



CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

March 15, 2024

The Honorable Greg Vital, Chair
30 East Wing
P.O. Box 202166
Harrisburg, PA 17120-2166

The Honorable Martin T. Causer, Republican Chair
47 East Wing
P.O. Box 202067
Harrisburg, PA 17120-2067

RE: CBF Support for House Bill 1166 (PN 1231)

Dear Chairs Vitali and Causer and Members of the Pennsylvania House Environmental Resources & Energy Committee:

On behalf of the Chesapeake Bay Foundation (CBF) and its more than 200,000 members and e- subscribers, please accept these comments in support of House Bill 1166 (PN 1231).

CBF is a 501(c)(3) non-profit organization, founded in 1967. The organization's mission—carried out from offices in Maryland, Virginia, Pennsylvania, and the District of Columbia—is to restore and protect the ecological health of the Chesapeake Bay, the nation's largest and one of its most vital estuaries. As such, and on behalf of our members, we are interested in matters that will impact the health of the Chesapeake Bay, the waters that feed into it, and the health of those who live and work within the Bay watershed.

Established in 1986, CBF's Pennsylvania office strives to protect and restore the waters of the Commonwealth through collaboration with a broad range of stakeholders from elected officials to farmers through our policy, planning, grassroots outreach and advocacy, and education. Our nationally recognized, multiple award-winning Pennsylvania Watershed Resiliency program has helped thousands of farmers design, build, and maintain critical conservation practices since its creation in 1997.

CBF urges that the Pennsylvania House Environmental Resources & Energy (ERE) Committee approve House Bill 1166, which would restrict the use of coal tar-based pavement sealants in the Commonwealth.

A robust and growing amount of scientific research has found that these types of sealants can pose significant risks to the health of humans, pets, and wildlife.^{1,2,3,4}

Coal tar contains hundreds of chemical compounds, including a class of water repelling ones collectively called polycyclic aromatic hydrocarbons (PAHs). Coal-tar-based pavement sealcoat can contain 35,000 to 200,000 milligrams per kilogram (70 to 400 pounds per ton) of PAHs. This is about 100 times more PAHs than in used motor oil and about 1,000 times more PAHs than in an asphalt (oil)-based sealcoat products.⁵

According to a study in the American Chemical Society's *Environmental Science and Technology*, people living near pavement sealed with coal tar can be exposed to PAHs in soils and household dust at concentrations found to elevate the risk of lung, skin, bladder, respiratory, and urinary tract cancers.⁶ The United States Geological Survey (USGS) reported that people living near coal tar sealcoated locations have a 38 times higher risk of developing some form of cancer in their lifetime compared those who don't live adjacent to these locations. Children younger than six years old are particularly at risk, according to the USGS.⁷

Stormwater runoff from areas coated with coal-tar sealants can carry significant concentrations of PAHs, contaminating nearby receiving waterbodies.^{8,9,10,11} One study found runoff from areas with seal-coated pavement was acutely toxic to minnows and small

¹ Williams, S., & Wilber, W. (2017). Human health concerns associated with exposure to PAHs & Coal-Tar-Sealed Pavement. North American Lake Management Society. <https://www.nalms.org/wp-content/uploads/2017/08/37-1-5.pdf>

² Driscoll S, Kulacki K, Marzoughi S. A Review of the Literature on Potential Effects of Runoff from Refined Coal-Tar-Based Sealant Coating on Aquatic Organisms. *Integr Environ Assess Manag*. 2020 Jan;16(1):17-27. doi: 10.1002/ieam.4210. Epub 2019 Oct 31. PMID: 31469226.

³ Simonich, S. (2017, October 5). Coal-tar based sealcoats on driveways, parking lots far more toxic than suspected. Life at OSU. <https://today.oregonstate.edu/archives/2016/apr/coal-tar-based-sealcoats-driveways-parking-lots-far-more-toxic-suspected>

⁴ Long AS, Watson M, Arlt VM, White PA. Oral exposure to commercially available coal tar-based pavement sealcoat induces murine genetic damage and mutations. *Environ Mol Mutagen*. 2016 Aug;57(7):535-45. doi: 10.1002/em.22032. Epub 2016 Jul 30. PMID: 27473530; PMCID: PMC4979669.

