In all other counties of Illinois, coverage is available upon request. Illinois has increased its maximum coverage limit three times, bringing it to its current limit of $350,000 in

[15] The "cost per thousand" figure was calculated at each state's maximum coverage limit for residential structures. Commercial insurance is available in most states, though the premiums tend to be significantly higher.
[16] For states with publicly available rating schedules, the rate tables are included in Appendix J-a.

2003. The cost of the first $10,000 of coverage is $21, and each additional $10,000 in coverage costs $3.09.

Pennsylvania

In Pennsylvania, the homeowner must request coverage for mine subsidence. There is no mandatory offering requirement. The maximum coverage available was increased to $250,000 in 2003. The cost of coverage is $12.50 for the first $5,000 of coverage, and $4 for each $5,000 of additional coverage.

Ohio

Like Illinois, Ohio has designated that coverage be mandatory in certain counties and requires insurers to make coverage available in several other counties. Coverage is limited to damage to the dwelling, and losses are settled on an actual cash value basis. Ohio's coverage limit of $50,000 is the original coverage limit established when the program was created in 1987. However, the fund is currently considering an increase. Ohio has a flat premium schedule with the cost of coverage being $1 in counties where coverage is mandatory and $5 in counties where coverage is optional.

Kentucky

In Kentucky, 55 counties were deemed eligible based on the presence of coal-bearing stratum. Of these counties, 34 have chosen to participate in the mine subsidence insurance program. Coverage can be waived by consumers living in counties that have mandated an offer of coverage, but consumers living in counties that have not chosen to participate in the program

may not purchase mine subsidence insurance form the fund. The coverage is available on an actual cash value basis for the structure only. In 1998, Kentucky increased its maximum coverage to $100,000 from $50,000, the only increase in its limit since the inception of the program. The first $15,000 of coverage costs $10, and each additional $5,000 of coverage costs $1.

Indiana

In Indiana, the state department of natural resources is tasked with the responsibility of maintaining a list of counties that are at least partially within the Illinois Coal Basin or underlain by coal-bearing rock formations of the Pennsylvanian system (Indiana Code 27-7-9-6). Mine subsidence insurance is only available in the counties identified by the DNR (currently 26). The coverage is available on an actual cash value basis for the structure only. Indiana has increased its limit four times, and its most recent increase (in 2001) raised the maximum amount of coverage available to $300,000. Indiana's premium structure is similar to that of Illinois. However, the cost per $1,000 of insurance is slightly higher at the higher limits of coverage.

West Virginia

In West Virginia, the availability of coverage is similar to that of the other states discussed so far, in that coverage is mandated in certain counties, but can be waived by the insured. Unlike Kentucky's program, consumers living in West Virginia counties that are exempt from the mandate can still purchase mine subsidence insurance from an insurer, but they must request the coverage (it isn't automatically offered). Coverage is available on a

replacement cost basis for the structure. West Virginia's limit of $75,000 was increased from $50,000 in 1985, with an additional increase currently being considered. The cost of coverage is $10 for the first $10,000 of insurance. Thereafter, each additional $5,000 of coverage costs another $1 in premium.

National Flood Insurance Program

Almost all of the nation's communities with serious flood potential have chosen to join the National Flood Insurance Program. To join, communities must establish guidelines and ordinances restricting land use and development in flood-prone areas. Insurance is offered through participating insurers to customers that live in these communities. Rates are primarily based on the zone classification in which the customer lives, but the age of the house and the presence of a basement are also factors in the rating process. The zone classifications are based on floodplain maps developed by the NFIP. In many cases, mortgage lenders will require flood insurance to be purchased if the home to be insured is in a zone with an annual flood chance of one percent (1%), commonly referred to as a "100-year flood".

Coverage for the structure is available on a replacement cost basis, while contents are covered at actual cash value. In addition, the maximum coverage limit is the lower of $250,000 or the limit of coverage that applies to Coverage A of the insured's homeowner's policy. The cost of flood insurance depends on a number of factors, and widely varying rates can result.[17] The National Flood Insurance Program has created maps showing the likelihood of flood disaster for a given area. Each area is classified into one of 12 zones. These zones are the primary determinant of flood insurance rates, along with the age of the building and the presence of a

[17] Historical rates and other data about the experience of the NFIP are available in Appendix K-g.

basement. Depending on the above rating factors, premiums can range from $351 to $2,855 for $100,000 of coverage on a single-family home. Additionally, discounts ranging from five to forty-five percent (5% - 45%) of the total premium can be given to residents in communities that have floodplain management ordinances that go beyond the requirements for participation in the program. Overall, dividing total premiums collected by the total dollar amount of coverage in force for 2003 yields an average rate of $2.75 per $1,000 of coverage. The NFIP offers a range of deductibles on the structure. The standard deductibles are $500 and $1,000, but may be optionally increased to $5,000. Similarly, the standard deductibles on contents are $500 and $1,000, but may be optionally increased up to $25,000.

The California Earthquake Authority

The California Earthquake Authority offers earthquake insurance to all residents of California through a network of participating insurers. Rates are based on location relative to known fault lines (approximated by ZIP codes), the age of the building, and its construction type. Coverage is available throughout the state, but sixty-six percent (66%) of the policies are sold in southern California (Los Angeles, Orange, Riverside, San Bernadino, and San Diego counties). Coverage for the structure and contents are covered on a replacement cost basis.

The California Earthquake Authority is unique in that imposes no upper limit on coverage other than the limit of Coverage A of the insured's homeowner's policy. Under the original establishment of the California Earthquake Authority, contents coverage was originally capped at $5,000, but a recent change to the program allowed customers to purchase additional contents coverage (up to $100,000) for an additional premium. The cost of earthquake insurance from the California Earthquake Authority also depends upon several factors very similar to the ones used

to determine rates for flood insurance.[18] The California Earthquake Authority determines premiums based on the age of the building, construction type, and location of the structure relative to known fault lines (approximated by ZIP codes). The CEA has calculated that the average rate for earthquake insurance is $2.79 per $1,000 of coverage. The California Earthquake Authority's program features much larger deductibles than the other facilities. In the event of a loss, the insured must pay the first ten or fifteen percent (10% or 15%) of the total coverage in force. In other words, a person with a $15,000 loss on a $100,000 policy with a fifteen (15%) deductible would receive no insurance payout. There are additional restrictions. Other structures (Coverage B in the standard homeowner's policy) are excluded, as are sidewalks, landscaping, and pools.

[18] Historical rates and other data about the experience of the CEA are available in Appendix K-f.

J. ECONOMIC IMPACT OF FACILITIES[19]

The states with subsidence funds discussed here report actuarially sound fund operations. In fact, two of these states (Ohio and Kentucky) recently decreased premium rates. A federal grant was used to start the operation of the Kentucky Mine Subsidence Insurance Fund. Ohio had both state and federal appropriations. In all cases, the programs are entirely funded from premium collections. The end of this section contains a description of some of those other sources of funding.

Illinois

In 2000 and 2001, the Illinois Mine Subsidence Fund incurred more than $17 million in residential claims and took in more than $12 million in earned premiums each year. Due to favorable investment experience during the period and changes in accounting principles, the surplus grew 20 percent in 2001, even with a combined ratio of 108 percent for residential losses (Illinois Mine Subsidence Insurance Fund, 2001). In 2002, Illinois recorded its 8th consecutive year that the Fund of positive net income. The combined surplus of the Fund rose to a record high of $23 million.

Indiana

Within the Indiana Handbook of Taxes, Revenues, and Appropriations, the financial status of the Mine Subsidence Insurance Fund is summarized. The summary includes premium information, earnings, and total revenue for the previous five years. Earnings more than doubled

[19] When available, financial statements of the subsidence facilities are presented in Appendix K. States included are Illinois, Indiana, Ohio, Pennsylvania, West Virginia. The California Earthquake Authority, and the National Flood Insurance Program also are included.

from 1998 to 2002, with total revenue reaching $945,858 in 2002. In addition, there has been in increase in premiums over the same period.

Ohio

In Ohio, between 2000 and 2001, the OMSF received more than 200 new claims and paid more than $1.3 million in existing claims (Ohio Mine Subsidence Insurance Underwriting Association, 2001). The OMSF currently insures more than 600,000 homeowners through member insurers (Ohio Insurance Institute, 2003). According to the Ohio Mine Subsidence Insurance Underwriting Association's annual report, its fund balance has remained in excess of $11 million since 2000, with premiums reaching nearly $730,000 in 2003. Disbursements from the OMSF in 2002 were approximately $724,000, compared to approximately $636,000 in 2000 (Ohio Mine Subsidence Insurance Underwriting Association, 2001; Deters, 2002).

