

From: [Bohl, James](#)
To: [Kuether, Molly](#)
Cc: [Reiss, Tess](#)
Subject: FW: Requested Amendment to High-PAH Sealant Ordinance
Date: Monday, February 06, 2017 1:20:58 PM
Attachments: [Support and Requested Change for Milwaukee PAH ordinance 2-6-17.pdf](#)
[Clean Wisconsin Tar-Based Sealant Factsheet.pdf](#)

Please add the following email and attachments to the file for PW Committee on the topic of a Coal Tar ban. Thanks, jb

From: Amber Meyer Smith [mailto:asmith@cleanwisconsin.org]
Sent: Monday, February 06, 2017 1:01 PM
To: Bohl, James; Hamilton, Ashanti; Johnson, Cavalier; Kovac, Nik; Bauman, Robert; Coggs, Milele; Rainey, Khalif; Donovan, Robert; Lewis, Chantia; Murphy, Michael (Alderman); Borkowski, Mark; Perez, Jose; Witkowski, Terry; Zielinski, Tony; Stamper II, Russell
Cc: Cheryl_nenn@milwaukeekeeper.org; reid@swwtwater.org
Subject: Requested Amendment to High-PAH Sealant Ordinance

Attached is a memo from Clean Wisconsin, Milwaukee Riverkeeper and Sweet Water regarding our support for Alderman Bohl's coal-tar sealant ordinance, to be considered at Tuesday's Common Council meeting. We are also requesting a small change to the language to address other sealants that are high in PAHs, toxic substances in some sealants that threatens public health and aquatic life.

I've also attached a fact sheet about the danger PAHs in these sealants pose, and would be happy to answer any questions. Thank you for your consideration of this ordinance and the requested change.

Amber Meyer Smith

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February 6, 2017

To: City of Milwaukee Common Council

From: Clean Wisconsin
Sweet Water – Southeastern Wisconsin Watersheds Trust, Inc.
Milwaukee Riverkeeper

Subject: Requested Amendment to High-PAH Sealant Ordinance

We commend the City of Milwaukee for taking on the important issue of toxic pollution from PAHs in pavement sealants. The risks to human health and aquatic life from PAHs contained in these sealants is real and significant. The proposed ordinance sponsored by Alderman Bohl is a great step forward for protecting our waterways and the health of our children from this toxic substance that has been shown to cause cancer.

Coal tar sealants are the primary cause of PAH pollution in urban areas, and a recent study found that 77% of PAH pollution in Milwaukee streambeds came from these substances. Moreover, since there are cheap, effective, and widely available alternatives with minimal PAH levels, restrictions on coal tar products have proven effective in other communities to reduce PAH levels in waterways.

Unfortunately, some products have now begun to appear that have nearly as high PAH levels as coal tar sealants but are designed specifically to get around coal tar sealant ordinances by using different industrial byproducts (e.g. "heavy pyrolysis oil;" see the following page for some example levels of PAHs in these and other sources of pollution). **More recent ordinances in other communities have addressed this issue by including "or other high PAH content pavement sealant product" in their definition, and we ask that you consider that change in order to most effectively reduce the cancer risk and impacts to aquatic life posed by PAHs.**

For instance, Van Buren, MI has further defined high PAH sealant products as those with a concentration above 1%. As you can see from the concentrations highlighted in red below, there are current products being used that fit that range, and their high PAH concentrations still present a significant risk. These sealants have been marketed as an environmentally "beneficial," "eco-friendly," and "acceptable for use in refined tar restricted areas" alternative, but they still contain dangerously high levels of PAHs.

We have spoken with the lead sponsor of the proposed ordinance and understand that he may introduce an amendment to address this burgeoning issue following the examples of the most-recently passed ordinances elsewhere in the nation. We strongly encourage you to support this ordinance, as well as any possible amendment that would further reduce human and environmental health risks associated with toxic pavement sealants.

