

WATERSHED WISDOM FOR HOMEOWNERS

Healthy Habits for Clean Water

www.allianceofrougecommunities.com



You Can Protect Water Quality in the Rouge River!

What is stormwater?

When it rains or the snow and ice melts, the water drains off streets, driveways, rooftops and lawns into lakes and rivers without treatment. As it travels across the landscape, it picks up various pollutants like bacteria, oils, nutrients, fertilizers and sediment. Impervious surfaces, such as pavement, speed up the flow of runoff from the landscape and prevent water from soaking into the ground where it can be naturally cleansed by microorganisms that live in the soil. Many pollutants also reach our waterways from soil erosion because many chemicals readily attach themselves to soil particles.

Contaminated runoff, known as non-point source pollution, comes from many different sources and is difficult to trace back to one source on the landscape. Contaminated runoff flows without treatment into the nearest stormwater drainage system. This may consist of simple drainage ditches or infrastructure such as enclosed pipes, outfalls, catch basins and detention ponds. If you live on a river, lake or stream, this runoff travels into the water much more quickly.

And what about groundwater?

Groundwater is water that is stored underground in the spaces between soil particles and fractured rocks. Groundwater is a source of drinking water for many suburban and rural households. Groundwater resources can be impacted if toxins in runoff leach through the soil. Contaminants can pass through surface water and into groundwater because these systems are interconnected. Pollutants can impact water quality by harming fish and wildlife, impairing recreation (fishing, boating and swimming) and contaminating drinking water supplies.

So then what is wastewater?

Wastewater is water that has been used in toilets, sinks and showers in a home, business, or as part of an industrial process. Wastewater flows through pipes to a wastewater treatment plant where it is treated before it is released back to the environment. It can also be treated in an onsite septic system located on your property. There are almost 20,000 houses in the Rouge River Watershed that have a septic system.

How do you prevent non-point source pollution from getting into the water? You can start by being aware that your actions DO impact water quality.

Read on to learn how YOU can make a difference by gaining watershed wisdom and practicing healthy habits for clean water . . .

- In your home
- In your yard
- For your vehicles
- In your community
- In your business

Common sources of pollution in stormwater runoff:

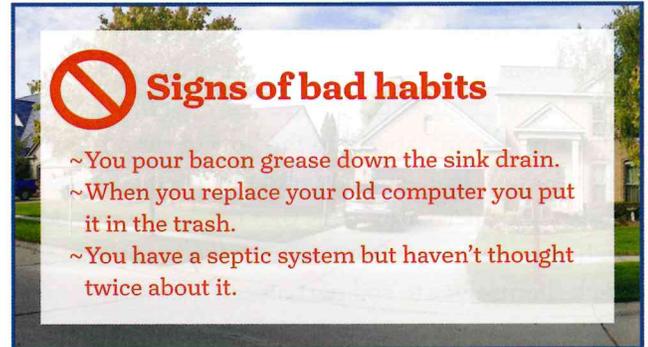
- Sediment - eroded soil from unprotected construction sites, eroding streambanks and shorelines and runoff from agricultural lands;
- Nutrients from natural sources (organic debris), fertilizers (either by leaching or through soil erosion, as well as runoff from product left on impervious surfaces), animal waste (pets, wildlife, and livestock) and sewage sources (failing septic systems or illegal discharges of sewage);
- Pesticides from residential and agricultural lands;
- Bacteria from animal waste or human sewage sources; and
- Grease, oil and other hazardous materials from motor vehicles, illegal dumping, or careless spills.

For more information visit: www.allianceofrougecommunities.com

Watershed Wisdom — Healthy Habits In Your Home

What are the benefits of healthy habits?

Practicing healthy habits in your home not only protects water quality, it reduces costs to you and the community. Healthy habits promote recycling which reduces the burden on our landfills. Healthy habits extend the life of septic and sewer systems and reduces the need for unnecessary maintenance costs.