Pennsylvania

Detailed financial and operational data are reported by the fund on a yearly basis. For the year ended June 9, 2003, Pennsylvania had 53,250 policies in force, providing a total of $5,134,000,000 in coverage (Pennsylvania Annual Report, 2003). The fund also had just under $40,000,000 in reserves. In 2003, the fund paid out more than $1 million in claims with the average claim payment being nearly $35,000. This is more than three times the amount of claims paid in 2002.

West Virginia

Very little information is publicly available on the financial health of the West Virginia fund. Within the Board of Risk and Insurance Management's annual report, the percentage of losses relative to other types and the percentage of operating revenue the fund generates is the extent of the data. From 1987 to 2002, losses incurred related to mine subsidence was three percent of total losses. As of the end of the 2002 fiscal year, the revenue generated from the fund represents less than five percent of the total operating review of the Board.

National Flood Insurance Program

The National Flood Insurance Program also is actuarially sound. In 2003 (the most recent year for which data were available), the National Flood Insurance Program collected just under $1.9 billion in premiums on $690 billion in coverage written on 4.5 million policies. In recent years, it has not been uncommon for loss payouts to be less than one half of the total premiums collected, allowing the program to build a substantial surplus ($700 million in 2001). Detailed financial statistics about the National Flood Insurance Program can be found in Appendix K-g.

California Earthquake Authority

In slightly more than a year's time, the CEA became the world's largest residential earthquake insurer, when measured by total policies written and total premiums. The California Earthquake Authority has been given an A- rating by A.M. Best, which represents a grade of "Excellent". The CEA has just under $2 billion on hand in reserves, which have been generated from premiums over the eight years. Currently, the CEA has approximately 750,000 policies in

force. In addition, and for the year 2003, the CEA received just over $400 million in premiums and has a total of about $7 billion in claims-paying ability. The CEA also purchases reinsurance, and has other financing commitments for several billion additional dollars, should it become necessary. Claims-paying ability should increase over time, as additional premiums are collected and reserves are built up. In the meantime, if an earthquake causes damage in excess of the facility's ability to pay, insured policyholders will receive a prorated portion of their covered losses, based on expected losses and available funds.

Other Government Programs and Funding Sources

The Surface Mining Control and Reclamation Act of 1977 created the National Association of Abandoned Mine Land Programs (NAAMLP), which currently has 30 member states and tribes. The states receive government appropriations from the Office of Surface Mining Reclamation and Enforcement (OSMRE) to fund state-run programs. Appropriations are obtained from the industry. For example, more than $1 billion has been collected from the Wyoming coal industry since the inception of the NAAMLP. Wyoming has spent the majority of the $333 million appropriated by the OSMRE on reclaiming mines, with a portion spent assisting public facilities affected by mine subsidence (Wyoming's Department of Environmental Quality, 1998).

In addition to providing funds for mine reclamation, the NAAMLP serves several other purposes, one of which is the sharing of information. As declared in its mission statement, the NAAMLP provides a "forum to address current issues, discuss common problems, and share new technologies regarding the reclamation of abandoned mine lands" (National Association of Abandoned Mine Land Programs, 2002). Besides this service, the NAAMLP also works with

other organizations, including the Interstate Mining Compact Commission, on the effective use of natural resources and other common issues.

Pennsylvania, Kentucky, and Indiana all have had success with mine reclamation projects. These projects can be costly and time consuming and are not always funded entirely by the NAAMLP. For example, one Kentucky project cost close to $900,000 and took approximately 10 months to complete. The Appalachian Clean Stream Initiative provided more than sixty percent (60%) of the cost of the project (National Association of Abandoned Mine Land Programs, 2002).

Pennsylvania established an initiative called Reclaim PA through the Bureau of Abandoned Mine Reclamation. The initiative is projected to cost the state approximately $15 million (Pennsylvania Department of Environmental Projection, 2002a). In Indiana, the Division of Reclamation falls under the Department of Natural Resources. Coal operators pay a $.03 per ton reclamation fee on mined surface coal to provide 12.5 percent of the division's budget. Revenue from the general fund and federal grants are the other main source of the division's budget (Access Indiana, 2003).

In Texas, subsidence due to the depletion of groundwater is being mitigated through a type of loss control implemented by the Texas Legislature. In 1975, Article XVI, Section 59, of the Texas Constitution created the Harris-Galveston Coastal Subsidence District by what is commonly known as the "Conservation Amendment." The District reviews permits for groundwater use with respect to the relative effect of a particular pumping on subsidence and other factors. As a result of the District's efforts, groundwater depletion has slowed and the level of subsidence has been reduced (Jensen, 1985).

K. ALTERNATIVE DISPUTE RESOLUTION

Among the several states with mine subsidence facilities, denial rates tend to be high. For example, in 2002 in Illinois, 507 mine subsidence claims were filed, and only 68 were paid by the fund (Illinois Annual Report, 2002). The following section outlines samples of the alternative dispute resolution policies in use by the facilities.

Pennsylvania. In Pennsylvania, it is common for 150-250 claims to be filed each year, of which between 14-50 will be paid (Personal Interview). Despite this high denial rate, disputes are relatively rare, suggesting that most filed claims do not represent mine subsidence losses. In Pennsylvania, should anyone have a claim denied by the fund, he or she may appeal the denial to the Environmental Hearing Board.

Kentucky. In Kentucky, if the insurer disagrees with the Administrator's determination of the Fund's obligation to pay any reinsured claim, the insurer is entitled to a hearing before the Commissioner (or a representative), who must then make findings of fact, conclusions of law, and enter an order. (Kentucky Plan of Operations, page 16, part B, located in Appendix E-c-i of this report) If the insurer disagrees with the order, the insurer may appeal to the Franklin Circuit Court (KRS 304.2-370). A copy of the statute can be found in Appendix E-a-iv.

West Virginia. West Virginia has an identical process (WV 33-30-7, WV 33-2-13, and WV 33-2-14). A copy of the statute can be found in Appendix E-a-vii.

V. APPLICABILITY AND SUGGESTIONS FOR THE FLORIDA MARKET

A. OVERVIEW

The history of state responses to insurance market problems related to automobile insurance, workers compensation insurance, property and windstorm insurance, earthquake insurance, and mine subsidence insurance provides many examples of different approaches to the structure of residual market mechanisms. By drawing on this experience, the Florida Legislature will be able to resolve the key placement, governance and financial issues inherent in the creation of an effective sinkhole insurance facility in Florida, if it believes action is necessary. The discussion below focuses on the following topics: 1) program organization; 2) training, communication, and education; 3) uniform evaluation standards; 3) consulting services for insurers; 4) public database of claims and exposures; 4) housing of the facility; 5) tax implications; 6) availability, coverage options, and costs; 7) economic impact of facilities; 8) alternative dispute resolution; 9) affordability and insurability of the peril; and 10) impact on Florida statutes.

B. PROGRAM ORGANIZATION

Traditionally, most residual market mechanisms are established as free-standing insurance operations organizationally separate from the state government that created them. This approach is independent of the amount of control the state has over the residual market mechanism. It seems to be related to the view that the day-to-day operation of a residual market mechanism is not an appropriate governmental function and that the entity would operate more efficiently if it were not encumbered with state procedural requirements. The residual market mechanisms in Florida for auto insurance, homeowners insurance, and workers compensation insurance were all established as free-standing insurance operations.

Most of the mine subsidence funds and the CAT FUND were established within state agencies, although they typically outsource certain functions. This may be because these entities having limited operational activities and contact with individual policyholders.

Another approach would be to establish a sinkhole facility as a component of an existing entity such as the CAT FUND, if the facility were to operate as a reinsurer, or Citizens Property Insurance Corporation (Citizens), if it were to operate as a direct insurer. The advantage of this approach is that the CAT FUND and Citizens have existing resources that would not have to be replicated in a new entity. The principal disadvantage is that the CAT FUND and Citizens each have complex responsibilities and significant challenges, and adding a new responsibility with a different nature, scope and focus could have a detrimental effect on their primary mission.

C. TRAINING, COMMUNICATION, AND EDUCATION

The focus of training, communication, and educational efforts is "… the public, engineers, the construction industry, insurance professionals, [and] others." This diverse population dictates a combined approach to these efforts. This would be done in conjunction with any facility that arises from this research effort. An obvious entity to be involved is FGS, especially if the recommended improvements to their sinkhole database can be made. FGS would pursue outreach efforts to get improved data into the hands of those who would make use of it, especially engineers and the construction industry. It has been suggested that an early training initiative would focus on the use of "minimum threshold" standards for verification of a sinkhole. That verification would then be the basis of cost estimates and recommendations for appropriate remediation procedures.

