

PO Box 4023
14 E. Beau St.
Washington, PA 15301



P) 724.229.3550
www.coalfieldjustice.org
info@coalfieldjustice.org

April 9, 2021

Citizens Advisory Council
Department of Environmental Protection
Rachel Carson State Office Building,
P.O. Box 8459
Harrisburg, PA 17105-8459

Re: Comments on 2013-2018 Effects of Subsidence Resulting from Underground Bituminous Coal Mining in Pennsylvania Report Noticed in 51 Pa.B. 241 (Saturday, January 9, 2021)

Dear Citizens Advisory Council:

On behalf of Center for Coalfield Justice (“CCJ”) and its more than 3,000 members and supporters, please accept these comments on 2013-2018 Effects of Subsidence Resulting from Underground Bituminous Coal Mining in Pennsylvania Report (“Act 54 Report”). The undersigned organizations support these comments.

CCJ is a 501(c)(3) non-profit organization founded in 1994 by individuals organizing against the destruction caused by longwall coal mining. Since then, we have expanded our mission to work on issues related to extractive industries generally in Washington and Greene Counties. The organization’s mission is to improve policy and regulations for the oversight of fossil fuel extraction and use; to educate, empower and organize coalfield residents; and to protect public and environmental health. As such, and on behalf of our members and supporters, we are acutely aware of the subsidence-induced impacts caused by longwall coal mining and the need to adequately address those impacts. The largest underground coal mine complex in North America is located in Greene and Washington Counties.¹ The communities we serve have experienced first

¹ Consol Energy’s Pennsylvania Mining Complex is the largest producing underground coal mining operation in North America. It consists of the Bailey, Enlow Fork and Harvey mines, along with a central preparation plant and train loadout facility. See <http://www.consolenergy.com/operations/pennsylvania-mining-complex>

hand the subsidence-induced damage to homes and other structures, water supplies, and streams described in the most recent Act 54 Report.²

I. Structure and Water Supply Impacts

It is critical to note immediately that changes in mining activity influenced the magnitude of subsidence impacts observed during the 5th assessment period. While the number of active mines has been fairly constant, the acres of coal mined has decreased by 24.5%. *See* Report at 3-5. The Act 54 Report concluded: “A decline in the acres mined has resulted in a decreased number of company liable water supply effects.” Report at 5-21.

During the 5th assessment, underground coal mining caused damage to at least 247 structures. Active longwall mines caused 92.7% (229) of the structure damage. *See* Report at 4-6. The Act 54 Report notes that the most common resolutions for company liable structure damage was “Unspecified Agreements” (125) and “Company Purchased Property” (76). *See* Report at Table 4-6. The Act 54 Report further states: “The most common final resolution category for longwall structures that were found to be company liable was an “Unspecified Agreement” (Table 4-10)... “Company Purchasing Property” was also a common resolution category.” Report at 4-10.

According to the Report, there were 177 reported water supply impacts from longwall mining that have reached a final resolution. “The most common company liable effect was an “Unspecified Agreement” (72; Table 5-8), which took an average of 492 days (Table 5-8)... There was also a large amount of company purchased properties for water supplies in the 5th assessment (54; Table 5-8).” Report at 5-12. There were an additional 56 reported water supply impacts from longwall mining that have not reached a final resolution and are still in interim resolution. It took an average of 441 days for those 56 reported effects to reach an interim resolution. *See* Report at 5-13, Table 5-9.

Act 54 and the Department’s underground coal mining regulations require that structures and water supplies impacted by underground coal mining be repaired or replaced. *See* 25 Pa. Code §§ 89.143a and 89.145a. But, what happens when mine operators purchase properties above their underground coal mining operations to

² Greene and Washington Counties had the most mining activity during the 5th assessment period. *See* Report at E-2, E-3.

resolve subsidence impacts? The Act 54 Report acknowledges that this practice has the potential to adversely alter overlying communities. Report at 11-12 (“Mine operator purchases of properties above underground mining, including purchases to resolve subsidence impacts, have the potential to adversely alter overlying communities.”) The Act 54 Report explains:

The University noticed a high rate of subsidence impact resolution through company purchase of the impacted property. BUMIS reveals a substantial proportion of impacts are resolved through company purchase of the impacted property (n.b., BUMIS does not differentiate between purchases pre- and post-mining). Of the 192 water supply impacts that were deemed company liable, 54 of those cases were listed as resolved by operator purchase of the impacted property (Table 5-4). For comparison, 54 cases represent an increase in purchases compared to previous assessment periods (34 company purchases of water supply impacted properties in the 3rd assessment period and 37 during the 4th assessment period).

