

Coal Tar Sealcoats

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On behalf of Freshwater Future
Muskegon Lake Watershed Partnership Meeting
September 25, 2014

Presentation points

- About Freshwater Future and its work on coal tar sealcoats
- How coal tar sealcoats were identified as a problem
- Environmental risks
- Public health risks
- Safer alternatives
- Efforts to reduce/eliminate use
- What municipalities can do
- Resources

About Freshwater Future and its work on coal tar sealcoats

- Founded 1996
- 501(c)(3) nonprofit organization.
- Builds effective community-based citizen action to protect and restore the waters and habitats of the Great Lakes region.
- Headquartered in Petoskey, MI.
- Serves communities in the Great Lakes. Helps communities through grant funding, communications and networking resources and specialized consulting.



* The work on coal tar sealcoat is aimed at prevention of pollution and protection of public health at the community level.

How coal tar sealcoats were identified as a problem

- High levels of polycyclic aromatic hydrocarbons (PAHs) found in lakes studied by the U.S. Geological Survey (USGS)
- High levels of PAHs found in streams in Austin, Texas
- Studies were done by the USGS to determine the source of the PAHs
- Coal tar sealcoats on driveways and parking lots were identified as the source
- See USGS webinar for specific information.

Environmental risks

- Studies have shown that coal tar sealcoats are responsible for high levels of polycyclic aromatic hydrocarbons (PAHs) found in the sediments of lakes and streams and stormwater basins near coal tar sealcoat treated pavements and in particles and dust from the pavements.
- PAHs are in coal tar pitch, which is in the coal tar sealcoat products. Some PAHs are suspected or known carcinogens.
- PAHs run off coal tar sealcoat treated pavements into nearby waterways months after application and as part of routine wear and tear.
- PAHs harm aquatic life.
- Cleanups of PAH sediments are expensive - Inver Grove Heights, Hts. Cleanup of stormwater basins estimated to be \$1.5 to \$4 million.



Photo credit: USGS

Public health risks

- Routine wear and tear of coal tar sealcoated pavements produces dust and particles contaminated with PAHs.
- They can be breathed in and accidentally ingested by people living by the pavements.
- Children are at greater risk.



Photo credit: USGS

- For someone who spends their entire lifetime living adjacent to coal tar sealcoated pavement, the average excess lifetime cancer risk is estimated to be 38 times higher than the urban background exposure.
- The estimated lifetime cancer risk also is elevated for someone who spends just the first 6 years of their life living adjacent to coal tar sealcoated pavement—about 25 times higher than urban background exposure.

Reference: Cancer risk from incidental ingestion exposures to PAHs associated with coal-tar-sealed pavement. Environ. Sci. Technol. 2012, 47 (2):1101-1109.

Safer alternatives

- Asphalt based sealcoats are safer, readily available. (According to the Minnesota Pollution Control Agency website.)
- The most common and least expensive alternative to coal tar sealcoat now on the market is petroleum asphalt based sealcoat (CAS number 8052-42-4).
- Asphalt sealcoats contain PAHs, but at far lower levels than coal tar sealcoats—about 1/1000th the PAH level of coal tar sealcoats.
- Good quality asphalt sealcoat emulsions provide a black appearance for one to two years, and protection (less visible) for two to four years if properly applied.
- Other alternatives such as Gilsonite®, acrylic and agricultural oil-based seals contain few or no PAHs, but they tend to be higher-priced and they have less of a performance track record than asphalt sealcoats.

Efforts to reduce/eliminate use

- Cities, counties and states across the U.S. and throughout the Great Lakes region are considering reducing or eliminating the use of coal tar sealcoats for public safety and environmental reasons.
- The state of Washington was the first state to ban coal tar sealcoats.
- In January of this year, the state of Minnesota passed a ban on the use of coal tar sealants. A proposed ban is advancing in Wisconsin.
- In August, the village of Winnetka, Illinois recently banned private use of coal tar sealcoats.
- Locally, Whitehall Township has passed a resolution not to use coal tar sealcoats.

What municipalities can do

- There are a number of ways that municipalities are addressing the issue.
- Some are passing resolutions that commit them to not use coal tar sealcoats in their driveway or parking lot projects. (Byron Township in Kent County, Whitehall Township, Charlevoix.)
- Some have also committed to help educate on the topic by disseminating information to their residents in their newsletters and through their websites. (Whitehall Township, the village of Bellaire in northern Michigan.)
- Some communities, like Winnetka, Illinois, and others, have prohibited the private use of coal tar sealcoats.

Resources

- **Freshwater Future:** www.freshwaterfuture.org
- Freshwater Future, a group that works with community organizations throughout the Great Lakes to protect water resources, is educating its members on the hazards of coal tar sealcoats and alternatives to its use. The group is also reaching out to communities, universities, suppliers, and contractors to gain commitments to reduce and eliminate the use of coal tar sealcoats.
- **Coal Tar Free America:** www.coaltarfreeamerica.blogspot.com
- A website set up and managed as a resource for those interested in the news, information, and opinions about coal tar sealcoats. The site contains news articles, videos, and information about health, science, regulations, and bans.
- **U.S. Geological Survey:** <http://pubs.usgs.gov/fs/2011/3010/pdf/fs2011-3010.pdf>
- A comprehensive fact sheet published by the U.S. Geological Survey, the leading researchers on the coal tar sealcoat issue. This fact sheet has information on the science of coal tar sealcoat risks, how it was determined that coal tar sealcoats pose environmental and public health risks, information about the chemicals in coal tar sealcoats responsible for the risks - polycyclic aromatic hydrocarbons or PAHs, and references.
- **Minnesota Pollution Control Agency:** <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/stormwater-management/great-lakes-coal-tar-sealcoat-pah-reduction-project/choosing-alternatives-to-coal-tar-based-pavement-sealcoats.html>

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