Adopt these healthy habits!



Pour grease into a container and toss in the trash.

Fats, Oils & Grease (FOG)

Excessive fats, oils and grease washed down a sink, referred to as FOG, blocks pipes and can create pollution problems. Reduce this problem by pouring or scraping greasy or oily food waste into a container or jar so that it can cool before throwing it in the trash. You can also use a paper towel or scraper to remove residual grease from dishes and pans prior to washing them. Use an absorbent material such as cat litter or coffee grounds to mix with liquid vegetable oil in a sealable container before throwing in the trash.

Keep drains clean by pouring 1/2 cup baking soda down the drain followed by 1/2 cup vinegar. Wait 10-15 minutes and rinse with hot water. This should be done at least once a year or more often if water is draining slowly.



Never put "disposable wipes" down a drain or toilet - they cause costly blockages in sewers.

Toilets

Never put "disposable wipes" down a drain or toilet. Even though it says "disposable" they don't break down. This can cause blockages in the sewer system which is costly and can cause sewage backups through floor drains and toilets.

Contact your community for take-back programs to dispose of prescription medication. Never flush them down the toilet which can end up polluting our waters, impacting fish and wildlife, and contaminating our food and water supplies.



Recycle your holiday greenery.

Household Hazardous Waste & Recycling

Check your community's website for the next household hazardous waste event to dispose of things like chemicals, batteries, paint, and aerosols. You can also bring old computers, televisions, propane tanks and light bulbs. Contact your community to find where to recycle things like old tires or your holiday greenery.

COUNTY HOUSEHOLD HAZARDOUS WASTE INFORMATION	WAYNE: http://bit.ly/ARC-WCHHW
	MACOMB: http://bit.ly/ARC-MCHHW
	OAKLAND: http://bit.ly/ARC-OCHHW
	ST. CLAIR: http://bit.ly/ARC-SCHHW
	WASHTENAW: http://bit.ly/ARC-WashCHHW
	DEA PRESCRIPTION TAKE-BACK: http://bit.ly/ARC-DEA

More healthy habits in your home if you have a septic system!

Educate Yourself

Learning about your septic system is key to keeping it functioning properly and saving you money! Visit <http://bit.ly/ARC-Septic> to access information and videos.

Inspection

Have your system inspected every 3 years by a reputable septic tank service contractor. When necessary, have your tank pumped out. At a minimum, septic tanks should be pumped out every 3-5 years.

Prolong the Life of Your System

Minimize water inputs into your system by installing water-saving fixtures such as low-flow toilets, faucets and shower-heads. Check out www.epa.gov/watersense to learn more.

Reduce the use of harsh chemicals that get washed down the drain and into your septic system. The chemicals can actually kill the beneficial bacteria necessary for the breakdown of the wastes entering your system.

Dispose of non-degradable items such as fats, oil and grease, hair, tampons and disposable diapers and wipes in the trash. These materials will not break down and can cause clogging and premature failure of your system.

Try composting kitchen scraps such as egg shells, coffee grounds, vegetable wastes and other organic kitchen wastes instead of putting them in the garbage disposal. Visit www.epa.gov/recycle/composting-home for more ideas.

Around Your Septic System

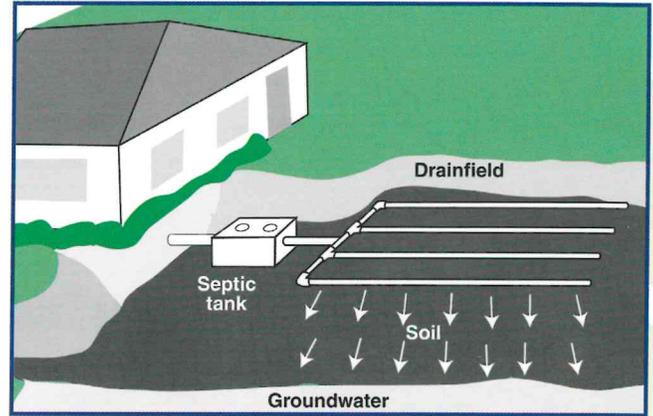
Point your downspouts away from the drainfield.

