Education is essential to changing people's behavior.

What is Stormwater Runoff?

Stormwater runoff occurs when precipitation from rain or snow melt flows over the ground. Impervious surfaces like driveways, sidewalks, and streets prevent stormwater from naturally soaking into the ground .

Why is Stormwater runoff a problem?

Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged untreated into the water bodies we use for swimming, fishing, and providing drinking water.

The effects of pollution

Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people.

Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also 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 the 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 stormwater often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

Stormwater Pollution Solutions

Auto care Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a water body. Use a commercial car wash that treats or recycles its waste water, or wash your car on your yard so the water infiltrates into the ground. Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

Pet waste Pet waste can be a major source of bacteria and excess nutrients in local waters. When walking your pet, remember to pick up the waste and dispose of it properly. Flushing pet waste is the best

disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local water bodies.

Septic systems Leaking and poorly maintained septic systems release nutrients and pathogens (bacteria and viruses) that can be picked up by stormwater and discharged into nearby water bodies. Pathogens can cause public health problems and environmental concerns. *Inspect your* system every 3 years and pump your tank as necessary (every 3 to 5 years). Don't dispose of household hazardous waste in sinks or toilets.

Lawn care Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams. Don't over water your lawn. Consider using a soaker hose instead of a sprinkler. Use pesticides and fertilizers sparingly. When use is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible. Compost or mulch yard waste. Don't leave it in the street or sweep it into storm drains or streams. Cover piles of dirt or mulch being used in landscaping projects.

Permeable Pavement —Traditional concrete and asphalt don't allow water to soak into the ground. Instead these surfaces rely on storm drains to divert unwanted water. Permeable pavement systems allow rain and snow melt to soak through, decreasing stormwater runoff.

Rain Barrels —You can collect rainwater from rooftops in mosquito-proof containers. The water can be used later on lawn or garden areas.

Rain gardens and grassy Swales—Specially designed areas planted with native plants can provide natural places for rainwater to collect and soak into the ground. Rain from rooftop areas or paved areas can be diverted into these areas rather than into storm drains.

Vegetated filter strips —Filter strips are areas of native grass or plants created along roadways or streams. They trap the pollutants stormwater picks up as it flows across driveways and streets.

Commercial Dirt, oil, and debris that collect in parking lots and paved areas can be washed into the storm sewer system and eventually enter local water bodies. Sweep up liter and debris from sidewalks, driveways and parking lots, especially around storm drains. Cover grease storage and dumpsters and keep them clean to avoid leaks. Report any chemical spill to the local hazardous waste cleanup team.

Construction Erosion controls that aren't maintained can cause excessive amounts of sediment and debris to be carried into the stormwater system. Install silt fences, vehicle mud removal areas,vegetative cover, and other sediment and erosion controls and properly maintain them.

Agriculture Keep stream banks vegetated . Livestock should be provided with an alternative water source other than streams. Rotate grazing. Apply fertilizers and pesticides according to label instructions. Store manure away from water bodies.

Auto Facilities Cleanup spills immediately and dispose of cleanup materials properly. Fuel, oil and other harmful fluids can be picked up by stormwater.

Forestry Use logging methods and equipment that minimize soil disturbance. Expedite revegetation of cleared areas.

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