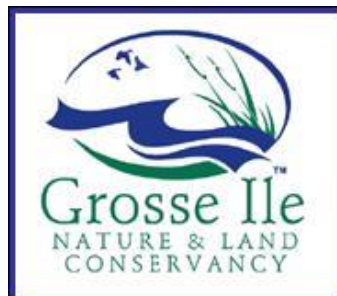


# Grosse Ile Township Coal-Tar Sealant Ban Information

## Contents

- Letter from Grosse Ile Township to Asphalt Sealing Businesses, March 2018
- Grosse Ile Township Ordinance 17-001 Chapter 99 passed on October 23, 2017
- Grosse Ile Nature & Land Conservancy information postcard mailed to all residents and businesses April 2018
- US Geological Survey Research: PAHs and Coal-Tar-Based Pavement Sealcoat  
<https://tx.usgs.gov/sealcoat.html>
- US Environmental Protection Agency: Coal-Tar Sealcoat, Polycyclic Aromatic Hydrocarbons, and Stormwater Pollution  
<https://www3.epa.gov/npdes/pubs/coaltar.pdf>





# Township of Grosse Ile

9601 GROH ROAD  
P.O. BOX 300  
GROSSE ILE, MICHIGAN 48138

GENERAL OFFICES (734) 676-4422  
FAX (734) 676-7433  
WEB SITE: [www.grosseile.com](http://www.grosseile.com)

To: The Asphalt and Sealcoating Business  
From: Tony Gray, Ordinance & Code Enforcement Officer  
Subject: Zoning Ordinance 17-001, Chapter 99 (Coal Tar Ordinance)  
Date: March 9, 2018

This letter is to inform you that on Monday, October 23, 2017, the Grosse Ile Township Board of Trustees passed Ordinance 17-001, Chapter 99 (Use of Coal Tar Based Sealer). This Ordinance prohibits the use and sale of coal tar and other high PAH content sealant products within the Township of Grosse Ile.

The purpose of this Ordinance is to protect, restore, and preserve the quality of its waters and protect the health of its residents. The use of sealers on asphalt driveways is a common practice. However, scientific studies on the use of driveway sealers have demonstrated a relationship between the use of coal tar-based sealers and certain health and environmental concerns, including increased cancer risk to humans and impaired water quality in streams.

Please find attached a copy of Ordinance 17-001, Chapter #99. Please review the following sections: section 99-3 Prohibitions on use of coal tar containing products; Section 99-4, Asphalt-based sealcoat products, Section 99-5, Penalties and Section 99-8, Effective date.

You are welcome to work in Grosse Ile using non-coal tar based sealcoat. There are many alternatives. Should you have any questions please contact me at (734) 676-4422, extension 240, Monday – Friday.

TOWNSHIP OF GROSSE ILE

Tony Gray, Ordinance & Enforcement Officer  
Department of Community Development

Attachment: Chapter 99

Ordinance No. 17-001  
An Ordinance to Amend the Code of Ordinances of  
The Township of Grosse Ile by Adding  
Chapter 99 – Use of Coal Tar Based Sealer Products

**PAVEMENT SEALANT- COAL TAR PRODUCTS**

**Sec. 99-1- Purpose.**

The Township Grosse Ile understands that lakes, rivers, streams and other bodies of water are natural assets which enhance the environmental, recreational, cultural and economic resources and contribute to the general health and welfare of the community. The use of sealers on asphalt driveways is a common practice. However, scientific studies on the use of driveway sealers have suggested a relationship between stormwater runoff and certain health and environmental concerns. The purpose of this article is to prohibit the use and sale of sealant products containing greater than 0.1% polycyclic aromatic hydrocarbons (PAHs) by weight, including coal tar containing sealer in the township, in order to protect, restore and preserve the quality of its waters, preserve wildlife and protect the health of its residents.

**Sec. 99-2 - Definitions.**

Except as may otherwise be provided or clearly implied by context, all terms shall be given their commonly accepted definitions. For the purpose of this article, the following definitions shall apply unless the context clearly indicates or requires a different meaning:

*Asphalt based sealer.* A petroleum based sealer material that is commonly used on driveways, parking lots, and other surfaces and may contain PAHs but at a much lower concentration than found in coal tar based sealers.

*Coal tar.* A byproduct of the process used to refine coal.

*Coal tar sealant product.* A surface applied sealing product for application on asphalt, concrete or other pavement including a driveway, path or parking area containing coal tar, coal tar pitch, coal tar pitch volatiles, heavy pyrolyzed oil, refined coal tar (RT-12), or any variation assigned the Chemical Abstracts Service (CAS) numbers 65996-93-2, 65996-89-6, 65996-92-1, 8007-45-2, 64742-90-1, or 69013-21-4.