D. UNIFORM EVALUATION STANDARDS

Recommendations of the Florida Geological Survey on Investigation[20]

The protocols provided herein are intended for the use of geological and geotechnical consultants to assist in standardizing subsidence claim investigations. These procedures are not intended to replace site-specific activities. They are, however, offered as guidelines to assist in developing sufficient information to confirm the cause(s) of subsidence-related damage to a structure. These guidelines are listed in the sequence that typically should be followed, where possible. It is not suggested that all the tests are appropriate in every situation. Good professional geological practice and judgment dictate necessary testing.

Subsidence Investigation Protocols

1. Use of Professional Judgment

    a. These guidelines are intended to standardize subsidence investigations initiated to determine the presence of a sinkhole loss as defined in the Florida Statutes.

    b. The professional investigator has the final responsibility for determining the specific procedures and amount of data necessary to complete the investigation in accordance with their professional license obligations and the requirements of §627.707 F.S.

    c. Modifications of these methods or procedures, reflecting appropriate professional judgment, should be documented and justified.

    d. These protocols are intended to be a comprehensive listing and brief discussion of those methods and procedures professionals have at their disposal to carry out such an investigation. Clearly site specific circumstances and economic capabilities of site owners must be reasonably weighed to determine what constitutes an adequate assessment to render a defendable interpretation. This is the call of the experienced professional carrying out the project. The goal is to minimize uncertainty in the final interpretation while maintaining a reasonable cost / benefit ratio.

2. Professional Qualifications

[20] The Florida Geological Survey following Sinkhole Summit II. As such the protocols reflect the input from all participants.

a. Professional Engineering and Professional Geology firms are required to hold Certificates of Authorization under Chapter 492 F.S. (geology) or Chapter 471 F.S. (engineering) to practice in the State of Florida. Similarly the individual professional consultant who performs subsidence investigations and who signs and seals work for geological or engineering firms, or practicing independently, must be licensed to practice as either a Professional Engineer qualified in geology, or a Professional Geologist in the State of Florida. Professionals doing work only for their parent company and others employed as teachers or instructors also must comply with these licensing requirements if such work is to be submitted to a government agency for public record.

b. The professional consultant should be expected to provide evidence of training and experience in identifying subsidence caused by sinkholes, expansive clays, organic-rich soils, slope stability, and other processes that cause subsidence. Appropriate training and expertise in the various subspecialties listed in these protocols should also be identified.

3. Professional Practice

a. At the conclusion of the investigation the professional will render an opinion within a reasonable degree of scientific or engineering probability as to the cause(s) of the damage in a professionally signed and sealed report.

b. It is not sufficient to simply rule out a sinkhole loss. The most reasonable cause of damage must be presented with supporting data.

c. ASTM or other published standard methods should be utilized wherever possible as appropriate based on professional judgment (i.e. standard geologic and geophysical field methods).

4. Initial Data Gathering

a. Background Data Collection - To the extent possible, it is recommended that the following information be obtained in order to better design and execute a subsidence investigation.

i. Regional / local geomorphology, areal extent of nearby geologic features, depth to competent rock, and lithologic, stratigraphic, and hydrogeologic characteristics of strata likely to be present at the site,

ii. Site elevation, topography, and drainage features as observed on relevant USGS 1:24,000 topographic quadrangle maps of the vicinity, supplemented by smaller scale, more detailed of same if available,

iii. Soil conditions as reported in the county soil survey,

iv. Nearby historic sinkholes as available from the FGS sinkhole database, local agencies, and private vendors (many are accessible on-line),

v. Historic aerial photographs that depict features that may represent sinkholes, wetlands, previous land uses, or other relevant features applicable to the site vicinity. It is important to keep in mind semi-circular depressions, wetlands, and other features observed on aerial photographs or other remotely sensed images may not always be sinkhole or karst features. Without ground truthing, these features must be treated as indicators, not proof of the existence of possible nearby sinkholes.

vi. Relative elevations of the surficial, intermediate, and/or Floridan aquifer system potentiometric surfaces as represented in current water management district or U. S. Geological Survey (USGS) maps, and elevations of surface water bodies in the vicinity of the site. Significant rainfall events that preceded the sinkhole lose date should be noted.

vii. Date of construction of the structure, notations of any additions, and other relevant information as obtained from the county property appraiser's web sites or owner (reference the source).

b. Preliminary Site Inspection

i. An interview with the owner(s) or owner representative(s)

1. Nature and extent of the damage to the structure,

2. Timing of damage,

3. Presence of additions to the building,

4. Nature and timing of any previous repairs,

5. Any known buried debris, removed tree stumps, old wells, etc., and

6. Information concerning other sinkhole claims in the immediate neighborhood of the site,

ii. Inspection of the grounds and immediate vicinity

1. Suspicious land surface features,

2. Overhanging trees and roots,

3. Land slopes,

4. Retaining walls,

5. Water bodies, recent changes in hydrologic conditions (rainfall events, changes in potentiometric level, nearby pumping centers?) and,

6. Utilities.

iii. Detailed photographs of the structure from all sides and of the observed damage / distress, including a sketch map showing the locations of damage and photographs, and

iv. Access issues for subsequent geophysical and geotechnical evaluation activities.

c. Organize the Results of the Preliminary Site Inspection in the form of field notes

i. A sketch map drawn to scale and photographs showing locations of damage to the structure in sufficient detail and dated that they can be identified at a later time.

ii. Maximum widths of cracks (where measured and location information, or photo location details).

iii. Land slope, depressions, soil erosion, stressed vegetation, and water features.

iv. Evidence of past or present stress to neighboring structures, driveways, streets, and retaining walls. Document trees, fences, or retaining walls that lean down slope.

v. Locations of septic tank, pool, gutters and downspouts, drainage ways, buried utilities, on-site water wells, and other hydrologic features.

vi. Results of owner interview including past performance of the structure and history and timing of the damage.

vii. Information concerning

1. Site flooding concerns or areas of historic flooding.

2. Proximity to wellfields or other ground-water extraction facilities,

3. New construction in the area (especially involving heavy equipment and/or blasting), and

4. Locations of nearby sinkholes or neighbors who have filed sinkhole claims, or sinkholes known to have been filled. Locations of houses or other structures that have been remediated because of a sinkhole loss. Determine if nearby structures on adjacent property have been grouted. Collect dates if available.

5. Geophysical Site Characterization

a. Concurrent with or following the site reconnaissance. Surface geophysical methods should be used (in most cases) to characterize subsurface geology, identify anomalous

subsurface conditions, and to provide guidance in selecting locations for invasive tests such as trenches, borings, etc.

b. The investigation method or methods selected should be sufficient to allow interpretation to be able to discern shallow conditions that are likely to have directly affected the structure in order to conform to the definition of "sinkhole loss" contained in §627.706 F.S.

c. When making field measurements, it is highly recommended that more than one set of data be used to aid in an interpretation. When two or more sets of different data agree, there is a higher degree of confidence in the results and the associated interpretation. For example, if a Ground Penetrating Radar survey indicates the presence of broken dipping strata and a test boring placed in the center of the anomaly identifies very loose sediments or voids; we can have a high degree of confidence in the interpretation of the presence of an active sinkhole.

d. Applicable geophysical investigation methods which may be useful include;

    i. Ground penetrating radar (GPR, including 3D-GPR),

    ii. Electrical resistivity soundings or profiling (ER),

    iii. 2-D Multi-electrode resistivity (2DER or MER),

    iv. Capacitive-coupled resistivity (CCR, Ohm-Mapper),

    v. Micro Gravity survey (MGS),

    vi. Magnetometer, Metal Detector, or EM31 measurements (often used to identify buried utilities which may impact other geophysical measurements),

    vii. Surface Wave measurements including Multispectral Analysis (MASW) and Spectral Analysis (SASW),

    viii. Choice of geophysical method and data reduction techniques should be in accordance with relevant ASTM or other accepted methods and chosen as appropriate based on local stratigraphy, hydrogeology, terrain, and cultural features. The spatial coverage of surface geophysical data should be sufficient to extend beyond the boundary of the possible sinkhole affected area. The data density should be close enough to define small localized sinkhole conditions. As one example, see ASTM Standard Guide for Selecting Surface Geophysical Methods D 6429-99.

    ix. There are other geophysical methods and technologies that are not typically used for shallow subsurface investigations; however they could have application in certain cases. Some of them are: Time-Domain Electromagnetic (TDEM) Surveys, Transient Electromagnetic (TEM) Soundings, Induced Polarization (IP), Seismic Refraction, Seismic Reflection,

several cross-hole geophysical methods, and numerous remote sensing techniques. There may be other appropriate methods and new technologies are being developed by researchers continuously. If new technologies are utilized, they should be thoroughly documented in order to establish their acceptance in the geological / geophysical community, validity, and reproducibility of the method.

