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Coal General
2006

Interstate Mining Compact Commission

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EXECUTIVE DIRECTOR

GREGORY E. CONRAD

November 8, 2006

MEMORANDUM

TO: Environmental Affairs Committee

FROM: Greg Conrad

RE: Results of Subsidence Survey

Enclosed please find a compilation of results from the survey that IMCC conducted regarding the regulation of subsidence. Should you require additional copies please let us know.

We discussed the potential of hosting a benchmarking session on subsidence following publication of the survey results. Formats for this session could include: 1) a roundtable discussion where interested states discuss the results of the survey and share additional information and perspectives; or 2) a workshop where several presentations are made followed by interactive discussion. Then again, the survey may have served its purpose simply by providing the information that is contained in the compilation of responses and there may not be the need for any follow up. I would appreciate receiving your input on whether IMCC should sponsor any type of follow up activity to this survey. Based on input from the member states, we will decide how best to proceed. Should we decide to pursue a more formal workshop, I will work with the existing benchmarking steering committee to formulate a program, identify presenters, choose a location, etc. If we decide to pursue a roundtable discussion or a workshop, I would welcome your thoughts on the best location. Please provide your input regarding these matters by November 30.

Enclosure

RECEIVED
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DIV. OF OIL, GAS & MINING

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Survey Responses

State Regulation of Subsidence

November 2006

Rec'd 11/13/06

Introduction

As part of its ongoing state regulatory program benchmarking initiative, the Interstate Mining Compact Commission (IMCC) from time-to-time conducts surveys of the states concerning various components of their regulatory programs. The surveys focus on both the content of the program component and implementation thereof. IMCC collects the responses to these surveys from the states and presents the results in a report that is available for use by the states as they consider program improvements and enhancements (one of the goal's of benchmarking). From time to time, IMCC also sponsors workshops or roundtable discussions to allow for further exploration of the material gathered from the surveys. Examples of recent workshops include those on underground mine mapping, abandoned mine land funding enhancements and partnering opportunities, blasting, and financial assurance for mining and reclamation obligations.

Among the many complex and controversial issues that states must handle as part of their mining regulatory programs, one of the most critical is subsidence. The Energy Policy Act of 1992 called for federal rulemaking by the Office of Surface Mining (OSM) on subsidence. The initial focus was on the protection of water supplies. On March 31, 1995, OSM published final rules to implement the Energy Policy Act that addressed subsidence control plans and permitting and performance standards for both water supplies and structures. Following legal challenges, certain of the rules were invalidated, including those relating to the angle of draw and a mandate for pre-subsidence condition surveys and a "presumption of guilt" when subsidence damages were alleged. Through the state program amendment process, OSM reviewed each state's regulatory program to determine whether it was "as effective as" the federal counterpart and, in some cases, state programs were adjusted.

Ten years have elapsed since the federal rules were enacted and resultant changes were made by states. The IMCC survey is intended to determine how each state has approached the implementation of the various subsidence permitting and performance standards. It is divided into five categories: General; Structures; Land; Water Supplies; and Mine Subsidence Insurance. While the survey is primarily targeted at coal regulatory programs, to the extent that it has applicability to noncoal mining operations, responses are also included. Responses from those states that participated in the survey are collated in the following pages. A copy of the survey instrument is attached as well. For further information on any of the responses from specific states, a listing of key contact persons in each state is also attached.

For additional copies of this report, please contact the Interstate Mining Compact Commission at (703) 709-8654 or Greg Conrad at gconrad@imcc.isa.us.

Survey Instrument

SURVEY ON REGULATION OF SUBSIDENCE

The Energy Policy Act of 1992 called for federal rulemaking by the Office of Surface Mining (OSM) on subsidence. The initial focus was to provide protection for groundwater supplies. OSM's March 31, 1995 Federal Register notice contained final regulations to implement EPACT. The rules went above and beyond the framework established in EPACT by defining in great detail new subsidence control plan, permitting and performance standards for both water supplies and structures.

After legal challenges by the coal industry, certain rules were subsequently invalidated. These included rules based on the angle of draw and a federal mandate for pre-subsidence condition surveys and a "presumption of guilt" when subsidence damages were alleged. Through the "732" state program amendment process, OSM reviewed each state's existing and proposed rules to determine if they were "as effective as" the federal counterpart.

Ten years have elapsed since the federal rules were enacted and resultant state changes were initiated. The following questionnaire is intended to determine how each state has approached the implementation of the various subsidence permitting and performance standards. It has been divided into four categories. General, Structures, Land, and Water Supplies. IMCC will collect and collate this information into a report following submission of state responses to the survey. IMCC may also sponsor a roundtable interactive discussion to allow further deliberation of these important issues. We appreciate your willingness to share the experiences under your regulatory program.

Please note that while this survey is primarily targeted at coal regulatory programs, to the extent that your state has experience with the regulation of subsidence impacts related to noncoal mining, we would appreciate your input. Many of these questions have applicability to both coal and noncoal regulatory programs.

PLEASE INDICATE WHETHER THE RESPONSES BELOW RELATE TO YOUR COAL PROGRAM, YOUR NONCOAL PROGRAM, OR BOTH. (If there are different requirements for each program, please submit survey responses for each program.)

The following responses relate to our ____ coal ____ noncoal regulatory program(s).

1. GENERAL

1. Do you differentiate between planned and unplanned (stable) subsidence control plans in your permitting process?

   _____ Yes _____ No

   How do you define the categories of subsidence control (percent extraction, etc.)?

2. Do you require information on a company's right to subside the surface in addition to the right to mine the coal?

   _____ Yes _____ No

   If so, how do you do this? (Listing of documents or a simple statement or affidavit)

3. For six month surface owner notification, do you allow companies to mail these notices well in advance of actual mining?

   _____ Yes _____ No

4. Do you waive the 6-month notice to a lesser time frame if requested?

   _____ Yes _____ No

   If so, do you have specific guidelines as to when you will or will not waive the minimum time frame?

2. STRUCTURES

Regulated Extraction Area

1. What is the date of coal extraction used in your state to initiate the requirement to repair, replace or compensate for subsidence damage to structures?

2. How do you define mining areas that predate your jurisdiction as opposed to areas that are subject to your subsidence control regulations? (Map defining the pre-law and post-law workings; criteria used?)

3. OSM requires prompt repair or compensation for material damage to occupied residential dwellings and structures related thereto, or non commercial buildings. Some states (like Illionis) maintain the requirement to mitigate "all structures" and does not exclude commercial buildings. What structures are covered in your state?

Condition Surveys

1. Do you require condition surveys for surface structures?

   _____ Yes _____ No

2. If so, are they required for all structures, whether over full extraction mining (planned subsidence) or room and pillar (stable mine plan)?

3. Do you specify the type of condition survey that is required to be performed (video, pictures, certified appraisal of value etc.)?

   _____ Yes _____ No

   If so, what are applicable requirements for the survey?

4. Whom do you require the company to submit the condition surveys to? (your office, to the land owner, kept on file at the mine office and/or anyone else)

5. If a structure owner denies access for a company to perform a pre-subsidence condition survey, what action does the state take? Does this refusal change the protection afforded to the structure owner?

6. What is the time requirement for performing pre-subsidence condition surveys? (i.e. must it be submitted in the application, or delayed until six months or 60 days before planned subsidence will impact the structure, etc.)

7. How often, if ever, have you had to use the condition survey to aid in detemining damages or compensation?

Public Roads, Utilities

1. In general, in the permitting process, how do you handle subsidence of public roads and utilities such as water, electric and gas lines? Do you require cooperative agreements between the mining company and the utility or road authorities to assure public safety?

2. Do you specifically hold the company financially liable for damages to public roads, utilities railroad lines etc. if damaged by subsidence?

3. How closely do you monitor the subsidence impacts and execution of subsequent repairs for these public facilities?

Private Homes and Other Structures

1. Is the choice between repair, replacement, or compensation for material damage to homes, outbuildings etc. that of the coal companies or that of the structure owner?

2. What is the maximum level of compensation for a given home or structure? Is it the fair market value, the replacement value or other?

3. Do you specifically require alternative housing when dwellings are subsiding?

   _____ Yes _____ No

If so, how long does this alternative housing typically last?

4. When disputes develop between the company and the land owner over whether alleged damages are mine subsidence related or not, how is it resolved? Does the state make a determination as to whether the alleged subsidence damage is the responsibility of the coal company? If not, who referees the dispute?

5. If the state makes a determination that the damages are not due to mine subsidence, does the state specifically define the real cause of non subsidence related damage (termites, soils issue etc.) or simply indicate it is not mining related with no further explanation?

6. Does the state ever perform surveys or monitoring to determine if movements are occurring (such as with unplanned room and pillar subsidence or structures just outside the angle of draw of a longwall)?

   _____ Yes _____ No

   If so, who does it (in house staff or contracted out?)

7. When subsidence is the cause of damages and a dispute occurs between the structure owner and the company over the dollar value of the damage, how is the amount of compensation determined (arbitration or other)?

8. How involved is the state in the determination of a damage dollar amount?

9. When the plan is to compensate the damaged party (not repair), what dictates the compensation amount? Is the value based on the estimated cost of repair or the difference in the fair market value before and after damage?

10. When the damage will be repaired, how does the state determine if a repair estimate is properly done?

11. Does the state get involved in evaluating the quality of the work done to repair structural damage?

    _____ Yes _____ No

Mine Subsidence Insurance

1. When did your state mine subsidence insurance program begin?

2. What is the source of funding for the program?

3. Who administers the program (is it run by the state or privately)?

4. What types of structures can be covered (i.e. residential commercial, etc.)?

5. What types of exclusions are there?

6. Does your program get involved with post-law damage within your regulatory jurisdiction and if so, how?

7. Is the program voluntary or mandatory? Is a waiver provided?

8. What types of minerals are covered (i.e. coal, limestone, salt, etc.)?

9. What is the maximum amount of coverage?

10. What types of loses are paid (i.e. cost of repair; living expenses) and what the limits?

11. What are the annual fees (specify for residential or commercial)?

12. What are the deductibles (specific for residential or commercial)?

13. What is the current number of policyholders?

14. What is the current fund balance?

15. How many claims have there been over the life of the program (indicate what portion were deemed valid v. invalid)?

16. How many residences/homeowners are eligible (v. those who have actually signed up)?

17. What types of marketing/notification efforts have been undertaken by the state to encourage homeowners to sign up for subsidence insurance? How successful have these efforts been?

18. How many subsidence emergencies have occurred in your state (estimate per year)?

19. What procedure applies if these emergencies involve homes/structures where a mine subsidence insurance program is also in place?

20. Are there any state or local laws that prohibit building or that place restrictions on development over abandoned coal mine areas?

21. Has the regulatory program ever been involved in any legal action by a homeowner for lack of notification, denial of claim, etc.?

Minimization of Damage Requirement

When planned subsidence (longwall and HER) operations are being used, the company is required to minimize damage to structures.

1. Do you require a minimization plan for all structures, certain structures or never (please explain)?

2. Do you dictate what level of minimization is required (house floating, foundation trenching, cable raps, cribbing, flexible gas couplings etc.?)

3. A company has the option of eliminating the need to minimize damage if the cost of minimization exceeds the cost of repairs and no public safety issues exist. Has this ever been done in your state and if so what type of economic analysis did you accept?

4. How do you verify if an operator has obtained the written consent of the owner of a structure or facility documenting that minimization measures need not be taken? Do you dictate the language required in such a written waiver?

5. If a structure owner refuses to allow minimization efforts to be implemented, what does the state do?

6. If a structure owner disagrees with the type of minimization effort proposed or believes the efforts just aren't enough, what does the state do?

Historic Structures

1. Do you require an inventory of historic structures or structures eligible for listing on the national register over mining/planned subsidence areas?

   _____ Yes _____ No

2. Do you require any type of archeological survey over areas of mining/ planned subsidence?

   _____ Yes _____ No

3. If such structures are present, are they treated any differently than other structures where subsidence is planned?

   _____ Yes _____ No

Bonding of Subsidence Damage

1. How do you comply with the requirement to bond subsidence damage if it is not repaired within 90 days? Do you allow an extension of the time frame to one year?

2. What type of bond do you accept?

3. Do you require subsidence damage bonds for both structures and land?

   _____ Yes _____ No

4. Do you individually bond each and every damage or do you have a blanket bond for all potential outstanding subsidence?

5. How do you determine when to release a bond?

6. Do you allow liability insurance to stand in place of individual bonding of subsidence damages?

   _____ Yes _____ No

7. If liability insurance is an option, do you require the policy to specifically identify subsidence and is there a minimum amount of coverage? Do you allow a deductible?

3. WATER SUPPLIES

1. What is the specific date used to determine which wells or springs are covered by the requirement to replace or compensate for subsidence damage to water supplies?

2. How do you differentiate between mining areas that predate your jurisdiction and mining areas that are subject to your subsidence control regulations concerning water replacement (map defining the pre-law and post-law workings)?

3. The performance requirement to replace water is limited to "drinking, domestic and residential water supplies contaminated, interrupted...." Does your state limit water replacement to this extent only or do you also cover agricultural or commercial use water supplies?

4. Do you require quality and quantity monitoring of all wells and springs over proposed mining areas or can an exemption be obtained from conducting specific monitoring on individual wells or springs based on mining type or geologic setting?

5. How many pre-subsidence samples are required and over what period of time?

6. How do you determine if a company can be exempted from conducting water quality and quantity monitoring for a given well or spring?

7. Do you require the individual quality and quantity data to be submitted as part of the application, or can the monitoring be delayed until after permit approval but before the individual water source is potentially impacted?

8. What information is required in the permit, such as the location and ownership of all existing drinking, domestic and residential water supplies, including private wells, municipal wells and springs.

9. How far beyond the proposed mining area (angle of draw) do you require inventorying and monitoring of wells and springs?

10. OSM did not define the parameters to monitor for quality. For wells and springs that will be specifically monitored for water quality and quantity, do you define the specific parameters to monitor for pre-mine quality and quantity? If so, what are they?

11. Do you define the number of samples required over time (such as four samples over one year to reflect seasonal fluctuations)?

12. Do you require a specific test to define water quantity before and after subsidence? (Slug test, pump test, etc.)

13. Do you require a specific plan in the permit for replacing any contaminated, diminished, or interrupted water supply? Must the plan spell out possible contingencies for emergency, temporary and/or permanent replacement of affected water supplies?

14. Do you allow a hook up to public water supply as a replacement for a lost spring or well?

_____ Yes _____ No

15. Do you require a plan for determining the present worth of the cost to replace a water supply if the operator wishes to pursue a one-time lump-sum payment for costs associated with providing both an equivalent water delivery system and operation and maintenance costs in excess of customary and reasonable delivery costs for pre-mining water supplies?

____ Yes ____ No

16. Must the water supply owner agree to a lump-sum payment for future costs?

____ Yes _____ No

17. If a water supply owner denies access to perform pre-subsidence water surveys, what do you do?

18. If a company cannot get a landowner to agree to a lump-sum payment for cost above and beyond customary, how do you monitor the payments made to a surface owner over time to supplement increased water bills?

4. LAND

1. What are the primary issues for restoring pre-mining land capabilities in your state? (Surface drainage restoration, etc.)

2. Is a man-made pond considered a structure or land damage? Can a mining operator destroy a pond, eliminate the pond and then compensate for the damages?

   ____ Yes ____ No

3. Are there any circumstances where you will allow a land use change due to subsidence? (for example, a stream subsidence that creates flooding in adjacent crop fields and is now a wetland)

4. How detailed must the pre-mining topography be defined in your application? Does the permittee project post-subsidence topography when longwalling?

5. Are there any land circumstances where you have or would prohibit longwall mining due to inability to make surface repairs?

6. How do you handle the regulatory language "to the extent technologically and economically feasible" concerning repair of land damage?

7. Has a company ever tried to show land damage was not technologically or economically feasible to repair? What analysis did they present and did the state agree with the company's position?

General Information

Name of Person Completing this Survey: _____

State: _____

State Agency: _____

Phone Number: _____

E-mail Address: _____

Coal Regulatory Programs

COAL PROGRAM RESPONSES:

General:

1) Do you differentiate between planned and unplanned (stable) subsidence control plans in your permitting Process?

Alabama: Yes.

Arkansas: Yes.

Illinois: Yes.

Indiana: Yes.

Kansas: Survey not applicable. There are no state regulations for subsidence.

Kentucky: Yes.

Maryland: Yes.

Mississippi: General Information: Because Mississippi does not have any underground mining there are no regulations concerning subsidence. Underground coal mining is extremely unlikely due to the soft-sediment nature of the geology of Mississippi's lignite deposits.

Missouri: General Information: The state of Missouri has not produced any coal through the process of underground mining for many decades. There has been no coal produced by underground mining since the enactment of any laws regulating the extraction of coal. Therefore, the survey is not pertinent to the state of Missouri at the present time with respect to the problem of subsidence related to active coal mining.

New Mexico: No.

North Dakota: General Information: Since there is no underground mining in North Dakota, the subsidence survey was not completed.

Ohio: Yes.

Oklahoma: Yes.

Pennsylvania: Yes.

Utah: Yes.

Virginia: Yes.

West Virginia:

Yes.

Wyoming: Yes.

How do you define the categories of subsidence control (percent extraction, etc.)?

Alabama: The subsidence control plans identify the percent extraction, stability of pillars, stability of roof and stability of mine floor for room and pillar mining. Longwall mining and high extraction room and pillar mining are addressed as planned subsidence.

Arkansas: We do not define any categories of subsidence control.

Illinois: If it is a longwall or high extraction retreat pillaring operation, it is classified as "planned subsidence." If it is a room and pillar mine, we review each plan based on geotechnical calculations of pillar, roof and floor stability. If we agree it is designed to be stable, it is classified as "unplanned subsidence." There are not specific limitations placed on percent extraction such as "above 70 percent is planned subsidence."

Indiana: Planned subsidence must be designed so that safety factors are low enough to assure subsidence. The permit must also contain a plan to monitor and assure that subsidence is occurring as planned; if not the plan must be modified.

Kentucky: The applicant can proposed either (1) planned subsidence, (2) a plan to prevent subsidence, or (3) a plan to prevent subsidence from causing material damage. Planned subsidence commonly occurs during pillar removal in retreat mining, and as a result of longwall mining. Generally, fifty (50) percent or less extraction will prevent subsidence beneath a structure or renewable resource land if there is at least 100 feet of cover. Designs (taking into account pillar load, pillar size, depth to the coal seam(s), etc.) may be implemented for greater than fifty (50) percent extraction using the room and pillar method, while still preventing subsidence if the factor of safety recommended in RAM #107 is met. Prevention of subsidence from causing material damage to a structure would require either supporting a structure on the surface or removing it from the area where it would be affected.

Maryland: All operations must address the potential for subsidence damage, but the higher the percent of extraction the more emphasis is placed on protection of structures. Generally, first mining with less than 60% extraction is considered relatively stable; but depth of cover and thickness of the seam are considered even in these areas.

Ohio: Longwall or full extraction, and high extraction pillar recovery is planned subsidence. Historic mining in the same seam is used as a guide for the minimum extraction percentage required to ensure planned subsidence. If the data does not exist, test panels are mined and monitored for subsidence. The lower limit for extraction in the plan would be above 80% for consideration for planned subsidence depending on geology and overburden thickness.

Oklahoma: Planned Subsidence = ≥80%; Unplanned Subsidence = < 80%

Pennsylvania: Stability Class I – Evaluation areas for structures and features covered by Section 1406.9a of BMSLCA. Coverage: Evaluation areas for public buildings and facilities, churches, schools, hospitals, impoundments with storage capacities of 20 acre-feet (2.46 hectare-meters) or more and water bodies with volumes of 20 acre-feet (2.46 hectare meters) or more. For cover thickness less than 100 feet (30.48 meters): No mining except for site-specific variances approved by the Department. For cover thickness more than 100 feet (30.48 meters), any of the following: Leaving coal pillars which are designed to achieve permanent coal support (50% coal support); Providing auxiliary support; Mining to induce planned subsidence (provided the operator has made the demonstrations required by regulation or obtained a waiver of protection from the structure owner). Stability Class II – Evaluation areas for structures, which are covered under Section 1405.5d of BMSLCA, and utilities, which are covered under Subchapter F of Chapter 89. Coverage: Evaluation areas for dwelling and permanently affixed appurtenant structures, noncommercial buildings customarily used by the public (except those included in Class I), buildings which are accessible to the public (i.e. commercial, industrial and recreational buildings) and their permanently affixed appurtenant structures, barns, silos, agricultural buildings of 500 or more square feet (46.44 square meters) in area, gas wells, oil wells, oil pipelines, gas pipelines, water pipelines, sewerage pipelines, underground electric and telephone lines, gas compressor stations, and electric transmission line towers. Service lines extending from mains to customers are excluded. For cover thickness less than 100 feet (30.48 meters): No mining except for site-specific variances approved by the Department. For cover thickness greater than 100 feet (30.48 meters), any of the following: Leaving coal pillars which are designed to achieve stable coal support (safety factor of 2.0 or higher); Providing auxiliary support; Mining to induce planned subsidence. Stability Class III – Perennial Streams and Public Water Supply Aquifers. Coverage: Perennial streams and public water supply aquifers. Perennial streams should be protected as described in Program Guidance 563-2000-655. (Note: where coal pillars are required to protect a perennial stream which serves as significant source to a public water system, they must be designed to provide permanent coal support; and where pillars are required to protect other perennial streams, they must be designed to achieve stable coal support.) Aquifers serving public water supply systems should be protected as described in the Program. Stability Class IV – Open areas. Coverage: Areas, which do not contain structures or features, listed in Classes I, II, or III. For cover thickness

less than 100 feet (30.48 meters), any of the following: leaving coal pillars which are designed to achieve stable coal support and roof spans which are: designed to achieve long term stability (safety factor of 2.0 or higher); providing auxiliary support; mining to induce planned subsidence. For cover thickness more than 100 feet (30.48 meters), any of the following: leaving coal pillars which are designed to achieve stable coal support; (for coal seams other than the Pittsburgh coal) leaving coal pillars which are uniform in size and pattern; providing auxiliary support; mining to induce planned subsidence.

Utah: Planned subsidence is assumed to occur in areas that are mined using longwall equipment. Planned subsidence is assumed to occur in room-and-pillar areas where second mining occurs. The Division does not have specific criteria for determining if room-and-pillar areas will subside. That determination is done on a case-by-case basis, usually in conjunction with the US Forest Service or Bureau of Land Management as part of the resource recovery and protection plan or surface management plan.

