

Stormwater Pollution: Sources & Solutions



Sources

Stormwater accumulates a variety of pollutants as it runs over roofs, lawns, sidewalks, streets, compacted soils and parking lots before entering local waterways. It is difficult to control this non-point source pollution because it comes from multiple sources. There are also some point-source contributors to stormwater pollution, such as industrial facilities and construction sites. The most common pollutants found in urban stormwater (and therefore urban waterways) include heavy metals, pesticides and fertilizers, oil and grease, bacteria and sediment. The transportation system is a primary source of metals in stormwater runoff to urban streams.

Pollutants	Common Sources	What you can do
Sediment	<ul style="list-style-type: none"> Erosion from exposed slopes, streambanks & streambeds Poorly managed construction sites 	<p>If something looks wrong, call!</p> <p>If you see muddy water, chemicals, dirt, or water that seems polluted flowing from a construction site call the local office that handles construction permits.</p>
Pesticides	<ul style="list-style-type: none"> Weed & Feed lawn care products Insecticides Herbicides Fungicides 	<ul style="list-style-type: none"> Adopt chemical free lawn and garden practices: <ul style="list-style-type: none"> Leave grass clippings as natural fertilizer. Encourage beneficial insects instead of using chemical pest products. Pull weeds by hand. Use mulch to suppress weeds.
Nutrient pollution (nitrogen & phosphorus)	<ul style="list-style-type: none"> Fertilizers Pet waste Detergents 	<ul style="list-style-type: none"> Eliminate fertilizers. Use compost/mulch to feed your plants instead. Pick up after pets Use water-friendly cleaners, soaps, products
Heavy Metals (zinc, lead, iron, mercury, copper, cadmium, chromium, nickel, manganese)	<ul style="list-style-type: none"> Tire & Engine wear Brake Linings & Pads Vehicle Exhaust 	<ul style="list-style-type: none"> Drive Less! Walk or bike, carpool and use public transit Don't use moss killer. Encourage beneficial insects instead of using chemical pest products
Hydrocarbons (petroleum-based vehicle byproducts)	<ul style="list-style-type: none"> Oil & Gasoline spills/leaks Engine Coolants & Antifreeze Hydraulic fluids Grease 	<ul style="list-style-type: none"> Wash car at carwash instead of in driveway Keep vehicle maintained and check for leaks frequently Drive Less! Walk or bike, carpool and use public transit
Chemical Compounds	<ul style="list-style-type: none"> Pesticides Plastics Cleaners 	<ul style="list-style-type: none"> Use only organic products in yard Reduce plastic use Use water friendly cleaners, soaps, products
Bacteria	<ul style="list-style-type: none"> Pet waste Bird poop Combined sewer overflows 	<ul style="list-style-type: none"> Pick up after pets Don't feed birds Disconnect downspouts and redirect runoff to landscape or rain garden.
Salts	<ul style="list-style-type: none"> De-icing salts 	<p>A little salt goes a long way. Cut back. Only salt if freezing temperatures are in the forecast</p>

Solutions

The two main things you can do at home to help minimize the impact of urban stormwater pollution are to minimize the amount of stormwater that runs off your property and choose safe cleaning and gardening products for the home and yard.

How to minimize the amount of stormwater that runs off your property

- Remove paved surfaces such as concrete pathways, patios, or unused areas of your driveway. Replace with pervious pavers, gravel, or mulch to allow water to soak into the ground. Or, turn them into landscaped areas!
- Install a variety of NATIVE trees, shrubs, and groundcovers. Having multiple layers of above-ground vegetation captures and uses some of the rainfall before it even hits the ground. A diversity of plants above-ground means there are varying depths and sizes of underground root systems which loosen the soil and make it more absorbent. Native plants are a great choice because they are adapted to local pests, diseases, and our climate, so they thrive without chemicals or extra fertilizers.
- Disconnecting Downspouts is a quick and easy first step to prevent stormwater runoff from leaving your property. At a minimum, this will help keep roof runoff from overloading the sewer system when it rains, which is a great start! Once your downspouts are disconnected, there are many options for where to direct your roof runoff. The system you choose can be as simple or complex as you like. You can redirect water to your grass, a vegetated area, rain garden, pond, or stormwater planter.

How to prevent pollution at home and in the yard

- Use water friendly cleaners, soaps, products
- Don't ever dump prescriptions or other liquids down the drain
- Learn which household products are hazardous and how to dispose of them safely.
- Choose safer (non-toxic) household products, or better - learn to make your own cleaners at home!
- Pick up after pets – in your yard, on walks, at parks... everywhere!
- Vehicle Care
 - Wash car on lawn or at carwash that recycles water
 - Check for leaks regularly
 - Recycle motor oil
- Use tools, not toxics. Replacing toxic chemicals with compost, organic fertilizers and hand tools makes for safer yards & healthier waterways.
 - Leave grass clippings as natural fertilizer.
 - Encourage beneficial insects instead of using chemical pest products.
 - Pull weeds by hand. Use mulch to suppress weeds.