

Potential Solutions to the Sinkhole Problem in Florida

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Introduction

Due to the geological structure of the land in certain parts of Florida, portions of the state are exposed to the peril of sinkhole. The occurrence of sinkholes is impacted by a variety of factors including population growth in sinkhole-prone areas, changes in weather patterns, and water usage.¹ As such, coverage was made available for the peril of sinkhole loss in 1969. However, the coverage was optional. The coverage was rendered obsolete by the fact that very few policyholders elected to purchase the sinkhole coverage. Subsequently, state statutes required insurers to make sinkhole coverage available and insurers elected to add coverage for sinkhole losses to the standard property contract.

Over time, several studies have been conducted to analyze the impact of the sinkhole problem in the state.² In each instance, the frequency and severity of the problem have increased from the prior period. Recently, the rise in the costs associated with sinkhole claims, as well as the potential movement of coverage for the exposed properties into the residual market, has created concern with respect to the insurability of sinkholes in the state of Florida. To address the issue, the 2004 Florida legislature mandated that a study be conducted related to the feasibility and costs/benefits of a Florida sinkhole insurance facility, along with other matters related to affordability and availability of sinkhole insurance. The authors participated in the study that focused on the methods employed to manage single-peril exposures, including reinsurance facilities and government-sponsored insurance.³ The report analyzed in detail the pertinent issues with respect to sinkholes in Florida and recommended, *inter alia*: (1) changes to the statutory definitions of sinkhole loss and sinkhole activity to address the concerns of geologists about ambiguity; (2) creation of uniform procedures for adjustment of claims utilizing experts; and (3) establishment of a data warehouse to store sinkhole claims information. The authors also suggested that

Abstract

Insurers in the state of Florida are required to make coverage available for the peril of sinkhole. Over the past 15 years, several studies have indicated a continual increase in the scope of the problem in terms of both frequency and severity. In a 2005 report to the state of Florida, a variety of solutions were proposed to mitigate the impact of the sinkhole problem in Florida. This article summarizes those recommendations and the subsequent action taken by the 2005 Florida legislature. These findings can be applied to other states exposed to similar perils, both subsidence- and nonsubsidence-related.

if the aforementioned measures did not remedy the problem, the state should consider establishing a facility to which insurers would cede all sinkhole coverage.

This article provides some background information on observable trends in sinkhole losses as well as a summary of the 2005 sinkhole study, focusing on two areas: (1) non-financing-related concerns; and (2) financing-related concerns. Within the discussion of these concerns, the article reviews the legislative changes made effective with the passage of Senate Bill 1486 during the 2005 session, which addresses many of these issues. While a discussion of these issues is obviously important to the Florida property insurance market, it also can be adapted for use by other states with similar single-peril exposures.

Background

A 1992 report for the state of Florida found that sinkhole claims accounted for a small portion of the homeowner's premium dollars, approximately 0.052 percent (Butler, Diskin, Eastman, Gatzlaff, Corbett, Lilly, and Maroney, 1992). A subsequent report completed 10 years later showed a rise in the occurrence of sinkhole claims, particularly in the central regions of the state, as well as a steady increase in the severity of payments for damage to structures (Cole, Maroney, and McCullough, 2004). The most recent study of sinkholes in 2005 showed total sinkhole losses in 2003 of more than \$67 million on 1,749,282 policies, for an average cost per policy of \$38.68 (Maroney, Cole, Corbett, Eastman, Dumm, Gatzlaff, McCullough, Browne, Newman Jr., and Simons, 2005). This amount represents 3.71 percent of the total annual premiums in 2003, as compared to the 0.052 percent reported in 1991 (Maroney et. al., 2005). While the frequency and severity of claims have increased over time, the general geographic regions impacted by the problem have remained fairly consistent, with the central and central western portions of the state having the highest frequency of sinkhole claims.

Recent trends in Florida bring into question the effect of increases in both frequency and severity of sinkhole claims on the availability of property coverage in the private insurance market. Indirect evidence of an adverse effect can be found in an examination of Florida's residual market facility, Citizens Property Insurance Company (Citizens). For example, in the Tampa Bay area, comprised of Hillsborough, Pinellas, Pasco, and Hernando counties, the policy count in Citizens rose from approximately 1,000 to 62,000 policies during the period from December 31, 2001, to July 31, 2003 (*Florida Underwriter*, 2003). By November 2004, the number of policies in this sinkhole-prone area of the state reached 146,901. This was an increase in the number of Citizens personal lines account policies of more than 104 percent in less than three years (Maroney et. al., 2005).⁴

