

Lower Makefield Township MS4 Program How Homeowners Can Help Prevent Stormwater Pollution

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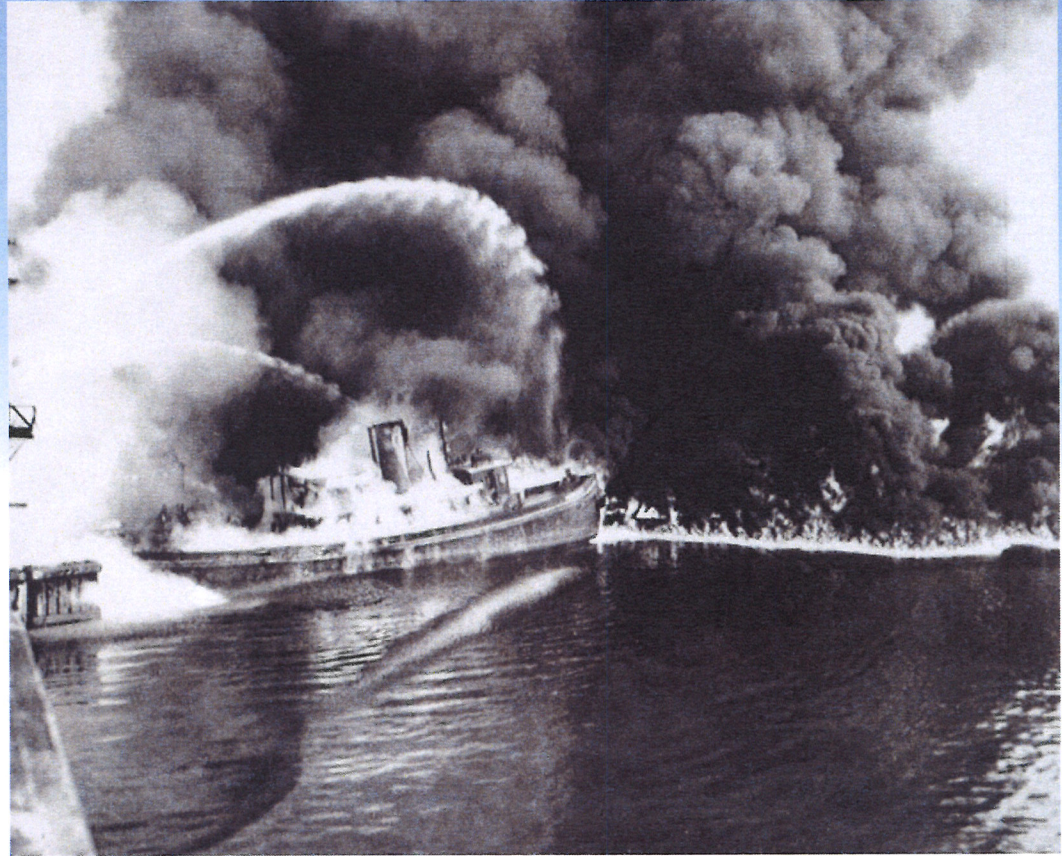
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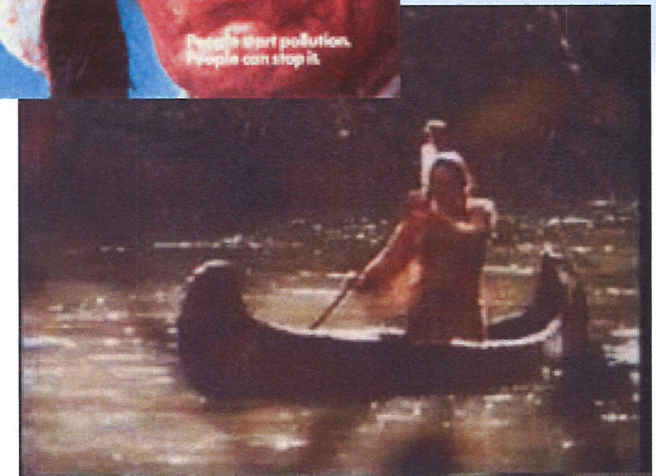
The Cuyahoga River: The Burning River That Sparked a Revolution

- Photo published by Time Magazine in 1969 depicting the June 22nd scene on the Cuyahoga River near downtown Cleveland when sparks from a passing train set fire to oil-soaked debris floating on the water's surface.
- The story said that the river was so saturated with sewage and industrial waste that it "oozes rather than flows".
- The story helped spearhead some of America's environmental reform which included The Clean Water Act of 1972.