Virginia: 50% or less is considered protected while 80% and above is planned subsidence. Can use site specific information such as pillar strength calculations with supporting data to demonstrate alternate percentages.

West Virginia:
Categories of subsidence control are differentiated by the angle of draw and by the percent extraction.

Wyoming: Type of mining, planned/unplanned subsidence: Chapter 7, Section 1(a)(v).

2) Do you require information on a company's right to subside the surface in addition to the right to mine the coal? If so, how do you do this? (Listing of documents or a simple statement or affidavit)

Alabama: No.

Arkansas: No.

Illinois: Illinois requires a specific affidavit that indicates the company has or will possess prior to mining all necessary rights to conduct planned subsidence. We also require a listing of ownership defining tracts where they currently possess the right to subside and where the right to subside remains outstanding. For outstanding right to subside tracts, they must get a separate subsidence agreement prior to conducting planned subsidence operations.

Indiana: Yes. The right to subside must be demonstrated by the applicant by a statement from an attorney licensed to practice law in Indiana. This statement must be a legal

opinion that the attorney has examined relevant right of entry documents, and it is the attorney's opinion, under Indiana case law, that the applicant has the right to subside.

Kentucky: Yes. If subsidence is planned and the effects can be predicted, a plan can be presented that will prevent subsidence from causing material damage or lessening the value of the surface. This plan would require either a pre-mining agreement with the owner of the structure, or the applicant can purchase the structure. The agreement must include some method of compensating the owner in order to prevent materials damage or lessening the value of the surface [405 KAR 18:210, Section 3].

Maryland: No.

New Mexico: No.

Ohio: No. Ohio only requires documentation of the right to remove the coal by underground mining methods.

Oklahoma: No.

Pennsylvania: No. An application shall contain a description of the documents upon which the applicant bases his legal right to enter and commence coal-mining activities within the permit area and whether that right is the subject of pending court litigation. The description shall identify the documents by type and date of execution, identify the specific lands to which the document pertains and explain the legal rights claimed by the applicant.

Utah: No.

Virginia: Not normally.

West Virginia:
Yes. Permittee will provide adequate documentation of its right to subside the surface and its right to mine the coal in the deed.

Wyoming: No. W.S. 35-11-406(a)(ii) – requires sworn statement regarding right to mine. Chapter 2, Section 2(a)(iii) – support statements for above.

3) For six month surface owner notification, do you allow companies to mail these notices well in advance of actual mining?

Alabama: Yes.

Arkansas: Yes.

Illinois: Yes. Illinois has found some company's mass mail them 5 to 10 years in advance. Although a landowner would probably prefer it closer to the actual date of coal extraction, we see no prohibition from doing it well in advance.

Indiana: Yes.

Kentucky: Yes. Kentucky regulations require the permittee to mail notification to all owners and occupants of the surface property and structures within the area above the underground workings at least ninety (90) days prior to mining beneath the property or structure. In accordance with 405 KAR 18:210, Section 2 (3), the Public Notice must include the following items: (A) Identification of specific areas in which mining will take place; (B) Dates that specific areas are anticipated to be undermined; and © The location(s) where the permittee's subsidence control plan may be examined. These regulations do not indicate the maximum time that notification may be sent out in advance of mining, although the dates should be listed in the notice. A full explanation of notification in emergency situations is given in 405 KAR 18:210, Section 2.

Maryland: Yes.

New Mexico: Yes.

Ohio: No.

Oklahoma: Yes.

Pennsylvania: Yes. The notice shall be sent at least 6 months, but not more than 5 years, prior to mining beneath that property or structure or within that political subdivision. The operator shall provide the Department with a copy of each notice and return receipt, or, if the certified mail is not accepted, a copy of the returned envelope documenting that the notice was not accepted or not deliverable.

Utah: Yes.

Virginia: Yes.

West Virginia:

Yes. WV DEP Rules state that it must occur at least six (6) months prior to undermining.

Wyoming: Yes. Chapter 7, Section 3© – Any late submittals shall occur *at least* 6 months prior.

4) Do you waive the 6-month notice to a lesser time frame if requested? If so, do you have specific guidelines as to when you will or will not waive the minimum time frame?

Alabama: No.

Arkansas: No.

Illinois: Yes. Illinois has waived the 6 month requirement to a shorter time frame on quite a few occasions. It has typically been only in unplanned subsidence mines and based on unexpected changes in mine plan.

Indiana: Yes. No, each case is reviewed on its own merits.

Kentucky: Yes. See above comments for the lesser time frame than six (6) months (ninety (90) days) required for Kentucky. A time frame less than the one listed in 405 KAR 18:210, Section 2 has not yet been requested in a permit we have reviewed, but it can be done for "subsequent mining emergencies or other unforeseen conditions."

Maryland: Yes.

New Mexico: No.

Ohio: Yes. Must be related to an unforeseen change in mining plans.

Oklahoma: No.

Pennsylvania: No.

Utah: No.

Virginia: Yes. No specific guidelines.

West Virginia:

Yes. No other time limit is granted, unless another time period is granted by the WV DEP Secretary, but this rarely occurs.

Wyoming: No. N/A.

Structures:

Regulated Extraction Area

1) What is the date of coal extraction used in your state to initiate the requirement to repair, replace or compensate for subsidence damage to structures?

Alabama: October 24, 1992.

Arkansas: October 24, 1992.

Illinois: Illinois' date is February 1, 1983, the date of our permanent program rules and regulations. We cannot make state law retroactive, therefore, there is a "limbo" period from the AML program (Pre-August 3, 1977) to the regulatory program post-February 1, 1983.

Indiana: July 29, 1982.

Kentucky: Underground mine operators have been required since September 18, 1983, to "repair, replace, or compensate" for subsidence damage. More detail on this has been provided in the regulation changes (405 KAR 18:210) on October 24, 1992.

Maryland: All underground coal mines in Maryland have been subject to subsidence control since the mid-1970's. There are no current operations that predate the requirements.

New Mexico: N/A.

Ohio: Ohio has required this since approval of our permanent program in 1982.

Oklahoma: After October 24, 1992.

Pennsylvania: August 21, 1994.

Utah: None. There is only one noncommercial building within a subsidence zone and that structure is not scheduled to be subsided for the next seven years. The Division usually allows the area to stabilize (6 months after mining ceased) before initiating permanent repairs. Temporary repairs, such as trucking water to stock ponds are usually required once the damage has occurred.

Virginia: Date of permanent program approval.

West Virginia:
October 24, 1992.

Wyoming: Chapter 2, Section 1(c) – May 3, 1978 and estimated issuance of permit.

2) How do you define mining areas that predate your jurisdiction as opposed to areas that are subject to your subsidence control regulations? (Map defining the pre-law and post-law workings; criteria used?)

Alabama: The subsidence control plan does not differentiate between areas mined before or after October 24, 1992.

Arkansas: The pre-law underground works were mapped prior to program approval.

Illinois: Illinois received a map from all active operators defining the working face on February 1, 1983. We also incorporated all mains and sub-mains used to facilitate mining after February 1, 1983. We use this map to determine pre and post law areas when an issue arises.

Indiana: Any mining that took place after July 29, 1982 is subject to regulations. No maps or special procedures have been needed to identify these workings.

Kentucky: Pre-law underground areas, defined as mining before September 18, 1983, will be shown on the annual underground mine maps review required by the agency.

Maryland: N/A.

New Mexico: N/A.

Ohio: Mapping – Interim program areas are treated on a case-by-case basis. The date of extraction (pre-SMCRA, Interim or Permanent Program) is used to determine jurisdiction.

Oklahoma: Pre-law is under the jurisdiction of the Abandoned Mine Lands Program, Oklahoma Conservation Commission.

Pennsylvania: Under Pennsylvania law, mine operators must submit semi-annually maps showing workings completed in the previous six months and workings proposed in the next six months. The records established by these maps are sufficient to delineate areas mined prior to and after the effective date of Pennsylvania's subsidence control regulations.

Utah: No, not an issue in Utah.

Virginia: Maps with dates of mining.

West Virginia:
Maps designate the mining areas.

Wyoming: Chapter 2, Section 1(c) – Maps defining the various regulatory time periods.

3) OSM requires prompt repair or compensation for material damage to occupied residential dwellings and structures related thereto, or non commercial buildings. Some states (like Illinois) maintain the requirement to mitigate "all structures" and do not exclude commercial buildings. What structures are covered in your state?

Alabama: Alabama law requires prompt repair or compensation for material damage to occupied residential dwellings and structures related thereto as well as non-commercial buildings. Repairs or compensation for material damage to other structures are required provided that the structures are not exempted by state law. Requirements that preventative and mitigative measures be taken apply to occupied dwellings and structures related thereto as well as non-commercial buildings when planned subsidence is used.

Arkansas: Our state law is the same as federal law.

Illinois: Illinois covers all structures and facilities.

Indiana: All structures.

Kentucky: 405 KAR 18:210, Section 3 requires mitigation of the adverse effects of subsidence to surface lands (Section 3(1)), noncommercial buildings and occupied residential dwellings and related structures (Section 3(2)), and other structures not included in the above categories (Section 3(3)).

Maryland: The presumption, until proven different, is that all occupied structures, residential or commercial, are protected.

New Mexico: Same as OSM.

Ohio: All structures are subject to mitigation except private utilities. They are required to protect their own conveyances if the right to mine predates the right-of-way issuance.

Oklahoma: All structures.

Pennsylvania: Pennsylvania law provides for repair or replacement of the following types of structures when they are damaged by underground mining operations: Dwellings used for human habitation and structures that are used in connection with dwellings (such as garages, storage sheds, greenhouses, fences, and other enclosures, retaining

walls, paved or improved patios, walks, and driveways, septic sewage systems, and lawn and garden irrigations systems; buildings that are accessible to the public (such as commercial, industrial and recreational buildings) and structures, which are securely attached to the land surface and used in connection with these buildings; non-commercial buildings (such as schools, churches, hospitals, and community and institutional buildings; barns and silos; certain agricultural buildings of 500 square feet or more in area.

Utah: The Division requires that the Permittee repair or compensate the owners of all structures damaged by subsidence (R645-301-525.530).

Virginia: Matches OSM.

West Virginia:
Any man-made structure or dwelling except commercial buildings.

Wyoming: Chapter 7, Section 4(a)(ii) – any structures or facilities.

Condition Surveys

1) Do you require condition surveys for surface structures?

Alabama: Yes.

Arkansas: Yes.

Illinois: Yes.

Indiana: Yes. For planned subsidence only.

Kentucky: A subsidence survey is required to provide a survey of all areas above underground or auger mining operations. The survey must identify all structures, renewable resource lands (i.e. aquifers that are being used or have the potential to be used as a water supply source in the future, etc.), water supplies (wells, springs, etc.), and fish and wildlife habitats that exist above the mining area. The applicant must report the result of the survey even if none of the above were found overlying the underground or auger mining areas. The Division does not require condition surveys (i.e. photos, videos, etc.) as a part of the application (the regulations requiring them have been removed). If the subsidence control plan includes measures to be taken to reduce the likelihood of subsidence, the determination of the degree of damage can be established by providing notice to the owner of structures and recording any damage reported by the owner to the applicant. Pre-subsidence surveys and monitoring would not be required in a subsidence control plan where subsidence is not planned.

If the subsidence control plan proposes planned or controlled subsidence, pre-subsidence surveys and monitoring may be beneficial to the applicant (although not required).

Maryland: Yes.

New Mexico: No.

Ohio: Yes.

Oklahoma: Yes.

Pennsylvania: Yes.

Utah: No.

Virginia: No. We ask for them but cannot require them.

West Virginia:
Yes.

Wyoming: No.

2) If so, are they required for all structures, whether over full extraction mining (planned subsidence) or room and pillar (stable mine plan)?

Alabama: Surveys are required for all occupied residential dwellings and structures related thereto and all non-commercial dwellings within the area encompassed by the applicable angle of draw when material damage may occur. In other words, surveys are required when planned subsidence is used but not when unplanned subsidence is indicated for a stable mine plan.

Arkansas: Yes.

Illinois: Although OSM threw out the condition survey requirement due to a court decision, condition surveys are still required for planned subsidence in Illinois. Pre-subsidence agreements or operator acquisition of the structure could negate the need for a condition survey.

Indiana: Only in areas of planned subsidence.

Kentucky: N/A.

Maryland: All property owners and residents above or within 1000' of the underground mine area are notified they may request a pre-subsidence survey, regardless of the type of mining.

New Mexico: N/A.

Ohio: Only over areas where planned subsidence will occur.

Oklahoma: Not for room and pillar mining (unplanned subsidence) where extraction is < 80%.

Pennsylvania: The premining survey is required for all structures whether it is full extraction mining or room-and-pillar mining.

Utah: N/A.

Virginia: Take what we can get.

West Virginia:
Yes. Unless exemption is requested by permittee and approved by WV DEP.

Wyoming: Chapter 2, Section 2(a)(vi)(Q) – Note location of any existing man-made features. Applicants would also likely have to supply this information for insurances purposes.

3) Do you specify the type of condition survey that is required to be performed (video, pictures, certified appraisal of value, etc.)? If so, what are applicable requirements for the survey?

Alabama: No.

Arkansas: No.

Illinois: No. Illinois has no specific regulatory requirement for the type or level of detail. Poor surveys do however fall back on the company if it is difficult to differentiate pre-existing damages. We urge companies to do thorough surveys for their own good.

Indiana: Yes. Same as pre-blast survey for strip mining.

Kentucky: No.

Maryland: Yes. Surveys are structural in nature, comparable in format to pre-blast surveys, and usually include pictures, but not video.

New Mexico: No.

Ohio: No.

Oklahoma: No.

Pennsylvania: No.

Utah: No.

Virginia: No.

West Virginia:
Yes. Refer to "Water Supplies" section, question 10.

Wyoming: No. Chapter 7, Section 1 (a)(v)(D) – manner of determining the degree of material damage or loss of value of property shall be described.

4) Whom do you require the company to submit the condition surveys to? (Your office, to the landowner, kept on file at the mine office, and/or anyone else)

Alabama: The surveys are retained at the mine office and copies are provided to the property owners. The surveys are available for review by the Alabama Surface Mining Commission staff upon request.

Arkansas: To our office and the property owner.

Illinois: Illinois requires the survey be provided to the surface owner and kept on file at the mine office for our review. We decided that it was inappropriate to have the surveys in our possession.

Indiana: Homeowner and this office are provided copies. There is no requirement to maintain a copy at the mine office.

Kentucky: N/A.

Maryland: Surveys are provided to our office and the survey requestor.

New Mexico: N/A.

Ohio: Kept on file at mine office and available for inspection. Copy to landowner.

Oklahoma: Oklahoma Department of Mines (ODM) permitting section in Oklahoma City, OK.

Pennsylvania: The results of a pre-mining survey are submitted to the landowner within 30 days of completion and to the Department upon Department request.

Utah: Condition surveys are not done in Utah because of the lack of structures in subsidence zones.

Virginia: Landowner and agency upon request.

West Virginia: To the property owner and WV DEP regional office.

Wyoming: Any information is provided as part of the application process.

5) If a structure owner denies access for a company to perform a pre-subsidence condition survey, what action does the state take? Does this refusal change the protection afforded to the structure owner?

Alabama: The state does not take any action if the landowner denies access for a company to perform a pre-subsidence survey. This denial of access does not change the protection afforded to the structure; however, it does shift the burden of proof to the landowner to show that subsidence caused the damage.

Arkansas: No action is taken by the state and the property owner is notified in writing by the applicant that refusal will cause no rebuttable presumption to exist.

Illinois: Illinois would still require repair or compensation for all damages regardless of a refusal to conduct the condition survey. We certainly encourage landowners to cooperate and urge the company to clearly document the refusal of access.

Indiana: None. No. However, refusal may affect the ability of the state to make a well-reasoned determination on whether subsidence is the cause.

Kentucky: N/A.

Maryland: The owner is advised it is in their best interest to allow the survey. Refusal does not change the protection but may make determination of damage claims more difficult, particularly in cases involving minor damage.

New Mexico: N/A.

Ohio: It will only affect Ohio's ability to determine if damages are mining related.

Oklahoma: Applicant notifies owner in writing of the effect of the denial of access. No.

Pennsylvania: If the Department becomes aware of a situation where access for a survey is being denied, it will advise the structure owner of the potential consequences of his/her actions. The effect of denial of access depends on the class of structure for which

access had been denied. If the structure is an EPACT structure, the operator's liability is limited to damages that the structure owner or the Department can prove by a preponderance of evidence was due to the operator's underground mining operations. For structures other than EPACT structures, the denial of access is grounds for relieving the operator of liability for structure damages.

Utah: Not an issue in Utah due to lack of structures in subsidence zones.

Virginia: Company documents but protection is still afforded.

West Virginia:
No action taken by WV DEP. Refusal of entry does not change the protection offered to the structure.

Wyoming: Document refusal, part of application information submitted. No difference in protection to structure owner unless specifically waived.

6) What is the time requirement for performing pre-subsidence condition surveys? (i.e. must it be submitted in the application, or delayed until six months or 60 days before planned subsidence will impact the structure, etc.)

Alabama: There is no specific time requirement for performing pre-subsidence surveys except that the timing for performing pre-subsidence surveys is specified and approved in the subsidence control plan. The surveys must be conducted prior to subsiding an area that has structures which are afforded protection.

Arkansas: They must be submitted with the application.

Illinois: Illinois allows the surveys to be conducted prior to planned subsidence. The surveys must be completed a minimum of 120 days in advance of planned subsidence operations impacting a given structure. We contend that it makes no sense doing a survey up front in the application possibly 5 or more years in advance of subsidence impacts. Structural condition can change in that time frame.

Indiana: All must be submitted in permit application, but time extension may be granted depending on circumstances and a permit condition applied.

Kentucky: N/A.

Maryland: Prior, but as near as practical, to the time the area of influence of mining reaches the structure. Area of influence is specified as the area within a 26 degree angle of draw.

New Mexico: N/A.

Ohio: 60 days prior to subsidence.

Oklahoma: No specified time in regulations, only prior to mining.

Pennsylvania: The pre-mining survey shall be completed prior to the time that a structure falls within a 30-degree angle of draw of underground mining, or a larger area as required by the Department.

Utah: Not an issue in Utah due to lack of structures in subsidence zones.

Virginia: Prior to mining within potential impact area.

West Virginia: Notice is required in the application, but this can be delayed until six (6) months prior to any mining in the area.

Wyoming: Any information is provided as part of the application process.

7) How often, if ever, have you had to use the condition survey to aid in determining damages or compensation?

Alabama: Once or twice a year.

Arkansas: This has not happened in Arkansas.

Illinois: In Illinois, to the best of my knowledge, the regulatory authority has never had to rely on a condition survey to make a determination of damages.

Indiana: No planned subsidence under a structure has been proposed in Indiana at this time.

Kentucky: Never.

Maryland: I do not recall any cases where such a survey was instrumental in making a determination.

New Mexico: N/A.

Ohio: We can think of only two or three cases in dispute that the pre-subsidence survey was a factor. The mining company uses the survey information to determine pre-existing conditions for subsidence remediation.

Oklahoma: Never.

Pennsylvania: The pre-mining surveys are used on a regular basis during the damage claim investigation.

Utah: Not an issue in Utah due to lack of structures in subsidence zones.

Virginia: Each time if available.

West Virginia:
Condition surveys are used every time as a control.

Wyoming: N/A.

Public Roads, Utilities

1) In general, in the permitting process, how do you handle subsidence of public roads and utilities such as water, electric and gas lines? Do you require cooperative agreements between the mining company and the utility or road authorities to assure public safety?

Alabama: Public roads, railroads and water lines are repaired at the expense of the mining company. The utility companies are responsible for protection of electric lines and gas lines. Cooperative agreements are not required but do exist in many cases.

Arkansas: This is not allowed in Arkansas.

Illinois: Illinois typically requires cooperative agreements with public road authorities, railroad authorities and utilities to assure public safety during the subsidence. This is only for planned subsidence operations.

Indiana: A company would have to demonstrate the right to subside a road. Repair agreements are between mining company and individual utilities, etc.

Kentucky: The applicant is required to submit a plan to prevent material damage to public roads and utilities (if a protection plan is provided no agreements are required). If planned subsidence is proposed, then agreements are required for "water, electric, and gas lines." For public roads, safety of public must be guaranteed. The permittee is required to submit plans to protect these structures in the Subsidence Control Plan (Item 35.1 of the MPA-03 application) and identify all protection zones (i.e. "no-mining areas" on maps included in the application).

Maryland: An agreement was required with respect to a high traffic state maintained road but not low traffic local roads. Other public utilities have not been an issue.

New Mexico: No.

Ohio: Public roads may be subsided but are protected as well as the public safety. The public road authority may require a bond to guarantee repair. Continued operation and maintenance of water supply, electricity and gas is required. The only factor that is up for negotiation is who pays for the cost of protecting such areas. Water supplies that may be damaged and affect a large number of residences require coordination between the mining company and the utility. In some cases mitigation is required in advance to ensure no interruption of service or danger to the public health or safety.

Oklahoma: Must be replaced. Yes.

Pennsylvania: Situations involving the undermining of roads and utilities are usually governed by which entity (road authority/utility owner or mining company) has the superior right. Mining companies are required to describe, in their permit application, how they intend to prevent hazards to human safety and minimize disruption of utility service. In cases where the mining has the superior property right, it will usually propose a notification arrangement in which it notified the road authority or utility owner in a time frame that allows the road authority or utility owner to take appropriate actions. The Department closely monitors situations where the failure to maintain effective communications could result in a hazard to human safety. In some cases, a utility owner will purchase coal support from a mining company to provide protection for critical facilities.

Utah: The only public roads that are affected by subsidence in Utah to date are dirt roads, which are usually on US Forest Service or Bureau of Land Management lands. Subsidence damage to the roads is usually minor and the permittees usually repair the roads as needed. In the past the permittees have either moved water and gas lines or not subsided them. The Division requires monitoring of power lines if the area they are in will be subsided. The Division did require that a permittee conduct weekly monitoring when they were mining near a reservoir. The main concern was with seismic events rather than subsidence.

Virginia: Handled between company and VDOT on roads. Agreements between company and utilities control.

West Virginia:

Permittee indicates in the permit what measures are to be taken to minimize material damage. No. Agreements are required by WV DEP regulations.

Wyoming: Chapter 2, Section 2(a)(vi)(Q) – must locate all of these features on map. Chapter 7, Section 4(a)(ii) requires compensation regardless of ownership. LQD maintains Memorandums of Understanding/Agreement with other concerned agencies.

2) Do you specifically hold the company financially liable for damages to public roads, utilities, railroad lines, etc. if damaged by subsidence?