Thank you for your consideration, and your action to protect human and environmental health.

Contact: Amber Meyer Smith, Clean Wisconsin Government Relations Director, 608.251.7020 ext. 16

EXAMPLE CONCENTRATIONS IN COMMON SOURCES OF TOXIC PAH POLLUTION

	<u>PRODUCT/ POLLUTANT</u>	<u>PAH CONC. (PPM)(DRY WT.)</u>	<u>% PAH</u>
	Fresh asphalt	1.5	< 0.001%
	Weathered asphalt	3	< 0.001%
	Fresh motor oil	4	< 0.001%
	Brake particles	16	0.002%
	Road dust	24	0.002%
	Tire particles	86	0.009%
	Wood fire smoke (<i>up to</i>)	114	0.01%
	Gasoline engine exhaust	370	0.04%
	Used motor oil	440	0.04%
Asphalt and Alternative Low-PAH Sealants	<i>Bio-Seal/Aexcel Corp</i>	<i>None detected</i>	-
	<i>Eco-Seal/ Rochester, NY</i>	<i>None detected</i>	-
	<i>Carbonplex /EcoStar Science</i>	<i>None detected</i>	-
	<i>Crack Stopper/Gardner Gibson</i>	12	0.001%
	<i>CMS-1P/QB/Western Colloid</i>	59	0.006%
	<i>SafeSeal Michigan</i>	40	0.004%
	<i>Henry Seal 532, Henry Co.</i>	50	0.005%
	<u>Typical Asphalt-Based Sealant</u>	50	0.005%
	<i>GSB 88 Gilsonite/ ASI</i>	215	0.02%
	<i>Paveshield/ NEYRA Industries</i>	694	0.07%
High-PAH Sealants	<i>Jennite AE/NEYRA Industries</i>	1,168	0.17%
	<i>Master Seal/Sealmaster</i>	2,867	0.29%
	<i>Liquid Road/Sealmaster</i>	16,272	1.6%
	<i>Black Diamond/ GemSeal</i>	19,064	1.9%
	<u>Coal Tar Sealant Range</u>	50,000 - 200,000	5-20%



DANGEROUS DRIVEWAYS TOXIC PAH POLLUTION FROM TAR-BASED SEALANTS



Tar-based pavement sealants are the primary source of toxic PAH pollution in urban landscapes. Those PAHs are harmful to human health and hurt fish and other aquatic life in our lakes and rivers.

What are pavement sealants?

Pavement sealants, also known as “sealcoats” or “sealers,” are the jet-black coatings homeowners and contractors apply to residential, commercial, and industrial driveways and parking lots. There are two main types of pavement sealants on the market today: tar-based sealants (also called “coal tar-based”), and asphalt-based sealants.

The problem with tar-based pavement sealants

Pavement sealants contain **polycyclic aromatic hydrocarbons** (PAHs), which are toxic compounds that can **cause cancer and developmental problems in children**. The American Medical Association and other public health groups have urged local and state governments to ban tar-based sealants due to their harmful health effects.

How are people exposed to PAHs from tar-based sealants?

PAHs accumulate in soils, household dust, and carpets when particles of tar-based sealants are blown or tracked into homes, schools, and other buildings. The particles come from those sealants being worn down over time by weather, tire abrasion, and foot traffic. The toxic sealant particles are also washed off by rain and spring meltwater, ending up in our local water bodies.

A recent study found that 77% of PAH pollution in Milwaukee streambeds came from tar-based sealants.

How significant is the health risk?