*High PAH content sealant product.* Any pavement sealant product that contains greater than 0.1% PAHs by weight.

*PAHs.* Polycyclic Aromatic Hydrocarbons. A group of organic chemicals formed during the incomplete burning of coal, oil, gas, or other organic substances. Present in coal tar and believed harmful to humans, fish, and other aquatic life.

*Person.* An individual, corporation, partnership, sole proprietorship, LLC or other entity.

*Township.* The Township of Grosse Ile.

Sec. 99-3 - Prohibitions on use of coal tar containing products.

- (a) No person shall use or apply a coal tar, coal tar sealant product or other high PAH content sealant product on asphalt paved surfaces within the township.
- (b) No person shall allow a coal tar, coal tar sealant product or other high PAH content sealant product to be used or applied upon property that is under that person's ownership or control.
- (c) No person shall contract with any commercial sealer product applicator, residential or commercial developer, or any other person for the application of any coal tar, coal tar sealant product or other high PAH content sealant product to any driveway, parking lot, or other surface within the township.
- (d) No commercial sealer product applicator, residential or commercial developer, or other similar individual or organization shall direct any employee, independent contractor, volunteer, or other person to apply any coal tar, coal tar sealant product or other high PAH content sealant product to any driveway, parking lot, or other surface with the township.

Sec. 99-4 - Asphalt based sealcoat products.

The provisions of this article shall only apply to coal tar, coal tar sealant products or other high PAH content sealant products in the township and shall not affect the use of asphalt based sealer products within the township, as long as those products contain less than 0.1% PAHs, by weight.

Sec. 99-5 - Penalties and enforcement.

- (a) *Penalty.* Violation of this article is a municipal civil infraction, punishable as provided in Chapter 1, Article II of the Grosse Ile Township Code.
- (b) *Injunction.* Any violation of this article is hereby declared to be a nuisance per se. In addition to, or in lieu of, seeking to enforce this article by proceeding under section XXX-XXX(x) above, the township may institute an action in a court of general jurisdiction seeking injunctive or equitable relief and shall be entitled to recover all attorney fees, court costs, litigation expenses, costs and expenses to abate the nuisance, and all other costs allowed by law.
- (c) *Enforcement and administration.* This article shall be enforced and administered by the township director of planning and economic development or such other township official as may be designated from time to time by resolution by the township board.

Sec. 99-6 - Severability.

In the event that any one or more sections, provisions, phrases or words of this article shall be found to be invalid by a court of competent jurisdiction, such holding shall not affect the validity or the enforceability of the remaining sections, provisions, phrases or words of this article.

Sec. 99-7 - Conflicts.

If any provision of this article conflicts with any provision of any other township general ordinance or zoning ordinance, the most restrictive provision shall apply.

Sec. 99-8 - Effective date.

The provisions of this article shall take effect 30 days following publication in a newspaper of general circulation within the township.

*Adopted: October 23, 2017*

*Publication Date: November 15, 2017, News Herald Newspaper*

*Effective Date following publication: December 15, 2017*

---

Ute O'Connor, Township Clerk

*Township Seal*

## CAN YOUR *DRIVEWAY* MAKE YOU *SICK*?

What you and your neighbors should know:  
On Oct. 23, 2017 Grosse Ile Township  
passed Ordinance 17-001 Chapter 99  
banning the use of COAL-TAR Sealants  
on driveways and parking lots.



This ordinance was passed with the help of GINLC **to protect human health and the natural environment**, including the Detroit River.

For more info, visit <https://www3.epa.gov/npdes/pubs/coaltar.pdf> ,  
<https://tx.usgs.gov/sealcoat.html> , <https://coaltarfreeusa.com/> and  
your friendly local environmental organization, [ginlc.org](http://ginlc.org)

NON PROFIT  
ORGANIZATION  
U.S. POSTAGE PAID  
GROSSE ILE, MI  
PERMIT NO. 99

\*\*\*ECRWSSDDM\*\*\*  
LOCAL POSTAL  
CUSTOMER



MPCA PHOTOS, CC BY 2.0



**What is that smell?** When you walk by a driveway or parking lot that has been recently sealed with a coal-tar based product, your nose knows. Coal-tar sealcoat is a smelly, black, viscous liquid applied to asphalt surfaces to improve their appearance and provide protection, for a while, from deterioration due to sunlight, weather and wear.



