



THE LEAGUE
OF WOMEN VOTERS
OF THE LANSING AREA

Environment Workgroup

P.O. Box 971
East Lansing, MI 48826
(517) 624-9224

Protect Michigan's Water: Take Action Now!

Informational Fliers

Prepared by Members of
The League of Women Voters of the Lansing Area
Environment Workgroup

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Neonicotinoids in Water: What are they and why should we be concerned?

A Short History: 1990s to present.

Neonicotinoids are a class of insecticides that have been important in the battle against the emerald ash borer, but have been implicated in the death of honeybee colonies. When introduced in 1990s neonics were touted for their selectivity, targeting only insects with little direct harm to mammals or birds. But reality has proven more complex. They have been widely used in the nursery plant industry and, because they are systemic pesticides, are ingested by bees. Gardening shoppers are urged to look for plants tagged as to their use. They are now showing up in our drinking water, and standards vary across states and countries about acceptable levels.

In 2014 MSU Extension reported that “Wise use can reduce negative impacts while helping to achieve pest management goals.” Former Michigan Rep. Gretchen Driskell introduced a bill in Nov 2016 that would have banned neonicotinoids. Similar bills have been introduced in other states. The Michigan Managed Pollinator Protection program has no intention at this time of banning neonics.

In 2017 a nationwide study of the streams in US found that neonicotinoids were found in 63% of streams and were “ubiquitously detected at all streams sampled that drain intensively row-cropped areas of the Midwest.” Samples of tap water in Iowa showed that neonicotinoids end up in drinking water. “Because of their pervasiveness in source waters, and persistence through treatment systems, neonicotinoids are likely present in drinking water systems across U.S. Conventional water treatment results in no measurable removal of clothianadin or imidacloprid.”

EPA is currently (2018) reviewing an application by Syngenta to allow its neonic product to be used in U.S. At the same time EPA drastically lowered the aquatic life benchmarks for other neonics.

LINKS FOR MORE INFORMATION

http://msue.anr.msu.edu/news/new_labels_restrict_use_of_select_neonicotinoids_in_vegetables_to_protect_p

http://www.michigan.gov/mdard/0,4610,7-125-2390_76976-387345--,00.html

<http://greatlakesecho.org/2017/02/06/debates-over-neonicotinoids-caught-between-fighting-emerald-ash-borer-protecting-pollinators/>

<https://bna.com/environment-and-energy/agrochemical-giants-downplay-threat-of-bee-killing-pesticide-in-water>

<https://pubs.acs.org/doi/pdf/10.1021/acs.estlett.7b00081>

<http://michiganradio.org/post/insecticides-showing-great-lakes-rivers>

<http://wmuk.org/post/pesticides-widespread-great-lakes-streams>





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PFAs in Michigan: What are they and why should we be concerned?

Perfluoroalkyl and polyfluoroalkyl compounds are classified by EPA as an emerging contaminant. They have been used for 50 years in industrial, food and textile industries, and in packaging, cleaning, firefighting products. They are stable, break down very slowly, and are highly soluble, so they easily accumulate in groundwater. There are several known polluted sites in Michigan, including two in Lansing: Adams Plating and RACER Lansing Plants 2, 3, 6.

PFAs have been linked to increased cholesterol, changes in body's hormones and immune system, and increased risk of cancers, in animal studies.

HB4320 (Michigan) provided a budget to support new positions at DEQ to sample and analyze drinking water supplies. The Governor set up an action team. The DEQ set a limit of 70 ppt for air borne pollution, mirroring the standard they set for groundwater pollution, and asked for public comment on this standard. Standards vary across states. This is 4 times higher than some. Public comments were closed on 4/16/18.

HB5375 (Michigan) proposed stricter limits on pfas. Introduced 12/2017.