The coal tar pitch used in tar-based sealants is classified as a **hazardous waste**. Children living in homes where parking lots are coated with tar-based pavement sealants face a **14-fold increase in cancer risk** compared to those living next to unsealed lots, according to researchers at Baylor University and the U.S. Geological Survey. ***A lifetime of exposure can lead to cancer rates 38 times higher than normal.***

CHILDREN LIVING FROM BIRTH TO AGE 6 NEAR PARKING LOTS WITH TAR-BASED SEALANTS HAVE A **14x HIGHER LIFETIME CANCER RISK**

Current Tar-Based Sealant Bans:

Andover, Massachusetts (use restriction)
Ann Arbor, Michigan
Annapolis/Anne Arundel County, Maryland
Austin, Texas
Bee Cave, Texas
Boone, North Carolina (use restriction)
Cwlth. of Massachusetts (use restriction)
Dane County, Wisconsin
Dexter, Michigan
Edwards Aquifer Authority, Texas
Greenville, South Carolina
Hamburg Township, Michigan
Montgomery County, Maryland
North Barrington, Illinois
Prince George’s County, Maryland
San Antonio, Texas
San Marcos, Texas
Scio Township, Michigan
South Barrington, Illinois
Spring Lake Township, Michigan
State of Minnesota
State of Washington
Sudbury, Massachusetts (use restriction)
Suffolk County, New York
Van Buren Township, Michigan
Washington, D.C.
Westwood, Massachusetts
Winfield, Kansas
Winnetka, Illinois
Ypsilanti, Michigan



“Whether sending their children to a playground or repairing a driveway, Americans are potentially being exposed to harmful carcinogens in coal-tar-based sealcoats.”
– American Medical Assoc.

How to be PAH-safe:

Don't use tar-based pavement sealants

If you feel you must seal your driveway or parking lot, then use asphalt-based sealants, which have 1,000-times lower PAH levels.

Remove your shoes

If you don't have control over your parking lot or driveway, try to keep sealant dust and soil out of your house by taking off shoes before entering your home or apartment.

Look for hidden PAHs

Tar can have a lot of different names, and some other byproducts can have very high levels of PAHs. To be safe, check the “Material Safety Data Sheet” of the product (try searching online) and avoid anything including CAS #'s **64742-90-1, 65996-92-1, 65996-93-2, 65996-89-6, 69013-21-4, or 8007-45-2.**

Speak up

Become an advocate in your community against the use of tar-based pavement sealants. More at cleanwisconsin.org/our-work/pah.

Environmental impacts

PAHs **kill small organisms** living on the bottoms of rivers and streams and can **cause tumors in fish and other large aquatic animals**. This could result in costly impacts on the ecological balance of aquatic environments. Even three months or more after sealants are applied, the tar-sealed pavement runoff can kill fathead minnows and water fleas, two indicator species used to assess chemical toxicity to aquatic life.

Economic Impacts

PAH pollution from tar-based sealants can be a significant burden to taxpayers when municipalities are on the hook for cleaning up stormwater sediment ponds contaminated with PAH-laden sediment. In the Minneapolis metro area, the PAH cleanup from tar-based sealants is estimated to cost taxpayers hundreds of millions of dollars.

Are there alternatives?

Yes. Asphalt-based pavement sealants have up to 1,000-times lower PAH levels and are no more expensive than tar-based sealants. Alternatives such as acrylic sealants or gravel parking lots and driveways have minimal PAH levels. Studies of an early PAH ban in Austin, Texas, show significant PAH reductions in local waterbodies.

How do tar-based sealants compare to other PAH sources?

Other sources of environmental PAH pollution have significantly lower concentrations than tar-based sealants. Fresh asphalt, for example is about 1.5 parts per million (ppm) PAHs. Smoke from wood fires can range from 2 to 114 ppm, engine exhaust 102-370 ppm, and used motor oil around 440 ppm. **Tar-based sealants are hundreds to thousands of times worse**, at 70,000 – 100,000 ppm.

WISCONSIN NEEDS TO FOLLOW THE LEAD OF OTHERS AND END THE SALE AND USE OF TAR-BASED OR OTHER HIGH-PAH SEALANTS TO PROTECT OUR HEALTH AND ENVIRONMENT.

Visit cleanwisconsin.org/our-work/pah for more information.

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