Do not plant shrubs and trees on the drainfield of your septic system. The root systems could interfere with the infrastructure which can lead to premature system failures. Plant only grass over and near your septic system.

Don't drive or park vehicles on any part of your septic system. Doing so can compact the soil in your drainfield or damage the pipes, tank or other septic system components.

Supplements & Additives

Supplements and additives generally do not improve operation of your system. Some may actually harm your system by causing solids to be carried into the drainfield, which causes premature clogging. In addition, supplements containing organic solvents can cause groundwater contamination.



How a septic system works.



Fats, oils and grease don't break down and can cause clogging and premature failure in a septic system.



Have your septic tank pumped every 3-5 years.

Watershed Wisdom — Healthy Habits In Your Yard

What are the benefits of healthy habits?

Practicing healthy habits in your yard not only protects water quality, it improves habitat and attracts butterflies, dragonflies and hummingbirds to your yard. Healthy habits help filter pollutants before they reach the Rouge River. Healthy habits make it easier and less costly to maintain your yard, all while keeping it looking beautiful.

Adopt these healthy habits!



Use non-toxic alternatives when cleaning items outside.



Install a rain barrel to collect free water for use in your garden.

Home Waste

Utilize non-toxic cleaning alternatives whenever possible. Common household items such as white vinegar, baking soda and hydrogen peroxide can serve a multitude of cleaning functions.

If you have a compost pile and live on the water, keep it away from the waters edge to eliminate the chance of runoff from these piles contributing excess nutrients to the water.

Never dump items such as used motor oil, cleaners, paint or other materials down a storm drain. Storm drains flow directly to the river without any treatment. No dumping on the ground or into your septic system either, as this could cause materials to seep into soils and contaminate the groundwater supply. Check your community's website for the next household hazardous waste event and dispose of it there.

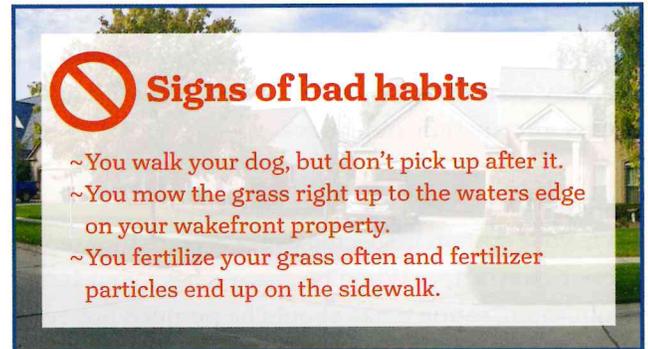
When it Rains

Redirect downspouts away from hard, paved surfaces into vegetated areas, such as a rain garden, or into a rain barrel for later use in your garden. Rain gardens are growing in popularity because they look great and filter pollutants out of runoff allowing clean water to infiltrate and replenish groundwater supplies.

Animal Waste

Always pick up pet waste promptly and dispose of it in the trash - even in the winter. When it rains or the snow melts, bacteria from pet waste that isn't picked up can wash directly into storm drains and drainage ditches and eventually into the Rouge River.

Don't feed ducks or geese, they become dependent on the food from humans and tend to congregate in one place expecting more food. This can lead to the concentration of droppings which adds excess nutrients and harmful bacteria to waterways.



Signs of bad habits

- ~ You walk your dog, but don't pick up after it.
- ~ You mow the grass right up to the waters edge on your wakefront property.
- ~ You fertilize your grass often and fertilizer particles end up on the sidewalk.



Pick up after your pet.

More healthy habits in your yard!