**Why are coal-tar sealants banned?** Studies by universities and government agencies identify coal-tar-based pavement sealcoat as a major source of **polycyclic aromatic hydrocarbons** (PAHs). These PAHs enter the air and water and come in contact with our children and pets. We track the dust into our homes. Ingestion of PAH-contaminated dust and soil results in an elevated potential cancer risk. Research reveals that growing up with toxic dust from coal tar-sealed surfaces could cause a 38-fold increase in a child's lifetime cancer risk. Dust particles also wash into drains and end up in our canal, streams and the Detroit River, where they are toxic to fish and other aquatic wildlife.

**What are the alternatives?** Not all asphalt sealants use coal-tar. There are alternatives. Latex-based or asphalt-based sealants are sold at local hardware stores for Do-It-Yourselfers or small local contractors. Commercial applicators of asphalt (non-coal-tar) sealants include:  
S & J Asphalt Co., 39571 Michigan Ave., Canton, MI 48188, 734-721-4442, <http://www.sjasphalt.com/>  
We are continuing to look for alternative suppliers.

**Where else are coal-tar sealants banned?** Grosse Ile Township already prohibits the use of coal-tar sealants on the bike paths. Michigan bans include Van Buren Township, Ann Arbor, and Wolverine Lake, among others. The states of Connecticut, Minnesota and Washington have banned coal-tar and a bill has been proposed in Lansing. The list is growing.



The Grosse Ile Nature & Land Conservancy led the effort to ban coal-tar sealants on Grosse Ile with the Township Board.



Freshwater Future provided a generous grant to GINLC to bring this information to all Grosse Ile residents and businesses.

Other organizations supporting this ban include the Rotary Club of Grosse Ile, the Bicycle & Pedestrian Advisory Commission of Grosse Ile and the Friends of the Detroit River.



## Texas Water Science Center

Home Information/Data GIS Projects Publications DroughtWatch FloodWatch FAQ Contact Internal

Sealcoat: [Home](#) [What is Sealcoat?](#) [Publications/Presentations](#) [Photo Gallery](#)



Coal-tar-based sealcoat being applied to a test plot.

### Quick Questions

What is pavement sealcoat?  
What are PAHs?  
What are coal tar and coal tar pitch?

### PAH and Sealcoat Contacts

**Barbara Mahler**  
USGS Research Hydrologist  
(512) 927-3556  
**Peter Van Metre**  
USGS Research Hydrologist  
(512) 927-3506

Mailing Address:  
U.S. Geological Survey  
1505 Ferguson Lane  
Austin, TX 78754

### ABOUT THE TEXAS WSC



- Office Locations
- Frequently Asked Questions
- Contacts for Management and Specialists
- Seminars
- Information Requests
  - Policies
  - Charges
  - Information Quality Requests
- Employment
- Education

### USGS IN YOUR STATE

USGS Water Science Centers are located in each state.



## USGS Research: PAHs and Coal-Tar-Based Pavement Sealcoat

### New Articles



Coal-tar-based Pavement Sealants – A Potent Source of PAHs

[Lakeline](#)



Trends and Sources of PAHs to Urban Lakes & Streams

[Lakeline](#)

### New Presentation

[PAHs and coal tar—old contaminants with emerging concerns](#): presented by Barbara Mahler to Emerging Contaminants in Aquatic Environment Conference, June 1, 2017.

Coal-tar-based pavement sealant is a potent source of polycyclic aromatic hydrocarbons (PAHs), as [documented by the USGS](#) and other researchers.

Coal-tar-based sealcoat products typically are 20 to 35% coal tar or coal-tar pitch—these materials are [known human carcinogens](#) that contain high concentrations of PAHs and related chemicals. Coal-tar-based pavement sealcoat typically contains 35,000 to 200,000 mg/kg (parts per million, or ppm) PAHs, about 100 times more PAHs than in used motor oil and about 1,000 times more PAHs than in sealcoat products with an asphalt base.

Coal-tar sealcoat is abraded to a fine dust by car tires and snow plows, requiring reapplication every 2–5 years. The mobile high-PAH dust is blown, washed, or tracked into nearby [soil](#), [stormwater ponds](#), [streams](#), [lakes](#), and [house dust](#). Many of the lighter-weight chemicals in coal-tar sealcoat volatilize (evaporate) into the air, primarily during the 2 weeks following application, but continuing for years after application.