These rates of operator purchase inferred from impact reports do not capture the complete scope of company real estate acquisitions as part of mining. Figure 11-1 shows the extent of operator owned parcels over mining during the 5th assessment period in Harvey Mine. A substantial portion (more than 40 %) of land area over these longwall panels is owned by the mine operator. If these properties are impacted by subsidence during mining and the properties later sold “as-is”, these subsidence impacts can degrade the local tax base and negatively impact the local community. Demonstration of these processes are beyond the scope of the 5th Act 54 assessment but have the potential to create economic strain on communities living over active mines. This would require an analysis of the long-term economic strain beyond the scope of work for this report.

Report at 11-2; Figure 11-1. As coal companies address subsidence impacts by

purchasing property either before or after mining, more people move out of the area. The homes and water supplies located on those properties may never be repaired or replaced.

Figure 4-5 in the Act 54 Report shows the damage to a home that was undermined by the Enlow Fork Mine in 2015. The mine operator purchased this property 12 days before it was first undermined. *See* Report at 4-11; Figure 4-5. This home may never be repaired and will sit vacant until it is eventually demolished. The Act 54 Report reveals that there are many other impacted homes like the one pictured in Figure 4-5. Coal operators also purchased 54 properties in order to resolve water supply impacts during the 5th assessment period. The values of those properties are severely diminished unless and until the operator replaces each of those water supplies with permanent replacement supplies. Report at 11-2.

Figure 4-6 in the Act 54 Report shows an example of structural damage to the interior of a home from the Bailey Mine in 2013. The main support beam of the house twisted and a bump was observed in the first-floor hallway. The property owners entered into an unspecified agreement with the company for these damages. *See* Report at 4-12; Figure 4-6. In other words, we don't know whether that unspecified agreement provided the property owner with sufficient funds to repair the house or whether the home was ever actually repaired. 25 Pa. Code § 89.143a requires the operator to fully repair the damage to a structure or compensate the owner for the reasonable cost of repairing or replacing the damaged structure. Landowners and coal operators almost always disagree about the "reasonable cost" of repair or replacement during post-mining negotiations. Not surprisingly, coal operators often underestimate the cost of repair or replacement.

The 2020 Greene County Comprehensive Plan³ provides a better understanding of the negative impacts to the local community previewed in the Act 54 Report. *See* Report at 11-2. Greene County saw the most underground coal mining activity during the last two assessment periods. The 2020 Greene County Comprehensive Plan recognizes that the County has experienced a decline in the overall population and an increase in the median age. *See* Comprehensive Plan at 19, 22. Greene County has also experienced a dramatic decreased in school enrollment over the last ten (10) years. "Enrollment in the five public school districts has dropped by more than 800 students, from 5,552 in 2008-09 to 4,724 in 2018-19." Comprehensive Plan at 19. Schools have been forced to close due to decreased enrollment. The Comprehensive Plan further

³ <https://www.co.greene.pa.us/resources/9196>

acknowledges that the majority of people working in Greene County do not live in Greene County. Currently 62 out of every 100 workers in the County commute from outside the County. *See* Comprehensive Plan at 21. The Comprehensive Plan suggests that inadequate housing choice may be to blame. According to the Comprehensive Plan, the natural average annual housing vacancy rate is 6%, which represents the supply of units in a given market that are not leased or occupied, allowing for housing turnover. However, the average housing vacancy rate in Greene County is much higher at 14.3%. *See* Comprehensive Plan at 23. The Comprehensive Plan explains that the remaining share of vacant housing (8.3%) is not available for sale or for rent, but is vacant due to needed repairs, foreclosure, or other reasons. *See* Comprehensive Plan at 23. Many vacant homes have suffered subsidence-induced damage to the dwelling or water supply and are now owned by coal mine operators. Others may be vacant because the post-mining “unspecified agreement” did not provide full compensation for the necessary repairs.⁴ *See e.g.* Act 54 Report at 4-10, 5-12, 11-2; Figure 4-5, Figure 4-6.