Mowing the Lawn

Cutting the grass too short can lead to plant stress, shallow root systems and turf that is more prone to pests and weeds. A healthy height for grass is 3 inches. Think about mulching your grass clippings back onto the lawn instead of bagging it. They will quickly break down and provide free nutrients and organic matter to the soil. Sweep excess grass clippings off hard or paved surfaces and back onto the lawn to prevent them from getting washed into the storm drains.



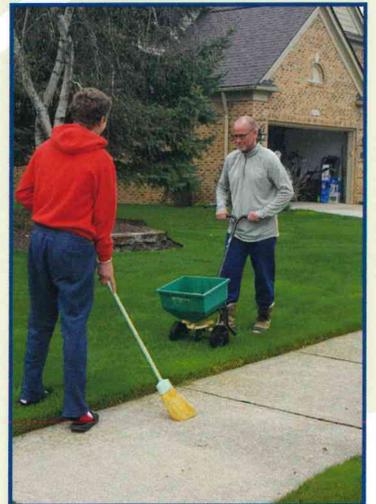
Mulch leaves into your lawn which acts as a natural fertilizer.

Yard Waste

Collect or mulch leaves soon after they fall so they don't get carried into lakes and streams through storm drains or with the wind where they can add excess nutrients. Rather than raking and bagging your leaves, mulch them into your lawn which acts as a natural fertilizer and adds organic matter to the soil.

Fertilizer

Don't overuse pesticides or fertilizers. Many of them contain hazardous chemicals which can travel through the soil and contaminate ground water. Sweep excess fertilizer particles off paved surfaces and back onto the lawn. Don't fertilize right before a heavy rain, use your sprinkler or hose to lightly water after fertilizing to move the nutrients into the root zone of the soil. Consider fertilizing only once a year—late summer or early fall is best since this is the time when the roots store nutrients over the winter months for future use in the spring growth season.



Sweep excess fertilizer particles off paved surfaces and back onto the lawn to keep it from going into the storm sewer.

Landscaping & Native Plants

Use porous landscaping materials, such as brick paving stones, sand or gravel beds and mulched areas, allowing spaces where water can infiltrate around and through the materials.

Landscaping with Michigan native plants is economical because they are adapted to local soil and climate conditions and once established will require less trimming, watering and fertilizing. Native plants also naturally resist pests and diseases, eliminating the need for harmful pesticides. Native plants attract wildlife, such as butterflies, dragonflies and hummingbirds, and can discourage nuisance species, like Canada geese. Native plants have extensive root systems that promote infiltration of water and filter pollutants and sediment from runoff.

Plant native flowers including:



Black-eyed susan



Bee balm



Liatris



New england aster



Native plants require less water and fertilizer, filter out pollutants and provide habitat for butterflies and hummingbirds.

Watershed Wisdom — Healthy Habits For Your Vehicles

What are the benefits of healthy habits?

Practicing healthy habits with your vehicles not only protects water quality, it protects fish and wildlife. Healthy habits promote a safe and healthy environment by keeping chemicals and detergents out of our lakes and rivers. Healthy habits encourage recreation that prevents the spread of plant and aquatic invasive species that can overtake our lakes.

Adopt these healthy habits!



Sweep your garage and dispose of in the trash instead of hosing it down.



Never dump unused bait into the river or lake.



Cars

Use your local car wash which sends the water to the sewer system to be treated before it goes to our rivers and streams. If you wash your car at home do it on the grass to filter out built-up road salt and other pollutants from going directly into the storm drains.

In spring, sweep your garage and dispose of it in the garbage to clean the road salt and pollutants that have accumulated over the winter. Using a hose to clean your garage floor sends the pollutants into the storm drain and directly to the river.

Dispose of used vehicle fluids that you change yourself at a household hazardous waste event in your community. Use appropriate containers for gas, oil or other fluids and ensure proper maintenance. Clean up leaks on pavement promptly with an appropriate absorbent material, such as cat litter, and dispose of it properly.