### Learn more about PAHs and coal-tar-based sealcoat

- [Coal-tar-based pavement sealcoat—Potential concerns for human health and aquatic life](#) (USGS factsheet, 2016)
- [Coal-Tar-Based Pavement Sealcoat, Polycyclic Aromatic Hydrocarbons \(PAHs\), and Environmental Health](#) (USGS factsheet, 2011) and
- [Coal-Tar-Based Pavement Sealcoat and PAHs: Implications for the Environment, Human Health, and Stormwater Management](#) (Environmental Science & Technology feature article, 2012).
- [Additional peer-reviewed journals, USGS publications, and presentations](#)

### Related USGS Research

- [NAWQA: Contaminant Trends in Lake Sediments](#) - A national assessment of trends in metals and hydrophobic organic contaminants in streams and rivers of the United States using lake and reservoir sediment cores.

### Key Findings

#### Human health

- Residences adjacent to parking lots with coal-tar-based sealcoat have concentrations of PAHs in house dust 25 times higher than residences adjacent to unsealed pavement or asphalt-sealed pavement. [\[References\]](#)
- Doses of carcinogenic PAHs through non-dietary ingestion of house dust in residences with coal-tar sealant on the parking lot are 14 times greater than in residences with unsealed pavement, and are more than twice the dose from dietary ingestion, reversing a long-held assumption that dietary PAH exposure exceeds non-dietary exposure. [\[References\]](#)
- Living adjacent to coal-tar-sealed pavement (a parking lot or driveway, for example) is estimated to increase excess lifetime cancer risk 38 times, and much of the increased risk occurs during early childhood. [\[References\]](#)

#### Environmental health

- Runoff from freshly applied coal-tar sealcoat is acutely toxic to two test organisms (fathead minnows (*Pimephales promelas*) and a water flea (*Ceriodaphnia dubia*)). [\[References\]](#)
- Toxic effects to test organisms continue for samples collected as long as 111 (3+ months) days following application if organisms also are exposed to ultra-violet light mimicking sunlight. [\[References\]](#)
- Runoff from coal-tar-sealed pavement, diluted 1:100, causes DNA damage when cells also are exposed to ultra-violet radiation that mimics sunlight. [\[References\]](#)
- Runoff from coal-tar-sealed pavement, diluted 1:10, impairs the ability of cells to repair DNA damage. [\[References\]](#)

#### Air

- Emissions of PAHs to air 2 hours after application of coal-tar sealant are 30,000 times greater than from unsealed pavement. [\[References\]](#)
- Emissions of PAHs to air from parking lots with older (3-8 years) coal-tar sealant are 60 times greater than from unsealed pavement. [\[References\]](#)
- Total annual PAH emissions from newly applied sealcoat are estimated to be larger than those from vehicles in the U.S. [\[References\]](#)

#### Streams and Lakes

- PAH concentrations in Lady Bird Lake sediment decline following a ban on coal-tar-based pavement sealants in Austin, Texas. [\[References\]](#)
- Coal-tar pitch from sealcoat reaches streams and lakes in runoff and soils and unsealed pavement near sealed parking lots. [\[References\]](#)
- Coal-tar-based sealcoat was determined to be the largest source of PAH contamination to urban lakes sampled by the USGS. [\[References\]](#)
- Use of coal-tar-based sealcoat is the primary cause of upward trends in PAHs in urban lake sediment. [\[References\]](#)

#### Stormwater runoff

- Concentrations of polycyclic aromatic hydrocarbons (PAHs) in runoff from pavement with coal-tar-based sealcoat remain elevated for months to years following sealcoat application. [\[References\]](#)
- Particles in runoff from coal-tar-sealed pavement contained PAHs at concentrations that are 65 times higher than particles in runoff from unsealed asphalt pavement. [\[References\]](#)
- Runoff from freshly applied coal-tar sealcoat contained elevated concentrations of acridine and carbazole in addition to PAHs. [\[References\]](#)

#### What's on coal-tar-sealed pavement?

- Scrappings of dried coal-tar sealant contain 9,400-93,300 mg/kg PAHs. [\[References\]](#)
- Dust from pavement with coal-tar-based sealcoat has PAH concentrations hundreds to thousands of times higher than dust from pavement with no sealcoat or with asphalt-based sealcoat. [\[References\]](#)

Some USGS publications on PAHs and coal-tar-based pavement sealant have been subject to Information Quality Act correction requests. USGS Information Quality Guidelines, the correction requests, and USGS responses can be found at: <http://tx.usgs.gov/infodata/infosealcoat.html>

USGS Home Water Climate Change Core Science Ecosystems Energy and Minerals Env. Health Hazards

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

URL: <http://tx.usgs.gov/sealcoat.html>

Page Contact Information: [gs-w-txpublicinfo@usgs.gov](mailto:gs-w-txpublicinfo@usgs.gov)

Page Last Modified: Monday, 06 Nov 2017 02:43:44 PST



# Coal-Tar Sealcoat, Polycyclic Aromatic Hydrocarbons, and Stormwater Pollution

### Minimum Measure

Pollution Prevention/Good Housekeeping

## What Is Coal-Tar Sealcoat?

Coal-tar sealcoat is a type of sealant used to maintain and protect driveway and parking lot asphalt pavement. Coal-tar sealcoat typically contains 20 to 35% coal tar pitch, a byproduct of the steel manufacturing industry, which is 50% or more polycyclic aromatic hydrocarbons (PAHs) by weight.