Alabama: See response above.

Arkansas: N/A.

Illinois: Yes. Illinois considers roads and utilities as structures and therefore requires the same protection as privately held structures.

Indiana: No. Financial responsibility is typically established by agreements with individual utility, etc. (Planned subsidence has never been proposed under public facilities in Indiana.)

Kentucky: In 405 KAR 18:210, Section 3(3) provides an explanation of the permittee's responsibility to repair or compensate for damage to other structures or facilities not included under surface lands (Section 3(1)) or noncommercial buildings and occupied residential dwellings (Section 3(2)). 405 KAR 18;210, Section 3(5)(a) describes requirements of the permittee by the cabinet to obtain additional performance bond or liability insurance.

Maryland: In the case of the state road the company was required to have an agreement with the Department of Highways to monitor the road 24/7 during the mining operation, and compensate the Highway Department for damage repair.

New Mexico: No.

Ohio: Yes. Unless a court decision has determined otherwise.

Oklahoma: Increase bond for planned subsidence damages.

Pennsylvania: Generally not. Mining between public roads is usually conducted in accordance with the provisions of the State Highway Act. Mining beneath utilities is usually done in accordance with property rights.

Utah: Yes.

Virginia: Handled between company and VDOT on roads. Agreements between company and utilities control.

West Virginia: Yes.

Wyoming: Chapter 7, Section 4(a)(ii) – correct material damage caused to any structures or facilities.

3) How closely do you monitor the subsidence impacts and execution of subsequent repairs for these public facilities?

Alabama: The same as other structures which must be repaired.

Arkansas: N/A.

Illinois: We quite honestly do not monitor extremely closely but rely on the cooperative agreements to assure the appropriate authority is intimately involved in order to assure the protection of the public.

Indiana: This agency does not monitor the subsidence or repair of public facilities. Alleged subsidence problems are investigated if reported to the agency. We would provide assistance to the agency with jurisdiction.

Kentucky: Relatively closely, once they have occurred.

Maryland: Monitoring is case dependent, usually left to the agency or entity with jurisdiction over the facility. The coal regulatory authority gets involved when notified by the jurisdictional authority.

New Mexico: On a monthly basis.

Ohio: Depends on the nature of mitigation efforts needed and degree of potential impact on users as well as whether the operator is controlling the repairs. If the landowner elects to receive cash settlement and supervise the repairs himself, then we do not monitor the repairs to structures. All land repairs are monitored and tracked.

Oklahoma: Oklahoma Department of Mines responds to all public complaints.

Pennsylvania: If the utility is considered critical (ex. gas) and it is located in a heavily populated area, the District Mining Office will monitor the situation closely. Non-critical utilities are spot checked during the mining operations.

Utah: Monitoring is usually done as part of the monthly inspection or more frequent if needed..

Virginia: We check on repairs but VDOT and utilities control.

West Virginia:
At least monthly.

Wyoming: Chapter 16, Section 1(a)(I) – monthly inspections averaging quarterly inspection of compliance of all conditions and requirements of permit.

Private Homes and Other Structures

1) Is the choice between repair, replacement, or compensation for material damage to home, outbuildings, etc. that of the coal companies or that of the structure owner?

Alabama: The companies have the choice.

Arkansas: The owner can choose.

Illinois: Illinois has held the position that it is ultimately the operator's choice of the three. We encourage the operator to work with the landowner. If, however, an offer to compensate at an appropriate amount is made, and the landowner wishes repairs are made instead, we would side with the operator to simply compensate.

Indiana: It is a negotiated matter between the structure owner and the mining company. Permit language states that they will negotiate settlement. If the parties cannot reach an agreement they will move to arbitration. If arbitration fails, the parties may initiate litigation.

Kentucky: The method of mitigation for material damage (between repair, replacement, or compensation) is decided upon between the structure owner and the operator.

Maryland: Coal company, but usually through a negotiation process.

New Mexico: N/A. All questions in this section N/A.

Ohio: It is strictly up to the structure owner.

Oklahoma: Structure owner, unless negotiated prior to mining or after damage has occurred.

Pennsylvania: The mine operator decides whether they want to repair, replace or compensate the structure owner or the landowner for the damages.

Utah: Not an issue in Utah because of the lack of homes in the subsidence zones.

Virginia: We encourage negotiation, but if the landowner refuses to agree on any method and asks for punitive action, if the company tenders an offer for any of the approved options with supporting documents, then the agency can enforce the order in accordance with guidance from Virginia Attorney General's office.

West Virginia:

Choice to repair, replace, or be compensated is made between permittee and owners of property. If no agreement can be reached, then WV DEP may decide or it may go to court.

Wyoming: Chapter 7, Section 4(a)(ii) – operator shall *either* correct material damage or compensate the owner.

2) What is the maximum level of compensation for a given home or structure? Is it the fair market value, the replacement value, or other?

Alabama: Fair market value.

Arkansas: Full amount of decrease in value.

Illinois: It is the fair market value in Illinois under our permanent program. This is a policy decision and not in the written rules.

Indiana: Compensation for the amount of damage or the cost of repair is determined by agreement, arbitration or litigation.

Kentucky: If compensation is chosen, the permittee is required to compensate the owner of the full amount of the decrease in value resulting from the subsidence-related damage (405 KAR 18:210, Section 3(2)).

Maryland: Maximum is unlimited.

Ohio: The structure owner must be made whole. Compensation must provide for replacement equivalent to what existed prior to mining.

Oklahoma: Full amount of the decrease in value resulting from the subsidence related damages.

Pennsylvania: If, rather than repair the damage, the operator compensates the structure owner for damage caused by the operator's underground mining operations, the operator shall provide compensation equal to the reasonable cost of repairing the structure. If the structure is determined to be irreparably damaged, the compensation shall be equal to the reasonable cost of its replacement except for an irreparably damaged agricultural structure, which at the time of damage was being used for a different purpose than the purpose for which the structure was originally constructed. For such an irreparably damaged agricultural structure, the operator may provide for the reasonable cost to replace the damaged structure with a structure satisfying the functions and purposes served by the damaged structure before the damage occurred.

Utah: Not an issue in Utah because of the lack of homes in the subsidence zones.

Virginia: We have not had to address replacement costs as homes have not been damaged to that extent. It is normally the repair cost.

West Virginia:

Maximum amount as per subsidence insurance, if applicable, is $75,000 after damage has occurred. Otherwise it is based upon an agreement reached by the permittee and the owners of the property.

Wyoming: Chapter 7, Section 4(a)(ii) – full amount of the reduction in the value resulting from the subsidence.

3) Do you specifically require alternative housing when dwellings are subsiding? If so, how long does this alternative housing typically last?

Alabama: No.

Arkansas: No.

Illinois: No. We have twice asked the company to provide compensation for alternative housing when a given homeowner refused to leave during the subsidence. In both cases the owner did not leave. This was done as a public safety concern. The regulations are silent on alternative housing compensation. Typically, a company will do this without any regulatory mandate. Although we have mandated the compensation in those two cases because of concern for safety, it is not part of the permitting process to require such commitments.

Indiana: No.

Kentucky: No. Alternate housing would be required if necessary, although not specifically required by the regulations, and would be maintained as long as necessary.

Maryland: No. The owner/resident is provided the option.

Ohio: No. This is up to the parties to negotiate. N/A.

Oklahoma: No.

Pennsylvania: No.

Utah: No. Not an issue in Utah because of the lack of homes in the subsidence zones.

Virginia: No. Subsidence has not been that bad.

West Virginia:

No. Alternative housing arrangements are normally indicated in the agreement between the permittee and the parties involved with the property.

Wyoming: No. N/A.

4) When disputes develop between the company and the landowner over whether alleged damages are mine subsidence related or not, how is it resolved? Does the state make a determination as to whether the alleged subsidence damage is the responsibility of the coal company? If not, who referees the dispute?

Alabama: The state makes the determination.

Arkansas: The state would make the determination.

Illinois: The Illinois state regulatory authority makes the determination if subsidence caused the alleged damage or not.

Indiana: The state does not get involved. If the permittee denied causing the damage the state may be required to make an initial determination on whether subsidence was a likely cause. Then the repair, compensate, arbitrate, litigate process could be pursued to a final resolution.

Kentucky: DMRE would conduct an investigation and make the determination as to whether the damages were subsidence related, and would direct the permittee to make restitution.

Maryland: An initial determination is made by the state. If either party is aggrieved by the determination they can request additional evaluation or appeal.

Ohio: If DMRM receives a complaint Ohio will determine if the damages are mining related. Ohio always requires repair or compensation. If the parties cannot agree they may end up in litigation over the specific amount of damages. Also, in Ohio landowners may file a claim on their homeowners insurance under their mine subsidence coverage. In such a case the insurance company (MSI) will determine causation and pay for the repairs and then MSI will sue the coal company to recover their costs.

Oklahoma: Oklahoma Department of Mines. Yes. Can be appealed to an administrative hearing.

Pennsylvania: Disputed damage claims are usually referred to the Department by aggrieved landowners. Upon receipt of a claim, the Department will conduct an investigation and determine whether or not the alleged damage was caused by the operator's underground mining operations. If the Department determines that the alleged damages were due to the operator's mining operations, it will issue an order to the

operator requiring the operator to repair or provide compensation to the landowner. If the Department determines the alleged damages were not due to the operator's underground mining operations, it advises both parties of its determination. Department determinations may be appealed to the Environmental Hearing Board.

Utah: Not an issue in Utah because of the lack of homes in the subsidence zones.

Virginia: State makes the call.

West Virginia:
Determinations in disputes as to the cause of damages to structures are normally done by the WV DEP.

Wyoming: W.S. 35-11-112 – Environmental Quality Council shall conduct hearings in any case contesting the administration or enforcement of any law, rule, regulation, standard or order issued or administered by the Department of divisions.

5) If the state makes a determination that the damages are not due to mine subsidence, does the state specifically define the real cause of non-subsidence related damage (termites, soils issue, etc.) or simply indicate it is not mining related with no further explanation?

Alabama: The state simply indicates the damage was not mine related.

Arkansas: The state would define the cause.

Illinois: Illinois might make some suggestions but does not formally determine the assumed true cause of damages. We only indicate that it is not mining related.

Indiana: We would only determine whether the damage was subsidence related but other causes might be identified.

Kentucky: During the course of the investigation, if an obvious cause is found, it may be referenced in the report, or during the investigation (as in the case of termites, construction issues, etc.).

Maryland: The state explains why it does not believe the problem is subsidence and indicates what it believes to be the cause.

Ohio: Generally not.

Oklahoma: Not mining related.

Pennsylvania: The Department's reports usually include explanations as to why mining was not the cause of the reported damages. The reports may or may not describe actual cause of the damages.

Utah: Not an issue in Utah because of the lack of homes in the subsidence zones.

Virginia: No. Other possible causes may be listed if they are evident, such as lack of proper drainage controls, but the state does not make an affirmative finding of the actual cause.

West Virginia:
WV DEP makes a finding as to the damages done to the structure and property.

Wyoming: W.S. 35-11-112(b) – EQC may contract with consultants having special expertise to assist in the performance if its duties. W.S. 35-11-112(e) – attorney general shall provide legal assistance when required.

6) Does the state ever perform surveys or monitoring to determine if movements are occurring (such as with unplanned room and pillar subsidence or structures just outside the angle of draw of a longwall)? If so, who does it (in house staff or contracted out)?

Alabama: No.

Arkansas: No.

Illinois: No. Illinois does not have staff nor do we attempt to contract this type of work. We have required the company to initiate monitoring.

Indiana: No.

Kentucky: Yes. In-house.

Maryland: No.

Ohio: It has been done but it is not the rule. We have required operators to survey and monitor to assure movements are as predicted. Yes. We have required the coal company to hire a consulting firm in one case and we have surveyed the brick pointing in other cases to evaluate the difference from level. Ohio required monitoring of soil moisture in an old growth forest adjacent to a longwall panel as well as land surveys by the operator to determine the extent of movement.

Oklahoma: No.

Pennsylvania: Yes. The work is completed by the District Mining Offices and/or the Bureau of Mining and Reclamation.

Utah: No.

Virginia: Yes. In addition, the company may be required to do so.

West Virginia:

Yes. WV DEP has occasionally contracted this or required the company to do so.

Wyoming: No. Chapter 7, Section 1(a)(v)(D) – subsidence plan would identify any monitoring conducted by operator, which will be reviewed through inspections.

7) When subsidence is the cause of damages and a dispute occurs between the structure owner and the company over the dollar value of the damage, how is the amount of compensation determined (arbitration or other?)

Alabama: Other.

Arkansas: Other.

Illinois: Illinois requires arbitration language in the permit to resolve such disputes. Unfortunately, landowners must cooperate and some landowners have refused to go this route. Most recently we required a company to employ an adjuster experienced in mine subsidence damage and repair (i.e. an adjuster employed by the Illinois Mine Subsidence Insurance Fund) to make a determination. We then mandated payment of this adjuster's determined amount.

Indiana: Permit language states that the owner and the mining company will negotiate settlement. If the parties cannot reach an agreement they will move to arbitration. If arbitration fails, the parties may initiate litigation.

Kentucky: Regulations specify that the compensation be for the full amount of the decrease in value resulting from the subsidence-related damage. Should dispute occur, it may be abjudicated in formal mediation or in court.

Maryland: No experience with this issue; expect we would leave it to civil court.

Ohio: The state does not decide the appropriate amount. If the parties cannot agree it is usually decided in court or by a mutually agreed upon 3rd party mediator.

Oklahoma: By Oklahoma Department of Mines, but can be appealed to an administrative hearing.

Pennsylvania: The dollar amount is left to the mine operator and the landowner.

Utah: Not an issue in Utah because of the lack of homes in the subsidence zones.

Virginia: Other. Parties submit documentation, state has guidance on necessary documentation.

West Virginia:
Independent arbitration occurs.

Wyoming: Owner provides evidence of value. State then would require satisfactory repair or replacement.

8) How involved is the state in the determination of a damage dollar amount?

Alabama: The state offered input in the past regarding the reasonableness of damage dollar amounts.

Arkansas: Not involved.

Illinois: As indicated above, we are not heavily involved but have dictated how it would be determined. We anticipate a possible challenge by the company in this recent case where we mandated payment based on an adjuster's repair estimate.

Indiana: The state is not involved in determining the value of the damage or cost of repair. That is a private matter left to the property owner and the mining company.

Kentucky: DMRE would review all documentation in determination of the damage dollar amount. Depending on the situation, the state could become very involved.

Maryland: The state is not involved in property values or settlement amounts.

Ohio: Very little to none. If a landowner refused access for repairs and an operator proposed a replacement value for the house that was obviously greater than the amount needed to make the landowner whole, we would determine that the operator has satisfied their obligations to repair and compensate.

Oklahoma: None, unless disputed.

Pennsylvania: The dollar amount is left to the mine operator and the landowner.

Utah: Not an issue in Utah because of the lack of homes in the subsidence zones.

Virginia: Review documentation provided.

West Virginia:
WV DEP is not involved in the determination of any monies associated with the damage dollar amount.

Wyoming: Fairly uninvolved.

9) When the plan is to compensate the damaged party (not repair), what dictates the compensation amount? Is the value based on the estimated cost of repair or the difference in the fair market value before and after damage?

Alabama: Decrease in value.

Arkansas: Full amount of the decrease in value.

Illinois: Based on a recent case, we have determined that the compensation level be the cost of repair up to the fair market value. After researching the issue and consulting with our Illinois Mine Subsidence Insurance Fund, it was determined that the before and after appraised value is too subjective and therefore a more equitable value is the cost to repair.

Indiana: Permit language states that the parties will negotiate settlement. If the parties cannot reach an agreement they will move to arbitration. If arbitration fails, the parties may initiate litigation.

Kentucky: Regulations specify that the compensation be fore the full amount of the decrease in value resulting from the subsidence-related damage.

Maryland: If owner elects compensation it is between the owner and the coal company.

Ohio: Estimated cost of repair.

Oklahoma: Full amount of the decrease in value resulting from the subsidence related damages.

Pennsylvania: The compensation for damages is based on the cost of repairing the damages.

Utah: Not an issue in Utah because of the lack of homes in the subsidence zones.

Virginia: Cost to repair.

West Virginia:
The full amount of the cost of the diminution in value resulting from subsidence dictate the compensation value.

Wyoming: Chapter 7, Section 4(a)(ii) – compensate the owner of structures or facilities in the full amount of the reduction in value resulting from the subsidence.

10) When the damage will be repaired, how does the state determine if a repair estimate is properly done?

Alabama: The state has not made this type determination in the past.

Arkansas: N/A.

Illinois: Illinois has not encountered a dispute over this value until this most recent issue. We determined that the Insurance Fund adjuster was the best suited and used his numbers.

Indiana: See answer above.

Kentucky: DMRE does not determine if repair estimates are properly done.

Maryland: The state has not been involved in the repair estimates.

Ohio: We do not make such determinations, as we allow the landowner and the operator to negotiate the amounts. If agreement is not reached the above methods will be employed to determine compliance.

Pennsylvania: When the mine operator and the homeowner settle the damage claim with a lump sum payment, the mine operator and/or the homeowner is not required to inform the state of the details of the settlement. When the homeowner chooses to have the mine operator repair the damages, the mine operator is not required to inform the homeowner or the state as to the cost of the repairs. If a homeowner elects to have the mine operator repair the damages, a subsidence agent for the state will spot-check the repairs to ensure that they are being completed.

Oklahoma: To date, have not had this problem.

Utah: Not an issue in Utah because of the lack of homes in the subsidence zones.

Virginia: If the landowner accepts the repair, then the agency requires compliance with the order. If there is a dispute, the agency determines if the company repaired damage attributable to subsidence. Disputes normally have been over non-subsidence damage.

West Virginia:
When all damages due to subsidence have been repaired or replaced.

Wyoming: Owner feedback. May be added to general bond as new line item.

11) Does the state get involved in evaluating the quality of the work done to repair structural damage?

Alabama: No.

Arkansas: No.

Illinois: No. (Unless a complaint were to be made. If so, we would investigate but might be at a loss as to the next step to take.)

Indiana: No.

Kentucky: Yes. DMRE would observe and document repairs.

Maryland: No.

Ohio: No.

Oklahoma: No.

Pennsylvania: No.

Utah: No.

Virginia: Yes. Only on rare occasions. We have required the company to go back once or twice.

West Virginia: No.

Wyoming: No.

<u>Mine Subsidence Insurance</u>

1) When did you state mine subsidence insurance program begin?

Alabama: Does not exist in this state. Questions in this section N/A.

Arkansas: N/A. All questions in this section N/A.

Colorado: Colorado's program was established in 1986.

Illinois: The Illinois Mine Subsidence Insurance Fund is not a state run program. The Fund was created by legislation in 1979.

Indiana: 1990.

Kentucky: The Kentucky General Assembly enacted legislation in 1984 with coverage to begin upon receipt of federal funds. We offered the first coverage in November of 1986.

Maryland: N/A. All questions in this section N/A.

New Mexico: N/A. All questions in this section N/A.

Ohio: October 21, 1987.

Oklahoma: N/A. All questions in this section N/A.

Pennsylvania: 1961 (it was the first in the nation).

Utah: The state does not have a mine subsidence insurance policy. Subsidence insurance is only required if repairs are not made within 90 days unless otherwise specified by the Division. All questions in this section N/A.

Virginia: None exists. All questions in this section N/A.

West Virginia:
1982.

Wyoming: [Please note that the mine subsidence Insurance relates only to Abandoned Mine Lands in Wyoming. The state does not currently require separate subsidence insurance for active permits and would be covered by general liability insurance holders.]
The Subsidence Insurance program began in Wyoming in 1991 with the adoption of AML Rules and Regulations.

2) What is the source of funding for the program?

Colorado: Office of Surface Mining (under Title IV) provided a $3 million grant to start the program. The money was invested in a trust fund and is designed to provide a self-sustaining fund to cover claims and help offset administrative costs. A private company is contracted to handle enrollment and program details.

Illinois: Premium is charged by insurance company who in turn cede a percentage to the Fund.

Indiana: Insurance premiums.

Kentucky: Federal funds from a coal severance tax grant were used initially, but the Mine Subsidence Insurance Fund has been self sustaining since 1990. The funding continues through endorsement premiums collected from insurance policies offered by those property and casualty companies operating in the Commonwealth of Kentucky.

Ohio: Homeowner's insurance premiums annual premium is $1 in mandatory counties and $5 in optional counties.

Pennsylvania: The funding is supplied by the policyholder's premiums.

West Virginia:
Insurance premiums from fire insurance and subsidence insurance.

Wyoming: Source of funding is the annual OSM Title IV Consolidated Grant, plus revenues from premiums.

3) Who administers the program (is it run by the state or privately)?

Colorado: Marsh USA, Inc. Is the Plan Administrator for the program.

Illinois: A Board of Directors comprised of six members from the insurance industry, four public members, and a licensed Illinois insurance agent is responsible for managing the Fund. Day to day activities are carried out by the Fund's President. All operations and expenses are funded by the premiums ceded by the insurance companies. The Fund is a tax paying entity and no financial subsidy of any kind is provided by the insurance industry or the state of Illinois.

Indiana: Run by the Indiana Department of Insurance.

Kentucky: The program is administered primarily by the Kentucky Office of Insurance, with the cooperation of those property and casualty companies offering policies in the Commonwealth by way of reinsurance agreements.

Ohio: The Mine Subsidence Insurance Governing Board (MSIGB) consists of the Director of Natural Resources or designee as chairperson, the Director of Insurance or designee, Treasurer of State or designee, and one representative from an Ohio domiciled insurance company. The Governing Board administers the MSIF and the Treasurer of State is the custodian of the fund. The MSIGB Board contracts the administration of the MSI Program to a private company.

Pennsylvania: The State of Pennsylvania (DEP Secretary, Chair, State Treasury, and Insurance Commissioner or their designee members).

West Virginia:

WV Board of Risk and Insurance Management (BRIM).

Wyoming: The program is administered by Wyoming DEQ/AML.

4) What types of structures can be covered (i.e. residential, commercial, etc.)?

Colorado: The program covers residential structures only – the primary residence, attached decks, patios, stoops and guest houses. Multi-residential complexes, up to 10 units, are also covered (all units in the structure must participate in the program). "Structure" means any residential dwelling, building or fixture, including basements, footings, foundation, septic systems and underground pipes and utilities on the property.

