



## **“The Legacy of 200 Years of Coal Mining - Pennsylvania’s Biggest Water Quality Problem”**

**Testimony Before the  
Subcommittee on Mining  
House Environmental Resources & Energy Committee**

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Good morning Chairman Reber, Rep. Smith, Rep. George and members of the House Environmental Resources and Energy Committee.

My name is David Hess, I am Executive Deputy Secretary for the Department of Environmental Protection. With me today is Robert Dolence, Deputy Secretary for Mineral Resources Management.

On behalf of DEP Secretary James M. Seif, we want to thank you for this opportunity to talk about the steps now being taken by local, state and federal governments, environmental groups and the coal industry to undo the environmental consequences of more than 200 years of coal mining in the Commonwealth.

Over 10 billion tons of coal has been taken from Pennsylvania mines. The mining of coal in Pennsylvania helped fuel the industrial revolution, win two world wars, provided hundreds of thousands of jobs for immigrants and helped position the United States as a world power.

Today, coal continues to be an important part of things we do every day, like turn on a light switch. Fifty-eight percent of the electricity Pennsylvanians use is generated by coal.

But the success brought about by coal mining came at a cost.



In direct human terms, the cost was highest-- over 51,480 coal miners lost their lives in Pennsylvania's mines since 1870.

The cost to the environment was also high: 250,000 acres of land were left unreclaimed, causing over 2,400 miles of polluted streams; more than 150,000 acres are vulnerable to mine subsidence; 2.6 billion cubic yards of coal refuse dot the landscape in huge piles; 45 deep mine fires and 100 million cubic yards of coal refuse continue to burn.

Environmental problems caused by past coal mining affect 45 of Pennsylvania's 67 counties. Pennsylvania has one-third of all the abandoned mine-related problems in the United States.

The cost of cleaning up this legacy of 200 years of coal mining has been estimated at \$15 billion, but it's probably more.

This is easily Pennsylvania's single biggest water quality problem.

Have we learned from these mistakes? Yes.

The worker safety record of modern coal mining operations is now comparable to industries like agriculture and construction because of the combined efforts by mine workers, coal companies and state and federal agencies like DEP's Bureau of Deep Mine Safety.

Pennsylvania pioneered the adoption of laws regulating coal mining. In fact this month we are celebrating the 60<sup>th</sup> anniversary of the Clean Streams Law that was prompted by water pollution problems caused by coal mining.

Modern regulations tell mine operators where and how they can mine and set requirements for restoring land after mining ends. Under these new rules and with a more scientific review of permits, more than 97 percent of surface mining operations permitted in the last five years have not caused water pollution.

In the last 30 years nearly \$1 billion has been spent through a variety of state and federal programs to restore about 25,000 acres of abandoned mine lands, reclaim refuse piles and help stabilize underground mines. About two-thirds of these funds came from active mine operators who paid a special fee on every ton of coal they mined to support reclamation efforts.

Modern surface mining techniques are allowing the coal industry itself to restore old areas by going back in and re-mining and reclaiming abandoned areas at no cost to taxpayers. Half of all new surface coal mine permits issued in Pennsylvania today involve re-mining representing about one-fourth of the total acres mined.

Remining is resulting in the reclamation of abandoned mine lands at more than twice the rate of taxpayer funded reclamation projects. In 1996 alone more than 2,514 acres of abandoned mine lands were reclaimed by the private sector through remining, while DEP-sponsored projects reclaimed 1,200 acres. And the rate of reclamation by remining is increasing.

### **Taking the Next Steps**

While Pennsylvania has achieved important successes in cleaning up the environmental legacy of past coal mining, we have only addressed a little more than six percent of the problem.

We also recognize that no matter how much taxpayer money is set aside to deal with this problem, there can never be enough public money to do all the environmental work that needs to be done.

To speed up reclamation, we need to maximize the effectiveness of the public funds that are available and find new, innovative ways to encourage reclamation work by current mine operators, landowners and other partners.

With these principles in mind, DEP has undertaken a series of initiatives, along with our state and federal partners, members of the General Assembly and the mining industry, that we believe will result in a significant increase in reclamation.

### **New Staff, Reorganization**

Our first step was to get our own house in order by getting the right people to do the job, reviewing our requirements to see where they can be made more effective and promoting remining and partnerships with a variety of groups to increase the rate of reclamation. An important part of this process was asking key stakeholders—citizens, local government, environmentalists, the coal industry and others—what we should do.