LINKS FOR MORE INFORMATION

http://www.michigan.gov/som/0,4669,7-192-45414_45929_83470---,00.html

http://www.michigan.gov/som/0,4669,7-192-45414_45929_83470_83473-452154--,00.html

http://www.mlive.com/news/index.ssf/2018/03/michigan_deq_potw_ipp_pfas.html

http://www.mlive.com/news/index.ssf/2018/04/deq_pfas_air_toxic_levels.html

http://www.mlive.com/news/grand-rapids/index.ssf/2017/11/what_is_a_safe_pfas_level.html

http://www.mlive.com/news/index.ssf/2017/12/michigan_pfas_standard_5-ppt.html





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PAH Contamination & Driveway Sealants

Sealcoat is the black, viscous liquid sprayed or painted on many asphalt parking lots, driveways, and playgrounds to protect and enhance the appearance of the underlying asphalt. Studies by the U.S. Geological Survey (USGS), academic institutions, and State and local agencies have identified coal-tar-based pavement sealcoat as a major source of polycyclic aromatic hydrocarbon (PAH) contamination in urban and suburban areas and a potential concern for human health and aquatic life.

As coal-tar-based sealcoat ages, it wears into small particles with high levels of PAHs that can be tracked into homes and incorporated into house dust. For people who live adjacent to coal-tar-sealcoated pavement, ingestion of PAH-contaminated house dust and soil results in an elevated potential cancer risk, particularly for young children. Exposure to PAHs, especially early in childhood, has been linked by health professionals to an increased risk of lung, skin, bladder, and respiratory cancers.

Runoff from coal-tar-sealcoated pavement, even runoff collected more than 3 months after sealcoat application, is acutely toxic to fathead minnows and water fleas, two species commonly used to assess toxicity to aquatic life. Exposure to even highly diluted runoff from coal-tar-sealcoated pavement can cause DNA damage and impair DNA repair. These findings demonstrate that coal-tar-sealcoat runoff can remain a risk to aquatic life for months after application.



The State of Minnesota and a number of Michigan communities have banned the use of coal-tar-based sealants and other sealants that contain high levels of PAH's.

LINKS FOR MORE INFORMATION

Presentation by Rebecca Esselman, Huron River Watershed Council, on Driveway Sealants and PAH Contamination at the April 4th meeting of the Meridian Township Environmental Commission
<http://meridianmi.swagit.com/play/04042018-870>

City of Ann Arbor Ban
<https://www.a2gov.org/departments/systems-planning/planning-areas/climate-sustainability/Pages/Coal-Tar-Sealants.aspx>

State of Michigan Proposed Legislation HB 5174
<https://housedems.com/article/rep-pagan-introduces-bill-ban-coal-tar-driveway-sealants>

State of Minnesota Ban
<https://www.pca.state.mn.us/water/restriction-coal-tar-based-sealants>

Tip of the Mitt Watershed Council
<https://www.watershedcouncil.org/coal-tar-sealants-and-pah-contamination.htm>



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Septic System Inspections

Michigan is the only state in the U.S. that doesn't regulate septic systems on a statewide basis. Septic systems are putting 280 million gallons per day of wastewater into the ground. Only 11 counties in Michigan have requirements that septic systems be inspected when a property is sold.

Statewide, the Michigan Association for Local Public Health estimates that local jurisdictions with time of sale programs find on average 17 - 25 percent of systems evaluated in need of repair. Depending on the average age of septic systems in a given community or watershed, the actual number of inadequate systems will vary, but the consequences of not having a time of sale ordinance in place are likely to grow more severe as existing systems age.

Typical septic system failures include leaking or damaged septic tanks, damaged or blocked connections to drain fields, inadequate distance from drain field to water table, inadequate system size for size of home, and insufficient distance from drain field to drinking water wells, lakes, or streams.