America's Environmental Reform

- Earth Day, the annual day of environmental action and awareness, was first held on April 22, 1970.
- The Crying Indian commercial was part of the Keep America Beautiful campaign aired on Earth Day in 1971.
- Keep America Beautiful is a U.S. based nonprofit organization founded in 1953. It focuses on three key issues: Litter prevention, waste reduction/recycling and community greening and beautification.



Lower Makefield Township MS4 Program

- Public Education & Outreach
- Public Participation & Involvement
- Illicit Discharge Detection & Elimination
- Construction Site Stormwater Runoff Controls
- Post Construction Runoff Controls
- Pollution Prevention & Good Housekeeping for Municipal Facilities

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Lawn Care



- Most grasses need modest amounts of nutrients for controlled growth and good color. Over fertilizing will result in excess mowing.
- Use fertilizers and herbicides according to manufactures instructions and sparingly.
- Mulch grass clippings which act as a natural fertilizer.
- Avoid application to adjoining drives and walkways.
- Consider time-released, water insoluble nitrogen fertilizers and corn gluten for weed control.

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Lawn Care



Other options to consider:

- Consider planting more trees, adding more beds and gardens to your landscaping or even adding a rain garden to your lawn; more beds and landscaping yield less stormwater run-off.
- Use more native plants which require less watering.
- Consider the use of a rain barrel.

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Lawn Care

If you use a lawn care service, it is still up to you as the homeowner to make sure that your landscaper does not contribute to stormwater pollution. Discuss these items with your service:

- Ask them to grasscycle (leave clippings on lawn).
- Make sure they are not leaving clippings in the street.
- Ask if they are properly trained and licensed to apply fertilizers.

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Fiction: Grass clippings aren't a problems because they are natural and can biodegrade.

Fact:As grass clippings and other organic material decompose, the chemical reaction uses available oxygen to produce carbon dioxide. Grass clippings and other organic materials, when introduced to creeks and lakes, remove oxygen from the water which suffocates fish and other aquatic animals. Grass clippings can be left on the lawn to biodegrade.

Fiction: Organic fertilizers are not harmful to the environment.

Fact: All fertilizers have the potential to be harmful when improperly applied. Fertilizers are essentially nutrients that plants need to survive. Whether a fertilizer is organic or synthetic (chemical), if over-applied the excess nutrients can be transported in storm water runoff to nearby creeks and lakes. Organic fertilizers are much more sustainable sources of nutrients, but a soil test will help prescribe the proper amount of fertilizer that should be applied.

Lawn Care Fact or Fiction

Fiction: My yard care habits can't possibly have that much impact on water quality.

Fact: Research shows that an average 1,000 square foot lawn can generate up to 500 pounds of grass clippings each year. Grass clippings are full of nutrients that have been applied as a fertilizer. In a metropolitan area the cumulative impact of our community on the water quality of our creeks and lakes is quite large.

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Swimming Pool Discharge

The discharge of chlorinated swimming pool water is prohibited by the Township as per the Pennsylvania Department of Environmental Protection (PADEP). These regulations are listed on the Township's Environment page on their website.

- As per §166-29.C of the Township's Sewers Ordinance, "Swimming pool and backwash water shall not be discharged into the sanitary sewer system."
- The Zoning regulations, Private Swimming Pools, §200-70.A(3) states, Provision shall be made for drainage of the pool and backwash water disposal. The use of open fields, lawns or dry wells shall be permitted for the purpose, provided that they meet the regulatory requirements. Water shall not be emptied onto public roads or adjoining land belonging to others or into the public sanitary sewer system.
- §200-72 Prohibited operations, states, No property owner or person shall construct facilities or drains or otherwise cause water from swimming pools to be discharged onto a public highway right-of-way or discharged at such a point or in such a way that the water flows onto a public road causing a safety hazard or nuisance.