Insurance market trends and developments in Florida, as in other states, usually arise from a combination of factors. However, a significant movement, like the disproportionate growth of Citizens policies in the four-county Tampa Bay region, often has a predominant cause. The growth of sinkhole claims in this region and the high cost associated with investigating and paying these claims may have contributed to the withdrawal of insurer capacity and an increase in the number of policyholders forced to obtain residential property insurance from Citizens (Maroney et. al, 2005). According to a report in *Bestwire*, rate increases for Citizens' policyholders in Pasco County have approached 90 percent, primarily because of the rates filed by private carriers in sinkhole areas (Lysiak, 2005).⁵ While causation cannot be conclusively shown, the evidence demonstrates a correlation as it appears that Citizens may have become the sinkhole insurer of last resort in the four-county Tampa Bay region.

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Non-Financing Concerns

The results of the 2005 report concluded that there were several issues that should be addressed regardless of whether a change was made to the way in which Florida finances sinkhole losses. These issues relate to: (1) potential changes to the definition of sinkholes; (2) development of uniformity in the adjustment process; (3) clarification and reform of the issues related to the coverage of sinkholes; and (4) the creation of systems for data warehousing and sinkhole-related training, communication, and education services. This section of the article discusses each of these areas in detail and what, if any, changes were approved during the 2005 legislative session to address each issue.

Definition of Sinkhole

One issue of major concern was the definition of sinkhole loss and sinkhole activity in Florida law. Specifically, a sinkhole was defined as a “sudden settlement or collapse of the earth supporting such property, but only when such settlement or collapse results from subterranean voids created by the actions of water on limestone or similar rock formations.”⁶ Under that language, there was some discrepancy between what geologists would determine to be a sinkhole event and what a court might determine as a sinkhole loss. In many cases, insurers covered a broader spectrum of geological events due to ambiguity in the definition and difficulty in proving that the claims did not occur as a result of “sinkhole activity.” This discrepancy created uncertainty, which increased pricing problems and limited offering of sinkhole coverage. In addition, statutory language provided that if an insurer discovered damage to the structure consistent with sinkhole activity, or if the structure was located in close proximity to a structure in which sinkhole damage had been verified, prior to denying the claim, the insurer was required to obtain a written certification from a qualified individual determining the existence of sinkhole activity and stating that the cause of the claim was not sinkhole activity.⁷ This requirement basically placed the burden of proving the cause of loss on the insurer. Thus, proposed changes to Section 627.706 F.S. and Section 627.707 F.S. were designed to help clarify the geological event covered and provide a fairly cost-effective way in which to ensure consistency in the coverage received by property owners.

Legislative changes were made in 2005 to deal with these issues. First, the legislature changed the definition of sinkhole to “a landform created by subsidence of soil, sediment, or rock as underlying strata are dissolved by groundwater.”⁸ This change was designed to make the definition more consistent with good geoscience. Second, the legislature changed the language regarding the burden of proof placed on insurers. The new language allows insurers to deny a sinkhole claim following an initial inspection. However, the insurer must notify the insured of the policyholder’s right to testing if the insurer denies the claims without testing. The testing must be conducted by an engineer or geologist in compliance with specified standards. The findings are presumed correct.⁹

Uniformity in Identification and Adjustment of Claims

Closely related to the need for a more precise definition of what constitutes a sinkhole loss is the need for uniformity in the identification and adjustment of sinkhole claims. Costs of testing for sinkhole losses can be relatively high, ranging from \$4,000 to \$8,000 and higher, depending on the depth of the limestone formations (*Florida Underwriter*, 2003). Furthermore, sinkhole losses create distinct challenges in the adjustment of claims due to the geotechnical expertise needed to properly identify sinkhole losses. In addition, some insurers experience a relatively small number of sinkhole claims each year. As a result, some adjusters may not have the expertise and experience needed to effectively and efficiently adjust the claims. This combination of factors has led to several problems, including variation in the identification and adjustment process across claims. This variation, along with perceived ambiguity in the definition of sinkhole losses, has contributed to the large number of claims disputes.

The 2005 report to the state of Florida suggested the creation of a uniform approach to identify and adjust sinkhole claims to achieve two purposes. First, the application of uniformity would increase the efficiency with which claims are handled, thus reducing the time to investigate and remediate claims. Second, uniformity would provide consistency in claims handling and improve communications with policyholders, which should help to reduce the number of disputes.

New legislation provides that, following the insurer's initial inspection, the insurer is to employ an engineer or a professional geologist to conduct testing to determine the cause of loss under certain circumstances, including situations where the insurer was unable to identify a valid cause of damage or if the policyholder demands testing.¹⁰ After the initial inspection, the insurer is to provide written notice to the policyholder indicating the determination of the insurer as to the cause of loss and notification to the policyholder of the circumstances under which the policyholder may demand certain testing. For example, if the insurer determines there is no sinkhole loss, the insurer may deny the claim. However, the policyholder may demand testing.

