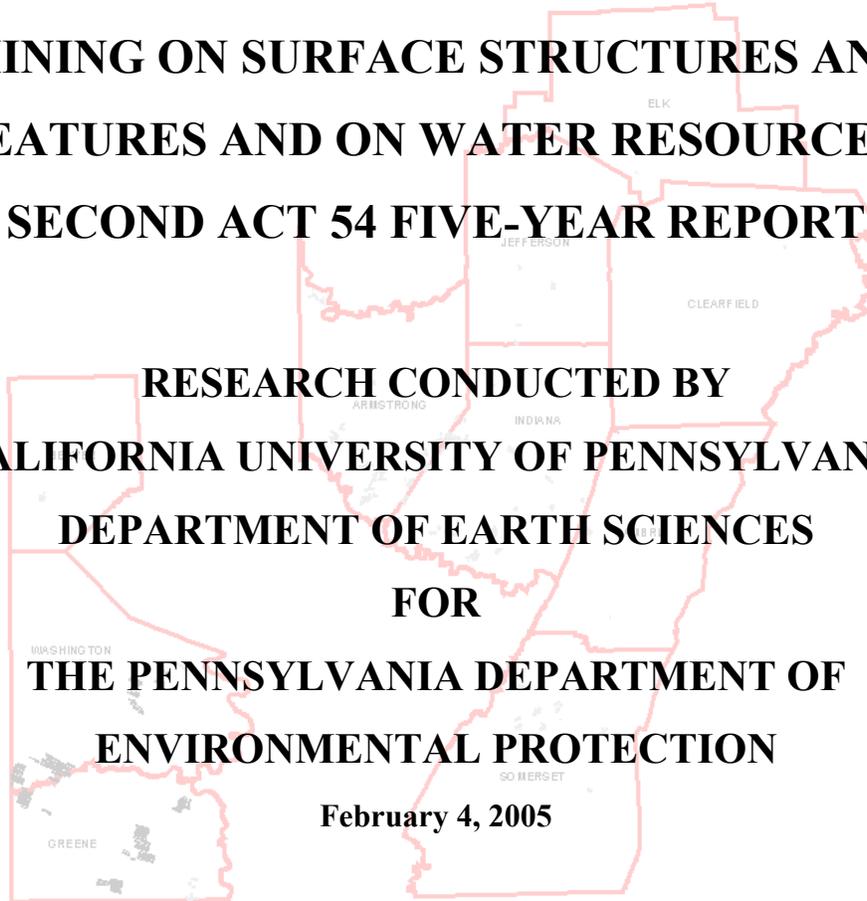


**THE EFFECTS OF SUBSIDENCE RESULTING
FROM UNDERGROUND BITUMINOUS COAL
MINING ON SURFACE STRUCTURES AND
FEATURES AND ON WATER RESOURCES:
SECOND ACT 54 FIVE-YEAR REPORT**

**RESEARCH CONDUCTED BY
CALIFORNIA UNIVERSITY OF PENNSYLVANIA
DEPARTMENT OF EARTH SCIENCES
FOR
THE PENNSYLVANIA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

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Section XII: ACTIONS TAKEN BY THE CALIFORNIA DISTRICT MINING OFFICE

XII.A. Overview

This brief section is an attempt to show how the California District Mining Office addresses issues related to mining problems. During the course of the assessment period, the California Office kept meticulous records of the actions of each staff member, compiling them in an internal audit. This audit contains information on the number of times the staff took specific actions. Because the California Office also houses agents who address a variety of environmental concerns, every category in the audit is *not* directly related to Act 54.

The University discovered through interviews that many “problems” are resolved amicably through the intervention of agents of the California District Mining Office. Such resolutions to problems preclude those problems from reaching the stage of “claim.”

XII.B. Resolution Time for the First and Second Five-Year Periods Compared

Attempts to compare the first and second five-year Act 54 assessment periods are limited by the paucity of data for the first of the two periods. Improvements in record-keeping and the apparent addition of staff after 1998 gave the second assessment period a more complete record of mining effects and the actions taken to mitigate those effects.

Commonsense tells us that many variables, some of which are unknown, come into play with regard to the effects of subsidence. Nevertheless, the first category in figure XII.1 shows a lengthening of the time to a finding of “no liability” during the second five-year period. Again, unknown variables might be responsible for the difference. As mentioned in previous sections of this report, insufficient data make a true comparison difficult at best. For example, there are “unspecified” agreements between mine operators and property owners.