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Vehicle Maintenance

- Washing of cars is preferred to be done at a public car wash where water is treated.
- Washing of cars at home should be done in a lawn area to filter pollutants and soap.
- Changing the oil in your car at home should be done using a drop cloth and drip pan; all spills should be cleaned up.
- Keeping your vehicles properly maintained helps prevent leaks onto impervious surfaces which drain directly to the stormwater system.

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Winter Maintenance

- The use of deicing agents does not eliminate the need to shovel.
- Always try to remove snow before it turns to ice.
- Apply deicing agents according to the manufacturer's recommendations.
- Use alternatives to rock salt such as CMA deicers.
- Clean up deicing agents once they are no longer needed and before they are washed into the local waterways.

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Additional Considerations



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Hazardous Materials

- Dispose of hazardous materials properly, never to a storm drain. Government agencies typically have periodic hazardous material collection days.
- Storage of materials and/or equipment outdoors which may be covered in oil or other chemicals should be covered so a storm event does not wash the pollution into the storm system.



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Always Pick Up After Your Pet

- Did you know that one average size dog dropping contains 3 billion fecal coliform bacteria and other pathogens that could be a health hazard? Noting that 40% of households have a dog, you can see the potential problem if all of that ended up in our surface waters that are being used for recreational and other purposes.
- We acknowledge that there are plenty of wild animals defecating in the wild; however, in general, that waste ends up in a wooded or brush area where it's naturally filtered and not being washed into the storm system. Also, this is not being done in a concentrated area.
- So besides the fact that it's the polite thing to do for your neighbors; it's helping your community prevent stormwater pollution.

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Stormwater Inlets

- Illicit discharges to the Storm System include introducing anything other than stormwater into the Storm Sewer System.
- Littering is also a major source of storm water pollution.
- Almost every inlet in the Township has been marked with some type of “no dumping” marker; if you see an inlet that doesn’t have a marker please inform the Township of its location.

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Additional Information

- Information concerning additional measures that can be taken to protect local waterways can be found on the Township's and the Department of Environmental Protection's web sites and many others.
 - www.lmt.org
 - www.dep.pa.gov
 - <https://www.epa.gov/npdes/npdes-stormwater-program>
- Note that many of these websites have information and specific pages just for kids.

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Additional Information

Sample of website illustrations:



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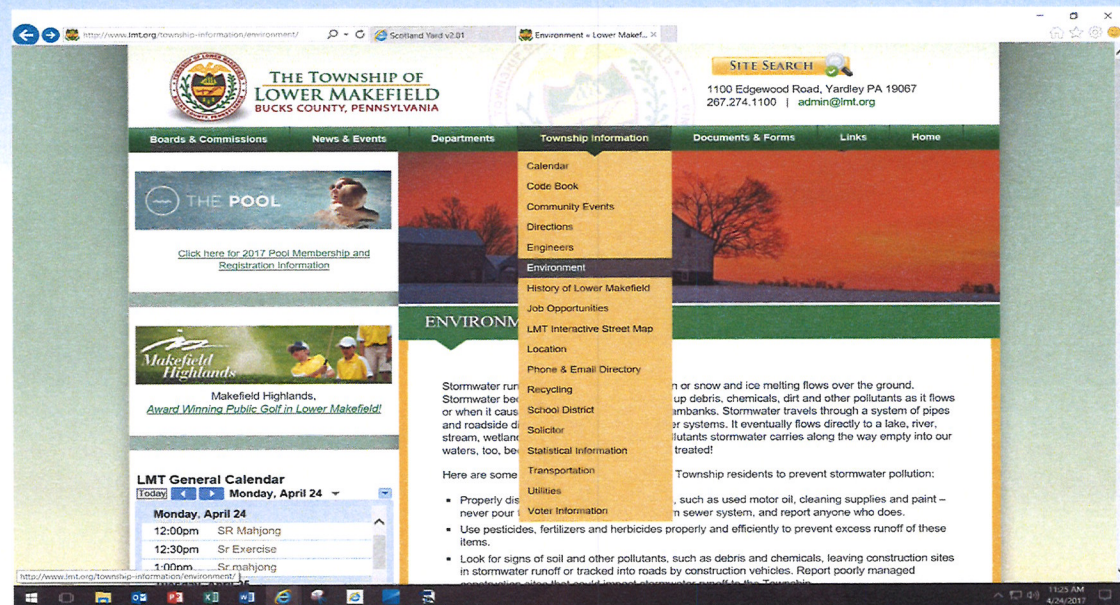


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Additional Information-Township Website

- The Lower Makefield Township website has all of this information and more on the prevention of stormwater pollution, as well as many other tips for the homeowner on their website under the “Environment” page.
- There are also various DEP and/or EPA links that contain additional resources.