The new law also requires that if a sinkhole loss is verified, the insurer is to pay to stabilize the land and buildings and repair the foundation.¹¹ Insurers are allowed to limit payment to actual cash value until the policyholder enters into a contract for performance of building stabilization or foundation repair. The costs of the engineer or professional geologist are to be paid by the insurer. The statute specifies what is to be included in professional reports and provides that the findings, opinions, and recommendations of the engineer and professional geologist as to the verification or limitation of a sinkhole loss and the findings, opinions, and recommendations of the engineer as to the land and building stabilization and foundation repair are to be presumed correct.¹²

Issues Related to the Coverage of Sinkholes

There are several coverage-related issues that should be addressed before the assessment of a change to the way in which sinkhole losses are financed can be made. One issue for consideration relates to whether all coverages in the homeowners policy should be provided for sinkhole losses or whether only Coverage A (Dwelling) and Coverage B (Other Structures) should be provided. It is plausible that all Section I coverages could be provided for cover-collapse claims, while only coverages for the dwelling and other structures could be provided in cases of cover-subsidence sinkhole claims.¹³ This is due to the nature of the damage caused by the respective types of sinkholes.

A second area for consideration relates to the payments and requirements for repairs. One potential option is to only make payment after remediation is completed based on the recommendations of a certified engineer. By only making payment when remediation efforts are complete, the insurer can minimize the potential for moral hazard on the part of the insured, such as when the insured accepts payment for a sinkhole loss and does not make proper repairs. This practice also may mitigate future claims by the insured for related damage.¹⁴

A third area for consideration is whether the structure will still be insurable for the peril of sinkhole if proper remediation steps are taken. Given the nature of the losses, the 2005 study suggested that the structure not be considered insurable if proper remediation is not completed.¹⁵ This policy is similar to the current policy used by Citizens.

A final area of consideration involves whether coverage will be available in all parts of the state. Furthermore, if the coverage is available statewide, will it be mandatory or optional for the insured? These issues will obviously impact the pricing of the coverage. As was found when this option was employed by the former sinkhole reinsurance

facility, participation rates can suffer when coverage is optional. In addition, the potential for adverse selection increases. The fact that no insurer in Florida has adopted a policy that allows consumers to reject sinkhole coverage offers some initial evidence of the potential ineffectiveness of this method and the potential for adverse selection.¹⁶

Data Warehousing of Sinkhole Claims Data

In addition to the development of a uniform identification and claims adjustment process, it also is important to have an accurate and complete database of sinkhole exposures and losses in the state of Florida. Currently, this is done on an *ad hoc* basis by the Florida Geological Survey. Due to budgetary issues and the lack of requirements for filing of information, the database is incomplete. A consistent and complete database would help in the evaluation of sinkhole claims as well as in the creation of fair and adequate rating of the peril by private insurers or a sinkhole facility. Mandatory reporting and verification of data will be essential to the facility's success.

It is important that this function be housed in an organization that has an understanding of the geotechnical issues related to sinkholes. This will aid in the proper development and maintenance of the database and may provide a more consistent and cost-effective handling of these services. Furthermore, there may be some benefit to not only having the organization or group aid in developing and maintaining a database of sinkholes, but also to be responsible for developing training, communication, and education materials. Housing all of these non-insurance services in a single location may achieve economies of scale and/or minimize duplication of efforts. Additionally, if the organization has significant knowledge related to sinkholes and connections to the geological community, start-up costs could be reduced.¹⁷

In response to questions regarding the credibility of data and the need for a sinkhole data warehouse, the Florida legislature found that the concerns raised in the report regarding the accuracy of data were valid. The Department of Financial Services was designated as the primary contact for consumers on issues relating to sinkholes. The Office of the Insurance Consumer Advocate was designated to consult with the Florida Geological Survey to implement a statewide, automated database of sinkholes and related activity. The Department of Financial Services is to manage a database, and the Department of Environmental Protection (in which the Florida Geological Survey is housed) is to investigate reports of sinkhole activity and include its findings and investigations in the database. Reports are to be made to the specified state officials. Additional statutory requirements include that the seller of real property is now required to disclose to the buyer that a sinkhole claim has been paid and also disclose whether the insurance proceeds were used to repair the sinkhole damage. Furthermore, insurers must file a report with the county property appraiser if the insurer has paid a sinkhole claim.¹⁸

A related issue involves the feasibility of pre-construction efforts to reduce the potential for sinkhole losses. Currently, some counties require borings to determine the existence of shrink-swell clay. Pre-construction testing of site suitability often occurs at commercial sites, thus providing a potential explanation of the low occurrence of sinkhole claims involving commercial locations.¹⁹ The residential construction industry is likely to resist mandated pre-construction testing as it would probably increase housing costs.

