

## What is stormwater runoff?

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Hard surfaces like roof tops, sidewalks, streets and driveways prevent the stormwater from naturally soaking into the ground.



The stormwater collects and travels downhill across the surface until it reaches either a storm sewer system or a natural waterway.

## How can stormwater runoff be a problem?

As stormwater travels across the ground it transports debris, chemicals, dirt, and other pollutants, to natural waterways such as streams, rivers, and lakes. Anything that enters a storm drain system can be discharged without treatment into natural waterbodies we use for swimming, fishing, and other forms of recreation. Too much pollution can even pose risks to drinking water sources.

## The effects of pollution

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

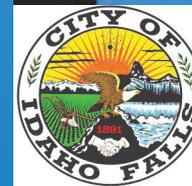
- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats.
- Nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low oxygen levels.
- Bacteria and other pathogens can wash into swimming areas and create health hazards.
- Debris such as plastic bags, bottles, cigarette butts, and trash that wash into bodies of water can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous waste like insecticides, pesticides, paint, solvents, motor oils, and automotive fluids can poison aquatic life.
- Polluted stormwater can also contaminate drinking water sources. This, in turn, can affect human health and water treatment costs.



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# When It Storms

## A Common Sense Guide to Understanding Storm Water



Prepared by:

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# COMMON SENSE SOLUTIONS TO STORMWATER POLLUTION

## Residential Lawn Care



Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. Yard clippings and leaves that enter storm drains contribute undesirable nutrients and organic matter to streams.

- Don't over-water your lawn. Consider using a soaker hose instead of a sprinkler and be sure to properly adjust your automated timer.
- 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 dump it into streets, storm drains, or waterways such as canals.
- Cover piles of dirt or mulch being used in landscaping projects.

## Auto Care

Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm drain system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody.

- Use a commercial car wash that treats or recycles its wastewater 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 stations.
- Never dispose of hazardous chemicals and waste automotive fluids in storm drains or street gutters.

## Septic Systems

Leaking and poorly maintained septic systems release pathogens that can be picked up by stormwater and carried to nearby waterbodies.

- Inspect your system every three years and pump your tank as necessary every three to five years.
- Don't dispose of household hazardous waste in sinks or toilets.

## General

Dirt, oil, & debris that collect in parking lots and paved areas can be washed into the storm drain system and eventually enter local waterbodies.

- Sweep up litter and debris from sidewalks, driveways and parking lots.
- Cover grease storage and dumpsters and maintain them to avoid leaks.
- Report any chemical spills to the Idaho Department of Environmental Quality. They'll know the best way to keep spills from harming the environment.

## Commercial



*Education is essential. Visit this website for educational games and information:*

<http://water.epa.gov/polwaste/nps/kids/index.cfm>

## Automotive Facilities General



Uncovered fueling stations allow spills to be washed into storm drains. Cars waiting to be repaired can leak fuel, oil, and other harmful

- fluids that can be picked up by stormwater.
- Clean up spills immediately and properly dispose of cleanup materials.
  - Provide cover over fueling stations and design or retrofit facilities for spill containment.
  - Properly maintain fleet vehicles to prevent oil, gas, and other discharges from being washed into local waterbodies.
  - Install and maintain oil/water separators on all connections to public storm drain systems.

## Site Maintenance

Erosion controls that aren't maintained can cause excessive amounts of sediment and debris to be carried into the stormwater system.

Construction vehicles can leak fuel, oil, and other harmful fluids that can be picked up by stormwater and deposited into local waterbodies.

- Divert stormwater away from disturbed or exposed areas of the construction site.
- Install silt fences, vehicle mud removal areas, vegetative cover, and other sediment and erosion controls and properly maintain them.
- Prevent soil erosion by minimizing disturbed areas during construction projects, and seed and mulch bare areas as soon as possible.
- Keep contaminants from entering existing storm drain inlets with proper erosion control devices.

## Construction



## Ranching & Farming

Lack of vegetation on streambanks can lead to erosion. Over-grazed pastures can also contribute excessive amounts of sediment to local waterbodies. Livestock in streams can contaminate waterways with bacteria, making them unsafe for humans.

- Keep livestock away from streambanks and provide them a water source away from waterbodies.
- Vegetate riparian areas along waterways.
- Store and apply manure away from waterbodies and in accordance with a nutrient management plan.
- Rotate animal grazing to prevent soil erosion in fields.
- Apply fertilizers and pesticides according to label instructions to save money and minimize pollution.

## Agriculture

