

# How Water Quality Works



Learn how water quality is affected by watersheds



Water quality plays an important role in a healthy watershed and you can contribute to the solution, not the pollution! Clean water provides communities with drinking water, makes recreation like boating and fishing safe for the residents of Michigan and supports a healthy ecosystem for plants and wildlife.

Knowing how watersheds work is important because it allows us to understand that our actions have an impact on water quality. When rain and snow/ice melt travel across the land (watershed) and into storm drains, it is called stormwater or runoff. As this runoff travels, it picks up trash, animal waste, chemicals, sediments and dissolved substances along the way until it discharges into the nearest waterbody which has a negative affect on water quality.

Common types of pollution in stormwater runoff include sediment, nutrients, chemicals, bacteria and illicit discharges. In addition to stormwater runoff, water velocity can decrease water quality.

**Sediment** can be eroded soil from unprotected construction sites, eroding streambanks and shorelines and runoff from agricultural lands.

- Adding vegetative buffers along agricultural land or at the water's edge of your waterfront property can help slow runoff.



**Nutrients** include natural sources (organic debris), fertilizers, animal waste (pets, wildlife, and livestock) and sewage sources coming from failing septic systems or illegal discharges of sewage.

- Don't feed the ducks and geese because the concentration of droppings adds excess nutrients to the river.
- Fertilize your yard with slow-release fertilizer and sweep excess particles off paved surfaces back onto the lawn.



**Chemicals** can come from pesticides used on residential and agricultural lands, leaking vehicle fluids, road salt and the improper disposal of household chemicals.

- Change to a chemical alternative for cleaning, like peroxide or baking soda and vinegar, and dispose of

cleaning supplies, paints, oven cleaners, aerosol cans, etc. at a household hazardous waste collection event in your community.

- Use Michigan native plants in your yard which are naturally resistant to pests and diseases, eliminating the need for harmful pesticides.



**Bacteria** is another source of pollution in stormwater which comes from animal waste or human sewage sources.

- Always pick up after your pet, even in the winter, to prevent the bacteria from washing into drainage ditches and storm drains which go straight to the river and have a negative impact on water quality.
- If you have a septic tank on your property, have it inspected every 3 years and pumped out every 3-5 years.

**Illicit discharges** are any discharge to a storm drain or waterbody that contains polluting material, such as sediment, nutrients, oil, and bacteria.

- If you see someone dumping anything in the river or lake, on the side of the road or even down the storm drain on your street, report it to your community's pollution hotline.

Report Illegal Dumping	
Michigan's Pollution Alert System	800-292-4706
Macomb County	877-679-4337 or IDEP@macombcountymi.gov
Oakland County	248-858-0931
St. Clair County	277-504-SWIM
Washtenaw County	734-222-3800 or <a href="https://washtenaw.org/196/Report-an-Issue">https://washtenaw.org/196/Report-an-Issue</a>
Wayne County	888-223-2363

**Water velocity** is too much water, too quickly, which scours the streambed and banks adding to the sediment and recirculating the bacteria and chemicals in the river reducing water quality.

- Plant trees to provide a natural filter to reduce stormwater runoff, flooding and erosion.
- Disconnect downspouts around your home or business to slow runoff and reduce the amount of sediment entering the river.



For more information on how to protect water quality, visit:

[www.allianceofrougecommunities.com](http://www.allianceofrougecommunities.com)

