

Comments for the CAC Regarding the Act 54 Report No. 4.
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One of the most unlawful results cited in the fourth Act 54 report is that seven streams were irreparably damaged during the last five-year review period. How many were irreparably damaged during the first, second, and third five year periods?

Act 54 does not allow irreparable damage. Conclusion: Act 54 is being implemented in an illegal fashion.

Not only have seven streams just in this last five year period been damaged that cannot be repaired or restored to their pre-mining state, but there are more than forty active mines that now have perpetual treatment systems and/or treatment trusts.

Perpetual treatment is an indication of a mine discharge resulting as collateral damage, some might even say inevitable damage, from underground mining. Collateral damage normally refers to accidental or unintentional damage to an unintended target.

It is our understanding of the law that no permit is to be issued that would cause a discharge. Once a discharge occurs, if the company constructs a mine drainage treatment system and/or sets up a perpetual treatment trust, I believe that the Department then considers the company "in compliance" and any new permit block is removed. The discharge has not been corrected or fixed. It simply has had a huge Band-Aid placed on it that will hopefully keep the water cleaned sufficiently to then dump back into the Commonwealth's streams. The treatment of these discharges and attendant systems will have to be monitored and maintained forever. We know. The

Mountain Watershed Association has five treatment systems at this time that it currently oversees and samples numerous other mine discharges on an ongoing basis. This aspect of mining is not addressed in the report. But the bigger question is why does the DEP keep issuing permits that cause discharges? We have created an egregious Catch 22. If the company is no longer issued permits because it has caused an illegal discharge, it may be unable to maintain treatment of that discharge for years to come. This is similar to the abandoned mine land Catch 22. If active mining stops, the AML fund will eventually disappear. Money will not be available to build treatment systems needed to restore Pennsylvania's 5000 miles of dead streams. But, if active mining continues, more discharges will obviously be created that will also need treatment into geologic time. Is permitting based on this policy? The fact that the Department has allowed mining to operate and expand, even after causing more discharges into the waters of the Commonwealth is clearly a violation of its public trust responsibility.

Is damage unintentional when the agency applying and interpreting the law knows or should have known damage has occurred in the past and will likely occur in the future?

How many more streams have to be irreparably harmed before it is admitted that longwall mining destroys streams and, therefore, cannot be lawfully permitted.

Further, making a determination that something cannot be corrected is NOT a resolution of the problem.

Specific issues:

Though not an environmental issue, it is certainly a community issue. "data was in paper files at the CDMO. Some data was in paper files on PADEP personnel desks with no record that it had ever been submitted. . .Some data was . . .not readily

available to the University OR THE GENERAL PUBLIC.” (emphasis added.) This Fourth Report on Act 54 points out the difficulty the public has accessing information. Features on the six-month maps are not labelled as specified in the PA Code, which requires a numerical identifier for structure and other surface features (PA Code, Title 25 Chapter 89.154b).

Despite the fact that the Department’s own Technical Guidance specifies measurement of flow and groundwater elevations on a daily basis during periods of undermining, the majority of reported data is quarterly. This was found to be inadequate by the University and unable to characterize rapid impacts to the hydrologic system.

“Understanding the processes causing losses of water sources following underground mining is challenging given the limited understanding of the well stratigraphy. . “

Supplemental sources of information had to be consulted to determine local aquifer stratigraphy. It seems that this information should be compiled as part of the analysis and prediction of hydrologic consequences and protection of the hydrologic balance that is required as part of the permit application, but rarely is it detailed and sufficiently complete to protect water resources.

This same comment applies to hydrologic monitoring of surface water systems and methods needed to address surface water impacts such as changes in spring flow.

This should also be part of the analysis and prediction of hydrologic consequences and protection of the hydrologic balance—and is not.

Although most of the damage caused by mining is a result of using the longwall process, other types of mining caused 15% of the total damage to structures, 7% of the total damage to the land, and 46% of the total damage to water supplies. None of the

damage to streams was outside of the longwall fields. I guess we in the room and pillar mining fields should count our blessings if we live where mining can only damage a significant portion of our homes, land and water supplies but not our streams.

One major thing is clear from the report: damage to streams is often not reparable. During the Fourth Report period, seven streams were deemed to be irreparably damaged by longwall mines. Of the ten cases in the third assessment period, eight involve streams that the Department has ruled have not recovered from mining. In addition stream water quality is not being tracked/assessed, and Pitt found (in this latest Report) that even when streamflow recovers and macroinvertebrates return in approximately the same premining numbers and types, the chemistry of the water does not necessarily recover.

Flow loss accounts for the majority of stream impacts. Damages from flow loss have in many cases proven to be irreparable. Why is flow loss so critical? "Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands is recognised as a major factor contributing to loss of biological diversity and ecological function in aquatic ecosystems, including floodplains. Alteration to natural flow regimes can occur through reducing or increasing flows, altering seasonality of flows, changing the frequency, duration, magnitude, timing, predictability and variability of flow events, altering surface and subsurface water levels and changing the rate of rise or fall of water levels (Walker 1985; Cadwallader and Lawrence 1990; Gehrke *et al.* 1995; Kingsford 1995; Maheshwari *et al.* 1995; Poff *et al.* 1997; Boulton and Brock 1999; Robertson *et al.* 1999, 2001)." ("Alteration to the natural flow regimes of rivers, streams,

floodplains & wetlands - key threatening process listing. NSW Scientific Committee - final determination”).

Despite this being one of the major impacts to streams there has been no demand by the Department nor attempt by mine operators to develop a model to predict flow loss, in the face of 20 years of data and monitoring.

That the Department has permitted a longwall mine to continue operating and even to expand, after permanently dewatering seven streams clearly is a violation of its public trust responsibility.

The fact these streams were irreparably damaged just during this five year review period is an additional condemnation of the inadequate sophistication and protection demanded by the Department with regard to the applicant’s analysis and prediction of hydrologic consequences and protection of the hydrologic balance.

We think the Fourth Report on Act 54 is the best of its kind, describing the need for more data and precise and improved methods of tracking the impacts of mining to both structures and water. Yet in our minds it is not the lack of methodology, data, or organization that leaps off the pages. The report screams of the continued, illegal destruction caused by underground mining.

If you *allow* destruction, pollution, and degradation (with the vain hope of fixing it later) you will most assuredly get it. The paramount conclusion from this report is that damage is being permitted despite the fact that damage has been occurring for twenty years, some of which cannot be fixed, ever. At this point after twenty years, much of this damage CAN BE PREDICTED OR SHOULD BE EXPECTED TO OCCUR and is not adequately considered—therefore not acting as a permit bar or cause to deny when it most certainly should.