* * *

The purpose of Bituminous Mine Subsidence and Land Conservation Act (commonly known as “Act 54”) is “to enhance the value of such lands for taxation, to aid in the preservation of surface water drainage and public and private water supplies, to provide for the restoration or replacement of water supplies affected by underground mining, to provide for the restoration or replacement of or compensation for surface structures damaged by underground mining and generally to improve the use and enjoyment of such lands[.]” 52 P.S. § 1406.2. The Pennsylvania General Assembly acknowledged that the prevention or restoration of damage from mine subsidence is related to the economic future and well-being of Pennsylvania. 52 P.S. § 1406.3.

The Act 54 Report covering 2013-2018 reveals that subsidence-induced damage is commonly resolved through unspecified agreements and that a substantial portion of subsidence impacts to structures and water supplies are resolved through company purchase of the impacted property. The 2020 Greene County Comprehensive Plan reveals that the County has seen a decline in the overall population, an increase in the median age, a dramatic decrease in school enrollment, and an increase in blighted

⁴ Landowners and coal operators almost always disagree about the “reasonable cost” of repair or replacement during post-mining negotiations. *See* 25 Pa. Code § 89.143a. Coal operators often underestimate the cost of repair or replacement.

properties. In light of the Act 54 Report and the 2020 Greene County Comprehensive Plan, we believe the Department can do more to ensure that goals of Act 54 are met.⁵

Accordingly, we ask that the Citizens Advisory Council recommend that the Department issue enforceable orders for repair or replacement of water supplies and structures when the company is found liable for the impact. At the very least, we believe these orders will help to level the playing field during negotiations between property owners and mine operators. Many landowners do not want to leave their homes or accept a less than adequate monetary agreement to perform the repairs themselves. However, when the Department does not get involved until a year or more after subsidence damage has occurred, many landowners are exhausted, frustrated, and desperate to get back to their lives. Alternatively, we ask that the Citizen Advisory Council recommend that the Department require underground coal mine operators submit status updates for impacted properties every six months. The Department should use these routine status updates to proactively identify properties where the Department's intervention would help resolve subsidence damage claims promptly and adequately.

II. Effects of Mining on Streams

During this assessment period the Environmental Hearing Board ("Board") issued an adjudication in the consolidated appeal of Permit Revision Nos. 180 and 189 of CMAP No. 30841316. *Center for Coalfield Justice and Sierra Club v. DEP*, 2017 EHB 799. These permits allowed Consol Pennsylvania Coal Company to conduct longwall mining in the 1L-5L panels of the Bailey Mine ("Bailey Lower East Expansion"). Since the Board's adjudication was issued in August 2017, the Department's implementation of that decision is not fully reflected in the Act 54 report covering 2013-2018.

Section 86.37(a)(3) – No Presumptive Evidence of Potential Pollution

To receive a permit, an underground mine operator has the burden to demonstrate, inter alia, that there is "no presumptive evidence of potential pollution of the waters of the Commonwealth." 25 Pa. Code § 86.37(a)(3). Prior to the Board's decision in *Center for Coalfield Justice and Sierra Club v. DEP*, the Department believed that "temporary" subsidence-induced impacts to streams were acceptable so long as the operator submitted a post-mining mitigation plan.⁶ The Department read the surface

⁵ We are not suggesting that underground coal mining is solely responsible for these community impacts. However, it certainly plays a substantial role.

⁶ See e.g. 2014-072-B Tr. 506:18-21 (Department interprets "maintain the existing and

water protection regulations in an unprecedented narrow manner to only preclude the permanent elimination of a stream. As a practical matter, the difference between “temporary” and “permanent” impact was subjective at best. Streams to the west of the Bailey Lower East Expansion were undermined in 2004-2005 by the 1I – 4I panels of the Bailey Mine. In December 2012, the Department sent a letter stating that the undermined streams had not recovered from the effects of underground mining activities at the Bailey Mine and that the Department was unaware of any additional efforts Consol could be required to take to remediate the affected streams. The Department later said that its December 2012 letter was (still) not a final determination.