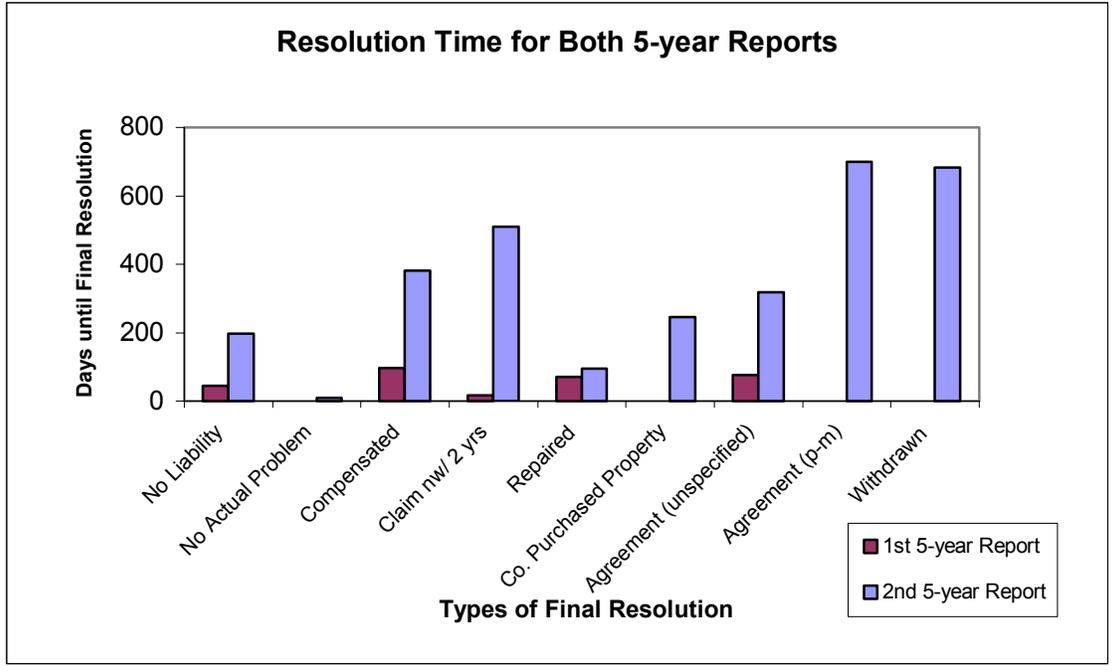


Figure XII.1 Resolution Times for Problems in Both Assessment Periods Compared

X.C. Actions of the California District Mining Office Germane to Act 54

An examination of the internal audit of the California Office reveals the number of subsidence claims for which the Office conducted investigations (fig. XII.2). Although, technically, September through December of 2003 is not part of this study, the period is included. The investigations include claims that are not BMSLCA related.