LINKS FOR MORE INFORMATION

"Aging septic systems fouling Michigan waters" Detroit Free Press 1/16/16
<https://www.freep.com/story/news/local/michigan/2017/01/16/aging-septic-systems-fouling-michigan-waters/96639750/>

Ingham County Inspection at Property Transfer
<http://hd.ingham.org/Portals/HD/Home/Documents/eh/POS/FINALPOSREGULATIONmay2.pdf>

Michigan Lake & Stream Associations
<https://www.mymlsa.org/septic-system-ordinances/>

Michigan State University Extension
http://msue.anr.msu.edu/news/got_water_time_of_sale_septic_inspections_can_protect_water_quality_part_2



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Agricultural Run-off

Pesticides, fertilizers, and animal waste products in the untreated run-off from farms into groundwater and surface water lakes and streams threatens our drinking water. Agriculture is the nation's leading cause of impaired water quality, according to the U.S. Environmental Protection Agency in 2013. The 2014 shut-down of the drinking water supply for half a million people in the Toledo area really startled Great Lakes residents. They could no longer ignore the large quantities of fertilizer runoff into Lake Erie and other surface water bodies, causing significant environmental, health and economic threats resulting in beach closings, fish advisories, and now a drinking water ban. Nutrient loss in runoff occurs in all seasons, but 63% of annual runoff takes place in the months of February, March and April as a result of farmers spreading manure on frozen or snow-covered ground. Some states - but not Michigan - ban the spreading of manure during the winter months.



LINKS FOR MORE INFORMATION

<http://inthesetimes.com/rural-america/entry/20374/aquatic-dead-zones-hypoxia-farm-policy-agricultural-runoff-water-pollution>

https://ippsr.msu.edu/sites/default/files/MAPPR/FINAL_MAPPR%20Study%20-%20Impact%20of%20Agriculture%20on%20Water%20Quality.pdf

<https://sraproject.org/2015/11/press-release-lansing-michigan-new-report-factory-farm-pollution-mapping/>

https://www.michigan.gov/documents/deq/ess-nps-savvy-agrunoff_209382_7.pdf



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Nestle and other Large-scale Water Withdrawals

Michigan's Great Lakes, streams and underground aquifers provide its human and wildlife residents with drinking water, a necessity for life.

Commercial enterprises, such as Nestle, are being allowed to generate substantial profits by permanently withdrawing drinking-quality waters from the Great Lakes Basin at the rate of millions of gallons per year for an annual \$200 permit. The water is either bottled and sold or used in mining or manufacturing processes and not treated, thereby rendering it no longer fit for drinking.

Only 10% of Michigan's aquifers have been mapped, unlike nearby states that have mapped 80%.

There is a serious disconnect in the State of Michigan's water policies and laws that grants Nestlé a permit for \$200 per year to take more than 210,000,000 gallons of fresh spring water (less than \$1.00 per 1,000,000 gallons) while more than 100,000 people in Detroit have had their household water disconnected for non-payment, and while Flint residents are being disconnected in spite of being subjected to long-term contamination of their drinking water.

When the California Water Board ruled that Nestlé must cease its unauthorized withdrawal of water from the San Bernadino National Forest on a permit that expired 30 years ago, Nestlé never stopped and continues to take water from this critical ecosystem.



LINKS FOR MORE INFORMATION

Great Lakes Now - Move to change the law
<https://www.greatlakesnow.org/2018/04/the-nestle-decision-should-michigans-water-policy-be-changed/>

"Tapping the Great Lakes" video by Detroit Public TV
<https://www.youtube.com/watch?v=D4Nsp96zV-E>

Nestle Makes Billions Bottling Water It Pays Nearly Nothing For: Bloomberg Businessweek, 9/21/17
<https://www.bloomberg.com/news/features/2017-09-21/nestl-makes-billions-bottling-water-it-pays-nearly-nothing-for>

Michigan Citizens for Conservation of Water Position on Nestle Water Taking in Ewart, Osceola County, Michigan 2/14/18
<https://savemiwater.org/2018/02/16/position-nestle-ice-mountain-ewart-osceola-county/>