Regardless, such an interpretation ignores the plain language of the Department’s water quality and mining regulations and the objective of the Clean Streams Law, which is to protect stream uses from impairment.⁷ Unfortunately, the Department issued underground coal mining permits based on the belief that a mitigation plan authorized predicted subsidence-induced flow loss that necessitated disruptive post-mining stream remediation. A promise to perform repairs is not enough. *See e.g. Center for Coalfield Justice and Sierra Club v. DEP*, 2017 EHB 799, 845-846, 865; *UMCO*, 2006 EHB at 570 (“UMCO places great weight on the fact that its mitigation plan is adequate...If it is known in advance that things will go bad, the permit cannot be issued in the first place. The fact that the Department requires deep mining permit applicants to describe how they will repair streams if they are damaged does not mean that it is acceptable to damage streams. Stream mitigation plans are designed to address unanticipated damage, not to excuse or approve damage in advance.”).⁸

designated uses” as maintain the uses post-restoration; 519:13-520:3 (“it was anticipated that there would be impacts to the streams”); 588:14 – 589:13 (timing of subsidence-induced stream impacts does not matter and mitigation is most important); 1008:3-25; 1435:6 – 1436:12; 1437:19 – 1438:4; 1446:3- 14; 1550:6-20 (“effects can be predicted or expected; however, the necessary stream mitigation plans must be in place to ensure that the stream does return to its existing uses or previous, pre-mining uses”); 1636:2 – 1637:17.

⁷ *See* 35 P.S. §§ 691.1, 691.4, 691.401, 691.402, 691.601, 691.611; 52 P.S. § 1406.9a(d); *Center for Coalfield Justice and Sierra Club v. DEP*, 2017 EHB 799; *P.U.S.H. v. DEP*, 789 A.2d 319 (Pa. Cmwlth 2004); *UMCO v. DEP*, 2006 EHB 557-58; *Oley Township v. DEP*, 1996 EHB 1098; *Crum Creek Neighbors v. DEP*, 2009 EHB 566-567.

⁸ By way of analogy, the Department will not permit a mine when it is predicted in advance that such activities will cause acid mine discharges. “The mine does not become permissible because an operator promises in advance to treat the discharges[.]” *UMCO*, 2006 EHB at 570; *P.U.S.H. v. DEP*, 1999 EHB at 559 (applying 25 Pa. Code § 86.37(a)(3) to

The Board ruled that the Department must evaluate the “scope and duration” of the anticipated impacts to the streams, which includes any impact resulting from the proposed post-mining stream mitigation measures. *Center for Coalfield Justice and Sierra Club v. DEP*, 2017 EHB at 845-846, 865. “Pollution, as that term is used in 25 Pa. Code § 86.37(a)(3), is properly thought of as a question of impairment.” *Id.* at 844. In order to determine whether the proposed underground longwall mining will comply with Section 86.37(a)(3), the Department must examine whether the anticipated impacts will “result in impermissible impairment of the streams because of the impacts, either as a result of the scope of the impacts, the duration of the impacts or some combination of those two, rise to a level that the streams cannot meet their designated use.” *Id.* at 845-846. If during the permit review, the Department concludes that a coal operator’s mining activity will impair overlying streams, then the Department should deny the requested permit because the operator will have failed to demonstrate that there is “no presumptive evidence of potential pollution” as required by the regulation. *Id.* at 844-845.

Article I, Section 27

Article I, Section 27 of the Pennsylvania Constitution, otherwise known as the Environmental Rights Amendment, grants the people of the Commonwealth two distinct rights. *Pa. Env'tl. Def. Found. v. Commonwealth*, 161 A.3d 911, 931 (Pa. 2017) (“PEDF”). The first “inherent and indefeasible” right guarantees “clean air, pure water, and the preservation of the natural scenic, historic and esthetic values of the environment.” *Id.* The second grants common ownership to “all the people” of “Pennsylvania’s public natural resources.” *Id.* The final clause of the Environmental Rights Amendment creates a trust designating the Commonwealth and all of its subdivisions as the trustee, the natural resources of the Commonwealth composing the trust res, and all the people and future generations as the beneficiaries *Id.*