e. GPR is a commonly used method for Florida sinkhole investigations owing to its ability to resolve details of shallow soil and rock conditions. The main limitation of GPR is its site specific performance and the depth of penetration is limited by shallow clays, hardpan soils, or high conductivity pore fluids. Other methods can be used when they are appropriate to the problem and local subsurface geology. Note that electrical resistivity methods are less impacted by subsurface clays or groundwater quality; however, they are prone to unique interpretation problems when utilized in urban environments where conductive and/or resistive materials near buildings and other structures are present. Direct Current ER, however, has been shown to have depth capabilities much greater than GPR approaches. Also note CCR may have limited applications in Florida due to shallow water tables which yield higher conductivity reducing signal strength.

f. Ground penetrating radar (GPR) – has best application in dry sandy soil conditions (depth of penetration impacted by clay layers, hardpan soils, and groundwater quality).

    i. A grid sufficient to ascertain near subsurface conditions should be designed by an experienced professional. Typically a maximum of an approximate 10-foot grid within the affected property is considered adequate.

    ii. Include the interior of the structure, where appropriate.

    iii. Identify affected areas on a site map for placement of subsurface tests (soil borings or soundings). The choice of boring location within an anomaly should consider proximity to the damaged structure and any significant surface or subsurface features located within an anomaly.

    iv. A shielded antenna should always be used to avoid interference from overhead and metallic objects. GPR instrumentation conditions, including the frequency of the antenna used, time settings, and other relevant parameters, should be included in the report.

g. Electrical resistivity methods – can be especially useful where there is shallow groundwater, hardpan soils, or shallow clays (but the method is not limited to such situations, in fact it can be applied to deep groundwater and clay-free subsurface environments).

    i. Electrical resistivity soundings (ER)

1. It is critical that the locations chosen for ER investigation be selected with cognizance of electrical interferences, such as fences, utilities, and the structure itself. All possible interference sources should be noted in the report and program design must account for such.

2. If ER is utilized, it is recommended that the ER investigation be coupled with GPR data or a second independent data set (such as borehole data).

3. All conditions of the testing, including electrode configuration(s), data reduction methods, and number of iterations required to produce the final interpretations, will be discussed in the report.

ii. Two dimensional electrical resistivity (2DER or MER)

1. All conditions of the testing, including electrode configuration(s), data conditioning (removal of data points, etc.), data reduction methods, and number of iterations to produce the final depth section or other interpretative results, must be discussed in the report.

2. It is critical that the locations chosen for these investigations be selected with cognizance of electrical interferences, such as fences, utilities, and the structure itself. Locations of potential interferences must be discussed in the report and accounted for in program design.

iii. Note that ASTM Standards D-6429, D6431-99, and G57-95a address various ER procedures and data acquisition procedures. These should be followed as appropriate or deviations noted and explained.

h. Capcitively-coupled resistivity methods (CCR).

i. Generally limited use in areas with shallow water table. However, instrument can penetrate to greater depths if the near-surface materials are relatively resistant. Shallow groundwater increases the conductivity resulting in reduced signal strength. Subject to the same conditions as identified for 2DER testing cited above.

i. All geophysical investigation reports should include:

i. Site maps showing locations of all measurements (stations, profile lines, traverses soundings or grids) along with all other data collection procedures and a discussion of why these locations were selected.

ii. Specific locations and interpretation of all anomalous areas.

iii. Uninterpreted raw-data should be included as appendices.

iv. Identify the limitations of the method, and any problems with data acquisition or data processing. Discuss any assumptions made or used as a precursor to interpreted results or data processing.

v. If the results of measurements are processed and interpreted by computer (i.e. data is entered into software and a cross section contoured by computer) provide other independent data or steps to verify or confirm the results.

j. Because of the three dimensional aspects of sinkholes and other geologic hazards, every effort must be taken to ensure that the land surrounding the affected structure is adequately investigated, based on an understanding of the local and regional hydrogeology.

6. Floor Mapping (often a valuable tool to assist with the determination of structural causes of observed damage and could yield information corroborating or discounting a sinkhole as the likely cause)

a. Used to identify locations where the structure's floor is depressed or elevated beyond tolerances allowed by the applicable Florida Building Code.

b. Acceptable methods include (1) transit and stadia rod, (2) manometer, and (3) laser level.

c. A base location that can be reoccupied for subsequent mapping should be identified in the report and be as permanent as possible.

d. Care should be taken to minimize accumulation of error while moving the instrument, including use of closed loops or resection of "shot" points when utilizing transit or laser level.

e. Accuracy of the survey measurements should be at least 0.01 foot.

f. Differences in floor coverings should be accounted for.

i. Paired measurement points located at floor-covering transitions.

ii. Field notes should indicate the nature and thickness of floor coverings.

g. Results reported through properly contoured map with accurate scale and elevation representations. The base location and transitions in constructed floor elevations (sunken rooms, elevated rooms, etc.) should be indicated.

h. The results of the contour map should be compared to tolerances in floor elevation allowed by the building code prevalent at the time of construction of the structure.

7. Subsurface Geotechnical Testing & Geological Interpretations

a. Locations of all boreholes, soundings, and other testing activities to be reported.

i. A control site or tie-back hole should be established for comparisons of anomalous results. In densely populated urban settings this may be difficult to access or not feasible due to overall scale of the feature vs. lot size.

ii. Discuss why each testing site or line was selected

iii. Hole locations should be carefully located and measurements necessary to allow for relocation of the test holes should be indicated in the report.

b. All soil testing procedures should follow ASTM methods or other published procedures. Again professional judgment prevails and should be explained.

c. If there is more than one foot of relief on the site, a leveling device should be used to determine the relative elevations of each test hole. The benchmark used for these levels should be a permanent feature on the lot that can be easily located for future investigation.

d. Dynamic penetration tests, such as; the Standard Penetration Testing (SPT), Baecher penetration test (BPT), and dynamic cone penetration test (DCPT).

i. SPT location criteria.

1. Locations identified by the geophysical investigation as anomalous features.

2. May choose to explore only those geophysical anomalies nearest the structure, preferably near areas of greatest damage with adequate justification.

3. If no anomalies are detected or if the anomalies are distant from the damage identified during the initial site visit, locate the SPT tests in close proximity to the damaged portions of the structure.

4. If sinkhole loss related geophysical anomalies or known or suspected sinkholes are distant, a SPT boring can be placed between the feature and the house in order to determine if the house has been affected by the processes that may have caused the remote feature.

ii. Ensure that all potential subsurface causes of the damage are adequately characterized. Adequate characterization will include enough testing to reasonably confirm any subsurface cause(s) of the damage.

iii. Site and location specific drilling equipment (truck or trailer mounted models, hand augers, and tripod) should be used. The only rationale for not drilling where the cause of the damage is likely to be manifested should be human health and safety or inability to obtain legal access. These should be documented in the report.

iv. Utility location procedures should be followed to ensure the safety of drilling crews and others on site as well as the structure. Where local or state requirements exist for utilization of the services of utility location providers, they will be utilized. (note, that utility location services will usually only work on public right-of-way and not on private property)

v. The boring materials recovered and their depths should be documented and described in the drilling log. It is recommended that these shallow soils be tested by a calibrated manual cone penetrometer in order to complete documentation of the relative strengths of materials encountered in the boreholes.

vi. All test holes should be backfilled or grouted in general accordance with applicable procedures established by the county or water management districts in Florida.

e. Cone penetration tests - mechanical (CPT), electric CPT, piezocone (CPTU), seismic piezocone (SCPTU), resistivity piezocone (RCPTU) and horizontal stress cone (HSC). Location criteria same as for d. above.

i. Use of CPT soundings often is used because the data may assist with the indication of raveling soils.

ii. Conductivity tips are useful to determine the presence and continuity of a clay confining layer.

iii. All sounding locations should be located relative to landmarks so they can be identified at a later date.

f. Auger Borings (hand, tripod, trailer, truck mounted, etc)

i. Advanced near the foundation for identification of soil depth and classification.

ii. A calibrated manual cone penetrometer is recommended for testing strengths of soils in the auger holes.

iii. All hand auger holes should be located relative to landmarks so they can be identified at a later date.

iv. If more than one foot of relief is present, the relative elevations of the borings should be determined by leveling.

v. It is recommended that a hand auger boring be advanced at each of the four primary corners of the structure and in any areas of concern, such as depressions elsewhere on the property.

vi. All holes created by auger boring will be properly filled.

g. Manual Cone Penetrometer (CPT) Soundings

   i. Used for determination of the relative strengths of soils near the foundation of the structure and in areas of concern.

   ii. Hand penetrometers should be calibrated.

   iii. Report results of the soundings, including units of soil strength measurement.

   iv. Report whether the soil strengths determined by CPT were taken in hand auger borings or other excavations where side friction is minimal or in undisturbed soil.

h. Foundation Test Pits

   i. The consultant should attempt to obtain design documents from the owner or local building department if there is any question as to design elements in the foundation of the structure.

   ii. If the foundation design and materials upon which the structure rests is unknown, at least one test pit should be dug in the vicinity of the most damaged part of the structure.

   iii. It may be necessary for a qualified licensed engineer to supervise this activity to avoid exacerbation of the damage. A qualified engineer (geotechnical or structural) should prepare conclusions as to foundation issues based on the test pit and structural observations.

   iv. Additional test pits may be required under the foundations of any additions to the structure. Appropriate backfilling must be done to insure foundation integrity.

i. Ground-water Levels

   i. Depth of static water level should be measured in any hole where water is encountered. Elevation differences if present throughout the site or property should be noted and plotted. Where possible a water table map of the site, from this data should be prepared.

   ii. If no groundwater is encountered, note in the log of each auger hole or piezometer reading.

j. Reporting

   i. Boring logs should be prepared for all test holes (SPT, CPT, PCPT, hand auger, other test holes).