Financing-Related Issues

The 2005 sinkhole study identified several options for coverage of the sinkhole peril. The first option is to maintain coverage for the sinkhole peril in the current homeowners policies and have insurers develop a separate rate for the peril. The second option also would require insurers to maintain coverage for sinkholes in the homeowners

policies, but a sinkhole reinsurance facility would be created to reinsure and adjust these claims. The third option would shift coverage for sinkholes from insurers to a sinkhole insurance facility. The advantages and disadvantages of each approach are discussed below.

Proper Rating for the Peril of Sinkhole in the Homeowners Policy Forms

Applying the changes suggested in the prior section with regards to the definition of sinkhole, uniform adjustment measures, and coverage options could aid in developing an adequate rate for sinkhole coverage, as these changes remove some of the cost and uncertainty in identifying and adjusting sinkhole claims. For example, having a clear definition of sinkhole may reduce the potential for disagreement between the insurer and the policyholder over whether the cause of loss is a sinkhole. This may lower claims costs by decreasing the number of lawsuits that result. In addition, having uniform adjustment measures and/or clearly outlined claims-handling procedures may result in more efficient processing of claims, again resulting in lower claims costs. Information on the location, frequency, and severity of sinkhole losses also could be useful. With these changes, it is possible that the sinkhole problem could be managed without the creation of a sinkhole facility. The advantage of this approach would be that the state would not incur the start-up costs and other expenses associated with establishing a facility.

However, certain issues may still exist. One is that the application of uniform adjustment procedures may be more difficult in this framework given the number of insurers in the state. Variations in policy forms also may impact the way in which the sinkhole peril is covered in terms of reasonable repairs to the structure and the repairs to land. Furthermore, this option may affect the overall availability of homeowners insurance from the private market in the event that insurers do not want to offer this coverage, even if they are allowed to price for the peril.

The Establishment of a Reinsurance Facility for the Peril of Sinkhole

Another option that may mitigate the problems of property insurance availability in the state would be to rate for the sinkhole peril separately and establish a sinkhole reinsurance facility.²⁰ The facility, either housed in an existing entity or under the umbrella of a state agency, would be responsible for the investigation and settlement of sinkhole claims. These claims would be financed through premiums ceded to the facility by insurers.²¹

By controlling the claims function within a facility, potential claims-related disputes may be reduced. This centralized claims handling also would achieve the goals described earlier of a more consistent and efficient processing of claims. A further benefit of a reinsurance facility is that the insured still has a single contract with a given insurer rather than having to deal with a separate insurer for sinkhole coverage. This could help maintain reasonable administrative costs as well as make the system easier for the insured.²²

Depending on the decisions made regarding the placement and governance of the facility, the facility may be exempt from federal taxation. The key issues in obtaining tax-exempt status relate to the nature and extent of the state's control of the enterprise and the nature and extent of the state's financial commitment to the enterprise. In terms of government control, generally the Internal Revenue Service (IRS) wants to see the board made up or under the clear control of one or more high-level government officials. 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 onset or over the life of the enterprise.²³

The state would incur some start-up costs in establishing this facility. However, based on the placement of the facility, the added administrative costs may be reduced if some

of the non-insurance functions, such as payroll and employee administration, could be outsourced. Similarly, the non-insurance education and consulting-related functions also could be placed in another organization to minimize the overall size of the sinkhole reinsurance facility and to take advantage of the expertise of an existing organization.²⁴

The Establishment of a Direct Writer for the Peril of Sinkhole

The final option would be to allow insurers in the state to exclude coverage for the peril of sinkhole from existing policies. In this scenario, insureds would then obtain coverage from a direct writer. The direct writer could be housed within an existing governmental organization or established as a private entity. The direct writer would act as a primary insurer for the peril of sinkhole and would be responsible for underwriting, marketing, policy issuance, premium collection, and possibly claims handling. This is distinctly different from a reinsurance facility in which the primary insurers and the agency force would be responsible for the majority of the operational responsibilities.