We brought in Bob Dolence, with his broad experience in mining and the federal Office of Surface Mining, to be our deputy for Mineral Resources Management. As part of this change, we moved Terry Fabian over to deputy for Field Operations to take advantage of his broad experience in implementing our other environmental programs.

Next we brought the District Mining Offices under Bob's control to promote a closer working relationship between the groups that regulate the active mine operations and those that reclaim abandoned mines. We also named new leadership to the Bureaus of Mining and Reclamation, Abandoned Mine Reclamation and District Mining Operations.

## **Customer Needs, Regulatory Basics**

This new team started an in-depth analysis of both the active and abandoned mine programs through what we call the Customer Needs Projection. This unique approach involved citizens, industry, environmental groups, local governments and other agencies in an effort to evaluate the effectiveness of our programs and make recommendations for improving them.

Together with our ongoing Regulatory Basics Initiative, the Customer Needs Projection resulted in a series of regulatory and policy recommendations designed to encourage quicker and more effective reclamation by clarifying liability for pre-existing discharges, allowing additional reclamation options like terrace-type backfilling, allowing easier substitution for topsoil and setting more flexible revegetation requirements to improve stability at lower costs.

## **Comprehensive Reclamation Plan**

At the same time we proposed a Comprehensive Mine Reclamation Plan that had been advocated by DEP's Mining and Reclamation Advisory Board and Citizens Advisory Council to better coordinate DEP reclamation programs.

The specific recommendations of the Plan are to –

- Create a focus for the abandoned mine lands program that properly balances expenditures among competing reclamation needs.
- Develop partnerships involving local citizens, local governments and other groups that promote abandoned mine land reclamation.
- Develop longer-term funding plans that would allow for coordination of programs and long-term commitment.
- Develop an area approach to reclamation planning that will result in reclamation and rehabilitation of an entire geographic area.
- Encourage the development and use of innovative technologies that reduce the cost of reclamation.
- Coordinate the activities of the Abandoned Mine Land program with the Mine Regulatory program so that active mine operators are encouraged to remine and reclaim where possible.
- Ensure that property owners who allow the use of their lands for long-term treatment of abandoned mine drainage are not subject to personal or environmental liabilities because of the projects.

We expect to finalize the Plan in July.

### **Watershed Solutions**

One of the key recommendations coming out of all these efforts and from our own staff was a suggestion that we focus our resources on cleaning up whole watersheds, not just individual problems.

Watersheds are the basic building blocks of the environment. Looking at abandoned mine problems in a particular watershed and systematically planning how state, federal and industry resources can be brought to bear to solve them is potentially a very powerful tool. But, this tool will not work effectively without the guidance and involvement of people in these watersheds.

We are now working with local partners in eight watersheds across the state in a special pilot program to test this watershed approach. Watersheds in Butler, Cambria, Clinton, Elk, Lebanon, Luzerne, Schuylkill, Tioga and Westmoreland counties are participating.

- Slippery Rock Creek (from Boyers to headwaters, Butler County)
- Sulphur Creek (Cambria County)
- Tangascootack Creek (Clinton County)
- Little Toby Creek (from Brandy Camp Creek confluence upstream to all Elk County)
- Swatara Creek (Lebanon and Schuylkill Counties.)
- Nescopeck Creek (Jeddo Tunnel discharge, Luzerne County.)
- Babb Creek (Tioga County)
- Beaver Run (Westmoreland County)

Swatara Creek in Lebanon and Schuylkill counties is a good example of how this process works. The first step was forming a strong watershed association lead by people in the watershed, with technical support from DEP. The group has identified the primary mine-related problems in the watershed and a variety of projects are now underway by local people, DEP and the active mining industry to deal with them.

### **New Technologies**

DEP has begun exploring a variety of new mine reclamation technologies that we think have significant potential to both improve the environmental effectiveness of reclamation while at the same time reducing reclamation costs.

At the Bark Camp Mine Reclamation Laboratory in Clearfield County we are demonstrating several reclamation techniques in cooperation with the Environmental Protection Agency, the U.S. Army Corps of Engineers and Penn State University. We

are testing one technology that involves bringing in river silt and mixing it with fly ash to create a structural fill-type material. We believe this could be a win-win situation—abandoned mine lands are reclaimed and river silt is “recycled” into a useful material.

We have also been promoting the use of wetlands as inexpensive, but effective ways to treat runoff from abandoned mine lands by testing a wetland system at Bark Camp and by designing and constructing proven systems under DEP-sponsored abandoned mine reclamation projects.

