

# Nonpoint Source Pollution



*Trash accumulates in a logjam*

## ***What is nonpoint source pollution?***

Nonpoint source (NPS) pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and ground waters.

### **NON-POINT SOURCE POLLUTION CAN INCLUDE:**

- ▶ Excess fertilizers, herbicides and insecticides from residential areas, golf courses, and agricultural lands
- ▶ Oil, grease, and toxic chemicals from urban runoff and energy production
- ▶ Sediment from improperly managed construction sites, eroding stream banks, and crop and forest lands
- ▶ Bacteria and nutrients from pet wastes, excessive numbers of waterfowl (namely Canada geese), faulty septic systems, and livestock
- ▶ Road salt
- ▶ Litter

## ***What is the problem with nonpoint source pollution?***

States report that NPS pollution is the leading remaining cause of water quality problems. The effects of NPS pollutants on specific waters vary and may not always be fully assessed. However, we know that these pollutants have harmful effects on drinking water supplies, recreation, fisheries, and wildlife. (EPA)

## ***How does Friends of the Rouge help?***

Education on pollution prevention should start in your community at a young age. Our Rouge Education Project works with teachers to get their students to the banks of the river for water quality testing where they assess the physical, chemical, and biological health and are encouraged to take action to improve the river based on their results. The State of Michigan does not do frequent monitoring or sampling of the river for non-point

source pollution. Our monitoring programs such as the Rouge Education Project, bug hunts, and SaltWatch and NitrateWatch through the Izaak Walton League provide the most recent snapshots as to what non-point source pollutants are entering our waterways and the impact they have.

FOTR citizen scientists who collect data for Friends of the Rouge undergo training in the Illicit Discharge Elimination Program, learning how to identify signs and sources of illegal and illicit discharges and how and where to report them. These volunteers, interns, and staff are often in river or wetland locations that are seldom visited or checked. As a result of this training, our monitors have discovered and reported discharges ranging from sewage, oil, and antifreeze and severe erosion issues that would likely never have been noticed or addressed. The awareness the training provides has led many participants to report spills they see outside of their work for Friends of the Rouge. One of our volunteers was the first to report the river turning bright green behind his house, leading to a quick response, cleanup, and identification of the source.

Restoration Programs inform and engage watershed residents and corporate citizens in activities that directly reduce nonpoint source pollution in our Rouge River. This is achieved through our Rain Gardens to the Rescue and Master Rain Gardener training courses, rain garden installations, tree plantings, rain garden maintenance work days, and informational seminars.

Residents can get involved by participating in river clean-up events, learning about restoration practices such as the installation of rain gardens, native plantings, safe fertilizer use, and rethinking the standard “mowed lawn” practice in their community. Residents can also help by picking up pet waste before it rains and washing vehicles on the lawn or at a car wash rather than on driveways.

### *What can you do to reduce and mitigate the effects of nonpoint source pollution in our communities?*

#### **SHARE AT HOME REMEDIES FOR RESIDENTS:**

- ▶ Properly dispose of oils and chemicals at Household Hazardous Waste Days or return them to manufacturers who will take them back
- ▶ Repair leaky vehicles as soon as you notice the leak
- ▶ Pick up pet waste
- ▶ Use lawn and garden fertilizers sparingly and with care
- ▶ Replace mowed grass with native trees, shrubs, and flower (or rain) gardens
- ▶ Ensure detention ponds and streams have a native plant buffer
- ▶ Reduce use of road salt or explore alternatives and reduction practices such as the use of brine (a salt/water mix), or only salting roads at the most effective temperatures
- ▶ Participation in river clean-up events

You can also help by promoting and/or organizing household hazardous waste collections, encouraging the use of storm drain covers that say No Dumping/Drains to River or Waterbody, sharing our programming in local schools and to municipalities, attending our events, or inviting a speaker to come to one of your events. Please always listen to concerns from residents of all ages.

Non-point source pollution education helps communities fulfill the public education component of state municipal and school district stormwater permit requirements. There are also gaps in legislation regulating the maintenance of septic systems.