Illinois: Mine subsidence coverage is available to the following: "Residence" means a building, used principally for residential purposes up to and including a four family dwelling, permanently affixed to realty located in Illinois, including appurtenant structures, driveways, sidewalks, basements, footing, foundations, septic systems and underground pipes directly servicing the dwelling or building, but does not include living units, land, tees, plants, crops or agricultural field drainage tile. "Living Unit" shall mean that physical portion designated for separate ownership or occupancy for residential purposes, of a building or group of buildings, permanently affixed to realty located in Illinois, having elements which are owned or used in common, including a condominium unit, a cooperative unit or any other similar unit. "Commercial Building" means any building, other than a residence, permanently affixed to realty located in Illinois including basements, footings, foundations, septic systems and underground pipes directly servicing the building, but does not include sidewalks, driveways, parking lots, living units, land, trees, plants, crops or agricultural field drainage tile.

Indiana: See attachment.

Kentucky: Both commercial and residential structures are covered.

Ohio: Residential only, which covers 1-4 family dwellings having at least 50% of the living area occupied. Mobile homes and farmhouses.

Pennsylvania: Both residential and commercial structures are covered.

West Virginia:

Residential and commercial.

Wyoming: Both residential and commercial structures are insurable, including detached garages, outbuildings, etc.

5) What types of exclusions are there?

Colorado: Colorado's program excludes all pre-existing damage to or conditions of the structure and contents of the structure. The program also excludes payment of subsidence damage caused by any coal mine that was active, abandoned or inadequately reclaimed after August 3, 1977. The program also excludes any damage to driveways and sidewalks.

Illinois: "Mine Subsidence" means lateral or vertical ground movement caused by a failure initiated at the mine level of man-made underground mines, including, but not limited to coal mines, clay mines, limestone mines, and fluorspar mines that directly damage structures. *Mine subsidence is not lateral or vertical ground movement caused by earthquake, landslide, volcanic eruption, soil conditions, soil erosion, soil freezing and thawing, improperly compacted soil, construction defects, roots of tree and shrubs or collapse of storm and sewer drains and rapid transit tunnels.*

Indiana: See attachment.

Kentucky: The coverage excludes all causes of loss other than damage to a covered structure resulting from underground coal mine subsidence.

Ohio: The mine subsidence coverage does not insure against loss caused by earthquake, landslide, volcanic eruption, or collapse of strip mines, any surface mines, storm and sewer drains or rapid transit tunnels, or other earth movement. Additionally, coverage does not extend to land, trees, crops, plants, contents, barns, and commercial buildings. Additional information regarding coverage and policy provisions is available in the Ohio Mine Subsidence Insurance Underwriting Association Procedural Guide. This document can be viewed at http://www.ohiominesubsidence.com/OMSIPProceduralGuide.pdf.

Pennsylvania: It has to be a complete building with a foundation. Prior damages are excluded as well as the building's contents.

West Virginia:

Structures must have utility hookups connected and operational. Structures must have fire insurance in order to obtain subsidence insurance.

Wyoming: Excluded: contents of buildings, loss of rental income, landscaping, mobile homes unless anchored or on a permanent foundation, loss to structures construction after 1991 over known voids unless risk of subsidence is reduced through mitigation or documentation of lower risk.

6) Does your program get involved with post-law damage within your regulatory jurisdiction and if so, how?

Colorado: No.

Illinois: The statutory mine subsidence covers losses that have a date of loss during the policy period. Pre or post law does not affect coverage or how it responds. Subrogation is pursued when applicable.

Indiana: No. The subsidence insurance program covers only subsidence damage from mining that occurred prior to August 3, 1977.

Kentucky: No.

Ohio: Ohio's MSI Program does not distinguish between active or abandoned underground mines. Coverage applies to active and abandoned mines.

Pennsylvania: Yes. Structures excluded from active mine safe guards may be insured.

West Virginia:
Yes. Insurance underwriter is required to refuse subsidence insurance on a structure which evidences a loss or damage in progress.

Wyoming: Yes, the program covers post law losses caused by subsidence. Insured structures are inspected with photo documentation when the policy is issued. Claims are investigated by AML consultants. If damage is subsidence related, claims are paid.

7) Is the program voluntary or mandatory? Is a waiver provided?

Colorado: The program is voluntary.

Illinois: A. Non-Exempt Counties: Those counties that have a significant area of their land surface undermined are Bond, Bureau, Christian, Clinton, Douglas, Franklin, Fulton, Gallatin, Grundy, Jackson, Jefferson, Knox, LaSalle, Logan, McDonough, Macoupin, Madison, Marion, Marshall, Menard, Mercer, Montgomery, Peoria, Perry, Putnam, Randolph, Rock Island, St. Clair, Saline, Sangamon, Tazewell, Vermillion, Washington and Williamson. Policies issued in these counties must provide mine subsidence coverage unless waived by the insured in writing.
B. Exempt Counties: The Director of Insurance has exempted those counties with 1,000,000 or more inhabitants and any county contiguous to any such counties, or any other specified county of the states from the provisions of Section 807.1 of the Insurance Code. The director has also exempted those counties where there are no known man-made underground mines or where man-made underground mines in such counties are so few that mine subsidence is unlikely to affect structures. In the following counties, mine subsidence insurance is not automatically attached to the

policy. The insured may purchase mine subsidence insurance if he or she requests the coverage from the insurer. These counties are: Adams, Alexander, Boone, Brown, Calhoun, Carroll, Cass, Champaign, Clark, Clay, Coles, Cook, Crawford, Cumberland, De Kalb, De Witt, Du Page, Edgar, Edwards, Effingham, Fayette, Ford, Greene, Hamilton, Hancock, Hardin, Henderson, Henry, Iroquois, Jasper, Jersey, Jo Daviess, Johnson, Kane, Kankakee, Kendall, Lake, Lawrence, Lee, Livingston, Mc Henry, Mc Lean, Macon, Mason, Massac, Monroe, Morgan, Moultrie, Ogle, Piatt, Pike, Pope, Pulaski, Richland, Schuyler, Scott, Shelby, Stark, Stephenson, Union, Wabash, Warren, Wayne, White, Whiteside, Will, Winnebago, and Woodford.

Indiana: Participation by a structure owner is strictly voluntary and no waiver is provided or required.

Kentucky: In the eligible counties where mine subsidence coverage is offered, it is mandatory that the property and casualty company offer the coverage, however, the insured may reject coverage by way of a signed waiver. The waiver is provided by the insurance producer.

Ohio: Ohio has 88 counties. Insurance coverage is mandatory in 26 and optional in 11 counties. There are no waivers.

Pennsylvania: The program is voluntary.

West Virginia:
Program is mandatory, unless policy holder signs a waiver stating that they do not desire subsidence insurance.

Wyoming: The program is voluntary. AML pays for one year of insurance for areas during active subsidence grouting/mitigation activities. Policy renewal is at the option of the owner. Some mortgage companies require policies be kept in effect.

8) What types of minerals are covered (i.e. coal, limestone, salt, etc.)?

Colorado: Coal only.

Illinois: See definition of mine subsidence in answer #5.

Indiana: Only underground coal mining is covered.

Kentucky: The Kentucky Mine Subsidence Insurance Fund covers only damage resulting from underground coal mine subsidence.

Ohio: Underground coal mines, clay mines, limestone mines and salt mines.

Pennsylvania: Coal and clay are covered.

West Virginia:
Coal.

Wyoming: Wyoming AML rules do not specify mineral type. We have issued policies for coal sites only.

9) What is the maximum amount of coverage?

Colorado: The maximum coverage is $100,000 per occurrence up to the value of the house and a $1,000 deductible.

Illinois: The statutory limit is $350,000.00 per structure. Reinsurance coverage is often limited to the policy limit contained in the primary policy for the dwelling or building coverage.

Indiana: $200,000.

Kentucky: The maximum amount of coverage offered by the KMSIF, known as the fund's limit of liability, is $100,000 per structure. The insurance companies may provide excess limits above $100,000 per structure by charging an additional premium of $2 for each $10,000 of additional coverage.

Ohio: Maximum coverage permitted is the limit of coverage for the structure on the insured's current policy or $100,000 whichever is less. The Board has discretion to raise the limit to $300,000 on a program wide basis, if deemed necessary.

Pennsylvania: $250,000.

West Virginia:
$75,000.

Wyoming: The maximum amount of coverage is $150,000.00. The largest claim paid to date was $40,000.00 for replacement of a detached garage that was damaged during grouting and could not be repaired. Due to increases in property values since 1991, AML is considering a rule change to increase the ceiling.

10) What types of losses are paid (i.e. cost of repair; living expenses) and what are the limits?

Colorado: Cost of repair of structure only.

Illinois: Direct damage caused by mine subsidence to structure or structures. Additional living expenses reasonably and necessarily incurred by the owner of a residence who has been temporarily displaced as the direct result of damage caused by mine subsidence if the underlying policy covers this type of loss. The coverage for additional living expense does not increase the insurance company limit of liability.

Indiana: See attachment.

Kentucky: The types of losses are exclusive to the cost to repair real property.

Pennsylvania: The cost to repair the structure.

West Virginia:
Losses are paid for collapses and damage to the structure caused by underground coal mines.

Wyoming: Losses are paid for the cost of repairs or replacement up to the maximum amount of coverage.

11) What are the annual fees (specify for residential or commercial)?

Colorado: Participation in the program requires a $35 fee per year. Upon receiving the $35 for three consecutive years, the participant shall not be required to pay any further fees as long as the original participant owns the property.

Illinois: The residential and commercial premium schedules are attached (See addendum).

Indiana: See attachment.

Kentucky: Insurance up to $50,000 – $10 residential premium/$15 commercial premium;
$50,001 to $60,000 – $12 residential premium/$17 commercial premium;
$60,001 to 70,000 – $14 residential premium/$19 commercial premium;
$70,001 to 80,000 – $16 residential premium/$21 commercial premium;
$80,001 to 90,000 – $18 residential premium/$23 commercial premium;
$90,001 to 100,000 – $20 residential premium/$25 commercial premium;

Ohio: See http://www.ohiominesusbidence.com/Coverage.aspx.

Pennsylvania: The annual fees vary. For rates go to: http://www.pa/msi/org/.

West Virginia:
$10,000 or less insurance – $10.00 (premium dwelling; $20.00 non-dwelling); up to $75,000 max. insurance – $23.00 (premium dwelling; $46.00 non-dwelling).

Wyoming: The annual premium is calculated by taking the total coverage amount and multiplying that amount by .2% for residential structures and .3% for commercial structures.

12) What are the deductibles (specify for residential or commercial)?

Colorado: Only residential structures are covered – $1,000 deductible.

Indiana: See attachment.

Illinois: The deductible for mine subsidence losses shall be the deductible that the insurance policy has set for other property losses.

Kentucky: For both residential and commercial, the deductible is 2% of the policy's total insurable value, but at no time is the deductible less than $250 or more than $500.

Ohio: Residential only: 2% deductible will apply on a per occurrence basis to the mine subsidence coverage being provided. A minimum deductible of $250 and a maximum deductible of $500 will apply.

Pennsylvania: $250 for residential and $500 for non-residential.

West Virginia:
$250 for each loss separately occurring to the structures insured.

Wyoming: The deductible per loss on residential structures is 1 percent of the amount of coverage purchased, but not less than $250 nor more than $500. The deductible per loss on commercial structures is 1 percent of the amount of coverage purchased, but not less than $250 nor more than $1,000.

13) What is the current number of policyholders?

Colorado: A total of 909 active member households were enrolled in the insurance program at the end of June 2006.

Illinois: Information not currently available.

Indiana: Unknown.

Kentucky: We do not track this data.

Ohio: As of December 31, 2005, the total number of policies was 689,601.

Pennsylvania: 56,641 policyholders.

West Virginia:
About 15,000.

Wyoming: Current number of policy holders – 170 (down from over 700 in 2001). Total coverage is $13,000,000.

14) What is the current fund balance?

Colorado: $5,047,597.

Illinois: See 2005 annual report which can be found on our website at www.imsif.com.

Indiana: As of March 1, 2005, the total balance of the Indiana Mine Subsidence Insurance Fund is $7,653,367.88.

Kentucky: The current fund balance is $18,888,000.

Ohio: As of December 15, 2005, the fund balance was $12,780,763.52.

Pennsylvania: At the end of 2004, the current fund balance was $47,644,640.54.

West Virginia:
About $20.5 million at end of year 2005.

Wyoming: The balance is $3,391,187.35.

15) How many claims have there been over the life of the program (indicate what portion were deemed valid v. invalid)?

Colorado: 59 claims investigated. 11 were valid.

Illinois: Information will need to be researched for exact numbers. On average 400-500 claims a year are received and we find that approximately 15-20% of the properties investigated are being affected by mine subsidence.

Indiana: A report is provided every three years. Latest report is attached. Claims for the last three years are: 2002 – $0.00; 2003 – $186,786.10; 2004 – $119,177.39.

Kentucky: The number of confirmed mine subsidence claims we have settled over the life of the program is 66.

Ohio: 1454 total claims with 81 claims having received a payment and considered valid.

Pennsylvania: Filed: 5,480; Paid: 1,455.

West Virginia:

From 1986 until 2006 BRIM has investigated a total of 3,036 mine subsidence claims. Payments were made to 517 claims (17.5%) for that time period.

Wyoming: 189. 128 denied, 61 paid.

16) How many residences/homeowners are eligible (v. those who have actually signed up)?

Colorado: It is estimated that at least 7,500 homes are affected or eligible.

Illinois: Mine subsidence coverage is available in those counties listed in #7. Owners who have fire and extended coverage can obtain mine subsidence coverage from their insurance company.

Indiana: Unknown.

Kentucky: We do not track that data, however, any homeowner that resides in any of the 24 qualified counties is eligible.

Ohio: As of December 31, 2005, the total number of housing units in mandatory counties was 819,648. The total number of mine subsidence policies written in mandatory counties was 650,004. As of December 31, 2005, the total number of housing units in optional counties was 696,146. The total number of mine subsidence policies written in optional counties was 39,597.

Pennsylvania: Approximately 1,000,000 structures (about five percent of the market) are eligible.

West Virginia:

Number is not available at this time.

Wyoming: Very difficult to estimate. AML has mitigated subsidence in Glenrock and Rock Springs since the inception of the program in 1991. As years go by without subsidence incidents, property owners let their coverage lapse. There are probably 2,000 to 3,000 structures in areas mitigated for subsidence risk, and perhaps twice that many in areas considered at low subsidence risk that are eligible to purchase insurance, but owners have chosen not to apply.

17) What types of marketing/notification efforts have been undertaken by the state to encourage homeowners to sign up for subsidence insurance? How successful have these efforts been?

Colorado: Direct mail has been the major source of marketing. Direct mail has not been as successful as hoped. Media coverage of subsidence events also leads to more homeowners signing up for the program.

Illinois: Numerous mailings to insurance agents and companies, radio and newspaper ads.

Indiana: Television advertisements, billboards and pamphlets have been used in the past. The program does not appear to be very effective, based on the number of people who have contacted our office with subsidence problems that do not have insurance.

Kentucky: Marketing campaigns include the publication of Mine Subsidence Insurance brochures developed and distributed by the state to insurance company producers located in all of the 34 qualified counties.

Ohio: Obviously, in the 11 mandatory counties, no marketing is done (nor is it needed, since coverage must be rolled on to any property insurance contract issued). However, in the optional counties, the statutory requirement is that with all new and renewal insurance contracts coverage must be offered. The offer for MSI coverage explains the MSI program. Brochures for MSI coverage are available and distributed by insurance agents and by ODNR at State and County Fairs. The marketing in the optional counties is difficult/impossible to measure. Statistical trends suggest that the most impactful event which results in a "bump" in the optional county MSI policy count is a publicized mine subsidence occurrence/claim.

Pennsylvania: Ongoing mass and direct marketing to structure owners and insurance agents. An additional $200,000 to $300,000 per year has been issued.

West Virginia:
Insurance company underwriters inform policy holders on all new and renewal of all claims with fire insurance that the subsidence insurance is available.

Wyoming: AML does not actively market subsidence insurance. Information about the program is available through local planning and zoning offices.

18) How many subsidence emergencies have occurred in your state (estimate per year)?

Colorado: 1-2 emergency subsidence events per year.

Illinois: This is not tracked by the Fund. The Abandoned Mined Land Reclamation Division of the DNR may track this and be able to answer this question.

Indiana: There have bee none in the Indiana Title V program.

Kentucky: None.

Ohio: 5-7 per year affecting structures such as homes, buildings, roads, etc.

Pennsylvania: There are approximately 50 subsidence emergencies each year with less than half of these emergencies insured.

West Virginia:

Approximately six (6) per year.

Wyoming: On an average, AML responds to 30 to 50 newly identified subsidence features annually. About half are in urban residential/commercial areas. The remainder are in rural areas where the feature constitutes a hazard to livestock or recreationalists.

19) What procedure applies if these emergencies involve homes/structures where a mine subsidence insurance program is also in place?

Colorado: OSM runs the Emergency Program for Colorado. All emergencies are coordinated with the Colorado Abandoned Mine Land Program and the emergency is handled by OSM with repairs to the structure handled by the Mine Subsidence Protection Program.

Illinois: This also seems to be a question for the Abandoned Mine Land Reclamation Division of the DNR. Each insurance company responds to emergencies in the manner prescribed by their practice and procedures.

Indiana: Subsidence insurance is not available for areas mined under the state SMCRA regulatory program.

Kentucky: Each of the 34 qualified counties may establish their own procedures relative to such emergencies. The procedures may involve local fire departments, civil engineers, and insurance claim representatives.

Ohio: Ohio's MSI Program works very closely with the Ohio AML Program. Formal communication on claims involving investigations and construction projects are coordinated between the two programs.

Pennsylvania: If the damages to the structure are caused by mine subsidence and the structure is insured, the claim is adjusted and paid.

West Virginia:

BRIM administers the program relative to the structure and its repairs or replacement. WV DEP administers the subsidence damage on the land.

Wyoming: In this case, AML mitigates the subsidence risk through grouting or mass excavation and backfill. AML also pays damage claims after an inspection verifies that the damage is subsidence related.

20) Are there any state or local laws that prohibit building or that place restrictions on development over abandoned coal mine areas?

Colorado: Until a state law was passed in 1972, there was no requirement that any type of review of geologic hazards, including mined areas, be conducted. A lack of awareness of underground mine locations, and rapid growth in some cities and suburbs also contributed to inadequate planning, surveying and engineering for homes and subdivisions. Laws and local regulations regarding building over abandoned mine lands are very weak.

Illinois: Unaware of any.

Indiana: This agency knows of none.

Kentucky: No. However, there is much literature available via state agencies and educational websites regarding due consideration of these areas before constructing.

Ohio: No statewide regulations but there are some local zoning laws that require subsurface evaluations to determine suitability. Ohio DMRM has an "Ask Before You Build Guide and Video" that is distributed to local governments and organizations. It advises about the dangers of building over old works. DMRM AML has taken the position that we will not expend AML monies repairing structures where someone knowingly builds on, near or over an AML feature that causes damage.

Pennsylvania: No.

West Virginia:
No.

Wyoming: Some local planning offices discourage new construction over mine voids, but there are no zoning restrictions in place. The major disincentive to new construction is the reluctance or refusal of lending institutions to finance construction in areas known to be undermined.

21) Has the regulatory program ever been involved in any legal action by a homeowner for lack of notification, denial of claim, etc.?

Colorado: No for the regulatory program. And the current Mine Subsidence Protection Program has not had any legal action.

Illinois: The exact number of claims where arbitration or a lawsuit has been filed against an insurer and the Fund will require reconciliation. An insured does not have the right to file a lawsuit in accordance with the insurance contract and local jurisdiction or can proceed with arbitration as set forth in the Mine Subsidence Insurance Act: Article XXXVIIIA of the Illinois Insurance Code (Mine Subsidence Insurance)

requires a policyholder to be given the right to arbitration in the event a claim has been denied. The arbitration provision only applies when a claim for damage alleged to have been caused by mine subsidence is denied because the insurer or the Illinois Mine Subsidence Insurance Fund has made a determination that the structure in question was not damaged by mine subsidence. The insurer must notify the policyholder in writing of that decision. This arbitration provision can not be used to resolve any other issue, such as insurable interest problems, policy term questions, or issues regarding the amount or scope of damage, or the occurrence of multiple mine subsidence events.

Indiana: No.

Kentucky: No.

Pennsylvania: Yes, but the regulatory program has never been found by the court to have erred in its findings.

West Virginia:
WV DEP, no. BRIM, yes.

Wyoming: No.

Minimization of Damage Requirement
When planned subsidence (longwall and HER) operations are being used, the company is required to minimize damage to structures.

1) Do you require a minimization plan for all structures, certain structures or never (please explain)?

Alabama: Only those structures afforded protection by law.

Arkansas: Just non-commercial, occupied dwellings and related structures.

Illinois: Illinois requires a generic commitment in the application to do damage minimization on all structures unless a waiver is obtained from the owner or the structure is acquired by the operator prior to subsidence.

Indiana: There are no longwall or high extraction operations active in Indiana. No company has proposed a plan to subside under structures.

Kentucky: The applicant is required to take measures to prevent subsidence from causing material damage or lessening the value or reasonably foreseeable use of the surface. This can be done in one (1) of three (3) ways, including: (1) Anticipating effects of planned subsidence and the acquisition of a "noncancellable, premium prepaid

insurance policy" in accordance with 405 KAR 18:210, Section 3; (B) Taking measures in the mine to reduce the likelihood of subsidence; or (C) Taking measures on the surface to prevent material damage. For longwall mining permits in western Kentucky they have provided written agreements with the owner of the structures. In eastern Kentucky the longwall permits generally do not have structures above them, but on rare occasions they have either bought the structure or provide insurance. No permit applications have yet proposed to take "measures" on the surface to prevent material damage.

Maryland: We require an agreement be developed between the company and the owner regarding residences and other structures on the property that could be damaged by subsidence. If an agreement cannot be reached, the coal company must provide the state a plan to minimize damage to all structures on the property.

New Mexico: N/A. All questions in this section N/A.

Ohio: Generally a minimization plan is not required unless the home is located relative to the panel where severe damage is anticipated or the structure will be very sensitive to subsidence. Then protection measures are requested.

Oklahoma: Occupied residential and non-commercial buildings.

Pennsylvania: Yes.

Utah: Because of the limited number of structures , are handled on a case-by-case basis.

Virginia: All.

West Virginia:

All structures are required to have a minimization plan if they are not exempted by the regulations and law.

Wyoming: Chapter 7, Section 1(a)(v)(D) – part of subsidence control plan, must include measures taken to prevent, lessen or mitigate material damage or loss of value to property, including reinforcements, relocation, restoration, or replacement of structures and features.