### **Recent Changes in Law**

Reforms adopted by the General Assembly under Act 181 of 1994 and Act 43 of 1996 made it easier for county conservation districts, mine operators and landowners to initiate reclamation projects.

These laws also created a variety of programs to help mine operators apply for permits to remine abandoned areas through the Remine Operator Assistance Program, designating areas suitable for remining, giving bond credits for reclaiming previously affected land and financial guarantees to support operator bonding on remining sites.

Act 43 provides DEP with additional authority to cooperate with surety companies to allow third parties to reclaim abandoned sites where the bonds have been forfeited and collected. We have done several agreements like this in the last three years, and there now several groups of sites being considered under the Act 43 program by the private sector.

### **Other Partners**

We have welcomed as a partner in our reclamation efforts county conservation districts that make up the Western and Eastern Coalition for Abandoned Mine Reclamation. Through this relationship we are promoting reclamation by funding specific county projects, providing technical support and encouraging direct EPA funding to the coalitions.

DEP has been successful in using mine operators who have violations to do reclamation work. Under this initiative, operators complete mine reclamation work on an abandoned site in-lieu of paying a monetary penalty to DEP.

All these efforts together result in about \$37 million worth of reclamation activity every year. To help summarize how much each program contributes to the reclamation effort, Bob has put together the chart we have here today.

### Average Level of Reclamation Effort

Program	Dollar Value	% of Value	Trend
Title IV (federal funds, average)	\$20,870,674	55.2%	↔
Remining	7,542,000	19.9	↑
Emergency Reclamation (federal)	3,094,573	8.2	↔
Bond Forfeiture Funded (old sites-state)	1,800,520	4.7	↑
Act 43 Surety Reclamation	1,723,621	4.6	↑
No cost reclamation contracts	867,000	2.3	↑
Water Treatment Plants (state)	774,000	2.0	↔
Local Watershed Non-Point Source	530,046	1.4	↑
Local Watershed Projects (in kind)	500,000	1.3	↑
Landowner reclamation	62,400	0.2	↑
Operation Scarlift (state bond program)	27,700	0.1	↔
Reclamation in-lieu of penalty	26,171	0.1	↑

**Annual Average Total -- \$37,819,305**

#### Federal/State Partnership

Our partnership with the federal government on mine reclamation initiatives is important to the Commonwealth. We think the U.S. Department of the Interior's Appalachian Clean Streams Initiative and EPA's new focus on mine reclamation in general are important steps forward and will help Pennsylvania address our single biggest water pollution problem.

Pennsylvania receives about \$20 million annually from the federal government to help with abandoned mine reclamation projects. This past year better management of federal funds will eliminate the carry-over of funds to the next grant year for the first time since the program existed.

We continue, however, to be concerned that the federal Abandoned Mine Lands Trust Fund now has an estimated surplus of \$1 billion in fees collected from mine operators.

The Western and Eastern Coalitions for Abandoned Mine Reclamation as well as other states have joined us in trying to convince the federal Office of Surface Mining to release the \$1 billion surplus in the Trust Fund for use by states. The Senate recently added their support to this effort by adopting Senate Resolution 38 and you have a similar resolution in the House—House Resolution 190.

## Areas of Inquiry

There is much more work we need to do to eliminate the harsh environmental legacy left by the mining industry in Pennsylvania. We are working harder and smarter to promote reclamation by a variety of state, federal and local partners.

If I could suggest some possible areas of inquiry for the Subcommittee, they would be—

- Provide incentives for third parties or “good Samaritans” such as watershed and other environmental groups, landowners and mine operators to do reclamation projects without fear of becoming legally responsible for discharges caused by past mining.
- Look at the need for additional liability reforms that make it easier for mine operators to remine sites with pre-existing discharges.
- Establish a discharge credit program that gives credit for reducing discharges anywhere in a watershed to meet pollution reduction requirements.
- Support efforts to establish and provide technical assistance to county conservation districts and watershed groups interested in mine reclamation and other water quality protection projects.
- Help in convincing the Clinton Administration to give states access to the \$1 billion surplus in the federal Abandoned Mine Lands Trust Fund.

I hope this quick overview of Pennsylvania’s mine reclamation efforts was helpful. Bob Dolence and I would be happy to answer any questions you may have.

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*For more information on Pennsylvania’s mine reclamation programs visit DEP’s website at: <http://www.dep.state.pa.us> (choose Information By Subject/ Mining and Mineral Resources). To learn about reclamation projects in your county visit the County Environmental Notebook section of the website.*