The Commonwealth’s duties as a trustee require the conservation and maintenance of the corpus of the trust—the public natural resources of the Commonwealth. *Id.* at 932 (quoting *Robinson Twp. v. Commonwealth*, 83 A.3d 901, 956–57 (Pa. 2013)). Importantly, the trust corpus includes the streams overlying underground coal mining operations. *Friends of Lackawanna v. DEP*, 2017 EHB 1123, 1162. “The plain meaning of the terms conserve and maintain implicates a duty to prevent and remedy the degradation, diminution, or depletion of our public natural resources.” *PEDF*, 161 A.3d at 932. The Commonwealth has a further duty to “act toward the corpus of the

analysis of deep mining discharges).

trust . . . with prudence, loyalty, and impartiality.” *Id.* Put more simply, the Commonwealth must act to conserve and maintain public natural resources in a prudent, loyal, and impartial manner. The Board has explicitly adopted the holding and reasoning in *PDEF*. See *Friends of Lackawanna*, 2017 EHB at 1160–61; *Center for Coalfield Justice and Sierra Club v. DEP*, 2017 EHB 799, 854–56.

Private trust principles, and not the public trust doctrine, govern the fiduciary duties imposed on the Commonwealth as trustee. *Center for Coalfield Justice and Sierra Club v. DEP*, 2017 EHB at 933 n. 26. “Under Pennsylvania trust law, the duty of prudence requires a trustee to exercise such care and skill as a man of ordinary prudence would exercise in dealing with his own property.” *Id.* at 932 (quoting *In re Mendenhall*, 398 A.2d 951, 953 (Pa. 1979)). But “if the trustee has greater skill than that of a man of ordinary prudence, he is under a duty to exercise such skill as he has.” *Mendenhall*, 398 A.2d at 953 n. 1 (quoting Restatement (Second) of Trusts § 174 (1959)).

The trust created by the Environmental Rights Amendment imposes on the Department the duty to act with prudence in its exercise of its expert discretion to maintain and conserve the corpus of the trust for the benefit of all people and future generations. The Department cannot discharge its fiduciary duties by ensuring bare compliance with environmental statutes and regulations. *Center for Coalfield Justice and Sierra Club v. DEP*, 2017 EHB at 860. And it certainly cannot meet its duty of prudence where its decisions are based on speculative and incomplete information.

A. Groundwater and Surface Water Connection

The maintenance of the groundwater and surface water connection has important implications not only for the stream hydrology, but also for the stream biology. It is critical for stream macroinvertebrates to have moist respiratory surfaces in order to breathe. Without such moisture they will experience a rapid death—within 24 hours. In a natural system they can take refuge in pools or in the hyporheic zone. If mining causes even these portions of a stream to dry up, however, there will be no place for them to survive.

In a natural stream system complete drying is very rare, even during low flow or “no flow” periods. Water can typically still be found in pools and in the sediments or the hyporheic zone. This is because in a natural system groundwater in the underground aquifer holds water throughout the year, gradually discharging water to the stream, and providing base flow. In mined streams, however, the situation is different. Fracturing and the creation of increased pore space causes the aquifer to become depleted more

quickly. Because of a disruption between the groundwater recharge system and the stream, the stream or stream segment can quickly become completely dry. The Act 54 Report notes numerous instances of dead fish observed in dry streams segments undermined by longwall mining during this assessment period. *See* Report at Table 9-11. There were three separate fish kills in Whitethorn Run in October 2016. On October 4, 2016, approximately 700 feet of Whitethorn run dried up and 90 dead fish were observed. *Id.* On October 14, 2016, approximately 2,650 feet of Whitethorn Run dried up and 100 dead fish were observed. *Id.* On October 17, 2016, approximately 3,450 feet of Whitethorn dried up and 200 dead fish were observed. *Id.* Then, on June 12, 2017, flow augmentation for Whitethorn Run was turned off and 300 dead fish were observed. *Id.*