1. These should include detailed soil or rock descriptions, including the Unified Soil Classification (ASTM D-2487 or –2488) and notation of mottling, bedding, small-scale lithologic variations, grain size range (gradation), and Munsell colors. Other scientifically accepted description methods can also be utilized. These should be appropriately referenced and defined. Examples include: Field Book for Describing and Sampling Soils, 2002, published by the National Soil Survey Center, U.S. Dept. of Agriculture; Manual of Field Geology, by R.R. Compton, published by Wiley & Sons, Inc.; and Handbook for Logging Carbonate Rocks, by D.G. Bebout, and R.G. Loucks, Handbook 5, Texas Bureau of Economic Geology.

2. Terminology should conform to ASTM D-653 method or it should be defined and referenced within the report.

3. Note the depth of any partial or total loss of drilling fluid circulation.

4. Note weight-of-rod or weight-of-hammer strength materials and voids will be noted in the boring logs. Note variable depth of bedrock.

ii. Color photographs or soil samples should be taken of key soil conditions, such as the presence of debris or organics. A statement that roots were found is not sufficient to attribute the subsidence to decaying organics. If construction debris or other anthropogenic material is encountered, photograph sample materials to ensure adequate documentation.

iii. If site relief is more than one foot, the graphic logs of the borings in the report should be placed in their relative vertical positions using the arbitrary datum used for leveling of their elevations.

k. Soil / Sediment / Rock - Sample Containers

i. All soil, rock, or debris samples will be stored in properly marked, sealed containers in anticipation that they will be retained for long periods of time and are likely to be used as evidence.

ii. “Chain of custody” procedures should be established and followed.

l. Other down hole testing.

i. Based upon professional judgment and site specific circumstances (structure size, economics, etc.) geophysical logging may provide useful information. This typically may include a natural gamma log and an induction (conductivity) log. See ASTM Standard Guide for Planning and Conducting Borehole Geophysical Logging D 5753-95.

ii. As above (site specific judgment), hole to hole Up-hole or Down-hole testing may be utilized in some cases to provide seismic P and Shear wave velocities

or resistivity or radar data. For hole to hole seismic tests see ASTM Standard Test Methods for Cross-hole Seismic Testing D 4428/D 4428M-91.

8. Laboratory Testing

a. If clay-rich strata are found within 20 feet of the land surface, the following laboratory tests are suggested:

   i. A minimum of three samples should be tested according to these procedures.

   ii. Atterberg limits.

   iii. Percent natural moisture content.

   iv. Gradation (grain-size) distribution information, including the fraction smaller than the 200-mesh U.S. Standard sieve.

   v. It is recommended that the fraction smaller than the 200 mesh sieve should be determined to identify the percent silt and clay, and that a hydrometer test, or equivalent, be conducted to determine the percent smaller than 2 microns.

   vi. If shrink / swell clays are suspected, an appropriate mineralogy test should be conducted. Typically this would be an x-ray diffraction interpretation. Alternatively elemental / chemical analysis also has use in this regard.

b. If organic-rich soils are suspected or detected within the exploration depth, the natural moisture content and percent organics should be determined on representative samples. If “peat” is recovered, then a grain size distribution and composition description should be carried out on such samples.

c. If debris, including natural wood fragments and construction debris, is detected and considered a possible cause of the damage, there is no need for laboratory testing.

   i. Document the nature and extent of the debris through samples and photographs that illustrate the size and make-up of the debris.

   ii. Samples of the debris will be collected and retained (see below), where practicable.

9. Structural Inspection

a. Many sinkhole claims may be the result of deterioration, construction defects or modifications in structures. Therefore, a qualified structural engineer should evaluate the damage that cannot be directly attributed to natural earth processes to ascertain the cause and origin of the damage and assess integrity of the structure.

b. The engineering inspection should be in concert with the geoscience assessment and be of a sufficient scope for determination as to whether the damage is consistent with

sinkhole activity or some other geological process, anthropogenic subsurface causes (buried utilities, etc.), or any structural or construction related causes.

i. Structural issues of concern include compliance with the prevalent building code at the time of construction,

ii. The effects of modification of the structure, including building additions, changes in load- and non-load-bearing walls, and modifications of the foundation, and

iii. The effects of leaking water or sewer lines, other buried utilities, wind damage, or other events that may cause damage.

a. The final report should include:

i. Photographs of the damage, including damage critical to cause determination, and information locating the subject(s) of the images(s).

ii. A listing of damage by room or elevation with analysis of damage causes, where evident.

iii. A statement as to the cause(s) of damage from the perspective of the structural analysis.

10. Final Report

a. Include all of the documentation cited above, plus

i. A simple explanation of the consultant's professional opinion as to the cause of the damage within a reasonable degree of engineering or scientific probability.

ii. Include all of the evidence used to draw conclusions concerning causation.

iii. It is not sufficient to say that the cause is not a sinkhole – the cause of damage should be suggested.

iv. All raw, uninterpreted data should be included as appendices. This allows the reader to better understand the data source used to derive the various anomalies and geologic or geotechnical interpretations, and it enables later investigators to understand the results.

b. If no cause can be identified, the investigator should recommend additional testing to determine the cause(s).

c. The report will contain a statement certifying the results of the investigation according to the requirements of §627.707 F.S.

d. All persons responsible for the interpretation of the data and preparation of the conclusions of the report shall be registered as either an engineer or geologist in Florida and will sign and seal the report indicating their profession and registration number.

e. A copy of the final report should be submitted to the Florida Geological Survey if legally permissible.

11. Retention of Samples and Data

a. All photographs, field notes, and other documentary materials will be retained by the consultant for an appropriate period of time.

b. All soil, sediment, rock, or debris samples will be retained by the consultant for an appropriate period of time.

Recommendations on Remediation

Sinkhole Remediation Meeting. On Friday, January 21, 2005 a meeting was held at the facilities of Ardaman and Associates in Orlando, Florida to discuss the alternatives available for remediation of sinkhole damage to real property. The following persons attended the meeting:

- John T. Bell, P.E., Coloney Bell Engineering
- Steve Brunk, Chief Operations Officer, GeoJect, Inc.
- Chuck Cunningham, Ardaman and Associates
- Bill Dunk, Nationwide Insurance
- Dean Elliott, Operations Manager, Hayward Baker Inc.
- Roger Jeffery, P.E., Structural Division Director, TLC Engineering for Architecture
- Tom Keller, Butler Pappas LLP
- Ron Maggard, P.G., Senior Geologist, HSA Engineers & Scientists
- John Marquardt, P.E., Senior Geotechnical Engineer, HSA Engineers & Scientists
- Jim Mehltretter, Master Consulting Engineers
- Ramzy Moumneh, President, GeoJect, Inc.
- Mike Wilson, P.E., Ardaman and Associates

Also present were Dr. Richard Corbett of Florida State University, moderator, Patrick F. Maroney of Florida State, and Dr. Walt Schmidt of the Florida Geological Survey. Prof. Maroney provided an introduction detailing the rationale and legislative authorization for the current study and the results of previous studies of sinkhole problems in Florida. There was

mention of the possibility of a residual market facility for insurance coverage for sinkhole damage and of the value of such a facility in attracting private market insurers to write property insurance in the state.

Dr. Schmidt then reviewed the participation of the Florida Geological Survey (FGS) in the 1992 sinkhole study and detailed the part FGS plays in the current study. He focused on the logic of a two-step process: 1) clear scientific determination of the existence of a sinkhole, and, 2) an appropriate remediation strategy. Dr. Schmidt then discussed the existing database on sinkhole activity housed at FGS.