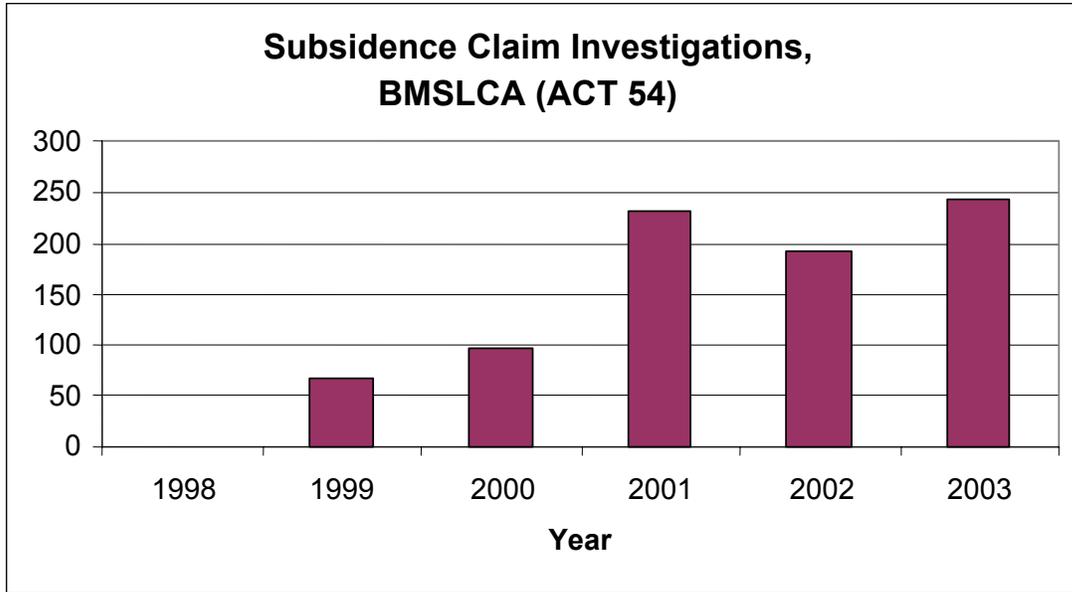


Figure XII.2 Investigations of Claims

A truer picture of the actions taken to ensure compliance with the BMLSCA and the Act 54 amendments might be obtained from the following graph (fig. XII.3) of compliance orders issued to mine operators during the study period. Apparently, a compliance officer whose duties were solely linked to compliance was not on staff during the first five-year period and did not come on staff until the second year of the second five-year period.



Figure XII.3 Compliance Orders Issued during the second five-year period.

If a compliance order is issued, it automatically means that the mine operator will be assessed a civil penalty provided that it was not issued for damage to a structure (e.g., house, shed, driveway, etc). The civil penalty procedure commences once the operator has complied with the order. Sometimes the California District Mining Office issues notices of violations (NOV) with a civil penalty, instances in which a coal mining company has violated the regulations, such as not performing a pre-mining survey. The most common occurrence for a NOV is a water source missed in a pre-mining water supply or property survey.

The California District Mining Office has staff whose primary focus is hydrological problems related to underground mining. This staff conducted a number of investigations, as figure XII.4 shows.

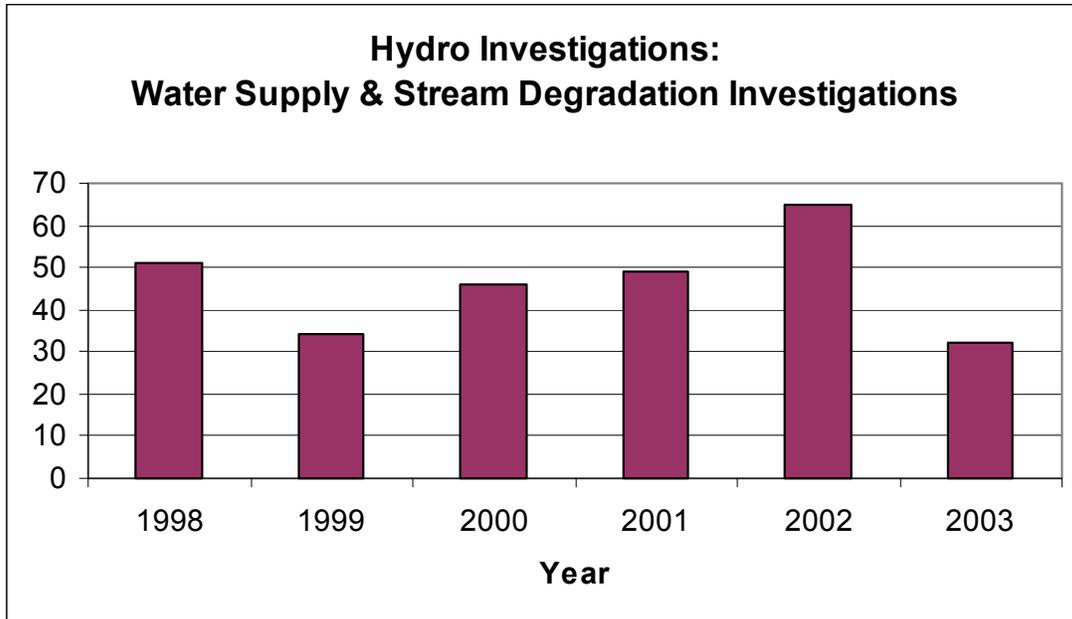


Figure XII.4 Hydrological Investigations conducted during the second ACT 54 five-year period.

The “presumptive zone of influence,” represented by an angle drawn from the base of the coal seam to the surface and discussed elsewhere in this report, is a zone for which the operator rather than the California District Mining Office has the burden of proof during litigation.