5 Things You Can Do To Protect the Great Lakes, 1/1/18
<https://freshwaterfuture.org/call-to-action/5-things-you-can-do-to-protect-the-great-lakes/>

A Great Lakes Water War: Nestle, the Great Lakes Compact, and the Future of Freshwater, 9/18/17
<https://freshwaterfuture.org/policy-memo/a-great-lakes-water-war-nestle-the-great-lakes-compact-and-the-future-of-freshwater/>



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Pipeline 5

Line 5 is a disaster waiting to happen. Every day, nearly 23 million gallons of oil and natural gas liquids pass through Line 5. Line 5 is a pair of 20" diameter pipes built by Enbridge, a Canadian company, in 1953 -- 65 years ago-- across the Mackinac Straits just west of the Mackinac Bridge.

University of Michigan studies call the Straits the "worst possible place" for an oil spill, which could pollute up to 720 miles of shoreline along Lakes Michigan and Huron. Enbridge has acknowledged that sections are dented and cracked but has no credible plan to cope with an oil spill when the Straits are ice-covered. Enbridge has already been responsible for the disastrous spill into the Kalamazoo River watershed that took over 4 years and over \$1.2 billion to clean up to the extent possible.



LINKS FOR MORE INFORMATION

FLOW (For Love of Water) Update on Line 5 <http://flowforwater.org/line-5/>

Oil and Water Don't Mix, Line 5: The Problem <https://www.oilandwaterdontmix.org/problem>

Governor Rejects Shutdown of Great Lakes Pipeline That's Losing Its Coating, Inside Climate News, 1/31/18 <https://insideclimatenews.org/news/31012018/great-lakes-oil-pipeline-enbridge-line-5-michigan-straits-of-mackinac>



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Lead in Drinking Water

Lead is poisoning our drinking water. The Flint Water Crisis brought the issue to the nation's attention.

The Crisis began in 2011, when the state of Michigan took over Flint's finances after an audit projected a \$25 million deficit. In order to reduce the water fund shortfall, the city announced that a new pipeline would be built to deliver water from Lake Huron to Flint. In 2014, while it was under construction, the city turned to the Flint River as a water source. Soon after the switch, residents said the water started to look, smell and taste funny. Tests in 2015 by the Environmental Protection Agency (EPA) and Virginia Tech indicated dangerous levels of lead in the water at residents' homes.

Lead consumption can affect the heart, kidneys and nerves. Health effects of lead exposure in children include impaired cognition, behavioral disorders, hearing problems and delayed puberty.

Since then, seventy-one water systems in Michigan have tested showing higher lead levels than the city of Flint. A Reuters investigative report released 12/19/16 found nearly 3,000 areas in the United States with lead poisoning rates at least double those in Flint.



LINKS FOR MORE INFORMATION

CNN, Flint Water Crisis Fast Facts 4/8/18
<https://www.cnn.com/2016/03/04/us/flint-water-crisis-fast-facts/index.html>

71 Michigan water systems now have higher lead levels than Flint, MLive, 10/30/17
http://www.mlive.com/news/flint/index.ssf/2017/10/71_michigan_water_systems_had.html

Here's Where Candidates Stand On Lead Pipes, Bridge, 1/31/18
<https://www.bridgemi.com/michigan-environment-watch/heres-where-michigan-2018-governor-candidates-stand-lead-pipes>

Woodside Church, Flint Water Emergency
<http://www.woodsidechurch.net/flint-water-emergency/>

Wikipedia: Flint Water Crisis
https://en.wikipedia.org/wiki/Flint_water_crisis

The Untold Story of Flint: The Assault on Democracy for Poor & Black People, Black Bottom Archives, 2/28/16
<http://www.blackbottomarchives.com/blackpapersocialjustice/the-untold-story-of-flint-the-assault-on-democracy-for-poor-black-people>