This led to a general discussion of various issues related to the database and its use. A key point of this discussion was that the database needs extensive revision and correction to be of use in public policy decisions. There is currently no distinction made in the database between "sinkhole" reports and actual, scientifically verified sinkholes. A question that arose is whether the database included payments made where an insurer made a "business decision" to pay an insured, without an actual, scientific verification of a sinkhole. These questions speak to our state of knowledge about the actual frequency and severity of sinkholes in Florida. The issue of the database and its maintenance is addressed elsewhere in this report.

Dr. Schmidt addressed the need for standardized approach to initial determination of whether property damage is a result of a sinkhole. He stressed the need for "scientifically credible" techniques in this initial review. He then noted that such techniques and their application would allow for both an upgrade in the quality of information in the database and an upgrade in construction permitting. It was noted that only Leon County now requires soil testing, i.e., 10-foot soil borings, for a residential construction site.

As Dr. Schmidt's remarks were discussed, it became clear that the focus of "remediation activity" often related to "foundation failures" as a causal factor as opposed to sinkholes. It was agreed that the key is to remediate by making the foundation of a structure once again suitable for use. It was also agreed that foundation failures sometimes result from faulty construction. In this vein, there were comments about the low incidence of sinkhole damage at commercial sites, likely due to the greater incentive to do pre-construction testing of site suitability. This led to comments that ultimately the "sinkhole problem" is related to land use issues.

After Dr. Schmidt's remarks and the discussion that followed, the topic shifted to actual remediation efforts for sinkhole damage to real property. Several key aspects of a successful remediation were agreed to. Those include the following.

- The person assessing the damage and causation must have appropriate professional credentials.
- The person assessing the damage and causation must use appropriate techniques and adhere to the "responsibility rules" of the profession (either engineering or geology).
- The person assessing the damage and causation must apply some minimum criteria to these determinations.
- There must be adequate time to conduct a thorough inspection. (It was noted that time pressures my lead to inadequate inspection and incorrect assessments.)
- The focus must be on the foundation failure.
- Any successful remediation effort must provide a true "fix" for the foundation failure.
- The overall effort must be cost effective. (It was generally agreed that a remediation effort that costs more than a property owner's insurance limits could not be considered cost effective.)

Assuming the above, there was general agreement that there are a limited number of legitimate techniques for remediation of sinkhole damage/ foundation failure. Those techniques are *compaction grouting, bridging/ underpinning, and a combination of grouting and*

underpinning. There was also general agreement that the process involves site examination, site preparation, and then the remediation effort.

The discussion then shifted to the possibility that some efforts could be made on a pre-construction basis to reduce the potential for sinkholes and subsequent property damage. It was noted that insurance companies might recognize such efforts with premium discounts, a clear incentive to make these efforts. Tools identified as usable in the pre-construction phase of property use include collapse and filtering. These involve changing the nature of the site by collapsing and compacting fragile land formations to provide a more stable construction site. These would be done under the direction of geotechnical and structural engineers. In essence, an effort would be made to assure that a site was appropriately prepared for the intended use.

There was a discussion of the efficacy of currently used grouting techniques. Grouting is not an exact science, as the depth of the limestone formation becomes an issue in the use of the technique. The point of grouting is to seal off the "neck" of the fissure in the site where soils are raveling and reducing the amount of material supporting the construction.

It seems clear that in some cases grouting has been used as a remediation before there was adequate geotechnical analysis to identify the exact problem. This may have been because of a "business decision" by an insurance company. This led to the following suggestions;

- All potential remediation sites should be inspected by a structural engineer;
- Remediation should be subjected to strict permitting requirements;
- There should be a system of assigning zones or ratings to areas reflecting the relative likelihood of sinkhole occurrence.

One person not able to attend asked that the following comments be included in the record. "In considering methods and techniques for sinkhole remediation, … we must be cautious in our

search for a 'better mousetrap.' *In addition, the objective of the remediation must be clear and consistent.* Through the years we have seen a growing trend in the use of underpinning or steel mini piles for sinkhole remediation. While underpinning is an excellent technique for foundation repair and stabilization, used alone it does not address the sinkhole condition when that has been determined to be the cause of the foundation failure. History and experience have proven that the most effective method of stopping the sinkhole mechanism is to inject a low mobility grout material to seal off the limestone surface at the soil/ rock interface. While combining these two techniques would be cost effective, several factors must be considered.

1. Does the installation equipment have the ability to install the steel pipe directly adjacent to the structure's foundation? Improperly placed, small diameter piles with highly cantilevered loads will have little value.

2. Does the installation equipment have the ability to insure that the pile is advanced all the way to the top of the limestone? Small, limited access drilling equipment is often limited in torque capacity.

3. Once the grout material is injected, do we know where the grout material is going? Also, can the grout material be injected with a consistency that will allow it maintain quality underground, below the water table?

While new techniques should be considered, we must be careful to investigate and qualify them before we allow trusting homeowners to risk their largest investment on a system that has yet to be proven. The new Geo-Ject method of injecting grout laterally into the soil is not a unique idea. In-depth investigation will show that these methods have been tried in many grouting techniques."

The participants then directed their attention to several larger issues. First was the issue of a possibility "facility" for sinkhole insurance and its role in setting standards for determining that a sinkhole has occurred and applicable remediation techniques. It was agreed that such a

facility would be useful in encouraging a “meeting of the minds” of structural, architectural, and geotechnical engineers to research the causes and prevention of foundation failures generally.

Finally, the issue of standards for sinkhole identification and remediation was discussed in the context of having a two-level standard, where the first level would be the application of “minimum threshold” standards. The second level would be the application of professional standards, as those are understood within the various involved disciplines. This would allow for the elimination at an early stage of incidents that were not true sinkhole incidents, adding credibility to the FGS database and improving our knowledge of underlying frequency and severity of occurrence.

Summary. The key findings of this discussion of sinkhole remediation activity are as follows.

- All sinkhole remediation activity must be based on scientific determination by a qualified professional that a sinkhole has occurred.
- There is a need to further the science of remediation technology.
- There is a need to improve the quality and accessibility of the FGS database.

E. CONSULTING SERVICES FOR INSURERS

Specific recommendations related to underwriting and pricing guidelines, claims administration and investigation as well as marketing responsibilities are premature at this time. They will be developed as appropriate when details regarding where such a facility will be housed, and its role as a direct insurer or reinsurer is defined.

F. PUBLIC DATABASE OF CLAIMS AND EXPOSURE

The current sinkhole database is maintained by FGS on an *ad hoc* basis. In discussions with Walt Schmidt, State Geologist and FGS Chief, it becomes clear that the quality and accessibility of the database will be improved only if there is recognition in the FGS budget that the database must be maintained on a "real-time" basis. An improved database will be helpful in outreach and educational efforts. The current database is updated sporadically and the data in it are a function of mainly volunteer reporting efforts. FGS has GIS capabilities, but they have not been able to use personnel to make site visits to do confirmations of reported sinkholes. FGS does make data available on its web site.

A key issue in improving the database is how all involved entities can be encouraged to submit reports to the database administrator. Essentially voluntary compliance has resulted in an incomplete database. Legislation mandating reporting, perhaps coupled with a limited public records exemption might assist with needed improvements.

A useable database that reflected the needs of "consumers and … the insurance, building construction, banking, and real estate industries…" would contain, at minimum, the following:

- Reports of sinkholes;
- Confirmations of sinkholes, based on site visits and application of scientific criteria;
- Dollar amounts of paid sinkhole loss claims by insurance companies;
- The remediation technique applied to the particular loss;
- Reports of whether the remediation effort was successful;
- Reports of instances when remediation was not feasible and property was either abandoned or converted to another use.

The current reporting form used by FGS can be accessed at http://www.dep.state.fl.us/geology/forms/sinkholereport/sinkreportform.htm.

G. HOUSING OF FACILITY

The governing boards of most residual market mechanisms have traditionally been made up entirely or primarily of insurance company representatives. One reason for this is that insurance industry representatives have the knowledge and experience necessary to provide oversight and guidance to residual market mechanisms, which in some cases are the equivalent of sizeable insurance companies. Another consideration is that in most residual market mechanisms private insurance companies are subject to assessment if the entity has a financial shortfall. As a result, insurance companies want to be in a position to have oversight of and involvement in the entity's operations and finances. The recent trend is for governing boards of residual market mechanisms to have a number of non-insurance members to provide a broader, and in some cases consumer-oriented, perspective.

Several of the mine subsidence funds are under the control of either (a) the insurance commissioner or another state official, (b) entities such as the state board of risk and insurance management or the state risk and insurance division in the insurance department, or (c) boards made up of state officials such as the secretary of environmental resources, director of natural resources, insurance commissioner, and state treasurer. The CAT FUND is part of the State Board of Administration, which is overseen by Florida's Governor, Chief Financial Officer, and Attorney General. As reinsurance mechanisms, these entities do not have the complex insurance operations typically found in many residual market mechanisms, but they have issues where the perspective and expertise of government officials is relevant.