2) Do you dictate what level of minimization is required (house floating, foundation trenching, cable raps, cribbing, flexible gas couplings, etc.)?

Alabama: No.

Arkansas: No.

Illinois: No. We have not been directly involved in the minimization plan. If a landowner approached us with a concern about the minimization plan's effectiveness, we would be forced to determine if the plan is acceptable under the regulations or not.

Indiana: Indiana has not received a plan to subside under structures, but plans to minimize impacts would be considered during permit review should such proposals be received.

Kentucky: Kentucky has not had an application where surface minimization has been proposed.

Maryland: No.

Ohio: The measures are stipulated by the company, when negotiated by the landowner.

Oklahoma: No.

Pennsylvania: Pennsylvania regulations were amended in October 2005 to require damage minimization plans for EPACT structures. Prior to that time, minimization plans were only required in cases where dwellings or agricultural buildings were likely to suffer irreparable damages.

Utah: No.

Virginia: No. The company proposes and the agency reviews. Normally it is either mined to protect or planned and controlled. We do not normally see extensive subsidence damage. These type of measures would likely not help.

West Virginia:
Yes. Depending on site specific information.

Wyoming: Chapter 7, Section 1(a)(v)(D) – part of permit application subsidence plan, subject to Administrator approval.

3) A company has the option of eliminating the need to minimize damage if the cost of minimization exceeds the cost of repairs and no public safety issues exist. Has this ever been done in your state and, if so, what type of economic analysis did you accept?

Alabama: Unknown.

Arkansas: No.

Illinois: Illinois has not had an operator attempt to take this course of action. We have not determined what type of economic analysis would be acceptable. Obviously, there are different methods of minimization (house trenching, floating, cable raps, etc.) that al vary in cost to perform.

Indiana: No. Indiana has not received any plans to subside under structures.

Kentucky: Yes. A real estate appraisal, estimated cost of minimization, and purchase of a "noncancellable, premium prepaid insurance policy" was conducted in accordance with 405 KAR 18:210, Section 3.

Maryland: No.

Ohio: No.

Oklahoma: No.

Pennsylvania: The state does not dictate what level of minimization is required to protect the structure, but it does review the minimization plan to ensure that the plan is adequate.

Utah: No, this issue has not come up due to lack of structures within the subsidence zones.

Virginia: No.

West Virginia:
Yes. Replacement or repair value of structure and property.

Wyoming: N/A.

4) How do you verify if an operator has obtained the written consent of the owner of a structure or facility documenting that minimization measures need not be taken?

Alabama: This documentation is kept in the individual pre-subsidence surveys available for inspection upon request.

Arkansas: The written consent must be provided to the state. No prescribed language is provided by the state.

Illinois: Typically we do not request or receive the actual subsidence agreements executed with the surface owners. One longwall operation has taken outright control of all surface properties and structures and therefore do not need a waiver from minimization. The other active longwall operation obtains subsidence agreements. We have not tracked the specific language. We track this by a quarterly report where a table is used to indicate if a minimization will occur, if a waiver was obtained, or if it is pending as to what method will be employed or if a waiver will be granted.

Indiana: Indiana has not received a plan to subside under structures. Specific language for owner consent is not dictated but a demonstration of owner consent would be required under the controlled subsidence plan.

Kentucky: The applicant did not include written consent, but instead provided a "noncancellable, premium prepaid insurance policy" [405 KAR 18:210, Section 3] on the structure after demonstrating that costs of minimizing damage exceeded the anticipated costs of repair [405 KAR 8:040, Section 26(3)(g)].

Maryland: The state receives copies of the agreements. Language of the waiver is not specified.

Ohio: No.

Oklahoma: Can call owner. No.

Pennsylvania: State regulations addressing this issue were adopted just recently. Implementation strategy is being developed.

Utah: Has not been done in Utah due to the limited number of structures.

Virginia: Has not been used.

West Virginia:
Permitting and Inspection and Enforcement personnel verify the documentation. No, WV DEP does not dictate the language of waivers.

Wyoming: Show us the agreement. Specific language is not required.

5) If a structure owner refuses to allow minimization efforts to be implemented, what does the state do?

Alabama: The state requires this documentation be maintained in the individual pre-subsidence surveys.

Arkansas: This has not been an issue.

Illinois: In one case, we had such an issue. We clearly explained the company's obligation to the structure owner. We explained that by refusing to allow access for minimization, we would document that they were in essence waiving the requirement even though they clearly refused to sign anything. We would then have to evaluate the damages after subsidence and determine what repair obligations would be imposed concerning repair. The company could argue that the cost would not have been as great if minimization was allowed and we would have to take that into consideration. The structure owners ultimately allowed the minimization efforts to be put into place. We have determined that the refusal would not waive any right to repair or compensate after subsidence but simply complicate the issue concerning dollar amount.

Indiana: Indiana has not received a plan to subside under structures. Any court decision concerning a claim for damage compensation would likely be impacted by the refusal.

Kentucky: The applicant must state that they will repair the damage and purchase before mining "noncancellable, premium prepaid insurance policy" [405 KAR 18:210, Section 3(3)].

Maryland: The state reviews the coal company's damage control plan, and if acceptable, allows mining to occur.

Ohio: We have not found it necessary to get involved in such disputes.

Oklahoma: Proceed with the permit review process.

Pennsylvania: State regulations addressing this issue were adopted just recently. Implementation strategy is being developed.

Utah: Has not been an issue in Utah.

Virginia: Has not been an issue.

West Virginia:
Any potential problems such as this are addressed and resolved in the permitting phase.

Wyoming: Permittee must document the refusal.

6) If a structure owner disagrees with the type of minimization effort proposed or believes the efforts just aren't enough, what does the state do?

Alabama: It is up to the company to determine the appropriate measures to be used to minimize damage.

Arkansas: This has not been an issue.

Illinois: This is a concern as our state agency does not employ any structural engineer who would be qualified to render such determinations. Fortunately, this argument has not been made by landowners, but it is a concern.

Indiana: Indiana has not received a plan to subside under structures, but there would be legal remedies available to both parties should disputes arise.

Kentucky: Kentucky has not had a permit application where surface minimization has been proposed.

Maryland: Evaluates the concerns and requires additional measures, if warranted.

Ohio: Since we require the landowner to be made whole, we address during the repair or compensation phase.

Oklahoma: Evaluates their concerns.

Pennsylvania: The operator is not responsible for the portion of structure damages which the operator can show, by a preponderance of evidence, could have been prevented had the structure owner provided the operator access to conduct a premining survey and implement necessary and prudent damage minimization measures.

Utah: Has not been an issue in Utah.

Virginia: Has not been an issue.

West Virginia: Any potential problems such as this are addressed and resolved in the permitting phase.

Wyoming: Structure owner may object to the issuance of a permit.

Historic Structures

1) Do you require an inventory of historic structures or structures eligible for listing on the National Register of Historic Places over mining/planned subsidence areas?

Alabama: Yes.

Arkansas: Yes.

Illinois: Yes. Although not clear in the regulations, we have, through permit modifications, requested such an inventory.

Indiana: Yes.

Kentucky: Yes. The Critical Resources Review Section (CRRS) reviews this portion of the application and makes a determination of whether or not historic structures or structures eligible for listing on the national register are present above underground mining areas (Item 13.1 of the MPA-03 application). If these structures exist, the CRRS usually requests that subsidence protection be implemented in specific portions of the permit area.

Maryland: No.

New Mexico: No.

Ohio: Yes.

Oklahoma: Yes.

Pennsylvania: Yes.

Utah: Yes. If a structure is known, then surveys are required. Otherwise sample survey would include structures in survey designs.

Virginia: Yes.

West Virginia: Yes.

Wyoming: Yes. Chapter 2, Section 2(b)(xxii) – Cultural Resources Management Plan.

2) Do you require any type of archeological survey over areas of mining/planned subsidence?

Alabama: Yes.

Arkansas: Yes.

Illinois: No. (Unless we anticipate shoreline erosion or inundation if subsidence under or near lakes, etc. (Rend Lake for example)). We have determined that subsidence alone would not impact archeological sites.

Indiana: No.

Kentucky: Yes. The CRRS requires an archeological survey if it is found that the proposed underground mining area may underlie an archeological site(s). The archeological survey is submitted to the CRRS of the Division of Mine Permits, as well as other agencies such as SHPO (State Historical Preservation Officer), etc. for solicitation of comments.

Maryland: No.

New Mexico: Yes.

Ohio: No. Not just for changes in land elevation. Case by case, but would only do so if it involves a historical structure or some special feature that could be irreparably damaged by the subsidence.

Oklahoma: Yes. As needed.

Pennsylvania: Yes.

Utah: Yes.

Virginia: Has not been an issue.

West Virginia:
Yes.

Wyoming: Yes. Chapter 2, Section 2(a)(vi)(S) – Archeological Info.

3) If such structures are present, are they treated any differently than other structures where subsidence is planned?

Alabama: Yes.

Arkansas: No.

Illinois: No. We have not encountered any in planned subsidence shadow areas. We would take a strong look at the minimization plan. We do not specifically protect such features beyond protections provided to other structures. This is a VER issue which is no longer applicable to subsidence.

Indiana: No.

Kentucky: Yes. If the CRRS requires subsidence protection for these structures, it is noted on correspondence sent to the applicant. Copies of this correspondence are also kept in the permit file, and inserted into th mining application by the permittee. Based upon findings by the CRRS, the reviewer can require the permittee to change the underground mining plan accordingly if it is determined that structures may be damaged by subsidence.

Maryland: No.

New Mexico: Yes.

Ohio: Yes. Structures on the National Register are more likely to be trenched supported or otherwise reinforced against subsidence. If it is determined that minimization is necessary to avoid irreparable damage, in order for the repairs to conform with the guidelines issued by the Secretary of Interior, minimization measures are required by the permit.

Oklahoma: No.

Pennsylvania: Yes.

Utah: Yes. They would be, but this has not been an issue in Utah yet.

Virginia: No.

West Virginia: Yes.

Wyoming: Yes.

Bonding of Subsidence Damage

1) How do you comply with the requirement to bond subsidence damage if it is not repaired within 90 days? Do you allow an extension of time frame to one year?

Alabama: A bond is posted. Yes.

Arkansas: The state monitors the repair work. The time frame can be extended to no longer than one year.

Illinois: Illinois has written regulations to allow liability coverage for subsidence damages. All operators have taken this approach to avoid individual bonding. We require the "Certificate of Liability" to indicate it covers subsidence damage. We are now researching the limits of damage and any deductibles that might preclude this method of coverage. We have never required a specific bond amount for damages within 90 days because of the liability insurance approach.

Indiana: Indiana has never had a case where time frame exceeded one year. Yes.

Kentucky: According to 405 KAR 18:210, Section 3(5)(a), if repair or compensation is completed within ninety (90) days of the occurrence of damage, additional bond will not be required. The cabinet may extend the ninety (90) day time frame, but not to exceed one (1) year, if the permittee demonstrates and the cabinet finds in writing that subsidence is not complete, or that not all probable subsidence-related material damage has occurred to lands or protected structures, and that therefore it would be unreasonable to complete within ninety (90) days the repair of the subsidence-related material damage to lands or protected structures. No bond is required when permit is issued for underground acreage.

Maryland: We have not required bond in subsidence damage cases as the coal company has had a subsidence damage repair agreement with the owners. All other questions in this section N/A.

New Mexico: N/A.

Ohio: Ohio has a supplemental reclamation fund (bond pool) paid by both surface and underground coal mine operators that can be used for subsidence damage repair in the event of operator default. Therefore bond is never required. However, the industry is proposing to change this and replace it with a separate liability insurance policy over and above the general liability insurance policy for the permit, like Illinois does.

Oklahoma: Yes.

Pennsylvania: In Pennsylvania, subsidence damage repair obligations are covered by a comprehensive bond submitted at the time of permit application and updated at each permit renewal. The bond is based on the amount of damage that is likely to accrue over a specified period during the term of the permit.

Utah: R645-301-525.550 requires that the permittee post additional bond if the damage is not repaired within 90 days. The Division may extend the time period to obtain insurance.

Virginia: Yes.

West Virginia:
WV DEP issues notice that subsidence has occurred and gives the permittee ninety (90) days to complete repairs or replace damaged structure, property, etc. Yes, an extension to the time frame may be granted.

Wyoming: Part of Annual Report review. Subsidence damage would likely be a line item in bond that would need to be increased at that time.

2) What type of bond do you accept?

Alabama: Letter of credit, surety, certificate of deposit or cash.

Arkansas: Same type of bonds as can be used for normal permitting.

Illinois: As above, we have only used liability insurance to date. We are not sure of how we would handle bonding if a company were incapable of providing a liability insurance coverage for subsidence.

Indiana: Indiana has never had a case where time frame exceeded one year, but the normal bonding instruments would be considered.

Kentucky: Whatever bonds may be normally accepted under the approved program.

New Mexico: Surety Bonds, Collateral Bonds and Self Bonds.

Ohio: N/A.

Oklahoma: Cash, surety, letter of credit, and certificate of deposit.

Pennsylvania: Surety Bond, Collateral Bonds, Self Bonds, A combination of the surety, collateral and self bonds.

Utah: The form of bonds is covered in R645-301-860, surety bonds, collateral bonds and cash accounts.

Virginia: Any that would comply with reclamation bond requirements except pool bond and self bond.

West Virginia:
Escrow bonds.

Wyoming: General bonding provisions. The state does not have a separate bond for subsidence.

3) Do you require subsidence damage bonds for both structures and land?

Alabama: Yes.

Arkansas: Yes.

Illinois: Yes. In theory, land would need to be covered by the liability insurance.

Indiana: No.

Kentucky: According to 405 KAR 18:210, Section 3(5), if subsidence-related material damage to land, structures, or facilities protected under subsections (1) through (3) of this regulation occurs, the cabinet will require the permittee to obtain additional performance bond in the amount of the estimated cost of the repairs if the permittee will be repairing, or in the amount of the decrease in value if the permittee will be compensating the owner, until the repair or compensation is completed.

New Mexico: Yes.

Ohio: No.

Oklahoma: Yes.

Pennsylvania: Yes.

Utah: Yes.

Virginia: No. Has not been an issue.

West Virginia:
Yes.

Wyoming: No.

4) Do you individually bond each and every damage or do you have a blanket bond for all potential outstanding subsidence?

Alabama: Each and every damage.

Arkansas: Each.

Illinois: We have only used a blanket liability insurance to date. We have discussed requiring a blanket bond to cover multiple panels of potential liability in the case of a longwall mine if liability insurance were not an option.

Indiana: Indiana has never had a case where bond was required but either type would be acceptable.

Kentucky: DMRE may allow both, depending on situation.

New Mexico: A blanket bond that considers the cost of each potential damage repair.

Ohio: N/A.

Oklahoma: Oklahoma has not had planned subsidence to date.

Pennsylvania: The state of Pennsylvania requires the mining operator to have a blanket bond for estimated damages that are likely to accrue during a specific period.

Utah: The issue has not occurred in Utah. The bond would be for the specific damage.

Virginia: Has not been an issue.

West Virginia: Individual bond.

Wyoming: General bond would cover all subsidence related damage.

5) How do you determine when to release a bond?

Alabama: When all repairs have been completed satisfactorily.

Arkansas: When repairs are complete.

Illinois: Good question. We have not had to do this with our current system of liability insurance coverage. We do not know what the release procedure would be as OSM had in writing that the standard bond release requirements would apply (i.e. Phase 1, 2 and 3). Obviously standards for cropland and land reclamation are not applicable to private structures.

Indiana: Indiana has never had a case where bond was required. Bond would be released upon concurrence of the parties (or a court) that damage had been adequately repaired or appropriately compensated. Parties could appeal the bond release.

Kentucky: According to 405 KAR 18:210, Section 3(5)(c), the cabinet may promptly release or return the additional bond amount provided under paragraph (a) of this regulation if the cabinet determines, based upon an application and information submitted by the permittee, the cabinet's own investigation as appropriate, and other information available to the cabinet, that the permittee has satisfactorily completed the required repair or compensation.

New Mexico: When the bonded area has been reclaimed and/or there will be no further likelihood of damage caused by mining.

Ohio: N/A.

Oklahoma: Have not had this problem yet.

Pennsylvania: Subsidence bonds are adjusted at permit renewal based on revised estimates of damages for the succeeding permit term. The risk of subsidence from bituminous underground mines for which liability under the bond continues runs for 10 years after completion of underground mine operations.

Utah: The issue has not occurred in Utah.

Virginia: Has not been an issue.

West Virginia:
When subsidence has stabilized in the area of mining extraction and within the damaged areas, when repairs and/or replacement work to subsidence damaged structures and property has satisfactorily been completed, and when all other conditions relative to the permit for that area have been met.

Wyoming: When all reclamation and performance standards have been met.

6) Do you allow liability insurance to stand in place of individual bonding of subsidence damage?

Alabama: No.

Arkansas: No.

Illinois: Yes.

Indiana: No.

Kentucky: Yes. The permittee may provide compensation by the purchase (before mining) of a noncancellable, prepaid insurance policy (405 KAR 18:210, Section 3(2)(3)). If the permittee demonstrates that his/her liability insurance policy under 405 KAR 10:030, Section 4 covers the subsidence damage, the additional bond amount required may be reduced by the amount of the insurance coverage applicable to the subsidence damage. The existence of applicable insurance coverage shall not prevent forfeiture of a performance bond under 405 KAR 10:050.

New Mexico: Yes.

Ohio: No, because no additional damage coverage bond is required at this time, but it is being proposed.

Oklahoma: No.

Pennsylvania: Yes.

Utah: Yes.

Virginia: Yes. This is used normally.

West Virginia:
Bonding is to be sufficient to complete repairs.

Wyoming: Yes.

7) If liability insurance is an option, do you require the policy to specifically identify subsidence and is there a minimum amount of coverage? Do you allow a deductible?

Alabama: N/A.

Arkansas: N/A.

Illinois: Yes. We require the certificate of liability insurance to specify subsidence and we do not allow a deductible.

Kentucky: If the permittee demonstrates that his/her liability insurance policy under 405 KAR 10:030, Section 4 covers the subsidence damage, the additional bond amount required may be reduced by the amount of the insurance coverage applicable to the subsidence damage.

Ohio: As proposed it will specifically identify subsidence. No minimum amount is proposed. It will be based upon estimated repair amounts. No discussions of deductibles have occurred.

Pennsylvania: No.

Utah: N/A.

Virginia: Has not been an issue.

West Virginia:
N/A.

Wyoming: General liability insurance. Minimum coverage public liability insurance 300K per each occurrence of bodily injury/property damage and 500K aggregate.

Water Supplies:

1) What is the specific date used to determine which wells or springs are covered by the requirement to replace or compensate for subsidence damage to water supplies?

Alabama: October 24, 1992.

Arkansas: October 24, 1992.

Illinois: In Illinois we passed a regulation on January 9, 1996 concerning the replacement of drinking domestic and residential water supplies.

Indiana: July 29, 1982.

Kentucky: The applicant has been required to replace or compensate water supplies since July 16, 1994, the date when regulations [405 KAR 18:060, Section 11(4)(b)(2)(1)(b)] were revised to state the permittee or operator shall promptly replace the water supply of an owner of interest in real property who obtains all or part of his/her supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source, if the water supply has been adversely impacted by contamination, diminution, or interruption proximately resulting from underground mining activities conducted after this date.

Maryland: No specific date, water supply replacement is a requirement of our program.

New Mexico: No.

Ohio: Ohio has always required water replacement since the effective date of our permanent program. Dates are not used as criteria in qualifying or disqualifying used water supplies from the perspective of replacement in the event of adverse impacts caused by subsidence resulting from deep mining. If a supply is developed following permit issuance and is subsequently adversely affected by subsidence, then its replacement would still be required. Therefore, we have no "cut-off-date" in the sense of precluding replacement.

Oklahoma: After October 12, 1992.

Pennsylvania: August 21, 1994.

Utah: If it is a domestic well, there is not specific date. For replacement of state appropriated water rights that are not directly domestic, the mining that affects a right had to occur after October 24, 1992.

Virginia: Same as OSM, October 1992.

West Virginia:
October 24, 1992.

Wyoming: Chapter 2, Section 1(c) – May 3, 1978 and estimated issuance of permit.

2) How do you differentiate between mining areas that predate your jurisdiction and mining areas that are subject to your subsidence control regulations concerning water replacement (map defining the pre-law and post-law workings)?

Alabama: Maps are used to determine whether an area is pre-law or post-law workings. The maps show the dates of mining different areas.

Arkansas: The state would require a map.

Illinois: We indicate any well in place at the time of application after January 19, 1996. No map has been required specific to this date. We would need to compare the timing of the application to mine relative to the timing of the well installation.

Indiana: Any mining that took place after July 29, 1982 is subject to regulations and maps are provided by the permittee as underground mining progresses. While many of the pre-law underground mines have been delineated in a state GIS system, additional information concerning pre-law mines is sought only when necessary to make a determination. The current applicant also provides the extent of known underground mine works within a proposed permit in the application.

Kentucky: (A) A dated, published map showing areas of pre-law (September 18, 1983) workings; (B) A dated aerial photograph showing pre-law-mined areas; (C) An affidavit from a disinterested third (3rd) party (with an attached site map), documenting the existence of pre-law mining in specific locations of the permit area.

Maryland: N/A.

New Mexico: N/A.

Ohio: The applicant is required to submit a map showing all known deep mines in the area in addition to showing the proposed deep mine workings. Distances from already subsided areas and areas proposed for subsidence are the primary criteria in determining if a supply is likely to have been or to be impacted. In addition to the map, time frames for impact are critical, since for the most part, subsidence impacts would occur within a few months of undermining. If the water supply in question was affected prior to the proposed deep mining, then the case would be properly referred to staff within our Division.

Oklahoma: Pre-law is under the jurisdiction of the Abandoned Mine Lands program, Oklahoma Conservation Commission.

Pennsylvania: Under Pennsylvania law, mine operators must submit semi-annually maps showing workings completed in the previous six months and workings proposed in the next six months. The records established by these maps are sufficient to delineate areas mined prior to and after the effective date of Pennsylvania's subsidence control regulations.

Utah: If a water-right owner suspects his water has been affected, the Division either uses production maps from annual reports to determine when mining occurred nearby, or requests such a map from the permittee.

Virginia: Maps with dates.

West Virginia:
Maps within the permit are prepared by the permittee and designate these areas.

Wyoming: Chapter 2, Section 1(c) – Maps defining the various regulatory time periods.

3) The performance requirement to replace water is limited to "drinking, domestic, and residential water supplies contaminated, interrupted...." Does your state limit water replacement to this extent only or do you also cover agricultural or commercial use water supplies?