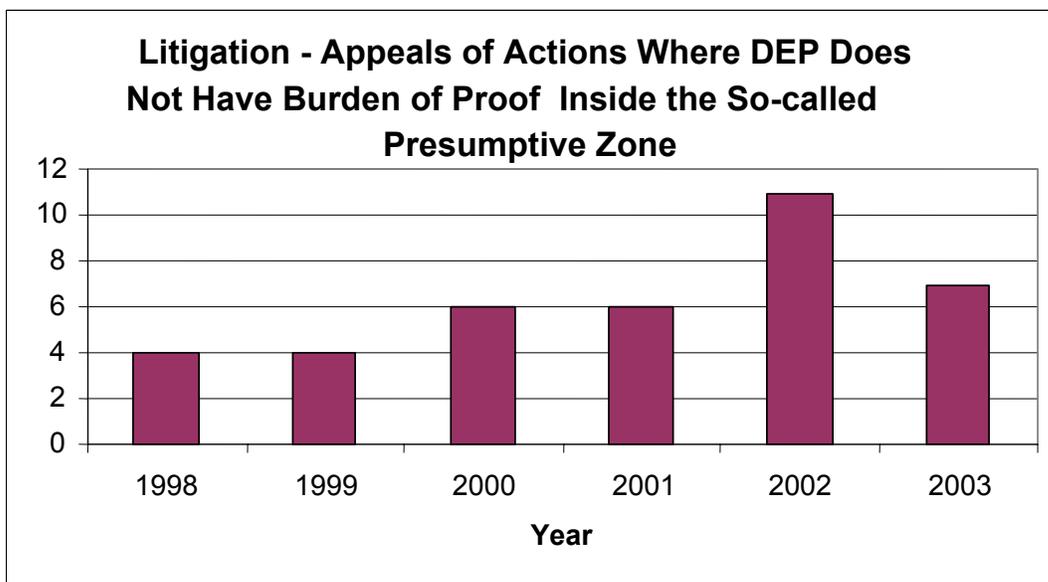


Figure XII.5.

Outside the presumptive zone of influence, the PA DEP has the burden of proof during litigation (fig. XII.6). There were only five instances of such activity during the five-year period.

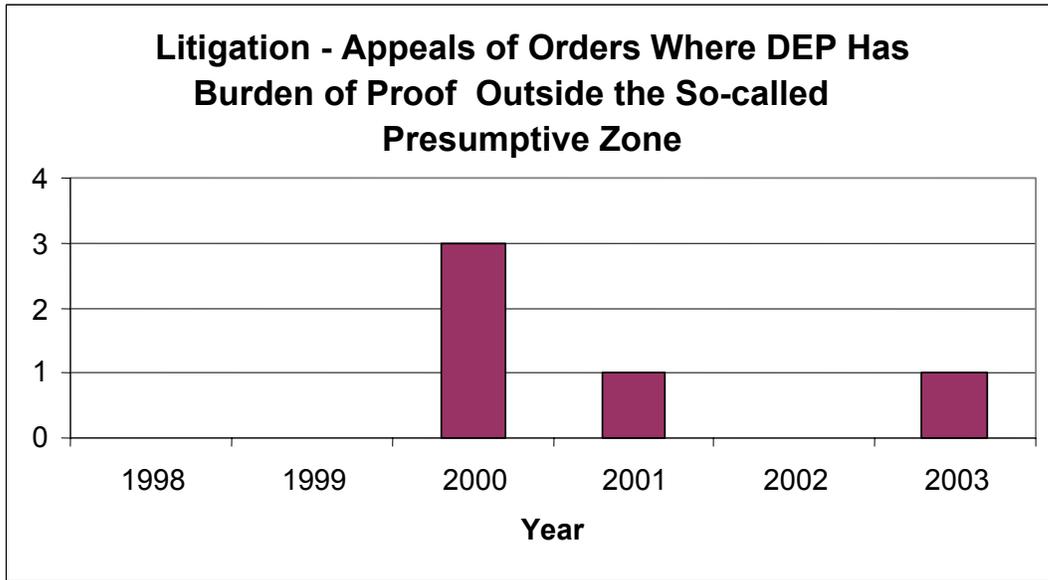


Figure XII.6.