The Act 54 Report reveals that the groundwater data is severely lacking: “The only consistent source of groundwater data for evaluation of subsidence effects are the hydrologic monitoring reports. Monitoring of these sites generally only occurs on a quarterly basis.” Report at 12-6. The Department cannot evaluate the scope and duration of stream impacts without an adequate understanding of how groundwater contributes to surface water flow pre-mining and how subsidence will impact the groundwater aquifers. *See Center for Coalfield Justice and Sierra Club v. DEP*, 2017 EHB at 845-846, 860. Furthermore, the Act 54 Report reveals that “[i]n some of the HMR data, piezometers that are destroyed [during undermining] do not seem to be replaced after destruction. This eliminates the possibility of any pre- vs. post-mining comparisons. This failure therefore eliminates one of the primary reasons for monitoring.” Report at 12-7.

Accordingly, we ask that the Citizens Advisory Council recommend that the Department require underground coal mine operators to sample HMR groundwater monitoring points for groundwater elevation at a frequency that is at least consistent with the pre-mining and post-mining sampling of surface water. The Department must also require the replacement of groundwater monitoring equipment that is damaged or destroyed during undermining.

B. Stream Flow Sampling

The Department’s pre-mining and post-mining surface flow monitoring requirements are also problematic. The flow monitoring data collected on a weekly or monthly basis will miss the quick recharge events and show a longer dry period than what actually occurred. Conversely it could be taken during a recharge event and miss a significant drying period. In short, the flow data currently collected is inadequate to understand the frequency and duration of low flow or dry periods, and consequently to make informed decisions about the environmental impacts of mining on overlying

streams. See *Center for Coalfield Justice and Sierra Club v. DEP*, 2017 EHB at 845-846, 865. Average or median data really does not tell you much about the behavior of a stream during the drier months of the year. Without any specific analysis of overlying streams to assess frequency or duration of low-flow or no flow periods, the Department does not know when or how long stream segments experience low or no flow pre-mining. As a result, the Department cannot determine how long of a dry period would be problematic post-mining. *Id.* The Department appears to make permitting decisions and stream recovery determinations based on the assumption that if there were some no flow periods in the pre-mining data, any length or frequency of dry periods is acceptable post-mining because it is within the range of flow seen in the background data. See Report at 13-3, 13-5. This is unacceptable.

The Department cannot make an informed decision regarding the environmental effects of its actions if it does not have an adequate understanding of what those effects are or will be. *Friends of Lackawanna v. DEP*, 2017 EHB 1159-60. Likewise the Department cannot be said to have acted with prudence when it acts on speculative or incomplete information. *Center for Coalfield Justice and Sierra Club v. DEP*, 2017 EHB at 860.

Accordingly, we ask the Citizens Advisory Council to recommend that the Department revise its pre-mining and post-mining flow monitoring requirements specified in the Stream Protection Technical Guidance Document. See Report at 12-9, 13-3, 13-5.

Conclusion

CCJ would be willing to meet with members of the Citizens Advisory Council and the Department in order to discuss what more can be done to ensure coalfield communities and public natural resources are properly protected. At a minimum, the Citizens Advisory Council should recommend the following:

- The Department issue enforceable orders for repair or replacement of water supplies and structures when the company is found liable for the impact. Alternatively, the Department should require underground coal mine operators to submit status updates for impacted properties every six months. The Department should use these routine status updates to proactively identify properties where the Department's intervention would help resolve subsidence damage claims promptly and adequately.
- The Department require underground coal mine operators to sample HMR groundwater monitoring points for groundwater elevation at a

frequency that is at least consistent with the pre-mining and post-mining sampling of surface water. The Department must also require the replacement of groundwater monitoring equipment that is damaged or destroyed during undermining.

- The Department revise its pre-mining and post-mining flow monitoring requirements specified in the Stream Protection Technical Guidance Document. The flow data currently collected is inadequate to make informed decisions about the environmental impacts of mining on overlying streams.

Thank you for your consideration. If you have any questions, please contact me anytime.

Respectfully,



Sarah E. Winner, Esq.

Senior Attorney

sarah@coalfieldjustice.org

Tom Schuster
Clean Energy Program Director
Sierra Club Pennsylvania Chapter

Melissa Marshall, Esq.
Community Advocate
Mountain Watershed Association