Alabama: Water replacement for agricultural or commercial use is covered under repair of damage to surface lands.

Arkansas: We are limited to drinking water.

Illinois: Illinois limits liability to this definition. No commercial or agricultural supplies (irrigation) would be covered.

Indiana: We also protect agricultural and commercial water supplies.

Kentucky: In accordance with 405 KAR 16:060, Section 8, the permittee or operator must replace the water supply of an owner of property who obtains all or part of the supply of water for domestic, agricultural (noncommercial), industrial, or other legitimate use from an underground or surface source.

Maryland: All legitimate uses occurring at the time of mining are covered.

New Mexico: No.

Ohio: Ohio requires replacement of all used supplies, which includes agricultural, commercial, and recreational supplies. Wildlife supplies are not considered as used from the perspective of requiring replacement in the event of adverse mining impacts.

Oklahoma: Regulations do not stipulate agricultural or commercial use.

Pennsylvania: Pennsylvania's requirements apply to virtually all types of water supplies that are in place at the time of mining.

Utah: The replacement requirements are also for any state appropriated water supplies, no exclusions are made for water quality.

Virginia: Same as OSM.

West Virginia:

WV DEP regulations and rules require additional water replacements. These include other uses such as the land's capability to support reasonable uses or losses which affect production or income.

Wyoming: Chapter 2, Section 2(b)(xiii) – requires identification of alternative water supplies for domestic, agricultural, industrial or other legitimate purposes. Chapter 7, Section 4(a) requires restoration of all material damage.

4) Do you require quality and quantity monitoring of all wells and springs over proposed mining areas or can an exemption be obtained from conducting specific monitoring on individual wells or springs based on mining type or geologic setting?

Alabama: Groundwater quality and quantity are required for selected groundwater monitoring wells within the potential impact area.

Arkansas: All wells and springs would be monitored.

Illinois: Exemptions can be obtained on a site-specific basis.

Indiana: Yes. An exemption can be obtained if other points are adequate to characterize and monitor the water bearing unit.

Kentucky: One time sampling of quality and quantity data for each well and spring is required for water supplies that could be *contaminated, diminished or interrupted by subsidence*. Monitoring for baseline data and during mining and post-mining is only required for each aquifer or water transmitting zone and not for each well or spring being used. An exemption can be obtained from the monitoring, but it has rarely been approved.

Maryland: Monitoring of all supplies is now required but has not always been.

New Mexico: Site-specific.

Ohio: There is no provision for exemptions for monitoring of sites within 500 feet of a panel edge, regardless of whether the operation proposes full-coal recovery (longwall mining or pillar recovery) or partial recovery (limited extraction via room and pillar mining). However, landowner refusal for access to water well measurement and/or sampling is a practical limitation on the extent of monitoring that is eventually conducted. The Division attempts to obtain landowner cooperation so that adequate monitoring data can be obtained in order to assess mining impacts for future application reviews and for assistance in resolving water complaint investigations.

Oklahoma: No.

Pennsylvania: No. All wells and springs must be sampled prior to the time they are susceptible to the effects of mining. Only selected wells and springs are monitored.

Utah: No, not all water sources are required to be monitored. However, if the water source is significant and likely to be affected, it will most likely become part of the water-monitoring plan. The Division invites public comment on all new mine plan actions and the water-rights owner's opinions are taken into account when approving monitoring plans.

Virginia: Inventory and survey required.

West Virginia:
Monitoring is required by WV DEP.

Wyoming: Chapter 2, Section 2(a)(vi)(L) – surface water must be monitored which is representative of the surface hydrologic system. Chapter 2, Section 2(a)(vi)(M) requires complete information on groundwater which may be affected in the permit area and adjacent areas.

5) How many pre-subsidence samples are required and over what period of time?

Alabama: Samples collected during the pre-subsidence survey are used. These are collected at the time of the survey.

Arkansas: No set number of samples are required.

Illinois: We require sufficient monitoring to document seasonal fluctuations. This is typically 4 to 6 samples over a year prior to subsidence.

Indiana: One sample for baseline. Additional sampling and analysis is require monthly when mining occurs within 1000 feet of that supply.

Kentucky: An *inventory* of all wells and springs being used within one-half (½) mile of the proposed underground works is required, although inclusion of water supplies within a 1000-foot radius can be accepted. The following items are included in the groundwater user inventory: (A) Owner; (B) Identification number (keyed to a map); and (C) Type of use (i.e. domestic, agricultural, municipal, etc.). This *inventory* also includes a general description of the water source. While it is requested that the applicant include information for *each* user within a one-half (½)-mile radius of the permit area, it is typically satisfactory if the applicant provides data for approximately eighty (80) percent of all water supplies within the affected area if information cannot be obtained for each within this radius (i.e. if a response to the survey was not received by the applicant, etc.). If a water supply within or immediately adjacent to the permit area could be "contaminated, diminished, or interrupted" by subsidence, then a *water supply survey* must be provided for quantity and quality information [405 KAR 8:040, Section 26(1)(d)]. Samples should be current (i.e. within one (1) year) and include the same testing parameters as those required in baseline groundwater sampling (Item 16 of the MPA-03 permit

application) These parameters include water levels, total dissolved solids or specific conductance (corrected to 25 degrees C), pH, dissolved iron, dissolved manganese, acidity, alkalinity, and sulfate. If the *water supply survey* data has been provided for only a small percent of groundwater users, the applicant is required to complete the following [405 KAR 8:040, Section 26(1)(c and d)]: (A) Provide a sample of the letter sent out to each resident; (B) Add columns to the groundwater user inventory indicating how each person was contacted and what type of follow-up was conducted (i.e. phone call, site visit, etc.), documenting denial or access.

Maryland: One sample in the application. One sample at the time of mining. Quarterly during mining for supplies within 1000 feet of mined area, and monthly for supplies within 1000 feet of where coal extraction is occurring. Quality samples are taken for these supplies twice per year.

New Mexico: One prior to mining.

Ohio: The Division requires monthly samples to be collected at sites over a 12-month period prior to the panel approaching within 500 feet of the supply, and continuing for a 12-month period following this. Thereafter, the applicant is to submit a request to the Division for cessation of monitoring, if that is desired, prior to in fact terminating monitoring. If the Division does not respond within 30 days of this request, the request is granted by default. This is the dominant procedure that has been occurring due to workload considerations and time constrictions on staff over the recent past.

Oklahoma: Site-specific basis.

Pennsylvania: All points included in the background-sampling program must be sampled in a manner which provides an accurate representation of average conditions and seasonal variations. At a minimum, samples and measurements must be taken at monthly intervals over a period of six successive months including at least one sample from the low flow period, which typically extends from July to October.

Utah: It depends on each mine's probable hydrologic consequence determination (PHC), the type of water resource, the use of the water, etc. Plans vary from monthly samples for 2-3 years preceding subsidence to quarterly samples for ½ - 1 year preceding subsidence.

Virginia: One.

West Virginia:
Determined by WV DEP on a site by site basis.

Wyoming: Sampling plan should be representative of the area and account for seasonal variations. Depends on site-specific needs.

6) How do you determine if a company can be exempted from conducting water quality and quantity monitoring for a given well or spring?

Alabama: The operator or his consultant requests an exemption, which is reviewed.

Arkansas: Utility of the well or spring.

Illinois: Illinois individually exempts stable room and pillar mines from monitoring based on a site-specific basis. Most room and pillar mines can obtain this exemption if wells are not based at greater depths close to the coal seam (roof fall impacts etc.). To date, all have been exempted. For longwall mines, it is much more difficult to exempt wells from quality and quantity monitoring. If the operator acquires the property and takes possession of the homestead, we do not make them monitor. If there is a pre-mining agreement concerning compensation for future water damages, we would not make them monitor. All others potentially impacted by planned subsidence would be monitored for quality and quantity.

Indiana: Grouping, spacing, construction, water source, and depth. Also see #4 in this section.

Kentucky: For a *water supply survey* the following are some examples of water supplies that may be affected by underground mining operations: (A) The coal seam to be mined lying below (not cropping out) a well or spring adjacent to the permit area, with a heavily-affected recharge area (i.e. mining below a high percent of the recharge area); (B) Wells or springs overlying the proposed underground mining areas; (C) A well or spring in the middle of an area where the recharge area would be mostly or totally affected by mining. The following are some examples of water supplies that would not likely be affected by underground mining operations: (A) A well or spring adjacent to an underground area, with the coal seam cropping out (and therefore not underlying the underground mining area), with a small percent of the recharge area affected by subsidence; (B) A water supply on the opposite side of a stream of the underground works. These sources of groundwater would be from different watersheds, and therefore would not be affected by these operations.

Maryland: If a number of supplies within a given area are being monitored, some supplies could be exempted or alternated if mining is beyond 1000 feet, but the company would still be liable for replacement.

New Mexico: Site-specific.

Ohio: See response to question 4 above.

Oklahoma: If well or spring is perpetually dry.

Pennsylvania: Mine operators are seldom exempted from conducting baseline water quality sampling. Exceptions may be granted in cases where wells are buried or located at inaccessible locations within buildings.

Utah: Since the regulations only require that the monitoring plan be based on the PHC, there is no need for an exemption. The permittee sets up a plan to best determine whether they have affected the hydrologic balance, etc. The Division only approves the plan if in agreement that the plan will show probable effects to the hydrologic balance, including important state appropriated water rights. If a non-monitored water right is affected by the mine, the water-right owner has the burden of proof to demonstrate that such an effect occurred, not the mine.

Virginia: If it has been used in the past for monitoring and existing data is available.

West Virginia:
Determined by WV DEP on a site by site basis.

Wyoming: A Probable Hydrologic Consequence analysis is performed.

7) Do you require the individual quality and quantity data to be submitted as part of the application, or can the monitoring be delayed until after permit approval but before the individual water source is potentially impacted?

Alabama: The individual quality and quantity data are collected with the pre-subsidence survey.

Arkansas: This would be submitted with the application.

Illinois: We get some baseline information to assist in writing the PHC in the findings. The individual monitoring would be required in advance of longwall subsidence impacts.

Indiana: Yes. Yes.

Kentucky: Quality and quantity data is required to be submitted as part of the application.

Maryland: At least once for the application, then as explained in #5 above.

New Mexico: Part of the application.

Ohio: There appears to be a terminology issue here. Pre-mining water quality and quantity data is required for the three flow conditions (one sample each for High, Low, and Intermediate flow periods) as spelled out by the Seasonal Variations Procedure Directive 2000-2 as part of the application submittal. This data is considered to be *background* data, not monitoring data. Monitoring data is the data collected *after* the permit is issued, as described in the response to question 5 above. Some applicants

and consultants refer to this as "background monitoring" data, which can add to the confusion.

Oklahoma: Before individual water source is potentially impacted.

Pennsylvania: Detailed sampling to determine baseline conditions may be postponed until after permit issuance but must be completed prior to the time the water supply is susceptible to mining-related effects.

Utah: If the water source will be undermined within the initial permit term (5 years), all baseline data must be included in the application. If it will not be undermined for a number of years, the baseline may be collected at a later date.

Virginia: Can be delayed.

West Virginia:
Submitted as part of the permit notification process to potentially impacted structures, wells, seeps, etc. identified in the permit.

Wyoming: Water Quality and Quantity data submitted at time of application, data is submitted for 1 year prior to anticipated disturbance.

8) What information is required in the permit, such as the location and ownership of all existing drinking, domestic and residential water supplies, including private wells, municipal wells and springs?

Alabama: Location and ownership information, as well as water quality and quantity data and well construction data is required for existing wells and springs.

Arkansas: A survey of the quantity and quality of the water supply is required.

Illinois: Illinois requires well location and ownership in the permit application. Unfortunately, it is usually based on what is in the public record and there usually are many wells and springs we are unaware of at the time of application. We also require depth information for planned subsidence operations and to grant waivers in room and pillar operations.

Indiana: The location and ownership of all existing drinking, domestic and residential water supplies, including private wells, municipal wells and springs.

Kentucky: The groundwater user inventory (in Item 16 of the MPA-03 application) must include ownership (by name), location (i.e. by identification number corresponding to locations shown on a map), and type of use (i.e. domestic, agricultural, municipal, etc.).

Maryland: Location, ownership, use, reported and/or measured depths, reported yield and quality information, sample analysis.

New Mexico: All of this is required.

Ohio: In addition to ownership, the Division requires information on the surface elevation, geographical coordinates (currently X and Y state plane coordinates), depth of well, depth to static water level of well, spring discharge, supplying aquifer designation and lithology, and known uses. Furthermore, if a log is available for a well, the Division requires the submittal of the log in order to include additional information, e.g. casing, liner, and pump depths, borehole and casing diameters, cement and grouting record, drawdown, stratigraphic column penetrated by the well, depths of perforations, well yield, identification of individual water-bearing zones, date of completion, sketch map of well location, and notations on color, taste, and odor, and the presence of natural gas, brine, and/or hydrogen sulfide.

Oklahoma: Location, ownership, total depth, well screen, completion, quantity of water yield.

Pennsylvania: Groundwater information shall include the results of a groundwater inventory of existing wells, springs, and other groundwater resources representative of the proposed permit, adjacent and general area. The survey shall provide information on location, ownership, quality, quantity, depth to water and usage for the proposed permit area and adjacent area. Information on water availability, occurrence and alternative water supplies shall be emphasized and water-quality information relating to suitability for existing premining uses shall be provided. At a minimum, water quality descriptions shall include total dissolved solids or specific conductance corrected to 25 degrees Centigrade, pH, total iron, total manganese, alkalinity, acidity, and sulfates.

Utah: The permittee must include maps and descriptions of all state appropriated water resources.

Virginia: All of these.

West Virginia:

Yes, this information and additional ground water and surface water requirements to be sampled and/or monitored are identified in the regulations and rules. Types of water system (public utility, private multi-dwelling water systems, well(s), springs, seeps, cisterns, etc.).

Wyoming: Chapter 2, Section 2(a)(vi)(N) – location of all water wells within the proposed permit area and adjacent areas including all wells filed with State Engineer's Office three miles or less form the proposed permit area.

9) How far beyond the proposed mining area (angle of draw) do you require inventorying and monitoring of wells and springs?

Alabama: The inventory is required for wells within the angle of draw.

Arkansas: No requirement.

Illinois: Inventorying originally was required up to ½ mile. We have been re-thinking this large distance as overkill and have not uniformly applied it. Monitoring is done on a site specific basis and we get a plan defining which wells will be monitored. The discretion is ours as to how far we might make them go beyond the edge of full extraction. This is not written into the regulations but was part of an operator memorandum.

Indiana: 1000 feet.

Kentucky: An inventory of ground water users is required for all wells and springs within one-half mile of the permit area.

Maryland: 1000 feet.

New Mexico: Inventory – one mile.

Ohio: The hydrology review boundary, within which the inventory is required, is defined by a *1000-foot perimeter around the shadow area*, which encompasses the angle of draw. The monitoring is *within the 500-foot distance of a panel*, as described in the response to question 5 above.

Oklahoma: Only to the angle of draw.

Pennsylvania: Pennsylvania requires the mine operator to collect information from wells and springs up to 1,000 feet beyond the permit boundary.

Utah: There is no set distance, since geology differs from mine to mine. Again, based on the PHC, any state appropriated water source, or other water important to the hydrologic balance that may be affected by mining must be included in the monitoring.

Virginia: Site-specific based on geology.

West Virginia:
One half (0.5) mile beyond the mining limits of the permit.

Wyoming: Adjacent areas and wells permitted by State Engineers Office which are within 3 miles of proposed permit area.

10) OSM did not define the parameters to monitor for quality. For wells and springs that will be specifically monitored for water quality and quantity, do you define the specific parameters to monitor for pre-mine quality and quantity?

Alabama: Yes. The quality parameters required are pH, conductivity/TDS, total iron and total manganese.

Arkansas: TDS, pH, total iron and total manganese.

Illinois: The parameters include at a minimum pH, total dissolved solids, total iron and total manganese. The Department may require additional parameters based on site-specific conditions. This is not written into the regulations, but was part of an operator memorandum.

Indiana: Acidity, water level, total dissolved solids, or specific conductance, pH, total iron, total manganese, alkalinity.

Kentucky: Yes. The same parameters used for baseline groundwater monitoring are used for monitoring water quality in wells and springs. These parameters include: water levels, total dissolved solids or specific conductance (corrected to 25 degrees C), pH, dissolved iron, dissolved manganese, acidity, alkalinity, and sulfate.

Maryland: Yes, pH, iron, manganese, acidity, alkalinity, sulfate, specific conductivity or total dissolved solids.

New Mexico: Site-specific depending on post mine use.

Ohio: The parameters for which analyses are required for pre-mining background data and for post-permit issuance monitoring data are as follows: pH, total acidity, total alkalinity, specific conductivity OR total dissolved solids, total iron, total sulfates, total manganese, total hardness, total suspended solids, total nitrates, and total aluminum. It should be noted that total aluminum was only added as a required parameter within the last 6 months.

Oklahoma: Site-specific basis.

Pennsylvania: Laboratory pH, Temperature degrees Centigrade, Alkalinity, Acidity, Iron, Manganese, Aluminum, Sulfate, Suspended Solid, Total Dissolved Solids or Specific Conductance.

Utah: Beyond the specific requirements of the regulations (water level or flow, total dissolved solids or specific conductance corrected to 25 degrees C, pH, total iron and total manganese), we have a guideline that suggests several additional parameters. Many permittees have implemented this into their water monitoring plans, but it is not a requirement. The suggested groundwater parameters for baseline monitoring

are: water temperature, total hardness, total alkalinity, acidity, dissolved aluminum, dissolved arsenic, dissolved boron, carbonate, bicarbonate, dissolved cadmium, dissolved calcium, chloride, dissolved copper, dissolved iron, dissolved lead, dissolved magnesium, dissolved manganese, dissolved molybdenum, ammonia, nitrate, nitrite, dissolved potassium, orthophosphate, dissolved selenium, dissolved sodium, sulfate, dissolved zinc, total cations, total anions. The Division suggests repeating these baseline parameters every five years for a comparison, or when a question of quality diminution arises. The additional groundwater parameters suggested for operational monitoring are: water temperature, total hardness, total alkalinity, carbonate, bicarbonate, dissolved calcium, chloride, dissolved iron, dissolved magnesium, dissolved manganese, dissolved potassium, dissolved sodium, sulfate, total cations, and total anions.

Virginia: If used for GW monitoring then the GW parameters are used. Otherwise basic drinking water standards.

West Virginia:

If water supply is other than public utility, survey must include water analysis (TDS or spec. cond. At 25 degrees centigrade, pH, acidity, alkalinity, total Fe, total Mn, and sulfates) and a description of the type of system and treatment being used. For wells, give type (drilled, or dug), if available well log, depth, age, depth and type of casing or lining, static water level, flow data, pump capacity, drilling contractor and source of data.

Wyoming: Chapter 2, Section 2(a)(vi)(L)(IV) & (M)(III) – at a minimum, total dissolved solids, total suspended solids, pH, total and dissolved iron, and total manganese.

11) Do you define the number of samples required over time (such as four samples over one year to reflect seasonal fluctuations)?

Alabama: Six monthly samples over six months are required.

Arkansas: One sample per month for six months to develop a minimum baseline.

Illinois: We do not specify the number of samples but approve a plan proposed by the operator. We look for seasonal fluctuation time spacing.

Indiana: 6 samples taken in 6 consecutive months.

Kentucky: The baseline water monitoring program for ground and surface water samples (in Items 16 and 17 of the MPA-03 application) requires at least six (6) months of pre-mining data be submitted as a part of the application. Although the required parameters for water users are the same as those in baseline sampling, six (6) months of data is not required in the water supply survey for groundwater users' wells and springs.

Maryland: See #5 above.

New Mexico: Sampling intervals would be prescribed.

Ohio: See the response to question 7. Note that the High, Intermediate, and Low flow periods are defined by the calendar, with 15 or 14-day buffer periods at the beginning and end of the flow periods serving as transition periods, during which time a sample could qualify for the preceding OR following flow period, depending on rainfall amounts and measured flow rates and water levels, within the hydrology review area and/or in nearby areas.

Oklahoma: Site-specific basis.

Pennsylvania: At a minimum, samples and measurements must be taken at monthly intervals over a period of six successive months including at least one sample from the low flow period, which typically extends from July to October.

Utah: No.

Virginia: Normally only one for the survey.

West Virginia:
Ground water can be sampled six (6) times and include an inventory data.

Wyoming: Quarterly in ring closest to pit and annually for all other monitor wells.

12) Do you require a specific test to define water quantity before and after subsidence? (Slug test, pump test, etc.)

Alabama: There are no specific tests required to define water quantity.

Arkansas: Not required.

Illinois: Illinois does not specify the type of test. We have been fortunate to date to have no well issues but anticipate more in the future and may need to be more specific concerning baseline information testing.

Indiana: No.

Kentucky: No required test of water quantity before subsidence other than water levels. After subsidence damage: typically, DMRE would perform tests after the event to determine if well capability has been disrupted to the point that it can no longer provide sufficient quantity for the number of individuals/households involved.

Maryland: No.

New Mexico: N/A.

Ohio: No, not as a minimum or an "across-the-board" requirement. Currently water quantity determinations are based on static water level measurements, with supplemental data from well logs and published countywide Ground Water Maps/reports by the Division of Water. Due to the fact that the "aquifers" within the area of longwall mining are of such limited horizontal extent, and because combinations of several laterally discontinuous saturated water-bearing zones recharge the vast majority of wells, a pump test would effectively need to be conducted for every single well. This would not be practical, nor would it be of much use. It should be noted that sustained yields from most of the water wells in the areas of longwall mining are less than two (2) gallons per minute, and well depths are less than 100 feet, as permeability decreases with depth. Nevertheless it should be stated that there is nothing precluding the requirement for such tests *on a site-specific basis*, under the rule clause of requiring other information as deemed necessary in order to determine the impact on the hydrologic balance. In fact pump tests were conducted years ago above the longwall mining area of Southern Ohio Coal Company in Meigs County in the late 1980's.

Oklahoma: Slug test.

Pennsylvania: The state's Technical Guidance Document – Water Supply Replacement and Permitting promotes the pump test and the specific capacity test to determine water quality.

Utah: No. If the water-monitoring plan does not detect a change, no change is inferred unless a water-right owner complains of an effect. They are then required to prove the effect, though we may require the mine to provide information to aid us in our determination.

Virginia: No. Potential to impact well by performing these tests preclude agency from dictating the type.

West Virginia:
No.