As discussed in another section of the report, the governance issue is critical to whether a sinkhole facility in Florida will be able to achieve exemption from federal income taxation as an integral part of the state. The Internal Revenue Service will look carefully at the nature and

degree of control that the state has over the sinkhole facility. If the Florida Legislature wants the sinkhole facility to be federal tax exempt, then it should (a) place the facility in a state agency where a state official or board would have direct control or (b) create the facility as a free-standing entity with the authority to appoint and remove board members placed clearly in the hands of one or more state officials. The first approach was used with the CAT FUND, while the second was used with Citizens.

H. TAX IMPLICATIONS

As described in Section IV.h. of the report, the decision the Legislature makes regarding the structure, placement, governance, and financing issues discussed above will be the primary determinants of whether a sinkhole facility will be exempt from federal income taxes as a state3 agency or as an integral part of the state. Because the size of a sinkhole facility will almost certainly be much smaller than entities such as the CAT FUND and CITIZENS, the Legislature will need to evaluate carefully other considerations to establish the priority to place on achieving tax-exempt status

I. AVAILABILITY, COVERAGE OPTIONS, AND COSTS

For a study to adequately examine the feasibility of operating a facility that insures sinkhole losses, it is vital that the data are sufficient and accurately reflect the Florida marketplace as it relates to sinkhole losses. For the purposes of this study, an external data set is being compiled that provides aggregated Florida residential loss costs data and the data set includes a substantial majority of the residential loss exposure units in the marketplace.

The data used in this study will be Florida residential property loss exposure data from 1997 to 2003. Data collected will include the following: Construction Type, Number of Policies, Total Coverage A Premium, Total Number of Claims: Coverage A, B, C, and D, Total Number of Sinkhole Claim: Coverage A, B, C, and D, Total Dollar Losses: Coverage A, B, C, and D, Total Dollar Sinkhole Losses: Coverage A, B, C, and D. Also included will be separate data for owners and tenants policies.

To ultimately address the questions of feasibility and adequacy, the study will first evaluate the trends in premium volume, loss costs, and loss frequency as it relates to sink hole and non-sink holes residential property losses. Using this information, the study will then analyze and evaluate the various funding options and costs of operating a facility in order to ascertain the premium levels necessary to ensure that premiums charged by the facility are adequate.

J. ECONOMIC IMPACT OF FACILITIES

When the FRPCJUA and the FWUA issued over $1 billion in pre-event bonds in 1995, this may have been the first time that residual market mechanisms had gone to the capital markets for part of their funding. These actions illustrate the fundamental issue facing residual market mechanisms of how to assure their initial and long-term financial capability to meet their claim obligations during periods of financial stress. This issue arises in part because state governments have not assumed responsibility for financial shortfalls in the residual market mechanisms they created.

The traditional approach in Florida and elsewhere has been to apportion financial shortfalls (deficits) among relevant groups of insurance companies based on market share. This approach can work well for residual market mechanisms in lines of business without catastrophic exposure or in situations where residual market rates are not artificially suppressed below needed levels. In these cases, revenues from policyholders usually closely match claims and expenses, and at worst the financial shortfalls are modest.

Another approach that has been used in some of the mine subsidence funds is to not require payment of claims by an insurance company if sufficient cash is not available to reimburse the insurer for losses ceded to the fund. This seems to encourage those involved in overseeing the fund to assure that rates are set at needed levels and that claims are adjusted with care and professionalism. Some states have loaned money to the fund to cover a financial shortfall with the loan being repaid from future revenues. The CAT FUND uses a variation of this approach in that the CAT FUND is not obligated to make reimbursement payments to insurance companies beyond its cash on hand plus the amount it can borrow in the debt markets.

A related issue is whether the Florida Legislature is willing to make a financial contribution to a sinkhole facility. The first, and most important, consideration is whether a sinkhole facility in Florida will be able to achieve exemption from federal income taxation as an integral part of the state. In conducting its analysis, the IRS reviews the nature and size of the state's financial contribution to the entity. As discussed in another section of this report, the IRS has accepted state financial contributions in a variety of forms.

The second consideration is that any type of up front or continuing state financial contribution will reduce the possibility that a sinkhole facility will incur a financial shortfall. A sinkhole facility is unlikely to experience catastrophic losses, and as long as sinkhole insurance rates are set conservatively, a sinkhole facility is not likely to incur a financial shortfall from normal operations. An initial financial contribution from the state that addresses the IRS tax-exempt issues will also reduce the possibility that the sinkhole facility will not have the funds to pay early sinkhole losses if they arise before the entity can develop a meaningful capital base from premium income.

With the best of intentions, a sinkhole facility may still incur a financial shortfall. The Legislature will need to consider how the sinkhole facility will respond in this event and how it will obtain the cash necessary to meet its obligations.

K. ALTERNATIVE DISPUTE RESOLUTION

The perceived costs and delays associated with litigation are often the subject of criticism. As a result, alternative means of resolving disputes have come into vogue. The most common forms of alternative dispute resolution are arbitration, mediation, mediation-arbitration, neutral case evaluation, mini-trial, and summary jury trial. Many states, by statute, also allow litigants to refer a lawsuit to a private judge for resolution. This procedure is commonly known as "rent-a-judge."

In arbitration a neutral third party or panel hears the dispute and renders a decision. The proceeding may be binding or non-binding. The scope of judicial review is usually limited. In mediation, a neutral party--the mediator--attempts to help the parties to negotiate a solution. Unlike a judge, however, the mediator has no power to impose a decision. In binding mediation the parties agree that if a resolution is not reached by the parties, the mediator can impose a binding decision. In mediation-arbitration, it is agreed that if mediation fails the dispute will proceed to arbitration.

Another formalized method of settlement negotiation is the mini-trial, which generally shortens the time for preparing for trial. Like mediation, the mini-trial is usually conducted before a neutral advisor who advises and may render a non-binding opinion. In a summary jury trial, the adviser’s role is assumed by a jury, but the verdict is non binding. Another cost-saving development is the use of a neutral third party to perform an early neutral case evaluation.

The study will gather input from various constituencies to compile information about the ADR mechanisms that are most effective in Florida and most appropriate in addressing the immediate problem. Florida Statutes and Rules to be addressed include the following:

Section 627.7015 Alternative Procedure for Resolution of Disputed Property Insurance Claims This section of the Florida Statutes sets out a non-adversarial ADR procedure for handling disputed property insurance claims in personal lines. It does not apply to commercial coverages, private passenger motor vehicle insurance coverages, or to disputes relating to liability coverages contained in property insurance policies. It calls for an informal, non-threatening mediated claim resolution conference, which is available to claimants and insurers prior to commencement of the appraisal process or litigation. The costs of the mediation must be reasonable and are borne by the insurer (with some specified exceptions). At the time a first-party claim is filed, the insurer must notify all first-party claimants of their right to participate in the mediation program. All parties to the mediation must negotiate in good faith and must have the authority to immediately settle the claim. The mediation is non-binding; however, if a written settlement is reached, the insured has three business days within which the insured may rescind the settlement (unless the insured has cashed or deposited any check or draft received as a result of the conference). If a settlement agreement is reached and is not rescinded, it is binding and acts as a release of all specific claims presented in the mediation conference. The mediation process is applicable to any dispute between an insurer and insured relating to a material issue of fact. However, it may not be used for disputes: (1) with respect to which the insurer has a reasonable basis to suspect fraud; (2) where, based on agreed-upon facts as to the cause of loss, there is no coverage under the policy; (3) with respect to which the insurer reasonably believes that the claimant has intentionally made a material misrepresentation of fact and payment has been denied on the basis of that material misrepresentation; or (4) with respect

to which the amount in controversy is less than $500 (unless the parties agree to mediate a dispute involving a lesser amount).

Rule 69BER04-18 Alternative Procedures for Resolution of Disputed Personal Lines Insurance Claims Arising from Hurricane and Tropical Storm Damage The Office of Insurance Regulation issued an Emergency Order on September 2, 2004 as a result of Hurricanes Frances, Charley, Ivan and Jeanne. The Order required all property and casualty insurers to follow the dictates of Rule 69BER04-18, Alternative Procedures for Resolution of Disputed Personal Lines Insurance Claims Arising from Hurricane and Tropical Storm Damage, to participate and pay fees as required in the mediation program, and to notify insureds of the right to mediate.