## Could Coal-Tar Sealcoat Be a Concern for Stormwater?

Studies found that PAHs are significantly elevated in stormwater flowing from parking lots and other areas where coal-tar sealcoats were used as compared to stormwater flowing from areas not treated with the sealant. For example, one study found the amount of PAHs in stormwater runoff was 65 times higher from parking lots sealed with coal-tar sealant vs. stormwater from unsealed parking lots. Another study found that coal-tar sealcoat is the largest source of PAHs to 40 urban lakes (Van Metre and Mahler, 2010). PAHs from coal-tar sealcoat may accumulate in the sediment of stormwater ponds,

requiring expensive disposal of the dredged PAH-contaminated sediment.

PAHs are of concern because of their harmful impacts on humans and the environment. They are persistent organic compounds, and several PAHs are known or probable human carcinogens and toxic to aquatic life.



## What Are States and Municipalities Doing to Address PAHs from Coal-Tar Sealcoat?

Several states and cities have taken action to address PAHs from coal-tar sealcoat. The following are some notable examples:

- The city of Austin, Texas banned the sale and use of coal-tar containing pavement sealants in 2005: <http://austintexas.gov/departments/coal-tar>
- The District of Columbia banned the sale and use of coal-tar sealcoat in 2009: <http://green.dc.gov/coal-tarban>
- In 2009, Minnesota restricted state agencies from purchasing undiluted coal tar-based sealant and directed its Pollution Control Agency to study the environmental effects of coal tar-based sealants and to develop management guidelines: [www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/municipal-stormwater/restriction-on-coal-tar-based-sealants.html](http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/municipal-stormwater/restriction-on-coal-tar-based-sealants.html)
- Washington State banned the sale of coal-tar pavement sealants on January 1, 2012 and banned the use of such sealants after July 1, 2013: <https://fortress.wa.gov/ecy/publications/summarypages/1104021.html>



## Alternatives to Coal-Tar Sealcoat

Pavement options such as pervious concrete, permeable asphalt and paver systems do not require sealants. These types of pavements allow for stormwater to naturally infiltrate, resulting in decreased runoff.

## For More Information

For more information you can watch EPA's webinar *Stormwater, Coal-Tar Sealcoat and Polycyclic Aromatic Hydrocarbons* available at: [http://cfpub2.epa.gov/npdes/courseinfo.cfm?program\\_id=0&outreach\\_id=645&schedule\\_id=1169](http://cfpub2.epa.gov/npdes/courseinfo.cfm?program_id=0&outreach_id=645&schedule_id=1169).

For information on assessing the toxicity of PAHs in sediment see: [www.epa.gov/nheerl/download\\_files/publications/PAHESB.pdf](http://www.epa.gov/nheerl/download_files/publications/PAHESB.pdf) from EPA's Office of Research and Development.

Additionally, you can visit the USGS webpage on PAHs and coal-tar-based sealcoat: <http://tx.usgs.gov/coring/allthingssealcoat.html>.

## References

Mahler, B.J.; Van Metre, P.C.; Crane, J.L.; Watts, A.W.; Scoggins, M.; Williams, E.S., Coal-tar-based pavement sealcoat and PAHs: Implications for the environment, human health, and stormwater management. *Environ. Sci. Technol.*, 2012.

Van Metre, P.C.; Mahler, B.J., Contribution of PAHs from coal-tar pavement sealcoat and other sources to 40 U.S. lakes. *Sci. of the Total Environ.*, 2010, v.409, 334–344.

Scoggins, M.; McClintock, N.L.; Gosselink, L.; Bryer, P., Occurrence of polycyclic aromatic hydrocarbons below coal-tar-sealed parking lots and effects on stream benthic macroinvertebrate communities. *Journal of the North American Benthological Society*, 2007, 26(4):694–707.

Mahler, B.J.; Van Metre, P.C.; Bashara, T.J.; Wilson, J.T.; Johns, D.A., Parking lot sealcoat: An unrecognized source of urban PAHs. *Environ. Sci. Technol.* 2005, 39, (15), 5560–5566.

EPA's Integrated Risk Information System (IRIS):  
[www.epa.gov/IRIS/](http://www.epa.gov/IRIS/)