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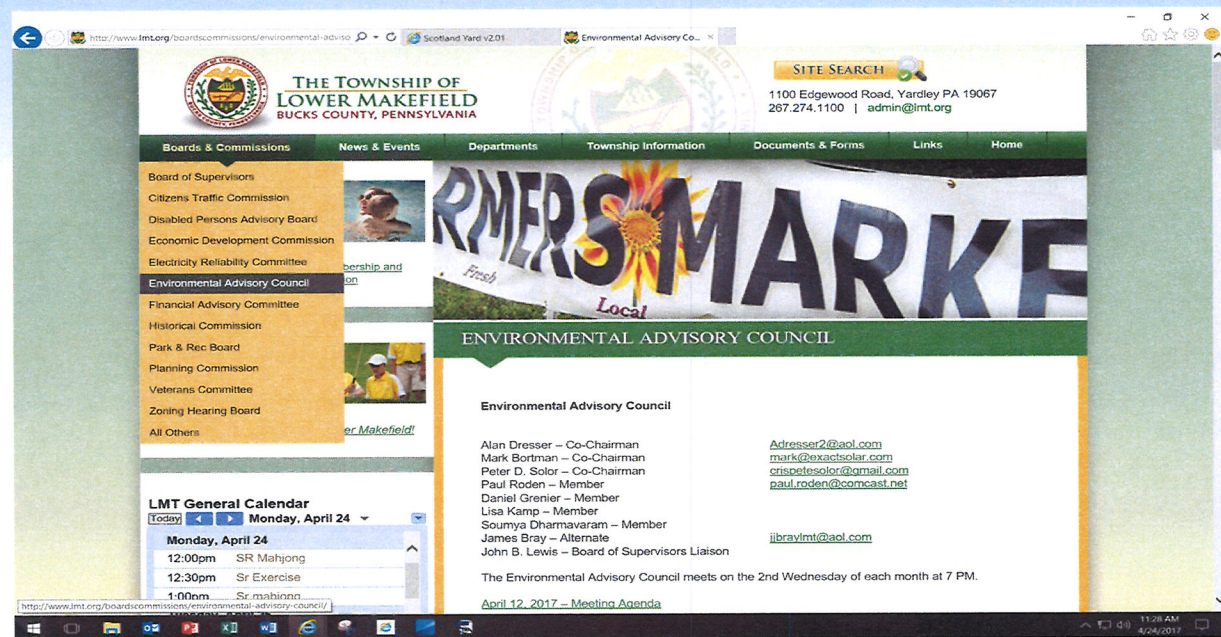


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Additional Information-EAC Webpage

- Lower Makefield Township also has a very active Environmental Advisory Council (EAC). You can view the various projects that they are working on under their website page found under the “Boards & Commissions” tab on the Township website.



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New MS4/NPDES Requirements

- In September 2017 Lower Makefield Township will be submitting a Notice of Intent for its new 2018 MS4 permit.
- Along with the new application, Pollution Reduction Plans (PRP) will be submitted for six impaired watersheds within the Township.
- The PRPs require a minimum 10% reduction in sediment runoff and/or a 5% reduction in phosphorus runoff for the individual watersheds. The PRP will outline how the reductions will be accomplished through the installation or retrofits of stormwater best management practices. The sediment/phosphorus reductions need to be completed during the new permit cycle which is five years.
- Currently, the Township is working on a number of projects that will help with these requirements:
 - Lower Makefield Township Long Range Tree Planting Plan
 - Basin Naturalizations
 - Retrofits, conversions, enhancements and/or restorations of basins, and/or other stormwater facilities.

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