

## Understanding Storm Water & How to Manage It

(Reference: EPA 833-B-03-002 *After the Storm – A Citizen's guide to understanding storm water*, [www.epa.gov/npdes/stormwater](http://www.epa.gov/npdes/stormwater))

Storm water runoff occurs when precipitation from rain or snow melt flows over the ground. Impervious surfaces like driveways, sidewalks, and streets prevent storm water from naturally soaking into the ground. Heavy rains or snow are not needed to send pollutants rushing towards streams, wetlands, and lakes. A garden hose, alone, can supply enough water.

Storm water becomes a problem because it picks up debris, chemicals, dirt, and other pollutants and flows into a storm sewer system or directly into a lake, stream, river, or wetland. Anything that enters a storm sewer system is discharged, untreated, into the waterbodies we use for swimming, fishing, and providing drinking water.

The effects of untreated storm water runoff (or pollution) are many, and adversely effect plants, fish, animals, and people.

- Sediment can cloud water, making it difficult or impossible for aquatic plants to grow and can destroy aquatic habitats.
- Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from water. Fish and other aquatic organisms can't exist in water with low, dissolved oxygen levels.
- Bacteria and other pathogens can wash into swimming areas and create health hazards, often making beach closures necessary.
- Debris – plastic bags, six-pack rings, bottles, and cigarette butts – washed into water bodies -- can choke suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish and shellfish or ingesting polluted water.
- Polluted storm water often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatments costs.