Wyoming: No, reference to Standard Methods for Examination of Water and Wastewater or 40 CFR Part 136.

13) Do you require a specific plan in the permit for replacing any contaminated, diminished, or interrupted water supply? Must the plan spell out possible contingencies for emergency, temporary and/or permanent replacement of affected water supplies?

Alabama: Yes.

Arkansas: Yes, a plan is required for replacement. No re. possible contingencies.

Illinois: Illinois only gets generic commitments to replace water on a temporary and permanent basis. To date, water replacement has not been an issue based on our geology, poor ground water quality to start with, and the availability of public water supplies in longwall areas. We do anticipate larger issues in the future longwall areas and look for other states' guidance.

Indiana: Yes. Yes.

Kentucky: Yes. The applicant is required (in Item 19.2 of the MPA-03 application) to present a plan to identify and describe the adequacy of the alternative sources of water that could be developed if contamination, diminution, or interruption results from mining activities. This plan should be in accordance with 405 KAR 16:060, Section (8)(2).

Maryland: A general plan is required which usually identifies possible options.

New Mexico: Yes.

Ohio: Yes.

Oklahoma: Yes.

Pennsylvania: Yes.

Utah: Yes.

Virginia: Replacement plan required, but agency has published replacement guidelines that must be used to address temporary and permanent replacement.

West Virginia:
Yes. Yes.

Wyoming: Chapter 2, Section 2(b)(xi)(E) and 2(b)(xiii) – require a plan to provide alternative sources of water in accordance with W.S. 35-11-415(b)(xii) and identify alternative sources.

14) Do you allow a hook up to public water supply as a replacement for a lost spring or well?

Alabama: Yes.

Arkansas: Yes.

Illinois: Yes.

Indiana: Yes.

Kentucky: Yes. In accordance with 405 KAR 16:060, Section 8(2)(3)(d), the operator or permittee must provide an equivalent water delivery system for replacing a water supply, including the hook up to public water supply.

Maryland: Yes.

New Mexico: Yes.

Ohio: Yes. It should be noted that the use of public water as a replacement for springs that served the agricultural supplies is strongly discouraged and occurs only as a last resort. If it is allowed, compensation for operation and maintenance cost is required. In order to retain the foreseeable use of the land for agriculture, we also have had the operator demonstrate that sufficient ground water resources exist on the property to develop new wells if a future landowner chose to do so.

Oklahoma: Yes.

Pennsylvania: Yes.

Utah: Yes.

Virginia: Yes.

West Virginia: Yes.

Wyoming: Yes. Would depend on alternative source outlined above.

15) Do you require a plan for determining the present worth of the cost to replace a water supply if the operator wishes to pursue a one-time lump-sum payment for costs associated with providing both an equivalent water delivery system and operation and maintenance costs in excess of customary and reasonable delivery costs for pre-mining water supplies?

Alabama: Yes.

Arkansas: No.

Illinois: No. We have not had a water loss issue and would at this point deal with it on a case by case basis as it arises.

Indiana: No.

Kentucky: Yes. If the operator wishes, a one (1)-time payment may be made to the owner of interest in an amount which covers the present worth of the increased annual operation and maintenance costs for a period of twenty (20) years, or other period agreed to by the permittee and the owner of interest (405 KAR 16:060, Section 8(2)(3)(e)(1)).

Maryland: No.

New Mexico: No.

Ohio: Yes. Note: The Division recently spelled out this procedure in detail in a revised Procedure Directive that dealt with water replacement, Technical Guidance Procedure 06-1.

Oklahoma: No.

Pennsylvania: Yes.

Utah: Utah requires replacement of the water in some manner, not compensation.

Virginia: Yes. However, unless agreed to in writing by the owner, present cost is not used. Agency requires full cost with inflation. For example, if the current cost is $1,000/year, then year two is $1,000 plus inflation factor, etc.

West Virginia: Yes.

Wyoming: No.

16) Must the water supply owner agree to a lump-sum payment for future costs?

Alabama: Yes.

Arkansas: No.

Illinois: Yes.

Indiana: No.

Kentucky: Yes. See above response at #15.

Maryland: Yes.

New Mexico: N/A.

Ohio: No, they can opt for a new well.

Oklahoma: Yes.

Pennsylvania: No.

Utah: Utah requires replacement of the water in some manner, not compensation.

Virginia: Yes. If discounted present value used. If full value with inflation used, then agency can require compliance with the order without owner consent.

West Virginia: No.

Wyoming: No.

17) If a water supply owner denies access to perform pre-subsidence water surveys, what do you do?

Alabama: The operator documents this in the pre-subsidence survey.

Arkansas: No rebuttable presumption will exist.

Illinois: Has not occurred (yet) and do not have a good answer.

Indiana: Operator must send letter to well owner informing him of the effect that denial of access may have on any future determination of impact.

Kentucky: If an owner denies access to perform pre-subsidence water surveys, the applicant must provide documentation that the owner was contacted more than once, and identify by what means he/she was contacted each time (i.e. by letter, phone call, site visit, etc.).

Maryland: The owner would be contacted by the state to discuss the value of the survey and that without it, making a determination in the case of a claim will be more difficult.

New Mexico: Document owner denial.

Ohio: In these cases, the Division relies on 1) landowner information regarding the specific well in question, 2) the log from the specific well if available, 3) data from nearby wells, 4) logs of wells in the area, and 5) published countywide Ground Water Maps/reports by the Division of Water.

Oklahoma: Proceed with the permit review process.

Pennsylvania: Advise water supply owner that they will lose the rebuttable presumption of causation provided by Pennsylvania law.

Utah: If they cannot be convinced, then they are completely responsible to prove any effect.

Virginia: Pursuant to the Code of Virginia at § 45.1-245. Replacement of water supply Paragraph (D) If the Director has ordered replacement under subsection B of this section.... "Upon conclusion of an investigation, if the Director does not order replacement under the provisions of subsection B of this section and reasonable access for a pre-mining survey was denied, the Director's determination shall not be overturned absent clear and convincing evidence to the contrary."

West Virginia:
The permittee will notify the owner in writing that no presumption of causation will exist.

Wyoming: Document that denial in application process.

18) If a company cannot get a landowner to agree to a lump-sum payment for costs above and beyond customary, how do you monitor the payments made to a surface owner over time to supplement increased water bills?

Alabama: Inspection and enforcement responds to complaints regarding settlements for subsidence damage.

Arkansas: This circumstance has not occurred in Arkansas.

Illinois: Has not occurred (yet) and do not have a good answer.

Indiana: Do not monitor payments.

Kentucky: According to 405 KAR 16:060, Section 8(2)(3)(e), the operator must pay operation and maintenance costs in excess of customary and reasonable delivery costs for the pre-mining water supply for a period of twenty (20) years, or other period agreed to by the permittee and the owner of interest. Upon agreement by the permittee and owner of interest, the obligation to pay the excess operation and maintenance costs may be satisfied by: (A) A one (1)-time payment may be made to the owner of interest in an amount which covers the present worth of the increased annual operation and maintenance costs for a period of twenty (20) years, or other period agreed to by the permittee and the owner of interest (405 KAR 16:060, Section 8(2)(3)(e)(1); (B) A uniform series of payments whose present worth equals or exceeds the present worth of the increased annual operation and maintenance costs for a period of twenty (20) years, or other period agreed to by the permittee and the owner of interest; or (C) Other reasonable compensation arrangements which fairly compensate the owner for the future operation and maintenance costs for a period of twenty (20) years, or other period agreed to by the permittee and the owner of interest [405 KAR 16:060, Section 8(2)(3)(e)(3)].

Maryland: We do not have a system for monitoring this. We rely on the homeowner notifying us.

New Mexico: N/A.

Ohio: Technical Procedure Directive 06-1, referenced above, specifically requires the applicant to send to the Division's hydrologist a photocopy of *all* reimbursement checks mailed to the landowner. The permittee will reimburse the landowner within 45 days of receipt of bona fide documents, invoices and receipts for reasonable costs, as addressed in the directive.

Oklahoma: We do not.

Pennsylvania: In the event the operator and the water supply owner do not reach a settlement, the operator is required to pay the costs on an on-going basis and to post a bond. The bond serves two purposes: Assurance that the payments are made; provide the money to pay for the increased costs in the event the operator defaults on the legal obligation to permanently pay the increased O&M costs. To calculate the bond amount, the annual cost amount is determined, then an additional calculation is done to determine present value of the operator's perpetual payment obligation. The Department relies on landowner's reports of delinquent payments as its primary means of monitoring.

Utah: This has not occurred in Utah.

Virginia: Has not been an issue.

West Virginia:
Payments are not monitored.

Wyoming: Annual Report review.

Land:

1) What are the primary issues for restoring pre-mining land capabilities in your state? (Surface drainage restoration, etc.)

Alabama: Backfilling subsidence cracks or holes and repairing water impoundments used to support agriculture or commercial land uses.

Arkansas: N/A.

Illinois: In Illinois, the largest issue is restoration of farmland drainage. It continues to be the most controversial subsidence issue we face.

Indiana: Mainly surface drainage.

Kentucky: The primary issues for restoring pre-mining land capabilities are restoration of surface drainage, stabilization of the land surface and structures overlying underground works, and restoring aquifer recharge areas.

Maryland: None to date.

New Mexico: Elimination/repair of headcutting.

Ohio: In most of the areas where planned subsidence is practiced the land is rather steeply sloping so the land productivity is rarely affected. Loss of ponds or stream can be a problem and more difficult to resolve. Slips or landslides are land impacts that must be repaired as well as cracks.

Oklahoma: Must be restored to a condition capable of maintaining the value and reasonable use prior to subsidence.

Pennsylvania: Flooding of the valley floors; impaired drainage; slope failures; tension cracking; hummocky topography; and subsidence features.

Utah: The permittee is required to repair surface cracks and restore surface and groundwater.

Virginia: Surface cracks that could interfere with land use; very few drainage issues.

West Virginia:

To mitigate or remedy any material damage or diminution in value of foreseeable use that may occur to surface lands due to subsidence. If subsidence causes any or all of these to occur then the permittee shall restore the land to a condition capable of supporting uses it was capable of supporting before subsidence occurred.

Wyoming: Revegetation and protection of water and water rights.

2) Is a man-made pond considered a structure or land damage? Can a mining operator destroy a pond, eliminate the pond and then compensate for the damages?

Alabama: Land damage. No.

Arkansas: Yes.

Illinois: Yes. Considered a structure.

Indiana: Yes. Yes, if the mining company has subsidence rights.

Kentucky: Yes. A man-made pond is considered a structure. This, just as a swimming pool, is built by a property owner and therefore is not considered a natural renewable resource land. If a pons was destroyed during a subsidence event, the operator would be responsible for compensating the owner for damages [405 KAR 18:210, Section 3(1)].

Maryland: Ponds are considered protected structures. If a pond were adversely affected, it would have to be replaced or some other arrangement worked out between the owner and the coal company.

New Mexico: A pond is considered a structure. Yes.

Ohio: Yes. Depends on what is damaged. If the dam is damaged it is treated as a structure. Structures cannot be eliminated or destroyed without written permission of the owner. If the land is damaged such that the pond no longer holds water (cracks in bed rock, loss of springs feeding the pond or stream flow) then it is treated as damage to the foreseeable use of the land and MUST be repaired.

Oklahoma: Structure. Yes.

Pennsylvania: A man-made pond is considered a structure and/or a water feature. Yes. If the owner of the pond and the coal operator work out an agreement, a pond can be destroyed or eliminated.

Utah: Yes.

Virginia: Yes. Can be either. Could be domestic water supply. Then it would be treated as such.

West Virginia:
Yes. Yes.

Wyoming: No. Would depend on mine and reclamation plans.

3) Are there any circumstances where you will allow a land use change due to subsidence? (For example, a stream subsidence that creates flooding in adjacent crop field and is now a wetland)

Alabama: No.

Arkansas: Maybe. This has not yet occurred in Arkansas.

Illinois: Technically the land must be restored. In one instance, some Illinois bottom land area has been "enhanced" as a wetland. Also, a small area was subsided and then converted to a true wetland area used as banking acreage for wetland replacement concerning a road project. Other than that, land must be restored to its capability. If it were crop land before, it must be crop land after.

Indiana: The land use in the shadow area above an underground mine is typically not expected to be altered. But with subsidence rights or landowner consent we believe a land use change may be possible when subsidence has affected the surface.

Kentucky: A land-use change may only be granted for areas disturbed by *surface mining* activities, and where consent has been given to the operator by the landowner(s).

Maryland: Due to the amount of relief in the coal region, this has not been an issue and is not likely.

New Mexico: N/A.

Ohio: No. The reasonably foreseeable uses of the land that existed prior to mining must be maintained. However, some additional pooling compared to pre-mining conditions may be allowed provided that it does not affect the stream to function as a stream. Pooling is seldom seen in Ohio subsided streams. Draining is more of a concern.

Oklahoma: Yes.

Pennsylvania: Yes.

Utah: The Division requires only USGS topographic maps to show pre-mining topography. The Division does not currently require post-subsidence topographic maps but is in the process of making such maps a requirement.

Virginia: Has not been an issue.

West Virginia:
No.

Wyoming: No, not unless preplanned and approved. Must also be equal value land use, Chapter 2, Section 2(b)(xiv) (c).

4) How detailed must the pre-mining topography be defined in your application? Does the permittee project post-subsidence topography when longwalling?

Alabama: 20 ft. contours. No-subsidence profiles may be presented but not to the extent to show the topography of the entire subsided area.

Arkansas: We request mine maps with two (2) foot contour intervals. We would require a projected post-subsidence map for longwall mining.

Illinois: In Illinois due to flat to gently rolling topography, we require pre-subsidence contours usually at a 2 foot contour interval. We then require projection of post-subsidence contours with defined drainage problems that are anticipated to require repair work. Again, Illinois farm land is the biggest issue we face.

Indiana: By overlaying the area to be subsided with a surface contour map applicants and operators can predict areas of potential problems. There are no longwall operations in Indiana. Yes.

Kentucky: The permit application does not require the applicant to define pre- or post-mining topography in underground mining operations.

Maryland: Topographic maps are the usual source of pre-mining topography. Post-mining topography usually involves a few cross-sections showing the projected amount of subsidence on the pre-existing topography.

Ohio: Usually only 10 to 20 foot contours interval. Again the terrain is usually not altered enough to affect land use.

Oklahoma: At least 10-foot contours. Have not had longwall mining in Oklahoma.

Pennsylvania: Detailed topographic information is only required in certain settings, such as sites where the depth of cover is less than 100 feet and sites where subsidence is expected to affect a stream channel. The mine operator is not required to submit a post-subsidence topography plan showing contour lines.

Utah: The Division requires only USGS topographic maps to show pre-mining topography. The Division does not currently require post-subsidence topographic maps but is in the process of making such maps a requirement.

Virginia: 40' contours are used. No projection of post-subsidence topography is required.

West Virginia:
Topographic map scales shall be 1" = 1,000'. Yes.

Wyoming: Chapter 2, Section 2(a)(vi)(J)(IV) – sufficient slope measurements of the proposed permit area measured and recorded at such distances as the Administrator determines to be representative of the pre-mining configuration and reflect geomorphic differences of the land to be mined.

5) Are there any land circumstances where you have or would prohibit longwall mining due to inability to make surface repairs?

Alabama: No such circumstances have been encountered in the state.

Arkansas: Under a lake or a perennial stream.

Illinois: Thus far, no.

Indiana: Yes. Where irreparable damage may occur.

Kentucky: Kentucky has not come across ths circumstance.

Maryland: We have limited longwall mining to areas where the depth is 300' or greater, but not for this particular reason. The intent was to lessen the potential for subsidence fractures to extend from the mine to the surface.

Ohio: When the overburden thickness is thin and a perennial stream will be impacted. In one case an old growth forest was protected because of a declaration that it is "fragile lands." If a structure on the National Register of Historic Places was irreparably damaged so as not to be able to be restored to the Secretary of Interior's Guidelines for restoration of historic structures, mining could be prohibited, however we have not encountered such a situation. By regulation, subsidence to public buildings is prohibited without the building owner's permission.

Oklahoma: Possibly.

Pennsylvania: Yes. When the extraction of a longwall panel would cause a stream to permanently lose flow.

Utah: Yes, damage to streams.

Virginia: Yes, primarily under low cover streams, etc.

West Virginia:
Yes.

Wyoming: Chapter 7, Section 4(a)(I) – operator must restore land to a condition capable of maintaining the value and reasonably foreseeable uses which it was capable of supporting before subsidence.

6) How do you handle the regulatory language "to the extent technologically and economically feasible" concerning repair of land damage?

Alabama: Repairs are expected to the extent possible using existing known technologies. Whether it is economically feasible to repair lands depends on the cost to repair the land versus the fair market value of the land considering the potential future revenue to be derived from use of the land.

Arkansas: This has not been an issue in Arkansas.

Illinois: We have avoided this issue thus far. The question would be what you base the amount on. Coal value? Land value? Profit margin? We have continually required repair without a company attempting to use this federal regulatory language to escape repair obligations.

Indiana: If an operator were to claim that repair was not technologically and economically feasible they would have to demonstrate why. Purchase of the property is also an available method of compensation.

Kentucky: This language is present in 405 KAR 18:210, Section 3, concerning repair of damage to surface lands. Fortunately, Kentucky has not had to determine technologically and economically feasible.

Maryland: To date repair has only involved minor surface cracks, thus repair has been easily accomplished.

Ohio: If the technology exists anywhere (including internationally) to repair damages to land – in other words, it has been proven as a technology to repair similar damages, then we would require it to be applied to land damages. No company has attempted to avoid repair to land due to economic factors. Ohio does not envision this situation occurring. However, if it did occur where the repair were so costly that it was economically impractical to fully restore, we'd evaluate whether the rule applies. If the repair could not be done simply because the company is in bad financial condition, the rule would not apply. Moreover, if repair was not feasible, we would likely not issue a permit in the first place due to the findings that must be made that mining and reclamation is reasonable and feasible.

Oklahoma: Have not had to handle this situation to date.

Pennsylvania: This is done on a case-by-case scenario. Emphasis is placed on what is technologically feasible more so than on what is economically feasible.

Utah: Not an issue in Utah.

Virginia: Normally this applies only to subsidence cracks and mountain breaks. These are not that difficult to repair.

West Virginia:
WV DEP evaluates the experience of the permittee with regard to their proposal as detailed in the application. All proposals in the application are compared with what is currently successful and has been accepted by WV DEP previously.

Wyoming: Chapter 7, Section 4(a)(I) – must correct material damage.

7) Has a company ever tried to show land damage was not technologically or economically feasible to repair? What analysis did they present and did the state agree with the company's position?

Alabama: No.

Arkansas: N/A.

Illinois: This has been discussed but never formally attempted.

Indiana: No.

Kentucky: Kentucky has not come across this circumstance.

Maryland: No.

Ohio: No.

Oklahoma: No. N/A.

Pennsylvania: Yes.

Utah: No.

Virginia: No.

West Virginia:
No.

Wyoming: No.

State Respondent Information (Coal):

Person Completing Survey:	*State:*	*Agency:*	*Phone/ E-mail::*
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Loretta E. Pineda	Colorado	Abandoned Mine Land Program	303.866.3819 loretta.pineda@state.co.us
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Greg Ohlemacker	Kansas		
Pam Carew and DMP	Kentucky	Dept. of Nat. Res., Div. Of Mine Reclamation and Enforce. and Div. Of Mine Permits	502.564.2340 Pamela.carew@ky.gov
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Lewis Halstead and Charles Sturey	West Virginia	Department of Environmental Protection	304.926.0499 lhalstead@wvdep.org csturey@wvdep.org
Craig Hults	Wyoming	Department of Environmental Quality, Land Quality Division	307.777.7066 chults@state.wy.us

Noncoal Regulatory Programs

NONCOAL PROGRAM RESPONSES:

General:

1) Do you differentiate between planned and unplanned (stable) subsidence control plans in your permitting process?

Kentucky: No.

Maryland: General Information: The only subsidence response in noncoal is for quarry operations in karst areas. Sinkholes and water supplies are covered for structures and water supplies in existence at the time of the permit review and for existing quarries at the time of the law change in 1991.

Missouri: General Information: Although there are presently several noncoal underground mining operations in the state of Missouri which extract both limestone and metallic minerals, there are no statutes or regulations at the state level that address the issue of subsidence. There may be local ordinances enacted at the county or city level that address this activity of underground mining and the possibility of subsidence. The state of Missouri does not have any authority at the state level to address this issue.

New York: No.

North Carolina:
No. General Information: North Carolina does not have any coal mining and no permitted underground mines. Mine subsidence has been a problem on occasion in historic underground gold mining districts.

North Dakota: General Information: Since there is no underground mining in North Dakota, the subsidence survey was not completed.

Virginia: General Information: The Virginia Division of Mineral Mining has the authority to regulate subsidence generated by underground mining under the Mineral Mine Reclamation Laws of Virginia. Subsidence plans are required by the Division on an as needed basis, and are tailored to the specific circumstances associated with that particular mine. Therefore, the specific information you solicit in this survey is not available, as the details of any subsidence plan the Division may require would be tailored to the circumstances existing at that particular site. At present, the Division has 2 underground operations permitted, and neither one has generated any subsidence issues at this time. The Division has required a subsidence plan for an underground operation in the recent past. Based on the mining methods employed, the Division does not anticipate any subsidence related problems at these operations, but is prepared

to require subsidence plans should the need become apparent at these or any future permitted underground operations.

West Virginia:

General Information: West Virginia does not require subsidence control plans for noncoal mining. However, there are requirements for water rights replacement and the permit can not be granted if the operation poses a hazard to a dwelling house, public building, school, church, cemetery, commercial or institutional building, public road, stream, lake or other public property. In addition to other penalties, any operator who directly causes damage to the property of others as a result of quarrying is liable to them in an amount not in excess of three times the provable amount of such damage if the damage occurs within one year after reclamation. Such damages are recoverable in an action at law in any court of competent jurisdiction.

How do you define the categories of subsidence control (percent extraction, etc.)?

Kentucky: N/A.

New York: Percent extraction ratio.

2) Do you require information on a company's right to subside the surface in addition to the right to mine the coal? If so, how do you do this? (Listing of documents or a simple statement or affidavit)

Kentucky: Yes.

New York: No.

3) For six month surface owner notification, do you allow companies to mail these notices well in advance of actual mining?

Kentucky: Yes.

New York: No.

4) Do you waive the 6-month notice to a lesser time frame if requested? If so, do you have specific guidelines as to when you will or will not waive the minimum time frame?