⁵ "Coal-Tar-Based Pavement Sealcoat, PAHs, and Environmental Health" United States Geological Survey Water Resources Mission Area. 1 March 2019. <https://www.usgs.gov/mission-areas/water-resources/science/coal-tar-based-pavement-sealcoat-pahs-and-environmental>

⁶ Williams, S.E., Barbara J. Mahler, and Peter C. Van Metre. Cancer Risk from Incidental Ingestion Exposures to PAHs Associated with Coal-Tar-Sealed Pavement. *Environmental Science & Technology* 2013 47 (2), 1101-1109 DOI: 10.1021/es303371t

⁷ "Coal-Tar-Based Pavement Sealcoat—Potential Concerns for Human Health and Aquatic Life" United States Geological Survey. Fact Sheet 2016 –3017. March 2016. <https://pubs.usgs.gov/fs/2016/3017/fs20163017.pdf>

⁸ Mahler, B, Peter C. Van Metre, Judy L. Crane, Alison W. Watts, Mateo Scoggins, and E. Spencer Williams. Coal-Tar-Based Pavement Sealcoat and PAHs: Implications for the Environment, Human Health, and Stormwater Management. *Environmental Science & Technology* 2012 46 (6), 3039-3045 DOI: 10.1021/es203699x

⁹ Watts, A., Thomas P. Ballesterro, Robert M. Roseen, and James P. Houle. Polycyclic Aromatic Hydrocarbons in Stormwater Runoff from Sealcoated Pavements. *Environmental Science & Technology* 2010 44 (23), 8849-8854 DOI: 10.1021/es102059

¹⁰ Witter, A. E., Nguyen, M. H., Baidar, S., & Sak, P. B. (2014). Coal-tar-based sealcoated pavement: A major PAH source to urban stream sediments. *Environmental Pollution*, 185, 59–68. <https://doi.org/10.1016/j.envpol.2013.10.015>

¹¹ Van Metre, P. C., & Mahler, B. J. (2010). Contribution of PAHs from coal-tar pavement sealcoat and other sources to 40 U.S. lakes. *Science of The Total Environment*, 409(2), 334–344. <https://doi.org/10.1016/j.scitotenv.2010.08.014>

water bugs.¹² Another study found that runoff collected 36 days after coal tar-base sealant application, fish liver cells showed DNA damage and impaired ability to repair damaged DNA.¹³ The U.S. Geological Survey reports that runoff collected from coal-tar sealed pavement 111 days after application resulted in 100 percent mortality to juvenile fathead minnows and water fleas when also exposed to simulated sunlight.¹⁴ And a study in Washington State found that seven months post-application, runoff from coal tar sealed areas killed 55 percent of juvenile salmon within 96 hours.¹⁵

PAHs even contaminate the air. Newly coal tar-sealed pavement rapidly volatilizes into the air, raising the risk of human, pet, and wildlife exposure. The USGS reports that three to eight years post-application, PAH releases to ground level atmosphere from sealed parking lots was an average of 60 times higher than unsealed pavement.¹⁶

The toxicological concerns of coal tar-based sealants are so great that a that communities across the United States have banned or restricted their use. Twelve states and Washington D.C. have enacted bans, and seventeen others have restrictions on its use. Most recently, on March 11th the Virginia General Assembly passed legislation banning coal-tar sealant ban to their Governor. It's time for Pennsylvania to join them.

House Bill 1166 will help protect the health, wellbeing, and quality of life for all Pennsylvanians. We urge you to pass this legislation.

Sincerely,



HL Campbell III
PA Science Policy & Advocacy Director

¹² Mahler, B., Woodside, M. D., & Van Metre, P. C. (2016). Coal-tar-based pavement sealcoat—potential concerns for human health and Aquatic Life. Fact Sheet. <https://doi.org/10.3133/fs20163017>

¹³ Van Metre, P. C. (2015, December). Implications of Use of Coal-Tar-Based Pavement Sealcoat on Urban Water Quality. In AGU Fall Meeting Abstracts (Vol. 2015, pp. GC51G-1172).

¹⁴ United States Geological Survey (n 5)

¹⁵ McIntyre, J. (2017). Toxicity of coal-tar pavement sealant to aquatic animals. North American Lake Management Society. <https://www.nalms.org/wp-content/uploads/2017/08/37-1-6.pdf>

¹⁶ United States Geological Survey (n 7)