The emergency rule implemented Section 627.7015, Florida Statutes by setting forth a non-adversarial ADR procedure for a facilitated claim resolution conference related to personal-lines insurance claims arising out of damages to residential property caused by hurricanes and tropical storms during the 2004 hurricane season (June 1, 2004 through November 30, 2004). This procedure is available to all first-party claimants prior to engaging counsel, or commencing litigation or the appraisal process. It applies only to claims for which (1) there is a dispute or the insurer has denied payment and (2) the insured requests $500 or more to settle the dispute, or the difference between the two positions of the parties is $500 or more. (Claims of less than $500 are not subject to this procedure unless the parties agree to mediate claims involving lesser amounts.)

Under the rule, an insurer is required to mail to the insured a notice of the right to mediate a disputed claim within 5 days of the time the insured files a first-party claim. The parties have 21 days from the date of the notice within which to settle the claim before the insured may request mediation. After 21 days from the date of the notice, the insured could request mediation by contacting the Department of Financial Services (who must contact the insurer within 48 hours of receipt of the request) or the insurer (who must contact the Department within 48 hours). The Administrator (i.e., the Department or its designee) then selects a mediator from a panel of Circuit Court Civil mediators approved by the Florida Supreme Court, and schedules a mediation conference to be held within 20 days from the date the Administrator received the request (unless the parties agree to a later date for the conference).

The representative of the insurer attending the conference must bring a copy of the policy and the entire claims file to the conference. He/she must also know the facts and circumstances of the claim, be knowledgeable of the provisions of the policy, have the authority to settle the full amount of the claim, and have the ability to disburse the settlement amount at the conclusion of the conference. The insurer may not have an attorney to represent it at the conference. The insurer pays all costs of the mediation (with a few exceptions).

The mediator is in charge of the conference and establishes and describes the procedures to be followed. Each party is given a chance to present their side of the dispute, and may use any relevant documents or persons with knowledge of the issues (e.g., adjusters, appraisers, or contractors). The mediator may meet with the parties separately, encourage meaningful communications and negotiations, and otherwise assist the parties to arrive at a settlement. The

parties may move to disqualify a mediator for good cause at any time (for example, a conflict of interest between a party and a mediator, the inability of the mediator to handle the conference competently, or other reasons that would reasonably be expected to impair the conference). An insured may request that a representative of the Department be available to help the insured prepare for a mediation conference. A representative of the Department will be present at and participate in the conference if requested at least 5 days prior to the scheduled mediation by a party or the mediator to offer guidance and assistance to the parties. Department representatives do not assume an advocacy role, but rather are available to provide legal and technical insurance information. An attorney representing the insured is permitted to attend and participate in the mediation conference. However, since the goal is an informal, non-adversarial and non-threatening process, the insureds attorney must conduct him or herself in the cooperative spirit of the intent of the law and refrain from turning the conference into an adversarial process. Both parties must negotiate in good faith. A party is deemed to have not negotiated in good faith if the party (or their representative) continuously disrupts, becomes unduly argumentative or adversarial, or otherwise inhibits the negotiations as determined by the mediator. The mediator terminates the conference if he/she determines that either party is not negotiating in good faith or that the conference should be terminated under the provisions of Rule 10.420(b) of the Florida Rules for Certified and Court-Appointed Mediators.

Within 5 days of the conclusion of the conference, the mediator must file with the Department a mediators status report, which indicates whether or not the parties reached a settlement. If so, the mediator includes a copy of the settlement agreement with the status report. Mediation is non-binding. However, if a settlement is reached, the insured has 3 business days within which

he/she may rescind any settlement agreement (provided the insured has not cashed or deposited any check or draft disbursed to him/her for the disputed matters as a result of the conference). If a settlement agreement is reached and not rescinded, it acts as a release of all specific claims that were presented in the conference. However, the release does not waive the insureds rights if circumstances that are reasonably unforeseen arise resulting in additional costs that would have been covered under the policy but for the release.

If the insured decides not to participate in the claim resolution process, or if the parties are unable to resolve the claim, the insured may choose to proceed under the appraisal process set forth in the insureds insurance policy, by litigation, or by any other dispute resolution procedure available under Florida law.

L. AFFORDABILITY AND INSURABILITY OF PERIL

In addressing the impact of all present requirements in the Florida Insurance Code on the affordability and availability of sinkhole insurance, the study will examine the principles of insurance markets. Discussed will be the characteristics of a successful market including supply and demand, the characteristics of insurance contracts, the characteristics of ideally insurable risks, and the application of the above standards to the sinkhole peril. Pertinent Florida statutes will be reviewed. The discussion of each statute will include specific aspects of the statute that promote and/or hinder the availability and/or affordability of sinkhole insurance coverage, as well as additional insight, suggestions, and opinions. The statutes reviewed include:

627.706 Sinkhole Insurance – This statute requires every insurer authorized to transact property insurance in Florida to make available coverage for insurable sinkhole losses on any structure, including contents of personal property contained therein, to the extent provided in the form to which the sinkhole coverage attaches. As such, it relates directly to the issue of availability. The statute defines "loss" as structural damage to the building, and directs that contents coverage applies only if there is structural damage to the building. Further, it defines "sinkhole loss" as actual physical damage to the property arising out of or caused by sudden settlement or collapse of the earth supporting that property, but only when such settlement or collapse results from subterranean voids created by the action of water on a limestone or similar rock formation.

627.707 Minimum Standards for Investigation of Sinkhole Claims by Insurers; Nonrenewals – This statute sets out minimum standards an insurer must meet in investigating a

claim for a sinkhole loss. Upon receipt of such claims, the insurer must make an inspection of the insured's premises to determine if there has been physical damage to the structure which might be the result of sinkhole activity. If that inspection shows damage to a structure which is consistent with sinkhole activity, or if the structure is located in close proximity to a structure in which sinkhole damage has been verified, then the insurer may deny the claim only after further requirements are met. Specifically, the insurer must obtain a written certification from an individual qualified to determine the existence of sinkhole activity, stating that (1) the cause of the claim is not sinkhole activity and (2) the analysis conducted was of sufficient scope to eliminate sinkhole activity as the cause of damage within a reasonable professional probability. The professional discipline and professional licensure or registration under which the analysis was conducted must also be specified in the written certification. If the insurer obtains such a written certification, and if the policyholder has submitted the claim without good faith grounds, the policyholder must reimburse the insurer for 50 percent of the cost of the analysis (up to $2,500 per claim). Such reimbursement is required only if the insurer informs the policyholder of the potential liability for reimbursement, and gives the policyholder the opportunity to withdraw the claim, prior to ordering the analysis. To the extent that these minimum standards affect insurer costs, they also directly affect the affordability of sinkhole insurance.

The statute also provides that no insurer may nonrenew any policy of property insurance based on the filing of claims for partial loss caused by sinkhole damage or clay shrinkage, as long as (1) the total of such payments does not exceed the current policy limits of coverage for property damage, and (2) the insured has repaired the structure in accordance with the engineering recommendations upon which any payment or policy proceeds were based. This provision relates directly to the issue of continued availability of coverage.

Several other statutes, not specifically related to sinkhole coverage, may nonetheless impact the affordability and/or availability of sinkhole insurance through their impact on insurer practices and costs. These include:

624.155 Civil Remedy - This statute allows any person to bring a civil action against an insurer when that person is damaged by either (1) a violation of specified statutory provisions by the insurer or (2) the commission of certain prohibited acts by the insurer. The statutory provisions relate primarily to unfair insurance trade practices, including unfair methods of competition and unfair or deceptive acts or practices. The prohibited acts for which civil actions may be brought against an insurer relate primarily to bad faith on the part of the insurer. They include: (1) not attempting in good faith to settle claims when, under the circumstances, the insurer could and should have done so; (2) making claims payments to insureds or beneficiaries not accompanied by a statement setting forth the coverage under which payments are being made; or (3) failing to promptly settle claims (other than liability claims) when the obligation to settle has become reasonably clear under one portion of the insurance policy coverage, in order to influence settlements under other portions of the policy coverage. The statute sets out various requirements that must be met in order to bring an action under this section. It also states that upon adverse adjudication at trial or upon appeal, the insurer is liable for damages, court costs, and reasonable attorney's fees incurred by the plaintiff. Punitive damages may not be awarded under this section unless the acts giving rise to the violation (1) occur with such frequency as to indicate a general business practice, and (2) are willful, wanton, and malicious or in reckless disregard for the rights of any insured.

The threat of civil actions alleging bad faith may impact both the availability and affordability of sinkhole insurance. Some insurers may deal with this threat by limiting the amount of insurance written. Others may pay questionable claims, or increase spending related to claims investigation, in order to avoid allegations of bad faith. In either case, the cost of sinkhole insurance would increase as a result.

627.428 Attorney's Fees – Under this section, a court may order an insurer to pay reasonable attorney's fees or compensation to the insured's attorney when the judgment is against the insurer. When awarded, the fees or compensation is included in the judgment or decree rendered in the case.