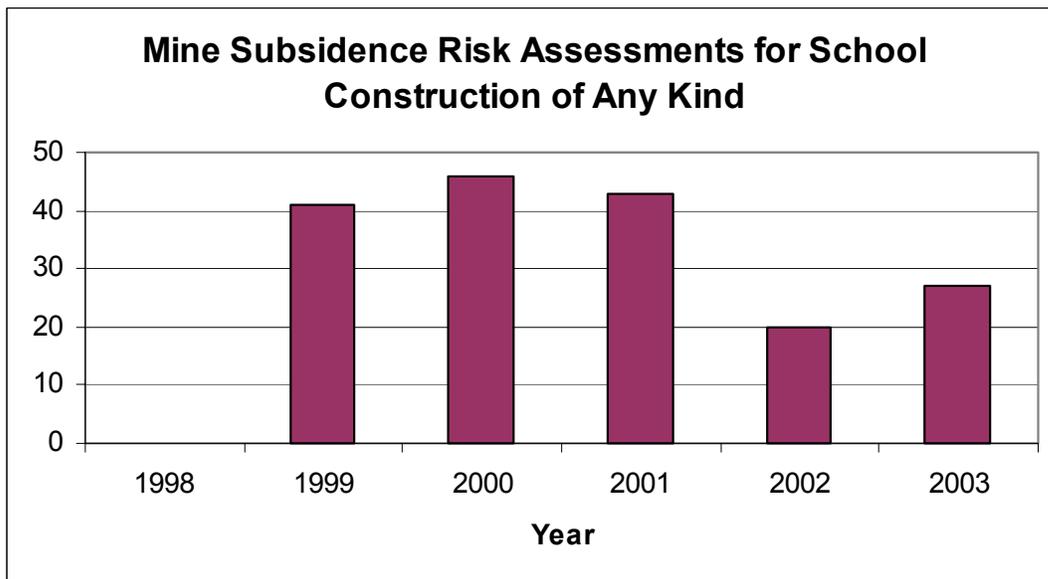


Figure XII.7. Risk assessments.

Mine fans and equipment can generate noise that is perceived as a nuisance by residents in the vicinity of the active mine. The California Office made a number of investigations of noise problems (fig. XII.8).

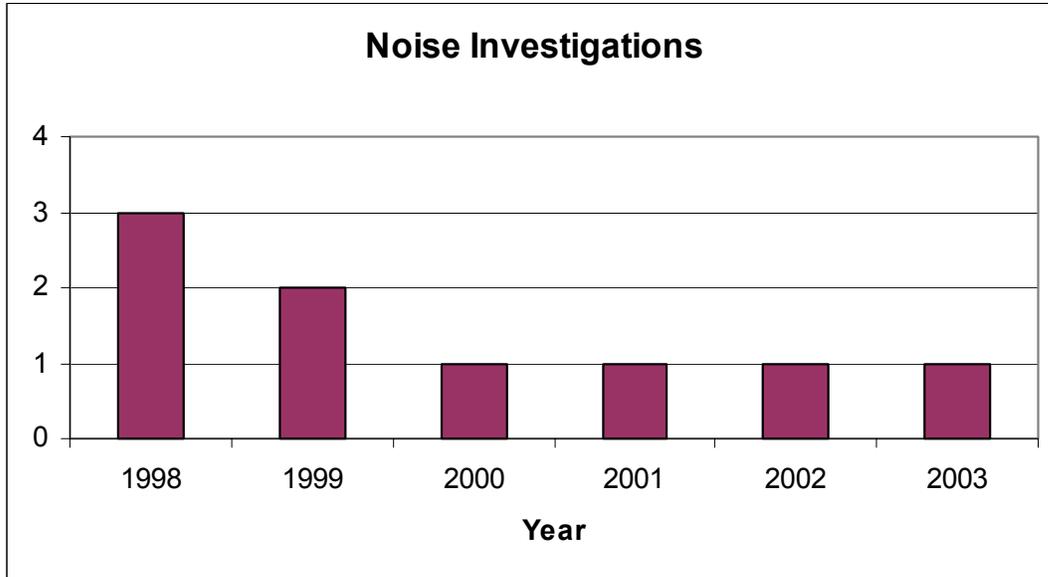


Figure XII.8. Investigations of noise incidents.

XII.D. Findings

Comparisons of the five-year periods are not easily derived from the dataset and records of the California District Mining Office. Record-keeping has been enhanced during the second Act 54 assessment period with the development of the Bituminous Underground Mining Information System.

The California District Mining Office appears to have been more active in its execution of the requirements of the BMLSCA, Act 54 amendments, during the second five-year Act 54 period than during the first five-year period, but the finding might reflect only a more thorough documentation.

The addition of a compliance officer has enhanced the effectiveness of the California District Mining Office in maintaining compliance with Act 54.