Kentucky: Yes. For the noncoal program there is no specific time frame for notification, other than it must be done prior to mining under a structure.

New York: No.

Structures:

Regulated Extraction Area

1) What is the date of coal extraction used in your state to initiate the requirement to repair, replace or compensate for subsidence damage to structures?

Kentucky: N/A.

New York: N/A.

2) How do you define mining areas that predate your jurisdiction as opposed to areas that are subject to your subsidence control regulations? (Map defining the pre-law and post-law workings; criteria used?)

Kentucky: N/A.

New York: Maps for noncoal.

3) OSM requires prompt repair or compensation for material damage to occupied residential dwellings and structures related thereto, or non commercial buildings. Some states (like Illinois) maintain the requirement to mitigate "all structures" and does not exclude commercial buildings. What structures are covered in your state?

Kentucky: Occupied dwellings, public buildings, school, churches, cemetery, commercial or institutional buildings, public roads, streams, lakes, other public property, real and personal property.

New York: All structures are protected.

Condition Surveys

1) Do you require condition surveys for surface structures?

Kentucky: No.

New York: No.

2) If so, are they required for all structures, whether over full extraction mining (planned subsidence) or room and pillar (stable mine plan)?

Kentucky: N/A.

New York: N/A.

3) Do you specify the type of condition survey that is required to be performed (video, pictures, certified appraisal of value, etc.)?

Kentucky: N/A. No.

New York: No.

4) Whom do you require the company to submit the condition surveys to? (Your office, to the landowner, kept on file at the mine office, and/or anyone else)

Kentucky: N/A.

New York: Department of Environmental Conservation office.

5) If a structure owner denies access for a company to perform a pre-subsidence condition survey, what action does the state take? Does this refusal change the protection afforded to the structure owner?

Kentucky: N/A.

New York: No.

6) What is the time requirement for performing pre-subsidence condition surveys? (i.e. must it be submitted in the application, or delayed until six months or 60 days before planned subsidence will impact the structure, etc.)

Kentucky: N/A.

New York: During application process.

7) How often, if ever, have you had to use the condition survey to aid in determining damages or compensation?

Kentucky: N/A.

New York: Never.

Public Roads, Utilities

1) In general, in the permitting process, how do you handle subsidence of public roads and utilities such as water, electric and gas lines? Do you require cooperative agreements between the mining company and the utility or road authorities to assure public safety?

Kentucky: The Kentucky noncoal program has never had a permit propose to subside protected structures.

New York: Yes, when applicable.

2) Do you specifically hold the company financially liable for damages to public roads, utilities, railroad lines, etc. if damaged by subsidence?

Kentucky: Yes, should it occur.

New York: Yes.

3) How closely do you monitor the subsidence impacts and execution of subsequent repairs for these public facilities?

Kentucky: This has not happened in Kentucky, and the existing regulations are silent, but we would monitor the situation very closely.

New York: We are present during all repairs.

Private Homes and Other Structures

1) Is the choice between repair, replacement, or compensation for material damage to home, outbuildings, etc. that of the coal companies or that of the structure owner?

Kentucky: The property owner would have to concur with whatever compensation was agreed upon. The Kentucky regulations do not provide specific guidance.

New York: Negotiated between the Department of Environmental Conservation, mining company and structure owner.

2) What is the maximum level of compensation for a given home or structure? Is it the fair market value, the replacement value, or other?

Kentucky: Fair market value.

New York: I would suspect fair market value. Situation has never arisen in NY.

3) Do you specifically require alternative housing when dwellings are subsiding? If so, how long does this alternative housing typically last?

Kentucky: Yes. As long as necessary for repairs or settlement.

New York: N/A.

4) When disputes develop between the company and the landowner over whether alleged damages are mine subsidence related or not, how is it resolved? Does the state make a determination as to whether the alleged subsidence damage is the responsibility of the coal company? If not, who referees the dispute?

Kentucky: Disputes would typically be abjudicated in court or through mediation.

New York: Operator has to prove to the Department of Environmental Conservation that it was not responsible. There is a hearing process in place.

5) If the state makes a determination that the damages are not due to mine subsidence, does the state specifically define the real cause of non subsidence related damage (termites, soils issue, etc.) or simply indicate it is not mining related with no further explanation?

Kentucky: If the information is readily available or obvious, the state tries to make a determination as to cause.

New York: Simply indicate that it is not mining related.

6) Does the state ever perform surveys or monitoring to determine if movements are occurring (such as with unplanned room and pillar subsidence or structures just outside the angle of draw of a longwall)? If so, who does it (in house staff or contracted out)?

Kentucky: No. N/A.

New York: No.

7) When subsidence is the cause of damages and a dispute occurs between the structure owner and the company over the dollar value of the damage, how is the amount of compensation determined (arbitration or other?)

Kentucky: Fair market value – otherwise, abjudication in court.

New York: N/A.

8) How involved is the state in the determination of a damage dollar amount?

Kentucky: Limited involvement.

New York: N/A.

9) When the plan is to compensate the damaged party (not repair), what dictates the compensation amount? Is the value based on the estimated cost of repair or the difference in the fair market value before and after damage?

Kentucky: The regulations are mute on this – typically, whatever is agreed upon by the damaged party.

New York: N/A.

10) When the damage will be repaired, how does the state determine if a repair estimate is properly done?

Kentucky: We would investigate, may ask for assistance from other departments (insurance assessment, etc.) if necessary. Typically, this would be resolved between the damaged party and the operator.

New York: N/A.

11) Does the state get involved in evaluating the quality of the work done to repair structural damage?

Kentucky: Yes. Typically, we would observe and document repairs.

New York: No.

Mine Subsidence Insurance

1) When did you state mine subsidence insurance program begin?

Kentucky: See answers for this section above in the "Coal" survey for Kentucky.

New York: N/A. All questions in this section N/A except question 18.

2) What is the source of funding for the program?

3) Who administers the program (is it run by the state or privately)?

4) What types of structures can be covered (i.e. residential, commercial, etc.)?

5) What types of exclusions are there?

6) Does your program get involved with post-law damage within your regulatory jurisdiction and if so, how?

7) Is the program voluntary or mandatory? Is a waiver provided?

8) What types of minerals are covered (i.e. coal, limestone, salt, etc.)?

9) What is the maximum amount of coverage?

10) What types of losses are paid (i.e. cost of repair; living expenses) and what are the limits?

11) What are the annual fees (specify for residential or commercial)?

12) What are the deductibles (specify for residential or commercial)?

13) What is the current number of policyholders?

14) What is the current fund balance?

15) How many claims have there been over the life of the program (indicate what portion were deemed valid v. invalid)?

16) How many residences/homeowners are eligible (v. those who have actually signed up)?

17) What types of marketing/notification efforts have been undertaken by the state to encourage homeowners to sign up for subsidence insurance? How successful have these efforts been?

18) How many subsidence emergencies have occurred in your state (estimate per year)?

New York: 1-2

19) What procedure applies if these emergencies involve homes/structures where a mine subsidence insurance program is also in place?

20) Are there any state or local laws that prohibit building or that place restrictions on development over abandoned coal mine areas?

21) Has the regulatory program ever been involved in any legal action by a homeowner for lack of notification, denial of claim, etc.?

<u>Minimization of Damage Requirement</u>
When planned subsidence (longwall and HER) operations are being used, the company is required to minimize damage to structures.

1) Do you require a minimization plan for all structures, certain structures or never (please explain)?

Kentucky: Typically, planned subsidence is not proposed.

New York: N/A. All questions in this section N/A.

2) Do you dictate what level of minimization is required (house floating, foundation trenching, cable raps, cribbing, flexible gas couplings, etc.)?

Kentucky: No. This would be up to the permittee's consultant.

3) A company has the option of eliminating the need to minimize damage if the cost of minimization exceeds the cost of repairs and no public safety issues exist. Has this ever been done in your state and, if so, what type of economic analysis did you accept?

Kentucky: Never been proposed.

4) How do you verify if an operator has obtained the written consent of the owner of a structure or facility documenting that minimization measures need not be taken?

Kentucky: A copy of the waiver or agreement would be included in the permit application. Other than generalities, our program would not dictate the language of such a document.

5) If a structure owner refuses to allow minimization efforts to be implemented, what does the state do?

Kentucky: Require the permittee to limit extraction under the structure.

6) If a structure owner disagrees with the type of minimization effort proposed or believes the efforts just aren't enough, what does the state do?

Kentucky: Not specifically addressed in the regulations, and planned subsidence has not been proposed in Kentucky.

Historic Structures

1) Do you require an inventory of historic structures or structures eligible for listing on the national register over mining/planned subsidence areas?

Kentucky: Yes.

New York: Yes.

2) Do you require any type of archeological survey over areas of mining/planned subsidence?

Kentucky: Yes.

New York: Yes.

3) If such structures are present, are they treated any differently than other structures where subsidence is planned?

Kentucky: Yes. Depending on the nature of the structure and the potential for damage.

New York: Yes.

Bonding of Subsidence Damage

1) How do you comply with the requirement to bond subsidence damage if it is not repaired within 90 days? Do you allow an extension of time frame to one year?

Kentucky: N/A. All questions in this section N/A for Kentucky.

New York: N/A.

2) What type of bond do you accept?

New York: Certificates of Deposit, Reclamation Bonds, LC's and General Liability Insurance.

3) Do you require subsidence damage bonds for both structures and land?

New York: Yes.

4) Do you individually bond each and every damage or do you have a blanket bond for all potential outstanding subsidence?

New York: Blanket bond.

5) How do you determine when to release a bond?

New York: When mining has been terminated, reclamation completed, shafts closed, if applicable and/or all monitoring requirements of approved closure plan have been met.

6) Do you allow liability insurance to stand in place of individual bonding of subsidence damage?

New York: Yes.

7) If liability insurance is an option, do you require the policy to specifically identify subsidence and is there a minimum amount of coverage? Do you allow a deductible?

New York: No. No. No.

Water Supplies:

1) What is the specific date used to determine which wells or springs are covered by the requirement to replace or compensate for subsidence damage to water supplies?

Kentucky: N/A.

New York: Permit application review process and permit conditions.

2) How do you differentiate between mining areas that predate your jurisdiction and mining areas that are subject to your subsidence control regulations concerning water replacement (map defining the pre-law and post-law workings)?

Kentucky: N/A.

New York: Maps and mining dates (pre-law).

3) The performance requirement to replace water is limited to "drinking, domestic, and residential water supplies contaminated, interrupted...." Does your state limit water replacement to this extent only or do you also cover agricultural or commercial use water supplies?

Kentucky: Losses of both surface or groundwater would be investigated.

New York: All ground water and/or surface water.

4) Do you require quality and quantity monitoring of all wells and springs over proposed mining areas or can an exemption be obtained from conducting specific monitoring on individual wells or springs based on mining type or geologic setting?

Kentucky: Baseline groundwater and surface water monitoring is not required except in special circumstances.

New York: Permittee's must develop and maintain monitoring program.

5) How many pre-subsidence samples are required and over what period of time?

Kentucky: N/A.

New York: Site specific, not defined.

6) How do you determine if a company can be exempted from conducting water quality and quantity monitoring for a given well or spring?

Kentucky: N/A.

New York: Not defined.

7) Do you require the individual quality and quantity data to be submitted as part of the application, or can the monitoring be delayed until after permit approval but before the individual water source is potentially impacted?

Kentucky: N/A.

New York: Must be submitted as part of application.

8) What information is required in the permit, such as the location and ownership of all existing drinking, domestic and residential water supplies, including private wells, municipal wells and springs?

Kentucky: N/A.

New York: Yes.

9) How far beyond the proposed mining area (angle of draw) do you require inventorying and monitoring of wells and springs?

Kentucky: N/A.

New York: Not defined. Site specific.

10) OSM did not define the parameters to monitor for quality. For wells and springs that will be specifically monitored for water quality and quantity, do you define the specific parameters to monitor for pre-mine quality and quantity?

Kentucky: N/A.

New York: No.

11) Do you define the number of samples required over time (such as four samples over one year to reflect seasonal fluctuations)?

Kentucky: N/A.

New York: No.

12) Do you require a specific test to define water quantity before and after subsidence? (Slug test, pump test, etc.)

Kentucky: N/A.

New York: If applicable, yes.

13) Do you require a specific plan in the permit for replacing any contaminated, diminished, or interrupted water supply? Must the plan spell out possible contingencies for emergency, temporary and/or permanent replacement of affected water supplies?

Kentucky: N/A.

New York: No.

14) Do you allow a hook up to public water supply as a replacement for a lost spring or well?

Kentucky: Yes.

New York: Yes.

15) Do you require a plan for determining the present worth of the cost to replace a water supply if the operator wishes to pursue a one-time lump-sum payment for costs associated with providing both an equivalent water delivery system and operation and maintenance costs in excess of customary and reasonable delivery costs for pre-mining water supplies?

Kentucky: No.

New York: No.

16) Must the water supply owner agree to a lump-sum payment for future costs?

Kentucky: Yes.

New York: No.

17) If a water supply owner denies access to perform pre-subsidence water surveys, what do you do?

Kentucky: N/A.

New York: We try to negotiate access.

18) If a company cannot get a landowner to agree to a lump-sum payment for costs above and beyond customary, how do you monitor the payments made to a surface owner over time to supplement increased water bills?

Kentucky: The Kentucky Program has not had to address this type of loss yet.

New York: N/A.

Land:

1) What are the primary issues for restoring pre-mining land capabilities in your state? (Surface drainage restoration, etc.)

New York: Not defined.

2) Is a man-made pond considered a structure or land damage? Can a mining operator destroy a pond, eliminate the pond and then compensate for the damages?

New York: No.

3) Are there any circumstances where you will allow a land use change due to subsidence? (For example, a stream subsidence that creates flooding in adjacent crop fields and is now a wetland)

Kentucky: This has not occurred in Kentucky, but we would require the permittee to address this in a permitting action, which would include property owner approval.

New York: Yes, if described in the plan and pre-approved.

4) How detailed must the pre-mining topography be defined in your application? Does the permittee project post-subsidence topography when longwalling?

Kentucky: We require a drainage map, typically an enlarged topographic map. There are no permits with proposed subsidence, and no longwalling in the noncoal program.

New York: N/A.

5) Are there any land circumstances where you have or would prohibit longwall mining due to inability to make surface repairs?

Kentucky: There could be circumstances where this would apply, should it be proposed.

New York: N/A.

6) How do you handle the regulatory language "to the extent technologically and economically feasible" concerning repair of land damage?

Kentucky: Case-by-case basis, should it be determined by the state to be subsidence related. This has not occurred in our program yet.

New York: N/A.

7) Has a company ever tried to show land damage was not technologically or economically feasible to repair? What analysis did they present and did the state agree with the company's position?

Kentucky: This demonstration has not been made in the noncoal program.

New York: N/A.

State Respondent Information (Noncoal):

Person Completing Survey:	*State:*	*Agency:*	*Phone/ E-mail::*
Pam Carew and Mark Tartar	Kentucky	Dept. for Nat. Res., Div. of Mine Reclamation and Enforcement	502.564.2340 Pamela.carew@ky.gov mark.tartar@ky.gov
Ed Larrimore	Maryland	Mining Program	410.643.5623 elarrimore@mde.state.md.us
Larry Coen	Missouri	Department of Natural Resources	573.751.4041 Larry.Coen@dnr.mo.gov
Steven Potter	New York	NY State Department of Environmental Conservation	518.402.8072 smpotter@gw.dec.state.ny.us
James D. Simons	North Carolina	Div. of Land Resources, Dept. of Environment and Natural Resources	919.733.3833 jim.simons@ncmail.net
Jim Deutsch	North Dakota	Public Service Commission	701.328.2251 jdeutsch@state.nd.us
Thomas C. Bibb	Virginia	Division of Mineral Mining	434.951.6310 tom.bibb@dmme.virginia.gov

Appendix

#11

ILLINOIS

Illinois Mine Subsidence Insurance Fund

Premium Schedule for Commercial Properties And Residential Properties Written on Commercial Forms

Effective for All policies issued or renewed on or after December 1, 1996

Coverage Limit			Frame	Other Than Frame *
	Up to	10,000	20	26
10,001	To	20,000	23	30
20,001	To	30,000	26	33
30,001	To	40,000	30	36
40,001	To	50,000	33	40
50,001	To	60,000	36	43
60,001	To	70,000	40	46
70,001	To	80,000	43	50
80,001	To	90,000	46	53
90,001	To	100,000	50	56
100,001	To	110,000	53	59
110,001	To	120,000	56	63
120,001	To	130,000	59	66
130,001	To	140,000	63	69
140,001	To	150,000	66	73
150,001	To	160,000	69	76
160,001	To	170,000	73	79
170,001	To	180,000	76	83
180,001	To	190,000	79	86
190,001	To	200,000	83	89
200,001	To	210,000	86	92
210,001	To	220,000	89	96
220,001	To	230,000	92	99
230,001	To	240,000	96	102
240,001	To	250,000	99	106
250,001	To	260,000	102	109
260,001	To	270,000	106	112
270,001	To	280,000	109	116
280,001	To	290,000	112	119
290,001	To	300,000	116	122
300,001	To	310,000	119	125
310,001	To	320,000	122	129
320,001	To	330,000	125	132
330,001	To	340,000	129	135
340,001	To	350,000	132	139

* Any Structure other than frame; this includes brick, brick veneer, steel frame, any fire resistive construction, etc.

#11

Illinois Mine Subsidence Insurance Fund

Premium Schedule for Residential Properties
Not Written on Commercial Forms

Effective for All policies issued or renewed on or after April 1, 2003

Coverage Limit			Premium
	Up to	10,000	$21
10,001	To	20,000	$24
20,001	To	30,000	$27
30,001	To	40,000	$30
40,001	To	50,000	$33
50,001	To	60,000	$36
60,001	To	70,000	$40
70,001	To	80,000	$42
80,001	To	90,000	$46
90,001	To	100,000	$49
100,001	To	110,000	$52
110,001	To	120,000	$55
120,001	To	130,000	$58
130,001	To	140,000	$61
140,001	To	150,000	$65
150,001	To	160,000	$67
160,001	To	170,000	$71
170,001	To	180,000	$73
180,001	To	190,000	$77
190,001	To	200,000	$80
200,001	To	210,000	$83
210,001	To	220,000	$86
220,001	To	230,000	$89
230,001	To	240,000	$92
240,001	To	250,000	$95
250,001	To	260,000	$98
260,001	To	270,000	$101
270,001	To	280,000	$105
280,001	To	290,000	$108
290,001	To	300,000	$111
300,001	To	310,000	$114
310,001	To	320,000	$117
320,001	To	330,000	$120
330,001	To	340,000	$123
340,001	To	350,000	$126

Premium Schedule for Living Units
Effective for All policies issued or renewed on or after April 1, 2003
This schedule did not change.

Coverage Limit	All
Up to $15,000	12

Attachment

The following is derived from the Indiana Subsidence Insurance Program, Indiana Department of Insurance.

Mine Subsidence Insurance

Pursuant to Indiana Code 27-7-9-18, the Indiana Department of Insurance hereby issues this report on behalf of the Indiana Mine Subsidence Insurance Fund.

CLAIMS FILED

The Indiana Mine Subsidence Insurance Fund received the following number of claims in each year indicated:

2002 - 12
2003 - 8
2004 - 9

CLAIMS PAID

The Indiana Mine Subsidence Insurance Fund paid the following amounts in claims in each year indicated:

2002 - $ 0.00
2003 - $ 186,786.10
2004 - $ 119,177.39

FUND BALANCE

As of March 1, 2005, the total balance of the Indian Mine Subsidence Insurance Fund is
$ 7,653,567.88.

The Indiana State Legislature created the Indiana Mine Subsidence Program to protect home and property owners in 26 affected counties in southwestern Indiana along the Illinois Coal Basin. If you own a home, farm or commercial property in one of the designated counties, you are eligible for mine subsidence insurance. Mine subsidence insurance is available to anyone with basic fire coverage.

Mine subsidence insurance is available from your property and casualty insurance agent. Due to the nature of the damage, standard policies do not cover mine subsidence claims. For protection, you must purchase mine subsidence insurance as an addition to your current policy. Subsidence insurance can be added to your homeowner's policy at any time. To be eligible for a claim, your property must be insured prior to any damage from mine subsidence.

Premiums are structured to put mine subsidence insurance within your reach. For just a few dollars a month, you can insure your home or other structures for up to $200,000.00 per structure. The deductible for

deductible of $250.00 and a maximum of $500.00).

Damages not covered by mine subsidence insurance includes losses caused by earthquake, landslides, volcanic eruptions, collapse of storm sewer drains, or active mining.

Land, trees, crops or other plants and the contents of the structure are also not covered by mine subsidence insurance.

If you have purchased mine subsidence insurance and suspect your property is being damaged by mine subsidence, call your insurance agent. Your insurance agent will assist in filing a claim with your insurance company. If necessary, a qualified engineer will assess the claim.

In some instances, repairs will have to be delayed until the subsidence has stopped. Once this occurs, final and permanent repairs can be made. Without coverage, you will have to pay for these home repairs.

The following counties are eligible for mine subsidence coverage:

Clay	Crawford	Daviess
Dubois	Fountain	Gibson
Greene	Knox	Lawrence
Martin	Monroe	Montgomery
Orange	Owen	Parke
Perry	Pike	Posey
Putnam	Spencer	Sullivan
Vanderburgh	Vermillion	Vigo
Warren	Warrick	

MINE SUBSIDENCE INSURANCE PREMIUM RATE TABLE DWELLINGS

COVERAGE AMOUNT	PREMIUM
$0 TO $25,000	$24.00
$25,001 TO $40,000	$30.00
$40,001 TO $60,000	$36.00

$60,001 TO $75,000	$42.00
$75,001 TO $100,000	$60.00
$100,001 TO $125,000	$80.00
$125,001 TO $150,000	$99.00
$150,001 TO $175,000	$120.00
$175,001 TO $200,000	$139.00

NON-DWELLING

COVERAGE AMOUNT	NEW PREMIUM
$0 TO $25,000	$42.00
$25,001 TO $35,000	$48.00
$35,001 TO $45,000	$54.00
$45,001 TO $55,000	$60.00
$55,001 TO $65,000	$66.00
$65,001 TO $75,000	$72.00
$75,001 TO $85,000	$75.00
$85,001 TO $100,000	$90.00
$100,001 TO $125,000	$115.00
$125,001 TO $150,00	$139.00
$150,001 TO $175,000	$159.00
$175,001 TO $200,000	$179.00

Indiana Department of Insurance
Consumer Service
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Indianapolis, IN 46204-2787
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InState WatsLine: 1-800-622-4461
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