Boats

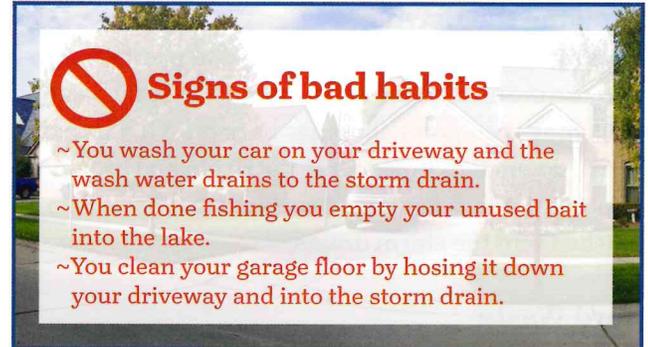
Wash your boat on the grass with phosphate-free soaps and avoid solvent-based cleaners. Wash boats with water, elbow grease and a coarse cloth. Other natural cleaners include baking soda, borax and lemon or lime juice.

After fishing, dispose of unused bait into the trash. Never dump it into the water which could spread aquatic invasive species. Learn more about the danger of invasive species at

<http://stopaquatichitchhikers.org> or <http://bit.ly/ARC-Invasives>.

When your boat comes out of the water: remove drain plugs from bilges, ballast tanks, and live wells; drain water from live wells and bilges; dry off your watercraft; and remove aquatic organisms and plants. This prevents the spread of invasive species that could easily be transported to other area waterways.

Before and after launching your boat in our lakes and rivers, inspect everything on your boat for aquatic organisms and plants.



Watershed Wisdom — Healthy Habits In Your Community

What are the benefits of healthy habits?

Practicing healthy habits in your community not only protects water quality, it improves your property values and quality of life in your community. Healthy habits promote a safe and healthy environment for the community, wildlife and the Rouge River. Healthy habits encourage residents to report illegal dumping and volunteer in efforts to gage the health of the rivers running through our community.

Adopt these healthy habits!

Detention/Retention Pond Maintenance

Plant a variety of native species around your detention or retention pond to filter sediment from stormwater before it reaches the outlet of the pond and to prevent erosion of the banks. This will also reduce the number of Canada geese that inhabit the pond. Remove invasive species like purple loosestrife which out-compete and takeover the native plants. Reduce mosquitoes around your pond by installing bat boxes and planting native flowers which attract dragonflies - both love mosquitoes! Remove trash around detention or retention ponds and have them inspected regularly.

Storm Drains

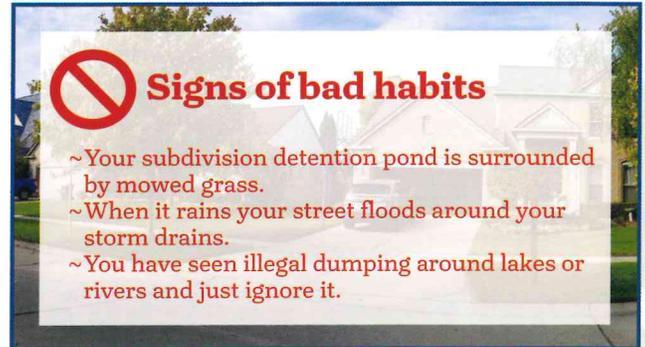
Storm drains lead right to our lakes and rivers! Keep your neighborhood storm drains clear of trash, leaves and debris. This will reduce street flooding and reduces pollution entering the Rouge River. Never dispose of chemicals, cleaners, paints or oils down a storm drain.

Illegal Dumping

You are the eyes and ears in your community! If you see someone dumping anything, even grass clippings, report it to your community's pollution hotline. Things that should be reported include: dumping to lakes, rivers or streams; unusual discharges from pipes; foul odors; or even a large number of dead fish in waterways.