This method should protect the availability of coverage in the Florida homeowners insurance market as well as remove the costs associated with sinkhole claims from the private market. However, this method is not likely to be a more cost-effective solution. Increased costs related to higher levels of underwriting and processing fees and increased policy procurement costs are among the reasons for the higher costs of this method. Furthermore, obtaining a policy from a direct insurer would add an additional layer of complexity and effort for the insured.²⁵

Conclusions and Implications of Other States and Perils

For most individuals, their home represents their largest single asset. Protection of this asset is of paramount concern. For most homeowners, insurance is the primary means of financial protection of this asset. For this reason, any threat to the affordability and availability of coverage must be taken seriously. Furthermore, clear definitions of covered perils and a fair and effective claims-adjustment process are essential.

Problems of availability and affordability in the insurance market, stemming from a single peril, are not uncommon. States such as Pennsylvania, Illinois, Ohio, Kentucky, West Virginia, and Indiana have struggled with similar issues related to mine subsidence (Cole, Maroney, and McCullough, 2004). In addition, California created the California Earthquake Authority in response to difficulties in obtaining earthquake coverage in the private market after the Northridge earthquake.²⁶ While all of these facilities may be considered successful in providing protection for a loss in which coverage in the private market may have been difficult to obtain, the extent to which the facilities currently operate varies significantly. For example, while the facility in Pennsylvania has approximately 50,000 policyholders and a \$40 million surplus, the California Earthquake Authority has roughly 600,000 policies in force and just under a \$2 billion surplus.²⁷

Florida law mandates sinkhole coverage be made available. However, one problem is making sure the premiums charged are not excessive, inadequate, or unfairly discriminatory. Legislative changes may be needed to best mitigate the problem. For example, statutory changes to clarify the definition of sinkholes and the addition of geoscience and engineering experts into the investigation and adjustment of claims may provide relatively low-cost ways to reduce claims disputes and increase the insurers' capacity to fairly underwrite the coverage. At this point, the Florida legislature has opted to focus on addressing these non-financing concerns identified in the 2005 sinkhole study. These changes should aid in creating more uniformity in identification and remediation of sinkhole losses. As such, they may alleviate many of the problems causing the increase in frequency and severity of sinkhole losses. If effective, a change to the current financing of sinkhole losses may not be necessary. However, the

effectiveness of these changes may not be known for several years. If additional support is needed, a reinsurance facility can be established to allow the homeowners policies to remain in the private market, with the exception of sinkhole coverage, which could be reinsured through a facility. Based on the needs of the property owners, insurers, and regulators, any combination of these solutions may be utilized.

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Endnotes

1. Population growth can result in an increased demand on ground water resources. If not properly managed, the increased rate of water usage can result in a void or cavity below the surface. The land then can move to fill in this void resulting in the formation of a sinkhole. Further, large increases or decreases in water levels, from natural or man-made causes, also can increase the frequency of sinkholes and/or other forms of subsidence.
2. For further information, see Butler, Diskin, Eastman, Gatzlaff, Corbett, Lilly, and Maroney, 1992; Eastman, Butler, and Lilly, 1995; Cole, Maroney, and McCullough, 2004; and Maroney, Cole, Corbett, Dumm, Eastman, Gatzlaff, McCullough, Browne, Newman, and Simons, 2005.
3. The full study, by Maroney, Cole, Corbett, Dumm, Gatzlaff, Eastman, McCullough, Browne, Newman, and Simons, (2005) was prepared for the state of Florida.
4. Due to the fact that Florida law places some restrictions on insurers' ability to terminate policies mid-policy period, it is likely that very little, if any, of the increases in the number of Citizens policies resulted from terminations and non-renewals due to losses sustained during the 2004 hurricane season.
5. Citizens is required by law to charge the highest premiums in each county or territory due to the fact that it is the insurer of last resort (Lysiak, 2004).
6. Section 627.706 F.S. 2004.
7. Section 627.707 F.S. 2004.
8. Senate Bill 1486 (FLA 2005).
9. Ibid.
10. Ibid.
11. Ibid.
12. Ibid.
13. See note 3 supra.
14. Ibid.
15. Ibid.
16. Ibid.

17. Ibid.
18. See note 8 supra.
19. See note 3 supra.
20. A reinsurance facility is somewhat different from a residual market facility in that a sinkhole facility would only provide coverage for a single peril while a residual market facility commonly provides a full line of coverage such as homeowners insurance. Further, unlike a typical residual market facility, a sinkhole reinsurance facility is likely to cover all sinkhole exposures in the state rather than just the exposure that the private market will not accept or is unwilling to accept at an affordable rate.
21. See note 3 supra.
22. Ibid.
23. Ibid.
24. Ibid.
25. Ibid.
26. See note 3 supra.
27. Ibid.

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CPCU eJournal, Vol. 58 No. 12, December 2005
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