Volunteer

Get involved with a stewardship group like Friends of the Rouge. They host many volunteer events throughout the year that help restore and gage the health of the Rouge River. All ages in the community can get involved by participating in a Frog and Toad Survey, Bug Hunt or Rouge Rescue. Check out their website to learn more at www.therouge.org.



Plant native species around your detention pond to filter sediment.



Keep storm drains clear of debris to reduce pollution entering our lakes and rivers.

REPORT ILLEGAL DUMPING	Michigan's Pollution Alert System call: 800-292-4706	St. Clair County call: 277-504-SWIM
	Macomb County call: 877-679-4337 or IDEP@macombcountymi.gov	Oakland County call: 248-858-0931
	Washtenaw County call: 734-222-3800 or https://washtenaw.org/196/Report-an-Issue	Wayne County call: 888-223-2363

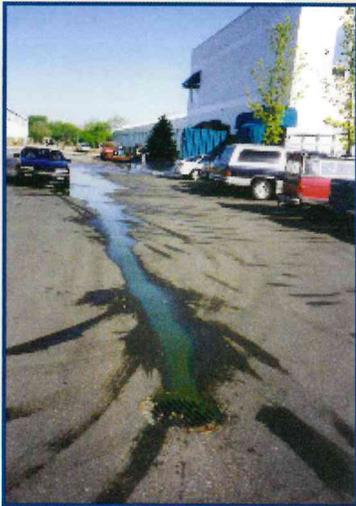
Watershed Wisdom — Healthy Habits In Your Business

What are the benefits of healthy habits?

Practicing healthy habits in your business not only protects water quality, it brings personal satisfaction whether you are the owner, an employee or a patron of a business. Healthy habits promote a safe and healthy environment for employees, customers and the Rouge River. Healthy habits make it easier and less costly to prevent pollution than to endure the expense of cleaning up a spill.



Adopt these healthy habits!



Don't allow material or trash to go down storm drains which leads to our lakes and rivers.

Facility Management

Maintain suitable loading dock and dumpster areas to prevent the potential for spills and leaks. Maintain landscaped areas, including picking up trash, to reduce the amount of stormwater runoff entering the Rouge River. Install rain gardens on your property, they are attractive and their deep roots slow runoff and provide filtration before stormwater enters the Rouge River.

Pollution Prevention

Keep paved surfaces clean by routinely sweeping parking lots to pick up trash and debris to reduce pollution reaching the river. Immediately clean up any spills and leaks from vehicles, dumpsters or equipment. Properly clean equipment to reduce runoff of pollutants. Dump all washwater from buckets and floor washing machines in an indoor drain not a storm drain in your parking lot.

Storage

Make sure you keep an inventory when storing and handling materials. Store fluids in a designated area which includes secondary containment in case the original containers leak. Recycle or dispose of wastes properly.

Education

Provide training sessions or informational materials to educate employees on the proper disposal and pollution prevention practices for the business. Education creates a safer workplace and reduces the potential for legal problems and fines.



Encourage recycling efforts at your business.



Train staff on the proper disposal and pollution prevention practices.



Store wastes using secondary containment and recycle or dispose of them properly.

For more information visit: www.allianceofrougecommunities.com



The Alliance of Rouge Communities, or ARC, is a non-profit organization consisting of local municipalities, counties, educational institutions and stewardship groups working together to improve the Rouge River. The ARC is funded by membership dues from local governments and supported by grants. The ARC and its partners work cooperatively to meet water quality requirements mandated by the state's stormwater permit and to restore beneficial uses, such as canoeing, fishing and other recreational activities, to the Rouge River.

For more information contact:

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YOU can make a difference by gaining watershed wisdom and practicing healthy habits for clean water all season long!

Parts of this publication have been adapted, with permission, from the Oakland County Water Resources Commissioner's Office Environmental Team's publication "Waterfront Wisdom - Healthy Habits for Clean Water"

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